

Civil Aviation Department

# Aeronautical Information Publication

# Hong Kong

## Effective Date: 27 November 2025

# GEN (GENERAL)

## GEN 0

## GEN 0.1 PREFACE

### 1 Name of the Publishing Authority

The AIP Hong Kong is published by authority of the Director-General of Civil Aviation, Civil Aviation Department.

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|---|---|
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| AIP Website | http://www.ais.gov.hk |

### 2 Applicable ICAO Document

The AIP Hong Kong is prepared in accordance with the Standards and Recommended Practices (SARPs) of Annex 15 to the Convention on International Civil Aviation, the Aeronautical Information Services Manual (ICAO Doc 8126) and Procedures for Air Navigation Services – Aeronautical Information Management (ICAO Doc 10066). Charts contained in the AIP are produced in accordance with Annex 4 to the Convention on International Civil Aviation and the Aeronautical Charts Manual (ICAO Doc 8697). Differences from ICAO Standards, Recommended Practices and Procedures are given in subsection GEN 1.7.

### 3 The AIP Structure and Established Regular Amendment Interval

3.1 The AIP forms part of the Integrated Aeronautical Information Package, details of which are given in subsection GEN 3.1.

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

3.1.1 **Part 1 - General (GEN)**

Part 1 consists of 5 sections containing information as briefly described hereafter.

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|---|---|
| GEN 0. | Preface; Record of AIP Amendments; Record of Supplements; Checklist of AIP Pages; List of hand amendments to the AIP; and the Table of Contents to Part 1. |
| GEN 1. | National Regulations and Requirement - Designated authorities; Entry, transit and departure of aircraft; Entry, transit and departure of passengers and crew; Entry, transit and departure of cargo; Aircraft instruments, equipment and flight documents; Summary of Hong Kong regulations and international agreements/conventions; and Differences from ICAO Standards, Recommended Practices and Procedures. |
| GEN 2. | Tables and Codes - Measuring system, aircraft markings, holidays; Abbreviations; Chart symbols; Location indicators; List of radio navigation aids; Conversion Tables; and Sunrise/ Sunset tables. |

GEN 3. Services - Aeronautical information services; Aeronautical charts; Air traffic services; Communication services; Meteorological services; and Search and rescue.

GEN 4. Charges for Aerodromes/Heliports and Air Navigation Services - Aerodrome/heliport charges; and Air navigation services charges.

3.1.2 **Part 2 - En-route (ENR)**

Part 2 consists of seven sections containing information as 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 messages; Interception of civil aircraft; Unlawful interference; Air traffic incidents; and Separation standards.

ENR 2. Air Traffic Services Airspace - Detailed description of Flight information regions (FIR); Terminal control areas (TMA); and other regulated airspace.

ENR 3. ATS Routes - Detailed description of ATS routes; Area navigation routes; Helicopter routes; Other routes; and En-route holding.

Note: other types of routes which are specified in connection with procedures for traffic to and from aerodromes/heliports are described in the relevant sections and subsections of Part 3 - Aerodromes.

ENR 4. Radio Navigation Aids/Systems - Radio navigation aids-en-route; Special navigation systems; Name-code designators for significant points; and Aeronautical ground lights - en-route.

ENR 5. Navigation Warnings - Prohibited, restricted and danger areas; Military exercise and training areas; Other activities of a dangerous nature; Air navigation obstacles - en-route; Aerial sporting and recreational activities; and Bird migration and areas with sensitive fauna.

ENR 6. En-route charts. En-route chart - Hong Kong.

3.1.3 **Part 3 - Aerodrome (AD)**

Part 3 consists of four sections containing information as briefly described hereafter.

AD 0. Table of Contents to Part 3.

AD 1. Aerodromes/Heliports - Introduction - Aerodrome/heliport availability; Rescue and fire fighting services and snow plan; Index to aerodromes and heliports; and Grouping of aerodromes/ heliports.

AD 2. Aerodromes - Detailed information about aerodromes, listed under 24 subsections.

AD 3. Heliports - Detailed information about heliports (not located at aerodromes).

3.2 **Regular Amendment Interval**

Regular amendments to the AIP will be issued once every 28 days. The publication dates will be on each of the AIRAC effective dates.

## 4 Service to contact in case of detected AIP error or omissions

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

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Air Traffic Management Division
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Civil Aviation Department Headquarters
1 Tung Fai Road
Hong Kong International Airport
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Email: aic@cad.gov.hk

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## GEN 0.2 RECORD OF AIP AMENDMENTS

| AIP AMENDMENT | | | | |
|---|---|---|---|---|
| **NR/Year** | **Publication date** | **Effective date** | **Date inserted** | **Inserted by** |
| Up to 12 / 24 | Previously Entered | | | |
| 1 / 25 | 28 NOV 2024 | 23 JAN 2025 | | |
| 2 / 25 | 26 DEC 2024 | 20 FEB 2025 | | |
| 3 / 25 | 23 JAN 2025 | 20 MAR 2025 | | |
| 4 / 25 | 20 FEB 2025 | 17 APR 2025 | | |
| 5 / 25 | 20 MAR 2025 | 15 MAY 2025 | | |
| 6 / 25 | 17 APR 2025 | 12 JUN 2025 | | |
| 7 / 25 | 15 MAY 2025 | 10 JUL 2025 | | |
| 8 / 25 (AIRAC) | 12 JUN 2025 | 7 AUG 2025 | | |
| 9 / 25 | 10 JUL 2025 | 4 SEP 2025 | | |
| 10 / 25 | 7 AUG 2025 | 2 OCT 2025 | | |
| 11 / 25 (AIRAC) | 4 SEP 2025 | 30 OCT 2025 | | |
| 12 / 25 | 2 OCT 2025 | 27 NOV 2025 | | |
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## GEN 0.3 RECORD OF AIP SUPPLEMENTS

Record of AIP Supplements as at 2 OCT 25

| *NR/Year* | *Subject* | *AIP Section(s) affected* | *Period of validity* | *Cancellation record* |
|---|---|---|---|---|
| 08/23 | Construction of the Integrated Waste Management Facilities | ENR | UFN | |
| 12/24 | Hong Kong International Airport Paved Areas Adjacent to the Centre RWY (RWY 07C/25C) | AD | UFN | |
| 15/24 | Rock Blasting | ENR | UFN | |
| 05/25 | Temporary Closure of Eastern Helipad in Sheung Wan/ Sky Shuttle Heliport (VHSS) | AD | UFN | |
| 06/25 | Tentative Operational Hours of Sheung Wan/ Sky Shuttle Heliport (VHSS) | AD | UFN | |
| 08/25 (AIRAC) | Replacement of Tung Lung (TD) DVOR/DME | ENR | Until 18 MAR 2026 | |
| 11/25 | Mass Small Unmanned Aircraft (SUA) Operation in Hong Kong Disneyland | ENR | Until 19 JUN 2026 | |
| 17/25 | High Altitude Small Unmanned Aircraft (SUA) Operation in Kwu Tung, Fanling and Tuen Mun, New Territories, Hong Kong | ENR | Until 8 JUN 2026 | |
| 18/25 | Mass Small Unmanned Aircraft (SUA) Operation in Hong Kong Disneyland | ENR | Until 4 JAN 2026 | |
| 20/25 | Hong Kong International Airport Runway Closure Programme | AD | UFN | |
| 21/25 | Marine and Land Obstruction in the Vicinity of Hong Kong International Airport | ENR | UFN | |
| 22/25 | Implementation of Low-Altitude Economy Regulatory Sandbox Pilot Projects Using Small Unmanned Aircraft (SUA) | ENR | UFN | |
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## GEN 0.5 LIST OF HAND AMENDMENTS TO THE AIP

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# GEN 1 NATIONAL REGULATIONS AND REQUIREMENTS

## GEN 1.1 DESIGNATED AUTHORITIES

### 1 Civil Aviation

| | |
|---|---|
| Postal Address: | Director-General of Civil Aviation<br>Civil Aviation Department Headquarters<br>1 Tung Fai Road<br>Hong Kong International Airport<br>Lantau<br>Hong Kong |
| Telephone Number: | +852 2910 6350 |
| Telefax Number: | +852 2910 6351 |
| AFS Address: | VHHHYAYX |
| Electronic Mail Address: | enquiry@cad.gov.hk |
| Website Address: | http://www.cad.gov.hk |

### 2 Meteorology

| | |
|---|---|
| Postal Address: | Director of the Hong Kong Observatory<br>Hong Kong Observatory<br>134A Nathan Road<br>Kowloon<br>Hong Kong |
| Telephone Number: | +852 2926 8200 |
| Telefax Number: | +852 2311 9448 |
| AFS Address: | VHHHYMYX |
| Electronic Mail Address: | mailbox@hko.gov.hk |
| Website Address: | http://www.weather.gov.hk |

### 3 Customs

| | |
|---|---|
| Postal Address: | Commissioner of Customs and Excise<br>Customs Headquarters Building<br>222 Java Road<br>North Point<br>Hong Kong |
| Telephone Number: | +852 2815 7711 |
| Telefax Number: | +852 2542 3334 |
| Electronic Mail Address: | customsenquiry@customs.gov.hk |
| Website Address: | http://www.customs.gov.hk |

**4 Immigration**

| | |
|---|---|
| Postal Address: | Director of Immigration<br>Immigration Headquarters<br>61 Po Yap Road<br>Tseung Kwan O<br>New Territories |
| Telephone Number: | +852 2824 6111 |
| Telefax Number: | +852 2877 7711 |
| Electronic Mail Address: | enquiry@immd.gov.hk |
| Website Address: | http://www.immd.gov.hk |

**5 Health**

| | |
|---|---|
| Postal Address: | Director of Health<br>Wu Chung House<br>213 Queen's Road East<br>Wan Chai<br>Hong Kong |
| Telephone Number: | +852 2961 8989 |
| Telefax Number: | +852 2836 0071 |
| Electronic Mail Address: | enquiries@dh.gov.hk |
| Website Address: | http://www.dh.gov.hk |

**6 Airport Charges**

| | |
|---|---|
| Postal Address: | Chief Executive Officer<br>Airport Authority Hong Kong<br>HKIA Tower<br>1 Sky Plaza Road<br>Hong Kong International Airport<br>Lantau<br>Hong Kong |
| Telephone Number: | +852 2188 7712 |
| Telefax Number: | +852 2802 7703 |
| Electronic Mail Address: | ceooffice@hkairport.com |
| Website Address: | http://www.hkairport.com |

**7 Enroute Charges**

| | |
|---|---|
| Postal Address: | Director-General of Civil Aviation<br>Civil Aviation Department Headquarters<br>1 Tung Fai Road<br>Hong Kong International Airport<br>Lantau<br>Hong Kong |
| Telephone Number: | +852 2910 6350 |
| Telefax Number: | +852 2910 6351 |
| AFS Address: | VHHHYAYX |

| | |
|---|---|
| Electronic Mail Address: | enquiry@cad.gov.hk |
| Website Address: | http://www.cad.gov.hk |

**8 Veterinary and Agriculture**

| | |
|---|---|
| Postal Address: | Director of Agriculture, Fisheries and Conservation<br>5/F Cheung Sha Wan Government Offices<br>303 Cheung Sha Wan Road<br>Kowloon<br>Hong Kong |
| Telephone Number: | +852 2150 6645 |
| Telefax Number: | +852 2311 3731 |
| Electronic Mail Address: | mailbox@afcd.gov.hk |
| Website Address: | http://www.afcd.gov.hk |

**9 Aircraft Accident and Incident Investigation**

| | |
|---|---|
| Postal Address: | Chief Accident and Safety Investigator<br>Level G, Facility Building<br>1 Tung Fai Road<br>Hong Kong International Airport<br>Lantau<br>Hong Kong |
| Telephone Number: | +852 9518 5800 (24 hours) |
| Telefax Number: | +852 2910 6049 (local)<br>+852 3912 4848 (international) |
| AFS Address: | VHHHYLYX |
| Electronic Mail Address: | ACCID@tlb.gov.hk |
| Website Address: | https://www.tlb.gov.hk/aaia/eng/index.htm |

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# GEN 1.2 ENTRY, TRANSIT AND DEPARTURE OF AIRCRAFT

## 1 General

1.1 All flights to or from Hong Kong and through Hong Kong airspace shall comply with the requirements of any law or instrument having the force of law, for the time being in force, relating to air navigation and air transport.

1.2 Fixed wing aircraft landing in or departing from Hong Kong must first land at or depart from Hong Kong International Airport.

1.3 Under Section 3 of the Civil Aviation (Aircraft Noise) Ordinance (Cap.312), a subsonic jet aircraft must not land or take off in Hong Kong unless there is in force in respect of that aircraft a noise certificate issued by the aeronautical authority of a country which is a party to the Convention on International Civil Aviation or other documentary proof of compliance by the aircraft with the Chapter 3 standards of noise.

(Note: “Chapter 3 standards of noise” means the standards of noise specified in Volume I, Part II, Chapter 3 of Annex 16 to the Convention on International Civil Aviation.)

1.4 The noise certificate or documentary proof of compliance must be carried on the aircraft and must be produced by the commander of the aircraft for inspection if he is requested to do so by any authorized officer.

1.5 The regulations governing the licensing of air services are contained in the Air Transport (Licensing of Air Services) Regulations (Cap. 448 sub. leg. A). An air service means any service performed by any aircraft for hire or reward.

1.6 The Air Transport (Licensing of Air Services) Regulations and the Civil Aviation (Aircraft Noise) Ordinance can be viewed online:

https://www.elegislation.gov.hk/

1.7 Operators and their handling agents should direct all applications and enquiries concerning the operation of scheduled, non-scheduled and general aviation flights to and from Hong Kong, including additional flights and schedule changes, to the Air Services and Safety Management Division at telephone number (852) 2910 6648 or fax number (852) 2877 8542. Please note that enquiries and applications will be processed during normal office hours.

## 2 Insurance Requirements for Civil Aircraft

2.1 Under the Civil Aviation (Insurance) Order (Cap. 448 sub. leg. F), all civil aircraft, whether operating commercial or non-revenue flights, are required to have a Combined Single Limit (CSL) insurance meeting the following requirements:

a) Subject to para c) below, the CSL should cover the operators' liabilities in respect of third party, passenger, baggage, cargo and mail.

b) It may include other liability items except the liability in respect of damage to the hull of the operators' aircraft.

c) If an operator declares in writing that the aircraft does not carry any passenger, baggage, cargo or mail, as the case may be, they will be allowed not to include those items in the CSL.

d) The insurance cover must be on a per occurrence basis. The minimum CSLs required are as follows:

| Aircraft maximum ramp or taxi weight, whichever is greater (if not applicable, maximum take-off weight or maximum weight, whichever is the greater), as stipulated in its Manufacturer's Flight Manual or Operations Manual | Applicable amount (equivalent to) |
|---|---|
| Not exceeding 5 700 kg | US$ 15 000 000 |
| Exceeding 5 700 kg but not exceeding 10 000 kg | US$ 25 000 000 |
| Exceeding 10 000 kg but not exceeding 28 000 kg | US$ 60 000 000 |
| Exceeding 28 000 kg but not exceeding 100 000 kg | US$ 200 000 000 |
| Exceeding 100 000 kg but not exceeding 170 000 kg | US$ 500 000 000 |
| Exceeding 170 000 kg | US$ 1 000 000 000 |

2.2 Any aircraft not complying with these insurance requirements will not be allowed to land or take off in Hong Kong. However, this does not apply to an aircraft in emergency.

2.3 Operators are reminded that documentary proof is required from the insurance company concerned. It is incumbent on the operator that material available to the Civil Aviation Department is current. Further, operators are to provide evidence of continued insurance cover prior to the expiry of the original policy.

2.4 The Civil Aviation (Insurance) Order can be viewed online:

https://www.elegislation.gov.hk/

**3 Scheduled Air Services**

3.1 GENERAL

3.1.1 The Air Transport (Licensing of Air Services) Regulations require that scheduled air services to and from Hong Kong by aircraft registered in a country or place other than Hong Kong may not be operated except under and in accordance with the provisions of an operating permit which has been granted by the Director-General of Civil Aviation.

3.1.2 The information and documents required for the application of an operating permit are available online at http://www.cad.gov.hk/application/checklist_scheduled_service.zip

3.1.3 The application together with the required documents should be submitted via the online E-filing system. Information regarding the E-filing System and how to open a user account is at http://www.cad.gov.hk/english/efiling_home.html

3.1.4 An application for the operating permit must be submitted to the Director-General of Civil Aviation at least one month before the anticipated commencement date of the scheduled air services.

3.2 SUMMARY OF DOCUMENTS TO BE PRESENTED BY AIRCRAFT CAPTAINS OR OTHER AUTHORISED AGENTS

3.2.1 It is necessary that the undermentioned principal documents (standard ICAO format) be submitted by Airline Operators to cover entry and departure of their aircraft to and from Hong Kong. Responsibility for their correct presentation and submission is vested in the Captain of the aircraft.

3.2.2 Aircraft Arrival Documents:-

| Required by | General Declaration | Cargo Manifest |
|---|---|---|
| Customs & Excise Department | - | 3 |
| Immigration Department | 1 | - |

3.2.3 Aircraft Departure Documents:-

| Required by | General Declaration | Cargo Manifest |
|---|---|---|
| Customs & Excise Department | - | 3 |
| Immigration Department | 1 | - |

3.2.4 In addition to the requirements listed in para 3.2.2 and 3.2.3 above, relevant documents covering freight and unaccompanied baggage (e.g. consular invoices, licences, permits etc.) must be submitted to the Customs Authorities for necessary checking and clearance.

**4 Non-Scheduled Flights**

4.1 GENERAL

4.1.1 The Air Transport (Licensing of Air Services) Regulations require that any person wishing to use aircraft in Hong Kong for the provision of non-scheduled air services for hire or reward must obtain a permit from the Director-General of Civil Aviation.

4.1.2 The information and documents required for the application of a permit are available online at http://www.cad.gov.hk/application/checklist_charter_service.zip

4.1.3 The application together with the required documents should be submitted via the online E-filing system. Information regarding the E-filing System and how to open a user account is at http://www.cad.gov.hk/english/efiling_home.html

4.2 APPLICATIONS

4.2.1 An application for the operation of non-scheduled air services to and from Hong Kong must be submitted to the Director-General of Civil Aviation at least 3 working days before the anticipated arrival/departure date of the aircraft in Hong Kong. For services operated by new or infrequent operators, it is advisable that an application be submitted at least two weeks prior to the date of operation. Partially or incorrectly completed applications will incur delay in processing.

4.2.2 Applications for non-scheduled air services for the carriage of both passengers and cargo will not normally be considered.

4.2.3 Operators who propose to operate a series of flights are advised to discuss their proposals with the Director-General of Civil Aviation well in advance of the flights taking place to secure approval in principle.

4.2.4 The Director-General of Civil Aviation reserves the right to approve or disapprove any application he sees fit.

4.3 DOCUMENTS REQUIRED FOR CLEARANCE OF AIRCRAFT

4.3.1 The requirements are the same as for scheduled flights (see para 3.2).

4.4 CONDITIONS GOVERNING THE OPERATION OF NON-SCHEDULED AIR SERVICES

4.4.1 In conformity with Article 5 of the Chicago Convention, applications for non-scheduled air services for the carriage of passengers or cargo will normally be approved if the Director-General of Civil Aviation is satisfied that the applicant has reasonably demonstrated that corresponding scheduled services cannot satisfy a genuine demand by providing the service or capacity required, that such non-scheduled services do not affect the development of scheduled services and, in the case of applications made by airlines based outside Hong Kong, that the aviation authorities of the country or place in which the airline is based would afford no less favourable treatment to a Hong Kong based airline making a similar application.

4.4.2 Notwithstanding para 4.2.2 above, the following passengers or cargo may be carried without charge on non-scheduled air services for which a permit has been issued by Director-General of Civil Aviation:

a) Infants under 2 years of age;

b) directors, or employees of the permit-holder, charterers or any travel organiser to whom the charterer has resold accommodation on the aircraft travelling on business;

c) tour conductors in charge of and conducting a group of not less than 15 persons travelling together, provided that not more than one such person may be carried pursuant to this condition for every 15 members of the groups;

d) cargo for the sole use of the permit-holder in connection with the services to which the permit relates, or for the sole use of the charterer or of any travel organiser to whom the charterer has resold accommodation on the aircraft, in connection with facilities offered to passengers carried in accordance with the terms of the permit;

e) authorized representatives of an appropriate national aeronautical authority travelling in the course of their duties;

f) (for cargo charter flights only) persons with special skills or knowledge, including security guards, who may be required by the charterer or consignor to accompany the cargo in order to take charge of it or protect it during loading, in-flight, transit, or on arrival at its destination. This category includes such persons being carried on any outward flight for the purpose of accompanying cargo on their return flight or being carried on a return flight after having accompanied cargo on their outward flight;

4.4.3 Permits may contain such conditions as the Director-General of Civil Aviation thinks fit having regard to the nature and circumstances of the applications. Failure to comply with these conditions may result in prosecution under the Air Transport (Licensing of Air Services) Regulations.

4.4.4 Permits for non-scheduled services are granted on condition that the holder does not advertise such services for sale direct to the general public except for domestic services.

**5 Flights Not Operated for Hire or Reward**

5.1 Prior clearance from the Director-General of Civil Aviation is required for the operation of flights to and from Hong Kong for purposes other than the carriage of passengers, cargo or mail for hire or reward. Details of such flights (see para 5.2 below), should be submitted to the Director-General of Civil Aviation during office hours before the anticipated arrival/departure date of the flight in Hong Kong via the E-filing System. Information regarding the E-filing System and how to open a user account is at https://www.cad.gov.hk/english/efiling_home.html

5.2 The following information and documents should be provided:

a) type of aircraft;

b) nationality and registration marks;

c) name of operator;

d) name of handling agent;

e) proposed dates and times of arrival and departure;

f) confirmation that there are no fare-paying passengers or commercial cargo on board;

g) completed Declaration of Compliance with the Civil Aviation (Insurance) Order (CAP 448F) form (DCA 41), which is available online at http://www.cad.gov.hk/application/insurance_declaration.doc;

h) documentary evidence from the operator's insurance company to show that the aircraft carries appropriate insurance cover for any accident, incident or occurrence (see para 2); and

i) confirmation that the aircraft meets the requirements for the carriage of radio navigation aids as specified in para 3 in GEN 1.5.

5.3 To avoid delay, it is advisable that the above information/documents be submitted at least 3 working days before the arrival/departure date of the flight.

**6 Documentary Requirements for the Clearance of General Aviation Aircraft and Helicopters**

6.1 The requirements are the same as for scheduled flights (see para 3.2).

**7 Health Requirements**

7.1 Strict compliance with the provisions of the International Health Regulations of the World Health Organisation is maintained.

7.2 Disinfection of an aircraft, when required, should be carried out using methods approved by the World Health Organisation.

**8 Overflights**

8.1 For all flights intending to transit Hong Kong airspace, but not landing in Hong Kong, prior permission is ***not*** required except for a flight in one or more of the following categories:

a) a flight by a state aircraft including military aircraft overflying the airspace above the territory of the Hong Kong Special Administrative Region (i.e. flights that will overfly Hong Kong territory, including the outlying islands and territorial waters);

b) a flight by an aircraft carrying munitions of war;

c) a flight by an aircraft carrying dangerous goods;

d) a flight notified as such by the Director-General of Civil Aviation.

8.2 Overflight Permission Procedure

a) A request for overflight permission for an aircraft under para 8.1 a) above must be made via the appropriate diplomatic channels.

b) A request for overflight permission for an aircraft under para 8.1 b) and c) above must be received at least 11 clear working days prior to the first flight of which the permission is required. Application should be submitted to:

Dangerous Goods Office
Civil Aviation Department Headquarters
1 Tung Fai Road
Hong Kong International Airport
Lantau
Hong Kong

Tel: +852 2910 6856 / 2910 6857 / 2910 6855
Fax: +852 2795 8469

c) Please refer to the relevant AICs of *"Permission for Carriage of Dangerous Goods in Aircraft"* and *"Permission for Carriage of Munitions of War in Aircraft"* for further details.

# GEN 1.3 ENTRY, TRANSIT AND DEPARTURE OF PASSENGERS AND CREW

## 1 Customs Requirements

1.1 Customs formalities are conducted in conformity with standard international procedure, and as far as possible, in accordance with the Standards and Recommended Practices laid down in Annex 9 to the Convention on International Civil Aviation. The customs officers at the airport are responsible for the enforcement of various legislations of Hong Kong affecting importation and exportation of articles carried by passengers and crew.

1.2 Hong Kong is essentially a free port and does not levy any Customs tariff on imports and exports. Excise duties are levied only on four types of dutiable commodities, namely liquors, tobacco, hydrocarbon oils and methyl alcohol. Duty-free concessions for incoming passengers are set out below -

*Alcoholic Liquor*

A passenger aged 18 or above is allowed to bring into Hong Kong, for his own use, **1 litre** of alcoholic liquor with an alcoholic strength above 30% by volume measured at a temperature of 20°C exempted from duty.

If the passenger holds a Hong Kong Identity Card, he must have spent 24 hours or longer outside Hong Kong.

*Tobacco*

A passenger aged 18 or above is allowed to bring into Hong Kong, for his own use, the following quantity of tobacco products exempted from duty :

- **19** cigarettes; or
- **1** cigar or **25** grams of cigars; or
- **25** grams of other manufactured tobacco.

## 2 Immigration Requirements

2.1 Immigration into Hong Kong is governed by the Immigration Ordinance, Cap. 115. Immigration control is exercised by the Immigration Department, Immigration Headquarters, 61 Po Yap Road, Tseung Kwan O, New Territories, telephone no. 2824 6111, fax no. 2877 7711, email: enquiry@immd.gov.hk, website: http://www.immd.gov.hk. The information contained in the following paragraphs is intended only as a guide, full details may be obtained from the Immigration Department.

2.2 **Advance Passenger Information System**

Upon the implementation of the Advance Passenger Information ("API") System and the commencement of Immigration (Advance Passenger Information) Regulation ("Regulation"), aircraft operators should comply with the requirements stipulated in the Regulation. For more details about the API System and the Regulation, please visit the website of Hong Kong Immigration Department.

https://www.immd.gov.hk/eng/useful_information/apis.html

2.3 **Passport Requirements and Travel Documents**

Arriving passengers must have valid travel documents, with visas/entry permits where required, and adequate means of support for their proposed stay. Travel documents issued by the following authorities are not acceptable. Visas should be endorsed on an affidavit in lieu of passport.

Imamate (or Emamate) of Oman State

Venda

Maori Kingdom of Tetiti

Turkish Republic of Northern Cyprus

Yemen (Royalist authorities)

Party of Democratic Kampuchea (Khmer Rouge) in Pailin, Northwest Cambodia

Taiwan

2.4 **Visas Requirement**

2.4.1 Visas are NOT REQUIRED for the following categories of passengers:-

i) Holders of the following valid documents

- Hong Kong Special Administrative Region passport
- Hong Kong Document of Identity for Visa Purposes provided that the holder's permitted limit of stay in the HKSAR has not expired
- Hong Kong Re-entry Permit
- Hong Kong Seaman's Identity Book
- Hong Kong Permanent Identity Card
- Hong Kong Identity Card bearing an 'R' code issued on or after January 2, 1999
- Travel document bearing one of the following endorsements:
  a) "Holder's eligibility for Hong Kong permanent identity card verified"
  b) "The holder of this travel document has the right to land in Hong Kong. (Section 2AAA, Immigration Ordinance, Cap. 115, Laws of Hong Kong)"
  c) "Unconditional stay - The holder does not require a visa to re-enter Hong Kong within twelve months of the date of his last departure"
- United Nation Laissez-Passer (on official UN business in Hong Kong or in transit to and from a third place for official UN business)

ii) Non-permanent Hong Kong residents whose permitted limit of stay has not expired.

iii) National of Britain (British citizens) coming for a stay not exceeding 180 days.

iv) Nationals of the following countries (territory) or holders of the following travel documents coming for a stay not exceeding 90 days:-

| | | |
|---|---|---|
| Andorra | Finland | Norway |
| Anguilla | France | Papua New Guinea |
| Antigua and Barbuda | Germany | Pitcairn, Henderson, Ducie & Oeno Islands |
| Argentina | Gibraltar | Poland |
| Australia | Greece | Portugal |
| Austria | Greenland | Romania |
| Bahamas | Grenada | San Marino |
| Barbados | Guyana | Saudi Arabia |
| Belgium | Hungary | Seychelles |
| Belize | Iceland | Singapore |
| Bermuda | Ireland (Republic of) | Slovak Republic |
| Botswana | Israel | Slovenia |
| Brazil | Italy | Spain |
| Britain (British Overseas Territories citizens, British Overseas citizens, British subjects and British Protected persons) | Jamaica | St Helena |
| British Antarctic Territory | Japan | St Helena Dependencies (Ascension, Tristan Da Cunha) |
| British Indian Ocean Territory | Kenya | St Kitts and Nevis |
| British Virgin Islands | Kiribati | St Lucia |
| Brunei Darussalam | Korea (Republic of) | St Vincent and the Grenadines |
| Bulgaria | Latvia | Sweden |
| Canada | Liechtenstein | Switzerland |
| Cayman Islands | Lithuania | Tanzania |
| Chile | Luxembourg | The South Georgia and the South Sa ndwich Islands |
| Colombia | Malawi | The Sovereign Base Areas of Akrotiri and Dhekelia |
| Croatia | Malaysia | Tonga * |
| Cyprus (Republic of) | Maldives | Trinidad and Tobago |
| Czech Republic | Malta | Türkiye |
| Denmark | Mauritius | Turks and Caicos Islands |
| Dominica (Commonwealth of) | Mexico | Tuvalu # |

| | | |
|---|---|---|
| Ecuador | Monaco | Uruguay |
| Egypt | Montserrat | U.S.A. @ |
| Estonia | Namibia | Vanuatu |
| Falkland Islands & Dependencies | Nauru | Venezuela |
| Faroe Islands | Netherlands | Zambia |
| Fiji | New Zealand | Zimbabwe |

** except holders of Tongan National passports and Tongan Protected Person passports*
*# except holders of travel documents with national status stated as "I-TUVALU"*
*@ except holders of U.S.A. Diplomatic passports*

v) Nationals of the following countries (territory) or holders of the following travel documents coming for a stay not exceeding 30 days:

| | |
|---|---|
| Armenia | Kuwait |
| Bahrain | Morocco |
| Belarus | Oman |
| Bolivia | Panama |
| Cape Verde (Republic of) | Paraguay |
| Costa Rica * | Peru |
| Dominican Republic | Qatar |
| El Salvador | Samoa |
| Georgia | South Africa |
| Guatemala | Thailand |
| Honduras | Tunisia |
| Indonesia | Uganda |
| Jordan | United Arab Emirates |

** visa exemption is not applicable if holding Costa Rican Provisional Passport*

vi) Nationals of the following countries (territory) or holders of the following travel documents coming for a stay not exceeding 14 days:

| | |
|---|---|
| Albania * | Marshall Islands (Republic of) |
| Algeria | Mauritania |
| Benin | Micronesia (Federated States of) |
| Bhutan | Mongolia |
| Bosnia and Herzegovina | Montenegro (Republic of) |
| Burkina Faso | Mozambique |
| Chad | Niger |
| Comoros | North Macedonia |
| Djibouti | Palau |
| Equatorial Guinea | Philippines |
| Gabon | Russian Federation |
| Guinea | Sao Tome and Principe |
| Haiti | Serbia (Republic of) * |
| India ^ | Suriname |
| Kazakhstan | Ukraine |
| Lesotho | US Trust Territory of Pacific Islands (holders of US Trust Territory passports only) |
| Madagascar | Vatican City |
| Mali | |

** visa exemption is applicable to holders of biometric passports only*
*^ Indian nationals are required to apply for and successfully complete pre-arrival registration (PAR) online before they can visit Hong Kong visa free*

vii) Nationals of other countries not mentioned in para. 2.4.2 do not require visas for a visit not exceeding seven days.

viii) Holders of Diplomatic and Official passports of the following countries coming for a stay not exceeding 30 days:
Pakistan

ix) Holders of Diplomatic and Official passports of the following countries coming for a stay not exceeding 14 days:

| | |
|---|---|
| Angola | Laos |
| Azerbaijan | Moldova (Republic of) |
| Bangladesh | Myanmar |
| Burundi | Nepal |
| Cambodia | Sri Lanka |
| Cameroon | Tajikistan |
| Congo (Republic of) | Togo |
| Ethiopia | Turkmenistan |
| Ghana | Uzbekistan |
| Kyrgyzstan | Vietnam |

x) The visa waiver concessions for para. 2.4.1 iii) to ix) are subject to the following conditions:-

(a) Onward or return tickets must be held. (Travellers to China or Macau without onward bookings may benefit from the visa waiver concession, provided entry to China or Macau is assured).

(b) The passengers must possess adequate means of support.

2.4.2 Visa is ALWAYS REQUIRED for the following categories of passengers:

i) Nationals of Afghanistan, Angola, Azerbaijan, Bangladesh, Burundi, Cambodia, Cameroon, Central African Republic, Congo (Democratic Republic of), Congo (Republic of), Cote d' Ivoire, Cuba, Eritrea, Eswatini, Ethiopia, Gambia, Ghana, Guinea-Bissau, Iran, Iraq, Korea (Democratic People's Republic of), Kyrgyzstan, Laos, Lebanon, Liberia, Libya, Moldova (Republic of), Myanmar, Nepal, Nicaragua, Nigeria, Pakistan, Palestine, Rwanda, Senegal, Sierra Leone, Solomon Islands, Somalia, South Sudan, Sri Lanka, Sudan, Syria, Tajikistan, Togo, Turkmenistan, Uzbekistan, Vietnam and Yemen (Republic of).

ii) Holders of Albanian non-biometric passports.

iii) Holders of Costa Rican Provisional passports or "Documento de Identidad Y Viaje" issued by Costa Rican Government.

iv) Holders of Special Peruvian passports.

v) Holders of Serbian non-biometric passports or Serbian passports issued by the Coordination Directorate in Belgrade.

vi) Holders of Tongan National Passports and Tongan Protected Persons passports.

vii) Holders of travel documents with national status stated as "I-TUVALU".

viii) Holders of Uruguayan passport issued under Decree 289/90.

ix) Holders of U.S.A. Diplomatic passports.

x) Holders of Vatican Service passports.

xi) Holders of all 'stateless' travel documents.

2.5 **Seamen**

2.5.1 Seamen who are visa-free nationals do not require visas when travelling to or through Hong Kong.

2.5.2 Seamen who are visa nationals or stateless person, who hold seafarers' identity documents issued by countries that ratified the ILO Convention 108 do not require visas when travelling to or through Hong Kong if they:

i) Transit Hong Kong within 48 hours to join a vessel elsewhere which is registered in any of the territories which have ratified ILO Convention 108.

ii) Pass through Hong Kong on repatriation from a ship.

iii) In transit to join a vessel in Hong Kong which is registered in any of the territories which have ratified ILO Convention 108.

(Note: These arrangements are not applicable to nationals of Angola, Cameroon, Ghana, Guinea-Bissau, Iran, Iraq, Liberia, Sri Lanka).

2.5.3 Seamen of Mainland who hold PRC passports or seamen books do not require visas when travelling to or through Hong Kong subject to the production of letters of indemnity from the local agents.

2.5.4 Seamen covered in para. 2.5.1 and 2.5.2 do not require visas when arriving to join vessels in Hong Kong even though they do not satisfy the normal requirement to hold onward or return tickets. However, seamen entering under these circumstances must be met on arrival by a representative of the shipping company concerned, or its local agent who will be required to provide a letter of indemnity against the cost of maintenance and repatriation of the seamen if they fail to join a ship in Hong Kong. Such seamen may also transit Hong Kong without visas for up to 48 hours on their way to or from vessels in other countries.

2.6 **Crew Member Certificates**

In general, flight crew members who:

a) is in airline uniform; and

b) on production of their valid Crew Member Certificate issued by Civil Aviation Department; or

c) on production of their valid travel document showing occupation in an aircrew grade or capacity or holds an airline identification card, crew card, crew certificate, crew license or similar airline identification document; may be accepted as a genuine flight crew member and accorded temporary admission. Unless exemption is granted, this concession does not apply to the crew of private aircraft, who are to be treated as visitors, nor to those covered by para. 2.4.2.

2.7 **Transit Passengers**

2.7.1 Passengers holding stateless documents, and nationals of the countries listed at para. 2.4.2 require transit visas to land in Hong Kong in transit.

2.7.2 Visas are not required for passengers who are in transit and remain on the airside (except Afghanistan, Angola, Bangladesh, Burundi, Cameroon, Central African Republic, Congo (Democratic Republic of), Congo (Republic of), Cote d' Ivoire, Eritrea, Eswatini, Ethiopia, Gambia, Ghana, Guinea-Bissau, Iran, Iraq, Korea (Democratic People's Republic of), Liberia, Libya, Nepal, Nigeria, Pakistan, Rwanda, Sierra Leone, Somalia, South Sudan, Sri Lanka, Sudan, Syria, Togo and Yemen (Republic of)). Personnel of airline company must keep the passengers from presenting to immigration authorities.

2.8 **Airlines Responsibility**

2.8.1 Except for passengers who have the right of abode or right to land in Hong Kong, person who arrives in Hong Kong in an aircraft does not have a valid travel document, the owner of the aircraft and his agent shall be guilty of an offence and shall be liable on conviction to a fine of level 6, under Cap. 115 Immigration Ordinance and Schedule 8 of Cap. 221, Criminal Procedure Ordinance. Airlines shall be held responsible for removing such passengers from Hong Kong if they are found inadmissible.

2.8.2 To ensure the compliance of aircraft operators with the relevant requirements, some offences are set out in the Immigration (Advance Passenger Information) Regulation ("Regulation"). For more details about the API System and the Regulation, please visit the website of Hong Kong Immigration Department.

https://www.immd.gov.hk/eng/useful_information/apis.html

**3 Public Health Requirements**

3.1 Strict compliance with relevant provisions of the International Health Regulations of the World Health Organisation and the Prevention and Control of Disease Ordinance (Cap. 599) is maintained. Facilities are available for vaccination and the issuance of an international certificate of vaccination.

3.2 ILLNESS OR DEATH ON BOARD

3.2.1 The pilot in command of an incoming aircraft, who has a seriously ill or dead person on board, must give as much notice as possible by radio to the Airport Authorities of such occurrence. Relevant information concerning the necessity for having a doctor or ambulance standing by would facilitate attention or removal as the case may be. Where an aircraft registered in Hong Kong is involved, conformity with the provision of the Civil Aviation (Births, Deaths and Missing Persons) Regulations 1984 (CAP. 173 Section 2) is essential.

**4 Air Passenger Departure Tax**

4.1 Under the Air Passenger Departure Tax Ordinance (Cap. 140) every passenger departing from Hong Kong by aircraft at Hong Kong International Airport shall pay a departure tax at the rates approved from time to time by the Hong Kong Government unless specifically exempted for payment by the provisions of the Ordinance (see GEN 4.1 para. 4 for details).

## 5 Procedures for General Aviation and Private Flights

5.1 DEPARTING AIRCRAFT

5.1.1 The pilot in command, other crew members and all passengers are required to pass through the normal Immigration and Security Departure channels in the Hong Kong Business Aviation Centre or Passenger Terminal Building, as appropriate and shall then be transported directly to the aircraft by the ground handling agent.

5.2 ARRIVING AIRCRAFT

5.2.1 After landing, the aircraft shall be taxied to the parking area as directed by Air Traffic Control, where it will be met by the Police Airport Security Unit who will record details of the flight and those on board.

5.2.2 The pilot in command, other crew members and all passengers shall be transported by the ground handling agent to the Hong Kong Business Aviation Centre or Passenger Terminal Building for Customs, Immigration and Quarantine (CIQ) clearance.

5.3 HELICOPTER FLIGHTS

5.3.1 For flights on cross-boundary flight stopover for Customs, Immigration and Quarantine (CIQ) clearance, the helicopter shall park at the designated location and the pilot in command, any crew and all passengers shall comply with the appropriate CIQ clearance requirements.

5.3.2 For all other flights, the helicopter shall park at the designated location and the pilot in command, other crew members and all passengers shall be transported by the ground handling agent to and/or from the Hong Kong Business Aviation Centre or Passenger Terminal Building for CIQ clearance.

# GEN 1.4 ENTRY, TRANSIT AND DEPARTURE OF CARGO

## 1 Customs Requirements

1.1 Customs formalities are conducted in conformity with standard international procedures, and as far as possible, in accordance with the Standards and Recommended Practices laid down in Annex 9 to the Convention on International Civil Aviation. The customs officers at the airport are responsible for the enforcement of various legislations of Hong Kong affecting importation and exportation of goods.

1.2 For reasons of health, safety, security and trade control, goods of the following categories may only be imported under valid licence:-

i) Narcotic drugs;

ii) Firearms and ammunitions;

iii) Dangerous goods;

iv) Endangered species of animals and plants;

v) Strategic commodities;

vi) Reserved commodities;

vii) Pesticides;

viii) Radioactive substances and irradiating apparatus;

ix) Pharmaceutical products and medicines;

x) Textiles; and

xi) Ozone depleting substances.

1.3 Further details of import and export regulations, controls and restrictions may be obtained from the Trade Department at Trade Department Tower, 700 Nathan Road, Kowloon (Telex 45126 CNDIHX) or the Customs & Excise Department at 3/F., Customs Headquarters Building, 222 Java Road, North Point, Hong Kong (customsenquiry@customs.gov.hk).

## 2 Agricultural Quarantine Requirements

Except under and in accordance with a special permit granted by the Agriculture, Fisheries and Conservation Department, no animal, bird or reptile which is brought into Hong Kong on board any aircraft from any place outside Hong Kong may be removed from such aircraft. Such live animals must be humanely crated in suitable containers of recommended IATA standard and consigned as manifest cargo. The special permit must also be produced to the Import Control Officer of the Agriculture, Fisheries and Conservation Department for inspection before any of the above can be removed from the aircraft.

## 3 Health Requirements

3.1 Fish, shellfish, vegetables or beverages imported from a cholera infected place or port should be declared to the Health Authorities at the Airport before unloading when required.

3.2 Under Section 14(1) of the Prevention and Control of Disease Regulation (Cap. 599A), a person shall not, without a permit in writing from the Director, knowingly import into Hong Kong -

a) a human corpse or any part of a human corpse;

b) an infectious agent;

c) any human or animal tissue, or tissue fluid, or any part of a human or animal body, that the person has reason to suspect contains an infectious agent; or

d) any excreta, secretion, blood, or blood component, that the person has reason to suspect contains an infectious agent.

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# GEN 1.5 AIRCRAFT INSTRUMENTS, EQUIPMENT, AND FLIGHT DOCUMENTS

## 1 General

1.1 The requirements of the Director-General of Civil Aviation and the general conditions under which the communication and navigation services are available for international use, as well as the requirements for the carriage of aircraft instrument, equipment and flight documents by all aircraft operating within the Hong Kong FIR are contained in the Air Navigation (Hong Kong) Order 1995.

1.2 The following are brief summaries of the requirements given in the Air Navigation (Hong Kong) Order 1995, operators should refer to that document for full details.

## 2 Notification

2.1 With reference to Schedule 6 of the Air Navigation (Hong Kong) Order 1995:

a) Hong Kong International Airport is notified for the purpose of paragraph 2(1)(c). This means all aircraft making an approach to landing at Hong Kong International Airport shall carry radio equipment capable of enabling the aircraft to make an approach to landing using the ILS, unless otherwise permitted by ATC. Fixed wing aircraft and helicopters with a maximum total weight authorized not exceeding 2 730 kg when engaged in local flying within Hong Kong are exempted from this requirement.

b) The Hong Kong Control Zone and Hong Kong Terminal Area are notified for the purposes of paragraph 2(2)(b). This means that all aircraft operating in these areas regardless of flight level or altitude shall carry a SSR 4096 code transponder capable of functioning in Mode A and C and complying with the specifications of ICAO Annex 10 Volume IV.

## 3 Radio and Radio Navigation Equipment

3.1 In addition to the requirements of para 2 above, aircraft (other than gliders) shall be equipped with the following radio and radio navigation equipment:

| | Nature of Flight | Equipment Required |
|---|---|---|
| a | Any IFR flight within controlled airspace | VHF radio operable on published frequencies, Transponder Mode 3/A and Mode C, VOR, DME |
| b | Any flight within the Hong Kong Control Zone | VHF radio operable on published frequencies, Transponder Mode 3/A and Mode C |

3.1.1 An aircraft without ADF equipment is permitted to fly within Hong Kong as NDB procedures are not used.

3.2 Aircraft with a maximum total weight authorised not exceeding 2 730 kg, when carrying out local flying within the territory of Hong Kong, are exempted from the requirement to carry VOR and DME.

3.3 SSR TRANSPONDER

3.3.1 All aircraft flying in controlled airspace within the Hong Kong FIR are required to carry Mode 3/A (4 096 codes) and Mode C transponders which comply with the specifications of ICAO Annex 10 Volume IV.

3.4 AIRBORNE COLLISION AVOIDANCE SYSTEM (ACAS / TCAS)

3.4.1 All aeroplanes engaged in commercial air transport operations in the Hong Kong FIR having a maximum certificated take-off weight in excess of 5 700 kg, or authorised to carry more than 19 passengers, shall be equipped with TCAS II meeting ICAO ACAS II standards.

3.4.2 All aeroplanes operating within Hong Kong RVSM airspace shall be equipped with TCAS II meeting ICAO ACAS II standards.

Note: With reference to ICAO Annex 10 Volume IV, TCAS II equipment shall be of Version 7.1 with effect from 1 January 2017.

3.5 AREA NAVIGATION (RNAV)

3.5.1 RNP 10

3.5.1.1 Operators of aircraft intending to operate on RNAV routes M772 and P901 within the Hong Kong FIR, shall prior to commencing operations obtain approval for RNP 10 operations from the relevant authority in the State of Registry or the State of the Operator.

3.5.2 RNP 4

3.5.2.1 Operators of aircraft intending to operate on RNAV routes L642 and M771 within the Hong Kong FIR shall, prior to commencing operations, obtain approval for RNP 4 operations from the relevant authority in the State of Registry or the State of the Operator.

3.5.3 RNP 1 SID / STAR

3.5.3.1 *Operational Approval.* Any aircraft arriving or departing HKIA other than those exempted categories of flights as specified in para 3.5.3.5 shall be equipped with appropriate systems and approved by the regulatory authority of the State of Registry/State of the Operator in accordance with ICAO RNP 1 standard for the conduct of RNP 1 SID and STAR. Carriage of a certified GNSS receiver is mandatory. Aircraft or avionics manufacturers shall provide aircraft documentation that shows compliance with the applicable criteria as appropriate. RNP 1 operational approval or compliance documentation shall be readily available for Ramp or Safety Assessment of Foreign Aircraft (SAFA) inspections conducted by the Civil Aviation Department Hong Kong.

3.5.3.2 GNSS RAIM availability prediction service and the associated NOTAM information related to GNSS availability will not be provided by the Hong Kong Civil Aviation Department. In accordance with ICAO Doc 9613, PBN Manual, aircraft operators shall subscribe the necessary information provided by other service providers to verify the RAIM availability for the intended route of flight.

3.5.3.3 RNP 1 navigation specifications are listed in ICAO Doc 9613, 'Performance-based Navigation (PBN) Manual'. The implementation procedures are given in Volume II, Part C, Chapter 3 of this document.

3.5.3.4 An operational approval issued in accordance with the ICAO Doc 9613 assumes that the operator and flight crew take into account all communication and surveillance requirements related to the relevant routes and/or airspace. Operators must therefore observe the equipment requirements when they file a flight plan. (see ENR 1.10 para. 11.3.1).

3.5.3.5 *Exemption Policy.* The following categories of flights are granted exemptions from the RNP 1 requirement, and approved to operate in / out of HKIA using contingency procedures stated in AD 2.22 para. 2.2.3 and para. 7.1.4:

a) Humanitarian or SAR flights;

b) State aircraft;

c) Flight Check;

d) Maintenance or delivery flights;

e) Air tests (e.g. post maintenance);

f) When specific prior approval has been given by Director-General of Civil Aviation.

3.5.3.6 Flights of categories specified in para 3.5.3.5 above shall indicate the status of flight in the flight applications to operate at HKIA, and in the FPL. Refer to ENR 1.10 para. 11.3.3 for details of flight planning requirements.

3.5.3.7 These procedures are intended exclusively for the purposes listed in para 3.5.3.5, and not as a means to circumvent the normal RNP 1 requirement.

3.6 REDUCED VERTICAL SEPARATION MINIMA (RVSM)

3.6.1 Operators shall obtain airworthiness and operational approval from the State of Registry or State of the Operator, as appropriate, to conduct RVSM operations.

3.6.2 The FAA is maintaining a website containing documents and policy for RVSM approval. Information may be obtained from the FAA website: https:// www.faa.gov/air_traffic/separation_standards/rvsm/

3.6.3 Operators are required to participate in the RVSM aircraft monitoring programme. This is an essential element of the RVSM implementation programme in that it confirms that the aircraft altitude-keeping performance standard is met. The Monitoring Agency for Asia Region (MAAR) processes the results of monitoring. Further information on RVSM monitoring may be obtained from the MAAR website:
http://www.aerothai.co.th/maar

3.6.4 Monitoring accomplished for other regions can be used to fulfil the monitoring requirements for the Asia region. MAAR will co-ordinate with other monitoring agencies to access this information. For monitoring services in the Asia region, operators may contact MAAR at:

| | |
|---|---|
| Telephone | +66 2 287 8154 |
| Fax | +66 2 287 8155 |
| e-mail | maar@aerothai.co.th |

3.7 AUTOMATIC DEPENDENT SURVEILLANCE BROADCAST (ADS-B)

3.7.1 All aircraft flying within Hong Kong FIR at or above F290 shall be installed with ADS-B equipages complying with the requirements stipulated in paragraph 3.7.6.

3.7.2 For all aircraft flying within Hong Kong FIR equipped with ADS-B equipages not complying with paragraph 3.7.6 the ADS-B equipages shall be:

a) deactivated; or

b) set to transmit only a value of zero for the Navigation Uncertainty Category ($NUC_p$) or Navigation Integrity Category (NIC) or Navigation Accuracy Category (NAC) or Source Integrity Level (SIL).

3.7.3 Aircraft not complying with paragraph 3.7.6 will not be accorded priority to operate in the designated airspace and flight level assignments would be subjected to air traffic conditions.

3.7.4 When an aircraft is ADS-B equipped but the equipment has become unserviceable during flight, the pilot in command or aircraft operator must inform ATC as soon as possible.

3.7.5 Operational approval from the State of Registry for ADS-B Out operation is no longer required.

3.7.6 Requirements for ADS-B Out Equipage

3.7.6.1 ADS-B equipages comply with 'RTCA DO-260 Minimum Operational Performance Standards', which is equivalent to ES Version 0 as specified in ICAO Annex 10, Volume IV, Chapter 3, Paragraph 3.1.2.8.6 and Chapter 2 of ICAO Doc 9871, or

3.7.6.2 ADS-B equipages comply with 'RTCA DO-260A Minimum Operational Performance Standards', which is equivalent to ES Version 1 as specified in ICAO Annex 10, Volume IV, Chapter 3, Paragraph 3.1.2.8.6 and Chapter 3 of ICAO Doc 9871, or

3.7.6.3 ADS-B equipages comply with 'RTCA DO-260B Minimum Operational Performance Standards', which is equivalent to ES Version 2 as specified in Chapter 4 of ICAO Doc 9871.

Note: The followings are the acceptable means of compliance to paragraphs 3.7.6.1, 3.7.6.2 or 3.7.6.3.

a) The ADS-B equipages that have been certificated as meeting the European Aviation Safety Agency - Certification Considerations for the Enhanced ATS in Non-Radar Areas using ADS-B Surveillance (ADS-B-NRA) Application via 1090 MHZ Extended Squitter (AMC 20-24), or

b) The ADS-B equipages that have been certificated as meeting the European Aviation Safety Agency - Certification Specifications and Acceptable Means of Compliance for Airborne Communications, Navigation and Surveillance (CS-ACNS) Subpart D - Surveillance (SUR) (CS-ACNS.D.ADS-B), or

c) The ADS-B equipages that have been certificated as meeting the Federal Aviation Administration - Advisory Circular No: 20-165A (or later versions) Airworthiness Approval of Automatic Dependent Surveillance - Broadcast (ADS-B) Out Systems, or

d) The ADS-B equipages that meet the equipment configuration standards in Appendix XI of Civil Aviation Order 20.18 of the Civil Aviation Safety Authority of Australia.

3.7.7 Flight Planning and Operation Requirements

3.7.7.1 Aircraft operator complying with the requirement stipulated in paragraph 3.7.6 is to indicate the appropriate ADS-B designator in item 10 of the flight plan as per ENR 1.10 para. 13.

3.7.7.2 The Aircraft Identification, not exceeding 7 characters, as entered in item 7 of the flight plan is to be replicated exactly when set in the aircraft (for transmission as Flight ID) as follows:

Either,

a) The ICAO three-letter designator for the aircraft operating agency followed by the flight identification (e.g. KLM511, BAW213, JTR25),

or,

b) The registration marking of the aircraft (e.g. EIAKO, 4XBCD, OOTEK), when the call sign used in radiotelephony consists of the registration marking alone (e.g. EIAKO), or preceded by the ICAO telephony designator for the operating agency (e.g. SVENAIR EIAKO),

Note 1: *No zeros, hyphens, dashes or spaces are to be added when the Aircraft Identification consists of less than 7 characters.*

Note 2: *Appendix 2 to PANS-ATM refers. ICAO designators and telephony designators for aircraft operating agencies are contained in ICAO Doc 8585.*

**4 Flight Documents to be Carried**

4.1 In accordance with Article 59 of the Air Navigation (Hong Kong) Order 1995, the commander of an aircraft shall, within a reasonable time after being requested to do so by an authorised person, cause to be produced to that person any of the following documents:

a) the certificates of registration and airworthiness and the noise certificate or documentary proof of compliance in respect of the aircraft;

b) the licences of its flight crew;

c) such other documents as it is required to carry in flight under the law of the country in which it is registered.

4.2 Pilots in command of general aviation aircraft, private aircraft or helicopters shall be in possession of a valid aircrew licence issued in accordance with the appropriate conventions.

**5 Holders of Foreign Pilot's Licence**

5.1 VISITING PILOTS

5.1.1 A holder of a foreign pilot's licence who wishes to operate day VFR private flights in Hong Kong registered aircraft must apply to validate his/her foreign licence in accordance with the procedures and requirements as per the requirements stated in CAD54 Part 2 Chapter 1 Section 1.8 and/or Part 2 Chapter 2 Section 2.8 as applicable (https://www.cad.gov.hk/english/pdf/CAD54.pdf).

5.1.2 The Director-General of Civil Aviation may in a particular case require the holder of a foreign licence to meet additional requirements.

5.2 INITIAL ISSUE OF A HONG KONG PROFESSIONAL PILOT'S LICENCE ON THE BASIS OF A FOREIGN PROFESSIONAL FLIGHT CREW LICENCE

5.2.1 The holder of a valid ICAO Contracting State professional flight crew licence may apply for conversion to an equivalent Hong Kong licence. However, such application will not be accepted and processed if:

a) the foreign professional pilot's licence presented is one which was issued for reasons of equivalence by the issuing authority; or

b) the applicant cannot show evidence of a genuine requirement to hold a Hong Kong professional pilot's licence and the need to exercise professional privileges of the licence on a Hong Kong registered aircraft.

5.2.2 Before a licence is issued, the Director-General of Civil Aviation requires to be satisfied that the applicant is a fit person to hold the licence and is qualified by reason of their knowledge, experience, competence, skill, physical and mental fitness to act in the capacity to which the licence relates.

5.2.3 The terms under which an applicant may convert his valid licence to a Hong Kong licence will be assessed individually and he will be notified in writing. Each term of issue will be valid for the period stated thereon.

5.2.4 The address of the Personnel Licensing Office is:

Personnel Licensing Office
Flight Standards and Airworthiness
Division
Civil Aviation Department
1 Tung Fai Road
Hong Kong International Airport
Lantau
Hong Kong

5.2.5 Detailed information on the conversion of foreign professional flight crew licence is published in document CAD 54 - Requirements Document : Pilot's Licences and Associated Ratings and document CAD 50 - the Flight Engineer's Licence.

# GEN 1.6 SUMMARY OF HONG KONG REGULATIONS AND INTERNATIONAL AGREEMENTS/ CONVENTIONS

**1**

*a)* The following is a brief explanation of legislation affecting civil aviation in Hong Kong. The laws are subject to amendments which are not notified in this Publication. Users should ensure that fully amended documents are used for reference purposes:

i) **Air Transport (Licensing of Air Services) Regulations (Cap. 448A)** Cap. 448A governs the provision of scheduled and non-scheduled air services to and from Hong Kong.

ii) **Hong Kong Civil Aviation (Investigation of Accidents) Regulations (Cap.448B)** Cap. 448B provides for the investigation of accidents arising out of or in the course of air navigation which occur to civil aircraft in or over Hong Kong or elsewhere to civil aircraft registered in Hong Kong.

iii) **Air Navigation (Hong Kong) Order 1995 (Cap. 448C)** Cap. 448C is the highest level of civil aviation operating regulation in Hong Kong. It is supported by policy and procedures documents such as Civil Aviation Documents, Hong Kong Aviation Requirements (HKARs), and Aeronautical Information Circulars.

iv) **Air Navigation (Dangerous Goods) Regulations (Cap. 448C Sch. 16)** Cap. 448C Sch. 16 provides for the regulation of carriage of dangerous goods by air.

v) **Air Navigation (Flight Prohibition) Order (Cap. 448E)** Cap. 448E provides for the establishment of prohibited airspace and the regulations of such airspace.

vi) **Hong Kong Air Navigation (Fees) Regulations (Cap. 448D)** Prescribes fees for certificates of registration, air operators' certificates, certificates of airworthiness, licences for maintenance engineers, licences for flight crew, and ancillary matters.

vii) **Civil Aviation (Insurance) Order (Cap. 448F)** Cap. 448F governs the insurance requirement for civil aircraft landing or taking off in Hong Kong.

viii) **Dangerous Goods (Consignment by air) (Safety) Regulations (Cap. 384A)** Cap. 384A provides for the control, in the interests of safety, the preparation, packing, marking, labelling and offering of dangerous goods for carriage by air, and for matters connected therewith.

ix) **Civil Aviation (Aircraft Noise) (Certification) Regulations (Cap. 312A)** Cap. 312A provides for the DGCA to grant noise certificates in respect of aircraft operating in Hong Kong.

x) **The Aviation Security Regulations (Cap. 494A)** Cap. 494A provides the statutory base for the establishment and implementation of a permit system for persons and vehicles to enter a restricted area designated under Cap. 494.

xi) **Air passenger Departure Tax Ordinance (Cap. 140)** Cap. 140 provides for the imposition and collection of air passenger departure tax.

xii) **Prevention and Control of Disease Ordinance (Cap. 599)** Cap. 599 provides for the control and prevention of disease among human beings; to prevent the introduction into, the spread in and the transmission from, Hong Kong of any disease, source of disease or contamination; to apply relevant measures of the International Health Regulations promulgated by the World Health Organization; and to provide for connected purposes.

xiii) **Civil Aviations (Births, Deaths and Missing Persons) Ordinance (Cap. 173)** Cap. 173 provides for the keeping of records of births and deaths, and records of persons missing and believed to have died in consequence of an accident, occurring in any part of the world in, or during a journey in any aircraft registered in Hong Kong; and provides for the preservation of such records.

xiv) **Hong Kong Airport (Control of Obstructions) Ordinance (Cap. 301)** Cap. 301 provides for the restriction and, where necessary, the reduction of heights of buildings in the interest of the safety of aircraft, for the control of lighting, for the erection or provision and the maintenance of aids to air navigation, for the assessment and payment of compensation in respect of damage suffered on account thereof, and for purposes connected with the matters aforesaid.

xv) **Civil Aviation (Aircraft Noise) Ordinance (Cap. 312)** Cap. 312 provides for the control of emission of noise by aircraft and for matters ancillary thereto or connected therewith.

xvi) **Dangerous Goods (Consignment by Air) (Safety) Ordinance (Cap. 384)** Cap. 384 provides for the control, in the interests of safety, the preparation, packing, marking, labelling and offering of dangerous goods for carriage by air, and for matters connected therewith.

xvii) **Civil Aviation Ordinance (Cap. 448)** Cap. 448 is the primary legislation providing for the making of orders and provisions for implementing the Chicago Convention and its Annexes and for regulating air navigation, including provisions concerning the registration of aircraft, certificates of airworthiness, access to aerodromes for the purpose of inspecting aircraft and operations, and the manner and conditions concerning the issuance of licences and other documents.

xviii) **Airport Authority Ordinance (Cap. 483)** Cap. 483 provides for the Airport Authority Hong Kong to provide, operate, develop and maintain an airport for civil aviation in the vicinity of Chek Lap Kok and otherwise to define its functions, to make provision for the safe, secure and efficient operation of such airport and for connected purposes.

xix) **Aviation Security Ordinance (Cap. 494)** Cap. 494 provides for the prevention and suppression of acts of violence against civil air transport and for connected purposes. It gives legal force to the terms and provisions of the following:

a) Tokyo Convention 1963

b) The Hague Convention 1970

c) Montreal Convention 1971

d) Montreal Protocol 1988

xx) **Carriage by Air Ordinance (Cap. 500)** Cap. 500 gives effect to certain Conventions concerning international carriage by air; to make provisions relating to non-international carriage by air and international carriage by air to which the Conventions do not apply; and for related purposes.

*b)* International Treaties and Conventions applicable to Hong Kong

i) The Convention on International Civil Aviation, Chicago, 1944 (Chicago Convention)

ii) International Air Services Transit Agreement, Chicago, 1944

iii) Convention on Offences and Certain Other Acts Committed on Board Aircraft, Tokyo, 1963 (Tokyo Convention)

iv) Convention for the Suppression of Unlawful Seizure of Aircraft, The Hague, 1970 (The Hague Convention)

v) Convention for the Suppression of Unlawful Acts Against the Safety of Civil Aviation, Montreal, 1971 (Montreal Convention 1971)

vi) Protocol for the Suppression of Unlawful Acts of Violence at Airports Serving International Civil Aviation, Supplementary to the Montreal Convention 1971, Montreal, 1988 (Montreal Supplementary Protocol 1988)

vii) Convention on the Marking of Plastic Explosives for the Purpose of Detection, Montreal, 1991

viii) Convention for the Unification of Certain Rules Relating to International Carriage by Air, Warsaw, 1929 (Warsaw Convention)

ix) Protocol to Amend the Warsaw Convention, The Hague, 1955 (Hague Protocol 1955)

x) Convention, Supplementary to the Warsaw Convention, for the Unification of Certain Rules Relating to International Carriage by Air Performed by a Person Other Than the Contracting Carrier, Guadalajara, 1961

xi) Convention for the Unification of Certain Rules for International Carriage by Air, Montreal, 1999 (Montreal Convention 1999).

## 2 Notification

### 2.1 Air Navigation (Hong Kong) Order 1995

2.1.1

a) References to the legislation under which notification may be made are listed below. These provisions are subject to amendment by ‘NOTAM’ or ‘Aeronautical Information Circular’.

(‘Notified’ is defined as “shown in any of the following publications for the time being in force and issued in Hong Kong whether before or after the coming into operation of this Order, that is to say ‘NOTAMs - Notices to Airmen’, ‘Aeronautical Information Publications (AIP)’, or such other official publications so issued for the purpose of enabling any of the provisions of this Order to be complied with.)

b) Air Navigation (Hong Kong) Order 1995

| Provision for Notification | Notification |
|---|---|
| Article 35(2) (Radio Frequencies). | Radio frequencies in use by aeronautical radio stations are notified in ENR 2.1. |
| Articles 71(1)(a) (Aerodromes) and 73 (Licensing of Aerodromes) | Licensed aerodromes that are available for take-off and landing of aircraft engaged on flights for the purpose of the public transport of passengers and the conditions and limitations subject to which they are available, are notified in AD 1.1. |
| Article 98 (Definition of Class A and Class C airspace) | Class A and Class C airspace is notified in ENR 2.1. |
| Article 98 (Definitions of Control Area and Control Zone) | Controlled airspace is notified in ENR 2.1. |
| Article 98 (Definition of Danger Area) | Danger areas are notified in ENR 5.1. |
| Article 14, and Schedule 6, paragraph 2(1)(c). (Carriage of radio equipment). | The requirement for the carriage of ILS equipment is notified in GEN 1.5. |
| Article 14, and Schedule 6, paragraph 2(2). (Carriage of radio equipment). | The requirement for the carriage of a SSR transponder is notified in GEN 1.5. |

Schedule 14 to the Air Navigation (Hong Kong) Order 1995

| Provision for Notification | Notification |
|---|---|
| Rule 21 (Flight in Class A airspace) | Notified in ENR 1.2 and ENR 1.3. |
| Rule 26 (Semi-circular rule; altimeter setting) | The altimeter setting procedure for use within the Hong Kong FIR is notified in ENR 1.7. |
| Rule 27(3) (Holding and instrument approach procedures) | Holding and instrument approach procedures are notified in ENR 1.5. |
| Rule 28 (Position reports) | Position reporting procedures are notified in ENR 1.1. |
| Rule 35(2) (Radio frequencies for ATC communication at aerodromes) | Notified in VHHH AD 2.18. |

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## GEN 1.7 DIFFERENCES FROM ICAO STANDARDS, RECOMMENDED PRACTICES AND PROCEDURES

### 1 ANNEX 1 - Personnel Licensing (13th edition)

| | |
|---|---|
| 1.1 | **Flight crew member**: those members of the crew of the aircraft who respectively undertake to act as pilot, flight navigator, flight engineer and flight radio operator of the aircraft. |
| 2.3.2.1 | A holder of a PPL which includes a flight instructor rating for aeroplanes may be paid for giving instruction or conducting flight tests on aeroplanes when doing so as and with members of the same flying club. |
| 2.3.3.1.2 | In case it is not possible to complete one cross-country flight totally not less than 270km (150NM) in the course of which full-stop landings at two different aerodromes are made, the licence, on initial issue, will be endorsed : 'The holder has not met the requirement in respect of the experience of cross-country solo flight time specified in paragraph 2.3.3.1.2 of Annex 1 to the Convention on International Civil Aviation'. When the holder can produce evidence of having met the cross-country flying requirements of Annex 1, the endorsement can be removed. |
| 2.3.4.1.2 | In case it is not possible to complete one cross-country flight totally not less than 180km (100NM) in the course of which full-stop landings at two different aerodromes are made, the licence, on initial issue, will be endorsed : 'The holder has not met the requirement in respect of the experience of cross-country solo flight time specified in paragraph 2.3.4.1.2 of Annex 1 to the Convention on International Civil Aviation'. When the holder can produce evidence of having met the cross-country flying requirements of Annex 1, the endorsement can be removed. |
| 2.7.1.3.1 | An applicant for an IR(A) or IR(H) must hold a valid Hong Kong Class 1 Medical Certificate. |
| 2.9.1.1 | Minimum ages for Hong Kong PPL (Gliders) and Hong Kong CPL (Gliders) are 17 years and 18 years respectively. |
| 2.10.1.1 | Minimum ages for Hong Kong PPL (Balloons and Airships) and Hong Kong CPL (Balloons) are 17 years and 18 years respectively. |
| 3.3.1.1 | Minimum age for Hong Kong Flight Engineer's Licence is 21 years. |

### 2 ANNEX 2 - Rules of the Air (10th edition)

| | |
|---|---|
| 1 | "Acrobatic manoeuvres" includes loops, spins, rolls, bunts, stall turns, inverted flying and any other similar manoeuvre. |
| 1 | "Aeronautical radio station" means a radio station on the surface, which transmits or receives signals for the purpose of assisting aircraft. |
| 1 | "Air Traffic Control Unit/Service" means a person appointed by the Chief Executive or by any other person maintaining an aerodrome or place to give instructions or advice or both by means of radio signals to aircraft in the interests of safety. |
| 1 | "Apron" means the part of an aerodrome provided for the stationing of aircraft for the embarkation and disembarkation of passengers, the loading and unloading of cargo and parking. |
| 1 | "Cloud ceiling" in relation to an aerodrome means the vertical distance from the elevation of the aerodrome to the lowest part of any cloud visible from the aerodrome which is sufficient to obscure more than one-half of the sky so visible. |
| 1 | "Flight crew" means those members of the crew of the aircraft who respectively undertake to act as pilot, flight navigator, flight engineer and flight radio operator of the aircraft. |
| 1 | "Ground visibility" means the horizontal visibility at ground level. |

1 "Special VFR flight" means a flight-

*a)* made in a control zone in any notified airspace in meteorological condition below Visual Meteorological Conditions or at night;

*b)* in respect of which the appropriate air traffic control unit has given permission for the flight to be made in accordance with special instructions given by that unit instead of in accordance with the Instrument Flight Rules; and

*c)* in the course of which the aircraft complies with any instructions given by that unit and remains clear of cloud and in sight of the surface.

1 Taxiing are those manoeuvring under the following conditions:

*a)* Aircraft moving under their own power within the airport boundaries, or any part of the airport subject to communal use, excluding take-off or landing;

*b)* Aircraft being moved with the assistance of ancillary power, i.e. tractor, jeep, or by other mechanical means;

*c)* Aircraft being manoeuvred by hand.

3.1.10 Balloon exceeding 2 metres shall not be flown in controlled airspace except with permission and in compliance with specific conditions.

3.9 The Visual Flight Rules shall be as follows:

a) Within Class B airspace:

i) an aircraft flying within Class B airspace at or above flight level 100 shall remain clear of cloud and in a flight visibility of at least 8 kilometres;

ii) an aircraft flying within Class B airspace below flight level 100 shall remain clear of cloud and in a flight visibility of at least 5 kilometres;

b) Within Class C, Class D or Class E airspace:

i) an aircraft flying within Class C, Class D or Class E airspace at or above flight level 100 shall remain at least 1 500 metres horizontally and 1 000 feet vertically away from cloud and in a flight visibility of at least 8 kilometres;

ii) an aircraft flying within Class C, Class D or Class E airspace below flight level 100 shall remain at least 1 500 metres horizontally and 1 000 feet vertically away from cloud and in a flight visibility of at least 5 kilometres;

c) an aircraft flying outside controlled airspace at or above flight level 100 shall remain at least 1 500 metres horizontally and 1 000 feet vertically away from cloud and in a flight visibility of at least 8 kilometres;

d) an aircraft flying outside controlled airspace below flight level 100 shall remain at least 1 500 metres horizontally and 1 000 feet vertically away from cloud and in a flight visibility of at least 5 kilometres:

Provided that this sub-paragraph shall be deemed to be complied with if:

i) the aircraft is flying at or below 3 000 feet above mean sea level and remains clear of cloud and in sight of the surface and in a flight visibility of at least 5 kilometres;

ii) the aircraft, other than a helicopter, is flying at or below 3 000 feet above mean sea level at a speed which according to its air speed indicator is 140 knots or less and remains clear of cloud and in a flight visibility of at least 1 500 metres; or

iii) in the case of a helicopter, the helicopter is flying at or below 3 000 feet above mean sea level flying at a speed, which, having regard to the visibility, is reasonable, and remains clear of cloud and in sight of the surface.

4.1 The Visual Flight Rules shall be as follows:

a) Within Class B airspace:

i) an aircraft flying within Class B airspace at or above flight level 100 shall remain clear of cloud and in a flight visibility of at least 8 kilometres;

ii) an aircraft flying within Class B airspace below flight level 100 shall remain clear of cloud and in a flight visibility of at least 5 kilometres;

b) Within Class C, Class D or Class E airspace:

i) an aircraft flying within Class C, Class D or Class E airspace at or above flight level 100 shall remain at least 1 500 metres horizontally and 1 000 feet vertically away from cloud and in a flight visibility of at least 8 kilometres;

ii) an aircraft flying within Class C, Class D or Class E airspace below flight level 100 shall remain at least 1 500 metres horizontally and 1 000 feet vertically away from cloud and in a flight visibility of at least 5 kilometres;

c) an aircraft flying outside controlled airspace at or above flight level 100 shall remain at least 1 500 metres horizontally and 1 000 feet vertically away from cloud and in a flight visibility of at least 8 kilometres;

d) an aircraft flying outside controlled airspace below flight level 100 shall remain at least 1 500 metres horizontally and 1 000 feet vertically away from cloud and in a flight visibility of at least 5 kilometres:

Provided that this sub-paragraph shall be deemed to be complied with if:

i) the aircraft is flying at or below 3 000 feet above mean sea level and remains clear of cloud and in sight of the surface and in a flight visibility of at least 5 kilometres;

ii) the aircraft, other than a helicopter, is flying at or below 3 000 feet above mean sea level at a speed which according to its air speed indicator is 140 knots or less and remains clear of cloud and in a flight visibility of at least 1 500 metres; or

iii) in the case of a helicopter, the helicopter is flying at or below 3 000 feet above mean sea level flying at a speed, which, having regard to the visibility, is reasonable, and remains clear of cloud and in sight of the surface.

4.4 1. Application

1.1 Flight under VFR may take place subject to ATC clearance within the following Class C airspace:

a) the Hong Kong CTR;

b) the Hong Kong TMA above the UCARAs from their notified upper limits up to 9000 ft AMSL;

c) the Hong Kong TMA within 50 NM of CH DME between 2000 ft and 8000 ft AMSL, excluding the airspace in paras a) and b) above.

1.2 Flight under VFR may take place within the following Class G airspace:

a) the UCARAs from surface up to the notified upper limits;

b) the Hong Kong TMA within 50 NM of CH DME from surface up to 2000 ft AMSL, excluding the airspace in paras. 1.1 a) and b) above;

c) the airspace south of the Hong Kong TMA from surface up to 8000 ft.

1.3 Flight under Special VFR may take place subject to ATC clearance within the Hong Kong CTR.

**PROCEDURES FOR AIR NAVIGATION SERVICES - AIR TRAFFIC MANAGEMENT (PANS-ATM, DOC 4444)(16th edition)**

**Definitions** **Special VFR Flight**: Has the meaning assigned to it by Rule 23 of the Rules of the Air.
(Note: The above Rules of the Air refer to Schedule 14 of AN(HK)O)

**Taxiing**: Taxiing are those aircraft manoeuvring under the following conditions:

*a)* Aircraft moving under their own power within the airport boundaries, or any part of the airport subject to communal use, excluding take-off and landing;

*b)* Aircraft being moved with the assistance of ancillary power, i.e. tractor, jeep or by other mechanical means;

*c)* Aircraft being manoeuvred by hand.

4.8 Change from IFR to VFR flight is not permitted in controlled airspace.

5.9 VMC clearances are not offered in Hong Kong. VMC clearances requested by pilots are normally granted subject to the VMC portion of the flight being at or below FL150.

6.5.6.2.1 Timed approach procedures are not authorized in Hong Kong.

7.4.1.2.1 f) Time checks are given only on request.

7.6.3.2.3.2 Light Signals are not used in Hong Kong.

8.6.2.4.2 This method of identification is not used in Hong Kong.

8.9.6.1.3 c) Hong Kong does not inform aircraft of the nominal glide path.

8.9.7.1 Surveillance radar final approach procedures are not authorized in Hong Kong.

11.4.3.2 Meteorological information transmitted on ATIS, VOLMET and D-VOLMET broadcasts disseminated from local meteorological reports. Surface wind velocity is as measured at RWY 07C/25C mid-point and visibility is representative of minimum all-round surface visibility.

16.5 Strategic Lateral Offset Procedures (SLOP) in oceanic and remote continental airspace not implemented in Hong Kong FIR.

Appendix 2
2.2 Item 18 Operators of non-RVSM approved aircraft capable of operating at FL280 or above, regardless of the requested flight level, shall insert in Item 18 ‘STS/NONRVSM’.

**REGIONAL SUPPLEMENTARY PROCEDURES (DOC 7030) MID/ASIA (5th edition)**

1.2.1 All flights operating in controlled airspace notified as Class A in the Hong Kong FIR are required to conform to IFR except as indicated in ENR 1.2, para. 4.

5.1.3.2
Note 1: Diversion Whenever a diversion occurs which will take the aircraft into another FIR, the original SSR code of the diverting aircraft will be retained subject to the acceptance of the receiving ATC unit. Otherwise, a code from the block 5101-5107, 5110-5113, 5114-5117 or appropriate code from block 3310-3357, 3530-3577, 5120-5177, 5250-5257 or 5710-5757 will be assigned to the diverting aircraft and this code will be included in the transfer message.

**PROCEDURES FOR AIR NAVIGATION SERVICES - AERONAUTICAL INFORMATION MANAGEMENT (PANS-AIM, DOC 10066) (1st edition)**

Appendix 2
AD 2.25 Information regarding Visual segment surface (VSS) penetration is published in AD 2.23 Additional Information

**3 ANNEX 3 - METEOROLOGICAL SERVICE FOR INTERNATIONAL AIR NAVIGATION (20th edition)**

NIL

## 4 ANNEX 4 - AERONAUTICAL CHARTS (11th edition)

1.1 Taxiing are those manoeuvring under the following conditions:

*a)* Aircraft moving under their own power within the airport boundaries, or any part of the airport subject to communal use, excluding take-off or landing;

*b)* Aircraft being moved with the assistance of ancillary power, i.e. tractor, jeep, or by other mechanical means;

*c)* Aircraft being manoeuvred by hand.

2.1.7* Some charts are not True North orientated. Aerodrome charts are runway orientated.

3.4.3* A horizontal scale of 1:10 000 is not used --- scale is 1:15 000.

4.3.1 Elevations are shown to the nearest metre or to the nearest foot in compliance with Doc 10066 Appendix 1.

10.6.2* Only relief within the boundary of Hong Kong Special Administrative Region is shown.

16.1 World Aeronautical Chart in scale 1:1 000 000 is not produced.

17.1 Local Flying Chart has a scale of 1:100 000.

17.7.10.1 Only relief within the boundary of Hong Kong Special Administrative Region is shown.

17.8.1 Isogonic lines not shown.

21.3.3* Chart scale not the same as Area Chart – scale is 1:800 000.

** : Recommended Practice*

## 5 ANNEX 5 - UNITS OF MEASUREMENT TO BE USED IN AIR AND GROUND OPERATIONS (5th edition)

NIL

## 6 ANNEX 6 - OPERATION OF AIRCRAFT (Part I 11th edition)

1 Aerial work is not defined as an aircraft operation in which an aircraft is used for specialized services such as agriculture, construction, photography, surveying, observation and patrol, search and rescue, aerial advertisement, etc.

6.20 The pilot and the flight engineer (if any) shall not make use of a hand-held microphone (whether for the purpose of radio communication within the aircraft) whilst the aircraft is flying in controlled airspace below flight level 150 or is taking off or landing.

9.4.3.5 A 13-month, instead of 12-month, recency requirement is stipulated for pilot-in-command on a route or within an area.

9.4.3.6 A 13-month, instead of 12-month, recency requirement is stipulated for pilot-in-command on a route or within an area.

### ANNEX 6 - OPERATION OF AIRCRAFT (Part II 10th edition)

1 Aerial work is not defined as an aircraft operation in which an aircraft is used for specialized services such as agriculture, construction, photography, surveying, observation and patrol, search and rescue, aerial advertisement, etc.

### ANNEX 6 - OPERATION OF AIRCRAFT (Part III 9th edition)

1 Aerial work is not defined as an aircraft operation in which an aircraft is used for specialized services such as agriculture, construction, photography, surveying, observation and patrol, search and rescue, aerial advertisement, etc.

## 7 ANNEX 7 - AIRCRAFT NATIONALITY AND REGISTRATION MARKS (6th edition)

6.2 ICAO requires that the width of each character (except the letter I and the number 1) and the length of hyphens shall be two-thirds of the height of a character.

In Hong Kong, China, the width of the letters M and W shall be neither less than two-thirds of their height nor more than their height.

## 8 ANNEX 8 - AIRWORTHINESS OF AIRCRAFT (12th edition)

NIL

## 9 ANNEX 9 - FACILITATION (15th edition)

2.11 General Declaration containing the names, nationalities of crew members are normally required on the arrival and immediately prior to the departure of aircraft under local legislation.

2.14 Air cargo reporting requirements are prescribed by local legislation under which no option as proposed is provided for.

2.44* Administration and operational information is required to meet operational and legal requirements. Details of the requirements are given in the Hong Kong AIP.

2.45 Administration and operational information is required to meet operational and legal requirements. Details of the requirements are given in the AIP Hong Kong.

3.25 Visas are normally valid for a period not more than 3 months from the date of issue.

3.28 The format at Appendix 5 is not adopted. The existing embarkation/disembarkation card is in a prescribed format according to legislation.

3.65 Air crew who are visa nationals, unless exempted, are required to present travel documents for immigration clearance.

3.65.1* Crew members who are visa nationals, unless exempted, require a visa for entry into Hong Kong.

3.65.2* This category of non-operating aircrew is required to present travel document for clearance as normal passengers upon arrival.

3.67* The entry of civil aviation inspectors is subject to normal immigration requirement, facilitation may be accorded if so required.

3.68* Civil Aviation Inspector Certificate is not issued in Hong Kong.

3.69* Civil Aviation Inspector Certificate is not issued in Hong Kong.

3.70* The entry of civil aviation inspectors is subject to normal immigration requirement, facilitation may be accorded if so required.

3.71* Temporary entry of passengers and crew members will be subject to normal immigration requirement. However, facilitation will be positively accorded to allow their temporary entry on a case-by-case basis.

3.72 Temporary entry of in-transit passengers will be subject to normal immigration requirement. However, facilitation will be positively accorded to allow their temporary entry on a case-by-case basis.

3.74* In general, passengers who wish to depart Hong Kong beyond their limitation of stay are required to apply for an extension prior to their departure. However, facilitation will be positively accorded to allow their departure from, or transit through, Hong Kong on a case-by-case basis.

3.75* Temporary entry of personnel required to be deployed at short notice will be subject to normal immigration requirement. However, facilitation will be positively accorded to allow their entry on a case-by-case basis.

| | |
|---|---|
| 3.76* | Entry of transit passengers will be subject to normal immigration requirement. However, facilitation will be positively accorded to allow their transit on a case-by-case basis. |
| 3.84* | Country of residence of the parent or guardian of the minor is not currently collected by aircraft operators. |
| 4.29 | Hong Kong is a non-tariff port. Duty is only payable for the four types of dutiable commodities as stipulated in the Dutiable Commodities Ordinance, namely alcoholic liquors, tobacco, hydrocarbon oil and methyl alcohol. |
| 4.35 | In the case where cargo, unaccompanied baggage or stores require re-forwarding to correct destination, they will also be subject to the laws and regulations of Hong Kong relating to the control of prohibited articles in addition to the other requirements under this Standard. |
| 4.37 | Hong Kong is a non-tariff port. Duty is only payable for the four types of dutiable commodities as stipulated in the Dutiable Commodities Ordinance, namely alcoholic liquors, tobacco, hydrocarbon oil and methyl alcohol. When processing the dutiable commodities with security bonds furnished by airport cargo operators, simplified customs procedures have been provided for release of goods before duty payment. |
| 4.39* | Hong Kong is a non-tariff port. Duty is only payable for the four types of dutiable commodities as stipulated in the Dutiable Commodities Ordinance, namely alcoholic liquors, tobacco, hydrocarbon oil and methyl alcohol. Supporting documentation is required for duty assessment. |
| 4.51 | Contained cargo in Hong Kong can be cleared by Customs within 80 minutes upon request. Under such circumstances, it would be unreasonable and inefficient to make alternate arrangements for the storage and/or clearance and/or examination of containers/pallets and their loads at off-airport locations. |
| 5.11 | Legislation in Hong Kong provides for the removal of any persons found inadmissible in Hong Kong to their last port of embarkation or place of origin, or place of nationality of deportee. |
| 5.11.1* | There are legal requirements for aircraft operators to comply with the directions of the authority for the removal of inadmissible passengers. |
| 5.14 | The principle is that aircraft operators should not carry any improper documented persons without the prior consent of the receiving State. Whether to fine aircraft operators or not in case of a breach of this principle will be considered on its own merit having regard to all circumstances of the case as well as actions taken by the said aircraft operators. |
| 5.19 | The operators are informed, before the execution of a Deportation Order, of the name of deportee and flight arrangement. |
| 5.19.2 | In making arrangement for removal of a deportee, the legal requirements as specified in the relevant legislations of Hong Kong will be observed and complied with. |
| 5.27 | The existing travel document production mechanism requires the applicant to produce an application form with signature appended. |
| 6.44* | At present, there is no arrangement to station representatives in other States to conduct pre-examination on aircraft, passengers, baggage, crew and cargo. |
| 6.48* | In general, there is no restriction on the import or export of funds of other States or places in Hong Kong. Passengers arriving Hong Kong and in possession of any currency and bearer negotiable instruments (CBNIs) of a total value more than HKD120,000 must make a written declaration to a Customs officer. Passengers about to leave Hong Kong, must upon the requirement of a Customs officer disclose whether he/she is in possession of CBNIs of a total value more than HKD120,000. |
| 6.49* | In general, there is no restriction on the import of its own currency in Hong Kong. Passengers arriving Hong Kong and in possession of any currency and bearer negotiable instruments (CBNIs) of a total value more than HKD120,000 must make a written declaration to a Customs officer. Passengers about to leave Hong Kong, must upon the requirement of a Customs officer disclose whether he/she is in possession of CBNIs of a total value more than HKD120,000. |

| | |
|---|---|
| 8.15.1* | There would be two additional items to be completed: (1) Passport/Identity Card number; and (2) Issuing Country/Organization in addition to the information provided in Appendix 13. |
| 9.24 | PNR is not yet in place in Hong Kong. |
| 9.25 | PNR is not yet in place in Hong Kong. |
| 9.26 | PNR is not yet in place in Hong Kong. |
| 9.27* | PNR is not yet in place in Hong Kong. |
| 9.28 | PNR is not yet in place in Hong Kong. |
| 9.29 | PNR is not yet in place in Hong Kong. |
| 9.30 | PNR is not yet in place in Hong Kong. |
| 9.31 | PNR is not yet in place in Hong Kong. |
| 9.32* | PNR is not yet in place in Hong Kong. |
| 9.33* | PNR is not yet in place in Hong Kong. |
| 9.34 | PNR is not yet in place in Hong Kong. |
| 9.35 | PNR is not yet in place in Hong Kong. |
| 9.36 | PNR is not yet in place in Hong Kong. |
| 9.36.1* | PNR is not yet in place in Hong Kong. |
| 9.37 | PNR is not yet in place in Hong Kong. |
| 9.38* | PNR is not yet in place in Hong Kong. |
| 9.39* | PNR is not yet in place in Hong Kong. |

** : Recommended Practice*

**10 ANNEX 10 - AERONAUTICAL TELECOMMUNICATIONS (Vol I 7th edition, Vol II 7th edition, Vol III 2nd edition, Vol IV 5th edition, Vol V 3rd edition)**

**Vol I**

| | |
|---|---|
| 3.1.3.3.1 | The RWY 07R localizer at the Hong Kong International Airport does not meet standard coverage criteria.<br><br>The RWY 25L localizer at the Hong Kong International Airport does not meet standard coverage criteria.<br><br>The RWY 25R localizer at the Hong Kong International Airport does not meet standard coverage criteria.<br><br>The RWY 07C localizer at the Hong Kong International Airport does not meet standard coverage criteria.<br><br>The RWY 25C localizer at the Hong Kong International Airport does not meet standard coverage criteria. |

3.1.5.3.1 The RWY 25L glide-path at the Hong Kong International Airport does not meet standard coverage criteria.

The RWY 25R glide-path at the Hong Kong International Airport does not meet standard coverage criteria.

The RWY 07L glide-path at the Hong Kong International Airport does not meet standard coverage criteria.

## 11 ANNEX 11 - AIR TRAFFIC SERVICES (15th edition)

1 "Air Traffic Control Unit/Service" means a person appointed by the Chief Executive or by any other person maintaining an aerodrome or place to give instructions or advice or both by means of radio signals to aircraft in the interests of safety.

1 "Flight crew" means those members of the crew of the aircraft who respectively undertake to act as pilot, flight navigator, flight engineer and flight radio operator of the aircraft.

1 "Incident" means any fortuitous or unexpected event, not being a reportable accident, by which the safety of an aircraft or any person is threatened.

1 "Operator" means the person (including any public body and any body or persons, corporate or unincorporated) who at the relevant time has the management of the aircraft.

1 "Special VFR flight" means a flight-

*a)* made in a control zone in any notified airspace in meteorological condition below Visual Meteorological Conditions or at night;

*b)* in respect of which the appropriate air traffic control unit has given permission for the flight to be made in accordance with special instructions given by that unit instead of in accordance with the Instrument Flight Rules; and

*c)* in the course of which the aircraft complies with any instructions given by that unit and remains clear of cloud and in sight of the surface.

1 "Taxiing" are those manoeuvring under the following conditions:

*a)* Aircraft moving under their own power within the airport boundaries, or any part of the airport subject to communal use, excluding take-off or landing;

*b)* Aircraft being moved with the assistance of ancillary power, i.e. tractor, jeep, or by other mechanical means;

*c)* Aircraft being manoeuvred by hand.

2.6.3 Class G airspace requires continuous two-way radio communication equipment.

** : Recommended Practice*

## 12 ANNEX 12 - SEARCH AND RESCUE (8th edition)

| | |
|---|---|
| 1 | "Operator" means the person (including any public body and any body or persons, corporate or unincorporated) who at the relevant time has the management of the aircraft. |
| 2.1.1.2 | The search and rescue (SAR) services system in Hong Kong, China does not include a legal framework. |
| 2.6.4 | Some helicopters are not equipped with homing device since such type of aircraft is usually deployed for local search and rescue tasks when required. |
| 2.6.6 | Some helicopters are usually deployed for local search and rescue tasks, it is considered that the carriage of a copy of the International Code of Signals is not necessary. |

## 13 ANNEX 13 - AIRCRAFT ACCIDENT AND INCIDENT INVESTIGATION (12th edition)

NIL

## 14 ANNEX 14 - AERODROMES (Vol I 8th edition, Vol II 5th edition)

**Vol I**

| | |
|---|---|
| 5.3.29* | No-entry bar is not provided. |
| 6.2.2.6 | The colour of low intensity obstruction lights displayed on rescue and fire fighting vehicles is red. |

** : Recommended Practice*

**Vol II**

| | |
|---|---|
| 5.3.1 | The colour of low intensity obstruction lights displayed on rescue and fire fighting vehicles is red. |

** : Recommended Practice*

## 15 ANNEX 15 - AERONAUTICAL INFORMATION SERVICES (16th edition)

| | |
|---|---|
| 4.2.1 | No metadata are collected for the complete data chain. |
| 4.2.2 | No metadata are collected for the complete data chain. |
| 5.3.3.3.5* | Not implemented. |
| 5.3.3.3.6* | Not implemented. |
| 5.3.3.4.7* | Not implemented. |
| 5.3.3.4.8* | Not implemented. |
| 5.4.3.1* | The provision of digital data sets via information services is not available. |
| 5.4.3.1.1 | The provision of digital data sets via information services is not available. |
| 5.4.3.1.2* | The provision of digital data sets via information services is not available. |
| 5.4.3.1.3* | The provision of digital data sets via information services is not available. |

** : Recommended Practice*

**16 ANNEX 16 - ENVIRONMENTAL PROTECTION (Vol I 8th edition, Vol II 4th edition, Vol III 1st edition and Vol IV 1st edition)**

**Vol IV, CORSIA**

Multiple differences have been filed in Chinese. For further details, please contact the Environmental Management Office of Hong Kong Civil Aviation Department.

**17 ANNEX 17 - AVIATION SECURITY - SAFEGUARDING INTERNATIONAL CIVIL AVIATION AGAINST ACTS OF UNLAWFUL INTERFERENCE (12th edition)**

NIL

**18 ANNEX 18 - THE SAFE TRANSPORT OF DANGEROUS GOODS BY AIR (4th edition)**

NIL

**19 ANNEX 19 - SAFETY MANAGEMENT (2nd edition)**

NIL

INTENTIONALLY

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# GEN 2 TABLES AND CODES

## GEN 2.1 MEASURING SYSTEM, AIRCRAFT MARKINGS, HOLIDAYS

### 1 Units of Measurement

1.1 The units of measurement used in all air and ground operations are in accordance with Annex 5, including those shown below commonly used for the dissemination of information and in messages transmitted to aircraft.

| QUANTITY | UNIT OF MEASUREMENT |
|---|---|
| Distance used in navigation # | Nautical Miles (NM) * |
| Relatively short distances (e.g. runway length) | Metres (m) |
| Altitudes, elevations and heights | Feet (ft) or metres (m) |
| Horizontal speed including wind | Knots (kt) |
| Vertical speed | Feet per minute (ft/min) |
| Wind direction for take-off and landing | Degrees Magnetic (°M) |
| Wind direction except for take-off and landing | Degrees True (°T) |
| Visibility (including RVR) | Metres or Kilometres (m, km) |
| Barometric pressure | Hectopascals (hPa) |
| Temperature | Degrees Celsius (°C) |
| Weight | Tonnes or Kilogrammes (t, kg) |
| Time | Hours and minutes, the day of 24 hours beginning at midnight UTC (hhmm) |
| # In geodesic or Great Circle distance<br>* International nautical miles, for which conversion into metres is given by:<br>1 nautical mile - 1 852 metres. | |

### 2 Time System

2.1 Co-ordinated Universal Time (UTC) is used in the air traffic and communication services and in documents published for international distribution by the Aeronautical Information Service.

2.2 Hong Kong Standard Time is 8 hours ahead of UTC. Where the all numeric date/time form is used in NOTAM, messages and aeronautical documents, this is presented in the sequences of year-month-day-time (yymmddtttt). It should be noted that normally the year digits may be omitted where no possible confusion could arise from such an omission.

### 3 Geodetic Reference Datum

3.1 Name/designation of datum

3.1.1 All published geographical co-ordinates within Hong Kong airspace indicating latitude and longitude are expressed in terms of World Geodetic System - 1984 (WGS-84) geodetic reference datum.

3.2 Area of application

3.2.1 Area of application for the published geographical co-ordinates coincides with the area of responsibility of the Aeronautical Information Service, i.e. the entire Hong Kong FIR in accordance with the regional air navigational agreement.

### 4 Vertical Reference System

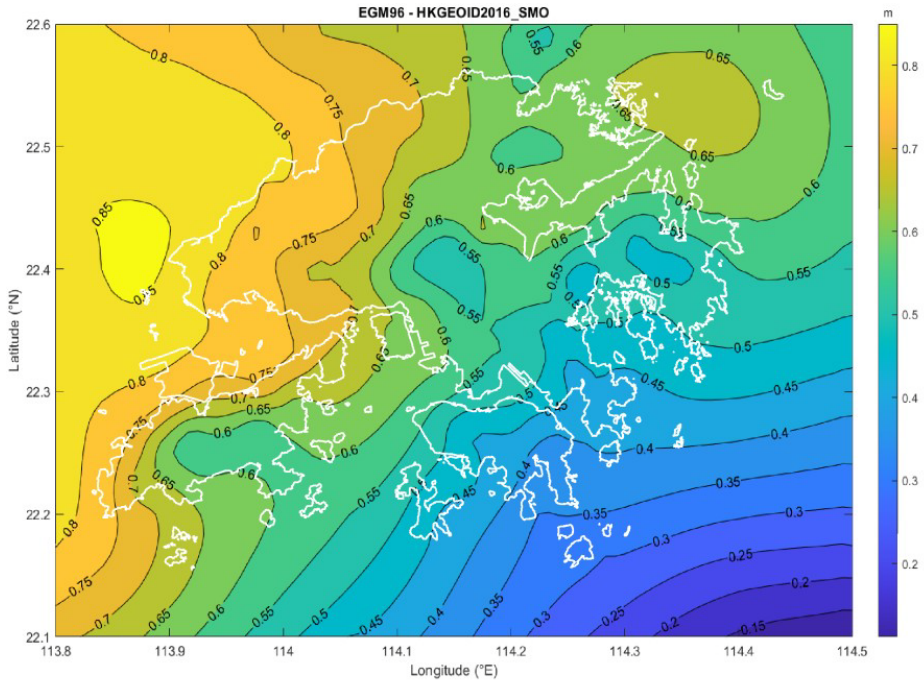
4.1 Hong Kong Principal Datum (HKPD) is the vertical reference system used in Hong Kong, which is about 1.30 metres below Mean Sea Level (MSL) as at 2016.

4.2 HKGEOID2016_SMO is the Geoid Model used in Hong Kong which corresponds to HKPD for GNSS heighting.

4.3 Altitudes (ALT) and Elevations (ELEV) expressed in AIP Hong Kong are measured from Mean Sea Level (MSL) as per ICAO definition.

4.4 Differences between the altitudes referenced to The Earth Gravitational Model - 1996 (EGM-96) and HKGEOID2016_SMO:

4.4.1 The differences between the orthometric heights referenced to EGM-96 and the orthometric heights referenced to HKGEOID2016_SMO (that is, the differences between the undulations of both geoids) depend on the geographic location of the point under consideration. The following map shows the undulation differences of these models in Hong Kong.




**Differences between EGM-96 and HKGEOID2016_SMO (that corresponds to HKPD)**

## 5 Aircraft Markings

5.1 The nationality mark for aircraft registered in Hong Kong is the letter ‘B’. The nationality mark is followed by a hyphen and a registration mark consisting of a three letter group. The first letter of the registration mark being the letter ‘H’, ‘K’ or ‘L’, representing Hong Kong. Registration marks are issued within the combination ‘HAA’ to ‘HZZ’, ‘KAA’ to ‘KZZ’ and ‘LAA’ to ‘LZZ’.

## 6 Public Holidays

6.1 Annual public holidays are notified in Aeronautical Information Circulars.

# GEN 2.2 ABBREVIATIONS

**Note * Not ICAO Abbreviation**

| | A |
|---|---|
| AAHK | Airport Authority Hong Kong* |
| AAL | Above aerodrome level |
| ABM | Abeam |
| AC | Altocumulus |
| ACAS | Airborne collision avoidance system |
| ACC | Area control centre or area control |
| ACFT | Aircraft |
| ACL | Altimeter check location |
| AD | Aerodrome |
| ADF | Automatic direction-finding equipment |
| ADS-B | Automatic dependent surveillance – broadcast |
| ADS-C | Automatic dependent surveillance – contract |
| AFIL | Flight plan filed in the air |
| AFM | Yes or affirm or affirmative or that is correct |
| AFS | Aeronautical fixed service |
| AFTN | Aeronautical fixed telecommunication network |
| AGA | Aerodromes, air routes and ground aids |
| AGL | Above ground level |
| AIC | Aeronautical information circular |
| AIMC | Aeronautical Information Management Centre* |
| AIP | Aeronautical information publication |
| AIRAC | Aeronautical information regulation and control |
| AIREP | Air-report |
| AIS | Aeronautical information services |
| ALERFA | Alert phase |
| ALR | Alerting (message type designator) |
| ALRS | Alerting service |
| ALS | Approach lighting system |
| ALT | Altitude |
| ALTN | Alternate (aerodrome) |
| AMD | Amend or amended (used to indicate amended meteorological message; message type designator) |
| AMDT | Amendment (AIP amendment) |
| AMS | Aeronautical mobile service |
| AMSL | Above mean sea level |
| AMSS | Aeronautical mobile satellite service |
| AOC | Aerodrome obstacle chart (followed by type and name/title) |
| AOM | Aerodrome Operating Minima* |
| AOR | Area of Responsibility* |
| AP | Airport |
| APCH | Approach |
| APP | Approach control office or approach control or approach control service |
| APR | April |
| APRX | Approximate or approximately |
| ARFOR | Area forecast (in aeronautical meteorological code)* |
| ARP | Aerodrome reference point |
| ARP | Air-report (message type designator) |
| AS | Altostratus |
| ASC | Ascend to or ascending to |
| ASDA | Accelerate-stop distance available |
| ASPH | Asphalt |
| ASR | Approach surveillance radar* |
| ASSR | Approach secondary surveillance radar* |
| AT | At (followed by time at which weather change is forecast to occur) |
| ATA | Actual time of arrival |
| ATC | Air traffic control (in general) |
| ATCC | Air traffic control centre* |
| ATCU | Air traffic control unit* |
| ATD | Actual time of departure |
| ATFM | Air traffic flow management |
| ATIS | Automatic terminal information service |
| ATM | Air traffic management |
| ATN | Aeronautical telecommunication network |
| ATS | Air traffic services |
| ATTN | Attention |
| ATZ | Aerodrome traffic zone |
| AUG | August |
| AUTH | Authorized or authorization |
| AUW | All up weight |
| AUX | Auxiliary |
| AVBL | Available or availability |

| | |
|---|---|
| AVGAS | Aviation gasoline |
| AVTUR | Aviation turbine fuel* |
| AWY | Airway |
| AZM | Azimuth |
| | **B** |
| BASE | Cloud base |
| BCFG | Fog patches |
| BCN | Beacon (aeronautical ground light) |
| BCST | Broadcast |
| BDRY | Boundary |
| BECMG | Becoming |
| BFR | Before |
| BKN | Broken |
| BLDG | Building |
| BLW | Below..... |
| BR | Mist |
| BRF | Short (used to indicate the type of approach desired or required) |
| BRG | Bearing |
| BRKG | Braking |
| BTN | Between |
| | **C** |
| C | Centre (preceded by runway designation number to identify a parallel runway) |
| C | Degrees Celsius (Centigrade) |
| CAD | Civil Aviation Department* |
| CASEVAC | Casualty evacuation* |
| CAT | Category |
| CAT | Clear air turbulence |
| CAVOK | Visibility, cloud and present weather better than prescribed values or conditions |
| CB | Cumulonimbus |
| CC | Cirrocumulus |
| CCA | (or CCB, CCC...etc., in sequence) Corrected meteorological message (message type designator) |
| CCTV | Closed circuit television* |
| CDC | Clearance delivery control* |
| CDN | Co-ordination (message type designator) |
| CH | Channel |
| CHG | Modification (message type designator) |
| CI | Cirrus |
| CIDIN | Common ICAO data interchange network |
| CL | Centre line |
| CLA | Clear type of ice formation |
| CLBR | Calibration |
| CLD | Cloud |
| CLG | Calling |
| CLIMB-OUT | Climb-out area |
| CLR | Clear(s) or cleared to... or clearance |
| CLRD | Runway/s cleared (in METAR/SPECI) |
| CLSD | Close or closed or closing |
| CM | Centimetre |
| CNL | Cancel or cancelled |
| CNL | Flight plan cancellation (message type designator) |
| CNS | Communications, navigation and surveillance |
| COM | Communications |
| CONC | Concrete |
| COND | Condition |
| CONST | Construction or constructed |
| CONT | Continue(s) or continued |
| COOR | Co-ordination |
| COP | Change-over point |
| COR | Correct or correction or corrected (used to indicate corrected meteorological message; message type designator) |
| CPL | Current flight plan (message type designator) |
| CS | Cirrostratus |
| CTA | Control area |
| CTC | Contact |
| CTL | Control |
| CTN | Caution |
| CTR | Control zone |
| CU | Cumulus |
| CUF | Cumuliform |
| CUST | Customs |
| CVSM | Conventional separation minima* |
| CWY | Clearway |
| | **D** |
| D | Danger area (followed by identification) |
| D | Distance* |
| DA | Decision altitude |
| DCD | Double channel duplex |
| DCP | Datum crossing point |
| DCS | Double channel simplex |
| DCT | Direct (in relation to flight plan clearances and type of approach) |
| DEC | December |
| DEG | Degrees |

| | |
|---|---|
| DEP | Departure (message type designator) |
| DER | Departure end of runway |
| DES | Descend to or descending to |
| DEST | Destination |
| DETRESFA | Distress phase |
| DFTI | Distance from touchdown indicator |
| DH | Decision height |
| DIAM | Diameter* |
| DIST | Distance |
| DIV | Divert or diverting |
| DLA | Delay (message type designator) |
| DME | Distance measuring equipment |
| DOF | Date of flight |
| DP | Dew point temperature |
| DR | Dead reckoning |
| DRG | During |
| DS | Dust storm |
| DTG | Date-time group |
| DU | Dust |
| DUC | Dense upper cloud |
| DUR | Duration |
| DVOR | Doppler VOR |
| DZ | Drizzle |

**E**

| | |
|---|---|
| E | East or eastern longitude |
| EAT | Expected approach time |
| EDA | Elevation differential area |
| EET | Estimated elapsed time |
| EGNOS | European geostationary navigation overlay service |
| ELEV | Elevation |
| ELR | Extra long range |
| EM | Emission |
| EMBD | Embedded in layer (to indicate cumulo nimbus embedded in layers of other clouds) |
| EMERG | Emergency |
| EN | English* |
| END | Stop-end (related to RVR) |
| ENE | East north east |
| ENG | Engine |
| ENR | En-route |
| EOBT | Estimated off-block time |
| EQPT | Equipment |
| ESE | East south east |
| EST | Estimate or estimated or estimate (message type designator) |
| ETA | Estimate time of arrival or estimating arrival |
| ETD | Estimated time of departure or estimating departure |
| ETO | Estimated time over significant point |

**F**

| | |
|---|---|
| FAC | Facilities |
| FAF | Final approach fix |
| FAL | Facilitation of international air transport |
| FAP | Final approach point |
| FATO | Final approach and take off area |
| FAX | Facsimile transmission |
| FBL | Light (used to indicate the intensity of weather phenomena, interference or static reports, eg FBL RA = light rain) |
| FC | Funnel cloud (tornado or water spout) |
| FCST | Forecast |
| FCT | Friction coefficient |
| FEB | February |
| FG | Fog |
| FIC | Flight information centre |
| FIR | Flight information region |
| FIS | Flight information service |
| FL | Flight level |
| FLG | Flashing |
| FLR | Flares |
| FLT | Flight |
| FLTCK | Flight check |
| FLW | Follow(s) or following |
| FM | From (followed by time weather change is forecast to begin) |
| FNA | Final approach |
| FPAP | Flight path alignment point |
| FPL | Filed flight plan exchanged via aeronautical fixed service (AFS) |
| FPM | Feet per minute |
| FREQ | Frequency |
| FRI | Friday |
| FRNG | Firing |
| FRONT | Front (relating to weather) |
| FRQ | Frequent |
| FST | First |
| FT | Feet (dimensional unit) |
| FU | Smoke |

| | |
|---|---|
| FZ | Freezing |
| FZDZ | Freezing drizzle |
| FZFG | Freezing fog |
| FZRA | Freezing rain |

**G**

| | |
|---|---|
| G | Variations from the mean wind speed (gusts)(followed by figures in METAR/SPECI and TAF) |
| G/A | Ground-to-air |
| GA | General Aviation |
| GAGAN | GPS and Geostationary earth orbit augmented navigation |
| GARP | GBAS azimuth reference point |
| GBAS | Ground-based augmentation system |
| GEN | General |
| GEO | Geographic or true |
| GFS | Government Flying Service* |
| GMC | Ground movement control* |
| GND | Ground |
| GNDCK | Ground check |
| GNSS | Global navigation satellite system |
| GP | Glide path |
| GPS | Global positioning system |
| GR | Hail |
| GRAS | Ground-based regional augmentation system |
| GS | Ground speed |

**H**

| | |
|---|---|
| H24 | Continuous day and night service |
| HBN | Hazard beacon |
| HDG | Heading |
| HEL | Helicopter |
| HF | High frequency (3 000 to 30 000 kHz) |
| HGT | Height or height above |
| HJ | Sunrise to sunset |
| HK | Hong Kong* |
| HKD | Hong Kong Dollars* |
| HKIA | Hong Kong International Airport* |
| HLDG | Holding |
| HN | Sunset to sunrise |
| HO | Service available to meet operational requirements |
| HOL | Holiday |
| HPA | Hectopascal |
| HR | Hours |
| HS | Service available during hours of scheduled operations |
| HVY | Heavy (used to indicate the intensity of weather phenomena, e.g. HVY RA = heavy rain) |
| HZ | Haze |
| HZ | Hertz (cycle per second) |

**I**

| | |
|---|---|
| I/V | Instrument / visual* |
| IAC | Instrument approach chart |
| IAF | Initial approach fix |
| IAP | Instrument approach procedure |
| IAS | Indicated air speed |
| IASC | Inter-area speech circuit* |
| IBN | Identification beacon |
| IC | Illumination candles* |
| ICAO | International Civil Aviation Organization |
| ICE | Icing |
| ID | Identifier or identify |
| IDENT | Identification |
| IF | Intermediate approach fix |
| IFR | Instrument flight rules |
| ILS | Instrument landing system |
| IMC | Instrument meteorological conditions |
| IMG | Immigration |
| INA | Initial approach |
| INBD | Inbound |
| INCERFA | Uncertainty phase |
| INFO | Information |
| INOP | Inoperative |
| INPR | In progress |
| INS | Inertial navigation system |
| INSTL | Install or installed or installation |
| INSTR | Instrument |
| INT | Intersection |
| INTL | International |
| INTRG | Interrogator |
| INTRP | Interrupt or interruption or interrupted |
| INTSF | Intensify or intensifying |
| INTST | Intensity |
| IR | Ice on runway |
| ISA | International standard atmosphere |
| ISOL | Isolated |

**J**

| | |
|---|---|
| JAN | January |

| | |
|---|---|
| JUL | July |
| JUN | June |
| | **K** |
| KG | Kilograms |
| KHZ | Kilohertz |
| KIAS | Knots indicated airspeed |
| KM | Kilometres |
| KT | Knots |
| KW | Kilowatts |
| | **L** |
| L | Left (preceded by runway designation number to identify a parallel runway) |
| LAM | Logical acknowledgement (message type designator) |
| LAT | Latitude |
| LCA | Local, locally, location or located |
| LDA | Landing distance available |
| LDG | Landing |
| LDI | Landing direction indicator |
| LGT | Light or lighting |
| LGTD | Lighted |
| LIH | Light intensity high |
| LIL | Light intensity low |
| LLZ | Localizer (progressively changed to LOC)* |
| LOC | Localizer |
| LONG | Longitude |
| LORAN | LORAN (long range air navigation system) |
| LRG | Long range |
| LTD | Limited |
| LTP | Landing threshold point |
| LV | Light and variable (relating to wind) |
| LVL | Level |
| LVP | Low visibility procedures |
| | **M** |
| M | Degree(s) magnetic* |
| M | Mach number (followed by figures) |
| M | Metres (preceded by figures) |
| M | Minimum value of runway visual range (followed by figures in METAR/SPECI) |
| MAINT | Maintenance |
| MAP | Aeronautical maps and charts |
| MAPT | Missed approach point |
| MAR | March |
| MAX | Maximum |
| MAY | May |
| MDA | Minimum descent altitude |
| MDH | Minimum descent height |
| MEA | Minimum en-route altitude |
| MEDEVAC | Medical evacuation flight |
| MEHT | Minimum eye height above threshold (for visual approach slope indicator systems) |
| MET | Meteorological or meteorology |
| METAR | Aerodrome routine meteorological report (in meteorological code) |
| MF | Medium frequency (300 to 3 000 kHz) |
| MHZ | Megahertz |
| MID | Mid-point (related to RVR) |
| MIFG | Shallow fog |
| MIL | Military |
| MIN | Minutes |
| MLS | Microwave landing system |
| MM | Middle marker |
| MMF | Middle marker fix* |
| MNM | Minimum |
| MNPS | Minimum navigation performance specifications |
| MNTN | Maintain |
| MOC | Minimum obstacle clearance (required) |
| MOD | Moderate (used to indicate the intensity of weather phenomena, interference or static reports, e.g. MOD RA = moderate rain) |
| MON | Monday |
| MOV | Move or moving or movement |
| MRA | Minimum reception altitude |
| MRG | Medium range |
| MRP | ATS/MET reporting point |
| MS | Minus |
| MSA | Minimum sector altitude |
| MSAS | Multi-functional satellite-based augmentation system |
| MSAW | Minimum safe altitude warning |
| MSG | Message |
| MSL | Mean sea level |
| MT | Mountain |
| MTW | Mountain waves |
| MX | Mixed type of ice information (white and clear) |
| | **N** |
| N | No distinct tendency (in RVR during previous 10 minutes) |
| N | North or northern latitude |
| NAV | Navigation |

| | |
|---|---|
| NAVAID | Navigation aid |
| NB | Northbound |
| NBFR | Not before |
| NC | No change |
| NCD | No cloud detected (In automated METAR/ SPECI) |
| NDB | Non directional radio beacon |
| NDV | No directional variations available (in automated METAR/SPECI) |
| NE | North-east |
| NEB | North-eastbound |
| NEG | No or negative or permission not granted or that is not correct |
| NGT | Night |
| NIL | None or I have nothing to send |
| NM | Nautical miles |
| NML | Normal |
| NNE | North north east |
| NNW | North north west |
| NOF | International NOTAM office |
| NOSIG | No significant change (used in trend-type landing forecasts) |
| NOTAM | Notice distributed by means of telecommunication containing information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations |
| NOTAMC | Cancelling NOTAM |
| NOTAMN | New NOTAM |
| NOTAMR | Replacing NOTAM |
| NOV | November |
| NR | Number |
| NS | Nimbostratus |
| NSC | Nil significant cloud |
| NW | North-west |
| NXT | Next |

**O**

| | |
|---|---|
| O/R | On request |
| OAC | Oceanic area control centre |
| OBS | Observe or observed or observation |
| OBSC | Obscure or obscured or obscuring |
| OBST | Obstacle |
| OCA | Obstacle clearance altitude |
| OCC | Occulting (light) |
| OCH | Obstacle clearance height |
| OCL | Obstacle clearance limit* |
| OCN | Oceanic control area* |
| OCNL | Occasional or occasionally |
| OCS | Obstacle clearance surface |
| OCT | October |
| OM | Outer marker |
| OMF | Outer marker fix* |
| OPMET | Operational meteorological (information) |
| OPN | Open or opening or opened |
| OPR | Operator or operate or operative or operating or operational |
| OPS | Operations |
| OVC | Overcast |

**P**

| | |
|---|---|
| P | Maximum value of wind speed runway visual range (followed by figures in METAR/SPECI and TAF) |
| P | Prohibited area (followed by identification) |
| PA | Precision approach |
| PANS | Procedures for air navigation services |
| PAPI | Precision approach path indicator |
| PARA | Paragraph* |
| PAX | Passenger(s) |
| PBN | Performance-based navigation |
| PCN | Pavement classification number |
| PDC | Pre-departure clearance |
| PE | Ice pellets |
| PER | Performance |
| PERM | Permanent |
| PLVL | Present level |
| PN | Prior notice required |
| PNR | Point of no return |
| PO | Dust devils |
| POB | Persons on board |
| PPR | Prior permission required |
| PRI | Primary |
| PROB | Probability |
| PROC | Procedure |
| PS | Plus |
| PSN | Position |
| PWR | Power |

**Q**

| | |
|---|---|
| QDM | Magnetic heading (zero wind) |
| QDR | Magnetic bearing |

| | |
|---|---|
| QFE | Atmospheric pressure at aerodrome elevation (or at runway threshold) |
| QFU | Magnetic orientation of runway |
| QNH | Altimeter sub-scale setting to obtain elevation when on the ground |
| QTE | True bearing |

**R**

| | |
|---|---|
| R | Radial from VOR (followed by three figures) |
| R | Restricted area (followed by identification) |
| R | Right (preceded by runway designation number to identify a parallel runway) |
| RA | Rain |
| RAC | Rules of the air and air traffic services |
| RAD | Radar* |
| RASS | Remote altimeter setting source |
| RCC | Rescue co-ordination centre |
| RCF | Radio communication failure (message type designator) |
| RCL | Runway centre line |
| RCLL | Runway centre line light(s) |
| RDH | Reference datum height |
| RDO | Radio |
| RE | Recent (used to qualify weather phenomena, e.g. RERA = recent rain) |
| REC | Receive or receiver |
| REDL | Runway edge light(s) |
| REF | Reference to .. or refer to ... |
| REG | Registration |
| RENL | Runway end light(s) |
| REP | Report or reporting or reporting point |
| REQ | Request or requested |
| RESA | Runway end safety area |
| RETIL | Rapid Exit Taxiway Indicator Lights* |
| RLCE | Request level change en-route |
| RMAC | Radar minimum altitude chart* |
| RMK | Remark |
| RNAV | Area navigation |
| RNG | Radio range |
| RNP | Required navigation performance |
| ROC | Rate of climb |
| RPL | Repetitive flight plan |
| RQP | Request flight plan (message type designator) |
| RQS | Request supplementary flight plan (message type designator) |
| RRA | (or RRB, RRC ... etc., in sequence) Delayed meteorological message (message type designator) |
| RSR | En-route surveillance radar |
| RSSR | En-route secondary surveillance radar* |
| RTD | Delayed (used to indicate delayed meteorological message, message type designator) |
| RTE | Route |
| RTF | Radiotelephone |
| RVR | Runway visual range |
| RVSM | Reduced vertical separation minima |
| RWY | Runway |

**S**

| | |
|---|---|
| S | South or southern latitude |
| SA | Sand |
| SAR | Search and rescue |
| SARPS | Standards and Recommended Practices (ICAO) |
| SAT | Saturday |
| SATCOM | Satellite communication (used only when referring generally to both voice and data satellite communication or only data satellite communication) |
| SB | Southbound |
| SBAS | Satellite-based augmentation system |
| SC | Stratocumulus |
| SCT | Scattered |
| SDBY | Stand by |
| SE | South-east |
| SEA | South East Asia* |
| SEB | South-eastbound |
| SEC | Seconds |
| SECT | Sector |
| SELCAL | Selective calling system |
| SEP | September |
| SER | Service or servicing or served |
| SEV | Severe (used e.g. to qualify icing and turbulence reports) |
| SFC | Surface |
| SG | Snow grains |
| SH | Showers (followed by RA=rain, SN=snow, PL=ice pellets, GR=hail, GS=small hail and/or snow pellets or combinations thereof, e.g. SHRASN = showers of rain and snow) |
| SID | Standard Instrument Departure |

| | |
|---|---|
| SIGMET | Information concerning en-route weather and other phenomena in the atmosphere that may affect the safety of aircraft operations |
| SIGWX | Significant weather* |
| SKARA | Shek Kong Aerodrome Reporting Area* |
| SKC | Sky clear* |
| SKED | Schedule or scheduled |
| SMR | Surface movement radar |
| SN | Snow |
| SNOWTAM | A special series NOTAM notifying the presence or removal of hazardous conditions due to snow, ice, slush and ice on the movement area, by means of a special format |
| SPECI | Aerodrome special meteorological report (in meteorological code) |
| SPECIAL | Special meteorological report (in abbreviated plain language) |
| SPL | Supplementary flight plan(message type designator) |
| SQ | Squall |
| SR | Sunrise |
| SRA | Surveillance radar approach |
| SRE | Surveillance radar element of precision approach radar system |
| SRY | Secondary |
| SS | Sandstorm |
| SS | Sunset |
| SSB | Single sideband |
| SSE | South south east |
| SSR | Secondary surveillance radar |
| SSW | South south west |
| ST | Stratus |
| STA | Straight in approach |
| STAR | Standard Instrument Arrival |
| STD | Standard |
| STF | Stratiform |
| STN | Station |
| STS | Status |
| STWL | Stopway light(s) |
| SUN | Sunday |
| SUP | Supplement (AIP Supplement) |
| SUPPS | Regional supplementary procedures |
| SVFR | Special visual flight rules* |
| SW | South-west |
| SWB | South-westbound |
| SWY | Stopway |

**T**

| | |
|---|---|
| T | True (preceded by a bearing to indicate reference to True North) |
| TA | Transition altitude |
| TAA | Terminal arrival altitude |
| TAF | Aerodrome forecast |
| TAS | True airspeed |
| TC | Tropical cyclone |
| TCAS | Traffic alert and collision avoidance system* |
| TCAS RA | Traffic alert and collision avoidance system resolution advisory |
| TCH | Threshold crossing height* |
| TCU | Towering cumulus |
| TDWR | Terminal Doppler Weather Radar* |
| TDZ | Touchdown zone |
| TEL | Telephone |
| TEMP | Temperature* |
| TEMPO | Temporary or temporarily |
| TEND | Trend forecast* |
| TFC | Traffic |
| THR | Threshold |
| THRU | Through |
| THU | Thursday |
| TIL | Until |
| TL | Till (followed by time by which weather change is forecast to end) |
| TMA | Terminal control area |
| TN | Minimum temperature |
| TO | To ... (place) |
| TODA | Take-off distance available |
| TORA | Take-off run available |
| TR | Track |
| TRANS | Transmits or transmitter |
| TRL | Transition level |
| TROP | Tropopause |
| TS | Thunderstorm (followed by RA=Rain, SN=snow, PL=ice pellets, GR=hail, GS=small hail and/or snow pellets or combinations thereof, e.g. TSRASN = thunderstorm with rain and snow) |
| TS | Thunderstorm (in aerodrome reports and forecasts, TS used alone means thunder heard but no precipitation at the aerodrome) |
| TSR | Terminal surveillance radar* |
| TSSR | Terminal secondary surveillance radar* |
| TTR | Terminal Transition Route* |

| | |
|---|---|
| TUE | Tuesday |
| TURB | Turbulence |
| TVOR | Terminal VOR |
| TWR | Aerodrome control tower or aerodrome control |
| TWY | Taxiway |
| TX | Maximum temperature |
| TXL | Taxilane |
| TYP | Type of aircraft |
| TYPH | Typhoon |
| | **U** |
| U/S | Unserviceable |
| U/SLG | Under slung* |
| UCARA | Uncontrolled airspace reporting area* |
| UFN | Until further notice |
| ULR | Ultra long range |
| UNL | Unlimited |
| UP | Unidentified precipitation (in automated METAR/SPECI) |
| UTC | Co-ordinated Universal Time |
| | **V** |
| V | Variations in the mean wind direction (preceded and followed by figures in METAR/SPECI, e.g. 350V070) |
| VA | Volcanic ash |
| VAC | Visual approach chart |
| VAR | Magnetic variation |
| VC | Vicinity of the aerodrome (followed by FG=fog, FC=funnel cloud, SH=showers, PO=dust/sand whirls, BLDU=blowing dust, BLSA=blowing sand, BLSN=blowing snow, DS=duststorm, SS=sandstorm, TS=thunderstorm or VA=volcanic ash, e.g. VCFG= vicinity fog) |
| VCP | VOR check point* |
| VDF | Very high frequency direction-finding station |
| VFR | Visual flight rules |
| VHF | Very high frequency (30 - 300 MHz) |
| VIP | Very important person |
| VIS | Visibility |
| VMC | Visual meteorological conditions |
| VOL | Volume (followed by I, II...) |
| VOLMET | Meteorological information for aircraft in flight |
| VOR | VHF omnidirectional radio range |
| VORTAC | VOR and TACAN combination |
| VPA | Vertical path angle |
| VRB | Variable |
| VV | Vertical visibility |
| | **W** |
| W | West or western longitude |
| WAAS | Wide area augmentation system |
| WAC | World aeronautical chart - ICAO 1:1 000 000 |
| WB | Westbound |
| WBAR | Wingbar lights |
| WED | Wednesday |
| WEF | With effect from or effective from |
| WIE | With immediate effect or effective immediately |
| WILCO | Will comply |
| WINTEM | Forecast upper wind and temperature for aviation* |
| WIP | Work in progress |
| WNW | West north west |
| WPT | Way-point |
| WRNG | Warning |
| WS | Wind shear |
| WSW | West south west |
| WT | Weight |
| WTWS | Windshear and Turbulence Warning System* |
| WX | Weather |
| | **X** |
| X | Cross |
| XBAR | Crossbar (of approach lighting system) |
| XNG | Crossing |
| XS | Atmospherics |
| | **Y** |
| YCZ | Yellow caution zone (runway lighting) |
| YR | Your |
| | **Z** |
| Z | Co-ordinated Universal Time (in meteorological messages) |
| ZNC | Zone Control* |

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## GEN 2.3 CHART SYMBOLS

Nil

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## GEN 2.4 LOCATION INDICATORS

1) The location indicators VHSK and VHSS cannot be used in the address component of AFS messages.
2) Refer to AIP Macao regarding the use of VMMC and VMMH as part of addresses of AFS messages.

| Encode | |
|---|---|
| **Location** | **Indicator** |
| HONG KONG FIR | VHHK |
| HONG KONG/ INTERNATIONAL | VHHH |
| MACAO/ HELIPORT | VMMH |
| MACAO/ INTL AIRPORT | VMMC |
| SEK KONG | VHSK |
| SHEUNG WAN / SKY SHUTTLE HELIPORT | VHSS |

| Decode | |
|---|---|
| **Indicator** | **Location** |
| VHHH | HONG KONG/ INTERNATIONAL |
| VHHK | HONG KONG FIR |
| VHSK | SEK KONG |
| VHSS | SHEUNG WAN / SKY SHUTTLE HELIPORT |
| VMMC | MACAO/ INTL AIRPORT |
| VMMH | MACAO/ HELIPORT |

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## GEN 2.5 LIST OF RADIO NAVIGATION AIDS

| ID | STATION NAME | FACILITY | PURPOSE (see Note) |
|---|---|---|---|
| ITFC | HONG KONG | DME RWY 25C | A |
| ITFC | HONG KONG/ INTERNATIONAL | ILS GP RWY 25C | A |
| ITFC | HONG KONG/ INTERNATIONAL | ILS LOC RWY 25C | A |
| ITFL | HONG KONG | DME RWY 25L | A |
| ITFL | HONG KONG/ INTERNATIONAL | ILS GP RWY 25L | A |
| ITFL | HONG KONG/ INTERNATIONAL | ILS LOC RWY 25L | A |
| ITFR | HONG KONG | DME RWY 25R | A |
| ITFR | HONG KONG/ INTERNATIONAL | ILS GP RWY 25R | A |
| ITFR | HONG KONG/ INTERNATIONAL | ILS LOC RWY 25R | A |
| IZSC | HONG KONG | DME RWY 07C | A |
| IZSC | HONG KONG/ INTERNATIONAL | ILS GP RWY 07C | A |
| IZSC | HONG KONG/ INTERNATIONAL | ILS LOC RWY 07C | A |
| IZSL | HONG KONG | DME RWY 07L | A |
| IZSL | HONG KONG/ INTERNATIONAL | ILS GP RWY 07L | A |
| IZSL | HONG KONG/ INTERNATIONAL | ILS LOC RWY 07L | A |
| IZSR | HONG KONG | DME RWY 07R | A |
| IZSR | HONG KONG/ INTERNATIONAL | ILS GP RWY 07R | A |
| IZSR | HONG KONG/ INTERNATIONAL | ILS LOC RWY 07R | A |
| SMT | SIU MO TO | DME | AE |
| SMT | SIU MO TO | DVOR | AE |
| TD | TUNG LUNG | DME | AE |
| TD | TUNG LUNG | DVOR | AE |

Note : A = Aerodrome
E = Enroute
AE = Dual purpose

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# GEN 2.6 CONVERSION TABLES

| NM to KM<br>1 NM = 1.852 KM | | KM to NM<br>1 KM = 0.54 NM | | FT to M<br>1 FT = 0.3048 M | | M to FT<br>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 | 0.370 | 0.2 | 0.11 | 2 | 0.610 | 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 | 16.40 |
| 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 | 9.260 | 5 | 2.70 | 50 | 15.240 | 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 | 18.520 | 10 | 5.40 | 100 | 30.480 | 100 | 328.08 |
| 20 | 37.040 | 20 | 10.80 | 200 | 60.960 | 200 | 656.17 |
| 30 | 55.560 | 30 | 16.20 | 300 | 91.440 | 300 | 984.25 |
| 40 | 74.080 | 40 | 21.60 | 400 | 121.920 | 400 | 1 312.34 |
| 50 | 92.600 | 50 | 27.00 | 500 | 152.400 | 500 | 1 640.42 |
| 60 | 111.120 | 60 | 32.40 | 600 | 182.880 | 600 | 1 968.50 |
| 70 | 129.640 | 70 | 37.80 | 700 | 213.360 | 700 | 2 296.59 |
| 80 | 148.160 | 80 | 43.20 | 800 | 243.840 | 800 | 2 624.67 |
| 90 | 166.680 | 90 | 48.60 | 900 | 274.320 | 900 | 2 952.76 |
| 100 | 185.200 | 100 | 54.00 | 1 000 | 304.800 | 1 000 | 3 280.84 |
| 200 | 370.400 | 200 | 107.99 | 2 000 | 609.600 | 2 000 | 6 561.68 |
| 300 | 555.600 | 300 | 161.99 | 3 000 | 914.400 | 3 000 | 9 842.52 |
| 400 | 740.800 | 400 | 215.98 | 4 000 | 1 219.200 | 4 000 | 13 123.36 |
| 500 | 926.000 | 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 | 0.30 | 18.0 | 0.55 | 33.0 | 0.80 | 48.0 |
| 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 |
| 0.10 | 6.0 | 0.35 | 21.0 | 0.60 | 36.0 | 0.85 | 51.0 |
| 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 | 0.40 | 24.0 | 0.65 | 39.0 | 0.90 | 54.0 |
| 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 |
| 0.20 | 12.0 | 0.45 | 27.0 | 0.70 | 42.0 | 0.95 | 57.0 |
| 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 | 0.50 | 30.0 | 0.75 | 45.0 | | |

From seconds of an arc to decimal minutes 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 | 0.30 | 33 | 0.55 | 48 | 0.80 |
| 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 | 0.10 | 21 | 0.35 | 36 | 0.60 | 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 | 0.40 | 39 | 0.65 | 54 | 0.90 |
| 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 | 0.20 | 27 | 0.45 | 42 | 0.70 | 57 | 0.95 |
| 13 | 0.22 | 28 | 0.47 | 43 | 0.72 | 58 | 0.97 |
| 14 | 0.23 | 29 | 0.48 | 44 | 0.73 | 59 | 0.98 |
| 15 | 0.25 | 30 | 0.50 | 45 | 0.75 | | |

INTENTIONALLY

LEFT

BLANK

## GEN 2.7 SUNRISE/SUNSET TABLES

1 The tables on the following pages have been prepared by the Hong Kong Observatory.

1.1 The times in the tables are in Hong Kong Time (UTC+8) for beginning of civil morning twilight (TWIL FROM), sunrise (SR), sunset (SS), and end of civil evening twilight (TWIL TO) for the years from 2024 to 2026.

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 6º below the horizon, as commonly used.

1.3 The tables in para 2 are calculated for HONG KONG/ INTERNATIONAL for the year 2025, which is used as an “average year” for the years from 2024 to 2026. In this period, the times on an arbitrary date will deviate less than 2 minutes from the times on the same date in the “average year”.

## 2. **Sunrise-Sunset Tables**

| HONG KONG/ INTERNATIONAL VHHH 221832N 1135453E | | | | | | HONG KONG/ INTERNATIONAL VHHH 221832N 1135453E | | | | | | HONG KONG/ INTERNATIONAL VHHH 221832N 1135453E | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MONTH/DAY | | TWIL FROM | SR | SS | TWIL TO | MONTH/DAY | | TWIL FROM | SR | SS | TWIL TO | MONTH/DAY | | TWIL FROM | SR | SS | TWIL TO |
| JAN | 1 | 6:40 | 7:04 | 17:52 | 18:16 | MAR | 1 | 6:23 | 6:46 | 18:28 | 18:51 | MAY | 1 | 5:29 | 5:52 | 18:51 | 19:14 |
| | 2 | 6:40 | 7:04 | 17:53 | 18:17 | | 2 | 6:22 | 6:45 | 18:28 | 18:51 | | 2 | 5:28 | 5:52 | 18:51 | 19:15 |
| | 3 | 6:40 | 7:05 | 17:53 | 18:18 | | 3 | 6:22 | 6:44 | 18:29 | 18:51 | | 3 | 5:28 | 5:51 | 18:52 | 19:15 |
| | 4 | 6:40 | 7:05 | 17:54 | 18:18 | | 4 | 6:21 | 6:43 | 18:29 | 18:52 | | 4 | 5:27 | 5:50 | 18:52 | 19:16 |
| | 5 | 6:41 | 7:05 | 17:55 | 18:19 | | 5 | 6:20 | 6:42 | 18:30 | 18:52 | | 5 | 5:26 | 5:50 | 18:53 | 19:16 |
| | 6 | 6:41 | 7:05 | 17:55 | 18:19 | | 6 | 6:19 | 6:41 | 18:30 | 18:53 | | 6 | 5:26 | 5:49 | 18:53 | 19:17 |
| | 7 | 6:41 | 7:05 | 17:56 | 18:20 | | 7 | 6:18 | 6:41 | 18:31 | 18:53 | | 7 | 5:25 | 5:49 | 18:53 | 19:17 |
| | 8 | 6:41 | 7:06 | 17:57 | 18:21 | | 8 | 6:17 | 6:40 | 18:31 | 18:53 | | 8 | 5:24 | 5:48 | 18:54 | 19:18 |
| | 9 | 6:42 | 7:06 | 17:57 | 18:21 | | 9 | 6:16 | 6:39 | 18:31 | 18:54 | | 9 | 5:24 | 5:48 | 18:54 | 19:18 |
| | 10 | 6:42 | 7:06 | 17:58 | 18:22 | | 10 | 6:15 | 6:38 | 18:32 | 18:54 | | 10 | 5:23 | 5:47 | 18:55 | 19:19 |
| | 11 | 6:42 | 7:06 | 17:59 | 18:23 | | 11 | 6:15 | 6:37 | 18:32 | 18:54 | | 11 | 5:23 | 5:47 | 18:55 | 19:19 |
| | 12 | 6:42 | 7:06 | 17:59 | 18:23 | | 12 | 6:14 | 6:36 | 18:32 | 18:55 | | 12 | 5:22 | 5:46 | 18:56 | 19:20 |
| | 13 | 6:42 | 7:06 | 18:00 | 18:24 | | 13 | 6:13 | 6:35 | 18:33 | 18:55 | | 13 | 5:22 | 5:46 | 18:56 | 19:20 |
| | 14 | 6:42 | 7:06 | 18:01 | 18:25 | | 14 | 6:12 | 6:34 | 18:33 | 18:56 | | 14 | 5:21 | 5:45 | 18:57 | 19:21 |
| | 15 | 6:42 | 7:06 | 18:01 | 18:25 | | 15 | 6:11 | 6:33 | 18:34 | 18:56 | | 15 | 5:21 | 5:45 | 18:57 | 19:21 |
| | 16 | 6:42 | 7:06 | 18:02 | 18:26 | | 16 | 6:10 | 6:32 | 18:34 | 18:56 | | 16 | 5:20 | 5:44 | 18:57 | 19:22 |
| | 17 | 6:42 | 7:06 | 18:03 | 18:27 | | 17 | 6:09 | 6:31 | 18:34 | 18:57 | | 17 | 5:20 | 5:44 | 18:58 | 19:22 |
| | 18 | 6:42 | 7:06 | 18:03 | 18:27 | | 18 | 6:08 | 6:30 | 18:35 | 18:57 | | 18 | 5:19 | 5:43 | 18:58 | 19:23 |
| | 19 | 6:42 | 7:06 | 18:04 | 18:28 | | 19 | 6:07 | 6:30 | 18:35 | 18:57 | | 19 | 5:19 | 5:43 | 18:59 | 19:23 |
| | 20 | 6:42 | 7:06 | 18:05 | 18:29 | | 20 | 6:06 | 6:29 | 18:35 | 18:58 | | 20 | 5:18 | 5:43 | 18:59 | 19:24 |
| | 21 | 6:42 | 7:06 | 18:06 | 18:29 | | 21 | 6:05 | 6:28 | 18:36 | 18:58 | | 21 | 5:18 | 5:42 | 19:00 | 19:24 |
| | 22 | 6:42 | 7:06 | 18:06 | 18:30 | | 22 | 6:04 | 6:27 | 18:36 | 18:58 | | 22 | 5:18 | 5:42 | 19:00 | 19:25 |
| | 23 | 6:42 | 7:06 | 18:07 | 18:31 | | 23 | 6:03 | 6:26 | 18:36 | 18:59 | | 23 | 5:17 | 5:42 | 19:01 | 19:25 |
| | 24 | 6:42 | 7:05 | 18:08 | 18:31 | | 24 | 6:02 | 6:25 | 18:37 | 18:59 | | 24 | 5:17 | 5:41 | 19:01 | 19:26 |
| | 25 | 6:42 | 7:05 | 18:08 | 18:32 | | 25 | 6:01 | 6:24 | 18:37 | 18:59 | | 25 | 5:17 | 5:41 | 19:02 | 19:26 |
| | 26 | 6:41 | 7:05 | 18:09 | 18:33 | | 26 | 6:01 | 6:23 | 18:37 | 19:00 | | 26 | 5:16 | 5:41 | 19:02 | 19:27 |
| | 27 | 6:41 | 7:05 | 18:10 | 18:33 | | 27 | 6:00 | 6:22 | 18:38 | 19:00 | | 27 | 5:16 | 5:41 | 19:02 | 19:27 |
| | 28 | 6:41 | 7:04 | 18:10 | 18:34 | | 28 | 5:59 | 6:21 | 18:38 | 19:01 | | 28 | 5:16 | 5:41 | 19:03 | 19:28 |
| | 29 | 6:41 | 7:04 | 18:11 | 18:34 | | 29 | 5:58 | 6:20 | 18:38 | 19:01 | | 29 | 5:16 | 5:40 | 19:03 | 19:28 |
| | 30 | 6:40 | 7:04 | 18:12 | 18:35 | | 30 | 5:57 | 6:19 | 18:39 | 19:01 | | 30 | 5:16 | 5:40 | 19:04 | 19:28 |
| | 31 | 6:40 | 7:03 | 18:12 | 18:36 | | 31 | 5:56 | 6:18 | 18:39 | 19:02 | | 31 | 5:15 | 5:40 | 19:04 | 19:29 |
| | | | | | | | | | | | | | | | | | |
| FEB | 1 | 6:40 | 7:03 | 18:13 | 18:36 | APR | 1 | 5:55 | 6:17 | 18:40 | 19:02 | JUN | 1 | 5:15 | 5:40 | 19:05 | 19:29 |
| | 2 | 6:39 | 7:03 | 18:14 | 18:37 | | 2 | 5:54 | 6:16 | 18:40 | 19:02 | | 2 | 5:15 | 5:40 | 19:05 | 19:30 |
| | 3 | 6:39 | 7:02 | 18:14 | 18:37 | | 3 | 5:53 | 6:15 | 18:40 | 19:03 | | 3 | 5:15 | 5:40 | 19:05 | 19:30 |
| | 4 | 6:39 | 7:02 | 18:15 | 18:38 | | 4 | 5:52 | 6:14 | 18:41 | 19:03 | | 4 | 5:15 | 5:40 | 19:06 | 19:31 |
| | 5 | 6:38 | 7:01 | 18:15 | 18:39 | | 5 | 5:51 | 6:14 | 18:41 | 19:03 | | 5 | 5:15 | 5:40 | 19:06 | 19:31 |
| | 6 | 6:38 | 7:01 | 18:16 | 18:39 | | 6 | 5:50 | 6:13 | 18:41 | 19:04 | | 6 | 5:15 | 5:40 | 19:07 | 19:32 |
| | 7 | 6:37 | 7:00 | 18:17 | 18:40 | | 7 | 5:49 | 6:12 | 18:42 | 19:04 | | 7 | 5:15 | 5:40 | 19:07 | 19:32 |
| | 8 | 6:37 | 7:00 | 18:17 | 18:40 | | 8 | 5:48 | 6:11 | 18:42 | 19:05 | | 8 | 5:15 | 5:40 | 19:07 | 19:32 |
| | 9 | 6:36 | 6:59 | 18:18 | 18:41 | | 9 | 5:47 | 6:10 | 18:42 | 19:05 | | 9 | 5:15 | 5:40 | 19:08 | 19:33 |
| | 10 | 6:36 | 6:59 | 18:18 | 18:41 | | 10 | 5:46 | 6:09 | 18:43 | 19:05 | | 10 | 5:15 | 5:40 | 19:08 | 19:33 |
| | 11 | 6:35 | 6:58 | 18:19 | 18:42 | | 11 | 5:45 | 6:08 | 18:43 | 19:06 | | 11 | 5:15 | 5:40 | 19:08 | 19:33 |
| | 12 | 6:35 | 6:58 | 18:20 | 18:43 | | 12 | 5:44 | 6:07 | 18:43 | 19:06 | | 12 | 5:15 | 5:40 | 19:09 | 19:34 |
| | 13 | 6:34 | 6:57 | 18:20 | 18:43 | | 13 | 5:44 | 6:06 | 18:44 | 19:07 | | 13 | 5:15 | 5:40 | 19:09 | 19:34 |
| | 14 | 6:34 | 6:57 | 18:21 | 18:44 | | 14 | 5:43 | 6:05 | 18:44 | 19:07 | | 14 | 5:15 | 5:40 | 19:09 | 19:34 |
| | 15 | 6:33 | 6:56 | 18:21 | 18:44 | | 15 | 5:42 | 6:05 | 18:44 | 19:07 | | 15 | 5:15 | 5:40 | 19:10 | 19:35 |
| | 16 | 6:32 | 6:55 | 18:22 | 18:45 | | 16 | 5:41 | 6:04 | 18:45 | 19:08 | | 16 | 5:15 | 5:40 | 19:10 | 19:35 |
| | 17 | 6:32 | 6:55 | 18:22 | 18:45 | | 17 | 5:40 | 6:03 | 18:45 | 19:08 | | 17 | 5:15 | 5:40 | 19:10 | 19:35 |
| | 18 | 6:31 | 6:54 | 18:23 | 18:46 | | 18 | 5:39 | 6:02 | 18:46 | 19:09 | | 18 | 5:15 | 5:41 | 19:10 | 19:36 |
| | 19 | 6:31 | 6:53 | 18:23 | 18:46 | | 19 | 5:38 | 6:01 | 18:46 | 19:09 | | 19 | 5:16 | 5:41 | 19:11 | 19:36 |
| | 20 | 6:30 | 6:53 | 18:24 | 18:47 | | 20 | 5:37 | 6:00 | 18:46 | 19:09 | | 20 | 5:16 | 5:41 | 19:11 | 19:36 |
| | 21 | 6:29 | 6:52 | 18:24 | 18:47 | | 21 | 5:37 | 6:00 | 18:47 | 19:10 | | 21 | 5:16 | 5:41 | 19:11 | 19:36 |
| | 22 | 6:28 | 6:51 | 18:25 | 18:47 | | 22 | 5:36 | 5:59 | 18:47 | 19:10 | | 22 | 5:16 | 5:41 | 19:11 | 19:36 |
| | 23 | 6:28 | 6:50 | 18:25 | 18:48 | | 23 | 5:35 | 5:58 | 18:48 | 19:11 | | 23 | 5:16 | 5:42 | 19:12 | 19:37 |
| | 24 | 6:27 | 6:50 | 18:26 | 18:48 | | 24 | 5:34 | 5:57 | 18:48 | 19:11 | | 24 | 5:17 | 5:42 | 19:12 | 19:37 |
| | 25 | 6:26 | 6:49 | 18:26 | 18:49 | | 25 | 5:33 | 5:57 | 18:48 | 19:12 | | 25 | 5:17 | 5:42 | 19:12 | 19:37 |
| | 26 | 6:25 | 6:48 | 18:27 | 18:49 | | 26 | 5:33 | 5:56 | 18:49 | 19:12 | | 26 | 5:17 | 5:42 | 19:12 | 19:37 |
| | 27 | 6:25 | 6:47 | 18:27 | 18:50 | | 27 | 5:32 | 5:55 | 18:49 | 19:12 | | 27 | 5:18 | 5:43 | 19:12 | 19:37 |
| | 28 | 6:24 | 6:46 | 18:28 | 18:50 | | 28 | 5:31 | 5:54 | 18:50 | 19:13 | | 28 | 5:18 | 5:43 | 19:12 | 19:37 |
| | | | | | | | 29 | 5:30 | 5:54 | 18:50 | 19:13 | | 29 | 5:18 | 5:43 | 19:12 | 19:37 |
| | | | | | | | 30 | 5:30 | 5:53 | 18:50 | 19:14 | | 30 | 5:19 | 5:44 | 19:12 | 19:37 |

| HONG KONG/ INTERNATIONAL VHHH 221832N 1135453E | | | | | | HONG KONG/ INTERNATIONAL VHHH 221832N 1135453E | | | | | | HONG KONG/ INTERNATIONAL VHHH 221832N 1135453E | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MONTH/DAY | | TWIL FROM | SR | SS | TWIL TO | MONTH/DAY | | TWIL FROM | SR | SS | TWIL TO | MONTH/DAY | | TWIL FROM | SR | SS | TWIL TO |
| JUL | 1 | 5:19 | 5:44 | 19:12 | 19:38 | SEP | 1 | 5:44 | 6:07 | 18:41 | 19:04 | NOV | 1 | 6:05 | 6:28 | 17:47 | 18:10 |
| | 2 | 5:19 | 5:44 | 19:13 | 19:38 | | 2 | 5:45 | 6:07 | 18:40 | 19:03 | | 2 | 6:06 | 6:29 | 17:47 | 18:10 |
| | 3 | 5:20 | 5:45 | 19:13 | 19:38 | | 3 | 5:45 | 6:08 | 18:39 | 19:02 | | 3 | 6:06 | 6:30 | 17:46 | 18:09 |
| | 4 | 5:20 | 5:45 | 19:13 | 19:38 | | 4 | 5:45 | 6:08 | 18:38 | 19:01 | | 4 | 6:07 | 6:30 | 17:46 | 18:09 |
| | 5 | 5:20 | 5:45 | 19:13 | 19:38 | | 5 | 5:46 | 6:08 | 18:38 | 19:00 | | 5 | 6:07 | 6:31 | 17:45 | 18:08 |
| | 6 | 5:21 | 5:46 | 19:13 | 19:37 | | 6 | 5:46 | 6:09 | 18:37 | 18:59 | | 6 | 6:08 | 6:31 | 17:45 | 18:08 |
| | 7 | 5:21 | 5:46 | 19:12 | 19:37 | | 7 | 5:46 | 6:09 | 18:36 | 18:58 | | 7 | 6:08 | 6:32 | 17:44 | 18:07 |
| | 8 | 5:21 | 5:46 | 19:12 | 19:37 | | 8 | 5:47 | 6:09 | 18:35 | 18:57 | | 8 | 6:09 | 6:32 | 17:44 | 18:07 |
| | 9 | 5:22 | 5:47 | 19:12 | 19:37 | | 9 | 5:47 | 6:09 | 18:34 | 18:56 | | 9 | 6:10 | 6:33 | 17:43 | 18:07 |
| | 10 | 5:22 | 5:47 | 19:12 | 19:37 | | 10 | 5:47 | 6:10 | 18:33 | 18:55 | | 10 | 6:10 | 6:34 | 17:43 | 18:06 |
| | 11 | 5:23 | 5:48 | 19:12 | 19:37 | | 11 | 5:48 | 6:10 | 18:32 | 18:54 | | 11 | 6:11 | 6:34 | 17:42 | 18:06 |
| | 12 | 5:23 | 5:48 | 19:12 | 19:37 | | 12 | 5:48 | 6:10 | 18:31 | 18:53 | | 12 | 6:11 | 6:35 | 17:42 | 18:05 |
| | 13 | 5:24 | 5:48 | 19:12 | 19:36 | | 13 | 5:48 | 6:11 | 18:30 | 18:52 | | 13 | 6:12 | 6:35 | 17:42 | 18:05 |
| | 14 | 5:24 | 5:49 | 19:12 | 19:36 | | 14 | 5:48 | 6:11 | 18:29 | 18:51 | | 14 | 6:12 | 6:36 | 17:41 | 18:05 |
| | 15 | 5:24 | 5:49 | 19:11 | 19:36 | | 15 | 5:49 | 6:11 | 18:28 | 18:50 | | 15 | 6:13 | 6:37 | 17:41 | 18:05 |
| | 16 | 5:25 | 5:50 | 19:11 | 19:36 | | 16 | 5:49 | 6:11 | 18:27 | 18:49 | | 16 | 6:14 | 6:37 | 17:41 | 18:04 |
| | 17 | 5:25 | 5:50 | 19:11 | 19:35 | | 17 | 5:49 | 6:12 | 18:26 | 18:48 | | 17 | 6:14 | 6:38 | 17:41 | 18:04 |
| | 18 | 5:26 | 5:50 | 19:11 | 19:35 | | 18 | 5:50 | 6:12 | 18:25 | 18:47 | | 18 | 6:15 | 6:38 | 17:40 | 18:04 |
| | 19 | 5:26 | 5:51 | 19:10 | 19:35 | | 19 | 5:50 | 6:12 | 18:24 | 18:46 | | 19 | 6:15 | 6:39 | 17:40 | 18:04 |
| | 20 | 5:27 | 5:51 | 19:10 | 19:34 | | 20 | 5:50 | 6:12 | 18:23 | 18:45 | | 20 | 6:16 | 6:40 | 17:40 | 18:04 |
| | 21 | 5:27 | 5:52 | 19:10 | 19:34 | | 21 | 5:50 | 6:13 | 18:22 | 18:44 | | 21 | 6:17 | 6:40 | 17:40 | 18:04 |
| | 22 | 5:28 | 5:52 | 19:09 | 19:34 | | 22 | 5:51 | 6:13 | 18:21 | 18:43 | | 22 | 6:17 | 6:41 | 17:40 | 18:03 |
| | 23 | 5:28 | 5:53 | 19:09 | 19:33 | | 23 | 5:51 | 6:13 | 18:20 | 18:42 | | 23 | 6:18 | 6:42 | 17:40 | 18:03 |
| | 24 | 5:29 | 5:53 | 19:09 | 19:33 | | 24 | 5:51 | 6:14 | 18:19 | 18:41 | | 24 | 6:19 | 6:42 | 17:39 | 18:03 |
| | 25 | 5:29 | 5:53 | 19:08 | 19:32 | | 25 | 5:52 | 6:14 | 18:18 | 18:40 | | 25 | 6:19 | 6:43 | 17:39 | 18:03 |
| | 26 | 5:30 | 5:54 | 19:08 | 19:32 | | 26 | 5:52 | 6:14 | 18:17 | 18:39 | | 26 | 6:20 | 6:44 | 17:39 | 18:03 |
| | 27 | 5:30 | 5:54 | 19:07 | 19:32 | | 27 | 5:52 | 6:15 | 18:16 | 18:38 | | 27 | 6:20 | 6:44 | 17:39 | 18:03 |
| | 28 | 5:30 | 5:55 | 19:07 | 19:31 | | 28 | 5:52 | 6:15 | 18:15 | 18:37 | | 28 | 6:21 | 6:45 | 17:39 | 18:03 |
| | 29 | 5:31 | 5:55 | 19:06 | 19:31 | | 29 | 5:53 | 6:15 | 18:14 | 18:36 | | 29 | 6:22 | 6:46 | 17:39 | 18:03 |
| | 30 | 5:31 | 5:55 | 19:06 | 19:30 | | 30 | 5:53 | 6:15 | 18:13 | 18:35 | | 30 | 6:22 | 6:46 | 17:39 | 18:03 |
| | 31 | 5:32 | 5:56 | 19:05 | 19:29 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| AUG | 1 | 5:32 | 5:56 | 19:05 | 19:29 | OCT | 1 | 5:53 | 6:16 | 18:12 | 18:34 | DEC | 1 | 6:23 | 6:47 | 17:39 | 18:04 |
| | 2 | 5:33 | 5:57 | 19:04 | 19:28 | | 2 | 5:54 | 6:16 | 18:11 | 18:33 | | 2 | 6:24 | 6:48 | 17:40 | 18:04 |
| | 3 | 5:33 | 5:57 | 19:04 | 19:28 | | 3 | 5:54 | 6:16 | 18:10 | 18:32 | | 3 | 6:24 | 6:48 | 17:40 | 18:04 |
| | 4 | 5:34 | 5:57 | 19:03 | 19:27 | | 4 | 5:54 | 6:17 | 18:09 | 18:32 | | 4 | 6:25 | 6:49 | 17:40 | 18:04 |
| | 5 | 5:34 | 5:58 | 19:03 | 19:26 | | 5 | 5:55 | 6:17 | 18:08 | 18:31 | | 5 | 6:26 | 6:50 | 17:40 | 18:04 |
| | 6 | 5:35 | 5:58 | 19:02 | 19:26 | | 6 | 5:55 | 6:17 | 18:07 | 18:30 | | 6 | 6:26 | 6:50 | 17:40 | 18:04 |
| | 7 | 5:35 | 5:59 | 19:01 | 19:25 | | 7 | 5:55 | 6:18 | 18:06 | 18:29 | | 7 | 6:27 | 6:51 | 17:40 | 18:05 |
| | 8 | 5:35 | 5:59 | 19:01 | 19:24 | | 8 | 5:56 | 6:18 | 18:05 | 18:28 | | 8 | 6:27 | 6:52 | 17:41 | 18:05 |
| | 9 | 5:36 | 5:59 | 19:00 | 19:24 | | 9 | 5:56 | 6:18 | 18:05 | 18:27 | | 9 | 6:28 | 6:52 | 17:41 | 18:05 |
| | 10 | 5:36 | 6:00 | 18:59 | 19:23 | | 10 | 5:56 | 6:19 | 18:04 | 18:26 | | 10 | 6:29 | 6:53 | 17:41 | 18:05 |
| | 11 | 5:37 | 6:00 | 18:59 | 19:22 | | 11 | 5:57 | 6:19 | 18:03 | 18:25 | | 11 | 6:29 | 6:54 | 17:41 | 18:06 |
| | 12 | 5:37 | 6:01 | 18:58 | 19:21 | | 12 | 5:57 | 6:19 | 18:02 | 18:24 | | 12 | 6:30 | 6:54 | 17:42 | 18:06 |
| | 13 | 5:37 | 6:01 | 18:57 | 19:21 | | 13 | 5:57 | 6:20 | 18:01 | 18:24 | | 13 | 6:30 | 6:55 | 17:42 | 18:06 |
| | 14 | 5:38 | 6:01 | 18:57 | 19:20 | | 14 | 5:58 | 6:20 | 18:00 | 18:23 | | 14 | 6:31 | 6:55 | 17:42 | 18:07 |
| | 15 | 5:38 | 6:02 | 18:56 | 19:19 | | 15 | 5:58 | 6:21 | 17:59 | 18:22 | | 15 | 6:32 | 6:56 | 17:43 | 18:07 |
| | 16 | 5:39 | 6:02 | 18:55 | 19:18 | | 16 | 5:58 | 6:21 | 17:59 | 18:21 | | 16 | 6:32 | 6:57 | 17:43 | 18:08 |
| | 17 | 5:39 | 6:02 | 18:54 | 19:17 | | 17 | 5:59 | 6:21 | 17:58 | 18:20 | | 17 | 6:33 | 6:57 | 17:44 | 18:08 |
| | 18 | 5:39 | 6:03 | 18:53 | 19:17 | | 18 | 5:59 | 6:22 | 17:57 | 18:20 | | 18 | 6:33 | 6:58 | 17:44 | 18:09 |
| | 19 | 5:40 | 6:03 | 18:53 | 19:16 | | 19 | 6:00 | 6:22 | 17:56 | 18:19 | | 19 | 6:34 | 6:58 | 17:45 | 18:09 |
| | 20 | 5:40 | 6:03 | 18:52 | 19:15 | | 20 | 6:00 | 6:23 | 17:55 | 18:18 | | 20 | 6:34 | 6:59 | 17:45 | 18:09 |
| | 21 | 5:41 | 6:04 | 18:51 | 19:14 | | 21 | 6:00 | 6:23 | 17:55 | 18:17 | | 21 | 6:35 | 6:59 | 17:46 | 18:10 |
| | 22 | 5:41 | 6:04 | 18:50 | 19:13 | | 22 | 6:01 | 6:24 | 17:54 | 18:17 | | 22 | 6:35 | 7:00 | 17:46 | 18:10 |
| | 23 | 5:41 | 6:04 | 18:49 | 19:12 | | 23 | 6:01 | 6:24 | 17:53 | 18:16 | | 23 | 6:36 | 7:00 | 17:47 | 18:11 |
| | 24 | 5:42 | 6:05 | 18:49 | 19:11 | | 24 | 6:02 | 6:24 | 17:52 | 18:15 | | 24 | 6:36 | 7:01 | 17:47 | 18:11 |
| | 25 | 5:42 | 6:05 | 18:48 | 19:11 | | 25 | 6:02 | 6:25 | 17:52 | 18:14 | | 25 | 6:37 | 7:01 | 17:48 | 18:12 |
| | 26 | 5:42 | 6:05 | 18:47 | 19:10 | | 26 | 6:03 | 6:25 | 17:51 | 18:14 | | 26 | 6:37 | 7:02 | 17:48 | 18:13 |
| | 27 | 5:43 | 6:06 | 18:46 | 19:09 | | 27 | 6:03 | 6:26 | 17:50 | 18:13 | | 27 | 6:38 | 7:02 | 17:49 | 18:13 |
| | 28 | 5:43 | 6:06 | 18:45 | 19:08 | | 28 | 6:03 | 6:26 | 17:50 | 18:13 | | 28 | 6:38 | 7:02 | 17:49 | 18:14 |
| | 29 | 5:43 | 6:06 | 18:44 | 19:07 | | 29 | 6:04 | 6:27 | 17:49 | 18:12 | | 29 | 6:38 | 7:03 | 17:50 | 18:14 |
| | 30 | 5:44 | 6:07 | 18:43 | 19:06 | | 30 | 6:04 | 6:27 | 17:48 | 18:11 | | 30 | 6:39 | 7:03 | 17:51 | 18:15 |
| | 31 | 5:44 | 6:07 | 18:42 | 19:05 | | 31 | 6:05 | 6:28 | 17:48 | 18:11 | | 31 | 6:39 | 7:04 | 17:51 | 18:15 |
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# GEN 3 SERVICES

## GEN 3.1 AERONAUTICAL INFORMATION SERVICES

### 1 Responsible Service

1.1 The Aeronautical Information Service in Hong Kong is provided by the Aeronautical Information Management Centre (AIMC) which is a section of the Air Traffic Management Division of the Civil Aviation Department. The International NOTAM office is an integral part of the AIMC and is located at the same address.

1.2 AIS Headquarters

| | | |
|---|---|---|
| Postal Address | : | Aeronautical Information Management Centre<br>Air Traffic Management Division<br>Civil Aviation Department<br>Civil Aviation Department Headquarters<br>1 Tung Fai Road<br>Hong Kong International Airport<br>Lantau<br>Hong Kong |
| Telephone Number | : | +852 2910 6174 |
| Telefax Number | : | +852 2910 1180 |
| AFS Address | : | VHHHYNYX |
| Electronic Mail Address | : | aic@cad.gov.hk |
| Website Address | : | http://www.ais.gov.hk |

1.3 The service is provided in accordance with the provisions contained in ICAO Annex 15 - Aeronautical Information Services and the guidance material in the Aeronautical Information Services Manual (ICAO Doc 8126) and the Procedures for Air Navigation Services – Aeronautical Information Management (ICAO Doc 10066).

### 2 Area of Responsibility

2.1 The AIMC is responsible for the collection and dissemination of information relating to the Hong Kong Flight Information Region.

### 3 Aeronautical Publications

3.1 AIP HONG KONG

3.1.1 The AIP Hong Kong is issued to give details applicable to international and local flights conducted by commercial or private operators. The document is available in English only.

3.2 AMENDMENT SERVICE TO THE AIP (AIP AMDT)

3.2.1 Amendments to the AIP Hong Kong are made by means of an AIP AMDT issued on AIRAC dates (see para 4.2 below). They incorporate permanent changes to the AIP on the corresponding effective dates.

3.2.2 A brief description of the amendments and changes are provided in the AIP AMDT cover pages.

3.2.3 No AIP AMDT will be issued on an AIRAC date if there is no information to be published. In such cases, a ‘NIL’ notification will be included in the NOTAM checklist.

3.3 AIP SUPPLEMENT (AIP SUP)

3.3.1 Temporary changes to the information contained in the AIP are published as AIP SUP.

3.3.2 Each AIP SUP is allocated a serial number which is consecutive and based on the calendar year. A checklist of AIP SUP currently in force is issued monthly by the NOTAM checklist.

3.4 NOTAM

3.4.1 NOTAM issued by the Hong Kong Aeronautical Information Service are distributed in two series, viz, Series A for international distribution and Series C for local distribution. Each NOTAM is allocated a serial number which is consecutive and based on the calendar year. A checklist of NOTAM currently in force is issued each month.

3.4.2 For the purpose of NOTAM exchange, foreign NOTAM Offices may retrieve Hong Kong NOTAM by sending NOTAM request message (RQN) to VHHHYNYX in the following format:

a) RQN VHHH A0115/14

b) RQN VHHH A0201/14 - A0205/14

where:
RQN stands for the NOTAM request format,
VHHH stands for the ICAO Location Indicator of Hong Kong,
A0115/14 stands for the NOTAM number being requested,
A0201/14 - A0205/14 stands for a series of specific NOTAM numbers being requested.

3.4.3 SNOWTAM is issued when the runway at HKIA is wholly or partly contaminated by standing water.

3.5 AERONAUTICAL INFORMATION CIRCULAR (AIC)

3.5.1 AICs contain information of a general or administrative nature which are inappropriate to the AIP or NOTAM, and are published as required.

3.6 AERONAUTICAL CHARTS

3.6.1 Aeronautical charts are a visual representation of a portion of the Earth specifically designated to meet the needs of air navigation.

3.7 AVAILABILITY OF AERONAUTICAL PUBLICATIONS

3.7.1 The Aeronautical Information Products are available at the Hong Kong AIS website: http://www.ais.gov.hk

## 4 AIRAC System

4.1 Operationally significant changes shall be published as AIP AMDT / AIP SUP on pre-determined days in accordance with the AIRAC system. AIRAC information shall be made available at least 28 days, and for major changes at least 56 days in advance of the effective date. Following the publication of an AIP AMDT / AIP SUP in accordance with AIRAC procedures, a Trigger NOTAM shall be issued stating the subject of the changes. The Trigger NOTAM shall remain in force for 14 days after the AIRAC date.

4.2 The schedule of AIRAC dates is as follows:

| **2024** | **2025** | **2026** | **2027** |
|---|---|---|---|
| 25 January | 23 January | 22 January | 21 January |
| 22 February | 20 February | 19 February | 18 February |
| 21 March | 20 March | 19 March | 18 March |
| 18 April | 17 April | 16 April | 15 April |
| 16 May | 15 May | 14 May | 13 May |
| 13 June | 12 June | 11 June | 10 June |
| 11 July | 10 July | 9 July | 8 July |
| 8 August | 7 August | 6 August | 5 August |
| 5 September | 4 September | 3 September | 2 September |
| 3 October | 2 October | 1 October | 30 September |
| 31 October | 30 October | 29 October | 28 October |
| 28 November | 27 November | 26 November | 25 November |
| 26 December | 25 December | 24 December | 23 December |

## 5 Pre-flight Information Service at Aerodromes

5.1 Pre-flight Information Bulletin (PIB) contains a recapitulation of current NOTAM. Coverage provided is based on scheduled airlines' first sectors originating in Hong Kong.

5.2 The Pre-flight Information Service available at the AIMC, is a self-briefing service.

5.3 Aircraft operators and their agents may download the PIBs and the Hong Kong NOTAM Summary from the CADAS Center Terminal via Private Communication Network.

5.4 For details of Private Communication Network service, refer to GEN 3.4 para 3.6.

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# GEN 3.2 AERONAUTICAL CHARTS

## 1 Responsible Services

1.1 The authority responsible for the production of aeronautical charts is the Assistant Director-General of Civil Aviation (Air Traffic Management), acting under the authority of the Director- General of Civil Aviation.

1.2 Aeronautical charts have been prepared in accordance with the standards and recommended practices of Annex 4 - Aerodrome Charts, and the guidance material in the ICAO Aeronautical Charts Manual (Doc 8697 - AN/889/2).

## 2 Maintenance of Charts

2.1 The aeronautical charts included in the AIP are kept up to date by amendments to the AIP. Information concerning new aeronautical charts will be notified by Aeronautical Information Circular.

## 3 Availability of Charts

3.1 The charts listed in para. 5 are available for download from the following web-site: www.ais.gov.hk

## 4 Aeronautical Chart Series Available

4.1 The following series of aeronautical charts are produced:-

a) Aerodrome Chart - ICAO
b) Aerodrome Chart - Visual Markings
c) Aerodrome Chart - Lighting Plan
d) Aircraft Parking/Docking Chart - ICAO
e) Aerodrome Obstacle Chart - ICAO - Type A (for each runway)
f) Aerodrome Obstacle Chart - ICAO - Type B
g) En-route Chart - ICAO
h) Area Chart - for Departure, Arrival and Transiting Hong Kong TMA
i) Instrument Approach Chart - ICAO (for each runway and procedure type)
j) Standard Departure Chart - Instrument (SID) - ICAO
k) Standard Arrival Chart - Instrument (STAR) - ICAO
l) ATC Surveillance Minimum Altitude Chart - ICAO

4.2 General description of each series

a) Aerodrome Chart - ICAO

This chart contains detailed aerodrome data to provide flight crews with information that will facilitate the ground movement of aircraft from the aircraft stand to the runway, and from the runway to the aircraft stand. It also provides essential operational information at the aerodrome.

b) Aerodrome Chart - Visual Markings

This chart contains detailed information on runway and taxiway designations and markings, taxiway holding positions and stop bars, and other visual guidance and control aids.

c) Aerodrome Chart - Lighting Plan

This chart contains detailed information on approach, runway and taxiway lighting.

d) Aircraft Parking/Docking Chart - ICAO

This chart provides detailed information to facilitate the ground movement of aircraft between the taxiways and the aircraft parking/docking stands.

e) Aerodrome Obstacle Chart - ICAO - Type A

This chart contains detailed information on obstacles in the take-off flight path areas. It is shown in plan and profile view; the horizontal scale is 1 : 15 000; the vertical scale is 1 : 1 500.

f) Aerodrome Obstacle Chart - ICAO - Type B

This chart contains data necessary to determine the minimum safe altitude, the procedures for use in the event of an emergency during take-off or landing, and the application of obstacle clearing and marking criteria.

g) En-route Chart - ICAO

This chart provides detailed information on aerodromes, restricted and danger areas, and the air traffic services system in the Hong Kong FIR.

h) Area Chart - for Departure, Arrival and Transiting Hong Kong TMA

These charts provides detailed information on the transition between the enroute phase and the approach to an aerodrome, the transition between the take-off and the enroute phase of flight and flights through areas of complex ATS routes or airspace structure.

i) Instrument Approach Chart - ICAO

These charts provides flight crew with information that will enable them to perform an approved instrument approach procedure to the runway/heliport of intended landing, including the missed approach, and where applicable, the associated holding patterns.

j) Standard Departure Chart - Instrument (SID) - ICAO

These charts provide flight crew with information that will enable them to comply with the designated standard departure route - instrument, from take-off phase to the en-route phase.

k) Standard Arrival Chart - Instrument (STAR) - ICAO

These charts provide 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.

l) ATC Surveillance Minimum Altitude Chart - ICAO

This supplementary chart provides information that will enable flight crews to monitor and cross-check altitudes assigned by a controller using an ATS surveillance system.

## 5 List of Aeronautical Charts Available

| Title of series | Scale | Name | Date |
|---|---|---|---|
| Aerodrome Chart - ICAO | 1 : 15 000 | Hong Kong International | Current edition as per AIP |
| Aerodrome Chart - Visual Markings | 1 : 15 000 | Hong Kong International | |
| Aerodrome Chart - Lighting Plan | 1 : 15 000 | Hong Kong International | |
| Aircraft Parking / Docking Chart - ICAO | 1 : 10 000 | Hong Kong International | |
| Pavement Diagram | 1 : 15 000 | Hong Kong International | |
| Aerodrome Obstacle Chart - ICAO - Type A | 1 : 15 000 | Hong Kong International RWY 07R/25L | |
| | 1 : 15 000 | Hong Kong International RWY 07L/25R | |
| Aerodrome Obstacle Chart - ICAO - Type B | 1 : 20 000 | Hong Kong International | |
| En-route Chart - ICAO | 1 : 3 500 000 | Hong Kong | |
| Area Chart | 1 : 2 500 000 | Departure Routes | |
| | 1 : 2 500 000 | Arrival Routes | |
| | 1 : 2 500 000 | Flight Plan Routes Transiting Hong Kong TMA | |
| Instrument Approach Chart - ICAO | 1 : 500 000 to 1 : 400 000 | Hong Kong International - various approach procedures | |
| | 1 : 250 000 | Sky Shuttle Heliport | |
| Standard Departure Chart - Instrument (SID) - ICAO | 1 : 800 000 to 1 : 400 000 | Hong Kong International - various departure procedures | |
| | 1 : 250 000 | Sky Shuttle Heliport | |
| Standard Arrival Chart - Instrument (STAR) - ICAO | 1 : 1 100 000 to 1 : 800 000 | Hong Kong International - various arrival procedures | |
| ATC Surveillance Minimum Altitude Chart - ICAO | 1 : 800 000 | Hong Kong International | |

## 6 Topographical Charts

6.1 To supplement the above aeronautical charts, the following topographical charts with aeronautical information are published by the Government Lands Department:

| Name | Ref No. |
|---|---|
| Hong Kong Helicopter Flying Chart 1 : 50 000 Sheet 1 and 2 | HM50 HFC latest edition |
| Hong Kong Local Flying Chart 1 : 100 000 | HM100 LFC latest edition |

6.2 Purchase prices can be found in the following website: http://www.landsd.gov.hk/mapping/en/paper_map/price.pdf

6.3 These charts and a wide range of other topographical charts are available from the Lands Department.

| | | |
|---|---|---|
| Postal Address | : | Map Publications Centre (Hong Kong)<br>6/F North Point Government Offices<br>333 Java Road<br>North Point<br>Hong Kong |
| Telephone Number | : | +852 2231 3187 |
| Telefax Number | : | +852 2116 0774 |
| Electronic Mail Address | : | smosale1@landsd.gov.hk |
| Website Address | : | http://www.landsd.gov.hk/mapping/en/paper_map/fc.htm |

# GEN 3.3 AIR TRAFFIC SERVICES

## 1 Responsible Service

1.1 The authority responsible for the overall administration of air traffic services is the Assistant Director-General of Civil Aviation (Air Traffic Management) acting under the authority of the Director-General of Civil Aviation.

| | | |
|---|---|---|
| Postal Address | : | Assistant Director-General of Civil Aviation (Air Traffic Management)<br>Air Traffic Management Division<br>Civil Aviation Department<br>Civil Aviation Department Headquarters<br>1 Tung Fai Road<br>Hong Kong International Airport<br>Lantau<br>Hong Kong |
| Telephone Number | : | 2910 6501 |
| Telefax Number | : | 2910 0186 |
| AFS Address | : | VHHKZQZX |
| Electronic Mail Address | : | enquiry@cad.gov.hk |
| Website Address | : | http://www.cad.gov.hk/english/atmd.html |

The services are provided in accordance with the provisions contained in the following ICAO documents:

| | | |
|---|---|---|
| Annex 2 | - | Rules of the Air |
| Annex 11 | - | Air Traffic Services |
| DOC 4444 | - | Procedures for Air Navigation Services - Air Traffic Management (PANS-ATM) |
| DOC 8168 | - | Procedures for Air Navigation Services - Aircraft Operations (PANS-OPS) |
| DOC 7030 | - | Regional Supplementary Procedures |

Differences to these provisions are detailed in GEN 1.7.

## 2 Area of Responsibility

2.1 Air traffic services are provided for the entire territory of Hong Kong including the territorial waters and the airspace over the South China Sea as listed in ENR 2.1, notified by AIP Supplement or promulgated by NOTAM.

## 3 Types of Services

3.1 Air traffic services for both military and civil traffic in Hong Kong airspace are provided by the Civil Aviation Department, administered by the Assistant Director-General of Civil Aviation (Air Traffic Management) at Hong Kong International Airport.

3.2 The airspace of Hong Kong, including adjacent international waters, comprises a single area and is listed in ENR 2.1. Air Traffic Control is exercised in all controlled airspace; there is no distinction between upper and lower airspace. All flight information, air traffic control and alerting services are provided by one air traffic services unit (Hong Kong ATC).

3.3 A control zone is established at Hong Kong International Airport. Flight information, air traffic control and alerting services within the control zone are provided by approach/zone/aerodrome control.

3.4 ENR 1.4 describes the airspace classification for air traffic service purposes.

3.5 Airspace restrictions and hazardous areas are set out in ENR 5.

## 4 Co-ordination Between the Operator and ATS

4.1 Co-ordination between the operator and air traffic services is effected in accordance with ICAO Annex 11, Chapter 2, para 2.17 and Procedures for Air Navigation Services - Air Traffic Management (Doc 4444, PANS-ATM).

## 5 Minimum Flight Altitude

5.1 The minimum flight altitude on the ATS routes listed in ENR 3.1 have been determined so as to ensure at least 1 000 ft vertical clearance above the highest known obstacle within the lateral limits of the route within the Hong Kong FIR and the adjacent areas of adjoining FIRs.

# GEN 3.4 COMMUNICATION SERVICES

## 1 Responsible Service

1.1 The authority responsible for the overall administration of aeronautical communication and navigation facility services is the Assistant Director-General of Civil Aviation (Air Traffic Management) acting under the authority of the Director-General of Civil Aviation.

| | | |
|---|---|---|
| Postal Address | : | Assistant Director-General of Civil Aviation<br>(Air Traffic Management)<br>Air Traffic Management Division<br>Civil Aviation Department<br>Civil Aviation Department Headquarters<br>1 Tung Fai Road<br>Hong Kong International Airport<br>Lantau<br>Hong Kong |
| Telephone Number | : | 2910 6501 |
| Telefax Number | : | 2910 0186 |
| AFS Address | : | VHHHYTYX |
| Electronic Mail Address | : | aftn@cad.gov.hk |

1.2 The service is provided in accordance with the 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 | - | Designators for Aircraft Operating Agencies, Aeronautical Authorities and Services |
| DOC 7030 | - | Regional Supplementary Procedures |
| DOC 7910 | - | Location Indicators |
| DOC 9880 | - | Manual on Detailed Technical Specifications for the Aeronautical Telecommunication Network (ATN) using ISO/OSI standards and protocols |

Differences to these provisions are detailed in GEN 1.7.

## 2 Area of Responsibility

2.1 Arrangements for aeronautical radio communications and navigation services on a continuing basis within the Hong Kong FIR should be made with the Director-General of Civil Aviation, who is also responsible for the application of the regulations concerning the design, type and installation of radio stations in Hong Kong registered aircraft.

## 3 Types of Service

### 3.1 Radio Navigation Service

3.1.1 The following types of radio aids to navigation are available:-

| | |
|---|---|
| Instrument Landing System | (ILS) |
| VHF Omnidirectional Radio Range | (VOR) |
| Distance-Measuring Equipment | (DME) |
| Enroute Surveillance Radar | (RSR) |
| Approach Surveillance Radar | (ASR) |
| Terminal Surveillance Radar | (TSR) |
| Enroute Secondary Surveillance Radar | (RSSR) |
| Approach Secondary Surveillance Radar | (ASSR) |
| Terminal Secondary Surveillance Radar | (TSSR) |

Note: There is no Special Navigation System stationed within Hong Kong FIR.

### 3.2 Aeronautical Fixed Service

3.2.1 The Aeronautical Network Centre (ANC) provides the aeronautical fixed service with automatic message switching facility for the handling of messages specified in para. 4.4.1.1 in Annex 10 Vol II via the international Aeronautical Fixed Telecommunication Network (AFTN) and Aeronautical Telecommunication Network (ATN) on H24 basis. Messages not belonging to the categories specified will not be accepted for transmission. (See Table COM - 1A and Table COM - 1B)

3.2.2 As Hong Kong is designated as one of the Regional OPMET Centres under the ROBEX Scheme, the centre is also responsible for the exchange of operational meteorological information via the aeronautical fixed service. Inter Area Speech Circuits (IASC) are also provided either through the common carrier system or dedicated telephone channels.

### 3.3 Aeronautical Broadcasting Service

3.3.1 The following aeronautical broadcasts are available for aircraft in flight:

a) HF VOLMET broadcasts on designated frequencies and at regular schedules on H24 basis.

b) VHF Automatic Terminal Information Service (ATIS) broadcasts information on H24 basis:

i) for arriving aircraft on 128.20 MHZ;

ii) for departing aircraft on 127.05 MHZ.

c) Continuous VHF VOLMET broadcast of Shenzhen, Macau, Taibei and Gaoxiong actual weather on 128.875 MHZ on H24 basis.

### 3.4 ATS Data Link Service

3.4.1 The following ATS data link services are available for aircraft in flight:

a) Data Link Automatic Terminal Information Service (D-ATIS);

i) for arriving aircraft code VHHHA;

ii) for departing aircraft code VHHHD.

b) Data Link Meteorological Information for Aircraft in Flight (D-VOLMET).

Note: If pilots experience difficulty in establishing communication with D-ATIS or D-VOLMET services within Hong Kong airspace, they are requested to inform Hong Kong ATC.

3.4.2 A data link service for the delivery of 2-way pre-departure clearance (PDC) to aircraft prior to departure from Hong Kong International Airport is available. Before participating in this service operators must contact the Civil Aviation Department to ensure technical compatibility with the 2-way PDC system. (Aircraft must be equipped with Aircraft Communication and Addressing and Reporting System [ACARS] equipment compliant with AEEC Specification 623 and with connectivity to SITA Aircom Network or another compatible data link service provider's network.)

Note: If pilots experience difficulty in obtaining PDC messages they are requested to inform Clearance Delivery on 122.15 MHZ.

### 3.5 Other Information Services

3.5.1 Automatic Terminal Information Service (ATIS) broadcast are available H24 via the following telephone hotlines:

| | | |
|---|---|---|
| (a) | Arrival ATIS | +852 3141 2820 |
| (b) | Departure ATIS | +852 3141 2705 |

3.5.2 Arrival ATIS and Departure ATIS are available H24 on the CAD website http://www.hkatc.gov.hk

3.6 **Private Communication Network Service**

3.6.1 Hong Kong Civil Aviation Department Private Communication Network service enables authorised airline operators and local organisations to access to the HKCAD ATS Messaging Handling System (AMHS) web server for the exchange of messages (see para 3.2.1 above) via the AFTN. Airlines operators can also submit flight plans to the Aeronautical Information Management Centre for flights departing HKIA, download Pre-flight Information Bulletin (PIB) and Hong Kong NOTAM Summary.

3.6.2 Authorised airline operators and local organisations can subscribe to the Private Communication Network service from the designated service provider PCCW for connection to the HKCAD ATS Messaging Handling System (AMHS) web server. Access to the web server is controlled by authorized user accounts and password authentication.

3.6.3 Equipment requirement for the Private Communication Network service:

3.6.3.1 Minimum equipment requirements are:

a) a dedicated Personal Computer (PC) with a web browser, e.g. Internet Explorer (version 7 or later) or Mozilla Firefox (version 3 or later) with Java Runtime Environment (version 6) installed, etc.; and

b) a connection to the required Private Communication Network.

3.6.3.2 There is no need to install the application software on the PC. The application will be downloaded when connected to the system via the Private Communication Network.

3.6.3.3 To minimize impact to the Private Communication Network service due to cyber security threats, the computer equipment shall be protected at subscribers' end, including at least provisions of regular operating system update, anti-virus and firewall software, physical access control and the computer shall not be used to access the internet. Other wired or wireless network facilities (if available) shall be disabled prior to and during the connection with the Private Communication Network.

3.6.4 For information related to HKCAD ATS Messaging Handling System (AMHS) web service and enquiries on user account management, contact the Duty Officer at the Aeronautical Network Centre on Telephone +852 2910 6216, Fax +852 2910 1118.

3.6.5 Enquiries on the Private Communication Network connection issues may be directed to PCCW Hotline on Telephone +852 2888 7180.

3.6.6 For subscription of Private Communication Network service, contact PCCW on Telephone +852 2888 3492.

3.7 **Language Used**

3.7.1 English is the only language medium to be used in aeronautical communication and aeronautical broadcasting services being provided.

Table COM - 1A

Aeronautical Fixed Service - Telegraph/Telephone

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|
| **Station** | | **Correspondent** | | **Type of Channel** | **Type of Traffic** | **Hours (UTC)** | **Remarks** |
| **Name** | **Call Sign** | **Name** | **Call Sign** | | | | |
| Hong Kong | --- | Bangkok | --- | LDD/d | AFS | H24 | --- |
| | | Beijing | | LDD/d | AFS | H24 | |
| | | Fukuoka | | LDD/d | AFS | H24 | |
| | | Guangzhou | | LDD/d | AFS | H24 | |
| | | Haikou | | LDD/d | AFS | H24 | |
| | | Hochiminh City | | LDD/d | AFS | H24 | |
| | | Macao | | LDD/d | AFS | H24 | |
| | | Manila | | LDD/d | AFS | H24 | |
| | | Taibei | | LDD/d | AFS | H24 | |
| Hong Kong ACC | Hong Kong | Guangzhou ACC | Guangzhou | LTF | ATS | H24 | Direct controller-to-controller voice link. |
| | | Macao TWR | Macao | LTF | ATS | H24 | Direct controller-to-controller voice link. |
| | | Manila ACC | Manila | LTF | ATS | H24 | Direct controller-to-controller voice link. |
| | | Nanning ACC | Nanning | LTF | ATS | H24 | Direct controller-to-controller voice link. |
| | | Sanya ACC | Sanya | LTF | ATS | H24 | Direct controller-to-controller voice link. |
| | | Shanghai ACC | Shanghai | LTF | ATS | H24 | Direct controller-to-controller voice link. |
| | | Shantou ACC | Shantou | LTF | ATS | H24 | Direct controller-to-controller voice link. |
| | | Taibei ACC | Taibei | LTF | ATS | H24 | Direct controller-to-controller voice link. |
| | | Xiamen ACC | Xiamen | LTF | ATS | H24 | Direct controller-to-controller voice link. |
| | | Zhanjiang ATCU | Zhanjiang | LTF | ATS | H24 | --- |
| | | Zhuhai APP | Zhuhai | LTF | ATS | H24 | Direct controller-to-controller voice link. |
| Hong Kong Radar | Hong Kong Radar | Taibei ACC | Taibei Radar | LTF | ATS | H24 | Direct controller-to-controller voice link. |

Table COM - 1B

Aeronautical Fixed Service - Circuits for local authority and operational units

| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
| **Name of Station** | **Correspondent**<br>**AFTN Addressee** | **Type of Circuit** | **Type of Traffic** | **Hours (UTC)** | **Remarks** |
| Hong Kong (VHHH) | VHHHYAHQ (CAD ASO) | LDD/a | AFS | H24 | --- |
| | VHHHYLYX (AAIC/AAIA) | LDD/a | AFS | H24 | |
| | VHHHYAYC (CAA) | LDD/a | AFS | H24 | |
| | VHHHYKYX (MRCC) | LDD/d | AFS | H24 | |
| | VHHHZSZX (COSPAS-SARSAT) | LDD/d | AFS | H24 | |
| | VHHKZDZX (ATFMU) | LDD/d | AFS | H24 | |
| | VHHKZQZX (ATCC) | LDD/d | AFS | H24 | |
| | VHHHYNYX (AIMC/NOF) | LDD/d | AFS | H24 | |
| | VHHHYMYX (AMO/HKO) | LDD/d | AFS | H24 | |
| | VHHHYCYX (RCC) | LDD/d | AFS | H24 | |
| | VHHHYFYX (COM) | LDD/d | AFS | H24 | |

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# GEN 3.5 METEOROLOGICAL SERVICES

## 1 Responsible Meteorological Offices

1.1 The Meteorological Authority designated in accordance with ICAO Annex 3 para. 2.1.4 to provide the meteorological facilities and services for international air navigation covered by this AIP is the Hong Kong Observatory (HKO), a department of the Hong Kong Special Administrative Region Government, with its headquarters at Tsim Sha Tsui, Kowloon.

| | | |
|---|---|---|
| Postal Address | : | Hong Kong Observatory<br>134A Nathan Road<br>Tsim Sha Tsui<br>Kowloon<br>HONG KONG |
| Telephone Numbers | : | +852 2910 6300 (Office hours)<br>+852 2910 6920 (Duty Forecaster) |
| Telefax Number | : | +852 2910 0080 |
| Electronic Mail Address | : | amo@hko.gov.hk |
| AFS Address | : | VHHHYMYX |
| Website Address | : | http://www.weather.gov.hk |

1.2 The Hong Kong Observatory operates an Airport Meteorological Office (AMO)[1] at the Hong Kong International Airport (HKIA). Located at Level T3 of the South Aerodrome Control Tower (S-TWR), the South AMO (S-AMO) together with the Ancillary AMO (A-AMO) located at Level T2 of the North Aerodrome Control Tower (N-TWR), and the North AMO (N-AMO) at Level T2 of the New Air Traffic Control Tower (NAT) forms a resilient group of offices to provide aeronautical meteorological services. Weather observation and reporting, provision of forecast and warnings are undertaken by qualified aeronautical meteorological personnel meeting World Meteorological Organization (WMO) qualification, competencies, education and training standards.

Note

1) When references are made to the Airport Meteorological Office (AMO) without mentioning the location, it refers to one or more of the three offices (S-AMO, A-AMO and N-AMO) depending on the activation status of the offices.

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

| | |
|---|---|
| Annex 3 | Meteorological Service for International Air Navigation |
| Asia and Pacific Regions - Air Navigation Plan | |
| Doc 7030 | Regional Supplementary Procedures |
| Doc 8896 | Manual of Aeronautical Meteorological Practice |

Differences from these provisions are detailed in GEN 1.7.

## 2 Area of Responsibility

2.1 The AMO serves as the meteorological watch office and maintains meteorological watch for the Hong Kong FIR and issues SIGMET information in respect of the occurrence or expected occurrence of specified en-route weather and other phenomena in the atmosphere which necessitate the issue of SIGMETs. The AMO also serves as the aerodrome meteorological office and aeronautical meteorological station for HKIA.

## 3 Meteorological Observations and Reports

3.1 Weather Observers are on duty H24 at the AMO to make routine meteorological observations and to issue reports at half-hourly intervals. Reports of routine observations are issued as local routine report for dissemination at the aerodrome and as METAR for dissemination beyond the aerodrome.

3.2 The Weather Observer also makes special meteorological observations and issue reports whenever changes meet any of the criteria specified in ICAO Annex 3, Appendix 3, Section 2.3 and when the crosswind components change through 20 kt. Reports of special observations are issued as local special report for dissemination at the aerodrome and as SPECI for dissemination beyond the aerodrome. The same set of criteria is adopted for the issuance of local

special report and SPECI for mean surface direction, mean surface wind speed, variation from the mean surface wind speed (gusts), prevailing visibility, runway visual range, onset/cessation/change in intensity of weather phenomena, height of base of the lowest cloud layer, and amount of cloud layer below 1 500 ft. The detailed criteria for the issuance of local special report and SPECI are provided on the Aviation Meteorological Information Dissemination System (AMIDS) (see para. 10).

3.3 The observing systems and sites, and operating procedures are described in more details in para. 3.6 and 4 below.

Table GEN 3.5.3 Meteorological Observations and Reports

| Name of Station/ Location Indicator | Type and Frequency of Observations | Type of MET Reports & Supplementary Information Included | Observation System and Sites | Hours of Operation | Climatological Information |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| HONG KONG/ INTERNATIONAL<br><br>VHHH | Half hourly plus special observations | MET Report / Special Report Trend, Wind Shear | Cup anemometers, RVR transmissometers and forward scatterers (see chart page AD 2-VHHH-ADC-1).<br><br>See para. 3.6 below for sites of TDWRs, WTWS anemometers, weather buoys and wind profilers, Doppler LIDARs, short-range LIDAR, RVR transmissometers, forward scatterers and ceilometers. | H24 | Climatological tables AVBL |

3.4 Owing to the variability of meteorological elements in space and time, limitations of observing techniques and limitations caused by the definitions of some of the elements, the specific value of any of the elements given in a report shall be understood to be the best approximation to the actual conditions at the time of the observation.

3.5 In local routine reports, present weather information is representative of conditions at the aerodrome, i.e. within a radius of approximately 8 km of the aerodrome reference point. In METAR, present weather information is representative of conditions at the aerodrome and, for certain specified weather phenomena, in its vicinity, i.e. the area that lies within a radius of approximately 8 km and 16 km of the aerodrome reference point.

3.6 Locations of the Terminal Doppler Weather Radars (TDWR), Windshear and Turbulence Warning System (WTWS) anemometers, weather buoys and wind profilers, Doppler LIDARs, short-range LIDARs, Runway Visual Range (RVR) transmissometers, forward scatterers and ceilometers are shown in GEN 3.5-HKO-EQ.

**4 Observing Systems and Operating Procedures**

4.1 ANEMOMETERS

4.1.1 Three sets of anemometers are installed near each of the three runways, i.e. the south runway (RWY 07R TDZ, RWY 07R/25L MID RWY and RWY 25L TDZ), the centre runway (RWY 07C TDZ, RWY 07C/25C MID RWY and RWY 25C TDZ), and the north runway (RWY 07L TDZ, RWY 07L/25R MID RWY and RWY 25R TDZ). Reports of observations made at the AMO from the records of the anemometer near RWY 07L/25R MID RWY constitute the official wind reports. Winds in aerodrome forecasts for the airport refer to this location.

4.1.2 In the event that records of the anemometer near RWY 07L/25R MID RWY are not available, wind information at RWY 25R TDZ, RWY 07L TDZ, RWY 25L TDZ, RWY 07R TDZ or RWY 07R/25L MID RWY, in that order, will be substituted.

4.2 CEILOMETERS

4.2.1 Cloud base is measured by ceilometers installed near the runway thresholds of RWY 07L, RWY 07C, RWY 07R, RWY 25L, RWY 25C and RWY 25R, and at Siu Mo To and Meteorological Garden adjacent to S-TWR.

4.3 RUNWAY VISUAL RANGE (RVR) AND VISIBILITY

4.3.1 Nine sets of transmissometers and forward scatterers are installed for observation of RVR and visibility along the runways.

4.3.2 Whenever the RVR value and/or the visibility is observed to be less than 1 500 m, the RVR values observed at the thresholds are included in MET reports. These will be disseminated beyond the airport and used for meteorological broadcast (VOLMET) and for display to ATC as appropriate.

4.3.3 RVR values will be reported in the following scale:-

a) from 50 m up to 400 m at increments of 25 m;

b) from 400 m up to 800 m at increments of 50 m;

c) from 800 m up to 1 500 m at increments of 100 m.

Note: Values between scale points are rounded down to the nearest lower scale point.

4.3.4 RVR values are updated every 10 seconds and averaged over a period of 60 seconds.

4.3.5 RVR reports should be used by pilots in comparison with their weather minima. RVR values will be passed to aircraft whenever the reading is less than 1 500 m at the commencement of each approach for landing and before every take-off. Subsequent changes will also be passed.

4.3.6 When all three positions are reported, the values will be passed as three numbers relating to touchdown, mid-point and stop-end respectively, e.g. RVR 650, 600, 500. When only two values are reported, (touchdown and only one of the successive positions), the latter value will be prefixed with its position, e.g. RVR 650, stop-end 500 or RVR 650, mid-point 600.

4.3.7 Values in excess of 1 500 m will not be given, controllers shall report that the RVR as more than 1 500 m.

4.3.8 ATC will be notified by AMO of changes in serviceability status of the transmissometers. ATC will then inform pilots and notify the AIMC to issue a NOTAM.

4.4 TEMPERATURE AND PRESSURE

4.4.1 Digital thermometers are used to measure air temperature and wet-bulb temperature, and are installed in Meteorological Garden adjacent to S-TWR.

4.4.2 Digital barometers are used to measure atmospheric pressure, and are installed in Meteorological Garden adjacent to S-TWR.

4.5 WIND SHEAR AND TURBULENCE ALERTING SERVICE

4.5.1 The Wind Shear and Turbulence Warning System (WTWS) (see para. 5) continuously monitors low-level wind shear and turbulence within 3 NM of each runway threshold and over the runway to automatically provide concise alerts to ATC. The system will, however, not generate alerts out of 2 NM over the departure corridors except microburst alerts. An alert of wind shear, microburst and turbulence generated by WTWS over the runway or within 3 NM of touchdown is passed by ATC to landing aircraft. An alert of wind shear and turbulence generated by WTWS over the runway or within 2 NM over the departure corridor as well as microburst over the runway or within 3 NM over the departure corridor is passed by ATC to aircraft prior to departure.

4.5.2 The types of alerts provided by WTWS and passed by ATC are:

a) Microburst Alert – when RWY orientated wind speed loss is 30 kt or greater and accompanied by precipitation,

b) Wind Shear Alert – when RWY orientated wind speed gain is 15 kt or greater, or RWY oriented wind speed loss is between 15 kt and 29 kt, or RWY oriented wind speed loss is 30 kt or greater and not accompanied by precipitation,

c) Turbulence Alert – when turbulence is of a moderate or severe intensity (as expected to be experienced by a HEAVY category aircraft).

4.5.3 A warning of wind shear and turbulence issued by AMO in respect of observed or expected occurrence of wind shear and turbulence below 1 600 ft on final approach or on departure is provided on Voice-ATIS and D-ATIS (see para. 7). In issuing the warning, AMO makes reference to weather sensors including: Terminal Doppler Weather Radar (TDWR), Doppler Light Detection and Ranging (LIDAR) systems and an extensive anemometer network on and in the vicinity of the airport, weather buoys as well as pilots' reports.

## 5 Wind Shear and Turbulence Warning System (WTWS)

5.1 GENERAL

5.1.1 WTWS processes and integrates data from weather sensors including the TDWR, LIDARs and an extensive anemometer network on and in the vicinity of the airport and weather buoys to detect wind shear and turbulence and generate alerts. The update rate of alerts is at least once every minute.

5.1.2 Wind shear and turbulence events can be of very small scale, sporadic and transient in nature and may affect successive aircraft differently. This is especially so when winds change rapidly, e.g. when winds blow across terrain and possibly buildings, especially during the passage of a tropical cyclone. As such, wind shear and turbulence experienced by an aircraft may at times differ from the alerts provided and from the conditions reported by preceding aircraft.

5.1.3 A Microburst Alert will be generated when TDWR indicates that RWY orientated wind speed loss is 30 kt or greater and accompanied by precipitation. The wind shear associated with this Microburst Alert may be caused by phenomena other than convection, e.g. terrain-induced wind disturbances. Microbursts may be asymmetric, having winds on one side stronger than the other. The column of downdraft from the microburst can hit the ground at an angle rather than vertically. Therefore, the sequence of events in traversing a microburst in the conventional sense (a gain of headwind followed by a downdraft and a loss of headwind) should not be expected to always occur when a Microburst Alert is in effect.

5.1.4 When a Microburst Alert or Wind Shear Alert is in effect, particularly with wind speed gains or losses of 30 kt or greater, pilots are strongly advised to avoid entering the alert area.

5.1.5 Detailed information on the WTWS can be obtained from the HKO/IFALPA/The Honourable Company of Air Pilots booklet 'Windshear and Turbulence in Hong Kong - Information for Pilots'. This may be viewed at the HKO website: http://www.weather.gov.hk/en/aviat/articles/files/booklet_latest_edition.pdf

5.2 MICROBURST / WIND SHEAR ALERTS

5.2.1 The Microburst or Wind Shear Alert passed by ATC includes the type of alert (i.e. microburst or wind shear), the magnitude of the runway orientated wind speed difference and the location (final approach, departure or runway area as appropriate).

5.2.2 When more than one occurrence of wind shear is detected for a particular runway corridor, WTWS provides a consolidated Microburst or Wind Shear Alert for that particular runway corridor based on a priority system which takes into consideration the severity of the alerts and the confidence level of the different data sources which generate the alerts.
E.g. If a microburst with an intensity of minus 30 kt and a wind shear with an intensity of plus 15 kt are detected, only a Microburst Alert will be issued.

5.2.3 Detailed information on the priority system used when providing WTWS alerts can be obtained from the booklet and website given in para 5.1.5 above.

5.2.4 Gain and loss events can co-exist within the same runway corridor, particularly for terrain-induced wind shear. The WTWS is designed to assign a higher priority to a Wind Shear Alert of wind loss than a Wind Shear Alert of wind gain. If the former is issued, pilots are reminded that they may still encounter wind gain events.

5.3 TURBULENCE ALERTS

5.3.1 The Turbulence Alert passed by ATC includes the intensity and type of alert (i.e. moderate or severe turbulence), and the location (final approach, departure or runway area as appropriate). Severe turbulence will be alerted when the peak value of the cubic root of the eddy dissipation rate (EDR) equals or exceeds 0.5. The corresponding threshold for alerting moderate turbulence is 0.3.

5.4 MICROBURST / WIND SHEAR ALERT COMBINED WITH TURBULENCE ALERT

5.4.1 When a Microburst Alert or a Wind Shear Alert is given for a particular runway corridor and turbulence is also detected for that particular runway corridor, a Turbulence Alert will be passed by ATC together with the Microburst Alert or Wind Shear Alert.

**6 Phraseology of Alerts Passed by ATC**

6.1 Alerts generated by the WTWS will be passed by ATC and preceded by the word 'caution'. Examples of the phraseology used by ATC to pass wind shear and turbulence alerts are:

a) '(call sign) caution microburst minus 30 kt on final approach';

b) '(call sign) caution wind shear plus 25 kt on departure';

c) '(call sign) caution wind shear plus 15 kt on the runway';

d) '(call sign) caution severe turbulence on final approach';

e) '(call sign) caution wind shear plus 20 kt and moderate turbulence on departure'.

## 7 Wind Shear and Turbulence Warnings on ATIS

7.1 Wind shear and turbulence warnings are given immediately after the runway-in-use at the beginning of the Voice-ATIS and D-ATIS.

7.2 The Arrival and Departure ATIS wind shear and turbulence warnings will be given as either 'forecast' when the information is predicted by the Aviation Meteorological Forecaster, or 'forecast and reported' when the information has been confirmed by pilot reports in the previous 30 minutes. When microburst is detected by the TDWR, a microburst and significant wind shear warning will be given on both the Arrival and Departure ATIS without indicating 'forecast' or 'forecast and reported'.

7.3 Wind shear and/or turbulence warnings may include the specific runway corridor(s) to which the information is applicable or to all runway corridors. Examples of wind shear and turbulence warnings on Arrival and Departure ATIS are:

a) Microburst and significant wind shear 07L and 07R;

b) Significant wind shear forecast 07R;

c) Significant wind shear forecast and reported 07L and 07R;

d) Moderate turbulence forecast 25L and 25R;

e) Moderate turbulence forecast and reported 25L and 25R.

(ICAO abbreviations, e.g. 'MBST AND SIG WS', 'SIG WS FCST' and 'MOD TURB FCST AND REP' are used for D-ATIS.)

7.4 As cumulonimbus (CB) is already reported on ATIS and it is commonly understood that turbulence may occur near CB, warning of turbulence in the vicinity of CB is not provided.

## 8 Pilot Reports of Wind Shear and Turbulence

8.1 For the benefit of subsequent aircraft and for validation and further enhancement of the low-level wind shear and turbulence alerting services, pilots are requested to inform ATC if they experience any microburst, wind shear or turbulence on arrival or departure, irrespective of whether an alert has been given. ATC will pass such reports to following aircraft.

8.2 Pilots may contact HKO via email to amo@hko.gov.hk to provide more detailed information about microburst, wind shear and turbulence encounters with reference to the template form available at the HKO website: http://www.weather.gov.hk/aviat/amt_e/report_form.pdf

## 9 Additional Meteorological Information in ATIS Broadcasts

9.1 HILLTOP WINDS

9.1.1 To assist pilots in assessing possible wind changes that may be experienced during the final phase of approach under strong wind conditions, when the 2 minute mean wind measured at approximately 2 500 ft AMSL on Yi Tung Shan (primary) or Nei Lak Shan (backup) exceeds 35 kt, it will be given at the end of the Arrival ATIS (see GEN 3.5-HKO-EQ for the location of these anemometers.)
e.g. '2500 FT ESTIMATED WIND 160 DEG 40 KT'

9.1.2 Due to spatial variability of the wind and different geographical environment of the hilltop stations, the hilltop wind data may be different from the wind actually experienced by aircraft at 2 500 ft on the approach track.

9.2 PREVAILING VISIBILITY

9.2.1 Prevailing visibility is included in METAR/SPECI as described in Note 1) of para 13.1. To provide pilots with an overall picture of visibility, when any one of the nine RVR values is lower than 1 500 m or the prevailing visibility is lower than 3 000 m, the prevailing visibility will also be given on ATIS.

9.3 THUNDERSTORM ACTIVITY

9.3.1 Information on thunderstorm activities due to significant convection which are affecting or expected to affect the approach, departure or missed approach areas in one hour's time will be included in the ATIS broadcast. The Arrival ATIS will give information relevant to the approach and missed approach areas and the Departure ATIS will give information relevant to the departure areas.

9.3.2 The information will include the approximate distance and bearing from the airport, and the direction of movement, if possible.
e.g. 'Thunderstorm 20 NM southwest moving northeast'.
e.g. 'Widespread thunderstorm 20 NM northeast moving southeast.'

9.3.3 Considering the dynamic nature of convection, distance, bearing and/or movement information may be omitted.
e.g. 'Thunderstorm to northwest moving southeast'.
e.g. 'Scattered thunderstorm within 20 NM moving east.'
e.g. 'Widespread thunderstorm within 20 NM.'

9.3.4 Time of occurrence of thunderstorms may be indicated if available.
e.g. 'Thunderstorm from 0330 to 0430'.

9.4 SIGNIFICANT TAILWIND ON BASE LEG

9.4.1 Unexpected significant tailwind on base leg can affect the descent profile of aircraft. This is particularly relevant to runway 07 operations because of the restricted airspace for base leg and short final approach which may result in a destabilised approach. When the reported tailwind on runway 07 base leg is 20 knots or greater, but is not anticipated from the surface wind velocity, the information will be included in the Arrival ATIS.
e.g. 'Expect significant tailwind on base leg'.

## 10 Types of Services

10.1 GENERAL INFORMATION

10.1.1 Two Aviation Forecasters are on duty H24 at the AMO to prepare weather forecasts, issue warning messages and provide weather briefings on weather impacting air traffic. Aerodrome forecasts (TAF) valid for 30 hours are issued every 3 hours. The 30-hour TAF includes forecast of the maximum and minimum temperatures within the validity period. A forecast valid for 9 to 12 hours is extracted from the 30-hour TAF for inclusion in the scheduled VOLMET broadcasts and D-VOLMET (see Table GEN 3.5.13 VOLMET Service). Landing forecast is issued in the form of a trend forecast appended to MET reports, and is updated with the issuance of MET reports.

10.1.2 The issue of a new forecast shall be understood to automatically supersede any forecast of the same type previously issued.

10.1.3 Telephone consultation can also be obtained from the following sources:

| | |
|---|---|
| Aviation Forecaster | +852 2910 6920 |
| Enquiry and booking of flight documents | +852 2910 6922 |

10.1.4 The latest meteorological information is displayed and made available to flight crew members and operators for self-briefing, flight planning and flight documentation purposes via the Aviation Meteorological Information Dissemination System (AMIDS), including,

a) forecasts of
   i) upper wind and upper-air temperature;
   ii) flight level and temperature of tropopause;
   iii) direction, speed and flight level of maximum wind; and
   iv) SIGWX phenomena;
b) METAR or SPECI (including trend forecasts as issued in accordance with regional air navigation agreement) for the aerodromes of departure and intended landing, and for take-off, en-route and destination alternate aerodromes;
c) TAF or amended TAF for the aerodromes of departure and intended landing, and for take-off, en-route and destination alternate aerodromes;
d) forecasts for take-off;
e) SIGMET information and appropriate special air-reports, relevant to the whole route;
f) volcanic ash and tropical cyclone advisory information relevant to the whole route;
g) aerodrome warnings for HKIA;
h) meteorological satellite images;
i) ground-based weather radar information; and
j) space weather advisory information relevant to the whole route.

10.1.5 For aircraft take-off and landing, aerodrome forecast and actual reports are disseminated to ATC for onward transmission to pilots and operators.

10.1.6 Owing to the variability of meteorological elements in space and time, limitations of forecasting techniques and limitations caused by the definitions of some of the elements, the specific value of any of the elements given in a forecast shall be understood by the recipient to be the most probable value which the element is likely to assume during the period of the forecast. Similarly, when the time of occurrence or change of an element is given in a forecast, this time shall be understood to be the most probable time.

10.1.7 Forecasts of weather phenomena in TAF and landing forecast are for the area at the aerodrome, within a radius of approximately 8 km of the aerodrome reference point. Forecasts of cloud are for the aerodrome and its vicinity, i.e. the area within a radius of approximately 16 km of the aerodrome reference point.

10.2 INFORMATION FOR OPERATORS FOR PRE-FLIGHT PLANNING AND FOR IN-FLIGHT RE-PLANNING

10.2.1 Information for pre-flight planning such as copies of the latest prognostic significant weather chart, forecast upper wind and upper-air temperature charts for standard flight levels, flight level of tropopause, direction, speed and flight level of maximum wind and selected meteorological information can be obtained by operators via AMIDS no later than three hours prior to departure. Forecast for take-off within the next three hours is available on the AMIDS and is also provided upon request.

10.2.2 Flight documentation for each flight is made available on the AMIDS two hours before its departure and is updated as new information is received. Messages will pop up on the AMIDS whenever the weather conditions included in the flight documentation differ materially from that already made available earlier. Operators are advised to retrieve the flight documentation two hours before departure of the flight and then retrieve updated information closer to the departure time.

10.2.3 Information, including METAR/SPECI and TAF for selected aerodromes and SIGMET and volcanic ash and tropical cyclone advisory information as well as those listed in para 10.2.1 may be obtained at any time via AMIDS and upon request for in-flight re-planning by operators.

10.3 INFORMATION FOR USE BY FLIGHT CREW BEFORE DEPARTURE FROM HONG KONG

10.3.1 Flight documentation for all flights leaving Hong Kong is made available on the AMIDS two hours before departure. On request, flight documentation can also be sent by fax. Pre-departure amendment to flight documentation and aerodrome forecasts supplied as part of the flight documentation will be made available normally by pop up messages on AMIDS.

10.3.2 The documentation normally contains a selection of fixed time prognostic charts of significant weather and upper wind and upper-air temperature data appropriate to the cruising level (normally one or more of FL180, FL300, FL340 and FL390 charts), METAR/SPECI, aerodrome forecasts, SIGMETs and special air-reports, volcanic ash and tropical cyclone advisory information from the information specified in para. 10.1.4 a) i) and iv), b), c), e) and f), covering the flight concerned in respect of time, altitude and geographical extent. In general, the information provided relates to appropriate fixed times, or periods of time, and extends to the aerodrome of intended landing, also covering the meteorological conditions expected between the aerodrome of intended landing and alternate aerodromes designated by the operator.

10.3.3 For long haul flights, one or more High Level Significant Weather (SWH) prognostic chart(s) and Wind/Temp chart(s) from World Area Forecast Centres (WAFCs) are supplied to high level flights. A Medium Level Significant Weather (SWM) prognostic chart from the AMO plus Wind/Temp prognostic chart(s) from WAFCs appropriate to the cruising level are supplied to medium level flights. A SWM prognostic chart from the AMO plus one or more SWM prognostic charts from WAFCs, if necessary, are also supplied to EDTO flights.

10.3.4 Aerodrome forecasts from other meteorological offices and forecast charts from WAFCs are normally included in flight documentation without modification.

10.3.5 In order to obtain the latest information including those from the meteorological satellites and weather radars, flight crews are advised to make use of the AMIDS or consult the Aviation Forecaster by telephone before departure.

10.3.6 In case of prolonged failure of the AMIDS, flight documentation and other meteorological information may be made available via fax to the operators. The operators will be advised by fax when the above arrangement is activated.

10.3.7 Information supplied to flight crew members are retained for a period of at least 30 days from the date of issue. This information is available on request, for inquiries or investigations and, for these purposes, shall be retained until the inquiry or investigation is completed.

10.4 INFORMATION FOR AIRCRAFT IN FLIGHT

10.4.1 Meteorological reports issued by the AMO together with those received from a selection of neighbouring aerodromes are disseminated by means of scheduled VOLMET broadcasts or D-VOLMET (see Table GEN 3.5.13 VOLMET Service). Additional meteorological information will be issued to the pilot-in-command on request (see also VHHH AD 2.18 for information on ATIS Broadcast).

10.5 INFORMATION TO AIR TRAFFIC SERVICES UNITS

10.5.1 Routine, special and extra MET reports, trend-type landing forecasts, aerodrome forecasts, SIGMET information, wind shear and turbulence alerts, aerodrome warnings, assessment on significant convection affecting air traffic, weather briefings and other relevant supplementary information are provided to the air traffic services units.

10.5.2 Displays related to data from the equipment listed under para. 4 above are also provided to Air Traffic Services in real-time to support approach, landing and take-off operation.

10.5.3 Provision of meteorological services to the Air Traffic Services (ATS) units and coordination arrangements between the Meteorological Authority and the ATS Authority are documented in the “Agreed Coordination Arrangements between the Hong Kong Observatory and Hong Kong Civil Aviation Department in Respect of the Provision of Meteorological Service for International Air Navigation”, as per the guidelines in ICAO Doc 9377 “Manual on Coordination between Air Traffic Services, Aeronautical Information Services and Aeronautical Meteorological Services”.

10.6 INFORMATION FOR SEARCH AND RESCUE SERVICES UNITS

10.6.1 The AMO maintains liaison with the search and rescue services units and supplies all the meteorological information to the Rescue Co-ordination Centre as and when required.

## 11 Notification Required from Operators

11.1 Operators requiring meteorological service or changes in existing meteorological service shall notify, sufficiently in advance, the HKO or the AMO in accordance with ICAO Annex 3, para. 2.3.

11.2 Operators requiring meteorological service shall notify the HKO and shall supply all details necessary for the planning of appropriate arrangements by HKO, at least one month in advance, when:

a) new routes or new types of operations are planned;

b) changes of a lasting character are to be made in scheduled operations;

c) other changes, affecting the provision of meteorological service, are planned.

11.3 Operators or their flight crew members shall notify the AMO, as soon as the following information becomes available :

a) change of flight schedules;

b) when non-scheduled flights are to be operated; and

c) when flights are delayed, advanced or cancelled.

Unless otherwise notified, AMO will utilize the information available on the Airport Operational Database (AODB) operated by the Airport Authority Hong Kong.

## 12 Aircraft Reports

12.1 SPECIAL AND OTHER NON-ROUTINE AIRCRAFT REPORTS

12.1.1 Further to the pilot reporting of low-level wind shear and turbulence at HKIA (see Section 8 above), pilots are requested to pass special aircraft observations as soon as possible to the appropriate ATS unit by voice communications whenever any of the following conditions are encountered or observed:

moderate or severe turbulence;
moderate or severe icing;
severe mountain wave;
thunderstorms, without hail (obscured, embedded, widespread or in squall lines);
thunderstorms, with hail (obscured, embedded, widespread or in squall lines);
heavy dust storm or heavy sandstorm;
volcanic ash cloud;
pre-eruption volcanic activity or a volcanic eruption.

12.1.2 When other meteorological conditions not listed under 12.1.1 are encountered and which, in the opinion of the pilot-in-command, may affect the safety or markedly affect the efficiency of other aircraft operations, the pilot-in-command shall advise the ATC as soon as practicable.

12.1.3 For flights operating on routes which could be affected by volcanic ash clouds, pilots are also requested to record special aircraft observations of pre-eruption volcanic activity, a volcanic eruption or volcanic ash cloud, on the special air-report of volcanic activity form (Ref ICAO PANS-ATM (Doc 4444) Appendix 1), which is supplied with the flight documentation for routes which could be affected by volcanic ash clouds, and send the completed form to the aerodrome meteorological office without delay upon arrival at an aerodrome. This form is also available at the HKO website http://www.weather.gov.hk/aviat/amt_e/vareport.pdf

12.1.4 Aircraft observations shall be reported as air-reports following the instructions in ICAO PANS-ATM (Doc 4444) Appendix 1.

## 13 VOLMET Service

13.1 VOLMET broadcast in English on designated HF and VHF channels is available on regular schedules throughout the day. D-VOLMET is also available to suitably equipped aircraft. Details of these meteorological broadcasts are given in the following table:

Table GEN 3.5.13 VOLMET Service

| Name of Station | CALL SIGN Identification (EM) | Frequency | Broadcast Period (UTC) | Hours of Service | Aerodromes Included | Contents & format of REP and FCST & Remarks |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Hong Kong | Hong Kong VOLMET | 128.875 MHZ | Continuous | H24 | ZGSZ Shenzhen | METAR/SPECI |
| | | | | | VMMC Macao | METAR/SPECI & Trend FCST |
| | | | | | RCTP Taibei | METAR/SPECI & Trend FCST |
| | | | | | RCKH Gaoxiong | METAR/SPECI & Trend FCST |
| Hong Kong | Hong Kong VOLMET | D-VOLMET (See Note 3)) | As requested | H24 | VHHH HONG KONG/ INTERNATIONAL | HKG SIGMET (if any) |
| Hong Kong | Hong Kong VOLMET | 6679 KHZ 8828 KHZ 13282 KHZ | H+15 to H+20 and H+45 to H+50 | H24 | VHHH HONG KONG/ INTERNATIONAL (See Note 1) and 2)) | METAR/SPECI & Trend FCST |
| | | | | | ZGGG Guangzhou/Baiyun | METAR/SPECI & Trend FCST |
| | | | | | ROAH Naha | METAR/SPECI |
| | | | | | RCTP Taibei International | METAR/SPECI & Trend FCST |
| | | | | | RCKH Gaoxiong | METAR/SPECI & Trend FCST |
| | | | | | RPLL Manila International | METAR/SPECI & Trend FCST |
| | | | | | RPVM Mactan | METAR/SPECI & Trend FCST |
| | | | | | VHHH HONG KONG/ INTERNATIONAL | FCST / Amend FCST |

Notes

1) VHHH METAR/SPECI and Forecasts, wind information refers to the mid anemometer of RWY 07L/25R and the visibility refers to the prevailing visibility observed by the Weather Observer at one or more of the locations including S-AMO at Level T3 of S-TWR, A-AMO at Level T2 of N-TWR, and N-AMO at Level T2 of NAT or at the ground level of the respective offices when deemed necessary, making reference to the measurements of the nine forward scatterers along the north, centre and south runways.

2) All METAR/SPECI are the latest available, however, if the latest available METAR/SPECI would be more than two hours old at broadcast time, it is not transmitted.

3) Special air-reports not covered by a SIGMET will be included as the last item in the D-VOLMET.

## 14 SIGMET and Aerodrome Warning Services

### 14.1 GENERAL

14.1.1 For the safety of air traffic, the AMO serves as the meteorological watch office and provides round the clock meteorological watch service for the Hong Kong FIR. This service consists of a continuous weather watch within the Hong Kong FIR and the issuance of SIGMET information for this area.

14.1.2 The AMO also provides an aerodrome warning service for the Hong Kong International Airport (HKIA). This service provides aerodrome warnings giving concise information of meteorological conditions which could adversely affect aircraft on the ground, including parked aircraft, and the aerodrome facilities and services at HKIA.

Table GEN 3.5.14 SIGMET Service

| Name of MWO/ Location Indicator | Hours | FIR served | Type of SIGMET/ Validity | Specific Procedures | ATS Unit Served | Additional Information |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Hong Kong / VHHH | H24 | Hong Kong FIR | SIGMET / up to 6 hours | Tropical Cyclone SIGMET valid for up to 6 hours<br><br>Volcanic ash SIGMET valid for up to 6 hours<br><br>See also para 14.2.1 and 14.2.2 | Hong Kong ACC and RCC | Nil |

### 14.2 METEOROLOGICAL WATCH SERVICE

14.2.1 As the meteorological watch office for the Hong Kong FIR, the AMO issues SIGMET information concerning the occurrence and/or expected occurrence of specified en-route weather and other phenomena in the atmosphere, which may affect the safety of aircraft operations, and of the development of those phenomena in time and space, in the Hong Kong FIR. The specified en-route weather and other phenomena in the atmosphere are as follows:

a) Obscured thunderstorms with/without hail

b) Embedded thunderstorms with/without hail

c) Frequent thunderstorms with/without hail

d) Squall line with/without hail

e) Tropical cyclone with 10-minute mean surface wind speed of 34 kt or more

f) Severe turbulence

g) Severe icing

h) Severe icing due to freezing rain

i) Severe mountain wave

j) Heavy sandstorm

k) Heavy duststorm

l) Volcanic ash

m) Radioactive cloud

14.2.2 Volcanic ash SIGMET messages issued are based on advisory information provided by Volcanic Ash Advisory Centres.

14.2.3 Tropical cyclone (TC) SIGMET messages issued are based on TC forecast issued by HKO, advisory information provided by Tropical Cyclone Advisory Centres and local weather observations.

14.2.4 SIGMET information is disseminated via the AFTN and broadcast in VOLMET service during the period of validity of the SIGMET information (see Table GEN 3.5.13 VOLMET Service).

14.3 AERODROME WARNING SERVICE

14.3.1 The AMO issues aerodrome warnings for HKIA in both abbreviated plain language and plain language if one or several of the following phenomena are occurring or expected to occur at the airport:

a) Tropical cyclone (if the 10-minute mean surface wind speed at the aerodrome is 34 kt or more);

b) Thunderstorm;

c) Hail;

d) Snow;

e) Freezing precipitation;

f) Hoar frost or rime;

g) Sandstorm;

h) Duststorm, rising sand or dust;

i) Strong surface wind and gusts (if the 10-minute mean surface wind speed exceeds 21 kt or the gusts exceed 31 kt at the aerodrome);

j) Squall;

k) Frost;

l) Volcanic ash;

m) Tsunami;

n) Volcanic ash deposition;

o) Toxic chemicals;

p) Tornado and waterspout.

14.3.2 See para. 4.5 - para. 7 for the low-level wind shear and turbulence warning services provided for HKIA.

## 15 Other Automated Meteorological Services

15.1 AVIATION METEOROLOGICAL DATA PROCESSING SYSTEM (METPS)

15.1.1 The Aviation Meteorological Data Processing System (METPS) is operated by the AMO to provide meteorological information to operators as well as the Airport Authority and ATC units. Meteorological information is made available to operators via a sub-system of METPS, viz. the Aviation Meteorological Information Dissemination System (AMIDS).

15.2 DATA LINK-ATIS (D-ATIS) AND DATA LINK-VOLMET (D-VOLMET)

15.2.1 Data link-ATIS (D-ATIS) and Data link-VOLMET (D-VOLMET) services are provided by CAD. They comply with the Airlines Electronics Engineering Committee (AEEC) Specifications 618, 620, 622 and 623. Aircraft equipped with ACARS meeting these AEEC specifications and with connectivity to the SITA Aircom network can request and obtain D-ATIS and D-VOLMET messages. There is inter-networking arrangement between SITA and ARINC to exchange D-ATIS and D-VOLMET messages from one network to the other. Operators should check with their service providers for further details.

15.2.2 The airport ID for the Hong Kong D-ATIS and D-VOLMET is VHHH.

The indicator codes are:

| | | |
|---|---|---|
| A | - | Arrival ATIS (ARR ATIS) |
| D | - | Departure ATIS (DEP ATIS) |
| E | - | VOLMET (ENR ATIS) |
| C | - | ARR ATIS with automatic update |
| T | - | Terminate automatic update of ARR ATIS |

## 16 Tropical Cyclones and Strong Monsoon Winds

16.1 TROPICAL CYCLONES

16.1.1 Tropical cyclones may occur over the South China Sea at any time of the year, but have only produced persistent winds of gale force or over (mean wind speed exceeding 33 kt) in the Airport area during the months of May to November. On one occasion (during the passage of Super Typhoon Mangkhut in 2018), the mean hourly wind speed reached 61 kt at HKIA and gusts of up to 84 kt were recorded.

16.1.2 Warnings issued by the Hong Kong Observatory:

a) SIGMET messages
SIGMETs for tropical cyclones within the Hong Kong FIR are issued by the AMO for dissemination beyond the aerodrome and broadcast to aircraft in flight (see GEN 3.5 para. 14).

b) Hong Kong's Tropical Cyclone Warning Signals
For tropical cyclones that may pose a threat to the territory, warnings are also issued by the HKO to a number of addressees including the Air Traffic Services Units, the Rescue Co-ordination Centre and to the Airport Terminal Building Information Office. In addition, the HKO passes the information to the Information Services Department for dissemination to the public through the press, radio and television. The following signals are used in Hong Kong:

| Signals | Meaning |
|---|---|
| No. 1 (Standby Signal) | A tropical cyclone is centred within about 800 km (432 NM) of Hong Kong and may affect the territory |
| No. 3 (Strong Wind Signal) | Strong wind is expected or blowing generally in Hong Kong near sea level, with a sustained speed of 41-62 km/h (22-33 kt), and gusts which may exceed 110 km/h (59 kt), and the wind condition is expected to persist |
| No. 8 NW<br>No. 8 SW<br>No. 8 NE<br>No. 8 SE<br>(Gale or Storm Signal) | Gale or storm force wind is expected or blowing generally in Hong Kong near sea level, with a sustained wind speed of 63-117 km/h (34-63 kt) from the quarter indicated and gusts which may exceed 180 km/h (97 kt), and the wind condition is expected to persist |
| No. 9 (Increasing Gale or Storm Signal) | Gale or storm force wind is increasing or expected to increase significantly in strength |
| No. 10 (Hurricane Signal) | Hurricane force wind is expected or blowing with sustained speed reaching upwards from 118 km/h (64 kt) and gusts that may exceed 220 km/h (119 kt) |

c) Tropical Cyclone Warning Bulletins
Tropical Cyclone Warning Bulletins issued by the HKO are disseminated to the various addressees and broadcast by all radio and television stations and given in the HKO website.

d) Further information on the signals and warning services provided are available from the HKO website.

16.1.3 Precautions

a) The HKO will issue an advisory in the Tropical Cyclone Warning Bulletin that the travelling public check with airlines before departing for the airport when weather conditions likely to cause significant disruptions to flight operations are expected. Airlines are advised to make the necessary arrangements to cater for surges in public enquiries on flight information.

b) Owners of aircraft are advised to take early action to safeguard their equipment by carrying out the precautions enumerated below, and other which may appear necessary. Owners may be held responsible for any damage caused by their equipment.

c) When the Strong Wind Signal, No. 3 is issued, the following actions should be taken:

(i) Make all serviceable aircraft ready for the air with adequate fuel.

(ii) If possible, make serviceable temporarily unserviceable aircraft.

(iii) Ensure that adequate picketing equipment is readily available and in position around aircraft that cannot be flown away.

(iv) Secure or move to shelter all loose equipment.

d) When the Gale or Storm Signal No. 8NW, 8SW, 8NE or 8SE is issued, the following actions should be taken:

(i) All serviceable aircraft with the necessary range should be flown away from the airport.

(ii) Aircraft which cannot be flown away should be securely picketed in the most sheltered places available, including the areas in front of the hangars.

(iii) Airline Companies should detail duty personnel to stand by in the event of a wind shift necessitating re-orientation of aircraft.

16.2 STRONG MONSOON WINDS

16.2.1 Introduction
When strong to gale force winds which are not associated with tropical cyclones are occurring or expected to occur in Hong Kong, the HKO will issue the Strong Monsoon Signal. This signal is used mainly in winter in connection with winter monsoon winds from the northeast quadrant and occasionally in summer when the southwest monsoon is strong.

16.2.2 Warnings issued by the HKO
Warnings for strong monsoon winds are issued by the HKO whenever the mean wind speed near sea level anywhere in Hong Kong exceeds, or is forecast to exceed, 21 kt. These winds may sometimes reach 38 kt or more in very exposed places.

16.2.3 Owners of aircraft are advised to take early actions to safeguard their equipment by carrying out precautions which may appear necessary. Owners may be held responsible for any damage caused by their equipment.

**17 Local Wind Effects on the Approach to and Departure from Hong Kong International Airport**

17.1 GENERAL WARNING

17.1.1 Due to the proximity of the hilly terrain of Lantau Island to the south and east of Hong Kong International Airport, significant low-level windshear and moderate to severe turbulence can be expected along the approaches to and departures from the runways when winds blow off these hills, i.e. from east through southwest at about 15 kt or more. As the hills to the north are further away, they play a less significant role, but nonetheless can create local wind effects when strong winds blow off these hills, i.e. from northwest through northeast, at about 20 kt or more.

17.1.2 The terrain induced wind disturbances from nearby hills can be of very small scale, sporadic and transient in nature. Whilst these wind disturbances may be small in physical dimension and correspond to only several seconds of flight time, significant headwind changes (i.e. runway orientated wind speed losses and/or gains being 15 kt or greater), can be expected as the aircraft flies through them. The sporadic and transient nature of the terrain-induced wind disturbances results in some aircraft experiencing windshear and/or turbulence, whilst others do not, even though the broad meteorological conditions are the same. Successive aircraft which experience wind shear and/or turbulence may also encounter a different sequence of events.

17.1.3 Surface winds at the airport are generally not good indicators of the wind that may be experienced during the final phase of the approach. Winds at approximately 2 000 ft may be a better representation of the prevailing wind conditions in the region. Generally, mean wind speed should decrease towards lower altitudes but isolated strong gusts may be expected. Wind direction would also change with altitude due to blocking of the general wind flow by nearby hills or in the presence of low-level temperature inversion which occurs mostly in the cool season (about half of the time or more from November to April). It is possible for the magnitude of wind shear and turbulence to increase towards final approach, resulting in deteriorating rather than improving conditions prior to touchdown.

17.2 EASTERLY THROUGH SOUTHWESTERLY WINDS

17.2.1 When prevailing winds are from the east through southwest and with a speed in excess of 15 kt, significant wind shear and moderate turbulence can be expected on the approaches to or on departure from the runways. Larger magnitude wind shear and turbulence is possible when the wind speed is in excess of 30 kt. Because of the proximity to the hills of Lantau, wind shear and turbulence are more significant over the south runway (RWY 07R/25L).

17.2.2 Low-level wind shear and turbulence are expected to be more significant when the wind is from the direction 130° - 210°, especially in the presence of low-level temperature inversion or when the wind speed is more than 30 kt.

17.3 NORTHWESTERLY THROUGH NORTHEASTERLY WINDS

17.3.1 Significant low-level wind shear and moderate turbulence can be expected when wind speeds exceed 20 kt, especially for approaches to RWY 25 and along the departure and missed approach corridors from RWY 07 as these approach/departure corridors are closer to the hills to the north as compared with approaches to RWY 07 or departure from RWY 25. Larger magnitude wind shear and turbulence over these approach and departure corridors is possible if the wind speed exceeds 30 kt, especially around the last 15 NM from the threshold when on final approach to RWY 25.

17.4 LAND-SEA BREEZE

17.4.1 Land-sea breeze is not a strong wind phenomenon but it can create a complex wind field in the vicinity of the airport and it can cause a significant change in wind direction within a distance of a few kilometres along the approach/departure areas. If the sea breeze opposes the prevailing wind flow it can result in significant wind shear even in fine weather conditions.

17.5 LOW-LEVEL JETSTREAM IN COOL SEASON

17.5.1 During a surge of the winter monsoon, strong low-level jets of northeasterly wind with speeds up to 50 kt occasionally affect the airport. Under such circumstances significant windshear along the departure corridors of RWY 07 can be expected.

17.6 LOW-LEVEL WIND EFFECTS

17.6.1 Pilots should be aware of the possibility of building-induced mechanical turbulence and wind shear effects when landing on Hong Kong International Airport's

a) RWY 25L in strong northwesterly / northerly winds;

b) RWY 25C in strong southwesterly / southerly / southeasterly winds;

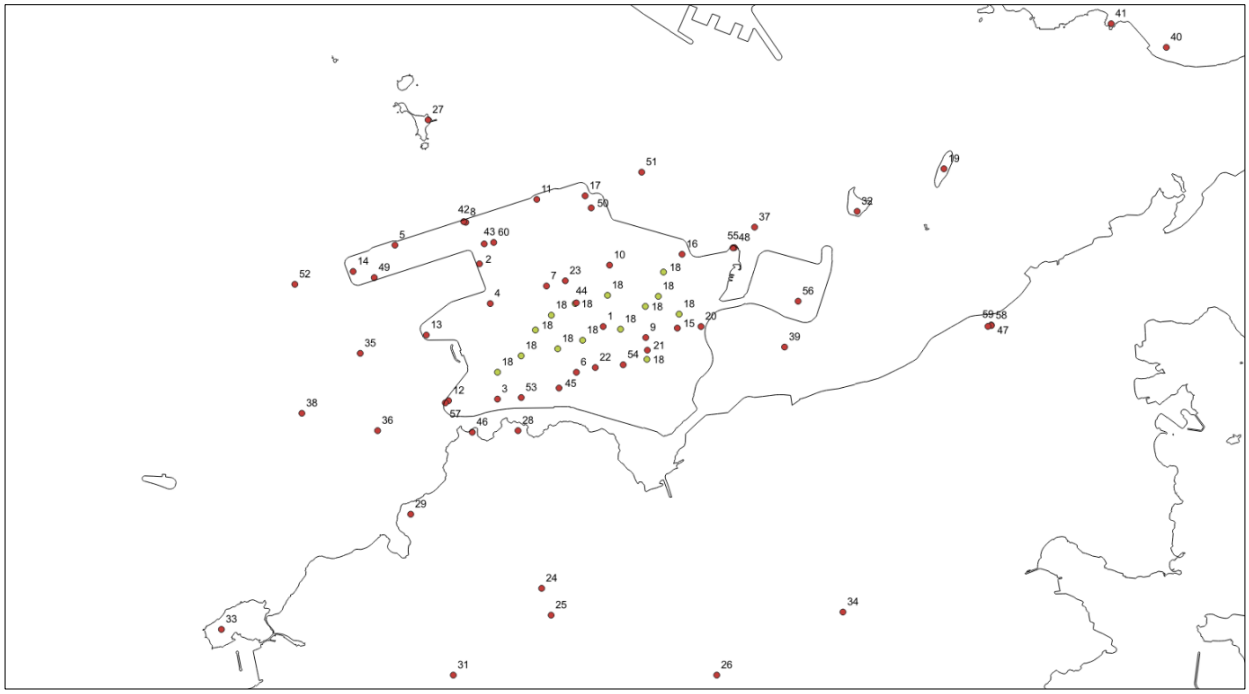
c) RWY 25C in northwesterly / northerly / northeasterly winds with a background speed of about 15 knots or more;

d) RWY 25R in strong southerly winds; and

e) RWY 07R touch down zone in northwesterly / northerly winds with a background speed of about 15 knots or more.

17.6.2 Pilots should be aware of the possibility of building-induced mechanical turbulence and wind shear effects when taking off beyond the mid-point of Hong Kong International Airport's RWY 07C in northwesterly / northerly / northeasterly winds with a background speed of about 15 knots or more.

# Location of Meteorological Equipment to support Aviation Weather Service



1. Meteorological Garden adjacent to S-TWR with ceilometer, rain gauge, temperature screen and barometer
2. Meteorological Garden at West Support Area
3. RWY 07R TDZ anemometer, RVR transmissometer and forward scatterer
4. RWY 07C TDZ anemometer, RVR transmissometer and forward scatterer
5. RWY 07L TDZ anemometer, RVR transmissometer and forward scatterer
6. RWY 07R/25L mid-point anemometer, RVR transmissometer and forward scatterer
7. RWY 07C/25C mid-point anemometer, RVR transmissometer and forward scatterer
8. RWY 07L/25R mid-point anemometer, RVR transimissometer and forward scatterer
9. RWY 25L TDZ anemometer, RVR transmissometer and forward scatterer
10. RWY 25C TDZ anemometer, RVR transmissometer and forward scatterer
11. RWY 25R TDZ anemometer, RVR transmissometer and forward scatterer
12. RWY 07R TDZ ceilometer
13. RWY 07C TDZ ceilometer
14. RWY 07L TDZ ceilometer
15. RWY 25L TDZ ceilometer
16. RWY 25C TDZ ceilometer
17. RWY 25R TDZ ceilometer
18. Anemometers at the apron (E9, E4, N70, D201, D219, W50, N12, S31, X458, M6, SSI, D312, D319, D323)
19. Siu Mo To ceilometer
20. Anemometer near RWY 25L approach lights
21. Anemometer near eastern end of South Runway
22. Anemometer near middle of South Runway
23. Anemometer near middle of Center Runway
24. Nei Lak Shan anemometer
25. Ngong Ping anemometer
26. Pak Kung Au anemometer
27. Sha Chau anemometer
28. Sha Lo Wan anemometer
29. Sham Wat Hilltop anemometer
30. (Intentionally removed)
31. Tai Fung Au anemometer
32. Tai Mo To anemometer
33. Tai O anemometer
34. Yi Tung Shan anemometer
35. Weather Buoy 1
36. Weather Buoy 2
37. Weather Buoy 4
38. Weather Buoy 5
39. Weather Buoy 8
40. Brothers Point TDWR
41. Tai Lam Chung TDWR
42. North Runway LIDAR 1
43. North Runway LIDAR 2
44. Center Runway LIDAR
45. South Runway LIDAR
46. Sha Lo Wan wind profiler
47. Siu Ho Wan wind profiler
48. Short-range LIDAR 1 near AsiaWorld Expo
49. Short-range LIDAR near western end of North Runway
50. Short-range LIDAR near eastern end of North Runway
51. Weather Buoy 12
52. Weather Buoy 13
53. Short-range LIDAR near Government Flying Service
54. Short-range LIDAR near Gate 3
55. Short-range LIDAR 2 near AsiaWorld-Expo
56. Short-range LIDAR near Fire Station on HZMB HK Port
57. Short-range LIDAR on South Perimeter Road near the west of South Runway
58. Siu Ho Wan Short-range LIDAR
59. Siu Ho Wan X-Band Radar
60. On-airport Wind Profiler

# GEN 3.6 SEARCH AND RESCUE

## 1 Responsible Service

1.1 The search and rescue service in Hong Kong is provided by the Civil Aviation Department and is responsible for all civil and military aircraft in the area within which Hong Kong provides Air Traffic Services.

| | | |
|---|---|---|
| Postal Address | : | Director-General of Civil Aviation<br>Civil Aviation Department Headquarters<br>1 Tung Fai Road<br>Hong Kong International Airport<br>Lantau<br>Hong Kong |
| Telephone Number | : | +852 2910 6350 |
| Telefax Number | : | +852 2910 6351 |
| AFS Address | | VHHHYAYX |
| Electronic Mail Address | : | enquiry@cad.gov.hk |
| Website Address | : | http://www.cad.gov.hk |

1.2 The search and rescue service is provided in accordance with the Standards, Recommended Practices and, when applicable, the procedures contained in the following ICAO documents:

| | | |
|---|---|---|
| (i) | Annex 12 | Search and Rescue |
| (ii) | Annex 13 | Aircraft Accident Investigation |
| (iii) | DOC 7030 | Regional Supplementary Procedures |

1.3 A Rescue Co-ordination Centre (RCC) is established to provide a H24 search and rescue service in Hong Kong.

| | | |
|---|---|---|
| Postal Address | : | Rescue Co-ordination Centre<br>Air Traffic Management Division<br>Civil Aviation Department<br>Civil Aviation Department Headquarters<br>1 Tung Fai Road<br>Hong Kong International Airport<br>Lantau<br>Hong Kong |
| Telephone Number | : | +852 2910 6813 |
| Telefax Number | : | +852 2910 1188 |
| AFS Address | : | VHHHYCYX |
| Electronic Mail Address | : | rcc@cad.gov.hk |
| Website Address | : | http://www.hkatc.gov.hk |

1.4 When SAR operations are required, qualified personnel are deployed through the Air Traffic Control Centre. All enquiries and initial communication on SAR matters, including Cospas-Sarsat data, should be addressed to the ATC Watch Manager, Hong Kong Air Traffic Control Centre, at:

| | |
|---|---|
| Telephone | +852 2910 6821 |
| Fax | +852 2910 1177 |
| AFTN | VHHHYCYX or VHHHZQZX |

## 2 Area of Responsibility

2.1 Search and rescue service is provided within the Hong Kong FIR.

## 3 Types of Service

3.1 Within the territorial limits of Hong Kong, locally based helicopters and light aircraft are deployed in co-operation with craft and personnel from other departments of the Government of the Hong Kong Special Administrative Region. For long-range SAR actions over the high seas, assistance is provided by units from adjacent search and rescue centres.

3.2 Various elements of the Government of the Hong Kong Special Administrative Region and the armed forces are available for SAR missions when required. The aeronautical, maritime and public telecommunication services are available to the SAR organisation.

3.3 SEARCH AND RESCUE FACILITIES

| Rescue Units | | |
|---|---|---|
| **Facility** | **Location** | **Remarks** |
| Helicopters HEL-M | Hong Kong Airport | Equipped with floats, searchlights and winches |
| Fixed-wing MRG aircraft | Hong Kong Airport | Equipped with multimode surveillance radar, electro-optical infrared system and droppable dinghies |
| Fire/Rescue Launch | Hong Kong Airport<br>(operates within 5 km of airport only) | Additional SAR craft and vessels available on request from other government departments. |
| Mountain Rescue Units | Hong Kong | Additional personnel available on request from other civil/military units. |

## 4 SAR Agreements

4.1 No formal Facilitation of Entry Agreement exists between the Government of the Hong Kong Special Administrative Region and adjacent States, however, facilitation of entry for SAR purposes is co-ordinated on the inter-area speech circuits with neighbouring rescue co-ordination centres and air traffic control centres.

## 5 Conditions of Availability

5.1 Although specific SAR aircraft and surface vessels are not immediately available in Hong Kong, other organisations will, on request, provide assistance and specialised SAR aircraft, equipment and personnel for the conduct of air and sea searches.

## 6 Procedures and Signals Used

6.1 PROCEDURES AND SIGNALS USED BY AIRCRAFT

6.1.1 Procedures for pilots-in-command observing an accident or intercepting a distress call and/or message are outlined in Chapter 5, Annex 12 to the Convention on International Civil Aviation.

6.1.2 The provision of meteorological information to RCC and SAR aircraft is detailed in Chapter 10, Annex 3 to the Convention on International Civil Aviation.

6.2 COMMUNICATIONS

6.2.1 Transmission and reception of distress messages is handled in accordance with paragraph 5.3, Chapter 5, Volume II of Annex 10 to the Convention on International Civil Aviation.

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

6.2.3 ATS units guard the international distress frequency 121.5 MHZ continuously. Coast Station (VPS) operates H24 and guards international maritime distress frequencies.

6.2.4 The call sign of SAR aircraft will normally be the pilot's personal call sign or aircraft registration preceded by “Rescue”. The call sign of Hong Kong RCC is “Hong Kong Rescue”.

6.3 SEARCH AND RESCUE SIGNALS

6.3.1 The search and rescue signals to be used are those prescribed in the Appendix of Annex 12.

# GEN 4 CHARGES FOR AERODROMES/HELIPORTS AND AIR NAVIGATION SERVICES

## GEN 4.1 AERODROME/HELIPORT CHARGES

### 1 General

1.1 The following charges apply to Hong Kong International Airport and, where applicable, to Sky Shuttle Heliport:

a) Landing charge;

b) Parking charge;

c) Airbridge charge;

d) Terminal building charge;

e) Air passenger departure tax;

f) Other charges (customs, immigration, security)

### 2 Charges collected by Airport Authority Hong Kong

2.1 Charge items a) to d) are collected by the Airport Authority Hong Kong under the Airport Authority Ordinance (Cap 483). Details of charges are gazetted in G.N. 3341 dated 17 June 2016. The Government Notice is available on the following web page:

http://www.gld.gov.hk/egazette

Use the search function to search for the G.N. numbers with the above dates.

### 3 Charges collected by Sky Shuttle Heliport

3.1 Charges collected by Sky Shuttle Heliport should be referred to the heliport operator found in VHSS AD 3.2 HELIPORT GEOGRAPHICAL AND ADMINISTRATIVE DATA.

### 4 Air Passenger Departure Tax

4.1 Under the Air Passenger Departure Tax Ordinance (Cap.140) every passenger departing from Hong Kong by aircraft at Hong Kong International Airport or Sky Shuttle Heliport, shall pay a departure tax at the rates approved from time to time by the Hong Kong Government unless specifically exempted from payment by the provisions of the Ordinance.

4.2 The Ordinance requires operators (see Note following) of aircraft to collect the tax from passengers prior to their departure on their aircraft and to pay over tax due to Government. Unless in the opinion of the Director-General of Civil Aviation satisfactory arrangements have been made to pay over tax subsequent to departure, the operator of an aircraft will be required to make payment in cash of the tax due prior to clearance of the aircraft for departure.

Note: For the purpose of the Ordinance, “operator” means, in relation to any aircraft, the person for the time being having control over the management of the aircraft, and includes a properly appointed agent of such person.

4.3 Further details of air passenger departure tax are available on the internet at https://www.hongkongairport.com/en/passenger-guide/departures/air-passenger-departure-tax.page

### 5 Other Charges

5.1 Other charges for customs, immigration or security services may apply to some operators depending on the type of flight operations and services required. Enquiries on customs and immigration charges should be referred to the appropriate authority listed in GEN 1.1 para. 3 and 4. Enquiries on security services should be made to the Airport Authority Hong Kong (GEN 1.1 para. 6) for referral to the accredited security service provider.

INTENTIONALLY

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# GEN 4.2 AIR NAVIGATION SERVICES CHARGES

## 1 En-route Navigation Charges for Aircraft not Landing in Hong Kong

1.1 The operator of an aircraft that passes through HKFIR without landing in Hong Kong is under a contractual obligation to pay En-Route Navigation Charges to the Government of the Hong Kong Special Administrative Region ("the HKSAR Government") in accordance with the prevailing Gazette Notice of the HKSAR Government.

1.2 Where a flight is made by any aircraft not landing in Hong Kong but passing through the airspace under the control of the Civil Aviation Department of the HKSAR Government on any day in a period as mentioned in column 1 of the following table, the charges payable by the operator to the HKSAR Government in respect of that flight are to be calculated at the rate as specified in column 2 of the table to which the date of flight relates.

| Date of flight | Charges payable per nautical mile flown (HK$) | Reference to Gazette Notice |
|---|---|---|
| from 1 September 2019 to 31 August 2020 (both dates inclusive) | 4.60 | No. 4684/2019<br>Published on<br>26 July 2019 |
| from 1 September 2020 to 31 August 2021 (both dates inclusive) | 5.00 | |
| from 1 September 2021 and onwards | 5.50 | |

Note: The Gazette Notices can be downloaded at http://www.gld.gov.hk/egazette/

1.3 For this purpose, the aforesaid 'date of flight' is defined to be the Date in Local Time on which the flight exits from the airspace under the control of the Civil Aviation Department of the HKSAR Government. The distance flown shall be computed by reference to standard calculated distances between the reporting points along the route flown. Variation from the route to avoid bad weather or for any other reason will not be taken into account.

1.4 The operator shall pay to the Director, in strict accordance with the Director's demand for payment of En-Route Navigation Charges. Unless otherwise specified in the Director's demand, such payment shall be made no later than fourteen days from the date of such demand. Demand notes will be issued twice a month covering service charges provided to the operators from first to fifteenth and sixteenth to thirtieth (or sixteenth to thirty-first) of the month, if any.

1.5 The Director may require an operator with unsatisfactory records in the payment of En-Route Navigation Charges to give to the Civil Aviation Department a banker's guarantee equivalent to the anticipated charges that the operator shall incur for one month of operations by that operator. The administrative measures, including the criteria of demanding banker's guarantee from an operator, are set out in the prevailing Aeronautical Information Circular which is openly accessible on the Civil Aviation Department's website. Without prejudice to other rights and remedies in connection with outstanding amounts, the Director shall have the right to call on the banker's guarantee the amounts that are not settled within the time limit specified in paragraph 1.4. The Director has the discretion to discharge or release any such banker's guarantee, without accruing any interest, given by the operator.

## 2 Exemptions and Reductions

The charges referred to in paragraph 1.2 above shall not be payable in respect of an overflight by any military aircraft.

## 3 Method of Payment

3.1 En-Route Navigation Charges are payable in Hong Kong Dollars.

3.2 Payment from overseas should be made by wire transfer or bank draft.

3.3 For payment by wire transfer, the bank account details are as follows:-

| | |
|---|---|
| Bank's Name: | The Hongkong and Shanghai Banking Corp. Ltd. |
| Bank's Address: | No. 1 Queen's Road Central, Hong Kong |
| Swift Code: | HSBC - HKHH - HKH |
| Bank Account No.: | 002 - 268126 - 008 |

| | |
|---|---|
| Bank Account Holder: | The Government of the Hong Kong Special Administrative Region<br>Treasury No. 1 Collection Account<br>(Attn.: Civil Aviation Department) |
| Payment Details: | Please quote demand note number |

3.4 All bank charges or handling fees relevant to the wire transfer shall be wholly and solely borne by the remitter concerned. Please include enough bank charges and tender exact amount in Hong Kong Dollars to avoid any underpayment due to exchange difference and any deduction made by appointed bank in Hong Kong.

3.5 Please direct any enquiries on the payment of ENCs to encbilling@cad.gov.hk.

# ENR (EN-ROUTE)

## ENR 0

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# ENR 1 GENERAL RULES AND PROCEDURES

## ENR 1.1 GENERAL RULES

### 1 General Rules and Procedures

1.1 The air traffic rules and procedures applicable to air traffic within the Hong Kong FIR conform to: Annex 2 and Annex 11, the Air Navigation (Hong Kong) Order 1995; ICAO Doc 4444 PANS/ATM, and the Regional Supplementary Procedures MID/ASIA Region, except for the differences listed in GEN 1.7.

### 2 Communication Procedures

2.1 TRAFFIC ENTERING HONG KONG FIR

2.1.1 To ensure the safe and orderly integration of traffic, all aircraft shall comply with the following communication requirements to obtain an air traffic control (ATC) clearance:

| Route | Reporting Point | Hong Kong Frequency (MHz) | Contact Hong Kong Radar |
|---|---|---|---|
| A1(E)/G581 | ELATO | 121.3 (PRI)<br>128.125 (SRY) | At least **10 NM** before ELATO |
| A202/R339 | SIKOU | 127.1 (PRI)<br>123.7 (SRY) | At least **10 NM** before SIKOU |
| A461/M501 | NOMAN | 132.15 (PRI)<br>129.9 (SRY) | At least **10 NM** before NOMAN |
| A470 | DOTMI | 121.3 (PRI)<br>128.125 (SRY) | At least **10 NM** before DOTMI |
| A583 | SABNO | 128.75 (PRI)<br>129.9 (SRY) | At least **10 NM** before SABNO |
| B330 | TAMOT | 127.1 (PRI)<br>123.7 (SRY) | At least **10 NM** before TAMOT |
| G86 | KAPLI | 132.15 (PRI)<br>129.9 (SRY) | At least **10 NM** before KAPLI |
| M503 | LELIM | 121.3 (PRI)<br>128.125 (SRY) | At least **10 NM** before LELIM |
| M771 | DOSUT | 122.95 (PRI)<br>135.6 (SRY) | At least **10 NM** before DOSUT |
| | DUMOL | 128.75 (PRI)<br>129.9 (SRY) | At DUMOL |
| M772 | ASOBA | 122.95 (PRI)<br>135.6 (SRY) | At least **10 NM** before ASOBA |
| A1(W) | IKELA | 125.325 (PRI)<br>132.775 (SRY) | At least **10 NM** before IKELA |
| R473 | SIERA | 127.55 (PRI)<br>134.3 (SRY) | At least **3** minutes prior to SIERA |
| ATS | MCU DVOR/DME | 123.95 (PRI)<br>132.225 (SRY) | At least **3** minutes prior to MCU |
| ATS | ROMEO | 123.95 (PRI)<br>132.225 (SRY) | At least **3** minutes prior to ROMEO |

2.1.2 Notwithstanding the above, aircraft shall establish two-way radio communication with Hong Kong Radar when so prescribed by the respective ATC unit, and maintain a listening watch on one of the notified frequencies (see ENR 3.1). Such aircraft shall make position reports when entering and leaving Hong Kong airspace, and at such other times and/or positions as directed by Hong Kong ACC.

2.1.3 Pilot shall report the aircraft call sign, position (with reference to a reporting point), level (including passing and cleared levels if not maintaining the cleared level), transponder code and other pertinent information (e.g. speed assigned by last ATC, tracking if it differs from the flight plan route) in the initial call before entering Hong Kong FIR.

2.1.4 Aircraft entering Hong Kong FIR outside controlled airspace, but wishing to join controlled airspace, shall request clearance from Hong Kong ACC stating flight level and estimated time/position of joining, in relation to a reporting point. Until specific clearance is received from Hong Kong ACC, the aircraft shall remain clear of controlled airspace.

2.2 FREQUENCY CHANGE

2.2.1 After take-off, on first contact with 'Hong Kong Departure', the pilot shall state the aircraft call sign; report the passing altitude to the nearest 100 ft and assigned altitude.

2.2.2 In the approach phase, in order to reduce frequency congestion, Approach Control will use the following phraseology when instructing a frequency change; "(Call sign) contact Hong Kong Director 119.5 MHZ with call sign only". The pilot on first communication with 'Hong Kong Director' shall state call sign only.

2.2.3 Unless prescribed above, pilot shall only report call sign and cleared level during frequency change *within* Hong Kong FIR.

2.3 TRAFFIC LEAVING HONG KONG FIR

2.3.1 Aircraft leaving Hong Kong FIR are to remain on Hong Kong control frequency until instructed.

2.4 OIL RIG SUPPORT HELICOPTER COMMUNICATION PROCEDURES

2.4.1 Details are as per ENR 3.4 HELICOPTER ROUTES.

2.5 COMPLIANCE WITH PROCEDURES

2.5.1 Position reports shall be made when over, or as soon as possible after passing, such reporting points. When so informed, the pilot of an aircraft that is radar identified may omit such position reports. Pilots shall resume position reporting when so instructed and when radar service is terminated or radar identification is lost. Additional reports may be requested by ATC for control purpose.

2.5.2 To ensure correct receipt of information, unless otherwise instructed pilots are required to read back the following:

a) ATC route clearances unless otherwise authorised by the appropriate ATS authority, in which case they shall be acknowledged in a positive manner.

b) All clearances to enter, land on, take off on, cross and backtrack the runway in use.

c) Other clearances or instructions, including conditional clearances, unless acknowledgement is given in a manner to clearly indicate that they have been understood and will be complied with.

d) Runway in use, altimeter settings, SSR codes, level instructions, heading and speed instructions, and where so required by the appropriate ATS authority, transition levels.

**3 Procedures for the Use of ATS Route A202**

3.1 The use of ATS route A202 via SIKOU to or from Hong Kong FIR is limited to:

a) traffic departing Hong Kong or Macao;

b) traffic landing Hong Kong or Macao;

c) traffic departing Guangzhou FIR, Sanya FIR, Hanoi FIR or Taibei FIR;

d) traffic landing Guangzhou FIR, Sanya FIR, Hanoi FIR or Taibei FIR

3.2 Traffic overflying Hong Kong FIR to or from Bangkok FIR and beyond (except as in paras c) and d) above), should normally route via IKELA on A1 or P901.

**4 Procedures for the Use of ATS Routes A1(E), G581 and G86, and RNAV 5 Route M750**

4.1 The use of ATS Routes A1/G581, G86 and RNAV 5 Route M750 between Hong Kong and Taibei FIR for flights

a) to/from Hong Kong or Macao

b) transiting Hong Kong FIR via SIERA (R473), TAMOT (B330), BEKOL (A461) or DOTMI (A470) shall be:

| FIR Boundary | Direction of Flight | Time Restriction at FIR Boundary (UTC) |
|---|---|---|
| ELATO | Westbound | No restriction |
| | Eastbound FL270 or below | |
| ENVAR | Eastbound FL270 or above | |
| KAPLI | Eastbound | |

4.2 The use of ATS Routes A1/G581, G86 and RNAV 5 Route M750 between Hong Kong and Taibei FIR for all other flights transiting Hong Kong FIR other than 4.1 above shall be:

| FIR Boundary | Direction of Flight | Time Restriction at FIR Boundary (UTC) |
|---|---|---|
| ELATO | Westbound | Not available |
| | Eastbound FL270 or below | Available 1700-0059 |
| ENVAR | Eastbound FL270 or above | |
| KAPLI | Westbound to ALLEY or MADRU only | No restriction |
| | Eastbound | |

**5 Procedures for the Use of RNAV 2 Route M503 between Hong Kong and Guangzhou FIR**

5.1 M503 is exclusive for RNAV 2 capable aircraft only. Aircraft operating on M503 shall adhere to the relevant RNAV 2 operational requirement as stipulated in the AIP China.

5.2 The use of RNAV 2 route M503 to or from Hong Kong FIR is limited to:

a) traffic departing Hong Kong or Macao and landing Shanghai Pudong, Qingdao, Yantai or Dalian;

b) traffic departing Shanghai Pudong, Qingdao, Yantai or Dalian and landing Hong Kong.

5.3 Owing to the close proximity of TTR V611 in the vicinity of LELIM to other regional airways, aircraft is not allowed to deviate eastwards beyond M503 under normal circumstances. Approval shall be sought from ATC well in advance should such manoeuvre become inevitable in the event of emergency.

5.4 In the event that M503 is not available, eg. due to severe weather condition or other airspace restriction, affected flights should file flight plan route ATS route A470.

**6 Procedures for the Use of RNP 4 Routes M771 and L642**

6.1 RNP 4 Routes M771 and L642 are normally restricted to traffic arriving or departing Hong Kong or Macao airports and traffic transiting the Hong Kong FIR to/from the Guangzhou FIR. (See ENR 1.10 for flight plan routes.)

6.2 Northeast/southwest bound traffic to/from the Taibei FIR and beyond should flight plan via N892 and L625. Only under special circumstances, eg severe weather avoidance, equipment failure, etc. will flights be considered to route via M771 or L642 (such flights shall flight plan via BIGEX).

**7 Procedures for the Use of RNP10 Route M772**

7.1 RNP10 Route M772 is restricted to traffic departing Jakarta to Hong Kong or to airports in the People's Republic of China, and departing Borneo to Hong Kong. Traffic from other points of departure is not normally permitted to use this route (see ENR 1.8 for details).

**8 Procedures for the Use of RNP10 Route Q1**

8.1 RNP10 Route Q1 is normally restricted to:

a) Arriving aircraft at the Hong Kong Airport via PBN Route M771 or M772, and

b) flights transiting Hong Kong FIR via PBN Route M771 or M772 for DOTMI and then ATS Route A470.

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# ENR 1.2 VISUAL FLIGHT RULES

## 1 Application

1.1 Flight under VFR may take place subject to ATC clearance within the following Class C airspace :

a) the Hong Kong CTR;

b) the Hong Kong TMA above the UCARAs from their notified upper limits up to 9 000 ft AMSL;

c) the Hong Kong TMA within 50 NM of BIGEX between 2 000 ft and 8 000 ft AMSL, excluding the airspace in paras. a) and b) above.

1.2 Flight under VFR may take place in Class G airspace.

1.3 Flight under Special VFR may take place subject to ATC clearance within the Hong Kong CTR.

## 2 Visual Flight Rules

2.1 VFR flights shall be conducted in conditions of visibility and distance from cloud, the same as or greater than those specified in the following table, (except when operating as a Special VFR flight):

<table>
<tr><th>Airspace Classification</th><th>Flight Visibility</th><th>Distance from Cloud</th></tr>
<tr><td>C</td><td>5 km</td><td>1 500 m horizontally and 1 000 ft vertically</td></tr>
<tr><td rowspan="4">G</td><td rowspan="2">5 km</td><td>1 500 m horizontally and 1 000 ft vertically</td></tr>
<tr><td>at or below 3 000 ft remains clear of cloud and in sight of surface</td></tr>
<tr><td colspan="2">an aircraft, other than a helicopter at or below 3 000 ft at an airspeed of 140 kt or less in a flight visibility of 1 500 m and remains clear of cloud</td></tr>
<tr><td colspan="2">a helicopter at or below 3 000 ft at a speed, with due regard to visibility, is reasonable, remains clear of cloud and in sight of surface</td></tr>
</table>

2.2 Visual Flight Rules shall be deemed not to apply to flights conducted at night, but ATC may authorize Special VFR within a control zone in accordance with special instructions.

2.3 A Special VFR flight is a flight made in Instrument Meteorological Conditions or at night in a control zone; in a control zone notified for the purpose of Rule 21 of Schedule 14 to the Air Navigation (Hong Kong) Order 1995, in respect of which the appropriate air traffic control unit has given permission for the flight to be made in accordance with special instructions given by that unit instead of in accordance with IFR.

Note: It shall be understood that such flights must be conducted clear of cloud and in sight of the surface.

## 3 Notification of Controlled Airspace

3.1 The Hong Kong Control Zone (CTR) as defined in ENR 2.1 is hereby notified for the purpose of Rule 21 of Schedule 14 to the Air Navigation (Hong Kong) Order 1995.

## 4 Calibration Aircraft

4.1 Calibration aircraft are exempted from the restrictions of ‘Notification of Controlled Airspace’, and are permitted to operate under Visual Flight Rules for the purpose of calibrating navigational aids.

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# ENR 1.3 INSTRUMENT FLIGHT RULES

## 1 Application

1.1 For flights within controlled airspace, the following Rules of the Rules of the Air, Schedule 14 to the Air Navigation (Hong Kong) Order 1995, shall be applicable : Rules 25, 27 and 28.

1.2 For flights outside controlled airspace, the following Rules of the Rules of the Air, Schedule 14 to the Air Navigation (Hong Kong) Order 1995, shall be applicable : Rules 25 and 26.

1.3 All flights within controlled airspace, notified for the purposes of Rule 21 of the Rules of the Air, Schedule 14 to the Air Navigation (Hong Kong) Order 1995, are subject to Instrument Flight Rules in all weather conditions.

1.4 An aircraft flying at night shall be flown in accordance with the Instrument Flight Rules unless ATC authorise a Special VFR flight in accordance with special instructions.

## 2 Notification of Controlled Airspace

2.1 The Terminal Control Area (TMA) from 8 000 ft AMSL to unlimited as defined in ENR 2.1 and all ATS Routes and PBN Routes as defined in ENR 3.1 and ENR 3.3 respectively, are hereby notified for the purpose of Rule 21 of Schedule 14 to the Air Navigation (Hong Kong) Order 1995.

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# ENR 1.4 ATS AIRSPACE CLASSIFICATION

## 1 Classification of Airspace

1.1 The airspace within Hong Kong FIR is subdivided into three classifications (A, C and G) according to ICAO specifications. The requirements for the flights within each class of airspace are shown in the following table.

| **Class** (Note 3) | **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 (Note 1) | Continuous two-way | Yes |
| **C** | IFR | IFR from IFR<br>IFR from VFR | Air Traffic Control Service | Not Applicable (Note 1) | Continuous two-way | Yes |
| | VFR | VFR from IFR | 1) Air Traffic Control Service for separation from IFR;<br>2) VFR/VFR traffic information (and traffic avoidance advice on request) | 250 KIAS below 10 000 ft AMSL | Continuous two-way | Yes |
| **G** | IFR | Nil | Flight Information Service | 250 KIAS below 10 000 ft AMSL | Continuous two-way | No |
| | VFR | Nil | Flight Information Service | 250 KIAS below 10 000 ft AMSL | Continuous two-way (Note 2) | No |

Note 1: Speed restriction applies to flights departing from and arriving to Hong Kong International Airport and Macao International Airport, pilot shall refer to ENR 1.5, respective AIP AD sections, SID, STAR and Instrument Approach Charts for details.

Note 2: Two-way communication is required in Class G Airspace within 50 NM of BIGEX, beneath Hong Kong TMA and in UCARAs. Two-way communication is not required in Class G Airspace south of Hong Kong TMA.

Note 3: Classes of airspace B, D, E and F are not used in Hong Kong FIR.

## 2 ATS Airspace Description

| Airspace | Levels | Classification |
|---|---|---|
| Within 50 NM of BIGEX (excluding airspace within and above Hong Kong CTR and UCARAs) | UNL / 8 000 ft | A |
| | 8 000 ft / 2 000 ft | C |
| | 2 000 ft / SFC | G (See Note 1) |
| Exceeding 50 NM from BIGEX but within Hong Kong TMA | UNL / 8 000 ft | A |
| Exceeding 50 NM from BIGEX and beneath Hong Kong TMA | 8 000 ft / SFC | G (See Note 1) |
| Above Hong Kong CTR | UNL / 9 000 ft | A |
| Hong Kong CTR | 9 000 ft / SFC | C |
| Above UCARAs | UNL / 9 000 ft | A |
| | 9 000 ft / Upper limit of UCARAs | C |
| UCARAs | Upper limit of UCARAs / SFC | G (See Note 1) |
| Airspace south of Hong Kong TMA | UNL / 8 000 ft | A |
| | 8 000 ft / SFC | G (See Note 2) |

Note 1: 2-way communication required

Note 2: 2-way communication not required South of Hong Kong TMA

Note 3: See ENR 2.1 for lateral limits of airspace.

# ENR 1.5 HOLDING, APPROACH AND DEPARTURE PROCEDURES

## 1 General

1.1 The holding procedures are based on criteria in ICAO DOC 8168 - OPS/611 Fourth Edition 1993, while approach and departure procedures are based on DOC 8168 Fourth Edition 1993.

1.2 Due to the proximity of the FIR boundary to the north, pilots carrying out holding procedures are advised to maintain a careful cross-check of aircraft positions by the use of appropriate navigational aids to ensure that the aircraft remains within the Hong Kong FIR.

1.3 EXPECTED APPROACH TIME (EAT) OR ONWARD CLEARANCE TIME (OCT)

1.3.1 An expected approach or onward clearance time will be determined for an arriving aircraft that will be subjected to a delay of 15 minutes or more.

1.3.2 If it is necessary to delay aircraft by holding, pilots will be advised of an expected approach or onward clearance time, or given a further clearance time.

1.3.3 The EAT or OCT will be given prior to entering the holding pattern. This time, in addition to giving the delay expectation, also caters for the possibility of radio failure (see para 7). Subsequently pilots may be given a specific time at which they should leave the holding pattern. It is important that pilots arrange their holding path so as to leave the holding pattern as near as possible to this time in order that an expeditious traffic flow can be maintained.

1.4 TERMINAL HOLDING PROCEDURES

1.4.1 ENTRY PROCEDURE
The entry into the holding patterns shall be in accordance with the three-sector entry procedure as prescribed in ICAO DOC 8168 - OPS/611 Fourth Edition 1993.

1.4.2 RATE OF TURN
All turns are to be made at a bank angle of 25º or at a rate of 3º per second, whichever requires the lesser bank.

1.4.3 DESCENT PROCEDURE
When directed to join a holding pattern, pilots shall reach their assigned level or altitude prior to or coincident with, arrival at the holding fix. This is to avoid step-descents in the holding pattern and to maintain the appropriate traffic sequence.

1.4.4 See ENR 3.6 En-route Holding for a detailed description of holding procedures.

1.5 SID, STAR AND TERMINAL TRANSITION ROUTES (TTR)

1.5.1 Within Hong Kong TMA, a number of SID, STAR and TTR are established for flights departing from and/or arriving at Hong Kong and Macao.

1.5.2 Aircraft departing Hong Kong or Macao transiting the Hong Kong FIR shall flight plan via the relevant TTR as required according to flight planning requirement in ENR 1.10.

1.5.3 Arriving flights to Hong Kong or Macao shall flight plan via the relevant TTR as required according to flight planning requirement in ENR 1.10.

1.5.4 Except when climbing via SID or descending via STAR to comply with the published altitude restrictions, pilots shall maintain a minimum rate of 500 feet per minute during all level changes instructed within the FIR. Pilots unable to comply shall inform ATC.

## 2 Arriving Flights to Hong Kong

2.1 STANDARD INSTRUMENT ARRIVAL (STAR) PROCEDURES

2.1.1 Unless specifically notified, an IFR arrival should expect a Standard Instrument Arrival (STAR).

2.1.2 RNP 1 STARs have been implemented in Hong Kong TMA. See GEN 1.5 para 3.5.3 for details of RNP 1 requirement and the Exemption Policy.

2.2 DESCENT PROFILE

2.2.1 To facilitate safe traffic integration and provide vertical separation between converging traffic in the Hong Kong TMA, pilots shall plan their descent profile in accordance with the published STAR procedures.

2.3 SPEED CONTROL

2.3.1 Speed control is used to optimise the spacing between aircraft and reduce the overall delay to traffic. Speed control shall be in force unless otherwise advised - pilots will be individually informed by ATC when speed control is cancelled.

2.3.2 Unless otherwise instructed, arriving aircraft shall fly at 250 KIAS or less below 10 000 ft AMSL. Pilots shall also comply with speed control restrictions as published in the STARs and Instrument Approach Procedures. ATC may issue further speed adjustment instructions during the various phases as and when required by traffic situations.

2.3.3 The minimum inter-arrival spacing at HKIA is 3.0 NM, subject to wake turbulence separation. Pilots shall inform Approach Control on first contact if the aircraft is unable to comply with the specified speeds in the Instrument Approach Procedures, so that additional inter-arrival spacing can be provided. Pilots shall also advise Approach Control on first contact if the planned final approach speed is below 125 KIAS. The final approach speed is defined as the Reference Landing Speed ($V_{ref}$) plus corrections.

2.4 SEQUENCING OF ARRIVING FLIGHTS BY VECTORING

2.4.1 Due to high traffic density within the Hong Kong TMA, arriving flights are normally sequenced by Hong Kong ATC units to achieve the maximum runway utilization within the parameters of safe separation minima, including vortex effect.

2.5 RADIO AIDS BEARING INDICATIONS

2.5.1 Pilots not receiving a good instrument indication from a specific aid should inform ATC accordingly and should not descend below 4 500 ft until they have positively identified their exact location.

2.6 TRACK KEEPING ACCURACY

2.6.1 STAR procedures are based on aircraft accurately following the published STAR track as defined by the navigation aids and reporting points listed below. Pilots may use FMS/RNAV equipment to fly the arrival procedures provided they monitor the track using the basic display normally associated with that procedure. Turn anticipation by the FMS/RNAV at STAR waypoints is permitted, however pilots shall comply with the published speed control procedures to limit the radius of turn unless otherwise advised by ATC.

2.6.2 If pilots are unable to follow the STAR track, they should request ATC assistance.

2.7 UNSERVICEABILITY OF AIRCRAFT EQUIPMENT

2.7.1 If arriving aircraft are unable to receive appropriate navigational information due to equipment unserviceability, pilots should request ATC assistance.

2.8 UNSERVICEABILITY OF GROUND EQUIPMENT

2.8.1 If ground based navigational aids are not available, ATC will provide an alternative arrival clearance or assist by vectoring.

## 3 Departing Flights from Hong Kong

3.1 STANDARD INSTRUMENT DEPARTURE (SID) PROCEDURES

3.1.1 Unless specifically notified an IFR departure shall expect a Standard Instrument Departure (SID).

3.1.2 RNP 1 SIDs have been implemented in Hong Kong TMA. See GEN 1.5 para 3.5.3 for details of RNP 1 requirement and the Exemption Policy.

3.1.3 Departing aircraft intending to cruise below the transition level shall follow the appropriate SID track and comply with individual ATC climb instructions.

3.2 DEPARTURE REPORT

3.2.1 After take-off, on first contact with ‘Hong Kong Departure’, the pilot shall state the aircraft call sign, report the passing altitude to the nearest 100 ft and assigned altitude.

3.3 SPEED CONTROL

3.3.1 Speed control shall be in force unless otherwise advised - pilots will be individually informed by ATC when speed control is cancelled.

3.3.2 Unless otherwise instructed, departing aircraft shall fly at 250 KIAS or less below 10 000 ft AMSL. Pilots shall also comply with speed control restrictions published in the SIDs. ATC may issue further speed adjustment instructions during the various phases as and when required by traffic situations.

3.4 TRACK KEEPING ACCURACY

3.4.1 SID procedures are based on aircraft accurately following the published track as defined by the SID navigation aids, significant points and waypoints. Pilots shall comply with the published speed control procedures to limit the radius of turn, unless otherwise advised by ATC.

3.4.2 If aircraft are unable to follow the SID track, pilots should advise ATC and request assistance.

3.4.3 On termination of a SID, aircraft must connect to the appropriate terminal transition route. Terminal transition routes are detailed in chapter ENR 3.1.

3.5 ALLOCATION OF CRUISING LEVEL

3.5.1 Aircraft can expect notification of their final cruising level at least 10 minutes prior to crossing the TMA boundary, except for traffic routeing via BEKOL.

3.5.2 Traffic routeing via BEKOL can expect climb to S0480 or above soon after departure.

3.5.3 Flights departing from or entering Hong Kong FIR will be allocated specific flight levels depending on the flight planned route. The Flight Level Assignment Schemes (FLAS) adopted by Hong Kong ATC and adjacent ACCs are detailed in ENR 1.8 para. 8.2

3.6 REACHING ASSIGNED CRUISING LEVEL

3.6.1 To ensure efficient coordination with adjacent units, aircraft are required to reach the assigned cruising level at or before the boundary of the Hong Kong TMA as indicated below.

| TMA Exit Point | Specified Location |
|---|---|
| BEKOL | BEKOL* |
| DOTMI | SOUSA (42 NM before DOTMI) |
| ELATO | 20 NM before ELATO |
| ENVAR | ENVAR |
| EPDOS | EPDOS |
| IDOSI | SURFA (23 NM before IDOSI) |
| KAPLI | 20 NM before KAPLI |
| LELIM | BESDA (62 NM before LELIM) |
| NOMAN | 20 NM before NOMAN |
| SABNO | 20 NM before SABNO |
| SIKOU | DAGBU (41 NM before SIKOU) |

* Traffic departing from Hong Kong routeing via BEKOL and transiting Guangzhou FIR is required to cross BEKOL at **S0480 (FL 157)** or above.

3.6.2 Failure to do so may result in the loss of standard separation. To guard against this possibility, pilots of aircraft that are unable to reach assigned levels as required are to inform ATC as soon as possible, so that an alternative clearance can be coordinated.

3.7 UNSERVICEABILITY OF AIRCRAFT EQUIPMENT

3.7.1 If departing aircraft are unable to receive appropriate navigational information due to equipment unserviceability, pilots should request ATC assistance.

3.8 UNSERVICEABILTY OF GROUND EQUIPMENT

3.8.1 If ground based navigational aids are not available, ATC will provide an alternative departure clearance or assist by vectoring.

**4 Arriving Flights to Macao**

4.1 PROVISION OF SERVICES

4.1.1 Hong Kong ATC will provide an ATS surveillance service to aircraft on approach and missed approach to/from Macau International Airport whilst they are transiting Hong Kong airspace.

4.2 SPEED CONTROL

4.2.1 The following speed restrictions are applicable to Macao instrument approach procedures:

a) maximum approach turning speed 190 KIAS;

b) maximum missed approach turning speed 185 KIAS.

4.2.2 Pilots unable to comply with the specified speed restriction should inform ATC as soon as possible so that alternative action can be taken.

4.3 LOSS OF COMMUNICATION

4.3.1 In the event of loss of communication, aircraft shall comply with the STAR procedure and join the approach feed-in procedure for the notified runway.

**5 Departing Flights from Macao**

5.1 **Provision of Service**

5.1.1 Hong Kong ATC will provide an ATS surveillance service to aircraft on departure from Macao whilst they are transiting Hong Kong airspace.

5.2 **Speed Control**

5.2.1 Pilots shall comply with speed control restrictions published in the SIDs.

5.2.2 Pilots unable to comply with the specified speed restriction should inform ATC as soon as possible so that alternative action can be taken.

5.3 **Loss of Communication**

5.3.1 In the event of loss of communication, aircraft shall comply with the last acknowledged clearance up to the next reporting point in the SID/ Terminal Transition Route procedure, then climb to the flight planned cruising level and follow the SID/ Terminal Transition Route track to the Hong Kong TMA exit point.

**6 Deviation from Flight Plans, ATC Clearances, Instrument Approach and Departure Procedures**

6.1 **Legislation**

6.1.1 The rules for flight under Instrument Flight Rules and Visual Flight Rules are contained in the Air Navigation (Hong Kong) Order 1995.

6.2 **Deviation from Flight Plans**

6.2.1 Aircraft may not deviate from current flight plans without the prior approval of ATC, except in an emergency which necessitates immediate action. Aircraft that have deviated from their flight plan in such emergencies are to inform ATC as soon as possible, to enable ATC to resolve any traffic conflictions resulting from the action.

6.3 **Deviation from Air Traffic Control Clearances**

6.3.1 ATC Clearances and instructions may not be deviated from except in an emergency as in para 6.2.1 above.

6.4 **Deviation from Instrument Approach and Departure Procedures**

6.4.1 Except in an emergency as in para 6.3.1 above aircraft may not deviate from standard instrument approach or departure procedures without the prior approval of ATC.

6.4.2 If visual reference is established before the completion of an instrument approach procedure, the entire procedure must be flown, until clearance to change the flight path has been requested by the pilot and granted by ATC.

**7 Radio Communication Failure Procedure**

7.1 In the event that radio communication failure prevents an aircraft, flying within controlled airspace, from maintaining a continuous listening watch on the appropriate radio frequency, and from making contact as necessary, the aircraft shall comply with one of the following procedures.

7.2 **Arriving Aircraft**

7.2.1 If in VMC, continue to fly in VMC and land at the nearest suitable aerodrome.

7.2.2 For an aircraft inbound to Hong Kong, i.e. a planned arrival or diversion arrival, if in IMC, or when the pilot of an IFR flight considers it inadvisable to complete the flight in accordance with para 7.2.1 above, the pilot shall:

a) if a specific STAR procedure has been designated and acknowledged prior to the occurrence of radio communication failure, comply with the radio communication failure procedures in para 7.2.3 below, or

b) if no specific STAR procedure has been designated or acknowledged prior to the occurrence of radio communication failure, endeavour to ascertain the landing direction from any means available (see para 7.2.5 below). Follow procedures i) or ii) listed below, then comply with the radio communication failure procedures in para 7.2.3:

i) arrivals should proceed in accordance with the STAR procedure appropriate to their ATS route and landing direction;

ii) arrivals from SIERA should proceed in accordance with SIERA $_{n}$ A or SIERA $_{n}$ B STAR according to the landing direction.

7.2.3 Proceed according to the STAR route to the termination point (LIMES for RWY 07L/RWY 07C/RWY 07R, RIVMI or LUDLA for RWY 25L/RWY 25C/RWY 25R), descend in accordance with the published descent planning profile of the relevant STAR procedure, thence:

a) For RWY 07L/RWY 07C/RWY 07R
Enter the LIMES holding pattern, then descend to 4 500 ft and carry out the appropriate ILS approach procedure.

b) For RWY 25L/RWY 25C/RWY 25R via RIVMI
Enter the RIVMI holding pattern, then descend to 4 500 ft and carry out the appropriate ILS approach procedure.

c) For RWY 25L/RWY 25C/RWY 25R via LUDLA
Enter the LUDLA holding pattern, then descend to 4 500 ft and carry out the appropriate RNP AR approach procedure.

7.2.4 The flight shall be arranged to arrive over the approach facility as closely as possible to the ETA as indicated in the filed flight plan and revised in accordance with the current flight plan.

7.2.5 Dependent on the nature of the radio communication failure pilots may obtain information on the landing runway from the following sources : ATIS, D-ATIS, ACARS, satellite phone, etc. In the absence of such information, pilots should rely on the best available information (e.g. aerodrome weather forecasts, meteorological reports or any other relevant information obtained prior to the communication failure), and decide on the most appropriate landing direction. To assist the pilot in ascertaining the landing direction, the ILS and approach lighting for the runway(s) in use will be switched on. The ILS and approach lighting for other runways will be switched off.

### 7.3 Arriving Aircraft Under Vectoring

7.3.1 When an arriving aircraft is being radar vectored, if no transmissions are heard on the frequency in use for a period of one minute, a signal check is to be made. If the signal check indicates a radio communication failure, comply with the procedures in para 7.2.3 above. If the aircraft is below the minimum sector altitude, the pilot shall immediately climb to the minimum sector altitude then carry out an ILS approach in accordance with the published procedure.

### 7.4 Departing Aircraft

7.4.1 The pilot shall comply with the last acknowledged clearance up to the next reporting point in the SID or Transition Route, then climb to the flight planned cruising level and follow the SID and Transition Route to the TMA boundary. Thereafter comply with the flight planned routeing.

### 7.5 Aircraft Overflying Hong Kong FIR

7.5.1 If in VMC, continue to fly in VMC and land at the nearest suitable aerodrome.

7.5.2 If in IMC, or when the pilot of an IFR flight considers it inadvisable to complete the flight in accordance with para. 7.5.1 above, the pilot shall maintain the last assigned speed and level, or minimum flight altitude if higher, for a period of 20 minutes following the aircraft's failure to report its position over a compulsory reporting point and thereafter adjust level and speed in accordance with the filed flight plan.

### 7.6 Departing or Overflying Aircraft Under Vectoring

7.6.1 The pilot shall maintain the last assigned speed and level, or minimum flight altitude if higher, for a period of 7 minutes following:

a) the time the last assigned level or minimum flight altitude is reached; or

b) the time the transponder is set to 7600; or

c) the aircraft's failure to report its position over a compulsory reporting point;

whichever is later, and thereafter adjust level and speed in accordance with the filed flight plan.

7.6.2 When being vectored without a specified limit, the flight shall rejoin the flight plan route no later than the next significant point, taking into consideration the applicable minimum flight altitude.

7.7 **SSR Procedure**

7.7.1 Suitably equipped aircraft are to select Mode C, code 7600 to indicate radio communication failure.

7.8 **RVSM Airspace Procedure**

7.8.1 If an RVSM compliant aircraft experiences a radio communication failure whilst operating in RVSM airspace, ATC shall consider the aircraft to be non-RVSM compliant and shall apply 2 000 ft vertical separation from all other traffic.

7.9 **Receiver or Transmitter Failure Only**

7.9.1 Aircraft which experience failure of transmitting or receiving facility only, shall proceed in accordance with para. 7.1 above, but shall also:

a) In the event of receiver failure, transmit intentions and subsequently transmit position reports etc. on the appropriate frequency; and

b) In the event of transmitter failure, continue to maintain watch on the appropriate ground/air frequencies.

7.10 **Action to be Taken by ATC** (For information only)

7.10.1 When unable to maintain two-way communication with an aircraft which has been given ATC clearance to enter a control zone or control area, or when ATC is unable to establish communication with an aircraft in accordance with standard procedures, two-way communication failure will be assumed. ATC will act in the following manner unless it is known that the aircraft is not adhering to the flight plan received:

a) Maintain separation between aircraft on the assumption that aircraft experiencing radio failure will adopt the procedures in paras 7.2, 7.3, 7.4, 7.5 and 7.6 above;

b) Transmit on the appropriate air/ground channels the altitude, route and EAT, or ETA, to which it is assumed the aircraft is adhering, and the weather conditions at the destination aerodrome and suitable alternates (when this information is already being transmitted on the appropriate channels either by routine broadcast, or in messages to other aircraft, a special transmission will be made only at the discretion of ATC). If practicable, the weather conditions in the area, or areas, suitable for a descent through cloud procedure will also be transmitted;

c) Endeavour by means of any available ATS surveillance systems to check whether the aircraft is receiving, and able to comply with instructions from ATC, and subsequently, to give all possible guidance to the aircraft;

d) Inform the operator concerned, or his designated representative;

e) Inform ATC at the alternate aerodrome, or the appropriate ATCC, of the circumstances; if (by agreement with the operator or his designated representative) instructions to divert are transmitted to the aircraft, transmit the latest weather report and any current unserviceability report of approach aids at the alternate, and request the appropriate ATC unit to attempt to establish communication with the aircraft.

7.10.2 Before presuming that the aircraft has proceeded to another area or aerodrome, ATC will allow:

a) A period of 30 minutes after the last acknowledged EAT;

b) If no EAT has been acknowledged, a period of 30 minutes after the last acknowledged ETA; or

c) If no ETA has been acknowledged, a period of 30 minutes after the ETA computed from the last acknowledged position report and the flight plan times for subsequent sectors of the flight.

7.10.3 If the aircraft has not reported or landed by the end of the appropriate period, alerting action will be initiated and pertinent information concerning the aircraft will be given to the operating agencies and/or the pilots of any other aircraft concerned and normal operations resumed if they so desire. It is the responsibility of the operating agencies and/or the pilots of aircraft to determine whether they will resume normal operations or take other action.

7.10.4 The period referred to in para 7.10.2 above will be reduced when:

a) Through the use of electronic or other aids, ATC can determine the position of the aircraft experiencing the failure, and can determine that action contrary to that prescribed above can be taken without impairing safety; or

b) It becomes known that the aircraft has landed.

# ENR 1.6 ATS SURVEILLANCE SERVICES AND PROCEDURES

## 1 Primary Radar

1.1 Hong Kong primary radar equipment is located at:

| | | | |
|---|---|---|---|
| a) | TSR: | Hong Kong APP | Tai Mo Shan 222442N 1140724E, 24 kW, coverage 140 NM approximately. |
| b) | ASR: | Hong Kong APP | Sha Chau 222044N 1135324E, 23 kW, coverage 80 NM approximately. |
| c) | RSR: | Hong Kong ACC | Mount Parker 221605N 1141317E, 24 kW, coverage 200 NM approximately. |

## 2 Secondary Surveillance Radar (SSR)

2.1 Hong Kong secondary surveillance radar equipment is located at:

| | | | |
|---|---|---|---|
| a) | RSSR: | Hong Kong ACC | Mount Parker 221611N 1141316E, 2 kW, coverage not less than 256 NM up to FL490 |
| b) | TSSR: | Hong Kong APP | Tai Mo Shan 222442N 1140724E, 2.5 kW, coverage not less than 256 NM up to FL490 |
| c) | ASSR: | Hong Kong APP | Sha Chau, 222044N 1135324E, 2.5 kW, coverage not less than 256 NM up to FL490 |

## 3 Supplementary Services

3.1 Radar Control Units are operated as an integral part of the Hong Kong ATS unit and provide radar service to aircraft to the maximum extent practicable to meet operational requirements. 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.

3.2 Pilots shall be advised on commencement and termination of radar services except radar service will be automatically terminated at the time the aircraft leaves the last assigned heading to intercept the ILS localiser.

3.3 Radar identification is achieved according to provisions specified by ICAO.

## 4 Application of Radar Control Service

4.1 Radar control service is provided in all controlled airspace. 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 normal 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; and

h) Information on observed weather.

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

## 5 Radar Separation Minima

5.1 Radar separation minima applied between identified aircraft are in accordance with ICAO Doc 4444 PANS-ATM and range from 3 to 10 nautical miles depending on the position of the aircraft in regard to:

a) the type of airspace they are in,

b) their distance from the airport or from the radar head, and

c) the number and types of radar stations that are tracking them.

## 6 Wake Turbulence Separation and Enhanced Wake Turbulence Separation (eWTS)

6.1 Wake Turbulence Separation

6.1.1 Except as stated in para. 6.2, the following distance-based wake turbulence separation minima utilising aircraft **wake turbulence categories** shall be applied to aircraft being provided with an ATS surveillance service in the approach and departure phases of flight.

| **Distance-based Wake Turbulence Separation Minima** | | | | | |
|---|---|---|---|---|---|
| | | **Follower** | | | |
| | | SUPER | HEAVY | MEDIUM | LIGHT |
| **Leader** | SUPER | - | **5 NM** | **7 NM** | **8 NM** |
| | HEAVY | - | **4 NM** | **5 NM** | **6 NM** |
| | MEDIUM | - | - | - | **5 NM** |
| - Indicates Wake Turbulence Separation is not applicable | | | | | |

6.2 Enhanced Wake Turbulence Separation (eWTS)

6.2.1 Enhanced wake turbulence separation minima is based on aircraft **wake turbulence groups** according to the maximum certificated take-off mass, wing span and speed, which govern the wake generation and resistance characteristics of the aircraft.

6.2.2 The wake turbulence groups are:

- GROUP A - aircraft types of 136 000 kg or more, and a wing span less than or equal to 80 m but greater than 74.68 m;
- GROUP B - aircraft types of 136 000 kg or more, and a wing span less than or equal to 74.68 m but greater than 53.34 m;
- GROUP C - aircraft types of 136 000 kg or more, and a wing span less than or equal to 53.34 m but greater than 38.1 m;
- GROUP D - aircraft types less than 136 000 kg but more than 18 600 kg, and a wing span greater than 32 m;
- GROUP E - aircraft types less than 136 000 kg but more than 18 600 kg, and a wing span less than or equal to 32 m but greater than 27.43 m;
- GROUP F - aircraft types less than 136 000 kg but more than 18 600 kg, and a wing span less than or equal to 27.43 m;
- GROUP G - aircraft types of 18 600 kg or less (without wing span criterion).

6.2.3 The following enhanced wake turbulence separation (eWTS) minima shall be applied to arrival aircraft being provided with an ATS surveillance service on approach to Hong Kong International Airport whilst on base leg and final approach.

| **Distance-based eWTS Minima** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | **Follower** | | | | | | |
| | | Group A | Group B | Group C | Group D | Group E | Group F | Group G |
| **Leader** | Group A | - | **4 NM** | **5 NM** | **5 NM** | **6 NM** | **6 NM** | **8 NM** |
| | Group B | - | **3 NM** | **4 NM** | **4 NM** | **5 NM** | **5 NM** | **7 NM** |
| | Group C | - | - | - | **3 NM** | **3.5 NM** | **3.5 NM** | **6 NM** |
| | Group D | - | - | - | - | - | - | **4 NM** |
| | Group E | - | - | - | - | - | - | **4 NM** |
| - Indicates Wake Turbulence Separation is not applicable | | | | | | | | |

6.2.4 In the event of consecutive missed approaches, eWTS will be applied to aircraft during the initial part of the standard missed approach procedure until another form of separation is established by ATC.

6.3 **Wake Turbulence Separation Minima shall not be infringed.** In the event of unexpected speed variations between consecutive arrivals on final approach and ATC considers there may be a catch-up situation in which an erosion of the prescribed separation would result, one of the affected aircraft shall be instructed to break off the approach or initiate a missed approach before the prescribed minima is infringed.

6.4 Aircrew shall comply with published speed restrictions or specific speed control instructions assigned by ATC at all times. If for any reason a speed instruction cannot be followed, pilots shall notify ATC accordingly.

## 7 System of SSR Code Assignment

7.1 Aircraft operating in the Hong Kong FIR can expect to be assigned SSR discrete codes within the following code blocks allocated to HK FIR:

| Flight Status | SSR Codes |
|---|---|
| *a)* Departing traffic<br>*b)* Traffic diverting from Hong Kong | 3301 - 3377<br>3501 - 3577<br>5101 - 5177<br>5301 - 5377<br>5701 - 5777 |
| *a)* Arriving traffic if not already assigned a SSR code by previous ATC units;<br>*b)* Local/domestic traffic | 5201 - 5277 |
| Overflying traffic if not already assigned a SSR code by previous ATC units | 3301 - 3377<br>3501 - 3577<br>5101 - 5177<br>5301 - 5377<br>5701 - 5777 |

## 8 Transponder Operating Procedures

8.1 Pilots of aircraft outbound from Hong Kong shall operate transponders in accordance with ATC instructions. In addition pilots shall also transpond on Mode C.

8.2 Pilots of aircraft inbound to Hong Kong shall, unless otherwise instructed by the appropriate ATS unit, operate transponders within the Hong Kong FIR to transpond on the SSR code last assigned to them by an ATS unit, or if no code has been previously assigned, to transpond on Code 2000, and to transpond on Mode C.

8.3 Pilots of aircraft inbound to Hong Kong are requested to comply with para. 8.2 above when they are within 300 NM of Hong Kong, although they may be outside Hong Kong FIR.

8.4 Except as stated in paras. 8.5, 8.6 and 8.7 below, pilots who have received specific instructions from ATC concerning the setting of the transponder should maintain that setting unless otherwise instructed.

8.5 To indicate that a state of emergency exists, the pilot of an aircraft shall set the transponder to Code 7700.

8.6 To indicate that a pilot has lost two-way communication, the pilot of an aircraft shall set the transponder to Code 7600.

8.7 Should an aircraft in flight be subjected to unlawful interference, the pilot shall endeavour to set the transponder to Code 7500 to give indication of the situation unless circumstances warrant the use of Code 7700. When a pilot has selected Code 7500 and is subsequently requested to confirm the code by ATC, the pilot shall, according to circumstances, either confirm this or not reply at all. (The absence of a reply from the pilot will be taken by ATC as an indication that the use of Code 7500 is not due to an inadvertent false code selection).

## 9 Radar Failure

9.1 In the event of a radar failure, the radar controller, in conjunction with the non-radar controller, shall provide non-radar separation as soon as possible and instruct aircraft to communicate with the appropriate non-radar controller for further instructions. Reduced vertical separation (e.g. 500 ft) may be employed temporarily if standard separation cannot be provided immediately.

## 10 Radio Communication Failure

10.1 In the event of an aircraft experiencing a two-way communication failure whilst receiving a radar service, the pilot shall comply with the standard radio communication failure procedures (see ENR 1.5).

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# ENR 1.7 ALTIMETER SETTING PROCEDURES

## 1 Introduction

1.1 The terms used in these procedures are as defined in ICAO Document 8168.

1.2 The transition altitude is 9 000 ft.

1.3 The transition level is FL110.

Note:

i) When the QNH value at Hong Kong International Airport is 979 hPa or below ATC will inform pilots of the transition level by Arrival ATIS broadcast or voice communication.

ii) The lowest QNH value recorded by the Hong Kong Observatory to date is 953.2 hPa.

## 2 Basic Altimeter Setting Procedures

### 2.1 Procedures

2.1.1 Aircraft operating beyond a range of 50 NM from Hong Kong International Airport, and those within 50 NM of the airport but at or above the transition level will use an altimeter setting of 1013.2 hPa.

2.1.2 Aircraft operating within 50 NM of Hong Kong International Airport at or below the transition altitude (9 000 ft) will use the local QNH setting supplied by ATC.

2.1.3 Aircraft wishing to operate within 50 NM of Hong Kong International Airport shall not flight plan to cruise at levels between the transition altitude and FL120.

### 2.2 Change of Settings

2.2.1 Arriving aircraft at Hong Kong International Airport will change from an altimeter setting of 1013.2 hPa to the local QNH setting :-

a) When 50 NM from the airport, if at or below the transition altitude (9 000 ft), or

b) When vacating the transition level on a descent, if within 50 NM of the airport.

Note: Aircraft approaching at or below 9 000 ft may be instructed by ATC to use the local QNH setting before reaching 50 NM from the airport, if it is considered necessary in the interest of flight safety.

2.2.2 Departing aircraft from Hong Kong International Airport will change from the local QNH setting to an altimeter setting of 1013.2 hPa:

a) When 50 NM from the airport, if at or below the transition altitude (9 000 ft).

b) When vacating the transition altitude on a climb, if within 50 NM from the airport.

### 2.3 Barometric Pressure Information

2.3.1 Current QNH reports are continuously available on the Automatic Terminal Information Service (128.2 MHZ and 127.05 MHZ). QFE settings are available on request.

2.3.2 All altimeter setting values are given in hectopascals. Airline operators and agencies must provide their own facilities for conversion to other units.

2.3.3 QNH and QFE settings are rounded down to the nearest whole hectopascal.

## 3 Description of Altimeter Setting Region

3.1 Not applicable.

## 4 Procedures Applicable to Operators (Including Pilots)

4.1 Not applicable.

## 5 IFR Cruising Levels

5.1 The allocation of IFR cruising flight levels within Hong Kong FIR in general follows ICAO Annex 2 Appendix 3 Table a) or b).

5.2 Flights departing from or entering Hong Kong FIR will be allocated specific flight levels depending on the flight planned route. The Flight Level Assignment Schemes adopted by Hong Kong ATC and adjacent ACCs are detailed in ENR 1.8 paragraph 8.2.

**6 VFR Cruising Levels**

6.1 A VFR flight operating in level cruising flight above 3 000 ft from the ground or water within Hong Kong airspace outside of controlled airspace shall be flown at a cruising level appropriate to its magnetic track as specified in the following table:

| Magnetic Track | Cruising Levels |
|---|---|
| 000° - 179° | Odd thousands plus 500 ft |
| 180° - 359° | Even thousands plus 500 ft |

**7 Application of Vertical Separation**

7.1 The vertical separation minima is 1 000 ft (300 m) at or below FL410 and 2 000 ft (600 m) above FL410.

7.2 Except when climbing via SID or descending via STAR to comply with the published altitude restrictions, a minimum rate of change of 500 feet per minute is assumed by ATC when applying vertical separation. Pilots intending to use a lower rate of level change shall inform ATC.

# ENR 1.8 REGIONAL SUPPLEMENTARY PROCEDURES (DOC 7030)

## 1 Application of Instrument Flight Rules

1.1 All flights in controlled airspace in Hong Kong FIR shall be flown in accordance with IFR except local flights as set out in ENR 1.2.

## 2 Submission of Flight Plan

2.1 A flight plan shall be submitted for every IFR flight except as notified in ENR 1.10.

## 3 Clearances Relating to Flights Subject to Maintaining Own Separation and Remaining in VMC

3.1 An ATCU shall only grant to an IFR flight a clearance subject to maintaining own separation and remaining in visual meteorological conditions, when so requested by a pilot and then only for the climb, descent or approach portion of the flight by day. In Hong Kong such clearances will only be granted subject to the aircraft being at or below FL150.

## 4 Longitudinal Separation Minima and Mach Number Technique

4.1 Mach Number Technique may be applied between turbo-jet aircraft to establish the required longitudinal separation minima between the aircraft, whether in level, climbing or descending flight.

4.2 When ATC issues a clearance based on Mach Number Technique, the pilot shall maintain the specified Mach Number. If for operational reasons, it is not feasible to maintain the last assigned Mach number, pilots shall advise ATC and request subsequent re-clearance.

4.3 Mach Number Technique may be used on the following routes:

a) ATS Routes
A1, A461, A583, B330, G86 and R473.

b) PBN Routes
L642, M771 and P901.

## 5 Reduced Vertical Separation Minima (RVSM) Airspace Procedures

5.1 IDENTIFICATION OF RVSM AIRSPACE

5.1.1 Within the Hong Kong FIR, controlled airspace from FL290 to FL410 inclusive is prescribed as Reduced Vertical Separation Minima (RVSM) airspace.

5.2 AIRWORTHINESS AND OPERATIONAL APPROVAL AND MONITORING

5.2.1 Operators must obtain airworthiness and operational approval from the State of registry or State of the Operator, as appropriate, to conduct RVSM operations. On behalf of Pacific ATS providers, the FAA maintains a web-site containing information on RVSM approval. The internet address is:
http://www.faa.gov/air_traffic/separation_standards/parmo/

5.3 IN-FLIGHT PROCEDURES WITHIN RVSM AIRSPACE

5.3.1 Before entering RVSM airspace, the pilot should review the status of required equipment. The following equipment should be operating normally:

i) two primary altimetry systems;

ii) one automatic altitude-keeping device;

iii) one altitude-alerting device.

5.3.2 The pilot shall notify ATC whenever the aircraft:

i) is no longer RVSM compliant due to equipment failure;

ii) experiences loss of redundancy of altimetry systems;

iii) encounters turbulence that affects the capability to maintain flight level.

5.4 During climb or descent, aircraft should not exceed the assigned level by more than 150 ft.

5.5 Except in a radar environment, pilots shall report reaching any level assigned within RVSM airspace.

5.6 See para 16 for RVSM in-flight contingency measures.

## 6 Procedures for the Suspension of RVSM

6.1 The ATC Watch Manager shall suspend RVSM procedures within Hong Kong FIR when there is pilot reports of greater than moderate turbulence. When RVSM procedures are suspended, the vertical separation minima between all aircraft shall be 2 000 ft. In the assignment of levels, aircraft operating on the two primary RNAV routes (L642 and M771) will have priority. Aircraft operating on routes that cross the six major routes, plus ATS Routes A1, A202 and RNAV Route P901, will be assigned levels subject to co-ordination with the adjacent FIRs.

## 7 Procedures for the Operation of Non-RVSM Compliant Aircraft in RVSM Airspace

7.1 Non-RVSM compliant aircraft may not flight plan between F290 and F410 inclusive within Hong Kong RVSM airspace, except under the following circumstances:

a) humanitarian or SAR flights;

b) State aircraft with a senior State person on board;

c) when specific prior approval has been given by Director-General of Civil Aviation.

7.2 Operators shall include the following information in Flight Plan Item 18: e.g. STS/HUM, STS/SAR, STS/HEAD, STS/STATE or STS/NONRVSM[1].

Note 1: Operators of non-RVSM approved aircraft capable of operating at FL280 or above regardless of the requested flight level, shall insert in Item 18 ‘STS/NONRVSM’.

7.3 These procedures are intended exclusively for the purposes listed in para 7.1 above, and not as a means to circumvent the normal RVSM approval process.

7.4 When non-RVSM approved aircraft are permitted to operate in RVSM airspace, RVSM approved aircraft shall be given priority for level allocation over non-RVSM approved aircraft and the vertical separation between non-RVSM compliant aircraft operating in RVSM airspace and all other aircraft shall be 2 000 ft.

7.5 A non-RVSM compliant aircraft may be cleared to climb to and operate above F410 or descend and operate below F290 provided that it:

a) climbs or descends at not less than the normal rate for that type of aircraft;

b) does not maintain an intermediate level while passing through RVSM airspace.

7.6 An aircraft that is RVSM compliant on delivery may operate in Hong Kong RVSM airspace provided that the crew is trained on Hong Kong RVSM policies and procedures and the Director-General of Civil Aviation has issued the operator with a letter of authorization approving the operation. State notification to the Monitoring Agency for Asia Region (MAAR) should be in the form of a letter, e-mail or fax, documenting the one-time flight. The planned date of the flight, flight identification, registration and aircraft type/series should be included. The MAAR e-mail address is: maar@aerothai.co.th

7.7 Where necessary the ATC Watch Manager should be consulted as follows:

| | |
|---|---|
| Telephone | +852 2910 6821 |
| Fax | +852 2910 1177 |
| AFTN | VHHKZQZX or VHHKZRZX. |

## 8 Flight Level Assignment Scheme (FLAS)

8.1 With the guidance ICAO Asia/Pacific RVSM Task Force, the regional ATS providers have developed a Flight Level Assignment Scheme (FLAS) that is applicable to the South China Sea airspace and adjacent areas.

8.2 Flights departing or entering Hong Kong FIR will be allocated specific flight levels depending on the flight planned route as indicated in the following tables:

a) FLAS between Hong Kong and Manila FIR

| Routes | Direction | FLAS Levels |
|---|---|---|
| A461/M501 and A583 | Hong Kong FIR to Manila FIR | F290, F330, F370 and F410 |
| | Manila FIR to Hong Kong | F300, F340 and F380 |
| M772 | Departing Jakarta,<br>i) Halim Perdanakusuma,<br>ii) Soekarno-Hatta and landing at Hong Kong/ airports in the People's Republic of China | F300 and F380 |
| | Departing Borneo,<br>i) Bintulu, ii) Kuching, iii) Sibu, iv) Brunei, v) Labuan and vi) Miri and landing at Hong Kong | |

b) FLAS between Hong Kong and Guangzhou FIR

| Routes | Direction | FLAS Levels |
|---|---|---|
| A461 | Departing Hong Kong - Landing Guangzhou | Primary S0420<br>Secondary S0450 |
| | Departing Hong Kong - Transiting Guangzhou FIR | S0690 |
| | Transiting Hong Kong and Guangzhou FIR | S0890*, S0950, S1010, S1070, S1130, S1190 |
| B330 | Transiting Guangzhou and Hong Kong FIRs | S0840, S0920, S0980, S1040, S1100, S1160, S1220* |
| W68 | Transiting Hong Kong FIR - Landing Guangzhou | Primary S0450<br>Secondary S0420 |
| R473 | Transiting Guangzhou FIR - Landing Hong Kong | F190, F210, F230 |
| | Departing Guangzhou - Transiting Hong Kong FIR | F230, F250 |
| Note: * -- Subject to prior co-ordination | | |

c) FLAS between Hong Kong FIR and Sanya FIR / Control Area

| Routes | Direction | FLAS Levels |
|---|---|---|
| A1/P901[1] | Sanya FIR to Hong Kong FIR | F270, F290, F330, F370, F390[2], F410 and F450<br>Note 2: No pre-coordination level between 1601 and 2300 UTC. For flights landing Hong Kong, Macao or Shenzhen, or overflying HK FIR via BEKOL, F390 is available on H24 basis. |
| | Hong Kong FIR to Sanya FIR | F280, F300, F340, F380, F400 and F430 |
| Note 1: P901 in Hong Kong FIR only. Vertical Limits - FL285 - UNL.<br>Vertical Limits of A1 between BIGEX and IKELA in Hong Kong FIR - SFC to FL285.<br>Vertical Limits of A1 in Sanya FIR - See AIP China. | | |
| L642 | Hong Kong FIR to Sanya FIR | F280, F310, F320, F350, F360, F390[3] and F400<br>Note 3: No pre-coordination level between 2301 and 1600 UTC. |
| M771 | Sanya FIR to Hong Kong FIR | F270, F310, F320, F350, F360, F390[4] and F400<br>Note 4: No pre-coordination level between 2301 and 1600 UTC. |
| A202 | Sanya Control Area to Hong Kong FIR:<br>Departing Sanya<br>Points beyond ASSAD | <br>S0810, S0890<br>S1010, S1070, S1130, S1190, S1250[5]<br>Note 5: S1250 for traffic overflying HK FIR without prior coordination. |
| | Hong Kong FIR to Sanya Control Area:<br>Landing Sanya<br>Points beyond ASSAD | <br>S0840<br>S1040, S1160, S1220 |
| R339 | Hong Kong FIR to Sanya Control Area:<br>Points beyond Nanning | <br>S0980, S1040, S1100, S1160, S1220 |

d) FLAS between Hong Kong FIR and Shantou Control Area

| Route | Direction | FLAS Levels |
|---|---|---|
| A470 | Depart Shantou for Hong Kong FIR | S0420 |
| | Exit Hong Kong FIR landing at Shantou Airport | S0450 |

e) FLAS between Hong Kong FIR and Nanning Control Area

| Routes | Direction | FLAS Levels |
|---|---|---|
| A202/R339 | Hong Kong FIR to Nanning Control Area:<br>Landing Boao<br>Landing Beihai/Nanning | <br>S0660, S0720<br>S0720, S0780 |

f) FLAS between Hong Kong and Taipei FIR

| Routes | Direction | FLAS Levels |
|---|---|---|
| A1 | Taipei FIR to Hong Kong FIR | In accordance with ICAO Annex 2 Appendix 3 Table a).[5] |
| | Hong Kong FIR to Taipei FIR | At or below F270: In accordance with ICAO Annex 2 Appendix 3 Table a). |
| G581 | Taipei FIR to Hong Kong FIR | In accordance with ICAO Annex 2 Appendix 3 Table a).[5] |
| | Hong Kong FIR to Taipei FIR[1] | At or below F250 within Hong Kong FIR: In accordance with ICAO Annex 2 Appendix 3 Table a). |
| M750 | Hong Kong FIR to Taipei FIR | 1. At or above F270: In accordance with ICAO Annex 2 Appendix 3 Table a).[2]<br>2. F290 not available between 2300-1159 UTC. |
| G86[3] | Taipei FIR to Hong Kong FIR | 1. Within RVSM airspace: F300, F340, F380 and F400.<br>2. Outside RVSM airspace: In accordance with ICAO Annex 2 Appendix 3 Table a). |
| | Hong Kong FIR to Taipei FIR | 1. Within RVSM airspace: F290, F330, F370, F390[4] and F410.<br>2. Outside RVSM airspace: In accordance with ICAO Annex 2 Appendix 3 Table a). |

Note 1: Traffic from Hong Kong FIR to Taipei FIR at F270 or above shall route via M750 DADON G581.

Note 2: For traffic via M750 DADON G581:
i). Within RVSM airspace: F290, F330, F370 and F410.
ii). Outside RVSM airspace: In accordance with ICAO Annex 2 Appendix 3 Table a).

Note 3: ATS Route G86 within Hong Kong FIR is a unidirectional eastbound route. East of KAPLI, this route is bi-directional.

Note 4: For destinations in Taipei FIR only.

Note 5: F300 not available for traffic via A1/G581 ELATO joining J101 in Hong Kong FIR due traffic.

g) FLAS between Hong Kong and Xiamen Control Area

| Route | Direction | FLAS Levels |
|---|---|---|
| A470 | Exit Xiamen Control Area to Hong Kong FIR | S0660, S0720, S0780 |
| | Exit Hong Kong FIR - landing at:<br>Xiamen, Jinjiang or Meixian<br>Fuzhou, Wuyishan or Wenzhou | <br>S0510, S0630, S0750*<br>S0630, S0750 |
| * -- Subject to prior co-ordination | | |

h) FLAS between Hong Kong FIR and Shanghai Control Area

| Routes | Direction | FLAS Levels |
|---|---|---|
| A470 | Exit Shanghai Control Area - Landing Hong Kong or Macao | F280, F300 |
| | Exit Shanghai Control Area and transiting Hong Kong FIR | F280, F300, F360, F380 |
| | Exit Hong Kong FIR - landing at:<br>Hangzhou, Yiwu or Ningbo<br>Aerodromes other than those listed above | <br>S0810*, F330<br>S0810*, F330, F350, F390 |
| M503 | Departing Shanghai Pudong, Qingdao, Yantai or Dalian and landing Hong Kong | F300 |
| | Departing Hong Kong or Macao and landing at:<br>Shanghai Pudong<br>Qingdao, Yantai or Dalian | <br>F330<br>F330, F350 |
| * -- Subject to prior co-ordination | | |

i) FLAS between Hong Kong FIR and Zhanjiang Control Area

| Routes | Direction | FLAS Levels |
|---|---|---|
| A202/R339 | Zhanjiang Control Area to Hong Kong FIR:<br>Departing Zhanjiang/Haikou | <br>S0570 |
| | Hong Kong FIR to Zhanjiang Control Area:<br>Landing Zhanjiang/Haikou | <br>S0600 |

## 9 Phraseology Related to RVSM Operations

9.1 The following recommended phraseology should be used in RVSM operations:
(Controller phraseology is in standard text, *pilot phraseology is in italic text:*)

| Phraseology | Purpose of Message |
|---|---|
| (call sign) CONFIRM RVSM APPROVED | For a controller to ascertain the RVSM approval status of an aircraft. |
| *Negative RVSM* | For a pilot to report non-RVSM approval status:<br><br>i. On the initial call on any frequency within the RVSM airspace (controllers shall provide a readback with this same phrase), and<br><br>ii. In all requests for flight level changes pertaining to flight levels within the RVSM airspace; and<br><br>iii. In all read-backs to flight level clearances pertaining to flight levels within the RVSM airspace.<br><br>Additionally, except for State aircraft, pilots shall include this phrase to read back flight level clearances involving the vertical transit through F290 or F410.<br><br>*See examples that follow.* |
| *AFFIRM RVSM* | For a pilot to report RVSM approval status. |
| *NEGATIVE RVSM STATE AIRCRAFT* | For a pilot of a non-RVSM approved State aircraft to report non-RVSM approval status, in response to the phrase (call sign) CONFIRM RVSM APPROVED. |
| (call sign) UNABLE CLEARANCE INTO RVSM AIRSPACE, MAINTAIN [or DESCEND TO, or CLIMB TO] FLIGHT LEVEL (number) | For a controller to deny clearance into the RVSM airspace. |
| *UNABLE RVSM DUE TURBULENCE* | For a pilot to report when severe turbulence affects the aircraft's capability to maintain the height-keeping requirements for RVSM. |
| *UNABLE RVSM DUE EQUIPMENT* | For a pilot to report that the aircraft's equipment has degraded enroute below that required for flight within the RVSM airspace.<br><br>*(This phrase is to be used to convey both the initial indication of the non-MASPS compliance, and henceforth, on initial contact on all frequencies within the lateral limits of the RVSM airspace until such time as the problem ceases to exist, or the aircraft has exited the RVSM airspace.)* |
| *READY TO RESUME RVSM* | For a pilot to report the ability to resume operations within the RVSM airspace after an equipment or weather-related contingency. |
| REPORT ABLE TO RESUME RVSM | For a controller to confirm that an aircraft has regained its RVSM approval status or to confirm that the pilot is ready to resume RVSM operations. |

## 10 PBN NAVIGATION REQUIREMENTS

10.1 ATC shall be advised as soon as possible when the navigational capability of the aircraft deteriorates below the requirement.

10.2 RNP 10 Navigation Requirements

10.2.1 ATC will apply as follows lateral separation minima to aircraft, which are approved for RNP 10 operations on those segments of the following routes which fall within the Hong Kong FIR:

| | | | |
|---|---|---|---|
| a) | P901 | BIGEX to IKELA | 50 NM |
| b) | M772 | ASOBA to DULOP | 50 NM |
| c) | Q1 | DULOP to CARSO | 50 NM |

10.2.2 Pilots must advise ATC of any deterioration or failure of the navigation systems below the navigation requirements for RNP 10. ATC shall then provide alternative separation and/or alternative routeing.

10.2.3 Pilots of aircraft meeting RNP 10 requirements shall indicate ‘R’ in Item 10a and ‘PBN/A1’ in Item 18 of the ICAO Flight Plan.

10.3 RNP 4 Navigation Requirements

10.3.1 ATC will apply as follows lateral separation minima to aircraft, which are approved for RNP 4 operations on those segments of the following routes which fall within the Hong Kong FIR:

| | | | |
|---|---|---|---|
| a) | L642 | BIGEX to EPKAL | 50 NM |
| b) | M771 | DOSUT to BIGEX | 50 NM |

10.3.2 Pilots must advise ATC of any deterioration or failure of the navigation systems below the navigation requirements for RNP 4. ATC shall then provide alternative separation and/or alternative routeing.

10.3.3 Pilots of aircraft meeting RNP 4 requirements shall indicate ‘RG’ in Item 10a and ‘PBN/L1’ in Item 18 of the ICAO Flight Plan.

10.3.4 ADS-C and CPDLC capability of the aircraft are NOT required for the RNP 4 operation within Hong Kong FIR.

## 11 OPERATIONS BY AIRCRAFT NOT MEETING RNP 10/ RNP 4 REQUIREMENTS

11.1 An aircraft that is unable to meet the minimum navigational requirements for RNP 10 or RNP 4 must flight plan at FL280 or below. Operations above FL280 for these aircraft will be subject to ATC approval, in accordance with the provisions of para. 11.3 below.

11.2 Pilots of such aircraft wishing to operate on PBN routes specified in para 10.2.1 a), b) or c), 10.3.1 a) or b) above, at or above FL290, must indicate their level requirements in Item 18 of the ICAO Flight Plan as RMK/REQ FL *(insert level)*. Approval to operate at the preferred level will be subject to ATC co-ordination and clearance. Flights that are not approved will be required to operate at FL280 or below or via alternative routes.

11.3 ATC units receiving a request for non-RNP10 or non-RNP 4 approved aircraft to operate on PBN routes specified in para 10.2.1 a), b) or c), 10.3.1 a) or b) above, at or above FL290, will co-ordinate with adjacent ATC units affected by the flight. In deciding whether or not to approve the flight, each ATC unit will take into consideration:

a) traffic density;

b) communications, including the non-availability of normal communications facilities;

c) weather conditions en-route; and

d) any other factors pertinent at the time.

## 12 SAFETY ASSESSMENT CRITERIA

12.1 The safety criteria associated with the introduction of the reduced lateral separation minima of 60 NM will be in accordance with the requirements for RNP10 navigation performance, i.e. aircraft navigation performance shall be such that the standard deviation of lateral track errors shall be less than 8.7 km (4.7 NM).

## 13 MONITORING OF AIRCRAFT NAVIGATION PERFORMANCE

13.1 Monitoring of aircraft navigation performance is a joint responsibility between operators, States of Registry or States of Operators (as applicable), regulatory authorities and the ATS providers. The detection and reporting of non-conformance with the navigation requirements against the following parameters will rely primarily on radar monitoring by ATC units:

a) Lateral Deviations
a deviation of 15 NM or more from track centreline based on radar observations;

b) Longitudinal Deviations

i) where time separation is being applied by ATC - when the reported separation based on ATC verified pilot estimates varies by 3 minutes or more from the expected separation at the reporting point; or,

ii) where a distance-based standard is being applied by ATC based on either ADS-B, radar observation or RNAV distance reports - when the distance varies by 10 NM or more from the expected distance.

13.2 ATC will advise the pilot when such deviations are observed and implement the required investigation procedures.

13.3 The ATC authority will investigate the causes of such deviations in conjunction with the aircraft operator and the State of Registry, or the State of the Operator, as applicable.

## 14 Weather Deviation Procedures for Use in the Hong Kong FIR

14.1 General

14.1.1 Regional ATS providers and airspace users have developed contingency procedures for weather deviations applicable in the South China Sea airspace, particularly in areas outside of direct controller-pilot VHF communication.

14.1.2 These procedures are intended to enhance ICAO Regional Supplementary Procedures (DOC 7030), however, it must be recognised that all circumstances cannot be covered. The pilot's judgement shall ultimately determine the sequence of actions taken and ATC shall render all possible assistance.

14.1.3 If an aircraft is required to deviate from its intended track to avoid weather and prior clearance cannot be obtained, an ATC clearance shall be obtained at the earliest possible time. In the meantime, the pilot shall broadcast the position (including ATS route designator or the track code, as appropriate), and intentions, on the frequency in use, as well as on frequency 121.5 MHZ, at suitable intervals until ATC clearance is received.

14.1.4 The pilot shall advise ATC when weather deviation is no longer required or when a weather deviation has been completed and the aircraft has returned to the centreline of its cleared route.

14.2 Priority For Obtaining ATC Clearance When Weather Deviation Is Required

14.2.1 When a pilot initiates communication with ATC, rapid response may be obtained by stating 'WEATHER DEVIATION IS REQUIRED', to indicate that priority is required on the frequency and for ATC response.

14.2.2 The pilot also retains the option of initiating the communication using the urgency call 'PAN, PAN', three times, to alert all listening parties of a special handling condition which will receive ATC priority for issuance of a clearance or assistance.

14.3 Actions To Be Taken When Controller-Pilot Communications Are Established

14.3.1 When two-way controller-pilot communications are established and a pilot identifies the need to deviate from the intended track to avoid weather, the pilot shall notify ATC and request clearance to deviate from track, advising where possible the extent of deviation expected. ATC will then take one of the following actions:

a) if there is no conflicting traffic, ATC will issue a clearance to deviate from track;

b) if there is conflicting traffic, and ATC is able to establish separation from the conflicting traffic, ATC will issue a clearance to deviate from track;

c) if there is conflicting traffic, and ATC is unable to establish separation from the conflicting traffic, ATC shall:

i) advise the pilot that ATC is unable to issue clearance for requested deviation;

ii) advise the pilot of conflicting traffic;

iii) request pilot's intentions.

The following is an example of the phraseology that may be used:

'Unable requested deviation, traffic is (call sign, position, flight level, direction), advise intentions'.

14.3.2 The pilot shall take the following action:

a) inform ATC of intentions by the most expeditious means available;

b) comply with ATC clearance as issued;

c) execute the procedures detailed in para. 14.4.2 below, (ATC shall issue essential traffic information to all affected aircraft);

d) if necessary, establish voice communications with ATC to expedite co-ordination on the situation.

14.4 Actions To Be Taken When Controller-Pilot Communications Are Not Established Or Revised ATC Clearance Is Not Available

14.4.1 A pilot may take the following actions under the provision that the pilot may deviate from Rules of the Air when it is absolutely necessary in the interests of safety to do so, e.g. the requirement to operate on route or track centreline unless otherwise directed by ATC.

14.4.2 If a revised ATC clearance cannot be obtained and deviation from track is required to avoid weather, the pilot shall take the following actions:

a) if possible, deviate away from an organized track or route system;

b) broadcast the aircraft's position and intentions on the frequency in use, frequency 121.5 MHZ and the inter-pilot air-to-air frequency 123.45 MHz, at suitable intervals, stating:

i) flight call sign or identification;

ii) flight level;

iii) aircraft position, including ATS route designator or track code;

iv) intentions, including extent of weather deviation.

c) watch for conflicting traffic both visually and by reference to ACAS, if available;

d) turn on aircraft exterior lights commensurate with aircraft operating procedures;

e) for deviations of less than 10 NM or operations within a composite route system, aircraft should remain at a level assigned by ATC;

f) for deviations of greater than 10 NM, when the aircraft is approximately 10 NM from track, initiate a level change based on the following criteria and broadcast details on the appropriate frequencies:

| Route Centreline Track | Deviation in Excess of 10 NM | Level Change |
|---|---|---|
| 000°M - 179°M (East) | LEFT | *DESCEND **300 ft*** |
| | RIGHT | *CLIMB **300 ft*** |
| 180°M - 359°M (West) | LEFT | *CLIMB **300 ft*** |
| | RIGHT | *DESCEND **300 ft*** |

NOTE 1 : If the pilot determines there is another aircraft at or near the same flight level with which his aircraft may conflict, the pilot is expected to adjust the path of the aircraft as necessary to avoid the confliction. In the event of a TCAS RA during weather deviation manoeuvres, the pilot may initiate other level changes to resolve the situation.

NOTE 2 : In accordance with paras. b) and c) above the pilot is required to communicate air-to-air with near-by aircraft and broadcast position and intentions with conflicting traffic.

g) when returning to track, be established at the assigned flight level or altitude, when the aircraft is within approximately 10 NM of centreline;

h) if communication was not established prior to the deviation, continue to attempt to contact ATC to obtain a clearance. If contact was established, continue to keep ATC advised of intentions and obtain essential traffic information.

**15 Large Scale Weather Deviation Contingency Procedure (LSWDCP)**

15.1 To mitigate the effects of widespread adverse weather and a potential loss of lateral separation between ATS routes served by the same 'no pre-departure co-ordination required' flight levels, a LSWDCP has been developed for application by Fukuoka ATMC, Hong Kong ATCC, Ho Chi Minh, Kota Kinabalu, Manila, Naha, Sanya, Singapore and Taipei ACCs.

15.2 Flight Level Allocation Scheme

15.2.1 When LSWDCP is implemented, the ATS provider/ANSP concerned will apply a LSWDCP Flight Level Allocation Scheme (LSWDCP FLAS) within the RVSM airspace on the affected route(s) within Hong Kong FIR as follows:

L642 (SW bound): FL320, FL360, FL400
M771 (NE bound): FL310, FL350, FL390

15.3 Action in the event of activating the LSWDCP FLAS

15.3.1 Hong Kong ATCC will issue a NOTAM when activating the LSWDCP FLAS.

**16 Actions in the Event of Aircraft System Malfunction or Turbulence Greater than Moderate**

16.1 These actions are intended to mitigate the potential conflict with other aircraft in certain contingency situations and should be read in conjunction with the relevant procedures in para. 14 above. (Note that paras. 16.2 - 16.8 contain material suitable for training programmes.)

16.2 Scenario 1: The pilot is:

a) unsure of the vertical position of the aircraft due to the loss or degradation of all primary altimetry systems, or

b) unsure of the capability to maintain cleared flight level (CFL) due to turbulence or loss of all automatic altitude control systems.

| Pilots Actions | Controllers Actions |
|---|---|
| Maintain CFL while evaluating the situation; | |
| Watch for conflicting traffic both visually and by reference to ACAS, if equipped; | |
| If considered necessary, alert nearby aircraft by<br>1) making maximum use of exterior lights;<br><br>2) broadcasting position, flight level, and intentions on 121.5 MHZ (as a back-up, the VHF inter-pilot air-to-air frequency, 123.45 MHz, may be used). | |
| Notify ATC of the situation and intended course of action. Possible courses of action include:<br><br>1) Maintaining the cleared flight level and route provided that ATC can provide lateral, longitudinal or conventional vertical separation.<br><br>2) Requesting ATC clearance to climb above or descend below RVSM airspace if the aircraft cannot maintain cleared flight level and ATC cannot establish adequate separation from other aircraft.<br><br>3) Executing the contingency manoeuvre listed in para. 14.4.2 above to offset from the assigned track and flight level, if ATC clearance cannot be obtained and the aircraft cannot maintain cleared flight level. | Obtain the pilot's intentions and pass essential traffic information.<br><br>1) If the pilot intends to continue in RVSM airspace, assess traffic situation to determine if the aircraft can be accommodated through the provision of lateral, longitudinal, or conventional vertical separation, and if so, apply the appropriate minimum.<br><br>2) If the pilot requests clearance to exit RVSM airspace, accommodate expeditiously, if possible.<br><br>3) If adequate separation cannot be established and it is not possible to comply with the pilot's request for clearance to exit RVSM airspace, advise the pilot of essential traffic information, notify other aircraft in the vicinity and continue to monitor the situation.<br><br>4) Notify adjoining ATC facilities/ sectors of the situation. |

16.3 Scenario 2: There is a failure or loss of accuracy of one primary altimetry system (e.g., greater than 200 foot difference between primary altimeters)

| Pilots Actions | Controllers Actions |
|---|---|
| Cross check standby altimeter, confirm the accuracy of a primary altimeter system and notify ATC of the loss of redundancy. If unable to confirm primary altimeter system accuracy, follow pilot actions listed in the preceding scenario. | |

16.4 Scenario 3: Loss of redundancy in primary altimetry systems

| Pilots Actions | Controllers Actions |
|---|---|
| If the remaining altimetry system is functioning normally, couple that system to the automatic altitude control system, notify ATC of the loss of redundancy and maintain vigilance of altitude keeping. | Acknowledge the situation and continue to monitor progress. |

16.5 Scenario 4: The primary altimeters diverge by more than 200 ft (60 m)

| Pilots Actions | Controllers Actions |
|---|---|
| Attempt to determine the defective system through established trouble-shooting procedures and/or comparing the primary altimeter displace to the standby altimeter (as corrected by the correction cards, if required). | |
| If the defective system can be determined, couple the functioning altimeter system to the altitude-keeping device. | |
| If the defective system cannot be determined, follow the guidance in Scenario 5 for failure or unreliable altimeter indications of all primary altimeters. | |

16.6 Scenario 5: All automatic altitude control systems fail (e.g., Automatic Altitude Hold).

| Pilots Actions | Controllers Actions |
|---|---|
| **Initially**<br>Maintain cleared flight level and evaluate the aircraft's capability to maintain altitude through manual control. | |
| **Subsequently**<br>Watch for conflicting traffic both visually and by reference to ACAS, if equipped. | |
| If considered necessary, alert nearby aircraft by<br><br>1) Making maximum use of exterior lights;<br><br>2) Broadcasting position, flight level, and intentions on 121.5 MHZ (as a back-up, the VHF inter-pilot air-to-air frequency, 123.45 MHz, may be used.) | |
| Notify ATC of the failure and intended course of action. Possible courses of action include: | Notify adjoining ATC facilities / sectors of the situation |
| 1) maintaining the cleared flight level and route, provided that the aircraft can maintain level. | 1) If the pilot intends to continue in RVSM airspace, assess traffic situation to determine if the aircraft can be accommodated through the provision of lateral, longitudinal, or conventional vertical separation, and if so, apply the appropriate minimum. |
| 2) requesting ATC clearance to climb above or descend below RVSM airspace if the aircraft cannot maintain cleared flight level and ATC cannot establish lateral, longitudinal or conventional vertical separation. | 2) If the pilot requests clearance to exit RVSM airspace, accommodate expeditiously, if possible. |
| 3) executing the contingency manoeuvre listed in para. 14.4.2 above to offset from the assigned track and flight level, if ATC clearance cannot be obtained and the aircraft cannot maintain cleared flight level. | 3) If adequate separation cannot be established and it is not possible to comply with the pilot's request for clearance to exit RVSM airspace, advise the pilot of essential traffic information, notify other aircraft in the vicinity and continue to monitor the situation. |

16.7 Scenario 6: All primary altimetry systems are considered unreliable or fail.

| Pilots Actions | Controllers Actions |
|---|---|
| Maintain cleared flight level by reference to the standby altimeter (if the aircraft is so equipped). | |
| Alert nearby aircraft by<br>1) Making maximum use of exterior lights;<br><br>2) Broadcasting position, flight level, and intentions on 121.5 MHZ (as a back-up, the VHF inter-pilot air-to-air frequency, 123.45 MHz, may be used). | |
| Consider declaring an emergency. Notify ATC of the failure and intended course of action. Possible courses of action include:<br><br>1) Maintaining cleared flight level and route provided that ATC can provide lateral, longitudinal or conventional vertical separation.<br><br>2) Requesting ATC clearance to climb above or descend below RVSM airspace if ATC cannot establish adequate separation from other aircraft.<br><br>3) Executing the contingency manoeuvre listed in para. 14.4.2 above to offset from the assigned track and flight level, if ATC clearance cannot be obtained. | Obtain pilot's intentions, and pass essential traffic information.<br><br>1) If the pilot intends to continue in RVSM airspace, assess traffic situation to determine if the aircraft can be accommodated through the provision of lateral, longitudinal, or conventional vertical separation, and if so, apply the appropriate minimum.<br><br>2) If the pilot requests clearance to exit RVSM airspace, accommodate expeditiously, if possible.<br><br>3) If adequate separation cannot be established and it is not possible to comply with the pilot's request for clearance to exit RVSM airspace, advise the pilot of essential traffic information, notify other aircraft in the vicinity and continue to monitor the situation.<br><br>4) Notify adjoining ATC facilities/ sectors of the situation. |

16.8 Scenario 7: Turbulence (greater than moderate) which the pilot believes will impact the aircraft's capability to maintain flight level.

| Pilots Actions | Controllers Actions |
|---|---|
| Watch for conflicting traffic both visually and by reference to ACAS, if equipped. | |
| If considered necessary, alert nearby aircraft by:<br><br>1) making maximum use of exterior lights;<br><br>2) broadcasting position, flight level, and intentions on 121.5 MHZ (as a back-up, the VHF inter-pilot air-to- air frequency, 123.45 MHz, may be used). | |
| Notify ATC of intended course of action as soon as possible. Possible courses of action include:<br><br>1) Maintaining cleared flight level and route provided ATC can provide lateral, longitudinal or conventional vertical separation.<br><br>2) Requesting flight level change, if necessary.<br><br>3) Executing the contingency manoeuvre listed in para. 14.4.2 to offset from the assigned track and flight level, if ATC clearance cannot be obtained and the aircraft cannot maintain cleared flight level. | 1) Assess traffic situation to determine if the aircraft can be accommodated through the provision of lateral, longitudinal, or conventional vertical separation, and if so, apply the appropriate minimum.<br><br>2) If unable to provide adequate separation, advise the pilot of essential traffic information and request pilot's intentions.<br><br>3) Notify other aircraft in the vicinity and monitor the situation.<br><br>4) Notify adjoining ATC facilities/ sectors of the situation. |

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# ENR 1.9 AIR TRAFFIC FLOW MANAGEMENT (ATFM)

## 1 Introduction

1.1 The objective of Air Traffic Flow Management (ATFM) is to ensure an optimum flow of air traffic to/from Hong Kong International Airport (HKIA), Macao International Airport (MIA) and traffic overflying Hong Kong FIR through all sectors. ATFM supports the ATC objective of safe, orderly and expeditious flow of air traffic by ensuring the amount of traffic handled is compatible with airspace and airport capacity.

1.2 The early anticipation of capacity constraints and dissemination of ATFM measures will greatly assist upstream ACCs and Towers in complying with even stringent flow measures. Tactical ATFM measures to handle adverse weather conditions or major traffic disruptions can facilitate the delay notification process and diversion planning of Airspace Users (AU).

## 2 ATFM Operations within Hong Kong FIR and the Hong Kong Air Traffic Flow Management Unit

2.1 The contents in this chapter provides a general overview of ATFM services in Hong Kong FIR managed by the Hong Kong ATFM Unit (ATFMU). These include ATFM measures defined in ICAO's Manual on Collaborative ATFM (Doc 9971), Ground Delay Programme (GDP), GDP for airport and airspace constraints, coordination during GDP, Hong Kong ATFM Notice, integration of ATFM and A-CDM, Hong Kong ATFM Website and the contact information of Hong Kong ATFMU. The associated ATFM Daily Plan (ADP), NOTAM, AIC, etc. should be referenced for supplementary information.

### 2.2 ATFM Measures as Defined in ICAO's Manual on Collaborative ATFM (Doc 9971)

2.2.1 ATFM serves to balance air traffic demand against ATM resources for both airport and airspace by implementing appropriate ATFM measures. Hong Kong ATFMU may implement the following ATFM measures to resolve a capacity-demand imbalance situation or to facilitate ATC flow restrictions originating from neighbouring ACC, with an aim to enable efficient and effective air traffic management.

a) Airborne Holding - Aircraft required to hold at a waypoint in a pre-defined holding pattern.

b) MINutes-In-Trail (MINIT) - A tactical ATFM measure expressed as the number of minutes between successive aircraft at an airspace boundary point (FIR entry and exit fixes).

c) Miles-In-Trail (MIT) - A tactical ATFM measure expressed as the distance in nautical miles between successive aircraft at an airspace boundary point (FIR entry and exit fixes).

d) Reroute - A route-based ATFM measure with the aim to reroute a number of flights scheduled to arrive at a constrained ATM resource. Re-routings are usually organized in scenarios and can be mandatory or advisory.

e) Arrival/Departure Fix Balancing - Re-routing aircraft to different fixes or holding patterns (also known as 'stack-swap') to redistribute demand.

f) Minimum Departure Interval (MDI) - A time-based departure flow rate to restrict the number of departures at a particular airport.

g) Level Capping - Aircraft are restricted to a specified flight level so as to balance airspace demand against capacity.

h) Ground Stop (GS) - A tactical ATFM measure taken in reaction to an unpredicted adverse situation, where selected aircraft are to remain on the ground of the departure point.

i) Ground Delay Programme (GDP) for Airport Constraint - GDP is the most efficient way in dealing with demand and capacity imbalance. It is an ATFM measure where aircraft are held on the ground in order to manage capacity and demand at a specific aerodrome. In the process, Calculated Take Off Times (CTOT) are assigned. The main factor for determining if a GDP is required is the landing capacity available called the Airport Acceptance Rate (AAR). When the AAR is reduced by inclement weather, large volume of traffic or aircraft incident, the ATFMU will institute a GDP. Specific timing of GDP will be promulgated through the ADP.

j) GDP for Waypoint or Airspace Constraint, also known as Airspace Flow Programme (AFP) - Flights held on the ground to manage demand in a specific volume of airspace or over a waypoint.

### 2.3 GDP CTOT Compliance Window

2.3.1 Hong Kong ATFMU or other ATFMUs in the APAC region will target to distribute CTOT at least 90 minutes before the EOBT of constrained flights.

2.3.2 <u>GDP for Airport Constraint (HKIA & MIA)</u>

CTOT compliance window for airport constraint is **-5/+10 minutes**.

2.3.3 GDP for Waypoint or Airspace Constraint

CTOT compliance window for waypoint or airspace constraint is **-5/+5 minutes**.

2.3.4 Despite the compliance window, ATC will release departures as close as possible to the assigned CTOT for effective flow management. Compliance of operators to assigned CTOTs during the ATFM operation is essential and contributes to the realization of the ATFM plan. Good compliance will also assist in the reduction of the need for tactical airborne delay, thereby promoting safe and expeditious air traffic control.

2.3.5 In order to secure a CTOT during GDP, operators are reminded to file FPLs at least 3 hours before the EOBT and strictly adhere to the procedures as stipulated in ENR 1.10 para 2, “Procedures for the Submission of a Flight Plan and Subsequent Changes for Flights Departing HKIA”. Late submission of FPL may result in additional delay.

2.4 **Coordination during GDP**

2.4.1 Prior coordination between the initiating ATFMU (the unit which initiates the GDP) and the facilitating ATFMU should be directed if the departure cannot comply with the assigned CTOT within the compliance window.

2.4.2 In this regard, the rules of thumb to obtain a revised CTOT are as follows:

a) Before the cabin door of a departure is closed, the AU shall notify Hong Kong ATFMU who will in turn coordinate with the initiating ATFMU for a revised CTOT.

b) After the cabin door is closed:

i) Hong Kong ATC (e.g. Clearance Delivery or Ground Control) shall notify Hong Kong ATFMU who will in turn coordinate with the initiating ATFMU for a revised CTOT.

ii) Pilot-In-Command (PIC) has the responsibility to ensure that a revised CTOT has been coordinated with the initiating ATFMU and to inform Hong Kong ATC if a revised CTOT has not been received.

2.4.3 In the spirit of providing an equitable service, Hong Kong ATFMU will not normally entertain a request for an earlier CTOT, except under exceptional circumstances.

2.5 **Hong Kong ATFM Notice**

2.5.1 In order to timely promulgate essential ATFM related information on special events/activities to local stakeholders, Hong Kong ATFMU issues a special notice via email called Hong Kong ATFM Notice.

2.5.2 The notice provides detailed information of special events, along with relevant ATFM measures to stakeholders for early planning and to enhance situational awareness.

2.5.3 The notice contains a description of the event, details of the ATFM measures to expect and any other relevant information that would impact the operation of the flight, airport operator, ATC operations, ground handling agents, etc.

2.5.4 A sample of a Hong Kong ATFM Notice is shown below for reference:

Hong Kong Civil Aviation Department

**Hong Kong Air Traffic Flow Management Notice – 03/20**

**SPECIAL EVENT – Anchorage FIR "ATC Zero"**

**Description**

This ATFM Notice serves as information on a special ATFM measure implemented by the FAA (Federal Aviation Administration) of the US, "ATC Zero", when a facility is unable to safely provide the published ATC services within the airspace managed by a specific facility i.e. zero services. During the Coronavirus pandemic, FAA has declared ATC Zero in Anchorage FIR on at least five occasions whereby Anchorage ARTCC (Air Route Traffic Control Centre) was closed for deep cleansing following actual or suspected contamination. Although the duration of closure of Anchorage FIR is normally 2 hours, the impact to operators can be several hours of delay because Japan ATMC (Air Traffic Management Center) must manage the air traffic flow through oceanic airspace to Oakland and Anchorage FIRs by means of cross border ATFM, domestic Ground Stop and traffic re-route.

**Details of ATFM Measures**

Upon notification by NOTAM, traffic destined for airports in Anchorage FIR or planning to transit Anchorage FIR will not be accepted. Japan ATMC will then issue a NOTAM with regard to the ATC Zero event to Taipei FIR and Hong Kong FIR in turn, with Fukuoka FIR boundary crossing times for international flights transiting Fukuoka FIR.

The time period of restriction for aircraft entering Fukuoka FIR will include a certain amount of buffer as the flight time may vary from FPL route due to jet stream or flight routing. It is important for ATC/operator to adhere to the restrictions because there are no holding procedures in oceanic airspace and any detour may lead to possible diversion of flights due to fuel consideration.

**Other Information**

A sample NOTAM, which will be issued by Anchorage FIR during initiation of ATC Zero, is attached for your reference.

*#Disclaimer: The source of information is from IATA and Japan ATMC. Details of information are subject to change.*

**Approvals: C(OP)1, C(OP)2**

**Issued By: SOO(SP), PO(3)** **Date: 18 December 2020**

**Remarks:** This ATFM Notice will remain effective until advised.

For enquiries, please contact:
Primary: Hong Kong Flow Manager Phone Line: +852 2910 6859 (Operational) Email: atmdflm@cad.gov.hk
Secondary: Hong Kong ATFMU Phone Line: +852 2910 6275 Email: hkatfmu@cad.gov.hk

Specimen

2.5.5 Local stakeholders who would like to be included in the recipient list should email to Hong Kong ATFMU (hkatfmu@cad.gov.hk).

## 2.6 Integration of ATFM and A-CDM

2.6.1 Airport Collaborative Decision Making (A-CDM) is a concept aimed at improving overall operational efficiency by reducing delays, enhancing predictability of events during the progress of a flight, sharing of timely and accurate operational data and optimizing use of resources.

2.6.2 A-CDM operation has been implemented at HKIA since 1 November 2018. The operation is based on the use of an A-CDM system to keep track of A-CDM milestones and to calculate updated and accurate times for various phases of the flight for use by all stakeholders. Details of the processes and associated procedures can be found at the website https://extranet.hongkongairport.com by selecting "PROCEDURE MANUAL" then "A-CDM Operations Guidelines".

2.6.3 ATFM and A-CDM are collaborative processes aimed at improving efficiency and optimizing resources in the airspace and the airport. The integration and exchange of operational information between the two processes with collaborative procedures is essential in maintaining an accurate demand picture from ATC's perspective and to enhance situational awareness for effective decision making and traffic management by all stakeholders.

2.6.4 As part of the A-CDM milestone approach, it is essential for AU to maintain an updated Target Off Block Time (TOBT) as per the A-CDM Operations Guidelines in order to generate a respective Target Start-up Approval Time (TSAT) for AU's reference, and for ATC to calculate and issue an accurate CTOT to regulated flights.

## 2.7 Hong Kong ATFM Website

2.7.1 The Hong Kong ATFM Website (https://www.atfmc.gov.hk/) which has been in operation from June 2020, aims to provide stakeholders the most updated ATFM information affecting flights operating to/from airports within the Hong Kong ATFM Node and transiting Hong Kong FIR. CTOT information distributed by emails and Slot Allocation Messages (SAM) via AFTN for HKIA & MIA under the Hong Kong Node would be posted to the website to complement coverage and to improve data accessibility.

2.7.2 AU can contact Hong Kong ATFMU (hkatfmu@cad.gov.hk) for creating an account to access specific functions within the Hong Kong ATFM Website. After creating an account, AUs can reference information of the flight, check if there are any updates on the airport status, waypoint status and view updated ADPs in the APAC region.

2.7.3 Hong Kong ATFMU will endeavour to keep the contents of the website updated. However, due to rapidly changing circumstances and events, information may not be always updated in a timely manner. Website users are advised to be cautious when using the information and to cross check with supplementary information from the associated ADP, NOTAM, AIC, emails, etc. Hong Kong ATFMU takes no responsibility for the accuracy of information received from external parties.

2.7.4 A link to a 'User Guide' is available in the website for reference.

2.8 **Requests for Exemption from ATFM Measures**

2.8.1 A flight requesting exemption from ATFM measures for reasons other than those that shall be given automatic exemption i.e. SAR, HEAD, STATE, HUM, HOSP, MEDEVAC and aircraft experiencing emergency situation should obtain prior approval for exemption from the appropriate ATS authority(s) and indicate in the flight plan the reason for special handling in the ICAO designator as 'STS/ATFMX' in item 18 (For more details on flight planning requirement, please refer to ENR 1.10.)

Note: The presence of one single ICAO designator for automatic exemption in the flight plan is sufficient. It is not required to include ATFMX after the single designator e.g. STS/SAR shall be filed, not STS/SAR ATFMX.

2.8.2 A remark should be included in the designator RMK/ for which FIR(s) the ATFMX exemption applies.

2.8.3 If authorization from the ATS authority(s) has not been obtained, ATFMX cannot be used. Instead, a remark should be included in the designator RMK/.

2.9 **Hong Kong ATFMU Contact Information**

2.9.1 ATFM of Hong Kong FIR is provided by ATFMU of Hong Kong ATCC.

2.9.2 ATFM service is provided H24. The contact details of Hong Kong ATFMU are as follows:

| Unit Name | Telephone | Fax | AFTN |
|---|---|---|---|
| **Hong Kong ATFMU** | Primary point of contact:<br>+852 2910 6859 Duty Flow Manager<br>Secondary point of contact:<br>+852 2910 6275 Hong Kong ATFMU | +852 2910 1177 | VHHKZDZX |
| e-mail | hkatfmu@cad.gov.hk | | |
| Website | https://www.atfmc.gov.hk | | |

**3 Asia Pacific Regional ATFM**

3.1 **Asia/Pacific Cross Border Multi-Nodal ATFM Collaboration (AMNAC)**

3.1.1 Hong Kong ATFMU is a member of a research collaboration group in the APAC region, AMNAC. The research focuses on the operational concept for cross-border ATFM as a means to balance demand and capacity in order to allow a sustainable growth in traffic demand in the near future.

3.1.2 Following the development of processes and procedures to enable cross-border ATFM and several rounds of testing and validation through the conduct of operational trials, a regional framework for collaborative ATFM and common operating procedures has been adopted and implemented among the states.

3.1.3 Hong Kong ATFMU is a Level 3 ATFM Node, meaning it has the capability to generate, deliver and receive CTOTs, and it is obligated to comply with CTOTs received from other Level 3 ATFM nodes in the region.

3.1.4 More information about AMNAC is available at the following website https://www.atfmc.gov.hk/info.html.

3.2 **Bay of Bengal Cooperative ATFM (BOBCAT)**

3.2.1 The States of the ICAO Asia Pacific Region within the Bay of Bengal, South Asia and Pakistan airspace have implemented an automated ATFM service under the auspices of the ICAO Bay of Bengal ATS Coordination Group - ATFM Task Force.

3.2.2 **Provision of ATFM Services for Flights Transiting Kabul FIR (BOBCAT ATFM)**

3.2.2.1 Bangkok ATFMU provides ATFM service for westbound flights intending to transit Kabul FIR between 2000 UTC and 2359 UTC daily. The service provided includes calculation, promulgation, and management of mandatory Calculated Take-Off Time (CTOT) and flight level, ATS route, and Calculated Time-Over (CTO) at entry waypoint for entry into Kabul FIR for each affected flight.

3.2.2.2 Hong Kong ATC retains responsibility for the tactical management of flights that are subjected to this ATFM measure and facilitates the compliance as much as practicable. In discharging tactical responsibilities, non-compliant flights may be delayed by using delayed pushback and startup clearances.

3.2.3 **Flights Exempted from BOBCAT ATFM**

3.2.3.1 The following flights are exempted from the BOBCAT ATFM procedures:

a) flights experiencing an emergency, including aircraft subject to unlawful interference;

b) flights on search and rescue (SAR) or rescue and firefighting (RFF) missions;

c) urgent medical evacuation flights specifically declared by medical authorities where flight delays would put the life of patients at risk;

d) flights with “Head of State” status; or,

e) other flights specifically identified by State authorities.

*Note: After medical flights have completed their mission; they should be subject to ATFM measures. Scheduled patient transfer flights are, by nature, non-urgent and should not be given priority under normal operational situation.*

3.2.3.2 Flights exempted from ATFM procedures shall indicate the exemption in their flight plan as follows, (STS/ATFMX in item 18).

3.2.4 **BOBCAT ATFM Operating Procedures**

3.2.4.1 All affected flights are required to submit slot requests to the BOBCAT system by logging into https://www.bobcat.aero between 0000 UTC and 1159 UTC on the day of flight and completing the electronic templates provided.

3.2.4.2 Affected operators who do not have dedicated BOBCAT username / password access should complete the application form provided and email the form to Bangkok ATFMU as soon as possible.

3.2.4.3 SLOT ALLOCATION PROCESS

3.2.4.3.1 The slot allocation is divided into 3 phases, namely: the slot request submission, initial slot allocation, and slot distribution to aircraft operators and ANSPs. Details can be found at https://www.bobcat.aero/.

3.2.5 **Aircraft Operator / Pilot-in-Command and ANSP Responsibilities**

*Aircraft Operator / Pilot-in-Command*

3.2.5.1 In accordance with ICAO PANS-ATM provisions, it is the responsibility of the Pilot-in-Command (PIC) and the airspace user to ensure that the aircraft is ready to taxi in time to meet any required departure time. PIC shall be kept informed by their operators of the CTOT, CTO at Kabul FIR entry waypoint, and flight parameters (route, flight level) allocated by BOBCAT.

3.2.5.2 The PIC, in collaboration with ATC, shall arrange take-off as close as possible to CTOT in order to meet the allocated CTO at Kabul FIR entry fix.

3.2.5.3 For flights with CTOTs from BOBCAT operating out of HKIA (an A-CDM airport), the CTOT is integrated into the A-CDM process. PIC are advised to comply with the HKIA A-CDM procedure.

Air Navigation Service Providers (ANSPs)

3.2.5.4 In accordance with ICAO PANS-ATM provisions, flights with an ATFM slot allocation should be given priority for take-off to facilitate compliance with CTOT.

3.2.5.5 CTOT shall be included as part of the initial ATC clearance. In collaboration with the PIC, Aerodrome Control shall ensure that every opportunity and assistance is granted to a flight to meet CTOT and allocated CTO at Kabul FIR entry waypoint.

3.2.6 **Coordination Procedure between Aircraft Operator / Pilot-in-Command, ANSPs, and Bangkok ATFMU**

3.2.6.1 Bangkok ATFMU (VTBBZDZX) shall be included in the list of AFTN addressees for NOTAMs regarding any planned activities that may affect slot availability (e.g. reservation of airspace / closure of airspace, non-availability of routes, etc).

3.2.6.2 Bangkok ATFMU (VTBBZDZX) shall be included in the list of AFTN addressees for ATS messages (e.g. FPL, DEP, DLA, CHG, CNL) relating to flights subject to ATFM procedures.

3.2.6.3 Prior to departure and before obtaining an ATC Clearance, in circumstances where it becomes obvious that the allocated Kabul FIR slot parameters will not be met, a new slot allocation should be obtained as soon as possible. To avoid frequency congestion, this should be obtained primarily via aircraft operators / flight dispatchers; otherwise Ground Control or Clearance Delivery may be asked for assistance in the coordination with Bangkok ATFMU as an alternative. Early advice that the allocated Kabul FIR slot parameters will be missed also enables the slots so vacated to be efficiently reassigned to other flights.

3.2.6.4 The PIC shall include the CTOT in the initial ATC clearance request.

3.2.6.5 A missed slot results in considerable increase in coordination workload for ATC and PIC and should be avoided. To minimize coordination workload in obtaining a revised slot allocation, if the flight is still at the gate and an ATC Clearance has been obtained, PIC shall advise Ground Control of the missed slot and obtains new CTOT as specified in paragraph 3.2.6.3. If it becomes essential, the ATC Clearance may be cancelled.

3.2.6.6 Prior to departure and after the aircraft has left the gate, in the event that the aircraft is unable to meet the allocated Kabul FIR slot parameters, when requested by the PIC, Aerodrome Control shall assist the PIC in coordination with Bangkok ACC and ATFMU for a revised slot allocation.

3.2.6.7 PIC shall adjust cruise flight to comply with slot parameters at the Kabul FIR entry waypoint, requesting appropriate ATC clearances including speed variations in accordance with published AIP requirements.

3.2.7 **BOBCAT ATFM Operations for Departing Aircraft from HKIA**

3.2.7.1 To increase the effectiveness for departing aircraft from HKIA during the BOBCAT ATFM period and to ensure priority departure in accordance with CTOT, the following procedures are required for all BOBCAT ATFM-related flights:

a) Before obtaining an ATC Clearance, ensure the flight is ready at least 25 minutes prior to the allocated CTOT (the additional 5-minute buffer to CTOT should not be taken into account under this provision);

b) Notwithstanding the above; there may be some occasions where, due to the location of the aircraft's parking bay, the aircraft could take less time to taxi than the Standard Taxi Time (STT) used by the BOBCAT system. In these cases, ATC may delay pushback and start-up procedures in order for the aircraft to have a smooth transition to the holding point.

3.2.8 **BOBCAT ATFM Users Handbook**

3.2.8.1 Supporting documentation, including detailed information in respect of the BOBCAT ATFM operations described above and other pertinent information has been included in the Bay of Bengal and South Asia ATFM Handbook (the "ATFM Users Handbook"), available at https://www.bobcat.aero.

3.2.8.2 ANSPs and aircraft operators shall ensure that they are conversant with and able to apply the relevant procedures described in the ATFM Users Handbook.

3.2.9 **Bangkok ATFMU Contact Information**

3.2.9.1 Bangkok ATFMU may be contacted via the following:

| | | |
|---|---|---|
| Unit Name | : | Bangkok ATFMU |
| Telephone | : | +66 2287 8024 |
| Contingency Mobile | : | +66 81 829 5256 |
| E-Mail | : | atfmu@bobcat.aero |
| AFS | : | VTBBZDZX |
| Website | : | https://www.bobcat.aero |

# ENR 1.10 FLIGHT PLANNING

## 1 Requirement for the Submission of a Flight Plan

1.1 All aircraft intending to conduct an IFR flight within the Hong Kong FIR shall file a flight plan, except that authorised operators may submit a CAD approved flight notification form for local VFR flights.

## 2 Procedures for the Submission of a Flight Plan and Subsequent Changes for Flights Departing HKIA

2.1 There are three means of filing flight plans for flights departing HKIA

a) by Private Communication Network;

b) by AFTN (for scheduled flight operations only);

c) by Flight Plan Form.

2.2 FILING OF FLIGHT PLAN BY PRIVATE COMMUNICATION NETWORK

2.2.1 Airline operators can use the Private Communication Network service to submit flight plans to the AIMC.

2.2.2 Private Communication Network is the most effective means above all and is widely in use.

2.2.3 A customized flight plan form is provided by the system on-line for users to complete and submit to the AIMC.

2.2.4 The flight plan form mimics the present ICAO flight plan format with the following customization:

a) all flight plans are addressed to VHHHZPZA which is the default address on the flight plan form;

b) for the purpose of flight plan message distribution by VHHHZPZA, an “AD/” field is provided on the flight plan form for airline operators to insert up to a maximum of 40 individual or collective AFTN addresses of the flight plan recipients. Please note that VHHHZPZA is not permissible under the “AD/” field; and

c) flight plan Field 19 can be activated for the input of supplementary information but Field 19 will not be transmitted as part of the normal flight plan message. The supplementary information stored can be transmitted as a Supplementary Flight Plan (SPL) upon request from ATC units.

2.2.5 Prior to the submission of flight plan, the system will perform validity checks on the flight plan fields as follows:

a) syntactic check for fields allowing alpha characters only or digits only;

b) syntactic check on time format;

c) semantic check on aircraft type and location indicators for destination/alternate aerodrome;

d) syntactic check on route as required by ICAO Doc 4444, Appendix 2 but no semantic check is provided;

e) checking of AFTN addresses in the “AD/” field against the global address book; and

f) checking of all entries in Field 18 and sorting them according to the sequence prescribed in ICAO Doc 4444, Appendix 2.

2.2.6 For details of Private Communication Network service, refer to GEN 3.4 para 3.6.

2.3 FILING OF FLIGHT PLAN BY AFTN

2.3.1 This facility is only applicable to scheduled flight operations.

a) Flight plans are to be addressed to VHHHZPZA;

b) Addressees of flight plan recipients are to be inserted in the “AD” field positioned at the beginning of the flight plan message, before the open bracket symbol; each line of “AD” field shall be prefixed by the characters “AD”. “AD” and each addressee shall be separated by a space; and a maximum of 7 addressees may be inserted to each line of “AD” field.

c) Supplementary Information in Field Type 19 is not required but it should be made readily available at the airline operator’s office / handling agent in Hong Kong and provide to ATC units when requested.

2.3.2 Filing of flight plan from an overseas AFTN address is not accepted unless the address has been registered with the AIMC. Registration requests should be sent to the Briefing Officer of the AIMC by email at bo@cad.gov.hk. The registration shall not be considered successful until a notice of confirmation is received from the AIMC.

2.3.3 In addition to the requirements stated in para 2.3.1 above, airline operators, filing a flight plan from an overseas AFTN address, shall adhere to the following submission requirements:

a) ensure the overseas AFTN address used for sending FPL is the same as the one registered with the AIMC. Prior approval shall be sought from the Briefing Officer of the AIMC for any change in the registered overseas AFTN address;

b) should the inclusion of the Hong Kong office/handling agent address is required, insert the addressee in the AD field as per para 2.3.1 b) above;

c) ensure the Hong Kong office/handling agent can be contacted by the AIMC in case of queries.

2.4 FILING OF FLIGHT PLAN BY FLIGHT PLAN FORM

2.4.1 The flight plan shall be completed on Flight Plan Form DCA6a. Flight plan forms other than DCA6a will not be accepted.

2.4.2 Flight Plan Form DCA6a is downloadable from the following CAD website:
http://www.cad.gov.hk/application/DCA6a.pdf

2.4.3 The addressees of all recipients shall be inserted into the addressee boxes provided in the beginning of the flight plan form.

2.4.4 To ensure legibility, flight plan data shall be printed onto the flight plan form. Only fair copies of flight plan will be accepted. A flight plan form with manuscript entries or amendments will be rejected and not processed.

2.4.5 Completed Flight Plan Form DCA6a shall be submitted to AIMC by the following means:

a) by hand to the staff in the AIMC; or

b) by facsimile to the AIMC, fax number 2910 1180.

2.4.6 The ultimate responsibility for compiling an accurate flight plan rests with pilots and/or airline operators. In order to avoid undue delay in flight plan processing, operators are advised to refer to the guidance notes appended to the Flight Plan Form DCA6a and other pertinent documents to ensure the information entered into the form is compliant with all relevant requirements.

2.5 CHANGES TO THE FILED FLIGHT PLAN

2.5.1 Airline operators, regardless of their means of filing flight plans, shall inform the AIMC by telephone of any subsequent changes to a filed Flight Plan (FPL) so that associated ATS message such as Delay (DLA), Modification (CHG) and Flight Plan Cancellation (CNL) can be sent by AIMC.

2.5.2 The AIMC will contact the airline operators' Hong Kong office/handling agent for any verification/changes required, for example, rectification of routes and flight levels. Where appropriate, associated ATS message will be sent by AIMC after receiving confirmation from airline operators.

2.5.3 In order to avoid confusion, airline operators shall not send DLA, CHG or CNL on their own.

**3 Procedures for the Submission of a Flight Plan and Subsequent Changes for Flights Inbound to HKIA or Transiting Hong Kong FIR**

3.1 For flights inbound to HKIA or transiting Hong Kong FIR, airline operators shall file flight plans and subsequent changes by AFTN to VHHKZQZX at the aerodrome of departure or with the telecommunications service enroute.

**4 Time of Submission**

4.1 Airline operators can file a FPL up to 5 days (120 hours) prior to the EOBT.

4.2 Except where necessary for operational or technical reasons, any aircraft operating to or from Hong Kong or transiting Hong Kong FIR shall submit a flight plan at least 3 hours prior to the estimated off-block time (EOBT).

4.3 In any case, flight plan submitted with less than 3 hours prior to the EOBT may experience further ATFM delay when an ATFM measure is in force.

4.4 In the event of a delay of 15 minutes in excess of the EOBT last transmitted, the flight plan should be amended with the transmission of a Delay (DLA) message, or a new flight plan submitted and the old flight plan cancelled, whichever is applicable. For flights departing from Hong Kong, airline operators shall inform AIMC any delay of the EOBT in a filed FPL in accordance with the procedures as described in para 2.5.

**5 Contents and Form of Flight Plan**

5.1 For airline operators operating non-scheduled flights or general aviation flights at HKIA, aircraft identification used in Item 7 of the flight plan and flight number/call sign used for flight application via Electronic Filing System in Hong Kong CAD website <http://www.cad.gov.hk> shall be identical.

5.2 Because the Flight Data Processing System (FDPS) in Hong Kong is fully automated the flight plan data must be submitted in accordance with the standard format designed for the purpose. All operators are required to strictly comply with the route syntax specified in paragraphs 6 to 9. Any discrepancy made on FPL will be rejected by the system which can cause delay to the flight.

5.3 In addition to the flight plan requirements detailed in this section, operators shall refer to ENR 1.8 para 8 and strictly adhere to the flight levels prescribed in the Flight Level Assignment Scheme.

5.4 Any flight inbound to HKIA or transiting Hong Kong FIR, must insert in Item 18 of the flight plan form:

a) the Date of Flight field in the form of DOF/yymmdd;

b) the national registration letters/numbers of the aircraft if different from the aircraft identification in Item 7;

c) the accumulated estimated elapsed time to the Hong Kong FIR in the form of EET/VHHK and without a space, a four figure group indicating hours and minutes.

5.5 Only specific indicators shall be used in Item 18 (Other Information) and adherence to the specific sequence of the indicators is mandatory.

5.6 Free text is not allowed for 'STS/' of Item 18, only specific indicators as prescribed in ICAO Doc 4444, Appendix 2 shall be used.

**6 Flights To or From Hong Kong International Airport**

6.1 Arriving at HKIA [1]

| | **Inbound Route** | **Flight planned route within the Hong Kong FIR to be filled in Item 15 of the standard ICAO Flight Plan** |
|---|---|---|
| (1) | A470 | DOTMI V512 ABBEY [2] |
| (2) | M503 [8 and 10] | LELIM V591 ABBEY [2] |
| (3) | A1/G581 | ELATO V522 ABBEY [2] |
| (4) | M501/A461 | NOMAN V533 BETTY [3] |
| (5) | A583 | SABNO V542 BETTY [4] |
| (6) | M772 | ASOBA M772 DULOP Q1 CARSO V551 BETTY [4] |
| (7) | M771 | DOSUT M771 DULOP Q1 CARSO V551 BETTY [4] |
| (8) | A1 | IKELA P901 IDOSI V561 CANTO ***or*** IKELA A1 IDOSI V561 CANTO [5] |
| (9) | R339/A202 | SIKOU V571 CANTO [5] |
| (10) | R473 | SIERA |
| (11) | --- | ALLEY DCT CANTO [11] |
| (12) | --- | FOXTROT DCT CANTO [12] |

6.2 Departing from HKIA [6]

| | **Flight planned route within the Hong Kong FIR to be filled in Item 15 of the standard ICAO Flight Plan** | **Connecting Route** |
|---|---|---|
| (1) | BEKOL | A461 |
| (2) | LEKEN V601 DOTMI | A470 |
| (3) | LEKEN V611 LELIM | M503 [9 and 10] |
| (4) | DALOL V621 ELATO | A1/G581 |
| (5) | DALOL V631 ENVAR | M750 |
| (6) | DALOL V642 NOMAN | A461/M501 |
| (7) | DALOL V642 SKATE DCT KAPLI | G86 |
| (8) | DALOL V652 SABNO | A583 |
| (9) | PECAN V10 SIKOU | R339/A202 |

| | | |
|---|---|---|
| (10) | PECAN V11 IDOSI A1 IKELA [7] ***or***<br>PECAN V11 IDOSI P901 IKELA [7] | A1 |
| (11) | PECAN V12 EPDOS L642 | L642 |
| (12) | PECAN DCT CHALI [13] | --- |
| (13) | PECAN DCT FOXTROT [14] | --- |

1 To optimise the flight plan processing work flow, operators are not to include Standard Instrument Arrival (STAR) Procedures in flight plans and subsequent AFTN messages for all operations into HKIA.
2 Cross ENPET at FL260. Do not descend without ATC clearance.
3 Cross SONNY at FL260. Do not descend without ATC clearance.
4 Cross CYBER at FL260. Do not descend without ATC clearance.
5 Cross MAPLE at FL260. Do not descend without ATC clearance.
6 To optimize the flight plan processing work flow, operators are not to include Standard Instrument Departure (SID) Procedures in flight plans and subsequent AFTN messages for all operations from HKIA. Operators departing from HKIA shall flight plan via the relevant Terminal Transition Route until exiting Hong Kong FIR/ TMA to join the appropriate ATS route.
7 Route via P901 at FL290 or above, or A1 at FL280 or below. To operate at FL290 or above aircraft must be RNP 10 compliant.
8 Flights departing from Shanghai Pudong, Qingdao, Yantai or Dalian to HKIA shall route via M503.
9 For destinations Shanghai Pudong, Qingdao, Yantai or Dalian only.
10 In the event that M503 is not available, e.g. approval could not be obtained in time from relevant authority, operator should file flight plan via ATS Route A470.
11 For flights departing from Macao International Airport.
12 For flights departing from Zhuhai Jinwan Airport. FOXTROT coordinates: 214536.00N 1132200.00E.
13 For flights landing in Macao International Airport.
14 For flights landing in Zhuhai Jinwan Airport. FOXTROT coordinates: 214536.00N 1132200.00E.

## 7 Flights To or From Macao International Airport Which Transit Hong Kong FIR

7.1 Arrival at Macao International Airport transiting Hong Kong FIR [1]

| | Inbound Route | Flight planned route within the Hong Kong FIR to be filled in Item 15 of the standard ICAO Flight Plan |
|---|---|---|
| (1) | A470 | DOTMI DCT SAMMI J101 SMT [7] |
| (2) | A1/G581 | ELATO J101 SMT [7] |
| (3) | M501/A461 | Not available [2] |
| (4) | A583 | SABNO DCT TOFEE DCT SUKER DCT ALDOM J103 ROBIN DCT CHALI [3 and 8] |
| (5) | M772 | ASOBA M772 DULOP M771 DUMOL J103 ROBIN DCT CHALI [8] |
| (6) | M771 | DOSUT M771 DUMOL J103 ROBIN DCT CHALI [8] |
| (7) | A1 | IKELA P901 IDOSI DCT DASON J104 CHALI [4 and 9] ***or***<br>IKELA A1 IDOSI DCT DASON J104 CHALI [4 and 9] |
| (8) | R339/A202 | SIKOU J104 CHALI [9] |

7.2 Departure from Macao International Airport transiting Hong Kong FIR [5]

| | Flight planned route within the Hong Kong FIR to be filled in Item 15 of the standard ICAO Flight Plan | Connecting Route |
|---|---|---|
| (1) | NUDPI V601 DOTMI | A470 |
| (2) | NUDPI V611 LELIM | M503 [6] |
| (3) | CONGA V621 ELATO | A1/G581 |
| (4) | CONGA V631 ENVAR | M750 |
| (5) | SKATE V642 NOMAN | A461/M501 |

| | | |
|---|---|---|
| (6) | SKATE V652 SABNO | A583 |
| (7) | ALLEY V32 EPDOS L642 | L642 |
| (8) | ALLEY V31 IDOSI P901 IKELA [4] ***or***<br>ALLEY V31 IDOSI A1 IKELA [4] | A1 |
| (9) | ALLEY V10 SIKOU | R339/A202 |
| (10) | SKATE DCT KAPLI | G86 |

1 Operators may include the relevant Standard Instrument Arrival (STAR) Procedures (e.g. SMT5B, CHALI4A etc.) into the flight plan route if considered necessary.

2 Flights from Manila FIR to Macao Airport should route via A583. In the event of bad weather, flights from Ho Chi Minh FIR that require to transit Manila FIR via diversionary route to Hong Kong FIR, should flight plan within Hong Kong FIR via A461 NOMAN DCT ALDOM J103 or expect radar vectors to join J103 by Hong Kong Radar at or below FL300.

3 Flights to Macao International Airport transiting Hong Kong FIR via A583 SABNO should plan to cross SABNO at FL340 or below.

4 Route via P901 at FL290 or above, or A1 at FL280 or below. To operate at FL290 or above aircraft must be RNP10 compliant.

5 Operators departing from Macao International Airport transiting Hong Kong FIR shall flight plan via the relevant Terminal Transition Route until exiting the Hong Kong FIR/TMA to join the appropriate ATS/PBN route.

6 For destinations Shanghai Pudong, Qingdao, Yantai or Dalian only. In the event that M503 is not available, e.g. approval could not be obtained in time from relevant authority, operator should file flight plan via ATS route A470.

7 Cross NEDLE at FL230. Do not descend without ATC clearance.

8 Cross ISBAN at FL200 and CHALI at FL110. Do not descend without ATC clearance.

9 Cross COTON at FL120 and CHALI at FL110. Do not descend without ATC clearance.

## 8 Flights To or From Guangzhou (ZGGG) or Shenzhen (ZGSZ) Airports Which Transit Hong Kong FIR

8.1 Arrivals into Guangzhou or Shenzhen Airports transiting Hong Kong FIR

| | Entry Route | Flight planned route within the Hong Kong FIR to be filled in Item 15 of the standard ICAO Flight Plan | Destination Airport |
|---|---|---|---|
| (1) | A1/G581 | ELATO J101 SMT DCT TAMOT | ZGGG |
| (2) | M501/A461 | Not Available [1] | |
| (3) | A583 | SABNO DCT TOFEE DCT SUKER DCT ALDOM J103 SAPAX DCT BIGEX B330 TAMOT [2] | |
| (4) | M772 | ASOBA M772 DULOP M771 DUMOL J103 SAPAX DCT BIGEX B330 TAMOT [2] | |
| (5) | M771 | DOSUT M771 DUMOL J103 SAPAX DCT BIGEX B330 TAMOT [2] | |
| (6) | A1 | IKELA DCT MORTU DCT ALDOM J103 SAPAX DCT BIGEX B330 TAMOT [2] | |
| (7) | A202/R339 | SIKOU J104 CHALI DCT SAPAX DCT BIGEX B330 TAMOT [4] | |

| | | | |
|---|---|---|---|
| (8) | A1/G581 | Not Available [5] | ZGSZ |
| (9) | M501/A461 | Not Available [1] | |
| (10) | A583 | SABNO DCT TOFEE DCT SUKER DCT ALDOM J103 ROBIN DCT ALLEY DCT GOBBI DCT LANDA [6 and 7] | |
| (11) | M772 | ASOBA M772 DULOP M771 DUMOL J103 ROBIN DCT ALLEY DCT GOBBI DCT LANDA [7] | |
| (12) | M771 | DOSUT M771 DUMOL J103 ROBIN DCT ALLEY DCT GOBBI DCT LANDA [7] | |
| (13) | A1 | IKELA P901 IDOSI DCT DASON J104 COTON DCT LANDA [3 and 8] ***or*** IKELA A1 IDOSI DCT DASON J104 COTON DCT LANDA [3 and 8] | |
| (14) | A202/R339 | SIKOU J104 COTON DCT LANDA [8] | |

1 Flights from Manila FIR to Guangzhou or Shenzhen Airport should route via A583. In the event of bad weather, flights from Ho Chi Minh FIR that require to transit Manila FIR via diversionary route to Hong Kong FIR, should flight plan within Hong Kong FIR via A461 NOMAN DCT ALDOM J103 or expect radar vectors to join J103 by Hong Kong Radar at or below FL300.

2 Flights to Guangzhou Airport transiting Hong Kong FIR via J103 should cross ISBAN at FL260. Do not descend without ATC clearance.

3 Route via P901 at FL290 or above, or A1 at FL280 or below. To operate at FL290 or above aircraft must be RNP10 compliant.

4 Flights to Guangzhou Airport transiting Hong Kong FIR via J104 should cross CHALI at FL260. Do not descend without ATC clearance.

5 Flights from Taibei FIR to Shenzhen Airport should route via R200. Refer to Taibei and/or China AIP.

6 Flights to Shenzhen Airport transiting Hong Kong FIR via A583 SABNO should cross SABNO at FL340 or below.

7 Flights to Shenzhen Airport transiting Hong Kong FIR via J103 should cross ISBAN at FL200 and GOBBI at FL110. Do not descend without ATC clearance.

8 Flights to Shenzhen Airport transiting Hong Kong FIR via J104 should cross COTON at FL120. Do not descend without ATC clearance.

8.2 Departures from Guangzhou or Shenzhen Airports transiting Hong Kong FIR

| | **Depart from** | **Flight planned route within the Hong Kong FIR to be filled in Item 15 of the standard ICAO Flight Plan** | **Connecting Route** |
|---|---|---|---|
| (1) | ZGGG | SIERA DCT MULET DCT SKATE DCT CONGA V621 ELATO [1] | A1/G581 |
| (2) | | SIERA DCT MULET DCT SKATE DCT CONGA V631 ENVAR [2] | M750 |
| (3) | | SIERA DCT MULET DCT SKATE V642 NOMAN | A461/M501 |
| (4) | | SIERA DCT MULET DCT SKATE V652 SABNO | A583 |
| (5) | | SIERA DCT MULET DCT ALLEY V32 EPDOS L642 | L642 |
| (6) | | SIERA DCT MULET DCT ALLEY V31 IDOSI P901 IKELA [3] *or* SIERA DCT MULET DCT ALLEY V31 IDOSI A1 IKELA [3] | A1 |
| (7) | | SIERA DCT MULET DCT ALLEY V10 SIKOU | R339/A202 |

| | | | |
|---|---|---|---|
| (8) | ZGSZ | LUKBU DCT SUDVA DCT DALOL V642 NOMAN [4] | A461/M501 |
| (9) | | LUKBU DCT SUDVA DCT DALOL V652 SABNO [4] | A583 |
| (10) | | LUKBU DCT SUDVA DCT SOSLU DCT PECAN V10 ALLEY V32 EPDOS L642 [4] | L642 |
| (11) | | LUKBU DCT SUDVA DCT SOSLU DCT PECAN V10 ALLEY V31 IDOSI P901 IKELA [3 and 4] *or*<br>LUKBU DCT SUDVA DCT SOSLU DCT PECAN V10 ALLEY V31 IDOSI A1 IKELA [3 and 4] | A1 |
| (12) | | SIERA DCT ROCCA DCT SKATE DCT CONGA V621 ELATO [1] | A1/G581 |
| (13) | | SIERA DCT ROCCA DCT SKATE DCT CONGA V631 ENVAR [2] | M750 |
| (14) | | SIERA DCT ROCCA DCT SKATE V642 NOMAN | A461/M501 |
| (15) | | SIERA DCT ROCCA DCT SKATE V652 SABNO | A583 |
| (16) | | SIERA DCT ROCCA DCT ALLEY V32 EPDOS L642 | L642 |
| (17) | | SIERA DCT ROCCA DCT ALLEY V31 IDOSI P901 IKELA [3] *or*<br>SIERA DCT ROCCA DCT ALLEY V31 IDOSI A1 IKELA [3] | A1 |
| (18) | | SIERA DCT ROCCA DCT ALLEY V10 SIKOU | R339/A202 |

1 Normally for non-RNAV 5 compliant or non-RVSM approved aircraft.

2 To operate between FL290 and FL410 aircraft must be RNAV 5 compliant and RVSM approved.

3 Route via P901 at FL290 or above, or A1 at FL280 or below. To operate at FL290 or above aircraft must be RNP10 compliant.

4 Traffic routeing via LUKBU may be subject to delay due to congestion in the vicinity of Hong Kong and Macao airports.

## 9 Other Flights Transiting the Hong Kong FIR

9.1 Flights transiting the Hong Kong FIR not specified in previous paragraphs

| | Entry Route | Flight planned route within the Hong Kong FIR/TMA to be filled in Item 15 of the standard ICAO Flight Plan | Connecting Route |
|---|---|---|---|
| (1) | A470 | DOTMI DCT SOUSA DCT CONGA V621 ELATO [1] | A1/G581 |
| (2) | | DOTMI DCT SOUSA DCT CONGA V631 ENVAR [2] | M750 |
| (3) | | DOTMI DCT ENROM DCT NOMAN | A461/M501 |
| (4) | | DOTMI DCT ENROM DCT NOPER DCT UNTUL DCT SABNO | A583 |
| (5) | | DOTMI DCT ENROM DCT RUSBI DCT SULUX DCT EPKAL | L642 |
| (6) | | DOTMI DCT ENROM DCT RUSBI DCT SULUX DCT IGLEG DCT IKELA | A1 |
| (7) | | DOTMI DCT ENROM DCT ALLEY V10 SIKOU [6] | A202/R339 |
| (8) | A1/G581 | ELATO DCT MAGOG DCT DOTMI | A470 |
| (9) | | ELATO J101 PONTI DCT BEKOL | A461 |
| (10) | G86 | KAPLI DCT MADRU DCT SULUX DCT IGLEG DCT IKELA | A1 |
| (11) | | KAPLI DCT ALLEY V10 SIKOU [6] | A202/R339 |
| (12) | A461 | NOMAN DCT SANKU DCT BIMIX DCT DOTMI | A470 |
| (13) | | Not Available | A202/R339 |
| (14) | A583 | SABNO DCT LEGOD DCT BEKOL | A461 |
| (15) | | SABNO DCT SIKOU [6] | A202/R339 |
| (16) | M772 | ASOBA M772 DULOP Q1 CARSO DCT NOBAD DCT SANKU DCT BIMIX DCT DOTMI | A470 |
| (17) | | ASOBA M772 DULOP M771 DUMOL J103 BEKOL | A461 |
| (18) | M771 | DOSUT M771 DULOP Q1 CARSO DCT NOBAD DCT SANKU DCT BIMIX DCT DOTMI | A470 |
| (19) | | DOSUT M771 DUMOL DCT DAGBU DCT SIKOU [6] | A202/R339 |
| (20) | | DOSUT M771 DUMOL J103 BEKOL | A461 |
| (21) | A1 | IKELA DCT MORTU DCT NOBAD DCT SANKU DCT BIMIX DCT DOTMI | A470 |
| (22) | | IKELA DCT MORTU DCT NOBAD DCT ELATO [1 and 3] | A1 |
| (23) | | IKELA DCT MORTU DCT NOBAD DCT ENVAR [2 and 3] | M750 |
| (24) | | IKELA DCT MORTU DCT NOBAD DCT KAPLI [5] | G86 |
| (25) | | IKELA P901 IDOSI DCT DAGBU DCT SIKOU [4 and 6] **or** IKELA A1 IDOSI DCT DAGBU DCT SIKOU [4 and 6] | A202/R339 |
| (26) | | IKELA P901 IDOSI DCT BIGEX A461 BEKOL [4] **or** IKELA A1 IDOSI DCT BIGEX A461 BEKOL [4] | A461 |

| | | | |
|---|---|---|---|
| (27) | B330/W18 | TAMOT B330 BIGEX DCT DALOL V621 ELATO [1] | A1 |
| (28) | | TAMOT B330 BIGEX DCT DALOL V621 ELATO [1] | G581 |
| (29) | | TAMOT B330 BIGEX DCT DALOL V631 ENVAR [2] | M750 |
| (30) | | TAMOT B330 BIGEX DCT DALOL V631 ENVAR [2] M750 DADON | G581 |
| (31) | | TAMOT B330 BIGEX DCT POVAM DCT NOPER V642 NOMAN | A461/M501 |
| (32) | | TAMOT B330 BIGEX DCT POVAM V652 SABNO | A583 |
| (33) | | TAMOT DCT ALLEY V32 EPDOS L642 | L642 |
| (34) | | TAMOT DCT ALLEY V31 IDOSI P901 IKELA [4] **or**<br>TAMOT DCT ALLEY V31 IDOSI A1 IKELA [4] | A1 |
| (35) | | TAMOT DCT ALLEY V10 SIKOU [6] | A202/R339 |
| (36) | A202/R339 | SIKOU DCT DAGBU DCT IDOSI P901 IKELA [4 and 6] *or*<br>SIKOU DCT DAGBU DCT IDOSI A1 IKELA [4 and 6] | A1 |
| (37) | | SIKOU DCT DAGBU DCT EPDOS L642 [6] | L642 |
| (38) | | SIKOU J104 CHALI DCT POVAM DCT NOPER V642 NOMAN [6] | A461/M501 |
| (39) | | SIKOU J104 CHALI DCT POVAM V652 SABNO [6] | A583 |
| (40) | | SIKOU J104 CHALI DCT BEKOL [6] | A461 |
| (41) | | SIKOU J104 CHALI DCT KAPLI [6] | G86 |

1 Normally for non-RNAV 5 compliant or non-RVSM approved aircraft.

2 To operate between FL290 and FL410 aircraft must be RNAV 5 compliant and RVSM approved.

3 Route available only during the period 1700 - 0059 UTC, flight plan via G86 KAPLI during the period 0100 - 1659 UTC. (See ENR1.1 para 4 for details).

4 Route via P901 at FL290 or above, or A1 at FL280 or below. To operate at FL290 or above aircraft must be RNP 10 compliant.

5 Between 1700 - 2200 UTC, Taipei ACC only accepts eastbound traffic entering Taipei FIR via KAPLI transiting Taipei FIR to Fukuoka FIR and routing via G86 HCN G581/J7 PICHU Q13 IGURU or destined for aerodromes in Taipei FIR.

6 See ENR 1.1 for ATC Procedures for the Use of ATS Route A202.

9.2 Approval should be sought from ATS Supervisor for flights intended to operate into Hong Kong FIR on routes other than those contained in paragraph 9.1.

**10 Arriving Cargo Aircraft and General Aviation Aircraft**

10.1 To ensure that cargo flights are correctly identified, operators of cargo flights are required to include the information ‘RMK/CARGO’ in item 18, ‘Other Information’, of the ATC FPL for Hong Kong.

10.2 To ensure that general aviation flights that will be parking at the Business Aviation Centre are correctly identified, operators of these flights are required to include the information ‘RMK/BAC PARKING’ in item 18, ‘Other Information’, of the ATC FPL for Hong Kong.

**11 RNAV Approved Aircraft**

11.1 RNP 10

11.1.1 Operators of aircraft with on-board area navigation capability specified in ICAO Regional Supplementary Procedures (Doc 7030), shall include the following information on their flight plan:

| Item 10a | Item 15 | Item 18 after ‘PBN/’ |
|---|---|---|
| R | True Mach Number and flight level at entry and exit point | A1 |

11.1.2 See ENR 1.8 for ATC application of RNAV criteria / Mach number technique.

11.2 RNP 4

11.2.1 Operators of aircraft with on-board area navigation capability specified in ICAO Regional Supplementary Procedures (Doc 7030), shall include the following information on their flight plan:

| Item 10a | Item 15 | Item 18 after 'PBN/' |
|---|---|---|
| RG | True Mach Number and flight level at entry and exit point | L1 |

11.2.2 See ENR 1.8 for ATC Application of RNAV criteria / Mach number technique.

11.3 RNP 1

11.3.1 Operators of aircraft approved for RNP1 operations, shall include either of the following information in Item 10a and Item 18 of their flight plan:

| Item 10a | Item 18 after 'PBN/' |
|---|---|
| RGDI | O1 |
| RG | O2 |

11.3.2 See GEN 1.5 para 3.5.3 for details of RNP 1 SID / STAR procedures and the Exemption Policy.

11.3.3 Flights of categories which are classified as exempted categories as specified in GEN 1.5 para 3.5.3.5 shall specify status of flight following the indicator STS in Item 18 of the flight plan form using appropriate ICAO designators (i.e. STS/HUM, STS/SAR, STS/STATE, STS/HEAD, STS/FLTCK). Flights of categories d) to f) shall denote the reasons following the indicator RMK in Item 18.

11.4 RNAV 5

11.4.1 Operators of aircraft approved for RNAV 5 operations, shall include one of the following information in Item 10a and Item 18 of their flight plan:

| Item 10a | Item 18 after 'PBN/' |
|---|---|
| RGODI or RGSDI * | B1 |
| RG | B2 |
| RD | B3 |
| ROD or RSD * | B4 |
| RI | B5 |

* S is used for standard equipment which includes O (VOR).

11.5 RNAV 2

11.5.1 Operators of aircraft approved for RNAV 2 operations shall include "R" in Item 10a and "C1" or "C2" after "PBN/" in Item 18 of their flight plan.

11.6 Authorization Required Approach (RNP-AR APCH) without Radius Fix (RF)

11.6.1 Operators of aircraft authorized to conduct RNP-AR APCH without RF shall include 'RG' in Item 10a and 'PBN/T2' in Item 18 of their flight plan.

**12 RVSM Approved Aircraft**

12.1 The Hong Kong controlled airspace between FL290 and FL410 inclusive are prescribed as Reduced Vertical Separation Minima (RVSM) airspace. RVSM approval is required to operate within RVSM airspace unless prior approval has been granted.

12.2 The letter 'W' shall be inserted in Item 10 (Equipment) of the flight plan to indicate that both the aircraft and operator are RVSM approved.

12.3 Operators on non-RVSM approved aircraft capable of operating at FL 280 or above, regardless of the requested flight level, shall insert the following information on their flight plan:

a) Item 18 'STS/NONRVSM'.

**13 Automatic Dependent Surveillance Broadcast (ADS-B) Approved Aircraft**

13.1 Aircraft operator complying with the requirement stipulated in GEN 1.5 paragraph 3.7.6 shall indicate the appropriate ADS-B designator in Item 10 of the flight plan as follows:

a) 'B1' for ADS-B with dedicated 1090 MHz ADS-B 'out' capability

b) 'B2' for ADS-B with dedicated 1090 MHz ADS-B 'out' and 'in' capability

**14 Repetitive Flight Plan System**

14.1 A repetitive flight plan system which generally follows the provisions of ICAO PANS-ATM DOC 4444 is available to flights operating between:

a) Taibei/Gaoxiong and Hong Kong;

b) Jakarta and Hong Kong; and

c) Kuala Lumpur and Hong Kong.

14.2 When filing a repetitive flight plan all operators shall include the following information on the RVSM approval status of the flight:

(a) Item Q 'EQPT/W', for flights with RVSM approval; or
'STS/NONRVSM', for flights without RVSM approval capable of operating at FL280 or above, regardless of the requested flight level.

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# ENR 1.11 ADDRESSING OF FLIGHT PLAN MESSAGES

## 1 General

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

(Flight movement messages in this context comprise flight plan messages, amendment messages, amendment messages relating thereto and flight plan cancellation messages. ICAO PANS-ATM DOC 4444, Chapter 11, para. 11.2.1.1.3 refers.)

| Category of Flight | Route | Message Address |
|---|---|---|
| All flights (IFR/VFR) | Inbound to Hong Kong International Airport or transiting Hong Kong FIR | VHHKZQZX |
| All flights (IFR/VFR) | Outbound from Hong Kong International Airport | VHHHZPZA |

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# ENR 1.12 INTERCEPTION OF CIVIL AIRCRAFT

## 1 General Rules

1.1 When an aircraft is being intercepted, the relevant ICAO provisions including signals and responses to be used shall be complied with. The pilot of the intercepted aircraft shall, whenever possible, notify the ATS unit concerned, who will offer assistance to the intercepted aircraft as far as possible.

## 2 Action for intercepted aircraft

2.1 An aircraft which is intercepted by another aircraft shall immediately:

a) follow the instructions given by the intercepting aircraft, interpreting and responding to visual signals in accordance with the specifications in para. 4 below;

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 121.5 MHZ, giving the identity of the intercepted aircraft and the nature of the flight; and if no contact has been established and if practicable, repeating 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;

e) if equipped with ADS-B or ADS-C, select the appropriate emergency functionality, if available, unless otherwise instructed by the appropriate air traffic services unit.

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

2.3 If any 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.

## 3 Radio communication during interception

3.1 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 following tables and transmitting each phrase twice:

a) Phrases for use by INTERCEPTING aircraft

| Phrase | Pronunciation [1] | Meaning |
|---|---|---|
| CALL SIGN | KOL-SA-IN | What is your call sign? |
| FOLLOW | FOL-LO | Follow me |
| DESCEND | DEE-SEND | Descend for landing |
| YOU LAND | YOU LAAND | Land at this aerodrome |
| PROCEED | PRO-SEED | You may proceed |

b) Phrases for use by INTERCEPTED aircraft

| Phrase | Pronunciation [1] | Meaning |
|---|---|---|
| CALL SIGN [2] | KOL-SA-IN | My call sign is (call sign) |
| WILCO | VILL-KO | Understood |
| CAN NOT | 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 |

Notes:
1. In the second column, syllables to be emphasized are underlined.
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”.

## 4 Signals for use in the event of interception

4.1 Signals initiated by intercepting aircraft and responses by intercepted aircraft

| Series | INTERCEPTING Aircraft Signals | Meaning | INTERCEPTED Aircraft Responds | Meaning |
|---|---|---|---|---|
| 1 | DAY or NIGHT - Rocking aircraft 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.<br><br>*Note 1. - Meteorological conditions or terrain may require the intercepting aircraft to reverse the positions and direction of turn given above in Series 1.*<br><br>*Note 2. - If the intercepted aircraft is not able to keep pace with the intercepting aircraft, the latter is expected to fly a series of racetrack patterns and to rock the aircraft each time it passes the intercepted aircraft.* | You have been intercepted. Follow me. | DAY or NIGHT - Rocking aircraft, flashing navigational lights at irregular intervals and following. | Understood, will comply. |
| 2 | DAY or NIGHT - An abrupt breakaway 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. | Understood, will comply. |
| 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 overflying the runway in use or helicopter landing area, landing is considered safe, proceeding to land. | Understood, will comply. |

4.2 Signals initiated by intercepted aircraft and responses by intercepting aircraft

| Series | INTERCEPTED Aircraft Signals | Meaning | INTERCEPTING Aircraft Responds | Meaning |
|---|---|---|---|---|
| 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 300 m (1 000 ft) but not exceeding 600 m (2 000 ft) (in the case of a helicopter, at a height exceeding 50 m (170 ft) but not exceeding 100 m (330 ft)) above the aerodrome level, and continuing to circle runway in use or helicopter landing area. If unable to flash 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.<br><br>If it is decided to release the intercepted aircraft, the intercepting aircraft uses the Series 2 signals prescribed for intercepting aircraft. | Understood, follow me.<br><br>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

Nil.

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# ENR 1.14 AIR TRAFFIC INCIDENTS

## 1 Definition of Air Traffic Incidents

1.1 An incident is an occurrence, other than an accident, associated with the operation of an aircraft which affects or could affect the safety of operation.

1.2 Air Traffic Incidents refer to incidents that are related to the provision of air traffic services, including, but not limited to, the following events: non-adherence to ATC instruction or published procedures, radio communication difficulty or error, loss of separation between aircraft, runway incursion, TCAS RA activation, GPWS/TAWS activation, etc.

## 2 Use of Report Forms

2.1 Pilots shall file an incident using the applicable forms to facilitate the process of investigation of different categories of incidents:-

| | |
|---|---|
| DCA 201 | Occurrence Report Form<br>(suitable for most incidents) |
| DCA 232 | AIRPROX Report - PILOTS<br>(exclusively for loss of separation incidents) |
| DCA 235 | Runway Incursion Reporting<br>(exclusively for runway incursion incidents) |
| DCA 237 | Wake Turbulence Reporting Form for Pilots<br>(exclusively for wake turbulence encounters) |

2.2 These forms are available at the CAD website:

[ https://www.cad.gov.hk/english/applications.html ]

## 3 Reporting Procedures

3.1 An initial report of an incident by a pilot should be made immediately by radio to ATC with which the pilot is in communication. Such initial report act as an important trigger for ATC to preserve any information relevant to the incident, and for controllers and other pilots involved to note the circumstances of the incident for user in future investigation.

3.2 If an initial report cannot be made on the radio at the time, it should be made by the pilot immediately after landing by telephone or other means to ATC.

3.3 The incident shall then be reported by completing the applicable forms and send to the contacts listed on the forms. The incident shall also be reported to the aircraft operator or organisation concerned for necessary follow-up actions. Reporters may also contact the ATC safety office by email at atmd_safety@cad.gov.hk for information.

## 4 Investigation

4.1 All reported incidents will be thoroughly investigated and the reporter or the organisation concerned may be requested to conduct or assist in the investigation. The reporter or the organisation concerned will be notified of the results of the investigation as soon as practicable.

4.2 The sole purpose of incident investigation is to enhance aviation safety by identifying contributing factors and to prevent recurrence. It is not for the purpose of apportioning blame or liability.

4.3 All incident reports are handled in strict confidence. Consent will be sought prior to sharing of safety related information outside of CAD.

## 5 Other Incidents (Bird Strikes, Windshear & Turbulence Encounters, Wake Vortex Encounters)

5.1 Due to the specialised nature of the information required on these incidents, dedicated reporting forms should be used.

5.2 **Bird Strikes**

Report Form is available from:

a) Airfield Operations Department
Airport Authority Hong Kong
Hong Kong International Airport
Lantau
Hong Kong
Tel: +852 2183 6107

OR

b) downloadable from HKIA Extranet at

[ https://extranet.hongkongairport.com/aom/ ]
(Part I, Appendix 1)

5.3 **Windshear & Turbulence Encounters**

Refer to GEN 3.5 (Meteorological Services) para 8, for procedures of reporting windshear and turbulence. Report Form is available from:

a) Airport Meteorological Office
Control Tower Level T3
Hong Kong

OR

b) downloadable from HKO website at

[ http://www.weather.gov.hk/aviat/amt_e/report_form.pdf ]

5.4 **Wake Vortex Encounters**

5.4.1 Pilots should report any wake vortex by completing the Wake Vortex Encounter Reporting Form (DCA 237) available at the CAD website. The completed form will be forwarded to ICAO for necessary action.

5.4.2 Alternatively, pilots may submit the report online direct to ICAO.

5.4.3 Contacts, fax, email, address and website information are contained on the reporting form.

**6 Voluntary Reporting of Incidents**

6.1 To promote incident prevention by analysis of safety data, all parties are encouraged to report incidents that are not required to be reported to CAD by completing the Voluntary Incident Reporting Form (DCA 234) available at the CAD website.

# ENR 2 AIR TRAFFIC SERVICES AIRSPACE

## ENR 2.1 FIR, UIR, TMA

| 1<br>Name<br>Lateral Limits<br>Vertical Limits<br>Class of Airspace | 2<br>Unit Providing Service | 3<br>Call Sign<br>Language(s)<br>Area and Conditions of Use<br>Hours of Service | 4<br>Frequency/ Purpose | 5<br>Remarks |
|---|---|---|---|---|
| **1. HONG KONG FIR** | | | | |
| 23 40 00N 117 30 00E | HONG KONG ACC | HONG KONG RADAR | 118.925 MHZ | ATC will advise |
| 21 00 00N 117 30 00E | | English | 121.3 MHZ | frequency in use |
| 16 40 00N 114 00 00E | | H24 | 122.95 MHZ | |
| 19 30 00N 111 30 00E | | | 123.475 MHZ | |
| 21 25 00N 111 30 00E | | | 123.7 MHZ | |
| | | | 123.95 MHZ | |
| then along the limit of the territorial | | | 125.175 MHZ | |
| waters of the People's Republic of | | | 125.325 MHZ | |
| China, ie 3 NM off-shore and the | | | 125.8 MHZ | |
| northern boundary of Macao and | | | 126.3 MHZ | |
| the Hong Kong Special | | | 126.5 MHZ | |
| Administrative Region, to | | | 127.1 MHZ | |
| 23 40 00N 117 30 00E | | | 127.55 MHZ | |
| UNL / SFC | | | 128.125 MHZ | |
| | | | 128.75 MHZ | |
| | | | 129.9 MHZ | |
| Classes A, C and G as defined in | | | 132.15 MHZ | |
| paras 2, 3, 4, 5 and 6 below | | | 132.225 MHZ | |
| | | | 132.525 MHZ | |
| | | | 132.6 MHZ | |
| | | | 132.775 MHZ | |
| | | | 132.8 MHZ | |
| | | | 133.7 MHZ | |
| | | | 133.825 MHZ | |
| | | | 134.3 MHZ | |
| | | | 135.6 MHZ | |
| | | | 121.5 MHZ/ | |
| | | | Emergency FREQ | |
| | | | 5655 KHZ | |
| | | | 8942 KHZ | |
| | | | 13309 KHZ | |
| | HONG KONG RCC | SEARCH AND RESCUE | 123.1 MHZ/SAR | |
| | | English | 3023 KHZ/SAR | |
| | | HR as required | | |

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| **Name<br>Lateral Limits<br>Vertical Limits<br>Class of Airspace** | **Unit<br>Providing<br>Service** | **Call Sign<br>Language(s)<br>Area and Conditions of Use<br>Hours of Service** | **Frequency/<br>Purpose** | **Remarks** |
| **2. HONG KONG TMA** | | | | |
| 23 40 00N 117 30 00E<br>21 00 00N 117 30 00E<br>18 56 00N 115 49 00E<br>19 00 00N 112 30 00E<br>19 30 00N 111 30 00E<br>then along the Hong Kong / Guangzhou FIR BDRY to<br>23 40 00N 117 30 00E<br><br>(a)<br>within 50 NM from BIGEX, but excluding the airspace within and above:<br>(i) Hong Kong Control Zone (CTR), as listed in para 3 and<br>(ii) Uncontrolled Airspace Reporting Areas (UCARAs), as listed in para 6.<br><br>UNL<br>2 000 ft<br><br>Class A :<br><br>UNL<br>8 000 ft<br><br>Class C :<br><br>8 000 ft<br>2 000 ft<br><br>(b)<br>the airspace above the Hong Kong Control Zone (CTR), as listed in para 3, | HONG KONG ACC/<br>APP | HONG KONG RADAR<br>English<br>H24 | 118.925 MHZ<br>119.1 MHZ<br>119.35 MHZ<br>119.5 MHZ<br>121.3 MHZ<br>122.0 MHZ<br>122.65 MHZ<br>123.225 MHZ<br>123.475 MHZ<br>123.7 MHZ<br>123.8 MHZ<br>123.95 MHZ<br>124.05 MHZ<br>125.175 MHZ<br>125.325 MHZ<br>125.8 MHZ<br>126.3 MHZ<br>126.5 MHZ<br>127.1 MHZ<br>127.55 MHZ<br>128.125 MHZ<br>128.75 MHZ<br>129.9 MHZ<br>132.15 MHZ<br>132.225 MHZ<br>132.525 MHZ<br>132.6 MHZ<br>132.775 MHZ<br>132.8 MHZ<br>133.7 MHZ<br>133.825 MHZ<br>134.3 MHZ<br>121.5 MHZ/<br>Emergency FREQ | ATS will advise frequency in use |

| 1<br>**Name**<br>**Lateral Limits**<br>**Vertical Limits**<br>**Class of Airspace** | 2<br>**Unit Providing Service** | 3<br>**Call Sign**<br>**Language(s)**<br>**Area and Conditions of Use**<br>**Hours of Service** | 4<br>**Frequency/ Purpose** | 5<br>**Remarks** |
|---|---|---|---|---|
| **2. HONG KONG TMA** | | | | |
| UNL<br>9 000 ft<br>Class A<br><br>(c)<br>the airspace above the Uncontrolled Airspace Reporting Areas (UCARAs), as listed in para 6,<br><br>UNL<br>9 000 ft<br>Class A<br><br>9 000 ft<br>Upper limit of UCARA<br>Class C<br><br>(d)<br>exceeding 50 NM from BIGEX<br><br>UNL<br>8 000 ft<br>Class A | | | | |

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| **Name<br>Lateral Limits<br>Vertical Limits<br>Class of Airspace** | **Unit<br>Providing<br>Service** | **Call Sign<br>Language(s)<br>Area and Conditions of Use<br>Hours of Service** | **Frequency/<br>Purpose** | **Remarks** |
| **3. HONG KONG CONTROL ZONE (CTR)** | | | | |
| 22 28 34N 114 00 54E | HONG KONG TWR/ | HONG KONG TOWER | 118.2 MHZ | ATS will advise |
| 22 26 59N 114 00 25E | ZNC/APP | HONG KONG ZONE | 118.4 MHZ | frequency in use |
| 22 25 51N 114 03 03E | | HONG KONG APPROACH | 118.7 MHZ | |
| 22 24 20N 114 04 10E | | HONG KONG DEPARTURE | 119.1 MHZ | |
| 22 25 15N 114 07 08E | | English | 119.35 MHZ | |
| 22 24 40N 114 10 40E | | H24 | 119.5 MHZ | |
| 22 22 40N 114 13 20E | | | 120.6 MHZ | |
| 22 20 30N 114 13 25E | | | 122.0 MHZ | |
| 22 15 15N 114 21 00E | | | 122.075 MHZ | |
| 22 08 50N 114 21 00E | | | 122.65 MHZ | |
| 22 08 50N 114 17 05E | | | 123.225 MHZ | |
| 22 08 20N 114 15 20E | | | 123.8 MHZ | |
| 22 08 50N 114 14 10E | | | 124.05 MHZ | |
| 22 08 50N 114 11 45E | | | 124.65 MHZ | |
| 22 06 40N 114 11 45E | | | | |
| 21 56 25N 113 48 00E | | | | |
| 22 13 44N 113 39 57E | | | | |
| 22 24 34N 113 49 44E | | | 121.5 MHZ/<br>Emergency FREQ | |
| 9 000 ft<br>SFC<br>Class C | | | | |

| 1<br>**Name**<br>**Lateral Limits**<br>**Vertical Limits**<br>**Class of Airspace** | 2<br>**Unit**<br>**Providing**<br>**Service** | 3<br>**Call Sign**<br>**Language(s)**<br>**Area and Conditions of Use**<br>**Hours of Service** | 4<br>**Frequency/**<br>**Purpose** | 5<br>**Remarks** |
|---|---|---|---|---|
| **4. HONG KONG AIRSPACE TO THE SOUTH OF THE HONG KONG TMA** | | | | |
| 19 30 00N 111 30 00E<br>19 00 00N 112 30 00E<br>18 56 00N 115 49 00E<br>16 40 00N 114 00 00E<br>UNL<br>SFC | | | | |
| Class A :<br>UNL<br>8 000 ft | HONG KONG ACC | HONG KONG RADAR<br>English<br>H24 | 122.95 MHZ<br>123.7 MHZ<br>125.325 MHZ<br>125.8 MHZ<br>127.1 MHZ<br>128.125 MHZ<br>128.75 MHZ<br>129.9 MHZ<br>132.15 MHZ<br>132.525 MHZ<br>132.775 MHZ<br>135.6 MHZ | ATS will advise<br>frequency in use |
| Class G :<br>8 000 ft<br>SFC | HONG KONG FIS | HONG KONG INFORMATION<br>English<br>H24 | 122.4 MHZ<br>122.075 MHZ<br>121.5 MHZ/<br>Emergency FREQ | ATS will advise<br>frequency in use<br>Flight<br>Information<br>Service and<br>alerting service<br>provided |

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| **Name<br>Lateral Limits<br>Vertical Limits<br>Class of Airspace** | **Unit<br>Providing<br>Service** | **Call Sign<br>Language(s)<br>Area and Conditions of Use<br>Hours of Service** | **Frequency/<br>Purpose** | **Remarks** |
| **5. AIRSPACE BENEATH HONG KONG TMA** | | | | |
| 23 40 00N 117 30 00E<br>21 00 00N 117 30 00E<br>18 56 00N 115 49 00E<br>19 00 00N 112 30 00E<br>19 30 00N 111 30 00E<br>then along the Hong Kong / Guangzhou FIR BDRY to<br>23 40 00N 117 30 00E<br>(a)<br>within 50 NM from BIGEX, but excluding Hong Kong Control Zone (CTR) as listed in para 3 and Uncontrolled Airspace Reporting Areas (UCARAs) airspace as listed in para 6.<br>2 000 ft<br>SFC<br>Class G *<br>(b)<br>exceeding 50 NM from BIGEX<br>8 000 ft<br>SFC<br>Class G * | HONG KONG FIS | HONG KONG INFORMATION<br>English<br>H24 | 122.4 MHZ<br>122.075 MHZ<br><br>121.5 MHZ/<br>Emergency FREQ | ATS will advise frequency in use<br><br>Flight Information Service and alerting service provided |
| * Note - requires aircraft operating in such Class G airspace to have equipment capable of maintaining direct two-way communication with ATC | | | | |

| 1<br>**Name**<br>**Lateral Limits**<br>**Vertical Limits**<br>**Class of Airspace** | 2<br>**Unit**<br>**Providing**<br>**Service** | 3<br>**Call Sign**<br>**Language(s)**<br>**Area and Conditions of Use**<br>**Hours of Service** | 4<br>**Frequency/**<br>**Purpose** | 5<br>**Remarks** |
|---|---|---|---|---|
| **6. UNCONTROLLED AIRSPACE REPORTING AREAS (UCARAS)** | | | | |
| (i)<br>22 24 45N 114 28 50E<br>22 21 55N 114 30 09E<br>22 08 50N 114 30 09E<br>22 08 50N 114 21 00E<br>22 15 15N 114 21 00E<br>22 20 30N 114 13 25E<br>22 22 40N 114 13 20E<br>22 24 40N 114 10 40E<br>22 25 15N 114 07 15E<br>22 27 50N 114 04 00E<br>22 30 20N 114 07 30E<br>22 29 50N 114 08 20E<br>22 32 20N 114 12 30E<br>then along the coast line to<br>22 31 30N 114 13 00E<br>22 30 00N 114 14 25E<br>22 29 00N 114 14 30E<br>22 28 00N 114 14 00E<br>then along the coast line to<br>22 24 20N 114 16 40E<br>22 24 55N 114 17 30E<br>22 24 50N 114 18 20E<br>22 25 40N 114 18 30E<br>22 24 15N 114 20 30E<br>22 25 50N 114 22 30E<br>22 24 45N 114 24 20E<br>22 24 45N 114 28 50E<br>2 000 ft<br>SFC<br>Class G *<br><br>(ii)<br>22 32 20N 114 12 30E<br>then along the coast line to<br>22 32 22N 114 12 59E | HONG KONG FIS | HONG KONG INFORMATION<br>English<br>01:00 - SS | 121.0 MHZ<br>122.075 MHZ<br><br><br>121.5 MHZ/<br>Emergency FREQ | ATS will advise<br>frequency in use |
| * Note - requires aircraft operating in such Class G airspace to have equipment capable of maintaining direct two-way communication with ATC | | | | |

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| **Name<br>Lateral Limits<br>Vertical Limits<br>Class of Airspace** | **Unit<br>Providing<br>Service** | **Call Sign<br>Language(s)<br>Area and Conditions of Use<br>Hours of Service** | **Frequency/<br>Purpose** | **Remarks** |
| **6. UNCONTROLLED AIRSPACE REPORTING AREAS (UCARAS)** | | | | |
| 22 33 56N 114 16 34E<br>22 34 06N 114 19 59E<br>22 33 43N 114 26 02E<br>22 32 42N 114 27 19E<br>22 28 07N 114 27 18E<br>22 24 45N 114 28 50E<br>22 24 45N 114 24 20E<br>22 25 50N 114 22 30E<br>22 24 15N 114 20 30E<br>22 25 40N 114 18 30E<br>22 24 50N 114 18 20E<br>22 24 55N 114 17 30E<br>22 24 20N 114 16 40E<br>then along the coast line to<br>22 28 00N 114 14 00E<br>22 29 00N 114 14 30E<br>22 30 00N 114 14 25E<br>22 31 30N 114 13 00E<br>then along the coast line to<br>22 32 20N 114 12 30E<br>3 000 ft<br>SFC<br>Class G * | | | | |
| * Note - requires aircraft operating in such Class G airspace to have equipment capable of maintaining direct two-way communication with ATC | | | | |

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| **Name<br>Lateral Limits<br>Vertical Limits<br>Class of Airspace** | **Unit<br>Providing<br>Service** | **Call Sign<br>Language(s)<br>Area and Conditions of Use<br>Hours of Service** | **Frequency/<br>Purpose** | **Remarks** |
| **7. UIR** | | | | |
| Nil | | | | |

## ENR 2.2 OTHER REGULATED AIRSPACE

Nil.

INTENTIONALLY

LEFT

BLANK

# ENR 3 ATS ROUTES

## ENR 3.1 ATS ROUTES

### (1) ATS ROUTES

| Route designator<br>Name of significant points<br>Coordinates | MAG Track | DIST (NM) | Upper limit<br>Lower limit<br>Airspace Classification | Lateral limits (NM) | FL Series ↓ | FL Series ↑ | Remarks<br>Controlling unit<br>Frequency |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | | 7 |
| **A1** | | | | | | | |
| ▲IKELA<br>183942.00N<br>1121442.00E<br>(Hong Kong/Sanya FIR BDRY) | | | | | | | |
| | 039<br>219 | 24.9 | FL 285<br>8000 ft AMSL<br><br>Class A | 50 | Odd | Even | PBN Route P901 above FL285<br><br>Hong Kong Radar<br>125.325 MHZ (PRI)<br>132.775 MHZ (SRY) |
| △IDOSI<br>190000.00N<br>1123000.00E | | | | | | | |
| | 027<br>207 | 210.8 | FL 285<br>8000 ft AMSL<br><br>Class A | 50 | Odd | Even | PBN Route P901 above FL285.<br>For airspace classification of route segment within or above Hong Kong CTR/UCARAs, refer to ENR 1.4 and ENR 2.1.<br><br>Hong Kong Radar<br>127.1 MHZ (PRI)<br>123.7 MHZ (SRY) |
| △BIGEX<br>221310.35N<br>1140148.20E | | | | | | | |
| | 090<br>271 | 100.0 | UNL<br>8000 ft AMSL<br><br>Class A | 50 | Odd | Even | For airspace classification of route segment within or above Hong Kong CTR/UCARAs, refer to ENR 1.4 and ENR 2.1.<br><br>Hong Kong Radar<br>118.925 MHZ (PRI)<br>121.3 MHZ (When instructed) |
| △MAGOG<br>221746.00N<br>1154930.00E | | | | | | | |
| | 091<br>272 | 93.2 | UNL<br>8000 ft AMSL<br><br>Class A | 50 | Odd | Even | Hong Kong Radar<br>118.925 MHZ (PRI)<br>121.3 MHZ (When instructed) |

| Route designator<br>Name of significant points<br>Coordinates | MAG Track | DIST (NM) | Upper limit<br>Lower limit<br>Airspace Classification | Lateral limits (NM) | FL Series ↓ | FL Series ↑ | Remarks<br>Controlling unit<br>Frequency |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | | 7 |
| ▲ELATO<br>222000.00N<br>1173000.00E<br>(Hong Kong/Taipei FIR BDRY) | | | | | | | |
| *Route Remarks:*<br>For flights within the RVSM airspace, FL290 - 410, refer to FLAS in ENR 1.8 para 8.<br>IKELA and ELATO: Compulsory ATS Reporting Points for all aircraft.<br>Other waypoints: Compulsory Reporting Points for non-jet aircraft only. | | | | | | | |

| Route designator<br>Name of significant points<br>Coordinates | MAG Track | DIST (NM) | Upper limit<br>Lower limit<br>Airspace Classification | Lateral limits (NM) | FL Series ↓ | FL Series ↑ | Remarks<br>Controlling unit<br>Frequency |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | | 7 |
| **A202** | | | | | | | |
| ▲SIKOU<br>205036.00N<br>1113000.00E<br>(Hong Kong/ Guangzhou FIR BDRY) | | | | | | | |
| | 062<br>243 | 163.7 | UNL<br>8000 ft AMSL<br><br>Class A | 50 | | | For airspace classification of route segment within or above Hong Kong CTR/UCARAs, refer to ENR 1.4 and ENR 2.1.<br><br>Hong Kong Radar<br>127.1 MHZ (PRI)<br>123.7 MHZ (SRY) |
| △BIGEX<br>221310.35N<br>1140148.20E | | | | | | | |
| *Route Remarks:*<br>Traffic overflying Bangkok not permitted on this route.<br>For flights within the RVSM airspace, FL290-410, refer to FLAS in ENR 1.8 para 8.<br>For direction of cruising levels, refer to FLAS in ENR 1.8 para 8.<br>SIKOU: Compulsory ATS Reporting Point for all aircraft.<br>Other waypoints: Compulsory Reporting Points for non-jet aircraft only. | | | | | | | |

| Route designator<br>Name of significant points<br>Coordinates | MAG Track | DIST (NM) | Upper limit<br>Lower limit<br>Airspace Classification | Lateral limits (NM) | FL Series ↓ | FL Series ↑ | Remarks<br>Controlling unit<br>Frequency |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | | 7 |
| **A461** | | | | | | | |
| ▲NOMAN<br>200000.00N<br>1164018.00E<br>(Hong Kong/Manila FIR BDRY) | | | | | | | |
| | 315<br>134 | 198.9 | UNL<br>8000 ft AMSL<br><br>Class A | 50 | Even | Odd | For airspace classification of route segment within or above Hong Kong CTR/UCARAs, refer to ENR 1.4 and ENR 2.1.<br><br>Hong Kong Radar<br>132.15 MHZ (PRI)<br>129.9 MHZ (SRY) |
| △BIGEX<br>221310.35N<br>1140148.20E | | | | | | | |
| | 020 | 20.2 | UNL<br>4500 ft AMSL<br><br>9 000 ft AMSL/UNL:<br>Class A<br><br>4500 ft/9000 ft AMSL:<br>Class C | 12 | Odd | | One-way route for northbound traffic only.For direction of cruising levels, refer to FLAS in ENR 1.8 para 8. For flights landing Shenzhen 2400 m (PRI) 2100 m (SRY).<br><br>FL250 and below<br>Hong Kong DEP<br>123.8 MHZ (PRI)<br>124.05 MHZ (SRY)<br><br>Above FL250<br>Hong Kong Radar<br>127.1 MHZ (PRI)<br>123.7 MHZ (SRY) |
| ▲BEKOL<br>223236.00N<br>1140800.00E<br>(Hong Kong/ Guangzhou FIR BDRY) | | | | | | | |
| *Route Remarks:*<br>For flights within the RVSM airspace, FL290-410, refer to FLAS in ENR 1.8 para 8.<br>BEKOL and NOMAN: Compulsory ATS Reporting Points for all aircraft.<br>Other waypoints: Compulsory Reporting Points for non-jet aircraft only. | | | | | | | |

| Route designator<br>Name of significant points<br>Coordinates | MAG Track | DIST (NM) | Upper limit<br>Lower limit<br>Airspace Classification | Lateral limits (NM) | FL Series ↓ | FL Series ↑ | Remarks<br>Controlling unit<br>Frequency |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | | 7 |
| **A470** | | | | | | | |
| △MAGOG<br>221746.00N<br>1154930.00E | | | | | | | |
| | 040<br>220 | 31.6 | UNL<br>8000 ft AMSL<br><br>Class A | 12 | Odd | Even | Hong Kong Radar<br>121.3 MHZ (PRI)<br>118.925 MHZ (When instructed)<br>128.125 MHZ (SRY) |
| ▲DOTMI<br>224306.00N<br>1161006.00E<br>(Hong Kong/ Guangzhou Transfer Point) | | | | | | | |
| *Route Remarks:*<br>For direction of cruising levels, refer to FLAS in ENR 1.8 para 8. Other flight levels, except FL270, may be available subject to co-ordination.<br>DOTMI: Compulsory ATS Reporting Point for all aircraft.<br>Other waypoints: Compulsory Reporting Points for non-jet aircraft only. | | | | | | | |

| Route designator<br>Name of significant points<br>Coordinates | MAG Track | DIST (NM) | Upper limit<br>Lower limit<br>Airspace Classification | Lateral limits (NM) | FL Series ↓ | FL Series ↑ | Remarks<br>Controlling unit<br>Frequency |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | | 7 |
| **A583** | | | | | | | |
| ▲SABNO<br>185906.00N<br>1155042.00E<br>(Hong Kong/Manila FIR BDRY) | | | | | | | |
| | 335<br>155 | 218.7 | UNL<br>8000 ft AMSL<br><br>Class A | 50 | Even | Odd | For airspace classification of route segment within or above Hong Kong CTR/UCARAs, refer to ENR 1.4 and ENR 2.1.<br><br>Hong Kong Radar<br>128.75 MHZ (PRI)<br>129.9 MHZ (SRY) |
| △BIGEX<br>221310.35N<br>1140148.20E | | | | | | | |

*Route Remarks:*
For flights within the RVSM airspace, FL290-410, refer to FLAS in ENR 1.8 para 8.
SABNO: Compulsory ATS Reporting Point for all aircraft.
Other waypoints: Compulsory Reporting Points for non-jet aircraft only.

| Route designator<br>Name of significant points<br>Coordinates | MAG Track | DIST (NM) | Upper limit<br>Lower limit<br>Airspace Classification | Lateral limits (NM) | FL Series ↓ | FL Series ↑ | Remarks<br>Controlling unit<br>Frequency |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | | 7 |
| **B330** | | | | | | | |
| △BIGEX<br>221310.35N<br>1140148.20E | | | | | | | |
| | 315<br>135 | 12.3 | UNL<br>6000 ft AMSL<br><br>9 000 ft AMSL/UNL: Class A<br><br>6000 ft/9000 ft AMSL: Class C | 12 | | | Hong Kong Radar<br>127.1 MHZ (PRI)<br>123.7 MHZ (SRY) |
| ▲TAMOT<br>222130.00N<br>1135200.00E | | | | | | | |

*Route Remarks:*
One-way route normally for southbound traffic only. Northbound for traffic transiting Hong Kong FIR and landing Guangzhou (ZGGG).
Appropriate Levels as assigned by ATC.
TAMOT: Compulsory ATS Reporting Point for all aircraft.
Other waypoints: Compulsory Reporting Points for non-jet aircraft only.

| Route designator<br>Name of significant points<br>Coordinates | MAG Track | DIST (NM) | Upper limit<br>Lower limit<br>Airspace<br>Classification | Lateral limits (NM) | FL Series | | Remarks<br>Controlling unit<br>Frequency |
|---|---|---|---|---|---|---|---|
| | | | | | ↓ | ↑ | |
| 1 | 2 | 3 | 4 | 5 | 6 | | 7 |
| **G581** | | | | | | | |
| △BIGEX<br>221310.35N<br>1140148.20E | | | | | | | |
| | 090<br>271 | 100.0 | UNL<br>8000 ft AMSL<br><br>Class A | 50 | Odd | Even | For airspace classification of route segment within or above Hong Kong CTR/UCARAs, refer to ENR 1.4 and ENR 2.1.<br><br>Hong Kong Radar<br>121.3 MHZ (PRI)<br>128.125 MHZ (SRY)<br>118.925 MHZ (When instructed) |
| △MAGOG<br>221746.00N<br>1154930.00E | | | | | | | |
| | 091<br>272 | 93.2 | UNL<br>8000 ft AMSL<br><br>Class A | 50 | Odd | Even | Hong Kong Radar<br>121.3 MHZ (PRI)<br>128.125 MHZ (SRY)<br>118.925 MHZ (When instructed) |
| ▲ELATO<br>222000.00N<br>1173000.00E<br>(Hong Kong/Taipei FIR BDRY) | | | | | | | |
| *Route Remarks:*<br>For flights within the RVSM airspace, FL290-410, refer to FLAS in ENR 1.8 para 8.<br>ELATO: Compulsory ATS Reporting Point for all aircraft.<br>Other waypoints: Compulsory Reporting Points for non-jet aircraft only. | | | | | | | |

| Route designator<br>Name of significant points<br>Coordinates | MAG Track | DIST (NM) | Upper limit<br>Lower limit<br>Airspace Classification | Lateral limits (NM) | FL Series ↓ | FL Series ↑ | Remarks<br>Controlling unit<br>Frequency |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | | 7 |
| **G86** | | | | | | | |
| ▲KAPLI<br>211000.00N<br>1173000.00E<br>(Hong Kong/Taipei FIR BDRY) | | | | | | | |
| | 110 | 203.8 | UNL<br>8000 ft AMSL<br><br>Class A | 50 | | Odd | For airspace classification of route segment within or above Hong Kong CTR/UCARAs, refer to ENR 1.4 and ENR 2.1.<br><br>Hong Kong Radar<br>118.925 MHZ (PRI)<br>128.125 MHZ (SRY) |
| △BIGEX<br>221310.35N<br>1140148.20E | | | | | | | |

*Route Remarks:*
One-way route for eastbound traffic only.
For flights within the RVSM airspace, FL290-410, refer to FLAS in ENR 1.8 para 8.
KAPLI: Compulsory ATS Reporting Point for all aircraft.
Other waypoints: Compulsory Reporting Points for non-jet aircraft only.

**(2) TERMINAL TRANSITION ROUTES**

| **Route designator**<br>**Name of significant points**<br>**Coordinates** | **Track °M** | **Distance**<br><br>**NM** | **Remarks**<br>**Controlling unit**<br>**Frequency** |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| **J101** | | | |
| ▲ELATO<br>222000.00N 1173000.00E | | | |
| | 286 | 47.1 | Hong Kong Radar<br>121.3 MHZ (PRI)<br>128.125 MHZ (SRY) |
| △TUBBY<br>223025.41N 1164024.45E | | | |
| | 270 | 39.6 | Hong Kong Radar<br>121.3 MHZ (PRI)<br>128.125 MHZ (SRY) |
| △SAMMI<br>222800.00N 1155742.00E | | | |
| | 269 | 70.3 | Hong Kong Radar<br>121.3 MHZ (PRI)<br>128.125 MHZ (SRY) |
| △NEDLE<br>222313.95N 1144157.47E | | | |
| | 269 | 13.2 | Hong Kong Radar<br>127.1 MHZ (PRI)<br>123.7 MHZ (SRY) |
| △PONTI<br>222216.35N 1142745.83E | | | |
| | 269 | 8.3 | Hong Kong Radar<br>127.1 MHZ (PRI)<br>123.7 MHZ (SRY) |
| △BUMDI<br>222139.62N 1141852.61E | | | |
| | 269 | 18.5 | Hong Kong Radar<br>127.1 MHZ (PRI)<br>123.7 MHZ (SRY) |
| △SIU MO TO (SMT)<br>DVOR/DME<br>222015.43N 1135855.46E | | | |
| *Route Remark:*<br>ELATO: Compulsory ATS Reporting Point for all aircraft.<br>Other waypoints: Compulsory ATS Reporting Points for non-jet aircraft only. | | | |

| Route designator<br>Name of significant points<br>Coordinates | Track °M | Distance<br><br>NM | Remarks<br>Controlling unit<br>Frequency |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| **J103** | | | |
| △DUMOL<br>190000.00N 1142648.00E | | | |
| | 358 | 50.1 | Hong Kong Radar<br>128.75 MHZ (PRI)<br>129.9 MHZ (SRY) |
| △ALDOM<br>195009.33N 1142226.42E | | | |
| | 358 | 59.4 | Hong Kong Radar<br>128.75 MHZ (PRI)<br>129.9 MHZ (SRY) |
| △ISBAN<br>204934.33N 1141713.11E | | | |
| | 358 | 13.2 | Hong Kong Radar<br>127.1 MHZ (PRI)<br>123.7 MHZ (SRY) |
| △ROBIN<br>210245.00N 1141606.00E | | | |
| | 358 | 16.6 | Hong Kong Radar<br>127.1 MHZ (PRI)<br>123.7 MHZ (SRY) |
| △TAPPO<br>211920.61N 1141434.62E | | | |
| | 358 | 20.0 | Hong Kong Radar<br>127.1 MHZ (PRI)<br>123.7 MHZ (SRY) |
| △SAPAX<br>213919.84N 1141247.62E | | | |
| | 358 | 53.3 | Hong Kong Radar<br>127.1 MHZ (PRI)<br>123.7 MHZ (SRY) |
| ▲BEKOL<br>223236.00N 1140800.00E | | | |
| *Route Remark:*<br>BEKOL: Compulsory ATS Reporting Point for all aircraft.<br>Other waypoints: Compulsory ATS Reporting Points for non-jet aircraft only. | | | |

| Route designator<br>Name of significant points<br>Coordinates | Track °M | Distance<br><br>NM | Remarks<br>Controlling unit<br>Frequency |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| **J104** | | | |
| ▲SIKOU<br>205036.00N 1113000.00E | | | |
| | 103 | 27.6 | Hong Kong Radar<br>127.1 MHZ (PRI)<br>123.7 MHZ (SRY) |
| △RAGSO<br>204532.33N 1115856.71E | | | |
| | 073 | 53.4 | Hong Kong Radar<br>127.1 MHZ (PRI)<br>123.7 MHZ (SRY) |
| △DASON<br>210323.27N 1125240.39E | | | |
| | 074 | 18.2 | Hong Kong Radar<br>127.1 MHZ (PRI)<br>123.7 MHZ (SRY) |
| △COTON<br>210924.17N 1131101.04E | | | |
| | 074 | 25.4 | Hong Kong Radar<br>127.1 MHZ (PRI)<br>123.7 MHZ (SRY) |
| △CHALI<br>211745.00N 1133641.00E | | | |
| *Route Remark:*<br>SIKOU: Compulsory ATS Reporting Point for all aircraft.<br>Other waypoints: Compulsory ATS Reporting Points for non-jet aircraft only. | | | |

| Route designator<br>Name of significant points<br>Coordinates | Track °M | Distance<br><br>NM | Remarks<br>Controlling unit<br>Frequency |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| **V10** | | | |
| ▲SIKOU<br>205036.00N 1113000.00E | | | |
| | 299 | 40.7 | Hong Kong Radar<br>127.1 MHZ (PRI)<br>123.7 MHZ (SRY) |
| △DAGBU<br>203257.99N 1120910.07E | | | |
| | 254 | 97.2 | Hong Kong Radar<br>127.1 MHZ (PRI)<br>123.7 MHZ (SRY) |
| △ALLEY<br>210511.15N 1134709.50E | | | |
| | 217 | 25.3 | Hong Kong Radar<br>123.475 MHZ (PRI)<br>132.6 MHZ (SRY) |
| △PECAN<br>212620.19N 1140205.64E | | | |
| *Route Remark:*<br>SIKOU: Compulsory ATS Reporting Point for all aircraft.<br>Other waypoints: Compulsory ATS Reporting Points for non-jet aircraft only. | | | |

| **Route designator**<br>**Name of significant points**<br>**Coordinates** | **Track °M** | **Distance**<br><br>**NM** | **Remarks**<br>**Controlling unit**<br>**Frequency** |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| **V11** | | | |
| △IDOSI<br>190000.00N 1123000.00E | | | |
| | 219 | 23.1 | Hong Kong Radar<br>125.325 MHZ (PRI)<br>132.775 MHZ (SRY) |
| △SURFA<br>191850.98N 1124411.17E | | | |
| | 220 | 120.5 | Hong Kong Radar<br>125.325 MHZ (PRI)<br>132.775 MHZ (SRY) |
| △LAXET<br>205616.57N 1140005.12E | | | |
| | 187 | 30.0 | Hong Kong Radar<br>123.475 MHZ (PRI)<br>132.6 MHZ (SRY) |
| △PECAN<br>212620.19N 1140205.64E | | | |
| *Route Remark:*<br>All waypoints: Compulsory ATS Reporting Points for non-jet aircraft only. | | | |

| **Route designator**<br>**Name of significant points**<br>**Coordinates** | **Track °M** | **Distance**<br><br>**NM** | **Remarks**<br>**Controlling unit**<br>**Frequency** |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| **V12** | | | |
| △EPDOS<br>190000.00N 1133318.00E | | | |
| | 195 | 118.6 | Hong Kong Radar<br>125.325 MHZ (PRI)<br>132.775 MHZ (SRY) |
| △LAXET<br>205616.57N 1140005.12E | | | |
| | 187 | 30.0 | Hong Kong Radar<br>123.475 MHZ (PRI)<br>132.6 MHZ (SRY) |
| △PECAN<br>212620.19N 1140205.64E | | | |
| *Route Remark:*<br>All waypoints: Compulsory ATS Reporting Points for non-jet aircraft only. | | | |

| **Route designator**<br>**Name of significant points**<br>**Coordinates** | **Track °M** | **Distance**<br><br>**NM** | **Remarks**<br>**Controlling unit**<br>**Frequency** |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| **V31** | | | |
| △IDOSI<br>190000.00N 1123000.00E | | | |
| | 219 | 23.1 | Hong Kong Radar<br>125.325 MHZ (PRI)<br>132.775 MHZ (SRY) |
| △SURFA<br>191850.98N 1124411.17E | | | |
| | 212 | 121.4 | Hong Kong Radar<br>125.325 MHZ (PRI)<br>132.775 MHZ (SRY) |
| △ALLEY<br>210511.15N 1134709.50E | | | |
| *Route Remark:*<br>All waypoints: Compulsory ATS Reporting Points for non-jet aircraft only. | | | |

| **Route designator**<br>**Name of significant points**<br>**Coordinates** | **Track °M** | **Distance**<br><br>**NM** | **Remarks**<br>**Controlling unit**<br>**Frequency** |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| **V32** | | | |
| △EPDOS<br>190000.00N 1133318.00E | | | |
| | 189 | 125.4 | Hong Kong Radar<br>125.325 MHZ (PRI)<br>132.775 MHZ (SRY) |
| △ALLEY<br>210511.15N 1134709.50E | | | |
| *Route Remark:*<br>All waypoints: Compulsory ATS Reporting Points for non-jet aircraft only. | | | |

| **Route designator**<br>**Name of significant points**<br>**Coordinates** | **Track °M** | **Distance**<br><br>**NM** | **Remarks**<br>**Controlling unit**<br>**Frequency** |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| **V512** | | | |
| △ABBEY<br>221611.00N 1145525.92E | | | |
| | 271 | 23.0 | Hong Kong Radar<br>126.5 MHZ (PRI)<br>132.8 MHZ (SRY) |
| △FISHA<br>221657.64N 1152011.61E | | | |
| | 271 | 19.7 | Hong Kong Radar<br>126.5 MHZ (PRI)<br>132.8 MHZ (SRY) |
| △ENPET<br>221733.16N 1154124.36E | | | |
| | 271 | 7.5 | Hong Kong Radar<br>121.3 MHZ (PRI)<br>128.125 MHZ (SRY) |
| △MAGOG<br>221746.00N 1154930.00E | | | |
| | 220 | 31.6 | Hong Kong Radar<br>121.3 MHZ (PRI)<br>128.125 MHZ (SRY) |
| ▲DOTMI<br>224306.00N 1161006.00E | | | |
| *Route Remark:*<br>DOTMI: Compulsory ATS Reporting Point for all aircraft.<br>Other waypoints: Compulsory ATS Reporting Points for non-jet aircraft only. | | | |

| **Route designator**<br>**Name of significant points**<br>**Coordinates** | **Track °M** | **Distance**<br><br>**NM** | **Remarks**<br>**Controlling unit**<br>**Frequency** |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| **V522** | | | |
| △ABBEY<br>221611.00N 1145525.92E | | | |
| | 271 | 23.0 | Hong Kong Radar<br>126.5 MHZ (PRI)<br>132.8 MHZ (SRY) |
| △FISHA<br>221657.64N 1152011.61E | | | |
| | 271 | 19.7 | Hong Kong Radar<br>126.5 MHZ (PRI)<br>132.8 MHZ (SRY) |
| △ENPET<br>221733.16N 1154124.36E | | | |
| | 271 | 7.5 | Hong Kong Radar<br>121.3 MHZ (PRI)<br>128.125 MHZ (SRY) |
| △MAGOG<br>221746.00N 1154930.00E | | | |
| | 272 | 93.2 | Hong Kong Radar<br>121.3 MHZ (PRI)<br>128.125 MHZ (SRY) |
| ▲ELATO<br>222000.00N 1173000.00E | | | |
| *Route Remark:*<br>ELATO: Compulsory ATS Reporting Point for all aircraft.<br>Other waypoints: Compulsory ATS Reporting Points for non-jet aircraft only. | | | |

| Route designator<br>Name of significant points<br>Coordinates | Track °M | Distance<br><br>NM | Remarks<br>Controlling unit<br>Frequency |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| **V525** | | | |
| △BETTY<br>212910.82N 1143331.92E | | | |
| | 318 | 39.5 | Hong Kong Radar<br>126.3 MHZ (PRI)<br>132.6 MHZ (SRY) |
| △SONNY<br>210103.66N 1150318.81E | | | |
| | 318 | 10.6 | Hong Kong Radar<br>132.15 MHZ (PRI)<br>129.9 MHZ (SRY) |
| △DAKTO<br>205330.89N 1151115.58E | | | |
| | 248 | 32.8 | Hong Kong Radar<br>132.15 MHZ (PRI)<br>129.9 MHZ (SRY) |
| △EATON<br>210724.40N 1154301.10E | | | |
| | 254 | 79.5 | Hong Kong Radar<br>132.15 MHZ (PRI)<br>129.9 MHZ (SRY) |
| △AKEKU<br>213418.33N 1170309.60E | | | |
| | 212 | 51.9 | Hong Kong Radar<br>121.3 MHZ (PRI)<br>128.125 MHZ (SRY) |
| ▲ELATO<br>222000.00N 1173000.00E | | | |
| *Route Remark:*<br>V525 is for ATC tactical use only and shall not be used for flight planning purposes<br>ELATO: Compulsory ATS Reporting Point for all aircraft.<br>Other waypoints: Compulsory ATS Reporting Points for non-jet aircraft only. | | | |

| Route designator<br>Name of significant points<br>Coordinates | Track °M | Distance<br><br>NM | Remarks<br>Controlling unit<br>Frequency |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| **V533** | | | |
| ▲NOMAN<br>200000.00N 1164018.00E | | | |
| | 301 | 41.0 | Hong Kong Radar<br>132.15 MHZ (PRI)<br>129.9 MHZ (SRY) |
| △UNTUL<br>201902.18N 1160138.11E | | | |
| | 300 | 30.8 | Hong Kong Radar<br>132.15 MHZ (PRI)<br>129.9 MHZ (SRY) |
| △OSUMO<br>203313.23N 1153232.05E | | | |
| | 318 | 28.4 | Hong Kong Radar<br>133.7 MHZ (PRI)<br>129.9 MHZ (SRY) |
| △DAKTO<br>205330.89N 1151115.58E | | | |
| | 318 | 10.6 | Hong Kong Radar<br>133.7 MHZ (PRI)<br>129.9 MHZ (SRY) |
| △SONNY<br>210103.66N 1150318.81E | | | |
| | 318 | 39.5 | Hong Kong Radar<br>126.3 MHZ (PRI)<br>132.6 MHZ (SRY) |
| △BETTY<br>212910.82N 1143331.92E | | | |
| *Route Remark:*<br>NOMAN: Compulsory ATS Reporting Points for all aircraft.<br>Other waypoints: Compulsory ATS Reporting Points for non-jet aircraft only. | | | |

| Route designator<br>Name of significant points<br>Coordinates | Track °M | Distance<br><br>NM | Remarks<br>Controlling unit<br>Frequency |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| **V534** | | | |
| ▲NOMAN<br>200000.00N 1164018.00E | | | |
| | 301 | 41.0 | Hong Kong Radar<br>132.15 MHZ (PRI)<br>129.9 MHZ (SRY) |
| △UNTUL<br>201902.18N 1160138.11E | | | |
| | 300 | 30.8 | Hong Kong Radar<br>132.15 MHZ (PRI)<br>129.9 MHZ (SRY) |
| △OSUMO<br>203313.23N 1153232.05E | | | |
| | 276 | 54.5 | Hong Kong Radar<br>132.15 MHZ (PRI)<br>129.9 MHZ (SRY) |
| △HOCKY<br>203549.35N 1143428.48E | | | |
| | 358 | 15.0 | Hong Kong Radar<br>128.75 MHZ (PRI)<br>129.9 MHZ (SRY) |
| △CYBER<br>205049.64N 1143310.56E | | | |
| | 003 | 38.2 | Hong Kong Radar<br>126.3 MHZ (PRI)<br>132.6 MHZ (SRY) |
| △BETTY<br>212910.82N 1143331.92E | | | |
| *Route Remark:*<br>V534 is for ATC tactical use only and shall not be used for flight planning purposes.<br>NOMAN: Compulsory ATS Reporting Point for all aircraft.<br>Other waypoints: Compulsory ATS Reporting Points for non-jet aircraft only. | | | |

| **Route designator**<br>**Name of significant points**<br>**Coordinates** | **Track °M** | **Distance**<br><br>**NM** | **Remarks**<br>**Controlling unit**<br>**Frequency** |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| **V542** | | | |
| ▲SABNO<br>185906.00N 1155042.00E | | | |
| | 305 | 36.7 | Hong Kong Radar<br>128.75 MHZ (PRI)<br>129.9 MHZ (SRY) |
| △TOFEE<br>191821.99N 1151738.48E | | | |
| | 304 | 42.5 | Hong Kong Radar<br>128.75 MHZ (PRI)<br>129.9 MHZ (SRY) |
| △SUKER<br>194033.48N 1143911.87E | | | |
| | 358 | 55.2 | Hong Kong Radar<br>128.75 MHZ (PRI)<br>129.9 MHZ (SRY) |
| △HOCKY<br>203549.35N 1143428.48E | | | |
| | 358 | 15.0 | Hong Kong Radar<br>128.75 MHZ (PRI)<br>129.9 MHZ (SRY) |
| △CYBER<br>205049.64N 1143310.56E | | | |
| | 003 | 38.2 | Hong Kong Radar<br>126.3 MHZ (PRI)<br>132.6 MHZ (SRY) |
| △BETTY<br>212910.82N 1143331.92E | | | |
| *Route Remark:*<br>SABNO: Compulsory ATS Reporting Point for all aircraft.<br>Other waypoints: Compulsory ATS Reporting Points for non-jet aircraft only. | | | |

| **Route designator**<br>**Name of significant points**<br>**Coordinates** | **Track °M** | **Distance**<br><br>**NM** | **Remarks**<br>**Controlling unit**<br>**Frequency** |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| **V551** | | | |
| △CARSO<br>190000.00N 1144237.75E | | | |
| | 358 | 40.5 | Hong Kong Radar<br>128.75 MHZ (PRI)<br>129.9 MHZ (SRY) |
| △SUKER<br>194033.48N 1143911.87E | | | |
| | 358 | 55.2 | Hong Kong Radar<br>128.75 MHZ (PRI)<br>129.9 MHZ (SRY) |
| △HOCKY<br>203549.35N 1143428.48E | | | |
| | 358 | 15.0 | Hong Kong Radar<br>128.75 MHZ (PRI)<br>129.9 MHZ (SRY) |
| △CYBER<br>205049.64N 1143310.56E | | | |
| | 003 | 38.2 | Hong Kong Radar<br>126.3 MHZ (PRI)<br>132.6 MHZ (SRY) |
| △BETTY<br>212910.82N 1143331.92E | | | |
| *Route Remark:*<br>All waypoints: Compulsory ATS Reporting Points for non-jet aircraft only. | | | |

| **Route designator**<br>**Name of significant points**<br>**Coordinates** | **Track °M** | **Distance**<br><br>**NM** | **Remarks**<br>**Controlling unit**<br>**Frequency** |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| **V561** | | | |
| △IDOSI<br>190000.00N 1123000.00E | | | |
| | 013 | 72.6 | Hong Kong Radar<br>125.325 MHZ (PRI)<br>132.775 MHZ (SRY) |
| △MYWAY<br>201146.30N 1124307.70E | | | |
| | 013 | 68.1 | Hong Kong Radar<br>127.1 MHZ (PRI)<br>123.7 MHZ (SRY) |
| △GAMBA<br>211908.12N 1125536.21E | | | |
| | 074 | 10.0 | Hong Kong Radar<br>127.1 MHZ (PRI)<br>123.7 MHZ (SRY) |
| △MAPLE<br>212226.82N 1130542.82E | | | |
| | 074 | 21.8 | Hong Kong Radar<br>127.55 MHZ (PRI)<br>134.3 MHZ (SRY) |
| △COMBI<br>212937.10N 1132744.30E | | | |
| | 074 | 7.0 | Hong Kong Radar<br>127.55 MHZ (PRI)<br>134.3 MHZ (SRY) |
| △ROCCA<br>213155.42N 1133451.44E | | | |
| | 048 | 10.0 | Hong Kong Radar<br>127.55 MHZ (PRI)<br>134.3 MHZ (SRY) |
| △CANTO<br>213902.63N 1134225.09E | | | |
| *Route Remark:*<br>All waypoints: Compulsory ATS Reporting Points for non-jet aircraft only. | | | |

| **Route designator**<br>**Name of significant points**<br>**Coordinates** | **Track °M** | **Distance**<br><br>**NM** | **Remarks**<br>**Controlling unit**<br>**Frequency** |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| **V571** | | | |
| ▲SIKOU<br>205036.00N 1113000.00E | | | |
| | 074 | 85.0 | Hong Kong Radar<br>127.1 MHZ (PRI)<br>123.7 MHZ (SRY) |
| △GAMBA<br>211908.12N 1125536.21E | | | |
| | 074 | 10.0 | Hong Kong Radar<br>127.1 MHZ (PRI)<br>123.7 MHZ (SRY) |
| △MAPLE<br>212226.82N 1130542.82E | | | |
| | 074 | 21.8 | Hong Kong Radar<br>127.55 MHZ (PRI)<br>134.3 MHZ (SRY) |
| △COMBI<br>212937.10N 1132744.30E | | | |
| | 074 | 7.0 | Hong Kong Radar<br>127.55 MHZ (PRI)<br>134.3 MHZ (SRY) |
| △ROCCA<br>213155.42N 1133451.44E | | | |
| | 048 | 10.0 | Hong Kong Radar<br>127.55 MHZ (PRI)<br>134.3 MHZ (SRY) |
| △CANTO<br>213902.63N 1134225.09E | | | |
| *Route Remark:*<br>SIKOU: Compulsory ATS Reporting Point for all aircraft.<br>Other waypoints: Compulsory ATS Reporting Points for non-jet aircraft only. | | | |

| **Route designator**<br>**Name of significant points**<br>**Coordinates** | **Track °M** | **Distance**<br><br>**NM** | **Remarks**<br>**Controlling unit**<br>**Frequency** |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| **V591** | | | |
| △ABBEY<br>221611.00N 1145525.92E | | | |
| | 271 | 23.0 | Hong Kong Radar<br>126.5 MHZ (PRI)<br>132.8 MHZ (SRY) |
| △FISHA<br>221657.64N 1152011.61E | | | |
| | 271 | 19.7 | Hong Kong Radar<br>126.5 MHZ (PRI)<br>132.8 MHZ (SRY) |
| △ENPET<br>221733.16N 1154124.36E | | | |
| | 271 | 7.5 | Hong Kong Radar<br>121.3 MHZ (PRI)<br>128.125 MHZ (SRY) |
| △MAGOG<br>221746.00N 1154930.00E | | | |
| | 251 | 71.0 | Hong Kong Radar<br>121.3 MHZ (PRI)<br>128.125 MHZ (SRY) |
| △MALKA<br>224413.60N 1170041.71E | | | |
| | 237 | 20.6 | Hong Kong Radar<br>121.3 MHZ (PRI)<br>128.125 MHZ (SRY) |
| ▲LELIM<br>225624.00N 1171842.00E | | | |
| *Route Remark:*<br>LELIM: Compulsory ATS Reporting Point for all aircraft.<br>Other waypoints: Compulsory ATS Reporting Points for non-jet aircraft only. | | | |

| **Route designator**<br>**Name of significant points**<br>**Coordinates** | **Track °M** | **Distance**<br><br>**NM** | **Remarks**<br>**Controlling unit**<br>**Frequency** |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| **V601** | | | |
| △LEKEN<br>215301.06N 1145444.95E | | | |
| | 091 | 19.9 | Hong Kong Radar<br>133.825 MHZ (PRI)<br>132.8 MHZ (SRY) |
| △LARIT<br>215341.37N 1151606.56E | | | |
| | 091 | 19.9 | Hong Kong Radar<br>133.825 MHZ (PRI)<br>132.8 MHZ (SRY) |
| △NUDPI<br>215418.90N 1153728.21E | | | |
| | 081 | 32.3 | Hong Kong Radar<br>118.925 MHZ (PRI)<br>128.125 MHZ (SRY) |
| △SOUSA<br>220110.40N 1161127.80E | | | |
| | 001 | 41.8 | Hong Kong Radar<br>118.925 MHZ (PRI)<br>128.125 MHZ (SRY) |
| ▲DOTMI<br>224306.00N 1161006.00E | | | |
| *Route Remark:*<br>DOTMI: Compulsory ATS Reporting Point for all aircraft.<br>Other waypoints: Compulsory ATS Reporting Points for non-jet aircraft only. | | | |

| **Route designator**<br>**Name of significant points**<br>**Coordinates** | **Track °M** | **Distance**<br><br>**NM** | **Remarks**<br>**Controlling unit**<br>**Frequency** |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| **V611** | | | |
| △LEKEN<br>215301.06N 1145444.95E | | | |
| | 091 | 19.9 | Hong Kong Radar<br>133.825 MHZ (PRI)<br>132.8 MHZ (SRY) |
| △LARIT<br>215341.37N 1151606.56E | | | |
| | 091 | 19.9 | Hong Kong Radar<br>133.825 MHZ (PRI)<br>132.8 MHZ (SRY) |
| △NUDPI<br>215418.90N 1153728.21E | | | |
| | 081 | 32.3 | Hong Kong Radar<br>118.925 MHZ (PRI)<br>128.125 MHZ (SRY) |
| △SOUSA<br>220110.40N 1161127.80E | | | |
| | 091 | 32.8 | Hong Kong Radar<br>118.925 MHZ (PRI)<br>128.125 MHZ (SRY) |
| △BESDA<br>220203.11N 1164645.01E | | | |
| | 032 | 48.1 | Hong Kong Radar<br>118.925 MHZ (PRI)<br>128.125 MHZ (SRY) |
| △LIMSU<br>224427.09N 1171137.82E | | | |
| | 032 | 13.6 | Hong Kong Radar<br>118.925 MHZ (PRI)<br>128.125 MHZ (SRY) |
| ▲LELIM<br>225624.00N 1171842.00E | | | |
| *Route Remark:*<br>LELIM: Compulsory ATS Reporting Point for all aircraft.<br>Other waypoints: Compulsory ATS Reporting Points for non-jet aircraft only. | | | |

| **Route designator**<br>**Name of significant points**<br>**Coordinates** | **Track °M** | **Distance**<br><br>**NM** | **Remarks**<br>**Controlling unit**<br>**Frequency** |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| **V621** | | | |
| △DALOL<br>214436.90N 1145045.34E | | | |
| | 093 | 20.6 | Hong Kong Radar<br>133.825 MHZ (PRI)<br>132.8 MHZ (SRY) |
| △DUMEP<br>214436.30N 1151249.87E | | | |
| | 093 | 20.5 | Hong Kong Radar<br>133.825 MHZ (PRI)<br>132.8 MHZ (SRY) |
| △MEBKI<br>214432.75N 1153454.24E | | | |
| | 093 | 67.2 | Hong Kong Radar<br>118.925 MHZ (PRI)<br>128.125 MHZ (SRY) |
| △CONGA<br>214402.50N 1164705.90E | | | |
| | 051 | 53.6 | Hong Kong Radar<br>118.925 MHZ (PRI)<br>128.125 MHZ (SRY) |
| ▲ELATO<br>222000.00N 1173000.00E | | | |
| *Route Remark:*<br>ELATO: Compulsory ATS Reporting Point for all aircraft.<br>Other waypoints: Compulsory ATS Reporting Points for non-jet aircraft only. | | | |

| **Route designator**<br>**Name of significant points**<br>**Coordinates** | **Track °M** | **Distance**<br><br>**NM** | **Remarks**<br>**Controlling unit**<br>**Frequency** |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| **V631** | | | |
| △DALOL<br>214436.90N 1145045.34E | | | |
| | 093 | 20.6 | Hong Kong Radar<br>133.825 MHZ (PRI)<br>132.8 MHZ (SRY) |
| △DUMEP<br>214436.30N 1151249.87E | | | |
| | 093 | 20.5 | Hong Kong Radar<br>133.825 MHZ (PRI)<br>132.8 MHZ (SRY) |
| △MEBKI<br>214432.75N 1153454.24E | | | |
| | 093 | 67.2 | Hong Kong Radar<br>118.925 MHZ (PRI)<br>128.125 MHZ (SRY) |
| △CONGA<br>214402.50N 1164705.90E | | | |
| | 072 | 42.8 | Hong Kong Radar<br>118.925 MHZ (PRI)<br>128.125 MHZ (SRY) |
| ▲ENVAR<br>215930.00N 1173000.00E | | | |
| *Route Remark:*<br>ENVAR: Compulsory ATS Reporting Point for all aircraft.<br>Other waypoints: Compulsory ATS Reporting Points for non-jet aircraft only. | | | |

| Route designator<br>Name of significant points<br>Coordinates | Track °M | Distance<br><br>NM | Remarks<br>Controlling unit<br>Frequency |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| **V642** | | | |
| ▲NOMAN<br>200000.00N 1164018.00E | | | |
| | 150 | 60.0 | Hong Kong Radar<br>132.15 MHZ (PRI)<br>129.9 MHZ (SRY) |
| △NOPER<br>205048.05N 1160601.97E | | | |
| | 130 | 67.5 | Hong Kong Radar<br>133.7 MHZ (PRI)<br>129.9 MHZ (SRY) |
| △SKATE<br>213154.99N 1150839.94E | | | |
| | 130 | 10.5 | Hong Kong Radar<br>133.825 MHZ (PRI)<br>132.8 MHZ (SRY) |
| △XEMEK<br>213816.17N 1145943.04E | | | |
| | 130 | 10.5 | Hong Kong Radar<br>133.825 MHZ (PRI)<br>132.8 MHZ (SRY) |
| △DALOL<br>214436.90N 1145045.34E | | | |
| *Route Remark:*<br>NOMAN: Compulsory ATS Reporting Point for all aircraft.<br>Other waypoints: Compulsory ATS Reporting Points for non-jet aircraft only. | | | |

| Route designator<br>Name of significant points<br>Coordinates | Track °M | Distance<br><br>NM | Remarks<br>Controlling unit<br>Frequency |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| **V652** | | | |
| ▲SABNO<br>185906.00N 1155042.00E | | | |
| | 190 | 80.3 | Hong Kong Radar<br>132.15 MHZ (PRI)<br>129.9 MHZ (SRY) |
| △UNTUL<br>201902.18N 1160138.11E | | | |
| | 149 | 33.7 | Hong Kong Radar<br>132.15 MHZ (PRI)<br>129.9 MHZ (SRY) |
| △RUSBI<br>204657.36N 1154127.93E | | | |
| | 149 | 33.7 | Hong Kong Radar<br>133.7 MHZ (PRI)<br>129.9 MHZ (SRY) |
| △POVAM<br>211454.67N 1152107.14E | | | |
| | 149 | 20.5 | Hong Kong Radar<br>133.7 MHZ (PRI)<br>129.9 MHZ (SRY) |
| △SKATE<br>213154.99N 1150839.94E | | | |
| | 130 | 10.5 | Hong Kong Radar<br>133.825 MHZ (PRI)<br>132.8 MHZ (SRY) |
| △XEMEK<br>213816.17N 1145943.04E | | | |
| | 130 | 10.5 | Hong Kong Radar<br>133.825 MHZ (PRI)<br>132.8 MHZ (SRY) |
| △DALOL<br>214436.90N 1145045.34E | | | |
| *Route Remark:*<br>SABNO: Compulsory ATS Reporting Point for all aircraft.<br>Other waypoints: Compulsory ATS Reporting Points for non-jet aircraft only. | | | |

| **Route designator**<br>**Name of significant points**<br>**Coordinates** | **Track °M** | **Distance**<br><br>**NM** | **Remarks**<br>**Controlling unit**<br>**Frequency** |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| **W29** | | | |
| △BETTY<br>212910.82N 1143331.92E | | | |
| | 318 | 39.5 | Hong Kong Radar<br>126.3 MHZ (PRI)<br>132.6 MHZ (SRY) |
| △SONNY<br>210103.66N 1150318.81E | | | |
| | 318 | 10.6 | Hong Kong Radar<br>133.7 MHZ (PRI)<br>129.9 MHZ (SRY) |
| △DAKTO<br>205330.89N 1151115.58E | | | |
| | 248 | 32.8 | Hong Kong Radar<br>133.7 MHZ (PRI)<br>129.9 MHZ (SRY) |
| △EATON<br>210724.40N 1154301.10E | | | |
| | 187 | 30.5 | Hong Kong Radar<br>133.7 MHZ (PRI)<br>129.9 MHZ (SRY) |
| ▲MEPUT<br>213759.00N 1154519.80E | | | |
| *Route Remark:*<br>W29 is for ATC tactical use only and shall not be used for flight planning purposes.<br>All waypoints: Compulsory ATS Reporting Points for non-jet aircraft only. | | | |

## ENR 3.2 UPPER ATS ROUTES

Nil.

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## ENR 3.3 PERFORMANCE BASED NAVIGATION (PBN) ROUTES

| Route designator (RNP/RNAV) Name of significant points Coordinates | MAG TRACK (°) | Great Circle DIST (NM) | Upper limit Lower limit Airspace Classification | FL series ↓ | FL series ↑ | Remarks Controlling unit Frequency |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | | 6 |
| **L642 (RNP 4)** | | | | | | |
| ▲EPKAL 175130.00N 1125718.00E | | | | | | |
| | 219 | 51.8 | UNL / 8000 ft AMSL Class A | | Even | Hong Kong Radar 122.95 MHZ (PRI) 135.6 MHZ (SRY) |
| △ENBOK 183324.00N 1132930.00E | | | | | | |
| | 191 | 26.7 | UNL / 8000 ft AMSL Class A | | Even | Hong Kong Radar 125.8 MHZ (PRI) 132.775 MHZ (SRY) |
| △EPDOS 190000.00N 1133318.00E | | | | | | |
| | 191 | 194.3 | UNL / 8000 ft AMSL Class A | | Even | For airspace classification of route segment within or above Hong Kong CTR/UCARAs, refer to ENR 1.4 and ENR 2.1.<br><br>Hong Kong Radar 127.1 MHZ (PRI) 123.7 MHZ (SRY) |
| △BIGEX 221310.35N 1140148.20E | | | | | | |

*Route Remark*

One-way Route.
For flights within the RVSM airspace, refer to FLAS in ENR 1.8 para 8.
EPKAL: Compulsory ATS Reporting Point for all aircraft
Other waypoints: Compulsory Reporting Points for non-jet aircraft only.

| Route designator (RNP/RNAV) Name of significant points Coordinates | MAG TRACK (°) | Great Circle DIST (NM) | Upper limit Lower limit Airspace Classification | FL series ↓ | FL series ↑ | Remarks Controlling unit Frequency |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | | 6 |
| **M750 (RNAV 5)** | | | | | | |
| △KILOG 215227.00N 1144137.00E | | | | | | |
| | 090 | 156.7 | UNL / FL 270 Class A | Odd | | Hong Kong Radar 118.925 MHZ (PRI) 128.125 MHZ (SRY) |
| ▲ENVAR 215930.00N 1173000.00E | | | | | | |

*Route Remark*

One-way Route.
This route is applicable only under radar environment, ATC will monitor navigation performance, and radar separation will be provided.
For flights within the RVSM airspace, refer to FLAS in ENR 1.8 para 8.
ENVAR: Compulsory ATS Reporting Point for all aircraft
Other waypoints: Compulsory Reporting Points for non-jet aircraft only.

| Route designator (RNP/RNAV) Name of significant points Coordinates | MAG TRACK (°) | Great Circle DIST (NM) | Upper limit Lower limit Airspace Classification | FL series ↓ | FL series ↑ | Remarks Controlling unit Frequency |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | | 6 |
| **M771 (RNP 4)** | | | | | | |
| ▲DOSUT 170200.00N 1134048.00E | | | | | | |
| | 037 | 87.3 | UNL / 8000 ft AMSL Class A | Odd | | Hong Kong Radar 122.95 MHZ (PRI) 135.6 MHZ (SRY) |
| ▲DULOP 181412.00N 1143236.00E | | | | | | |
| | 356 | 46.0 | UNL / 8000 ft AMSL Class A | Odd | | Hong Kong Radar 125.8 MHZ (PRI) 132.775 MHZ (SRY) |
| △DUMOL 190000.00N 1142648.00E | | | | | | |
| | 356 | 193.9 | UNL / 8000 ft AMSL Class A | Odd | | For airspace classification of route segment within or above Hong Kong CTR/UCARAs, refer to ENR 1.4 and ENR 2.1.<br><br>Hong Kong Radar 128.75 MHZ (PRI) 129.9 MHZ (SRY) |
| △BIGEX 221310.35N 1140148.20E | | | | | | |
| *Route Remark*<br>One-way Route.<br>For flights within the RVSM airspace, refer to FLAS in ENR 1.8 para 8.<br>DOSUT and DULOP: Compulsory ATS Reporting Points for all aircraft | | | | | | |

| Route designator (RNP/RNAV) Name of significant points Coordinates | MAG TRACK (°) | Great Circle DIST (NM) | Upper limit Lower limit Airspace Classification | FL series ↓ | FL series ↑ | Remarks Controlling unit Frequency |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | | 6 |
| **M772 (RNP 10)** | | | | | | |
| ▲ASOBA 172222.00N 1143413.00E | | | | | | |
| | 001 | 51.7 | FL 460 / FL 285 Class A | | | Hong Kong Radar 122.95 MHZ (PRI) 135.6 MHZ (SRY) |
| ▲DULOP 181412.00N 1143236.00E | | | | | | |
| *Route Remark* One-way Route. For flights within the RVSM airspace, refer to FLAS in ENR 1.8 para 8. ASOBA and DULOP: Compulsory ATS Reporting Points for all aircraft | | | | | | |

| Route designator (RNP/RNAV) Name of significant points Coordinates | MAG TRACK (°) | Great Circle DIST (NM) | Upper limit Lower limit Airspace Classification | FL series ↓ | FL series ↑ | Remarks Controlling unit Frequency |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | | 6 |
| **P901 (RNP 10)** | | | | | | |
| ▲IKELA 183942.00N 1121442.00E | | | | | | |
| | 039 / 219 | 24.9 | UNL / FL 285 Class A | Odd | Even | Hong Kong Radar 125.325 MHZ (PRI) 132.775 MHZ (SRY) |
| △IDOSI 190000.00N 1123000.00E | | | | | | |
| | 027 / 207 | 210.8 | UNL / FL 285 Class A | Odd | Even | Hong Kong Radar 127.1 MHZ (PRI) 123.7 MHZ (SRY) |
| △BIGEX 221310.35N 1140148.20E | | | | | | |
| *Route Remark*<br>For flights within the RVSM airspace, refer to FLAS in ENR 1.8 para 8.<br>IKELA: Compulsory ATS Reporting Point for all aircraft<br>Other waypoints: Compulsory Reporting Points for non-jet aircraft only. | | | | | | |

| Route designator (RNP/RNAV) Name of significant points Coordinates | MAG TRACK (°) | Great Circle DIST (NM) | Upper limit Lower limit Airspace Classification | FL series ↓ | FL series ↑ | Remarks Controlling unit Frequency |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | | 6 |
| **Q1 (RNP 10)** | | | | | | |
| ▲DULOP 181412.00N 1143236.00E | | | | | | |
| | 015 | 46.6 | UNL / 8000 ft AMSL<br>Class A | Odd | | Hong Kong Radar<br>125.8 MHZ (PRI)<br>132.775 MHZ (SRY) |
| △CARSO 190000.00N 1144237.75E | | | | | | |

*Route Remark*

One-way Route.
For flights within the RVSM airspace, refer to FLAS in ENR 1.8 para 8.
From M771 joining Q1 - FL270, FL310, FL320, FL350, FL360, FL390, (2301 - 1600 UTC) and FL400; from M772 joining Q1 - FL300 and FL380.
DULOP: Compulsory ATS Reporting Point for all aircraft
Other waypoints: Compulsory Reporting Points for non-jet aircraft only.

# ENR 3.4 HELICOPTER ROUTES

## 1 General

1.1 There are two types of Helicopter Routes within the Hong Kong FIR:

a) Oil Rig Support Helicopter Routes, and

b) Hong Kong - Macau Helicopter Routes.

1.2 Only helicopter operators authorised by the Director-General of Civil Aviation may use the Helicopter Routes established in the Hong Kong FIR.

## 2 Oil Rig Support Helicopter Routes

2.1 Reporting Points

| Reporting Point | Co-ordinates |
|---|---|
| MCU DVOR (116.4 MHZ)* | 220808N 1133552E ^ |
| ZAO DVOR (117.2 MHZ) * | 2214.7N 11336.7E ^ |
| ZUH VOR (116.7 MHZ) * | 221318N 1132800E + |
| AOTOU * | 224300N 1143155E |
| DAPENG | 222700N 1143000E |
| DELTA | 213100N 1133000E |
| HENGA * | 223900N 1141200E |
| HOTEL | 222300N 1145430E |
| HVC02 | 220448N 1134152E |
| HVW01 | 220343N 1134441E |
| PINGSHAN * | 224130N 1142100E |
| QUBEC | 220601.7N 1134045.3E |
| ROMEO | 215148N 1132654E |
| SESAN | 223050N 1145025E |
| UNIFORM | 220900N 1134042E |
| VICTOR WHISKEY | 215000N 1135500E |

* Navaid/Reporting Point outside Hong Kong FIR
^ Information from AIP Macao
+ Information from AIP China

2.2 Routes

| Name | Route | Controlling Unit Frequency * |
|---|---|---|
| Track H (IFR/VFR) | Helicopter base - HENGA – AOTOU – SESAN | HONG KONG INFORMATION 122.4 MHZ (primary) 122.075 MHZ (secondary) |
| Track D (Secondary IFR Track) | ZUH VOR – ROMEO – DELTA | HONG KONG RADAR 123.95 MHZ (primary) 132.225 MHZ (secondary) |
| Track VW (VFR) | Helicopter base – ZAO DVOR – QUBEC – HVC02 – HVW01 – VICTOR WHISKEY | HONG KONG ZONE 120.6 MHZ (primary) 122.075 MHZ (secondary) |
| Track VH (Secondary VFR Track) | Helicopter base – HENGA – PINGSHAN – along Eastern Coast of DAPENG WAN – DAPENG | HONG KONG INFORMATION 122.4 MHZ (primary) 122.075 MHZ (secondary) |

* Helicopters departing from an oil rig shall contact Hong Kong Information/ Hong Kong Radar on the last assigned frequency as soon as practicable.

2.3 Vertical Limits

| Route | | Less Than 50 NM from BIGEX | 50 NM or Greater from BIGEX |
|---|---|---|---|
| VFR | Track H | 2 000 ft AMSL or less | Below 8 000 ft AMSL<br><br>At appropriate cruising levels in accordance with ICAO Annex 2, Rules of the Air, Appendix C.<br><br>Oil rig support helicopters shall not normally be flown at or above 8 000 ft AMSL in controlled airspace. |
| | Track VH<br>(Base to rig) | 2 000 ft AMSL or less | |
| | Track VH<br>(Rig to base) | 2 000 ft AMSL or less | |
| | Track VW<br>(ZAO - QUBEC) | 500 ft AMSL or less (RWY 07 in HKIA);<br>800 ft AMSL or less (RWY 25 in HKIA) | |
| | Track VW<br>(QUBEC - VW) | 1 000 ft AMSL or less | |
| | Track VW<br>(VW - rig) | 2 000 ft AMSL or less | |
| IFR | Track H<br>(Base to rig) | 5 000 ft AMSL | |
| | Track H<br>(Rig to base) | 4 000 ft AMSL | |
| | Track D<br>(Base to rig) | 4 000 ft AMSL (PRI)<br>6 000 ft AMSL (SRY subject to coordination) | |
| | Track D<br>(Rig to base) | 5 000 ft AMSL | |

## 3 Hong Kong - Macao Helicopter Routes

3.1 VFR/SVFR ROUTE A, ROUTE A2, ROUTE B1 and ROUTE C1

3.1.1 Reporting Points

| Reporting Point | Co-ordinates |
|---|---|
| MACAO HELIPORT | 221148N 1133333E |
| SKY SHUTTLE HELIPORT | 221719.7N 1140908.4E |
| CHEUNG CHAU BUOY | 221224N 1140012E |
| CHEUNG CHAU SOUTH | 220900N 1140148E |
| CHAKO | 221020.5N 1135616.3E |
| FAN LAU | 221124N 1135100E |
| FATUT | 221132.4N 1134803.6E |
| FOVOG | 221133.2N 1134058.3E |
| GOGRE | 221133.2N 1133430.4E |
| GREEN ISLAND | 221720N 1140620E |
| HASAN | 221018.6N 1135320.9E |
| HOROT | 221640.0N 1140556.8E |
| HVB01 | 221032N 1134327E |
| HVB02 | 220935N 1134834E |
| HVB03 | 220934N 1135143E |
| HVB04 | 220900N 1135408E |

| Reporting Point | Co-ordinates |
|---|---|
| HVC02 | 220448N 1134152E |
| HVC03 | 220446N 1134408E |
| LEVKE | 221458.2N 1140442.7E |
| LIGHTHOUSE | 220442N 1134812E |
| QUBEC | 220601.7N 1134045.3E |
| TANGO | 221124N 1134012E |
| UNIFORM | 220900N 1134042E |
| WAVOS | 221201.5N 1140402.3E |
| WAYPOINT 2 | 220500N 1135312E |
| ZEXEK | 221023.10N 1140034.90E |

3.1.2 Routes

| Name | Route | Availability |
|---|---|---|
| Route A | Sky Shuttle Heliport - GREEN ISLAND - CHEUNG CHAU BUOY - FAN LAU - TANGO - Macao Heliport | Specifically approved operators only. VFR / SVFR Standard Westbound route |
| Route A2 | Sky Shuttle Heliport - HOROT - LEVKE - WAVOS - ZEXEK - CHAKO - HASAN - FATUT - FOVOG - GOGRE - Macao Heliport | Specifically approved operators only. SVFR only Standard Westbound route |
| Route B1 | Macao Heliport - UNIFORM - HVB01 - HVB02 - HVB03 - HVB04 - CHEUNG CHAU SOUTH - GREEN ISLAND - Sky Shuttle Heliport | Specifically approved operators only. VFR only Standard Eastbound route |
| Route C1 | Macao Heliport - QUBEC - HVC02 - HVC03 - LIGHTHOUSE - WAYPOINT 2 - CHEUNG CHAU SOUTH - GREEN ISLAND - Sky Shuttle Heliport | Specifically approved operators only. VFR/SVFR Standard Eastbound SVFR route |

3.1.3 Communication

a) Helicopters operating VFR shall contact Hong Kong Zone 120.6 MHZ

b) Helicopters operating SVFR shall contact Hong Kong Zone 120.6 MHZ, or Hong Kong Approach 119.1 MHZ, or Hong Kong Departure 123.8 as instructed.

3.1.4 Altitude Restrictions

| Route | Hong Kong RWY in Use | Operating Conditions | Maximum Altitude* |
|---|---|---|---|
| Route A | RWY 07 | VFR / SVFR | 500 ft AMSL |
| | RWY 25 | VFR / SVFR | 500 ft AMSL |
| Route A2 | RWY 07 | SVFR | 500 ft AMSL |
| | RWY 25 | SVFR | 500 ft AMSL |
| Route B1 | RWY 07 | VFR | 500 ft AMSL |
| | RWY 25 | VFR | 500 ft AMSL |
| Route C1 | RWY 07 | VFR | 500 ft AMSL |
| | | SVFR | 1 000 ft AMSL |
| | RWY 25 | VFR / SVFR | 1 200 ft AMSL |

* The maximum altitude restrictions in the above table are only applicable to the western portions of the routes, i.e. west of FAN LAU / HVB03 / WAYPOINT 2 / HASAN.

3.2 IFR ROUTE J and ROUTE L

3.2.1 Reporting Points

| Reporting point | Co-ordinates (WGS84) | Cross Reference from Navaid |
|---|---|---|
| Macao Heliport | 221148N 1133333E | - |
| Sky Shuttle Heliport | 221719.7N 1140908.4E | - |
| KEMTE | 220544.56N 1140650.54E | - |
| PEARL | 220304.7N 1134735.7E | MCU R116/DME 12 NM |
| QUBEC | 220601.7N 1134045.3E | MCU R116/DME 5 NM |
| WALIN | 220540.10N 1135843.20E | - |

3.2.2 Routes

| Name | Route | Availability |
|---|---|---|
| Route J | Macao Heliport - visual segment to MCU DVOR - MCU R116 - QUBEC - MCU R116/DME 20 NM - WALIN | Specifically approved operators only.<br><br>Only one flight at a time shall use Routes J and L. |
| Route L | KEMTE - intercept TD R225 - intercept MCU R116 - PEARL - MAP (MCU R116/DME 1.1 NM) - visual segment to Macao Heliport | |

3.2.3 Communication

a) Helicopters on Route J shall contact Hong Kong ATCU on the notified frequency at or before QUBEC;

b) Helicopters on Route L shall contact Hong Kong Zone 120.6 MHZ.

3.2.4 Altitude Restrictions

| Route | Segment | Maximum Altitude |
|---|---|---|
| Route J | Macao Heliport - MCU R116/DME 1 NM | Visual not above 500 ft |
| | MCU R116 - WALIN | 1 800 ft |
| Route L | KEMTE - TD R225 | 1 600 ft |
| | TD R225 - MCU R116/DME 1.1 NM | 2 000 ft |
| | MCU R116/DME 1.1 NM - Macao Heliport | Visual not above 500 ft |

3.2.5 Operating Procedures

a) Only specifically approved helicopter operators are permitted to use the IFR routes.

b) Operators shall obtain authorisation from Hong Kong Control Tower Supervisor and Macao Control Tower by fax or telephone prior to departure.

c) Only one helicopter at a time shall use both Route J and L.

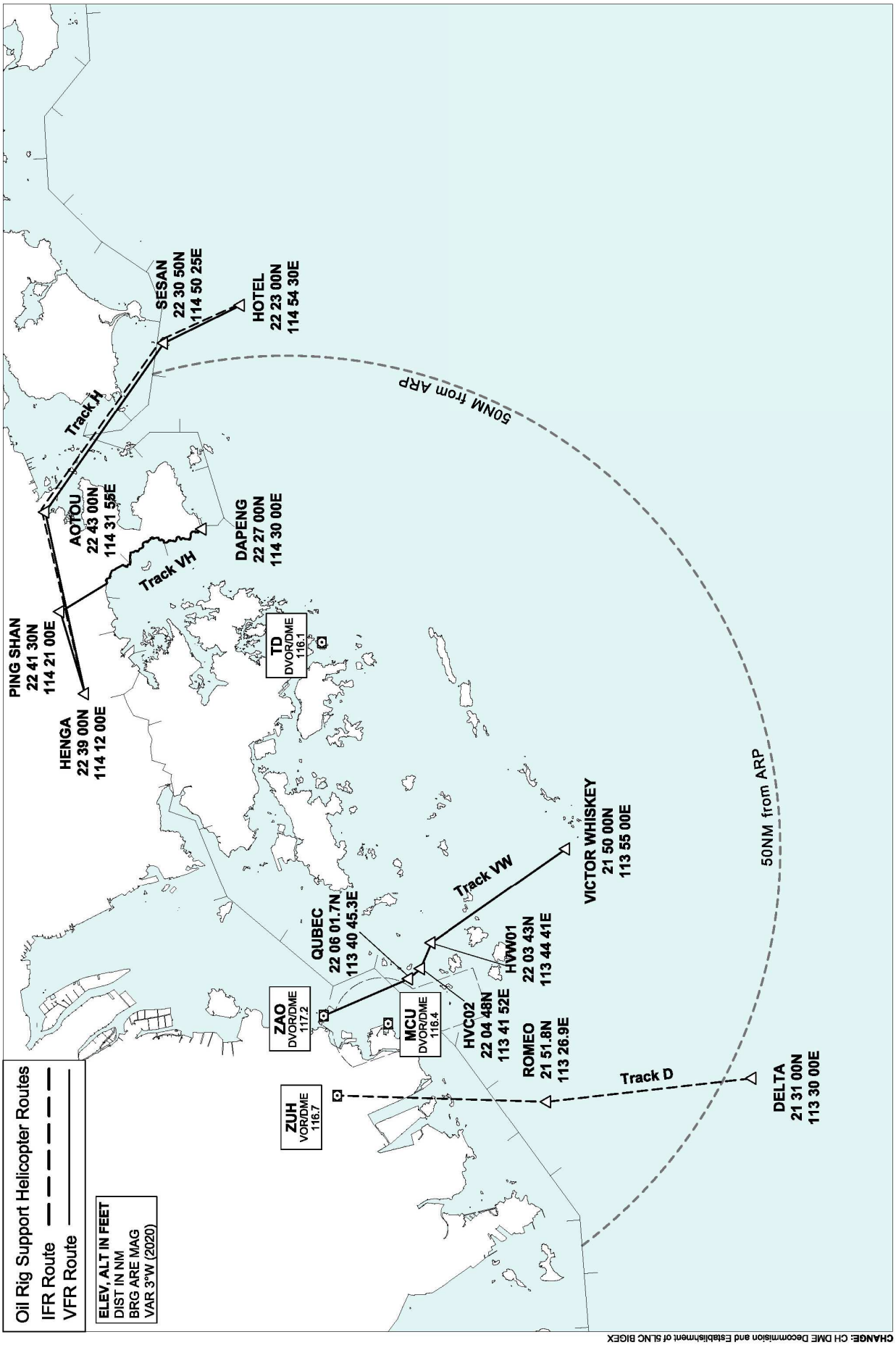
d) Pilots should use published instrument departure or approach procedure to/from Sky Shuttle Heliport.

e) Helicopters shall have a serviceable SSR transponder.

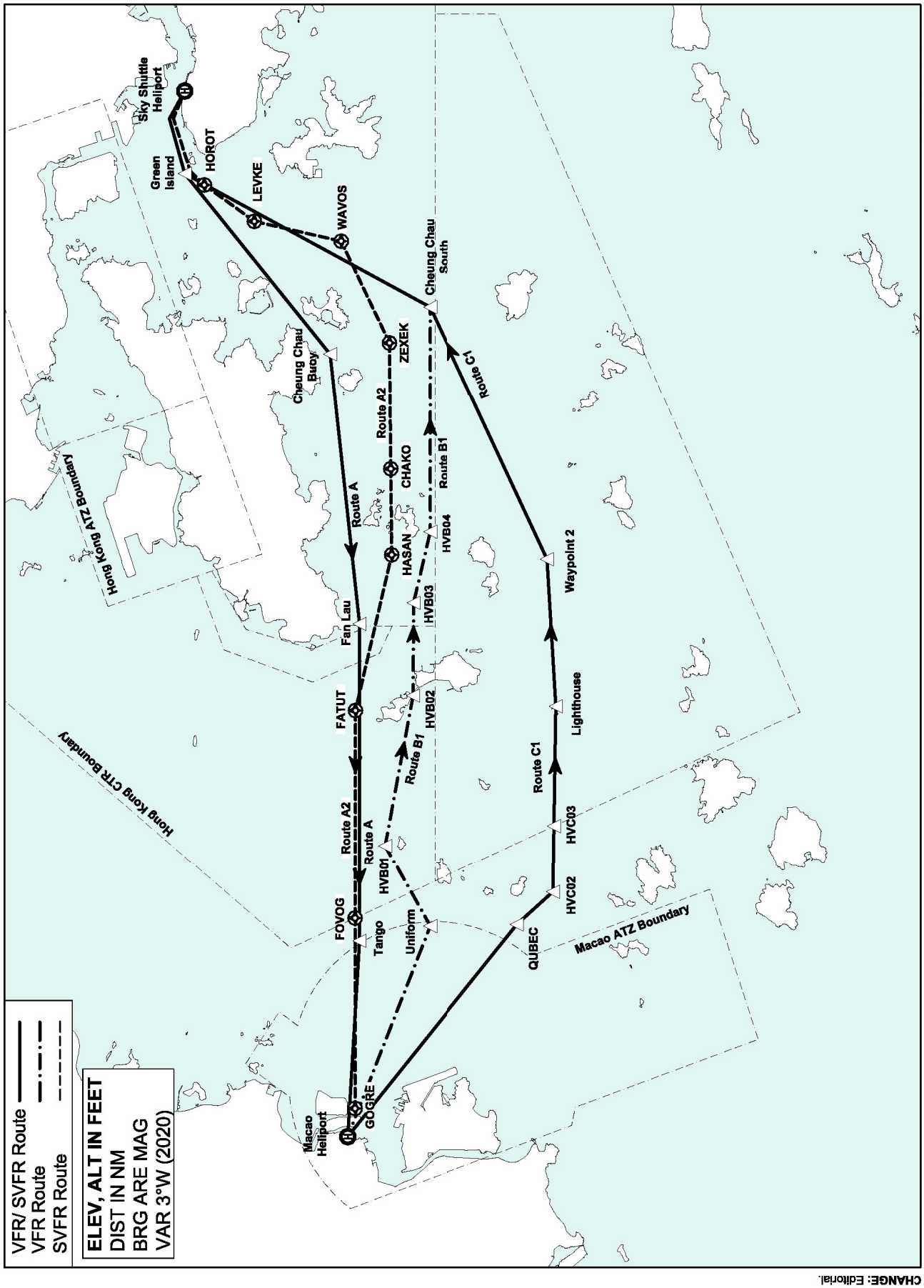
f) The IFR routes shall not normally be used during the peak periods of Macao Airport traffic.

g) The operating altitudes of the IFR routes are generally below the Minimum Safe Altitude and Minimum Vectoring Altitude, therefore no deviation from the published procedures is permitted.

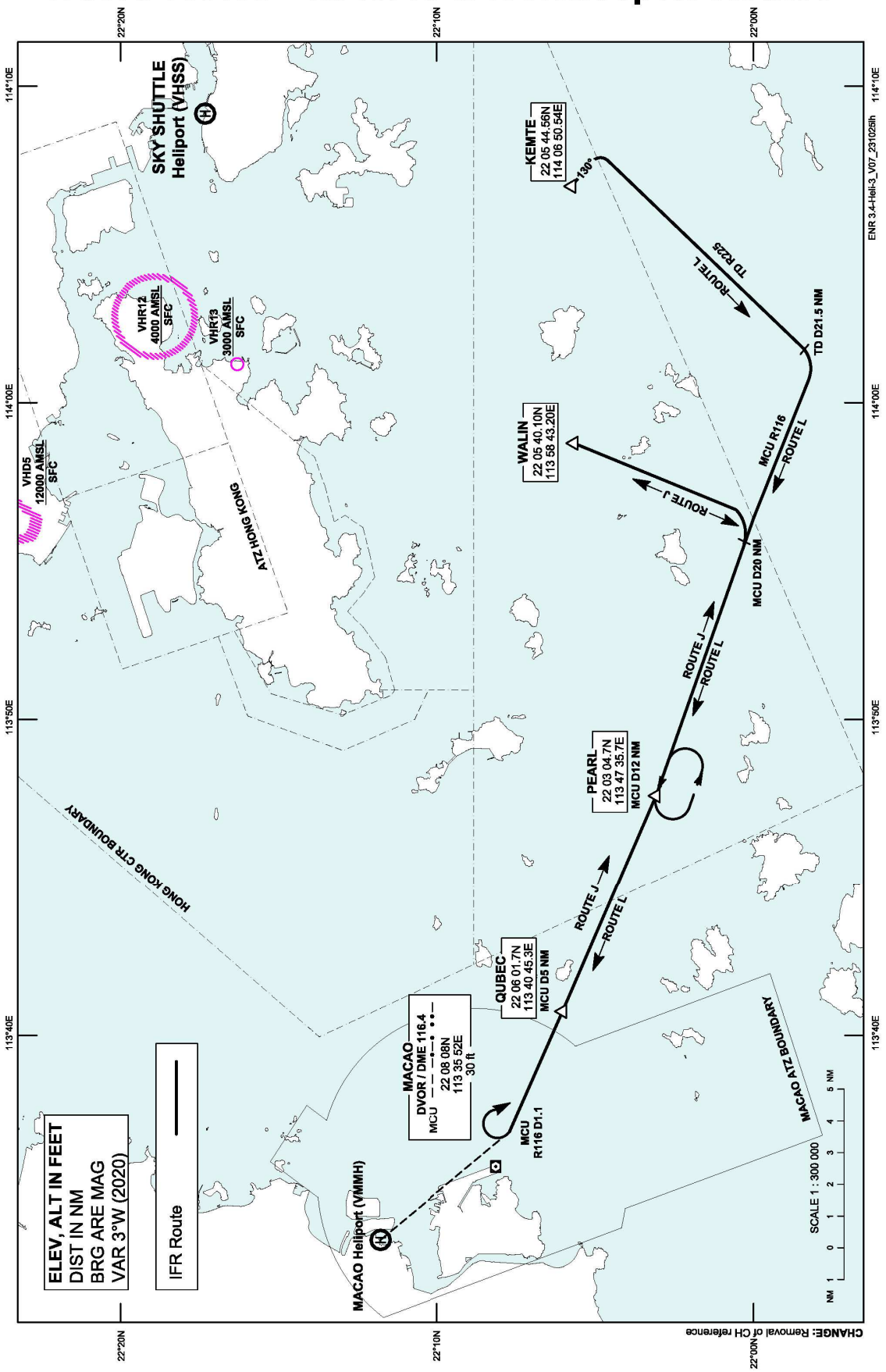
# Oil Rig Support Helicopter Routes



# Hong Kong - Macao VFR/SVFR Helicopter Routes



# HONG KONG - MACAO IFR Helicopter Routes



## ENR 3.5 OTHER ROUTES

Nil.

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# ENR 3.6 EN-ROUTE HOLDING

| EN-ROUTE HOLDING | | | | | | |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| **HLDG ID/FIX/WPT Cross Reference From Navaids and Co-ordinates** | **Inbound Track °MAG** | **Direction of Procedure Turn** | **MAX IAS (KT)** | **MNM HLDG LVL** | **Time/DIST Outbound** | **Controlling Unit and Frequency** |
| **ABBEY**<br>TD R091/D35.1NM<br>221611.00N<br>1145525.92E | 271 | Right<br>(Left above FL250) | 250* | FL90 | 10 NM | HONG KONG RADAR<br>126.5 MHZ<br>132.8 MHZ(SRY) |
| **ATIKO**<br>SMT R221/D40.1NM<br>214829.56N<br>1133226.04E | 036 | Right | 210 | 5000 ft | 1 min | HONG KONG RADAR<br>123.95 MHZ<br>132.225 MHZ(SRY) |
| **BAKER**<br>TD R165/D64.8NM<br>211302.00N<br>1143907.00E | 345 | Right | 250* | FL90 | 10 NM | HONG KONG RADAR<br>126.3 MHZ<br>132.6 MHZ(SRY) |
| **BETTY**<br>TD R165/D47.9NM<br>212910.82N<br>1143331.92E | 345 | Right | 250* | FL90 | 10 NM | HONG KONG RADAR<br>126.3 MHZ<br>132.6 MHZ(SRY) |
| **BUMDI**<br>SMT R089/D18.5NM<br>222139.62N<br>1141852.61E | 269 | Left | 220 | FL190 | 1 min | HONG KONG DEPARTURE<br>122.0 MHZ<br>124.05 MHZ(SRY) |
| **CANTO**<br>TD R226/D48.4NM<br>213902.63N<br>1134225.09E | 048 | Right | 250* | FL90 | 10 NM | HONG KONG RADAR<br>127.55 MHZ<br>134.3 MHZ(SRY) |
| **CHALI**<br>211745.00N<br>1133641.00E | 074 | Left | 230 | FL90 | 1 min | HONG KONG RADAR<br>123.95 MHZ<br>132.225 MHZ(SRY) |
| **COMBI**<br>TD R229/D64.7NM<br>212937.10N<br>1132744.30E | 074 | Right | 250* | FL90 | 10 NM | HONG KONG RADAR<br>127.55 MHZ<br>134.3 MHZ(SRY) |
| **DAKTO**<br>TD R151/D95.3NM<br>205330.89N<br>1151115.58E | 318 | Right | 250* | FL90 | 10 NM | HONG KONG RADAR<br>133.7 MHZ<br>129.9 MHZ(SRY) |
| **EATON**<br>TD R133/D104.2NM<br>210724.40N<br>1154301.10E | 248 | Right | 250* | FL90 | 10 NM | HONG KONG RADAR<br>133.7 MHZ<br>129.9 MHZ(SRY) |
| **FISHA**<br>TD R091/D58.1NM<br>221657.64N<br>1152011.61E | 271 | Right<br>(Left above FL250) | 250* | FL90 | 10 NM | HONG KONG RADAR<br>126.5 MHZ<br>132.8 MHZ(SRY) |
| **GAMBA**<br>TD R237/D94.4NM<br>211908.12N<br>1125536.21E | 074 | Right | 250* | FL90 | 10 NM | HONG KONG RADAR<br>127.1 MHZ<br>123.7 MHZ(SRY) |

Note *: 280 kt or Mach 0.8 whichever is the less under turbulent conditions and when approved by ATC
Note #: Holding at FL340 or below, MAX speed is 280KIAS or Mach 0.8 whichever is the less; above FL340 MAX speed is Mach 0.83.

| EN-ROUTE HOLDING | | | | | | |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| **HLDG ID/FIX/WPT Cross Reference From Navaids and Co-ordinates** | **Inbound Track °MAG** | **Direction of Procedure Turn** | **MAX IAS (KT)** | **MNM HLDG LVL** | **Time/DIST Outbound** | **Controlling Unit and Frequency** |
| **GODEN**<br>TD R182/D99.9NM<br>203435.35N<br>1141832.48E | 358 | Right | 250* | FL90 | 1 min | HONG KONG RADAR<br>128.125 MHZ<br>129.9 MHZ(SRY) |
| **HOCKY**<br>TD R174/D99.9NM<br>203549.35N<br>1143428.48E | 358 | Right | 250* | FL90 | 10 NM | HONG KONG RADAR<br>128.125 MHZ<br>129.9 MHZ(SRY) |
| **LIMES**<br>220625.60N<br>1134632.60E | 338 | Right | 210, or as directed by ATC | 4500 ft | 1 min | HONG KONG APPROACH<br>119.5 MHZ<br>119.1 MHZ(SRY) |
| **LUDLA**<br>221340.79N<br>1140428.75E | 336 | Right | 210, or as directed by ATC | 4500 ft | 1 min | HONG KONG APPROACH<br>119.5 MHZ<br>119.1 MHZ(SRY) |
| **MC513**<br>ZUH R147/D14.7NM<br>220109.95N<br>1133720.04E | 328 | Left | 185 | 3000 ft | 1 min | HONG KONG RADAR<br>123.95 MHZ<br>132.225 MHZ(SRY) |
| **MYWAY**<br>TD R219/D151.1NM<br>201146.30N<br>1124307.70E | 013 | Left | See Note # | FL90 | 10 NM | HONG KONG RADAR<br>127.1 MHZ<br>123.7 MHZ(SRY) |
| **OTKUM**<br>TD R229/D16.3NM<br>220334.20N<br>1140455.85E | 346 | Left | 230 | 4500 ft | 1 min | HONG KONG DEPARTURE<br>122.0 MHZ<br>124.05 MHZ(SRY) |
| **PAPA**<br>MCU R164/D10NM<br>215839.00N<br>1133922.00E | 344 | Left | 190 | 3000 ft | 1 min | HONG KONG RADAR<br>123.95 MHZ<br>132.225 MHZ(SRY) |
| **RIVMI**<br>222403.96N<br>1141909.28E | 344 | Right | 210, or as directed by ATC | 4500 ft | 1 min | HONG KONG APPROACH<br>119.5 MHZ<br>119.1 MHZ(SRY) |
| **ROCCA**<br>TD R226/D58.4NM<br>213155.42N<br>1133451.44E | 074 | Right | 250* | FL90 | 1 min | HONG KONG RADAR<br>127.55 MHZ<br>134.3 MHZ(SRY) |
| **TAPPO**<br>TD R186/D55.4NM<br>211920.61N<br>1141434.62E | 358 | Left | 250* | FL90 | 1 min | HONG KONG RADAR<br>123.475 MHZ<br>132.6 MHZ(SRY) |
| **TD DVOR**<br>221452.42N<br>1141735.30E | 344 | Right | 230, or as directed by ATC | 4500 ft | 1 min | HONG KONG APPROACH<br>119.1 MHZ<br>119.35 MHZ(SRY) |
| **TEDUR**<br>221118.77N<br>1142351.26E | 344 | Right | 210, or as directed by ATC | 4500 ft | 1 min | HONG KONG APPROACH<br>119.1 MHZ<br>119.35 MHZ(SRY) |

Note *: 280 kt or Mach 0.8 whichever is the less under turbulent conditions and when approved by ATC
Note #: Holding at FL340 or below, MAX speed is 280KIAS or Mach 0.8 whichever is the less; above FL340 MAX speed is Mach 0.83.

# ENR 4 RADIO NAVIGATION AIDS/SYSTEMS

## ENR 4.1 RADIO NAVIGATION AIDS - EN-ROUTE

| Name of station (VOR/VAR) | Id | Frequency (CH) | Hours of operation | Co-ordinates | ELEV DME antenna | Remarks |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| **TUNG LUNG**<br>DVOR/DME<br>(3°W) | TD | 116.1MHZ<br>(CH 108X) | H24 | 221452.42N<br>1141735.30E | 249.87 M | Coverage up to<br>200 NM at 35 000 ft |

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## ENR 4.2 SPECIAL NAVIGATION SYSTEMS

Nil.

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## ENR 4.3 GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS)

Nil.

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## ENR 4.4 NAME-CODE DESIGNATORS FOR SIGNIFICANT POINTS

| Name-code designator | Co-ordinates | ATS Route / PBN Route / TTR | SID / STAR / IAP / HLDG Fix |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| ABBEY | 221611.00N 1145525.92E | V512 / V522 / V591 | STAR-VHHH / HLDG Fix |
| ADLAD | 223040.74N 1141952.57E | | SID-VHHH |
| AGOMU | 223015.17N 1142229.86E | | SID-VHHH |
| AKEKU | 213418.33N 1170309.60E | V525 | |
| ALDOM | 195009.33N 1142226.42E | J103 | |
| ALLEY | 210511.15N 1134709.50E | V10 / V31 / V32 | SID-VMMC |
| ANRUX | 222705.73N 1141241.76E | | SID-VHHH |
| ARGON | 221152.56N 1134347.67E | | IAP-VHHH |
| ASOBA | 172222.00N 1143413.00E | M772 | |
| ATIKO | 214829.56N 1133226.04E | | HLDG Fix |
| BAKER | 211302.00N 1143907.00E | | HLDG Fix |
| BEKOL | 223236.00N 1140800.00E | A461 / J103 | SID-VHHH |
| BESDA | 220203.11N 1164645.01E | V611 | |
| BETTY | 212910.82N 1143331.92E | V525 / V533 / V534 / V542 / V551 / W29 | STAR-VHHH / HLDG Fix |
| BIGEX | 221310.35N 1140148.20E | A1 / A202 / A461 / A583 / B330 / G581 / G86 / L642 / M771 / P901 | |
| BIMIX^ | 220123.63N 1161953.93E | | |
| BOKAG | 223146.65N 1141327.06E | | IAP-VHHH |
| BORDA | 214132.37N 1132429.01E | | STAR-VHHH |
| BUMDI | 222139.62N 1141852.61E | J101 | HLDG Fix |
| CANTO | 213902.63N 1134225.09E | V561 / V571 | STAR-VHHH / HLDG Fix |
| CANUP | 222502.54N 1141346.40E | | IAP-VHHH |
| CARSO | 190000.00N 1144237.75E | Q1 / V551 | |
| CHAKO* | 221020.5N 1135616.3E | | |

| Name-code designator | Co-ordinates | ATS Route / PBN Route / TTR | SID / STAR / IAP / HLDG Fix |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| CHALI | 211745.00N 1133641.00E | J104 | STAR-VMMC / HLDG Fix |
| COMBI | 212937.10N 1132744.30E | V561 / V571 | HLDG Fix |
| CONGA | 214402.50N 1164705.90E | V621 / V631 | SID-VMMC |
| COTON | 210924.17N 1131101.04E | J104 | |
| CUSDO | 221643.86N 1140543.60E | | IAP-VHSS |
| CYBER | 205049.64N 1143310.56E | V534 / V542 / V551 | |
| DAGBU | 203257.99N 1120910.07E | V10 | |
| DAKIG | 215052.90N 1142633.33E | | SID-VHHH / SID-VMMC |
| DAKTO | 205330.89N 1151115.58E | V525 / V533 / W29 | HLDG Fix |
| DALOL | 214436.90N 1145045.34E | V621 / V631 / V642 / V652 | SID-VHHH / SID-VMMC |
| DASON | 210323.27N 1125240.39E | J104 | |
| DELTA* | 213100N 1133000E | | |
| DOSUT | 170200.00N 1134048.00E | M771 | |
| DOTMI | 224306.00N 1161006.00E | A470 / V512 / V601 | |
| DULOP | 181412.00N 1143236.00E | M771 / M772 / Q1 | |
| DUMEP | 214436.30N 1151249.87E | V621 / V631 | SID-VHHH / SID-VMMC |
| DUMOL | 190000.00N 1142648.00E | J103 / M771 | |
| EATON | 210724.40N 1154301.10E | V525 / W29 | HLDG Fix |
| ELATO | 222000.00N 1173000.00E | A1 / G581 / J101 / V522 / V525 / V621 | |
| ENBOK | 183324.00N 1132930.00E | L642 | |
| ENPET | 221733.16N 1154124.36E | V512 / V522 / V591 | |
| ENROM^ | 213333.00N 1161200.00E | | |
| ENVAR | 215930.00N 1173000.00E | M750 / V631 | |
| EPDOS | 190000.00N 1133318.00E | L642 / V12 / V32 | |
| EPKAL | 175130.00N 1125718.00E | L642 | |

| Name-code designator | Co-ordinates | ATS Route / PBN Route / TTR | SID / STAR / IAP / HLDG Fix |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| FATUT* | 221132.4N 1134803.6E | | |
| FIDLA | 221406.03N 1140344.89E | | SID-VHSS / IAP-VHSS |
| FISHA | 221657.64N 1152011.61E | V512 / V522 / V591 | HLDG Fix |
| FOVOG* | 221133.2N 1134058.3E | | |
| GAMBA | 211908.12N 1125536.21E | V561 / V571 | HLDG Fix |
| GOBBI^ | 210808.15N 1133138.01E | | |
| GODEN | 203435.35N 1141832.48E | | HLDG Fix |
| GOGRE* | 221133.2N 1133430.4E | | |
| GONAT | 223232.30N 1141527.06E | | IAP-VHHH |
| GUAVA | 220936.10N 1140336.30E | | IAP-VHHH |
| HASAN* | 221018.6N 1135320.9E | | |
| HAZEL | 220126.49N 1134056.63E | | STAR-VMMC |
| HOCKY | 203549.35N 1143428.48E | V534 / V542 / V551 | HLDG Fix |
| HOROT* | 221640.0N 1140556.8E | | |
| HOTEL* | 222300N 1145430E | | |
| IDOSI | 190000.00N 1123000.00E | A1 / P901 / V11 / V31 / V561 | |
| IGLEG^ | 185415.61N 1122539.95E | | |
| IKELA | 183942.00N 1121442.00E | A1 / P901 | |
| INDUS | 220241.00N 1133601.00E | | STAR-VMMC |
| IONIC | 221604.50N 1140513.93E | | SID-VHSS |
| ISBAN | 204934.33N 1141713.11E | J103 | |
| KAPLI | 211000.00N 1173000.00E | G86 | |
| KEMTE | 220544.56N 1140650.54E | | SID-VHSS |
| KILOG | 215227.00N 1144137.00E | M750 | |
| LAMMA | 221655.61N 1140510.55E | | IAP-VHHH |

| Name-code designator | Co-ordinates | ATS Route / PBN Route / TTR | SID / STAR / IAP / HLDG Fix |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| LANDA+ | 213647.24N 1130242.74E | | |
| LARIT | 215341.37N 1151606.56E | V601 / V611 | SID-VHHH / SID-VMMC |
| LAXET | 205616.57N 1140005.12E | V11 / V12 | |
| LEGOD^ | 205631.76N 1145344.09E | | |
| LEKEN | 215301.06N 1145444.95E | V601 / V611 | SID-VHHH / SID-VMMC |
| LELIM | 225624.00N 1171842.00E | V591 / V611 | |
| LEVKE* | 221458.2N 1140442.7E | | |
| LIKBI | 222443.38N 1141532.10E | | IAP-VHHH |
| LIMES | 220625.60N 1134632.60E | | STAR-VHHH / IAP-VHHH / HLDG Fix |
| LIMSU | 224427.09N 1171137.82E | V611 | |
| LUBMO | 215755.24N 1143152.98E | | SID-VHHH / SID-VMMC |
| LUDLA | 221340.79N 1140428.75E | | IAP-VHHH / STAR-VHHH / HLDG Fix |
| LUKBU | 222244.12N 1135301.50E | | SID-VMMC |
| MADRU^ | 210945.30N 1170948.01E | | |
| MAGOG | 221746.00N 1154930.00E | A1 / A470 / G581 / V512 / V522 / V591 | |
| MALKA | 224413.60N 1170041.71E | V591 | |
| MANGO | 213649.00N 1143053.00E | | STAR-VHHH |
| MAPLE | 212226.82N 1130542.82E | V561 / V571 | |
| MEBKI | 214432.75N 1153454.24E | V621 / V631 | SID-VMMC |
| MEPUT | 213759.00N 1154519.80E | W29 | |
| MORTU^ | 194237.03N 1142305.91E | | |
| MULET | 213501.95N 1134751.87E | | SID-VMMC |
| MURRY | 214528.37N 1134841.97E | | STAR-VHHH |
| MUSEL | 221553.99N 1144652.13E | | STAR-VHHH |
| MYWAY | 201146.30N 1124307.70E | V561 | HLDG Fix |

| Name-code designator | Co-ordinates | ATS Route / PBN Route / TTR | SID / STAR / IAP / HLDG Fix |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| NEDLE | 222313.95N 1144157.47E | J101 | |
| NIXUS | 222922.05N 1141019.70E | | IAP-VHHH |
| NOBAD^ | 201443.75N 1153033.94E | | |
| NOLIB | 222538.95N 1140036.84E | | IAP-VHHH |
| NOMAN | 200000.00N 1164018.00E | A461 / V533 / V534 / V642 | |
| NOPER | 205048.05N 1160601.97E | V642 | |
| NUDPI | 215418.90N 1153728.21E | V601 / V611 | SID-VMMC |
| OSUMO | 203313.23N 1153232.05E | V533 / V534 | |
| OTKUM | 220334.20N 1140455.85E | | HLDG Fix |
| PEARL* | 220304.7N 1134735.7E | | |
| PECAN | 212620.19N 1140205.64E | V10 / V11 / V12 | SID-VHHH / SID-VMMC |
| PONTI | 222216.35N 1142745.83E | J101 | |
| PORPA | 222009.10N 1140116.30E | | SID-VHHH / IAP-VHHH |
| POVAM | 211454.67N 1152107.14E | V652 | |
| POVEG | 221743.28N 1134803.62E | | SID-VHHH |
| PRAWN | 221605.40N 1134840.10E | | SID-VHHH |
| QUBEC* | 220601.7N 1134045.3E | | |
| RAGSO | 204532.33N 1115856.71E | J104 | |
| RAMEN | 220939.22N 1140509.89E | | SID-VHHH |
| RIVMI | 222403.96N 1141909.28E | | IAP-VHHH / HLDG Fix / STAR-VHHH |
| ROBIN | 210245.00N 1141606.00E | J103 | |
| ROCCA | 213155.42N 1133451.44E | V561 / V571 | STAR-VHHH / HLDG Fix |
| ROMEO* | 215148N 1132654E | | |
| ROVER | 222035.58N 1140139.12E | | SID-VHHH |
| RUMSY | 220456.94N 1134816.79E | | SID-VHHH |

| Name-code designator | Co-ordinates | ATS Route / PBN Route / TTR | SID / STAR / IAP / HLDG Fix |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| RUNLI | 212659.72N 1134051.00E | | STAR-VMMC |
| RUNSU | 222522.96N 1141153.57E | | IAP-VHHH |
| RUSBI | 204657.36N 1154127.93E | V652 | |
| SABNO | 185906.00N 1155042.00E | A583 / V542 / V652 | |
| SAGNI | 222346.63N 1140652.68E | | IAP-VHHH |
| SAMED | 220443.00N 1142631.83E | | SID-VHHH |
| SAMMI | 222800.00N 1155742.00E | J101 | |
| SANKU^ | 213121.37N 1162040.33E | | |
| SAPAX | 213919.84N 1141247.62E | J103 | |
| SEGPO | 215732.77N 1142118.59E | | SID-VHHH / SID-VMMC |
| SIERA# | 215912.00N 1133312.00E | | STAR-VHHH |
| SIKOU | 205036.00N 1113000.00E | A202 / J104 / R339 / V10 / V571 | |
| SILVA | 215104.50N 1135410.88E | | STAR-VHHH |
| SKATE | 213154.99N 1150839.94E | V642 / V652 | SID-VMMC |
| SMT | 222015.43N 1135855.46E | J101 | STAR-VMMC / SID-VHHH |
| SOKOE | 220441.20N 1135038.10E | | IAP-VHHH |
| SONNY | 210103.66N 1150318.81E | V525 / V533 / W29 | |
| SOSLU | 213844.03N 1140518.39E | | SID-VHHH / SID-VMMC |
| SOUSA | 220110.40N 1161127.80E | V601 / V611 | SID-VMMC |
| STELA | 221153.29N 1134349.11E | | IAP-VHHH |
| SUDVA | 220425.14N 1142133.87E | | SID-VHHH / SID-VMMC |
| SUGAP | 215557.44N 1140201.64E | | SID-VHHH |
| SUKER | 194033.48N 1143911.87E | V542 / V551 | |
| SULUX^ | 202054.31N 1152433.18E | | |
| SUPAD | 220005.99N 1140730.72E | | SID-VHHH |

| Name-code designator | Co-ordinates | ATS Route / PBN Route / TTR | SID / STAR / IAP / HLDG Fix |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| SURFA | 191850.98N 1124411.17E | V11 / V31 | |
| TAMOT | 222130.00N 1135200.00E | B330 | |
| TANGO* | 221124N 1134012E | | |
| TAPPO | 211920.61N 1141434.62E | J103 | HLDG Fix |
| TEDUR | 221118.77N 1142351.26E | | STAR-VHHH / HLDG Fix |
| TEGUB | 222418.28N 1140454.69E | | SID-VHHH |
| TOFEE | 191821.99N 1151738.48E | V542 | |
| TONIC | 221247.88N 1134321.85E | | IAP-VHHH |
| TOPUN | 222254.17N 1140409.15E | | IAP-VHHH |
| TUBBY | 223025.41N 1164024.45E | J101 | |
| TUTBA | 221401.82N 1134244.92E | | IAP-VHHH |
| UNTUL | 201902.18N 1160138.11E | V533 / V534 / V652 | |
| VANPU | 220357.95N 1134803.85E | | SID-VHHH |
| VEDMU | 220814.02N 1135508.18E | | SID-VHHH |
| VEDVO | 220438.19N 1141543.05E | | SID-VHHH / SID-VMMC |
| VEMSO | 221425.06N 1141852.28E | | SID-VHHH |
| WALIN* | 220540.10N 1135843.20E | | IAP-VHSS |
| WAVOS* | 221201.5N 1140402.3E | | |
| XEMEK | 213816.17N 1145943.04E | V642 / V652 | SID-VHHH / SID-VMMC |
| ZEXEK* | 221023.10N 1140034.90E | | SID-VHSS / IAP-VHSS |

Note :

+ Significant point for route W130 (Refer to AIP China)

# Significant point for route R473 (Refer to AIP China)

^ Through area waypoint

* Helicopter routes reporting point

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## ENR 4.5 AERONAUTICAL GROUND LIGHTS - EN-ROUTE

Nil.

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# ENR 5 NAVIGATIONAL WARNINGS

## ENR 5.1 PROHIBITED, RESTRICTED AND DANGER AREAS

| 1 | | 2 | 3 |
|---|---|---|---|
| Identification, name and lateral limits | | Upper Limit<br>Lower Limit | Remarks (time of activity, type of restriction, nature of hazard) |
| **PROHIBITED AREA** | | | |
| **VHP8** | **STANLEY FORT**<br>Sectors 090° - 120° and 230° - 270° at 221154N 1141304E within a radius of 3 000 ft (914.4 m) | ALT 1 000 ft<br>GND | H24<br>Satellite earth station. |
| **RESTRICTED AREA** | | | |
| **VHR7** | **TUNGSHA (PRATAS) ISLAND**<br>Circle of 10 NM (18.5 km) radius centred at 2042N 11643E | ALT 5 000 ft<br>SFC | H24<br>Military firing<br>Controlling authority is Taipei Civil Aeronautics Administration. |
| **VHR12** | **PENNY'S BAY**<br>Circle of 1.35 NM (2.5 km) radius centred at 221855.56N 1140244.0E | ALT 4 000 ft<br>SFC | H24<br>Entertainment Park |
| **VHR13** | **KAU SHAT WAN**<br>Circle of 0.19 NM (350 m) radius centred at 221619.20N 1140113.80E | ALT 3 000 ft<br>SFC | H24<br>Explosive depot |
| **DANGER AREAS** | | | |
| **VHD5** | **TSING SHAN FIRING RANGE**<br>222653N 1135742E, 222448N 1135609E,<br>222454N 1135522E, 222337N 1135527E,<br>222243N 1135539E, 222233N 1135557E,<br>222228N 1135623E, 222358N 1135732E,<br>222613N 1135844E, 222653N 1135742E. | ALT 12 000 ft<br>GND | Period of activity to be notified by NOTAM.<br>Artillery firing |
| **VHD11** | **NINEPINS RANGE**<br>222000N 1142600E<br>222000N 1143000E<br>221600N 1143000E<br>221600N 1142600E<br>222000N 1142600E | ALT 2 000 ft<br>SFC | Period of activity to be notified by NOTAM.<br>Police firing. |
| **ZJ(D) 208** | 201116N 1110004E<br>202054N 1114452E<br>194210N 1115408E<br>193233N 1110928E<br>201116N 1110004E | 15 000 m<br>6 000 m | Daily: 0030 - 1200<br>Ground to air firing |

**1 Prohibited Area VHP8**

1.1 Flights within the Prohibited Area notified in ENR 5.1 are prohibited to civil aircraft.

1.2 Pilots are warned that deliberate infringement of a prohibited area is an offence under the Air Navigation (Hong Kong) Order 1995.

**2 Restricted Area VHR7**

2.1 The Restricted Area VHR7 listed in ENR 5.1 and shown in ENR 6.1 is controlled by Taibei Civil Aeronautics Administration.

**3 Restricted Area VHR12**

3.1 No aircraft shall operate within the Restricted Area VHR12 listed in ENR 5.1, except for:

a) aircraft flying in accordance with ATC instructions or published procedures, for the purpose of weather avoidance or deviation due to technical problems;

b) aircraft of the Government Flying Service operating for the purposes of fire fighting, fire prevention, life saving, casualty evacuation or on police operations;

c) aircraft granted specific exemption from the relevant legislation by the Director-General of Civil Aviation.

**4 Restricted Area VHR13**

4.1 No aircraft shall operate within the Restricted Area VHR13 listed in ENR 5.1, except for emergency.

**5 Danger Areas VHD5 and VHD11**

5.1 The Danger Areas listed in ENR 5.1 constitute areas in which flying is dangerous when the areas are active. Pilots are warned that they should not fly within such areas.

5.2 Activation of Danger Areas VHD5 and VHD11 will be promulgated by NOTAM.

**6 Nomenclature of Prohibited, Restricted or Danger Areas**

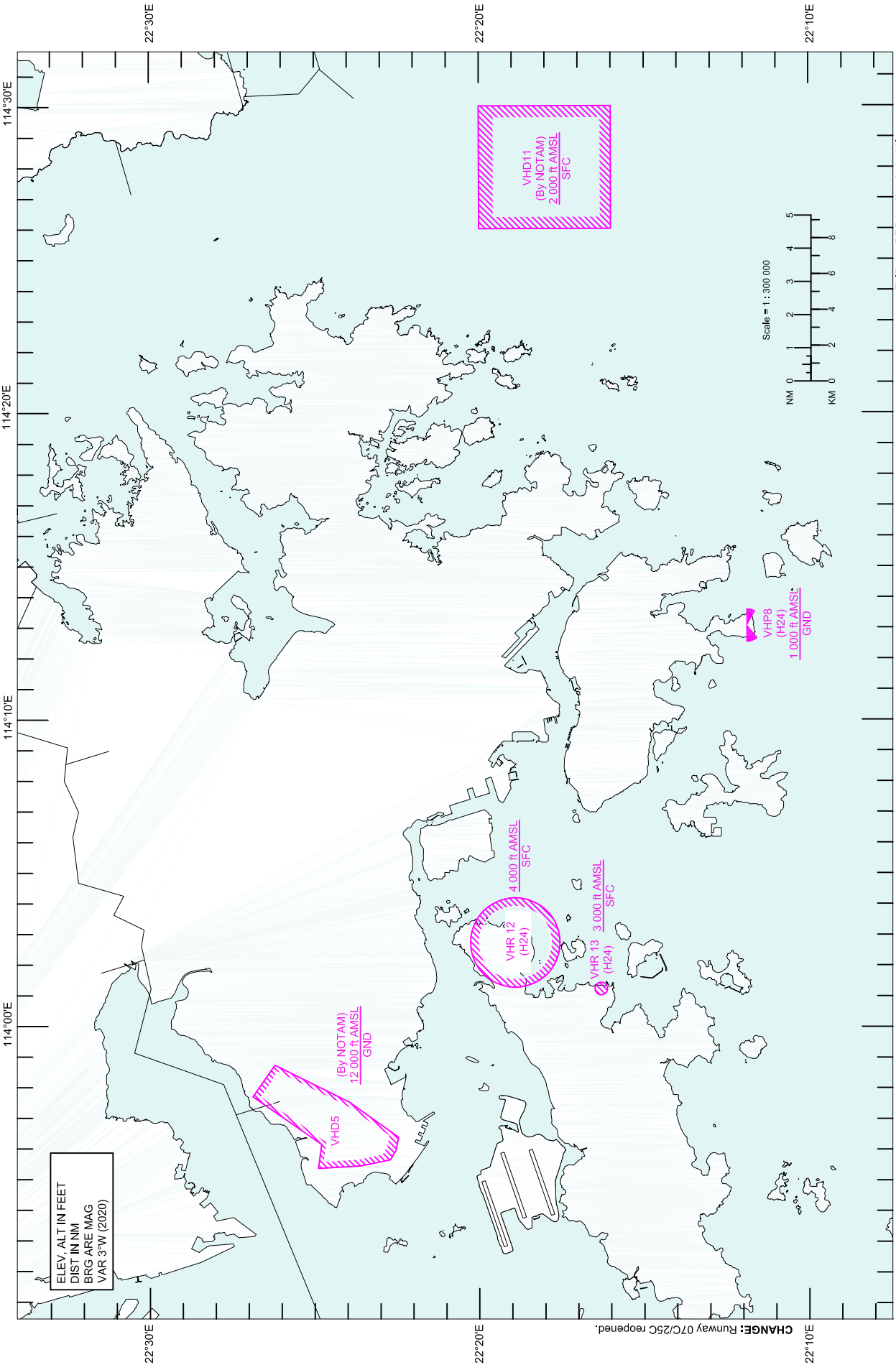
6.1 All Areas defined for such purposes are named in alphanumeric combinations according to the following :-

| | | | |
|---|---|---|---|
| (i) | The 1st & 2nd letters as | **VH** | denoting Hong Kong; |
| (ii) | The 3rd letter as | **P** | denoting a Prohibited Area; or |
| | | **R** | denoting a Restricted Area; or |
| | | **D** | denoting a Danger Area. |

(iii) The 4th (and 5th) numeric(s) denoting the number sequence of the Area type.

6.2 The numeric numbers of the particular Area sequence will not be reused.

# Prohibited, Restricted and Danger Areas Chart - Short Range



## ENR 5.2 MILITARY EXERCISE AND TRAINING AREAS

1 Military exercise areas will be notified by NOTAM as and when necessary.

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# ENR 5.3 OTHER ACTIVITIES OF A DANGEROUS NATURE AND OTHER POTENTIAL HAZARDS

## 1 Avoidance of Disaster Area(s)

1.1 Disasters, particularly those involving installations or carriers of gas, oil or chemicals, may produce an immediate risk of explosion, fire and surface pollution which, in addition, may cause the release of gases which may be noxious or explosive or both.

1.2 In the event of a disaster occurring on land or at sea within the territory of Hong Kong, the Civil Aviation Department may consider it necessary for the safety of life and property, and particularly for the protection of those subsequently engaged in search and rescue, to inhibit flights in the vicinity of the disaster by aircraft not directly engaged in emergency actions, by establishing a temporary Danger Area around the scene of the disaster. However, if the temporary Danger Area fails to achieve this objective, statutory Restriction of Flying under Article 69 of The Air Navigation (Hong Kong) Order 1995, which makes it an offence for an aircraft to be flown in the designated area without appropriate permission, will be brought into effect. Details of temporary Danger Areas and Restriction of Flying will be promulgated by NOTAM.

## 2 Release of Radio-sonde MET Balloon

2.1 Radio-sonde MET balloons are released by the Hong Kong Observatory twice a day, at 1130 and 2330 UTC plus once a week every Wednesday at 0530 UTC, from King's Park Meteorological Station (Hong Kong International Airport ARP 090º/27 km).

2.2 The balloon is red in colour and has a diameter of 1.5 m at ground level; a parachute and an instrument box are tethered 1.5 m and 60 m respectively below. It rises at a rate of about 1 200 ft per minute and can reach a height of 90 000 ft.

## 3 Penny's Bay Gas Turbine Power Station

3.1 A gas turbine power station at Penny's Bay may operate and produce high temperature plumes within a radius of 0.27 NM (0.5 km) of UTM Grid Ref JK952713, up to an altitude of 1 500 ft AMSL. (This area is wholly within Restricted Area VHR12 Penny's Bay.)

## 4 Laser and Searchlight Display

4.1 A laser and searchlight display takes place every evening from the buildings along the Central, Wanchai, Tsim Sha Tsui and Kowloon Bay Districts' waterfront during the period 1200 to 1213 UTC daily.

4.2 The laser beams are confined to an altitude band of 600 ft to 1 500 ft AMSL so as to mitigate visual distraction to pilots.

4.3 RESTRICTIONS TO AIRCRAFT AND HELICOPTER OPERATIONS

4.3.1 Aircraft and helicopters shall remain clear of the area bounded by UTM Grid references KK072671, to KK079681, to KK119713, to KK130691, to KK091667 then along the coastline to KK072671, up to an altitude of 1 500 ft AMSL, during the period of the laser and searchlight display.

4.3.2 If there is an operational requirement for an aircraft or helicopter to enter the above area during the period of the laser and searchlight display, except for emergency situations, the operator must obtain the prior approval of the Director-General of Civil Aviation.

4.4 There are no operational restrictions to the use of Sky Shuttle Heliport.

## 5 Fireworks Displays

5.1 At Disneyland

5.1.1 A fireworks display lasting for 20 minutes is held every evening at Hong Kong Disneyland, during the period 1100 -1430 UTC, subject to weather conditions. The fireworks are contained within a radius of 0.54 NM (1 km) of UTM Grid Ref JK956706, up to an altitude of 1 100 ft AMSL. (This area is situated inside Restricted Area VHR12 (Penny's Bay) as described in ENR 5.1)

5.2 At Victoria Harbour

5.2.1 Fireworks displays lasting about 25 minutes are held in Victoria Harbour (area around UTM Grid KK085675) to celebrate special occasions of the year. The date, time and affected airspace will be promulgated by NOTAM.

5.2.2 During the fireworks display period, aircraft operating in the CTR Island Zone shall keep clear of the published NOTAM area. Flights departing from or arriving for Hong Kong International Airport shall not deviate and overfly the Victoria Harbour.

**6 Tung Chung - Ngong Ping Cable Car**

6.1 An aerial cable car is in operation at the southern perimeter of the airport. The cable car links Tung Chung with Ngong Ping Peak on Lantau Island (see chart page AD 2-VHHH-VFR-3).

6.2 Between Tower 2B, 190 ft AMSL (Hong Kong Airport southern perimeter) and Tower 3, 1 023 ft AMSL (Nei Lak Shan), the ropeway spans Tung Chung Bay up to a height of 694 ft AMSL. Helicopters operating in the Tung Chung Bay area shall visually maintain safe clearance from the ropeway.

6.3 All cable car support towers are lit and the ropeway over Tung Chung Bay is marked with orange and white day markers and red lights at night.

**7 Local Rock Blasting**

7.1 Rock blasting is carried out at a number of locations in Hong Kong. Refer to the AIP Supplement for details.

**8 Wind Turbines**

8.1 Wind turbine erected at Lamma Island PSN: 22 13 32.16N 114 07 15.10E Height 535 ft AGL.

**9 Hong Kong Offshore Liquefied Natural Gas Terminal**

9.1 The Hong Kong Offshore Liquefied Natural Gas (HKOLNG) Terminal is located to the east of Soko Islands, in close proximity to the Hong Kong – Macao VFR/SVFR Helicopter Routes A2 and B1 (see the diagram below).

9.2 The maximum height of the Terminal is up to 83.9 m or 275 ft AMSL. During its operations, the closest distance between the LNG carrier and the Hong Kong – Macao VFR/SVFR Helicopter Route B1 is about 374 m.

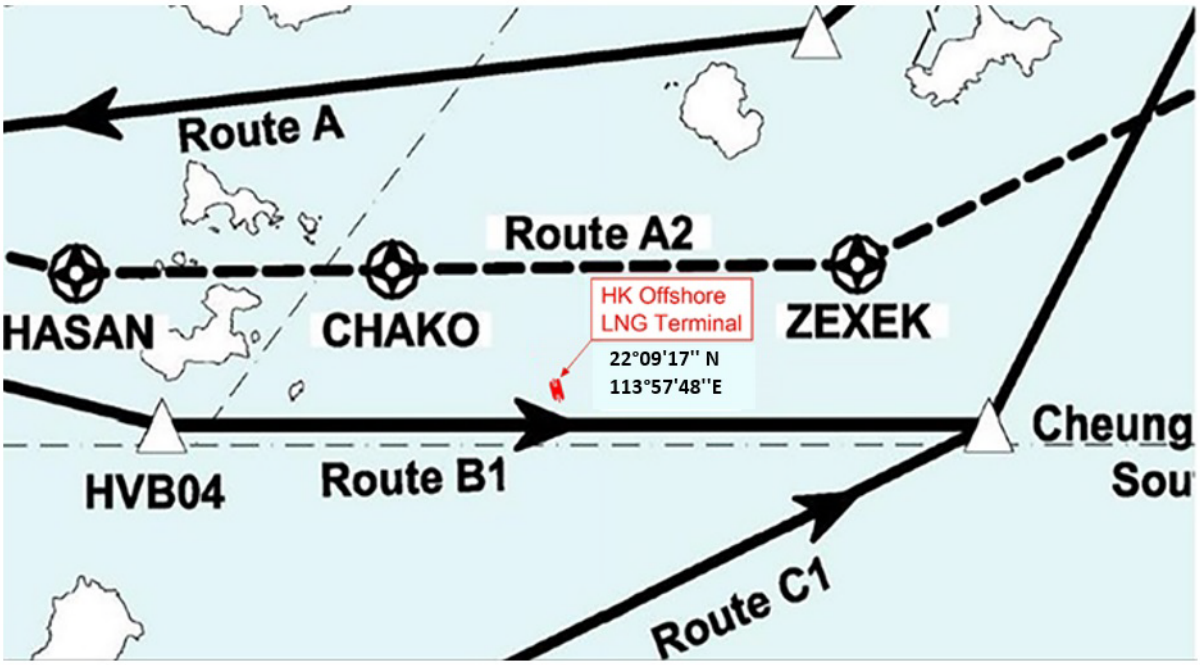
9.3 Aviation Obstacle Lights are installed at the highest points of the superstructures and lifting equipment in the Terminal.

9.4 Advice to Helicopter and Aircraft Operators

9.4.1 Local VFR/SVFR traffic (helicopter and fixed-wing light aircraft) should avoid flying over the Terminal.

9.4.2 Pilots are reminded to adhere to the relevant flight procedures published in AIP ENR 3.4 and remain vigilant when operating in the airspace near the Terminal.

Location of the HKOLNG Terminal



## ENR 5.4 AIR NAVIGATION OBSTACLES - EN-ROUTE

(Under development)

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# ENR 5.5 AERIAL SPORTING AND RECREATIONAL ACTIVITIES

## 1 Paragliding Activities

1.1 Paragliding activities are frequently carried out in the following areas of the CTR Zones and UCARAs (see chart ENR 5.5-ASRA) during daylight hours:

| | Name | Location | Operating Altitude | Boundary Coordinates (LAT LONG) or land features |
|---|---|---|---|---|
| a | Long Ke Wan | Sai Kung East Country Park,<br>UCARA Port Shelter | SFC - 2000 ft AMSL | 222236N 1142209E<br>222300N 1142247E<br>222148N 1142259E<br>222145N 1142241E |
| b | Pak Tam Au | Sai Kung East Country Park,<br>UCARA Tolo | SFC - 2000 ft AMSL | 222610N 1141821E<br>222729N 1141851E<br>222552N 1142233E<br>222506N 1142220E<br>222517N 1141957E<br>222541N 1141836E |
| c | Pat Sin | Pat Sin Leng Country Park,<br>UCARA New Town | SFC - 2500 ft AMSL | 222759N 1140959E<br>222927N 1141029E<br>222923N 1141228E<br>222908N 1141403E<br>222803N 1141404E<br>222753N 1141034E |
| d | Ma On Shan | Ma On Shan Country Park,<br>UCARA New Town | SFC - 2500 ft AMSL | Sai O Raw Water Pumping Station<br>(222539N 1141512E)<br>Ma On Shan Water Treatment Works<br>(222539N 1141532E)<br>Tai Tung Tsuen<br>(222525N 1141550E)<br>Nga Yiu Tau<br>(222516N 1141558E)<br>then along Sai Sha Road to<br>Wong Chuk Wan<br>(222358N 1141658E)<br>Shek Lung Tsai San Tsuen<br>(222331N 1141536E)<br>222214N 1141453E<br>Tsim Mei Fung<br>(222158N 1141317E) |
| e | Sai Wan | Sai Kung East Country Park,<br>UCARA Port Shelter | SFC - 1000 ft AMSL | 222331N 1142147E<br>222417N 1142150E<br>222408N 1142225E<br>222316N 1142222E |
| f | Shek O | Hong Kong Island,<br>CTR Island Zone | SFC - 1500 ft AMSL | 221221N 1141434E<br>221442N 1141325E<br>221459N 1141507E<br>221347N 1141537E<br>221228N 1141536E |

| | Name | Location | Operating Altitude | Boundary Coordinates (LAT LONG) or land features |
|---|---|---|---|---|
| g | South Lantau East | Lantau South Country Park,<br>CTR Lantau Zone | SFC - 2000 ft AMSL | 221356N 1135731E<br>221417N 1135849E<br>221542N 1135816E<br>221530N 1135723E<br>then the footpath south of Sunset Peak, along the ridge to 350m, then direct to Cheung Sha Beach. |
| h | South Lantau West | Lantau South Country Park,<br>CTR Lantau Zone | SFC - 2000 ft AMSL | 221325N 1135543E<br>221310N 1135432E<br>221438N 1135434E<br>221456N 1135541E<br>then along the ridge from Lantau Peak to Tong Fuk. |
| i | South Lantau | Lantau South Country Park,<br>CTR Lantau Zone | SFC - 500 ft * AMSL<br><br>** For landing only* | 221340N 1135608E<br>221356N 1135731E<br>221354N 1135609E<br>221427N 1135707E |

1.2 Paragliders shall avoid paragliding activities over or land on any bathing beaches / or land on any private premises without permission from the landowners.

**2 Captive Balloon Flights**

2.1 Permission to operate captive balloon flights, with persons or no persons on board, to not exceeding 60 m (200 feet) AGL, may be granted in the Hong Kong territory subject to satisfying relevant safety conditions and not affecting the normal operations of aircraft.

2.2 Application for permission, depending on type of flight, must be submitted to CAD at least 14 days prior to the intended date of operation. Please refer to the following website for details:

http://www.cad.gov.hk/english/faq.html#balloon

**3 Mass Release of Small Balloons**

3.1 Balloons not larger than 30 cm (12 inches) in diameter may be released individually. For mass release of balloons not exceeding 500 in number, CAD needs to be notified at least 7 working days prior to the date of intended release. Relevant conditions may be imposed upon notification. Please refer to the following website for details:

http://www.cad.gov.hk/english/faq.html#balloon

**4 Kite Flying**

4.1 Kites are permitted to fly to a maximum height of 60 m (200 feet) AGL but prohibited within 5 km of an aerodrome.

**5 Model Aircraft Flying**

5.1 Model aircraft flying may be conducted at any suitable location in Hong Kong. Model aircraft activities are usually carried out during weekends and public holidays up to a height of 300 ft AGL, between the hours of 0900 - 1900 local time.

5.2 Organised sites where model aircraft flying is regularly carried out are:

a) Tai Tong, Yuen Long (UTM Grid JK955820), surface to 350 ft AGL; and

b) Tseung Kwan O. (UTM Grid KK198670), surface to 200 ft AGL.

5.3 Other popular locations for model aircraft flying (including model gliders and model helicopters) are:

a) Nam Sang Wai, Yuen Long;

b) Tate's Cairn, and

c) Clearwater Bay Peninsula.

Note: *This list is NOT comprehensive – Model aircraft flying shall only take place during daylight hours.*

**6 Aerobatic Flight**

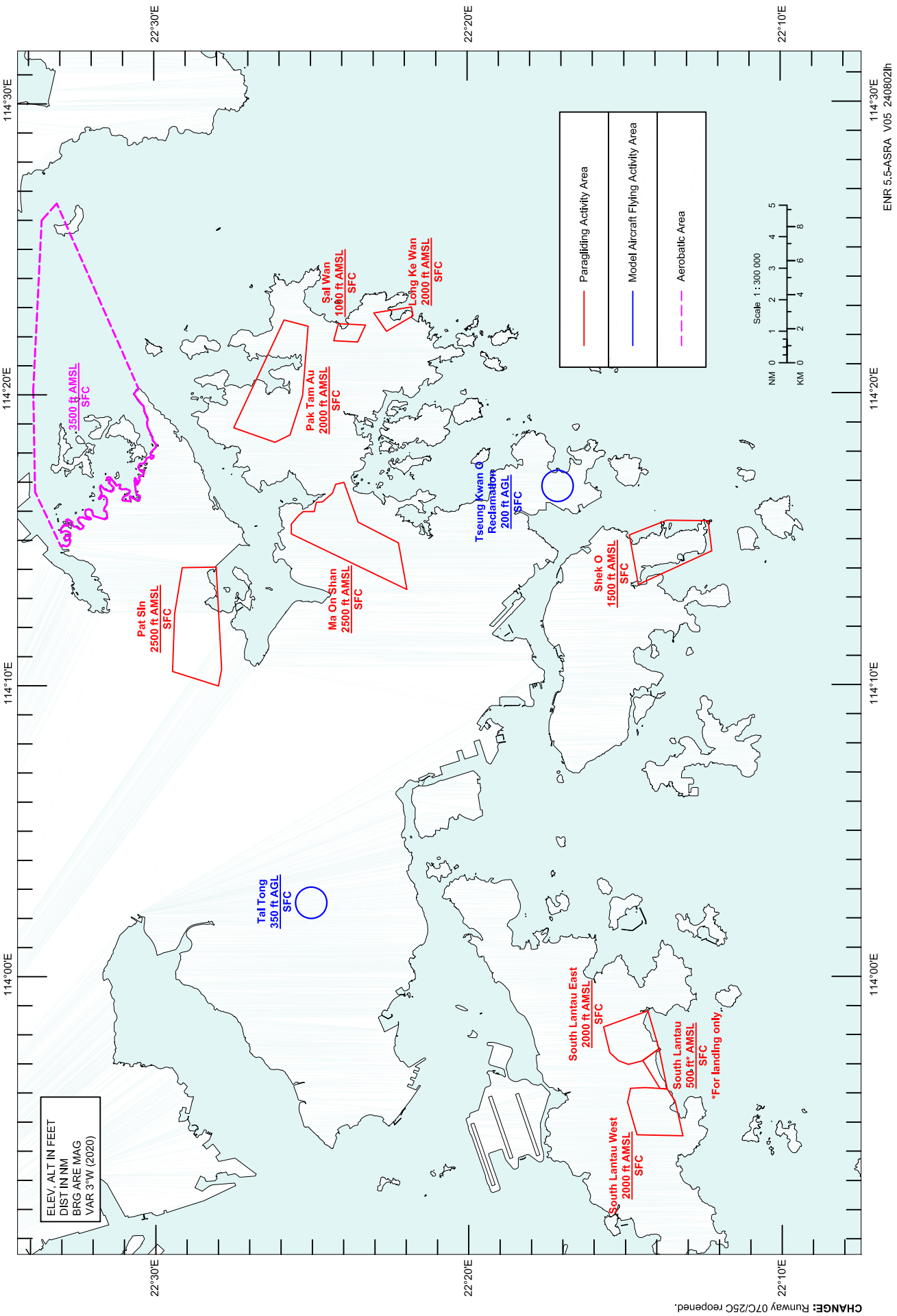
6.1 Designated aerobatic areas are established in the NE part of the Hong Kong territory up to 3 500 feet AMSL.

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# AERIAL SPORTING AND RECREATIONAL ACTIVITIES LOCATION



# ENR 5.6 BIRD MIGRATION IN HONG KONG

## 1 Bird Concentration on or in the Vicinity of the Hong Kong International Airport

1.1 A number of varieties of birds are present in Hong Kong throughout the year they include:

a) Black-eared kite (weighing up to approximately 1 kg). The usual maximum number present is 10, but up to 45 at one time have been recorded. The greatest numbers are present during the period October to January. Birds soar on thermals up to approximately 2,000 ft over the runway and approach areas.

b) Gull, particularly the black-headed gull (weighing approximately 300 g). The numbers are variable but up to 3,000 have been recorded from early November to early April. They usually keep below 200 ft.

c) Crested Myna (weighing up to 120 g). Up to 200 birds have been sighted around the southern and western perimeter of the airport.

d) Raptors, their number usually increases between late October and April. Common Kestrel (weight > 100 g) and Common Buzzard (weight > 500 g) are raptors commonly seen in urbanized landscape. Common Buzzards usually soar on thermals above the runway or sea surface at heights similar to Black Kite. Common Kestrels usually forage near the runway at heights up to about 200 ft by active flying.

e) Egret & Herons (collectively known as ardeids) (weighing up to 250 g). Flocks of ardeids are usually roost in the artificial seawall of the airport. Egrets may fly to lawn along the runway when these grasslands are flooded by heavy rains.

1.2 During spring (April - May) and autumn (August - October) the number of birds increases due to the migration of many species, including: snipe, plover, sandpiper and starling, (weight range 30-300 g approximately). Most of the migratory waterbirds stay in Mai Po Nature Reserve. They may be present in the airport in variable numbers with MAX concentrations (approximately 500) occurring during periods of heavy rain, low cloud, strong winds and cold surges, both by day and during the hours of darkness. These birds usually keep below 100 ft.

1.3 A long grass policy has been adopted at Hong Kong International Airport as a deterrent to breeding and roosting on the airport. In addition regular bird control patrols are conducted on all movement areas.

1.4 Pilots are advised, where the design limitations of aircraft installations permit, to operate landing lights at all times during take-off, approach-to-land, climb and descent phases of flight.

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## Prohibited, Restricted and Danger Areas - Long Range

### LEGEND

Prohibited, Restricted and Danger Areas Airspace

Identification of area — ZJ(D)208
Vertical limits — 15000m / 6000m AMSL
P = Prohibited
R = Restricted
D = Danger

ACTIVE PERIODS OF RESTRICTED AREA

| | |
|---|---|
| VHR7 | H24 |

ACTIVE PERIODS OF DANGER AREAS

| | |
|---|---|
| ZJ(D)208 | 0030 - 1200 |
| ZJ(D)209 | 0030 - 1400 |
| ZJ(D)210 | 2300 - 0030 |

FOR COMPLETE INFORMATION OUTSIDE HONG KONG AIRSPCE, SEE RESPECTIVE AIPs

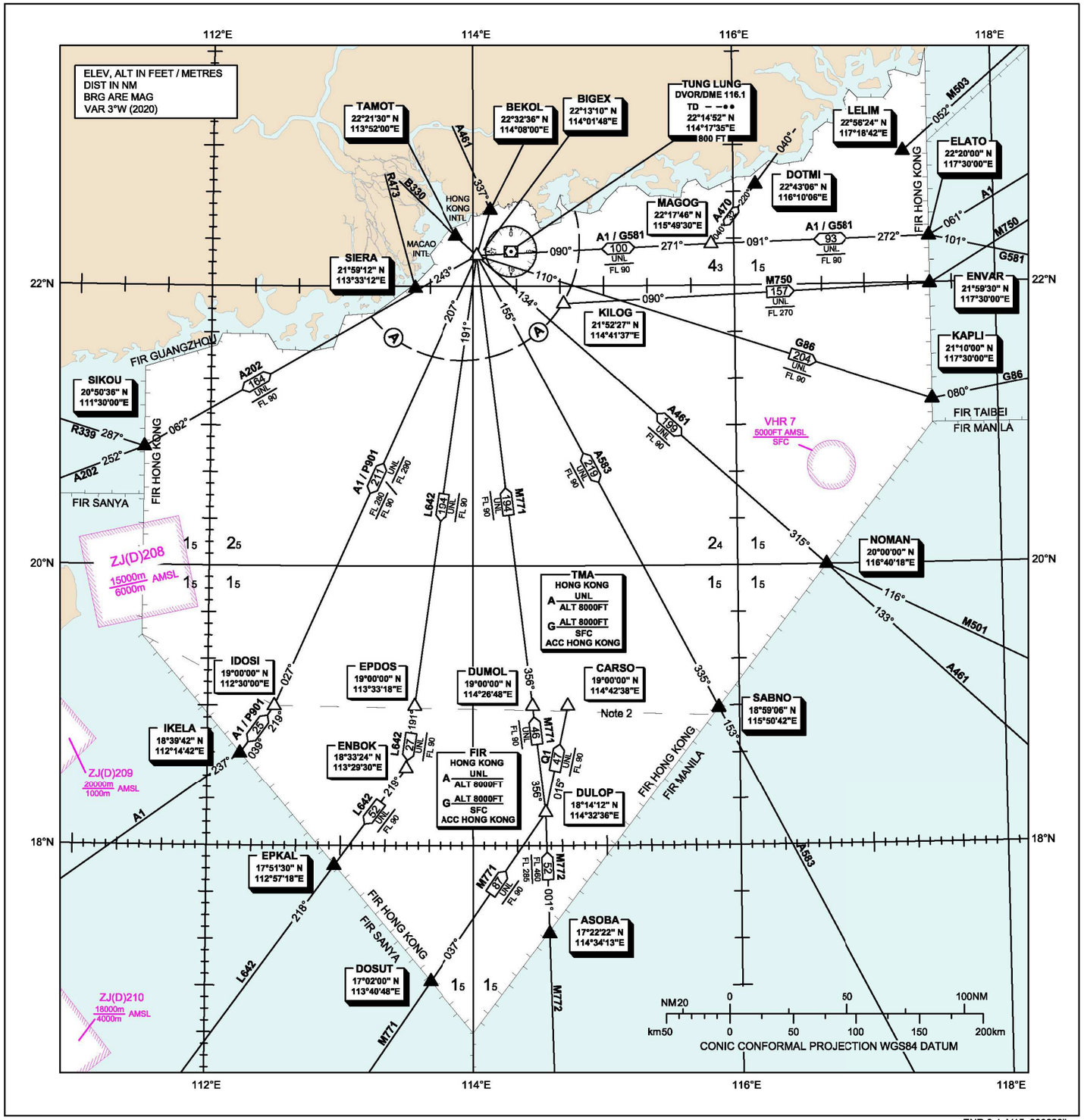
COMMUNICATION FACILITIES
SEE ENR 6-3

Area Minimum Altitude (AMA)

Each 2° quadrilateral contains an Area Minimum Altitude (AMA) which represents the lowest altitude which may be used within Hong Kong airspace under instrument meteorological conditions (IMC). The AMA provides a minimum clearance of 1,000 ft (300m) above all obstacles within Hong Kong airspace in the quadrilateral. It is represented in thousands and hundreds of feet above mean sea level.

Example : 2,400 feet $2_4$

REMARK:
CONSULT RESPECTIVE NOTAMS AND AIPS FOR THE LATEST AERONAUTICAL INFORMATION OUTSIDE HONG KONG FIR.




CHANGE: CH DME Decommision and Establishment of 5LNC BIGEX

ENR 6-1_V15_230626lh

## ENROUTE CHART - HONG KONG

### LEGEND

| | |
|---|---|
| Aerodrome | ☼ |
| Flight Information Region (FIR) Boundary | |
| Terminal Control Area (TMA) Boundary | |
| Name of airspace<br>Upper limit<br>Category of airspace<br>Lower limit<br>Name of airspace | TMA<br>HONG KONG<br>UNL<br>A<br>ALT 8000FT<br>ACC HONG KONG |
| Route designator<br>Magnetic track<br>Distance in NM<br>Upper limit<br>Minimum cruising level | A461<br>134° 199 315°<br>UNL<br>FL 90 |
| Reporting point | Complusory ▲<br>On request △ |
| VHF omnidirectional radio range (VOR)<br>Compass rose orientated on the chart to Magnetic North | |
| Co-located VOR and DME navigational aids (VOR/DME) | |
| Distance Measuring Equipment (DME) | |
| Altimeter setting boundary (50 NM from airport) | |
| Identification for radio navigation aids (NAVAIDS)<br>Name<br>NAVAID, frequency, identification or callsign<br>Geographical coordinates<br>Elevation of DME site (to the nearest 100 feet) | TUNG LUNG<br>DVOR/DME 116.1<br>TD – – ●●<br>22°14'52" N<br>114°17'35"E<br>800 FT |
| Identification for reporting point<br>Geographical coordinates | SABNO<br>22°13'10" N<br>114°01'48"E |

Note 1: Refer to ENR1.10 for flights transiting Hong Kong FIR

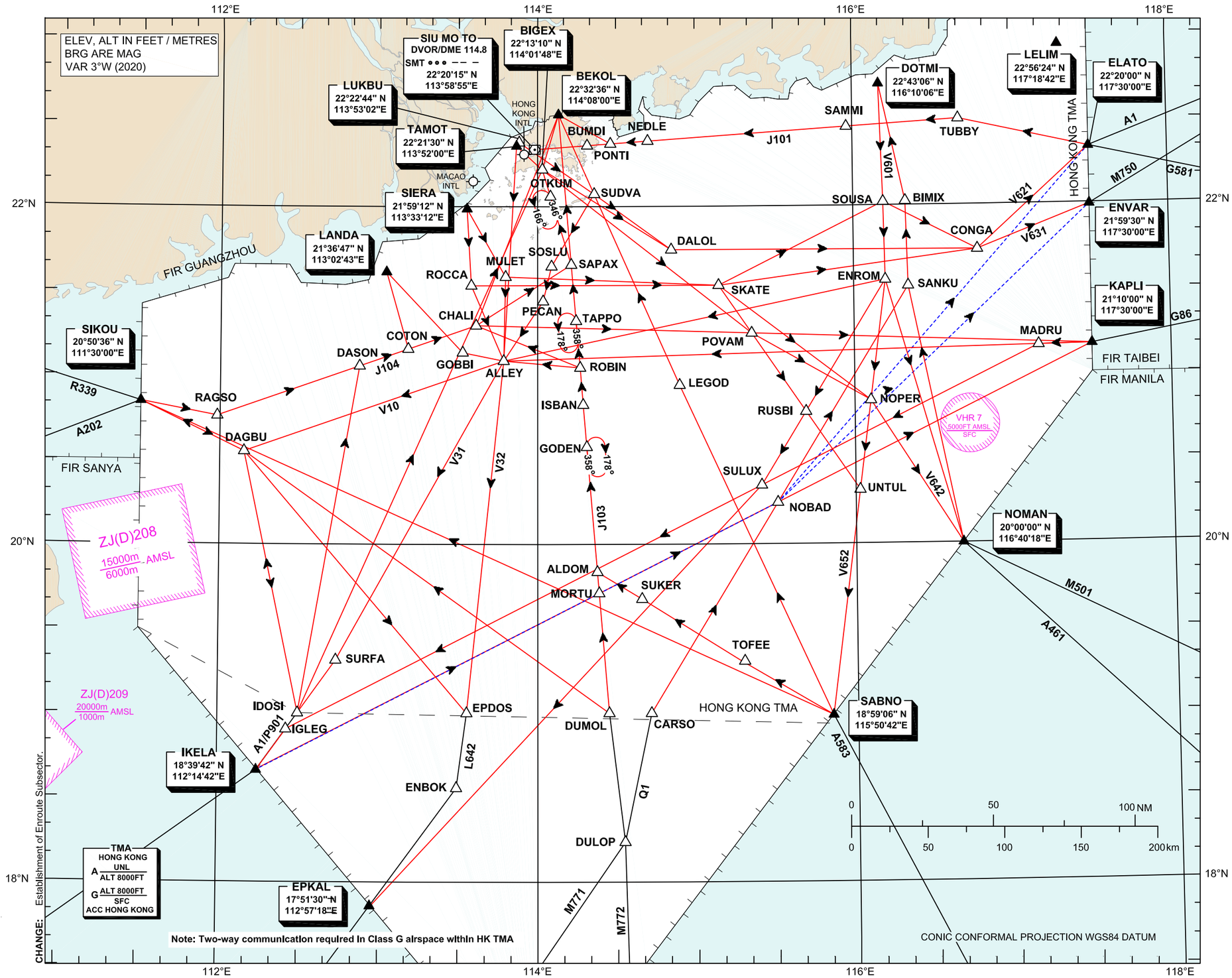
Note 2: PBN Route Q1 joins STAR at CARSO

Note 3: Two-way communication required in Class G airspace within HK TMA

AREA CHART

FLIGHT PLAN ROUTES TRANSITING HONG KONG TMA

VHHH / HONG KONG TMA




LEGEND

Transit Routes Availability

H24

1700 - 0059 UTC

See page ENR 6-1 ENROUTE CHART for additional legend.

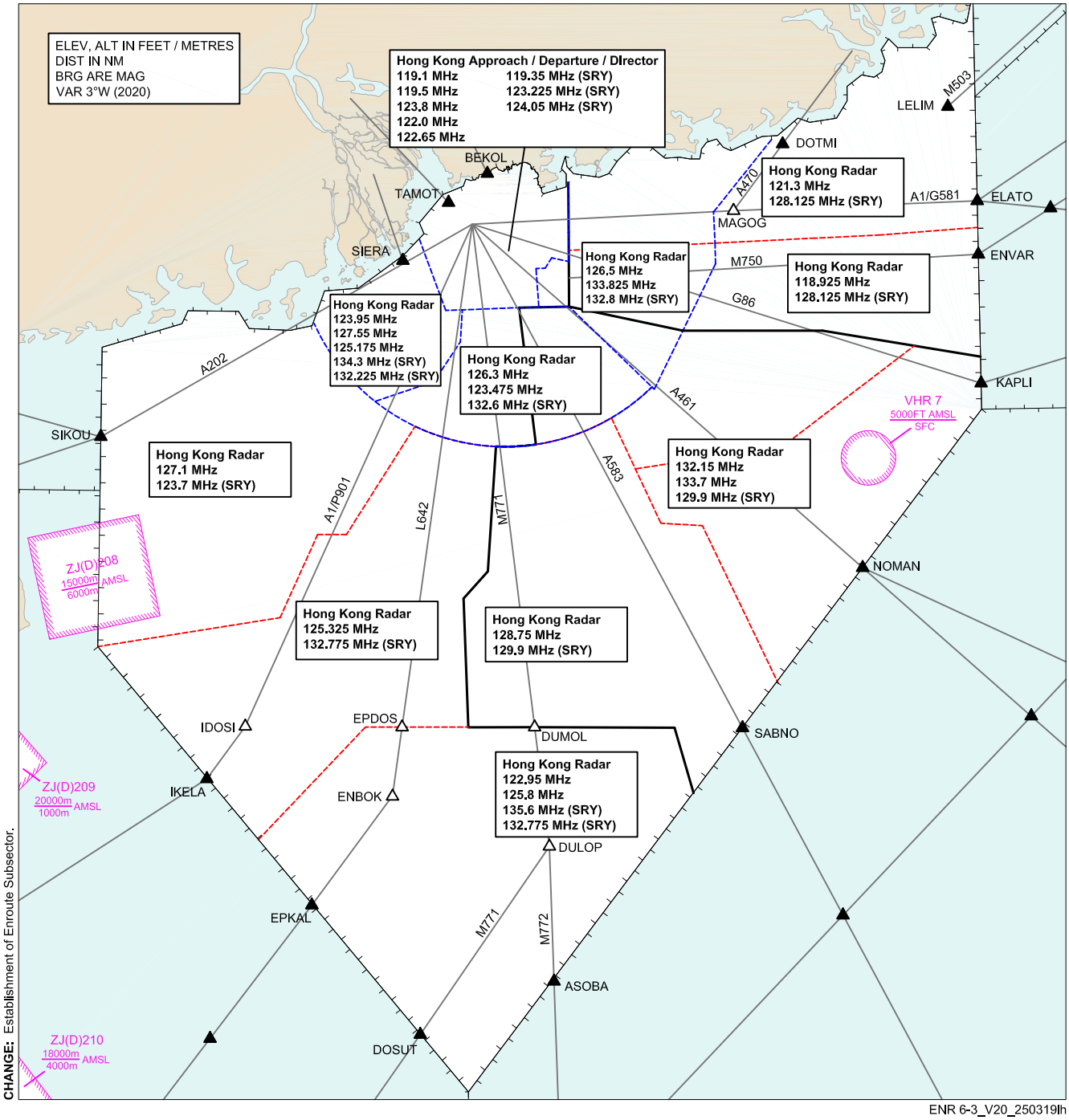
See page ENR 6-3 for communication frequencies.

Note1: Refer to ENR 1.10 for flights transiting Hong Kong FIR

Note2: Refer to ENR 3.6 for enroute holding procedures.

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# Communication Facilities in Hong Kong FIR



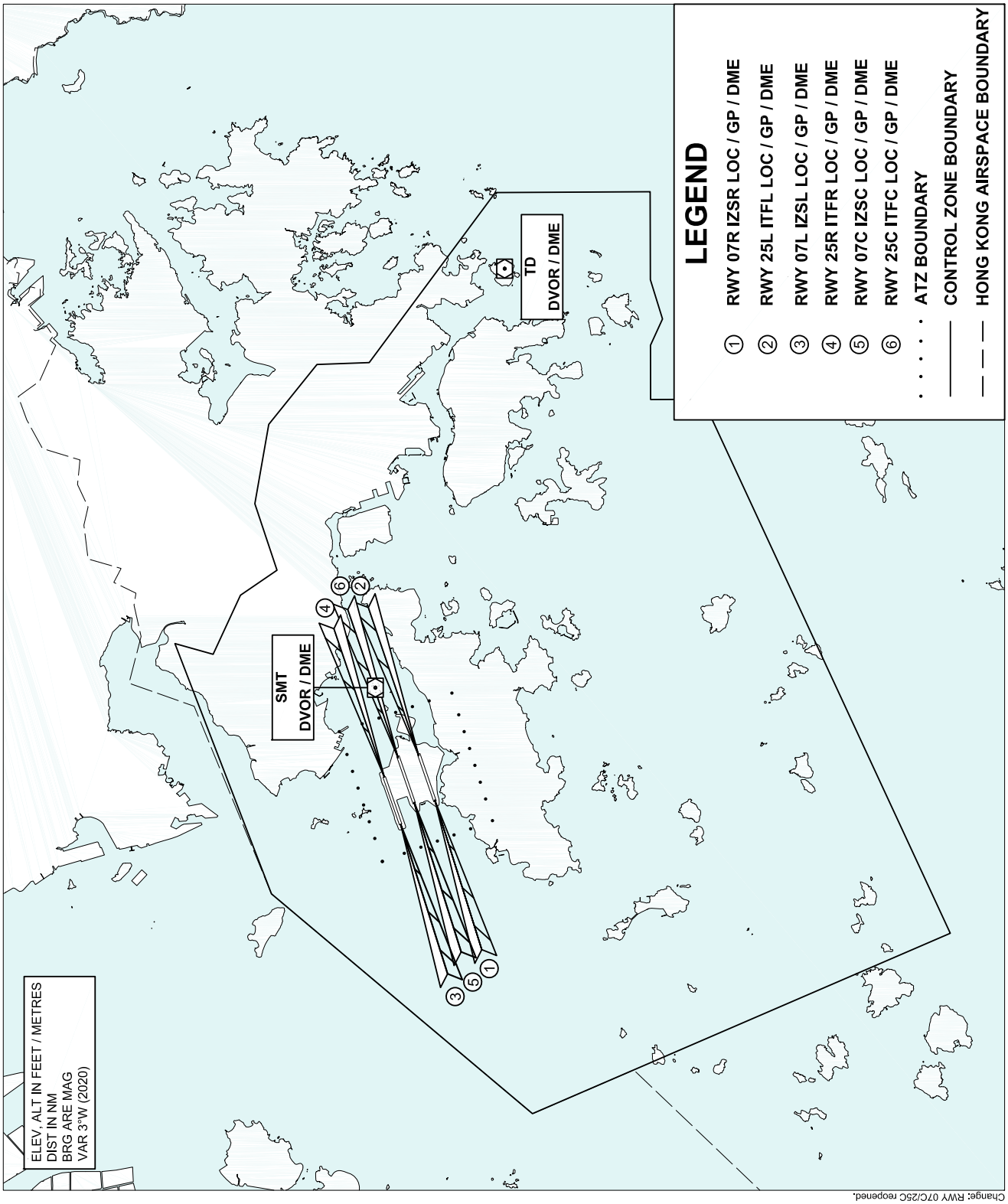

**Airspace Sector Boundary**

**Airspace Sub-Sector Boundary : FL250 and below**

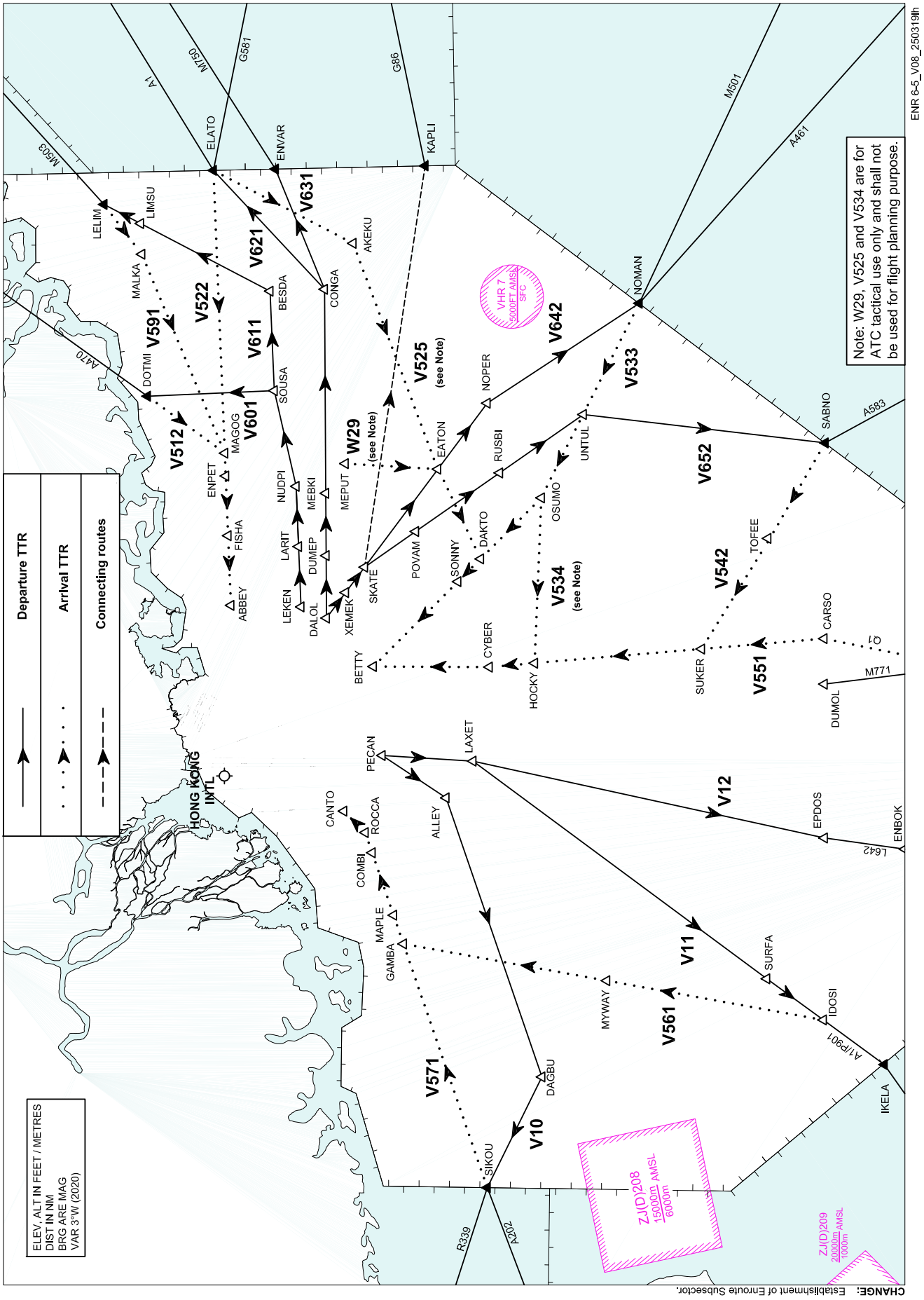
**Airspace Sub-Sector Boundary : Above FL250**

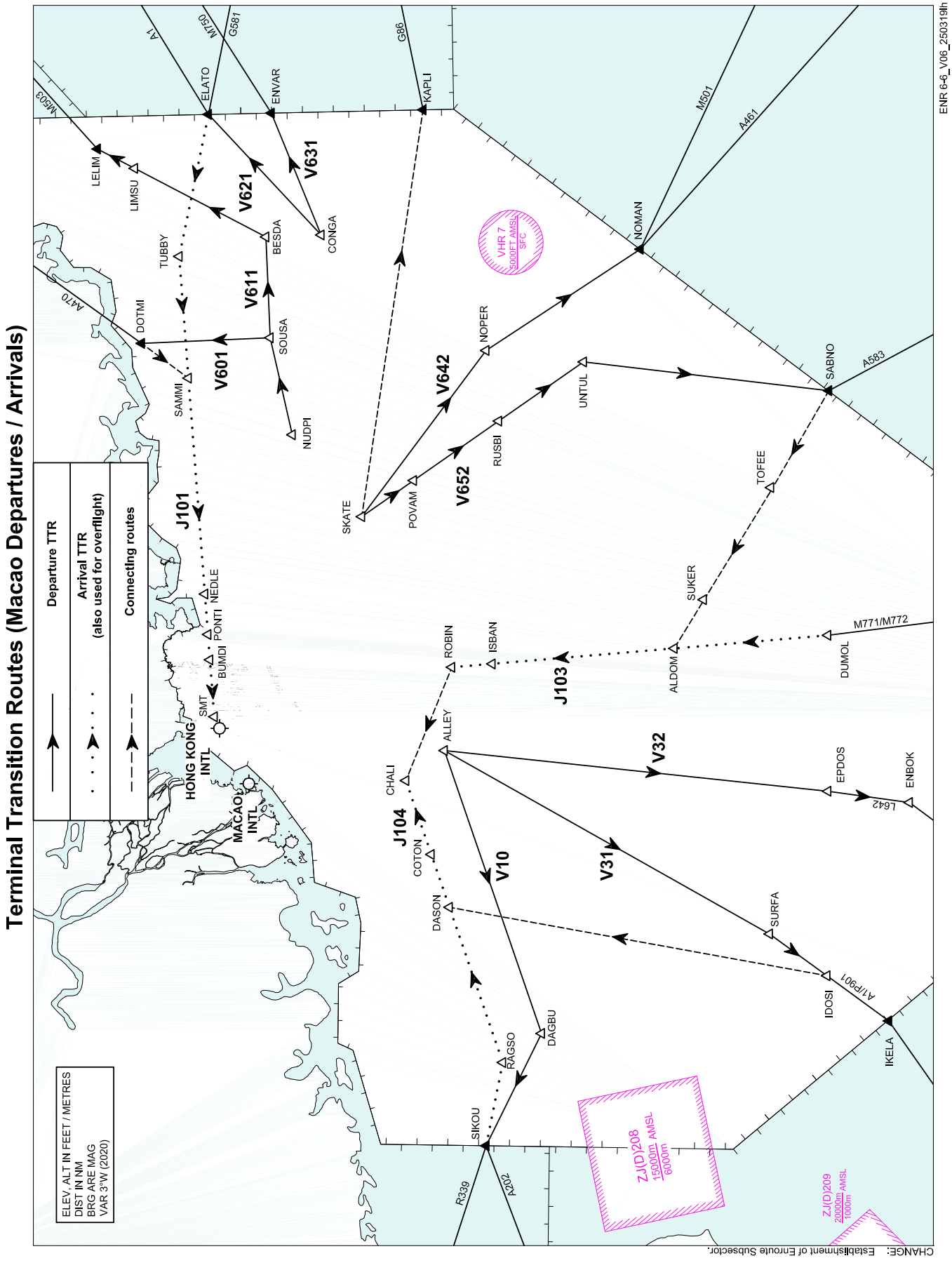
**SRY - Secondary Frequency**

# Radio Facilities Chart



# Terminal Transition Routes (Hong Kong Departures / Arrivals)




Terminal Transition Routes (Macao Departures / Arrivals)
Departure TTR
Arrival TTR
(also used for overflight)
Connecting routes
ELEV , ALT IN FEET / METRES
DIST IN NM
BRG ARE MAG
VAR 3°W (2020)
HONG KONG INTL
MACAO INTL
SMT
BUMDI
PONTI
NEDLE
J101
SAMMI
DOTMI
TUBBY
LIMSU
LELIM
A470
V601
V611
V621
V631
SOUSA
NUDPI
BESDA
CONGA
ELATO
ENVAR
KAPLI
A1
M150
G581
G86
M503
SKATE
POVAM
V652
V642
RUSBI
NOPER
UNTUL
NOMAN
SABNO
M501
A461
A583
TOFEE
SUKER
ALDOM
M771/M772
DUMOL
J103
ROBIN
ISBAN
ALLEY
CHALI
J104
COTON
DASON
V10
V31
V32
EPDOS
L642
ENBOK
SURFA
A1/P901
IDOSI
IKELA
RAGSO
DAGBU
SIKOU
R339
A202
VHR 7
5000FT AMSL
SFC
ZJ(D)208
15000m AMSL
6000m
ZJ(D)209
20000m AMSL
1000m
CHANGE: Establishment of Enroute Subsector.
ENR 6-6_V06_250319th

## Sectorisation of Air Traffic

The Hong Kong TMA is divided geographically into the following sectors:

a) three area sectors, Hong Kong Radar East, South and West;
b) four terminal sectors, Hong Kong Radar East, South, West and Macao;
c) four approach sectors, Approach, Departure, Departure High and Final Approach Director.

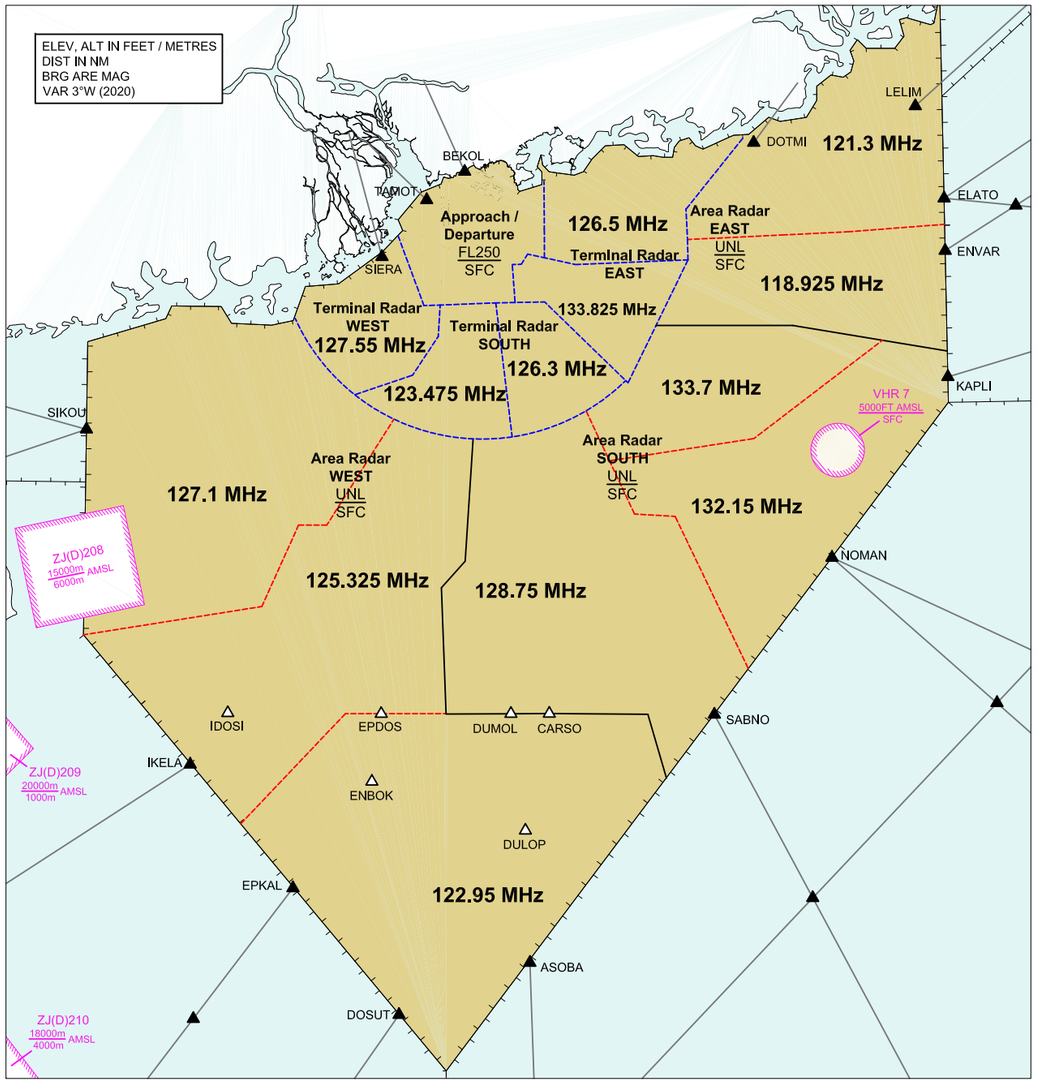
The sector boundaries are shown in the chart.

The vertical limits of each sector are:

| Sectors | Vertical Limits |
|---|---|
| Hong Kong East, South and West Area sectors | Above FL250 - Unlimited<br>All other areas<br>SFC - Unlimited |
| Hong Kong East Terminal sector | SFC - FL250 |
| Hong Kong South Terminal sector | SFC - FL250 |
| Hong Kong West Terminal sector | Above FL120 - FL250 |
| Macao Approach and Departure sectors | SFC - FL120 (but excluding Macao ATZ) |
| Approach and Departure sectors | SFC - FL250 (but excluding Hong Kong ATZ and UCARAs airspace) |

**CHANGE:** Establishment of Enroute Subsector.

### Hong Kong ATC Sector Boundaries Chart




Air Traffic Service will be provided in each sector as follows:

| Air Traffic Services | Sector | Primary Frequency | Secondary Frequency |
|---|---|---|---|
| Area Radar Control | East | 121.3 MHz<br>118.925 MHz | 128.125 MHz |
| | South | 132.15 MHz<br>128.75 MHz<br>133.7 MHz | 129.9 MHz |
| | West | 127.1 MHz<br>125.325 MHz<br>122.95 MHz | 123.7 MHz<br>132.775 MHz<br>135.6 MHz |
| Terminal Radar Control | East | 126.5 MHz<br>133.825 MHz | 132.8 MHz |
| | South | 126.3 MHz<br>123.475 MHz | 132.6 MHz |
| | West | 127.55 MHz<br>125.175 MHz | 134.3 MHz |
| Macao Radar Control | Macao | 123.95 MHz | 132.225 MHz |
| Final Approach Director | Approach | 119.5 MHz | 123.225 MHz |
| Approach Radar Control | Approach | 119.1 MHz | 119.35 MHz |
| Departure Radar Control | Departure | 123.8 MHz<br>122.0 MHz | 124.05 MHz |
| Departure Radar Control | Departure (High sector as required) | 122.65 MHz | 124.05 MHz |

ENR 6-7_V08_250319lh

# AD (AERODROMES)

## AD 0

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| *SID-DUMEP-T* | RNAV(GNSS) DUMEP SID RWY 07C | AD 2-VHHH-SID-DUMEP-T |
| *SID-XEMEK-T* | RNAV(GNSS) XEMEK SID RWY 07C | AD 2-VHHH-SID-XEMEK-T |
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| *SID-BEKOL-C* | RNAV(GNSS) BEKOL SID RWY 07C | AD 2-VHHH-SID-BEKOL-C |
| *SID-BEKOL-D* | RNAV(GNSS) BEKOL SID RWY 25C | AD 2-VHHH-SID-BEKOL-D |
| *SID-BEKOL-E* | RNAV(GNSS) BEKOL SID RWY 07L | AD 2-VHHH-SID-BEKOL-E |
| *SID-BEKOL-F* | RNAV(GNSS) BEKOL SID RWY 25R | AD 2-VHHH-SID-BEKOL-F |
| *SID-BEKOL-X* | RNAV(GNSS) BEKOL SID RWY 07R (RF capability required) | AD 2-VHHH-SID-BEKOL-X |
| *SID-BEKOL-Y* | RNAV(GNSS) BEKOL SID RWY 07C (RF capability required) | AD 2-VHHH-SID-BEKOL-Y |
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| *SID-LEKEN-E* | RNAV(GNSS) LEKEN SID RWY 07L | AD 2-VHHH-SID-LEKEN-E |
| *SID-LEKEN-F* | RNAV(GNSS) LEKEN SID RWY 25R | AD 2-VHHH-SID-LEKEN-F |
| *SID-LEKEN-X* | RNAV(GNSS) LEKEN SID RWY 07R (RF capability required) | AD 2-VHHH-SID-LEKEN-X |
| *SID-LEKEN-Y* | RNAV(GNSS) LEKEN SID RWY 07C (RF capability required) | AD 2-VHHH-SID-LEKEN-Y |
| *SID-LEKEN-Z* | RNAV(GNSS) LEKEN SID RWY 07L (RF capability required) | AD 2-VHHH-SID-LEKEN-Z |
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| *SID-DALOL-D* | RNAV(GNSS) DALOL SID RWY 25C | AD 2-VHHH-SID-DALOL-D |
| *SID-DALOL-E* | RNAV(GNSS) DALOL SID RWY 07L | AD 2-VHHH-SID-DALOL-E |
| *SID-DALOL-F* | RNAV(GNSS) DALOL SID RWY 25R | AD 2-VHHH-SID-DALOL-F |
| *SID-DALOL-X* | RNAV(GNSS) DALOL SID RWY 07R (RF capability required) | AD 2-VHHH-SID-DALOL-X |
| *SID-DALOL-Y* | RNAV(GNSS) DALOL SID RWY 07C (RF capability required) | AD 2-VHHH-SID-DALOL-Y |
| *SID-DALOL-Z* | RNAV(GNSS) DALOL SID RWY 07L (RF capability required) | AD 2-VHHH-SID-DALOL-Z |
| *SID-PECAN-A* | RNAV(GNSS) PECAN SID RWY 07R | AD 2-VHHH-SID-PECAN-A |
| *SID-PECAN-B* | RNAV(GNSS) PECAN SID RWY 25L | AD 2-VHHH-SID-PECAN-B |
| *SID-PECAN-C* | RNAV(GNSS) PECAN SID RWY 07C | AD 2-VHHH-SID-PECAN-C |
| *SID-PECAN-D* | RNAV(GNSS) PECAN SID RWY 25C | AD 2-VHHH-SID-PECAN-D |
| *SID-PECAN-E* | RNAV(GNSS) PECAN SID RWY 07L | AD 2-VHHH-SID-PECAN-E |
| *SID-PECAN-F* | RNAV(GNSS) PECAN SID RWY 25R | AD 2-VHHH-SID-PECAN-F |
| *SID-PECAN-X* | RNAV(GNSS) PECAN SID RWY 07R (RF capability required) | AD 2-VHHH-SID-PECAN-X |
| *SID-PECAN-Y* | RNAV(GNSS) PECAN SID RWY 07C (RF capability required) | AD 2-VHHH-SID-PECAN-Y |
| *SID-PECAN-Z* | RNAV(GNSS) PECAN SID RWY 07L (RF capability required) | AD 2-VHHH-SID-PECAN-Z |
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| *SID-RAMEN-C* | RAMEN SID RWY 07C | AD 2-VHHH-SID-RAMEN-C |
| *SID-RAMEN-E* | RAMEN SID RWY 07L | AD 2-VHHH-SID-RAMEN-E |
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| *STAR-CANTO-A* | RNAV(GNSS) CANTO 3A STAR RWY 07L/C/R | AD 2-VHHH-STAR-CANTO-A |
| *STAR-CANTO-B* | RNAV(GNSS) CANTO 3B STAR RWY 25L/C/R | AD 2-VHHH-STAR-CANTO-B |
| *STAR-SIERA-AC* | RNAV(GNSS) SIERA 7A / 7C STAR RWY 07L/C/R | AD 2-VHHH-STAR-SIERA-AC |
| *STAR-SIERA-BD* | RNAV(GNSS) SIERA 7B / 7D STAR RWY 25L/C/R | AD 2-VHHH-STAR-SIERA-BD |
| *STAR-G* | RNAV(GNSS) ABBEY 2G / BETTY 2G / CANTO 2G / SIERA 2G STAR RWY 25L/C/R | AD 2-VHHH-STAR-G |
| *SMAC-1* | ATC Surveillance Minimum Altitude Chart | AD 2-VHHH-SMAC-1 |
| *IAC-01A* | Instrument Approach Chart - ICAO - ILS - RWY 07R | AD 2-VHHH-IAC-01A |
| *IAC-01C* | Instrument Approach Chart - ICAO - LOC - RWY 07R | AD 2-VHHH-IAC-01C |
| *IAC-01E* | Instrument Approach Chart - ICAO - RNP Z - RWY 07R (AR) | AD 2-VHHH-IAC-01E |
| *IAC-01G* | Instrument Approach Chart - ICAO - RNP Y - RWY 07R (AR) | AD 2-VHHH-IAC-01G |
| *IAC-02A* | Instrument Approach Chart - ICAO - ILS - RWY 25L | AD 2-VHHH-IAC-02A |
| *IAC-02C* | Instrument Approach Chart - ICAO - LOC - RWY 25L | AD 2-VHHH-IAC-02C |
| *IAC-02E* | Instrument Approach Chart - ICAO - RNP Z - RWY 25L (AR) | AD 2-VHHH-IAC-02E |
| *IAC-02G* | Instrument Approach Chart - ICAO - RNP Y - RWY 25L (AR) | AD 2-VHHH-IAC-02G |
| *IAC-03A* | Instrument Approach Chart - ICAO - ILS or LOC - RWY 07C | AD 2-VHHH-IAC-03A |
| *IAC-03E* | Instrument Approach Chart - ICAO - RNP RWY 07C (LNAV/VNAV only) | AD 2-VHHH-IAC-03E |
| *IAC-04A* | Instrument Approach Chart - ICAO - ILS - RWY 25C | AD 2-VHHH-IAC-04A |
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| *IAC-04E* | Instrument Approach Chart - ICAO - RNP Z - RWY 25C (LNAV/VNAV only) | AD 2-VHHH-IAC-04E |
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| *IAC-05E* | Instrument Approach Chart - ICAO - RNP RWY 07L (LNAV/VNAV only) | AD 2-VHHH-IAC-05E |
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| *IAC-06B* | Approach Transition Chart - RNAV TRANSITION TO ILS - RWY 25R | AD 2-VHHH-IAC-06B |

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| | *IAC-06C* | Instrument Approach Chart - ICAO - LOC - RWY 25R | AD 2-VHHH-IAC-06C |
| | *IAC-06E* | Instrument Approach Chart - ICAO - RNP Z - RWY 25R (LNAV/VNAV only) | AD 2-VHHH-IAC-06E |
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| | *VMMC AD 2.10* | AERODROME OBSTACLES | AD 2-VMMC-2 |
| | *VMMC AD 2.11* | METEOROLOGICAL INFORMATION PROVIDED | AD 2-VMMC-2 |
| | *VMMC AD 2.12* | RUNWAY PHYSICAL CHARACTERISTICS | AD 2-VMMC-2 |
| | *VMMC AD 2.13* | DECLARED DISTANCES | AD 2-VMMC-2 |
| | *VMMC AD 2.14* | APPROACH AND RUNWAY LIGHTING | AD 2-VMMC-2 |

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| *VMMC AD 2.18* | ATS COMMUNICATION FACILITIES | AD 2-VMMC-3 |
| *VMMC AD 2.19* | RADIO NAVIGATION AND LANDING AIDS | AD 2-VMMC-3 |
| *VMMC AD 2.20* | LOCAL TRAFFIC REGULATIONS | AD 2-VMMC-3 |
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| *VMMC AD 2.23* | ADDITIONAL INFORMATION | AD 2-VMMC-6 |
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| *SID-ALLEY-T* | RNAV(GNSS) ALLEY 4T SID | AD 2-VMMC-SID-ALLEY-T |
| *SID-ALLEY-U* | RNAV(GNSS) ALLEY 4U SID | AD 2-VMMC-SID-ALLEY-U |
| *SID-CONGA-P* | RNAV(GNSS) CONGA 2P SID | AD 2-VMMC-SID-CONGA-P |
| *SID-CONGA-T* | RNAV(GNSS) CONGA 4T SID | AD 2-VMMC-SID-CONGA-T |
| *SID-CONGA-U* | RNAV(GNSS) CONGA 5U SID | AD 2-VMMC-SID-CONGA-U |
| *SID-SKATE-P* | RNAV(GNSS) SKATE 1P SID | AD 2-VMMC-SID-SKATE-P |
| *SID-SKATE-T* | RNAV(GNSS) SKATE 1T SID | AD 2-VMMC-SID-SKATE-T |
| *SID-SKATE-U* | RNAV(GNSS) SKATE 1U SID | AD 2-VMMC-SID-SKATE-U |
| *SID-NUDPI-P* | RNAV(GNSS) NUDPI 1P SID | AD 2-VMMC-SID-NUDPI-P |
| *SID-NUDPI-T* | RNAV(GNSS) NUDPI 1T SID | AD 2-VMMC-SID-NUDPI-T |
| *SID-NUDPI-U* | RNAV(GNSS) NUDPI 1U SID | AD 2-VMMC-SID-NUDPI-U |
| *SID-BIGRO-F* | BIGRO 1F SID | AD 2-VMMC-SID-BIGRO-F |
| *SID-BIGRO-H* | RNAV(GNSS) BIGRO 1H SID | AD 2-VMMC-SID-BIGRO-H |
| *SID-MIPAG-F* | MIPAG 2F/ NLG 1F/ IDUMA 1F SID | AD 2-VMMC-SID-MIPAG-F |
| *SID-MIPAG-H* | RNAV(GNSS) MIPAG 1H/ RNAV(GNSS) NLG 1H/ RNAV(GNSS) IDUMA 1H SID | AD 2-VMMC-SID-MIPAG-H |
| *STAR-CHALI-A* | RNAV(GNSS) CHALI 4A STAR | AD 2-VMMC-STAR-CHALI-A |
| *STAR-CHALI-B* | RNAV(GNSS) CHALI 5B STAR | AD 2-VMMC-STAR-CHALI-B |
| *STAR-SMT-A* | RNAV(GNSS) SMT 4A STAR | AD 2-VMMC-STAR-SMT-A |
| *STAR-SMT-B* | RNAV(GNSS) SMT 5B STAR | AD 2-VMMC-STAR-SMT-B |

**AD 3 Heliports**


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| VHSS | | | AD 3-VHSS - 1 |
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# AD 1 AERODROMES / HELIPORTS - INTRODUCTION

## AD 1.1 AERODROME/HELIPORT AVAILABILITY

### 1 General Conditions

1.1 NOTIFICATION

1.1.1 The Hong Kong International Airport is hereby notified for the purposes of Articles 71(1)(a) and 73 of the Air Navigation (Hong Kong) Order 1995 as available for the take-off and landing of aircraft engaged on flights for the purpose of public transport of passengers or for the purpose of instruction in flying subject to the conditions specified in this Aeronautical Information Publication.

1.2 Permission to land or take-off at Hong Kong International Airport will not be refused solely because of adverse weather conditions. Pilots of public transport aircraft should bear in mind however, that Articles 30 and 31 of the Air Navigation (Hong Kong) Order 1995, requires that they do not infringe the aerodrome operating minima specified by their company.

1.3 Engine-out-ferry flights to and from Hong Kong International Airport will not normally be permitted. If extenuating circumstances prevail, an operator may request permission to carry out an engine-out ferry flight; such requests should be made to the Director-General of Civil Aviation.

1.4 Unless a prior arrangement has been made with the AAHK, all landing and parking charges due and payable in respect of an aircraft in accordance with the provisions of the Airport Authority Ordinance shall be payable before the aircraft leaves the airport; and the AAHK may refuse to give clearance for that aircraft to depart or for any other aircraft that is operated by the operator of that aircraft to depart until such charges have been paid (see GEN 4.1 para. 1 to 4 for details).

### 2 Applicable ICAO Documents

2.1 ICAO Standards and Recommended Practices contained in Annex 14 - Aerodromes, are applied in so far as geographical limits permit. Differences to these Standards and Recommended Practices are listed in GEN 1.7.

### 3 Use of Military Aerodromes

3.1 Nil.

### 4 Aerodrome Operating Minima (AOM)

4.1 According to the *Manual of All Weather Operations* (ICAO DOC 9365), where a State of the Aerodrome has established the aerodrome operating minima (AOM) policy and published the landing and take-off minima in the AIP, the minima authorised for the use by the State of the Operator shall not be lower than the minima established by the State of the aerodrome. The AOM for the Hong Kong International Airport and relevant requirements are published in AD 1.1 for compliance by all operators.

4.2 Pursuant to Air Navigation (Hong Kong) Order 1995, operators of public transport aircraft registered outside Hong Kong shall not fly in or over Hong Kong unless the operator has furnished their AOM as required. For foreign operators to meet this requirement, they shall submit the completed AOM Form, i.e. DCA 236 (https://www.cad.gov.hk/application/DCA_236.pdf) to the Director-General of Civil Aviation for the issuance of an Accepted AOM in conjunction with other documents required under GEN 1.2.

4.3 Operators should note each instrument approach procedure may have more than one missed approach climb gradient requirement. Acceptable minima for operations at Hong Kong International Airport are based on ICAO DOC 9365, and are as follows:

| | | | |
|---|---|---|---|
| a) | Take-off | 125 m RVR | for RWY 07L/25R and RWY 07C/25C |
| | | 150 m RVR | for RWY 07R/25L |
| b) | Landing | | |
| | | Decision Height | RVR |
| | CAT I | 200 ft | 550 m |
| | CAT II | 100 ft | for RWY 07L and RWY 25C/07C:<br>- 300 m<br>for RWY 25L/07R:<br>- 350 m |

| | | |
|---|---|---|
| CAT III | less than 100 ft | for Cat. A/B/C aircraft:<br>- less than 300 m but not less than 75 m<br>for Cat. D aircraft:<br>- less than 300 m but not less than 100 m |

**5 Airport Qualifications**

5.1 Prior to the commencement of operations at Hong Kong International Airport, flight deck crew are to be adequately briefed on operations into and out of the airport.

5.2 Various methods of aerodrome categorization are in operation throughout the world. It is the responsibility of each State Authority to stipulate the level of familiarization required by pilots operating aircraft on their respective register prior to operations into Hong Kong International Airport.

5.3 For Hong Kong registered operators, Hong Kong International Airport has been declared Category B, indicating the second level of pilot briefing intensity is required.

5.4 As stated, whilst regulatory authorities may impose additional requirements on operators registered with them, the minimum suggested requirement is a self briefing document to be issued to pilots highlighting the following:

a) terrain at and within the environs of the airport;

b) departure, arrival, missed approach procedures, gradients and DMA limits required;

c) familiarity with the Windshear and Turbulence Warning System (WTWS) operation and terminology;

d) Hong Kong and specific airport weather characteristics and seasonal variations;

e) location of nearby aerodromes Shenzhen, Macao and Zhuhai, and the delineation of the Hong Kong TMA boundary in relation to these aerodromes;

f) ground handling and breakaway thrust requirements.

5.5 A system should be in place to ensure flight crew remain current with the Hong Kong International Airport brief on an annual basis or at least prior to each operation to the airport, if such operations are less frequent.

5.6 It is recommended that all operators complete flight crew familiarisation in accordance with para 5.4 above.

**6 ILS Category I (CAT I) Operations**

6.1 At Hong Kong International Airport, pilots are to expect an ILS CAT I approach unless otherwise informed.

**7 Acceptance of ILS CAT II/III (CAT II/III) Operations**

7.1 Before commencing public transport operations at the Hong Kong International Airport, foreign operators who wish to conduct ILS Category II (CAT II) or Category III (CAT III) operations at Hong Kong International Airport, must submit the following information to the Director-General of Civil Aviation.

a) The completed proforma (softcopy in http://www.cad.gov.hk/english/aom.html) to show the operator's CAT II/III minima authorised by their State; and

b) The CAT II/III authorisation issued by their State.

7.2 The operator shall comply with the more restrictive minima prescribed by their State or Hong Kong when operating at the Hong Kong International Airport at all times.

**8 Low Visibility Operations (LVO)**

8.1 GENERAL

8.1.1 General AOM requirements of the ICAO and Hong Kong are in paragraph 4.

8.1.2 Operators and pilots who wish to conduct ILS CAT II/III operations at the Hong Kong International Airport shall conform with all requirements prescribed by their States and Hong Kong, China.

8.2 SPECIAL PROCEDURES AND SAFEGUARDS

8.2.1 Special procedures and safeguards will be applied during CAT II/III operations to protect aircraft operating in low visibility and to avoid interference to the ILS signals in accordance with ICAO Doc 9365 - Manual of All Weather Operations.

8.2.2 Pilots shall be informed when:

a) meteorological reports preclude ILS CAT I operations;

b) Low Visibility Procedures are in operation;

c) there is any unserviceability in a promulgated facility so that they may amend their minima.

8.2.3 Hong Kong International Airport RWY 07R, 07C and RWY 25L are equipped with CAT II ILS equipment, while RWY 07L and 25C have the CAT III ILS equipment installed.

8.2.4 Low Visibility Procedures are established for operations in a visibility of less than RVR 550 m or a cloud ceiling of less than 200 ft.

8.2.5 When Low Visibility Procedures are in force, pilots will be advised on the ATIS. Pilots may carry out ILS CAT II approaches. When the ATIS advises “Low Visibility Procedures in force, CAT III approach available on request”, pilots wishing to carry out ILS CAT III approaches shall inform Approach Control on initial contact. (Pilots conducting practice ILS CAT II/III approaches do not have to inform ATC. See para 8.5.1)

8.3 ARRIVING AIRCRAFT

8.3.1 All runway exit taxiways are available.

8.3.2 All runway exits have taxiway centre-line lead off lights that are colour coded (green/yellow) to indicate that portion of the taxiway that is within the ILS sensitive area. Pilots are to delay the ‘runway vacated’ call until the aircraft has completely vacated the ILS sensitive area and passed the end of the colour coded taxiway centre-line lights.

8.3.3 During LVO, ATC may rely on the pilot report and/or information from the Advanced Surface Movement Guidance and Control System (A-SMGCS) to determine if an aircraft has vacated the runway and/or the ILS sensitive area.

8.4 DEPARTING AIRCRAFT

8.4.1 Aircraft shall normally enter the runway for departure via the following taxiways:

| | |
|---|---|
| RWY 07L | TWY C1, C2; |
| RWY 07C | TWY A1, A2 or F1, F2; |
| RWY 07R | TWY J1, J2 or K1; |
| RWY 25L | TWY J10, J11 or K7; |
| RWY 25C | TWY A11, A12 or F7, F8; |
| RWY 25R | TWY C11, C12. |

8.4.2 Aircraft may enter the runway for an intersection departure via the following taxiways:

| | |
|---|---|
| RWY 07L | TWY C3; |
| RWY 07C | TWY A4; |
| RWY 07R | TWY J3 or K2; |
| RWY 25L | TWY J9 or K6; |
| RWY 25C | TWY A9; |
| RWY 25R | TWY C10. |

8.4.3 RWY 07R/25L: The holding positions on TWY J1, J2, J10 and J11 are combined CAT I/II holding positions. RWY 25L holding position on TWY K is combined CAT I/II holding positions. Separate CAT I and CAT II holding positions are provided on taxiways K1 and K for RWY 07R.

8.4.4 RWY 07C/25C: The holding positions on TWY A1 and A2 are combined CAT I/II holding positions and the holding positions on TWY A11 and A12 are combined CAT I/II/III holding positions. Separate CAT I and CAT II holding positions are provided on taxiways F1 and E, and taxiways F2 and F for RWY 07C. Separate CAT I and CAT II/III holding positions are provided on taxiways F7 and F, and taxiways F8 and E for RWY 25C.

8.4.5 RWY 07L/25R: The holding positions on taxiways C1 and C2 are combined CAT I/II/III holding positions. The holding positions on taxiways C11 and C12 are CAT I holding positions.

8.5 PRACTICE APPROACHES

8.5.1 Pilots may carry out a practice ILS CAT II/III approach at any time, but the full safeguarding procedures will not be applied and pilots should anticipate the possibility of ILS signal interference.

## 9 Parallel Runway Operations

9.1 THREE-RUNWAY OPERATIONS

9.1.1 When all three runways are available (normally between 0000 - 1459 UTC daily), the following operating mode will normally be adopted to allow simultaneous operations of all three runways:

a) Runway 07
**07L: A**rrivals Only
**07C: D**epartures Only (flight planned to the North, Northeast or East via BEKOL, LEKEN - V601/V611 or DALOL - V621/V631)
**07R: M**ixed Arrivals and Departures (flight planned to the Southeast, South or West via DALOL - V642/V652 or PECAN - V10/V11/V12)

b) Runway 25
**25R: A**rrivals Only
**25C: D**epartures Only (flight planned to the East, Southeast, South or West via DALOL - V621/V631/V642/V652 or PECAN - V10/V11/V12)
**25L: M**ixed Arrivals and Departures (flight planned to the North or Northeast via BEKOL or LEKEN - V601/V611)

9.1.2 Arrivals will operate via **dependent parallel approaches** to Runways 07L/07R or Runways 25R/25L.

9.1.3 ATC will assign the landing runway based on expected parking location and other operational factors. Aircraft parking at the South Cargo Apron or Business Aviation Centre facility will be preferentially assigned the South Runway (07R/25L) subject to prevailing traffic conditions. All other arrival flights should anticipate landing on the North Runway (07L/25R) and should refrain from making requests for an alternative runway unless operationally required.

9.1.4 ATC will confirm the landing runway to arriving aircraft on first contact with Approach Control.

9.1.5 **Independent parallel departures** will normally be conducted on RWY 07C/07R or RWY 25C/25L and will be broadcast on the Departure ATIS. RWY 07C departures can expect to be assigned SIDs with 'T' designator during three-runway operations. Refer to VHHH AD 2.22 para 6.

9.1.6 Aircraft operators should base on the runway allocation strategies in para 9.1.1 for operational planning to enable the most efficient use of the airport runway capacity.

9.2 DUAL AND SINGLE RUNWAY OPERATIONS

9.2.1 Between 1500 - 1759 UTC daily, the Centre Runway (07C/25C) and the South Runway (07R/25L) will normally operate in Segregated Mode. The Centre Runway (07C/25C) will be the normal arrival runway and the South Runway (07R/25L) will be the normal departure runway.

9.2.2 Between 1800 - 2259 UTC daily, only one runway, either the North Runway (07L/25R) or the Centre Runway (07C/25C), will remain operational in Mixed Arrivals and Departures Mode.

9.2.3 Between 2300 - 2359 UTC daily, dual runway operations will resume using a combination of North/Centre, Centre/South or North/South runways depending on the maintenance schedule.

9.2.4 Scheduled runway maintenance will normally be arranged on a rotational basis across the three runways between 1800 - 2359 UTC daily. The scheduled maintenance periods are published in AIP Supplements and any amendments are promulgated by NOTAM.

## 10 Runway Utilisation

10.1 DEPARTURES

a) When instructed to enter the runway pilots should commence the manoeuvre without delay.

b) Pilots should commence take-off roll as soon as take-off clearance is issued by ATC.

c) To enable efficient handling of departures, all runways have a pair of taxiways at the beginning of the runway. For application of wake turbulence longitudinal separation, ATC considers aircraft using these two taxiways as departing from a similar position, and not intermediate (intersection) departures.

| Runway | Pair of Taxiway |
|---|---|
| 07L | C1 and C2 |
| 25R | C11 and C12 |
| 07C | A1 and A2; F1 and F2 |

| Runway | Pair of Taxiway |
|---|---|
| 25C | A11 and A12; F7 and F8 |
| 07R | J1 and J2 |
| 25L | J10 and J11 |

d) To provide an expeditious departure sequence, ATC may request a flight to depart from an intersection taxiway with a reduced runway length. In this case and when applicable, the intermediate (intersection) departure wake turbulence longitudinal separation shall be applied. The take-off run available (TORA) for an intermediate (intersection) departure is listed in VHHH AD 2.13.

e) If the pilot is unable to comply with the conditions mentioned in the subparagraphs above, he/she must inform ATC prior to entering the runway.

10.2 ARRIVALS

a) Pilots should vacate the runway as quickly as practicable to enable ATC to apply minimum spacing on final approach thereby maximising runway utilisation and minimising the occurrence of missed approaches.

b) To facilitate minimum runway occupancy time, each runway has multiple Rapid Exit Taxiways (RETs) that comply with ICAO design specifications. Pilots should vacate via the first available RET commensurate with operational conditions, or as instructed by ATC.

c) There are rapid exit taxiway indicator lights (RETILs) for RETs (TWYs C4, C5, C6, C7, C8, C9, A3, A5, A6, A7, A8, A10, F3, F4, F5, F6, K3 and K5) to assist pilots at night or in low visibility to assess the distance to the RETs. The RETILS provide guidance to RETs by displaying distance information of 300 metres, 200 metres and 100 metres.

d) Aircraft vacating the runway should not stop on the exit taxiway until the entire aircraft has passed the runway holding point.

e) When vacating the runway pilots shall remain on the appropriate Tower frequency until instructed to contact the relevant Ground Control frequency.

10.3 REDUCED RUNWAY SEPARATION MINIMA (RRSM)

10.3.1 RRSM may be applied between a departing aircraft and a succeeding landing aircraft or between two successive landing aircraft on the same runway provided the following conditions exist:

a) visibility at least 5 km;

b) cloud ceiling in the departure/missed approach area at 3 000 feet or more;

c) during daylight hours from 30 minutes after local sunrise to 30 minutes before local sunset;

d) the second aircraft able to see the first aircraft clearly and continuously until the first is clear of the runway;

e) no unfavourable surface wind conditions including significant tailwind/turbulence or windshear, and/or braking action not adversely affected by water or other contaminants, i.e. RRSM will be suspended whenever the runway is wet or there is pilot report of poor braking action.

10.3.2 When RRSM is applied, the successive landing aircraft may be given clearance to land before the first aircraft has cleared the runway-in-use after landing or crossed the runway end on departure provided there is reasonable assurance that the following separation distances will exist when the landing aircraft crosses the runway threshold:

| | Landing following departure | Landing following landing |
|---|---|---|
| RWY 07R/25L | The departing aircraft is/will be airborne and has passed a point at least **2 900** m from the threshold of the runway (abeam TWY K6 for RWY 07R or TWY K2 for RWY 25L) | The preceding aircraft has landed and has passed a point at least **2 900** m from the threshold of the runway (abeam TWY K6 for RWY 07R or TWY K2 for RWY 25L), is in motion and will vacate the runway without backtracking. |
| RWY 07C/25C | The departing aircraft is/will be airborne and has passed a point at least **2 400** m from the threshold of the runway (abeam TWY F6/A8 for RWY 07C or TWY F3 for RWY 25C) | The preceding aircraft has landed and has passed a point at least **2 400** m from the threshold of the runway (abeam TWY F6/A8 for RWY 07C or TWY F3 for RWY 25C), is in motion and will vacate the runway without backtracking. |

| | Landing following departure | Landing following landing |
|---|---|---|
| RWY07L/25R | The departing aircraft is/will be airborne and has passed a point at least **2 400** m from the threshold of the runway (abeam TWY C8 for RWY 07L or TWY C5 for RWY 25R) | The preceding aircraft has landed and has passed a point at least **2 400** m from the threshold of the runway (abeam TWY C8 for RWY 07L or TWY C5 for RWY 25R), is in motion and will vacate the runway without backtracking. |

10.3.3 ATC will provide warning to the second aircraft when issuing the landing clearance in line with ICAO standard phraseology, e.g.:

– "(Call sign…), preceding B737 landing about to vacate the runway, surface wind 090 degrees 11 kt, cleared to land."

– "(call sign…), departing A320 ahead about to rotate, surface wind 230 degrees 6 kt, cleared to land."

10.4 Pilots must notify ATC in advance if they anticipate not being able to comply with any of the above requirements.

**11 Runway Maintenance Periods**

11.1 To facilitate the regular maintenance of the runways at Hong Kong International Airport, one runway is normally closed overnight for scheduled maintenance. During the closure period, all arrivals and departures will utilise one or both of the remaining runways depending on the time of day and runway configuration.

11.2 The scheduled maintenance periods are published in AIP Supplements and any amendments are promulgated by NOTAM.

11.3 Upon an unforeseen situation where an operational runway is not available, or is likely to become unavailable, the runway maintenance work can be terminated and the closed runway can be returned to service within approximately two hours. However, the actual time required is dependent on the nature of the maintenance work being carried out.

**12 Ground Handling Arrangements**

12.1 All operators, including overseas and local operators of private aircraft, operating international flights to or from Hong Kong International Airport shall employ the services of a recognised ground handling agent.

12.2 Operators should contact the Airport Authority Hong Kong for further information on ground handling arrangements.

**13 Ground Manoeuvring of Aircraft**

13.1 LEGISLATION

13.1.1 The rules concerning ground manoeuvring of aircraft and vehicles are contained in Rule 33 of Schedule 14 to the Air Navigation (Hong Kong) Order 1995.

13.2 DEFINITION OF TAXIING AIRCRAFT

13.2.1 Aircraft taxiing are those manoeuvring under the following conditions:

a) Aircraft moving under their own power within the airport boundaries, or any part of the airport subject to communal use, excluding take-off and landing.

b) Aircraft being moved with the assistance of ancillary power, i.e. tractor, jeep or by other mechanical means.

c) Aircraft being manoeuvred by hand.

Note: Aircraft classified under a), b) and c) above are not subject to these regulations unless they are moved along, or across runways, taxiways or taxilanes, in which case they are considered to be taxiing.

13.3 LOCAL TAXIING /AIR-TAXIING REGULATIONS

13.3.1 Overtaking of moving aircraft at Hong Kong International Airport is prohibited.

13.3.2 When taxiing/air-taxiing on an apron, aircraft shall follow the nose-wheel guide lines at all times. Marshalling service will only be provided at parking stands not equipped with full Safegate Aircraft Docking System.

Note: Pilots should exercise extreme caution when manoeuvring on the aprons due to the proximity of other aircraft, ground staff and equipment. Engine power should be restricted to the minimum required, to reduce the adverse effect of jet blast. A case in point is the use of greater than normal breakaway thrust when commencing taxi.

13.4 AIRCRAFT EQUIPPED WITH RADIO

13.4.1 Before the commencement of any manoeuvre, all aircraft equipped with radio, except those specified in the 'Note' to para 13.2 above, are to contact "Hong Kong Ground". Refer to VHHH AD 2.18 for the list of "Hong Kong Ground" (GMC) frequencies.

13.4.2 A person qualified (see para 13.6 below) shall be in charge of all movements. If voice communication cannot be established, the aircraft is to remain in position and comply with regulations applicable to aircraft not fitted with radio.

13.5 AIRCRAFT UNABLE TO ESTABLISH RADIO CONTACT WITH ATC

13.5.1 Parked aircraft that are unable to establish radio contact with ATC must arrange with Airport Authority Apron Control Centre for a 'Follow Me' escort service to guide the aircraft.

13.5.2 Landing aircraft that are unable to establish radio contact with ATC shall vacate the RWY onto the parallel taxiway and await a 'Follow Me' vehicle to guide them to the parking stand.

13.6 PERSONS QUALIFIED TO TAXI/AIR-TAXI AIRCRAFT

13.6.1 No person may taxi/air-taxi an aircraft at Hong Kong International Airport unless they are qualified under one of the following categories:

a) a licensed pilot in possession of a valid licence to operate that type of aircraft;

b) a qualified ground engineer (see note below);

c) a pupil under instruction who has been authorised by a Flying Instructor in possession of a valid instructor's licence for that type of aircraft.

Note: In the case of para b) above, such ground engineers are to be in possession of a certificate, signed by a pilot holding for that type of aircraft a valid licence, stating that the ground engineer is qualified to taxi/air-taxi that type of aircraft.

13.7 PERSONS QUALIFIED TO TOW AIRCRAFT

13.7.1 A tractor driver in possession of,

a) a valid Airport Restricted Area Permit, with a driving endorsement, for the areas in which the aircraft is to be towed;

b) a valid driving licence issued by the Transport Department of Hong Kong Special Administrative Region Government with the classes as appropriate for driving the type of tug which is to be used for towing the aircraft, and covered by a valid Third Party insurance policy for such towing;

c) a valid Aircraft Towing Runway Crossing (ATRC) certificate issued by Airport Authority Hong Kong;

d) written approval from the company owning the tug that he may tow aircraft;

e) written approval from the owner or operator of the aircraft to be towed, that he may tow the aircraft.

Note: In the case of para e) the approval may be in the form of a contract between the company owning the tug and the aircraft owner/operator, providing the other conditions in para a) to para d) inclusive are satisfied.

13.7.2 In addition to the conditions set out above, the tug driver or his employer must also ensure that the tug is appropriate for towing that type of aircraft and has been issued with a valid Airside Vehicle Licence for those areas within which it is intended to be operated, and is covered by the appropriate level of insurance required for operation on the aircraft movement area.

**14 Regulations for Vehicles and Persons on Aerodromes**

14.1 The general regulations for vehicles and persons within Hong Kong International Airport are contained in Airport Authority Ordinance.

14.2 The regulations for vehicles and persons within the Hong Kong International Airport Restricted Areas are contained in Airport Authority Ordinance.

**15 Engine Tests and Ground Runs**

15.1 GENERAL

15.1.1 An engine ground run is defined as any engine start up not associated with a planned aircraft departure.

15.1.2 Engine ground runs at ground idle power of not more than two engines at a time and for a duration not exceeding ten minutes may be carried out on the Passenger Apron or Cargo Apron.

15.1.3 Engine runs above ground idle power shall be carried out in the engine run-up facility and engine ground runs at idle power for a duration in excess of ten minutes shall only be carried out in approved locations.

15.1.4 All engine ground runs must be fully supervised by ground staff.

15.1.5 Maintenance or test running of jet engines not mounted on an aircraft is prohibited unless performed in a test cell of adequate design.

15.2 ENGINE GROUND RUN PRODEDURES

15.2.1 Initial requests for a ground engine run should be made to the Airport Authority Apron Control Centre (tel. no. 2910 1112). The airline, aircraft maintenance agent engineer or mechanic in charge of the engine test is responsible for ensuring that all safety precautions against injury to persons or damage to properties, aircraft, vehicles and equipment in the vicinity, are adopted.

15.2.2 When ready to conduct the engine run, the pilot or authorised engineer shall obtain start-up clearance from Apron Control on frequency 121.775 MHz, and a listening watch shall be maintained on the frequency throughout the engine run. The aircraft anti-collision beacons must be activated for the entire duration of the ground engine run and Apron Control shall be advised on completion of the engine run.

15.2.3 The ground crew in charge must maintain communication with cockpit personnel and be able to stop the engine run immediately if directed.

**16 Runway Friction Measuring Device and Runway Friction Level**

16.1 Runway surface friction at Hong Kong is measured by means of the Surface Friction Tester Vehicle in accordance with recognised procedures. Runs are carried out at a speed of 95 km/hour regularly on a dry runway surface using a self-watering device giving a controlled depth of 1 mm of water to monitor the effectiveness of the rubber deposit removal programme and surface wear and tear. Should the friction value fall to 0.34 or less the runway will be notified as liable to be slippery when wet.

16.2 If and when such notification is given, there may be a significant deterioration both in aircraft stopping performance and directional control when the runway is wet. Take-off or landing should then be considered only if the distances available equal to or exceed those required for slippery conditions as determined in the Aeroplane Flight Manual.

16.3 If a pilot experiences a significant degradation of the braking action, it should immediately be reported to ATC for relay to subsequent landing aircraft and for follow-up action by the airport authority.

**17 Ground Handling of Code F Aircraft**

17.1 All runways at Hong Kong International Airport can support Code F aircraft operations, but not all the taxiways/ taxilanes are available for Code F Aircraft. Refer to chart page AD 2-VHHH-ADC-6 for details.

# AD 1.2 RESCUE AND FIRE FIGHTING SERVICES, RUNWAY SURFACE CONDITION ASSESSMENT AND REPORTING, AND SNOW PLAN

## 1 Rescue and Fire Fighting Services

1.1 Adequate rescue and fire fighting vehicles are provided at Hong Kong International Airport. The scale of protection has been determined in accordance with Annex 14 - Aerodromes, Attachment A. In addition, 2 rescue launches with foam and water fire fighting capability, and 8 high speed rescue boats, together with rescue facility, are available H24.

1.2 Further information on the Rescue and Fire Fighting services at Hong Kong International Airport and Sky Shuttle Heliport is listed in Section VHHH AD 2.6 RESCUE AND FIRE FIGHTING SERVICES and Section VHSS AD 3.6 RESCUE AND FIRE FIGHTING SERVICES respectively.

## 2 Runway Surface Condition Assessment and Reporting, and Snow Plan

2.1 Aerodrome operator is responsible for assessing and reporting the runway surface condition based on the ICAO Global Reporting Format (GRF) whenever water or contaminant is present on an operational runway.

2.2 Runway condition report (RCR) is disseminated when there are significant changes in the runway surface condition. The RCR includes runway condition code (RWYCC) and the information that describes the runway surface condition, i.e. type of surface contaminants, depth and coverage for each runway third.

2.3 The RWYCC is derived from the Runway Condition Assessment Matrix (RCAM):

| **Assessment Criteria** | | **Downgrade Assessment Criteria** | |
|---|---|---|---|
| **RWYCC (Applicable in Hong Kong)** | **Runway Surface Description** | **Aeroplane Deceleration or Directional Control Observation** | **Pilot Report of Runway Braking Action** |
| 6 | - DRY | - | - |
| 5 | - WET (the runway surface is covered by any visible dampness or water up to and including 3 mm depth) | Braking deceleration is normal for the wheel braking effort applied AND directional control is normal. | GOOD |
| 3 | - WET (“Slippery wet” runway) | Braking deceleration is noticeably reduced for the wheel braking effort applied OR directional control is noticeably reduced. | MEDIUM |
| 2 | - STANDING WATER (more than 3 mm depth) | Braking deceleration OR directional control is between Medium and Poor. | MEDIUM TO POOR |

2.4 Communication Channels for RCR:

| **Runway Condition Code (RWYCC)** | **Air-Ground Voice Communications** | **ATIS** | **SNOWTAM** |
|---|---|---|---|
| 6 (Dry) | Yes* | No | No** |
| 5 (Wet) | Yes | Yes | No** |
| 3 (Slippery Wet) | Yes | Yes | No** |
| 2 (Standing Water) | Yes | Yes | Yes |

* Upon request

** Except when RWYCC 2 or lower was previously reported

2.5 Pilots are to make special air report (AIREP) whenever worse braking action than previously reported is experienced. Pilots may also be asked by ATC to report their assessment of the braking performance.

2.6 GRF is applicable to the following aerodrome: Hong Kong International Airport (VHHH)

2.7 Snow Plan: Nil.

## AD 1.3 INDEX TO AERODROMES AND HELIPORTS

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Aerodrome/heliport name<br>Location indicator | Type of traffic permitted to use aerodrome/heliport | | | Reference to AD Section and remarks |
| | International-National (INTL - NTL) | IFR - VFR | S = Scheduled<br>NS = Non-scheduled<br>P = Private | |
| Aerodromes | | | | |
| HONG KONG/ INTERNATIONAL<br>VHHH | INTL | IFR - VFR | S-NS-P | AD 2 |
| SEK KONG<br>VHSK | Military - NTL | VFR | Military | |
| Heliports | | | | |
| SHEUNG WAN / SKY SHUTTLE HELIPORT<br>VHSS | INTL | VFR | NS | AD 3 |

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# AD 1.4 GROUPING OF AERODROMES/HELIPORTS

## 1 General

1.1 The criteria applied by Hong Kong in grouping aerodromes/heliports for the provision of information in this AIP are listed below.

1.2 Primary/Major International Aerodrome/Heliport.

An aerodrome/heliport 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.

1.3 National Aerodrome/Heliport.

An aerodrome/heliport available only for domestic air traffic, including those military aerodromes/heliports where civil air traffic is allowed under certain conditions.

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## AD 1.5 STATUS OF CERTIFICATION OF AERODROMES

| *Aerodrome Name Location Indicator* | *Date of Certification* | *Validity of Certification* | *Remark* |
|---|---|---|---|
| HONG KONG/ INTERNATIONAL VHHH | 24 Nov 2024 | 1 year | NIL |

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# AD 2 AERODROMES

## VHHH

### VHHH AD 2.1 AERODROME LOCATION INDICATOR AND NAME

VHHH - HONG KONG/ INTERNATIONAL

### VHHH AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

| | | |
|---|---|---|
| 1 | *ARP co-ordinates and site at AD* | 221832N 1135453E<br>Mid-point of aerodrome |
| 2 | *Direction and distance from city* | 25 km west of Central District, Hong Kong Island |
| 3 | *Elevation/Reference temperature* | 28 ft/34°C |
| 4 | *MAG VAR / Annual change* | 3°W (2020) / 4'W |
| 5 | *AD Administration, address, telephone, telefax, internet* | Chief Executive Officer<br>Airport Authority Hong Kong<br>HKIA Tower<br>1 Sky Plaza Road<br>Hong Kong International Airport<br>Lantau<br>Hong Kong<br><br>Tel: +852 2188 7111<br>Telefax: +852 2824 0717<br>internet: http://www.hkairport.com |
| 6 | *Types of traffic permitted (IFR/VFR)* | IFR/VFR |
| 7 | *Remarks* | Nil |

### VHHH AD 2.3 OPERATIONAL HOURS

| | | |
|---|---|---|
| 1 | *AD Administration* | H24 |
| 2 | *Customs and immigration* | H24 |
| 3 | *Health and sanitation* | H24 |
| 4 | *AIS Briefing Office* | H24 |
| 5 | *ATS Reporting Office* | H24 |
| 6 | *MET Briefing Office* | H24 |
| 7 | *ATS* | H24 |
| 8 | *Fuelling* | H24 |
| 9 | *Handling* | H24 |
| 10 | *Security* | H24 |
| 11 | *De-icing* | Nil |
| 12 | *Remarks* | Nil |

## VHHH AD 2.4 HANDLING SERVICES AND FACILITIES

| | | |
|---|---|---|
| 1 | *Cargo handling facilities* | All modern facilities handling weights up to 4 500kg |
| 2 | *Fuel/oil types* | Jet A1 (AVTUR 650) and all oil grades normally available |
| 3 | *Fuelling facilities/capacity* | Jet A1 available by hydrant refuelling on all main apron and cargo stands, at a rate of 500 gpm |
| 4 | *De-icing facilities* | Nil |
| 5 | *Hangar space for visiting aircraft* | Limited and unheated. Available to all types of aircraft by prior arrangement |
| 6 | *Repair facilities for visiting aircraft* | Major and minor repair facilities available. Engine changes available. Spare parts and major repairs by prior arrangement |
| 7 | *Remarks* | Fixed ground power supply (960V 400 Hz) available at all main apron and cargo apron stands |

## VHHH AD 2.5 PASSENGER FACILITIES

| | | |
|---|---|---|
| 1 | *Hotels* | Adjacent to airport terminal and in the city |
| 2 | *Restaurants* | At terminal and in the city |
| 3 | *Transportation* | Rail, buses, taxis and ferries |
| 4 | *Medical facilities* | At terminal and Hospital in city |
| 5 | *Bank and Post Office* | At terminal |
| 6 | *Tourist office* | At terminal |
| 7 | *Remarks* | Transit passenger lounge available. Bonded storage for transhipment goods. |

## VHHH AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

| | | |
|---|---|---|
| 1 | *AD category for fire fighting* | Category 10 |
| 2 | *Rescue equipment* | Yes.<br>Additional:<br>(i) 2 rescue launches with rescue and fire fighting (foam with water) facility and life rafts;<br><br>(ii) 8 high speed rescue boats. |
| 3 | *Capability for removal of disabled aircraft* | Specialized aircraft recovery equipment available for up to Code F aircraft. The Airport Authority Hong Kong is the co-ordinator for the removal of disabled aircraft. Various lifting jacks, gantry crane, tractors, portable lighting and other miscellaneous equipment can be provided by aircraft engineering companies. |
| 4 | *Remarks* | If pilots wish to communicate direct with RFFS, they should inform ATC. |

## VHHH AD 2.7 SEASONAL AVAILABILITY - CLEARING

| | | |
|---|---|---|
| 1 | *Types of clearing equipment* | Nil |
| 2 | *Clearance priorities* | Nil |
| 3 | *Remarks* | Nil |

## VHHH AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATION DATA

| | | |
|---|---|---|
| 1 | *Apron surface and strength* | North / South aprons :<br><br>West apron :<br><br>Cargo apron : Refer to pavement diagram on page AD 2-VHHH-ADC-5<br><br>Maintenance apron :<br><br>BAC apron: |
| 2 | *Taxiway width*<br><br><br><br><br><br>*Taxiway surface*<br>*Taxiway strength* | All TWYs (except A1, A2, A4, A9, A11, A12, B1 - B3, B10 - B12, C, C1 - C12, D, D1, D4, D5, D7, D8, E, E2, E3, F, F1 - F8, J2, Q1, Q2, T, V4, Y, Z, Z1, Z2, Z3) : Width 29 m,<br>TWYs A1, A2, A4, A9, A11, A12, B1 - B3, B10 - B12, C, C1 - C12, D, D1, D4, D5, D7, D8, E, E2, E3, F, F1 - F8, J2, Y, Z, Z1, Z2, Z3 : Width 25 m<br>TWYs Q1, Q2: Width 10.5 m<br>TWY T : Width 27 m<br>TWY V4 : Width 60 m<br>All TWYs : Asphalt<br>All TWYs : Refer to pavement diagram on page AD 2-VHHH-ADC-5 |
| 3 | *ACL location and elevation* | Location :Main apron (not marked)<br>Elevation :19 ft |
| 4 | *VOR checkpoint*<br><br>*INS checkpoints* | NIL<br><br>see COORDINATES OF AIRCRAFT STANDS |
| 5 | *Remarks* | Straight sections of taxiway at the ends of bridges on TWYs V, V4, W, S and T, D and E are not available at:<br>*a)* junction of TWY H and TWY V;<br>*b)* junction of TWY V and TWY V4;<br>*c)* junction of TWY V4 and TWY W;<br>*d)* junction of TWY W and TWY H;<br>*e)* junction of TWY W and TXL W2;<br>*f)* junction of TWY S and TWY H;<br>*g)* junction of TWY T and TWY H;<br>*h)* junction of TWY D and TWY E. |

## COORDINATES OF AIRCRAFT STANDS

### 1 Passenger apron

| Stand | Coordinates for First Nose Wheel Guideline Stop Location | |
|---|---|---|
| S1 | 221847.75N | 1135604.77E |
| S1R | 221847.34N | 1135604.45E |
| TW1 | 221835.86N | 1135523.96E |
| S2 | 221845.52N | 1135605.61E |
| S2R | 221845.11N | 1135605.28E |
| TW2 | 221837.17N | 1135523.90E |
| S3 | 221843.30N | 1135606.43E |
| S3R | 221842.88N | 1135606.11E |
| S4 | 221841.07N | 1135607.27E |
| N5 | 221857.47N | 1135559.22E |
| N6 | 221901.10N | 1135559.81E |
| N6R | 221900.72N | 1135559.54E |
| N7 | 221903.33N | 1135558.99E |
| N7R | 221902.93N | 1135558.71E |
| N8 | 221905.56N | 1135558.17E |
| N9 | 221907.79N | 1135557.35E |
| N10 | 221855.10N | 1135557.44E |
| S11 | 221849.97N | 1135601.58E |
| N12 | 221854.77N | 1135555.55E |
| R13 | 221904.08N | 1135550.12E |
| R14 | 221902.79N | 1135550.60E |
| R15 | 221901.50N | 1135551.08E |
| R16 | 221859.75N | 1135550.33E |
| R17 | 221859.35N | 1135548.96E |
| R18 | 221858.80N | 1135547.68E |
| R19 | 221900.03N | 1135547.59E |
| R20 | 221901.32N | 1135547.11E |
| R21 | 221902.61N | 1135546.63E |
| S23 | 221851.07N | 1135557.18E |
| N24 | 221853.07N | 1135553.19E |
| N24R | 221853.22N | 1135552.76E |
| S25 | 221850.18N | 1135554.71E |
| S25R | 221850.09N | 1135555.08E |
| N26 | 221852.26N | 1135550.81E |
| N26R | 221852.40N | 1135550.42E |
| S27 | 221849.46N | 1135552.30E |
| S27R | 221849.31N | 1135552.69E |
| N28 | 221851.48N | 1135548.41E |

| Stand | Coordinates for First Nose Wheel Guideline Stop Location | |
|---|---|---|
| N28R | 221851.64N | 1135548.03E |
| S29 | 221848.42N | 1135549.08E |
| S29R | 221848.41N | 1135549.41E |
| N30 | 221850.64N | 1135545.79E |
| N30R | 221850.79N | 1135545.40E |
| S31 | 221847.65N | 1135546.68E |
| S31R | 221847.64N | 1135547.03E |
| N32 | 221849.87N | 1135543.40E |
| N32R | 221850.02N | 1135543.01E |
| S33 | 221846.88N | 1135544.30E |
| S33R | 221846.73N | 1135544.68E |
| N34 | 221849.10N | 1135541.00E |
| N34R | 221849.24N | 1135540.62E |
| S35 | 221846.11N | 1135541.89E |
| S35R | 221845.96N | 1135542.28E |
| N36 | 221849.61N | 1135537.09E |
| W40 | 221842.88N | 1135535.20E |
| W40R | 221842.75N | 1135534.77E |
| S41 | 221842.64N | 1135538.92E |
| S41R | 221842.80N | 1135539.29E |
| W42 | 221840.62N | 1135534.07E |
| W42R | 221840.47N | 1135533.69E |
| S43 | 221840.41N | 1135537.75E |
| S43R | 221840.56N | 1135538.13E |
| W44 | 221838.39N | 1135532.91E |
| W44R | 221838.24N | 1135532.52E |
| S45 | 221838.18N | 1135536.58E |
| S45R | 221838.32N | 1135536.98E |
| W46 | 221836.16N | 1135531.74E |
| W46R | 221836.00N | 1135531.36E |
| S47 | 221835.94N | 1135535.42E |
| S47R | 221836.02N | 1135535.96E |
| W48 | 221833.92N | 1135530.58E |
| W48R | 221833.81N | 1135530.10E |
| S49 | 221833.84N | 1135534.28E |
| S49R | 221833.90N | 1135534.85E |
| W50 | 221831.79N | 1135529.49E |
| N60 | 221850.87N | 1135534.34E |
| N60R | 221851.37N | 1135534.34E |
| W61 | 221847.56N | 1135533.87E |
| W61R | 221847.13N | 1135534.00E |
| N62 | 221852.10N | 1135531.59E |

| Stand | Coordinates for First Nose Wheel Guideline Stop Location | |
|---|---|---|
| N62R | 221852.59N | 1135531.65E |
| W63 | 221848.58N | 1135531.59E |
| W63R | 221847.97N | 1135531.70E |
| N64 | 221853.56N | 1135528.95E |
| N64R | 221854.05N | 1135528.82E |
| W65 | 221849.61N | 1135529.32E |
| W65R | 221849.37N | 1135529.54E |
| N66 | 221854.59N | 1135526.09E |
| N66R | 221855.08N | 1135526.04E |
| W67 | 221850.64N | 1135527.04E |
| W67R | 221849.98N | 1135527.20E |
| N68 | 221854.58N | 1135523.37E |
| N68R | 221854.61N | 1135522.70E |
| W69 | 221851.67N | 1135524.76E |
| W69R | 221851.02N | 1135524.88E |
| N70 | 221853.49N | 1135520.52E |
| N70R | 221853.46N | 1135519.94E |
| W71 | 221852.31N | 1135522.78E |
| W71R | 221852.02N | 1135522.91E |
| S101 | 221838.62N | 1135558.37E |
| S102 | 221840.85N | 1135557.54E |
| S103 | 221843.08N | 1135556.71E |
| S104 | 221842.67N | 1135555.45E |
| S105 | 221840.44N | 1135556.27E |
| S106 | 221838.21N | 1135557.10E |
| S107 | 221837.41N | 1135548.32E |
| S108 | 221839.74N | 1135547.79E |
| S109 | 221839.41N | 1135546.47E |
| S110 | 221837.51N | 1135546.60E |
| S111 | 221835.52N | 1135545.22E |
| W121 | 221839.33N | 1135524.28E |
| W121L | 221838.73N | 1135524.59E |
| W122 | 221841.45N | 1135525.39E |
| W122L | 221840.35N | 1135525.43E |
| W122R | 221841.97N | 1135526.28E |
| W123 | 221843.58N | 1135526.48E |
| W123R | 221843.60N | 1135527.13E |
| W124 | 221843.41N | 1135524.25E |
| W124L | 221843.76N | 1135524.76E |
| W125 | 221844.45N | 1135521.98E |
| W125L | 221844.55N | 1135523.02E |
| W125R | 221845.34N | 1135521.28E |

| Stand | Coordinates for First Nose Wheel Guideline Stop Location | |
|---|---|---|
| W126 | 221847.08N | 1135520.94E |
| N141 | 221859.58N | 1135536.27E |
| N142 | 221858.55N | 1135538.54E |
| N143 | 221856.55N | 1135540.72E |
| N144 | 221858.78N | 1135539.89E |
| N145 | 221900.80N | 1135540.09E |
| D201 | 221847.78N | 1135501.74E |
| D202 | 221846.52N | 1135457.84E |
| D203 | 221845.55N | 1135502.57E |
| D204 | 221844.30N | 1135458.67E |
| D205 | 221843.33N | 1135503.40E |
| D206 | 221842.07N | 1135459.50E |
| D207 | 221841.10N | 1135504.23E |
| D208 | 221839.84N | 1135500.33E |
| D209 | 221838.87N | 1135505.06E |
| D210 | 221837.62N | 1135501.16E |
| D211 | 221836.11N | 1135506.09E |
| D212 | 221831.89N | 1135503.29E |
| D213 | 221833.88N | 1135506.92E |
| D214 | 221829.43N | 1135504.21E |
| D215 | 221831.65N | 1135507.75E |
| D216 | 221826.97N | 1135505.12E |
| D217 | 221829.43N | 1135508.57E |
| D218 | 221824.51N | 1135506.03E |
| D219 | 221827.20N | 1135509.40E |
| D301 | 221842.62N | 1135445.50E |
| D301L | 221842.17N | 1135446.56E |
| D301R | 221843.41N | 1135446.09E |
| D302 | 221840.39N | 1135446.33E |
| D302L | 221839.68N | 1135447.48E |
| D302R | 221840.92N | 1135447.02E |
| D303 | 221838.16N | 1135447.16E |
| D304 | 221835.93N | 1135447.99E |
| D304L | 221835.93N | 1135448.88E |
| D304R | 221837.17N | 1135448.41E |
| D305 | 221833.71N | 1135448.81E |
| D305L | 221833.44N | 1135449.80E |
| D305R | 221834.69N | 1135449.34E |
| D306 | 221830.66N | 1135449.78E |
| D306L | 221830.29N | 1135450.98E |
| D306R | 221831.64N | 1135450.47E |
| D307 | 221827.98N | 1135450.78E |

| Stand | Coordinates for First Nose Wheel Guideline Stop Location | |
|---|---|---|
| D307L | 221827.61N | 1135451.98E |
| D307R | 221828.96N | 1135451.47E |
| D308 | 221825.29N | 1135451.78E |
| D308L | 221824.92N | 1135452.98E |
| D308R | 221826.27N | 1135452.48E |
| D309 | 221822.88N | 1135452.84E |
| D309L | 221822.86N | 1135453.74E |
| D310 | 221820.65N | 1135453.67E |
| D310L | 221820.37N | 1135454.67E |
| D310R | 221821.61N | 1135454.21E |
| D311 | 221841.31N | 1135442.25E |
| D312 | 221838.62N | 1135443.25E |
| D313 | 221836.06N | 1135444.21E |
| D314 | 221833.62N | 1135445.12E |
| D315 | 221830.62N | 1135446.23E |
| D316 | 221828.20N | 1135447.14E |
| D317 | 221825.75N | 1135448.05E |
| D318 | 221823.31N | 1135448.95E |
| D319 | 221820.87N | 1135449.86E |

**2 Cargo Apron**

| Stand | Coordinates for First Nose Wheel Guideline Stop Location | |
|---|---|---|
| TC1 | 221809.15N | 1135543.54E |
| X1 | 221757.24N | 1135458.52E |
| X2 | 221755.01N | 1135459.35E |
| X3 | 221752.71N | 1135500.99E |
| X4 | 221749.72N | 1135502.48E |
| X5 | 221747.40N | 1135503.20E |
| X6 | 221745.18N | 1135504.04E |
| X7 | 221747.83N | 1135511.05E |
| X7L | 221748.31N | 1135510.48E |
| X7R | 221746.87N | 1135511.50E |
| X8 | 221750.05N | 1135510.23E |
| X8L | 221750.14N | 1135509.80E |
| X9 | 221751.92N | 1135508.76E |
| X9R | 221752.10N | 1135508.18E |
| X10 | 221752.89N | 1135511.76E |
| X10L | 221753.37N | 1135512.10E |
| X10R | 221752.73N | 1135510.14E |
| X11 | 221753.76N | 1135514.40E |

| Stand | Coordinates for First Nose Wheel Guideline Stop Location | |
|---|---|---|
| X12 | 221754.53N | 1135516.79E |
| X13 | 221755.51N | 1135519.83E |
| X14 | 221756.28N | 1135522.22E |
| X15 | 221757.05N | 1135524.62E |
| X16 | 221758.03N | 1135527.65E |
| X17 | 221758.80N | 1135530.05E |
| X18 | 221759.58N | 1135532.50E |
| X19 | 221800.51N | 1135534.77E |
| X20 | 221801.19N | 1135537.47E |
| X21 | 221802.00N | 1135539.98E |
| X22 | 221802.80N | 1135542.48E |
| X23 | 221803.61N | 1135544.99E |
| X24 | 221809.15N | 1135534.53E |
| X25 | 221808.38N | 1135532.14E |
| X26 | 221807.61N | 1135529.74E |
| X27 | 221806.83N | 1135527.35E |
| X28 | 221806.06N | 1135524.96E |
| X29 | 221805.02N | 1135521.74E |
| X30 | 221804.24N | 1135519.31E |
| X31 | 221803.45N | 1135516.89E |
| X33 | 221801.38N | 1135510.50E |
| X33L | 221800.57N | 1135509.12E |
| X33R | 221801.21N | 1135511.09E |
| X34 | 221800.41N | 1135507.50E |
| X34L | 221759.94N | 1135507.16E |
| X35 | 221759.31N | 1135505.19E |
| D321 | 221838.50N | 1135433.52E |
| D322 | 221835.81N | 1135434.52E |
| D323 | 221833.24N | 1135435.44E |
| D324 | 221830.79N | 1135436.35E |
| D325 | 221827.80N | 1135437.47E |
| D326 | 221825.36N | 1135438.38E |
| D327 | 221818.97N | 1135440.75E |
| D328 | 221816.52N | 1135441.66E |
| L417 | 221824.13N | 1135436.45E |
| L427 | 221821.38N | 1135427.91E |
| L431 | 221815.45N | 1135430.02E |
| L432 | 221815.90N | 1135431.41E |
| L433 | 221816.34N | 1135432.79E |
| L434 | 221816.21N | 1135435.26E |
| L435 | 221817.14N | 1135438.15E |
| X451 | 221834.53N | 1135420.42E |

| Stand | Coordinates for First Nose Wheel Guideline Stop Location | |
|---|---|---|
| X452 | 221832.31N | 1135421.25E |
| X453 | 221830.08N | 1135422.07E |
| X454 | 221826.99N | 1135423.22E |
| X455 | 221823.73N | 1135424.64E |
| X456 | 221821.14N | 1135425.40E |
| X458 | 221815.15N | 1135427.63E |
| X459 | 221813.13N | 1135427.57E |

**3 Maintenance and Long Term Parking Apron**

| Stand | Coordinates for First Nose Wheel Guideline Stop Location | |
|---|---|---|
| M1 | 221800.32N | 1135353.09E |
| M1A | 221802.29N | 1135353.96E |
| M2 | 221801.81N | 1135400.93E |
| M3 | 221802.58N | 1135403.33E |
| M4 | 221803.35N | 1135405.72E |
| M5 | 221804.20N | 1135408.36E |
| M6 | 221805.07N | 1135411.06E |
| M7 | 221805.88N | 1135413.57E |
| M8 | 221806.69N | 1135416.07E |
| M9 | 221807.49N | 1135418.58E |
| M10 | 221808.30N | 1135421.08E |
| M21 | 221816.09N | 1135402.96E |
| M22 | 221818.23N | 1135401.86E |
| M24 | 221819.91N | 1135358.41E |
| M25 | 221823.30N | 1135409.37E |
| M26 | 221824.08N | 1135411.76E |
| M27 | 221824.85N | 1135414.15E |
| M31 | 221825.84N | 1135351.27E |
| M32 | 221826.69N | 1135353.91E |
| M33 | 221827.63N | 1135356.88E |
| M34 | 221828.40N | 1135359.28E |
| M35 | 221829.33N | 1135405.83E |
| M36 | 221830.83N | 1135407.42E |
| M37 | 221831.60N | 1135409.81E |
| M38 | 221832.38N | 1135412.20E |
| L411 | 221838.05N | 1135431.34E |
| L412 | 221835.83N | 1135432.17E |
| L413 | 221833.60N | 1135433.00E |
| L414 | 221831.37N | 1135433.83E |
| L415 | 221829.15N | 1135434.66E |

| Stand | Coordinates for First Nose Wheel Guideline Stop Location | |
|---|---|---|
| L416 | 221826.92N | 1135435.48E |
| L421 | 221835.45N | 1135423.26E |
| L422 | 221833.22N | 1135424.09E |
| L423 | 221831.00N | 1135424.92E |
| L424 | 221828.77N | 1135425.75E |
| L425 | 221826.54N | 1135426.58E |
| L426 | 221824.31N | 1135427.40E |

## VHHH AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

| | | |
|---|---|---|
| 1 | *Use of aircraft stand ID signs, TWY guide lines and visual docking / parking guidance system of aircraft stands.* | Guidance sign boards available.<br>Nosewheel guidance lines at apron.<br>Continuous yellow nosewheel guidance lines at aircraft stands for use by wide-body aircraft, e.g. stand S25, dashed yellow nosewheel guidance lines at stands for use by narrow-body aircraft, e.g. stand S25R (see AD 2.23 para 3).<br>Safegate Docking System for wide-body aircraft at every stand, except W126, on passenger terminal aprons (see AD 2.23 para 4). |
| 2 | *RWY and TWY markings and LGT* | RWY markings - RWY designation, THR, TDZ, centreline, aiming point marking and side stripe.<br><br>RWY LGT - THR, TDZ, centreline, wing bars, RETIL, RWY edge and end lights.<br><br>TWY markings - TWY Centre-line, edge, TWY intermediate holding positions. (See Remark 2)<br><br>TWY LGT - Centre-line, edge lights on some sections and TWY intermediate holding position lights. |
| 3 | *Stop bar*s | All stop bars lit. (See Remark 3)<br>Crossing of illuminated stop bars is prohibited.<br>Aircraft and vehicles may cross stop bars only when ATC has given permission to proceed and the stop bar lights are switched off. |
| 4 | *Variable Message Sign (VMS)* | VMS are installed at the entrances of TWY B1 and B12 with two display options depending on the use of RWY 07C/25C:<br>*a)* Direction sign will be displayed when TWY B1 or TWY B12 is available;<br>*b)* No entry sign will be displayed when entries to TWY B1 or TWY B12 are not available. |

| | | | |
|---|---|---|---|
| 5 | *Remarks* | 1) | Follow nosewheel guidance lines when taxiing on apron and taxiways, and entering/exiting the runway. |
| | | 2) | Runway holding position markings and stop bars are applied at the entrances of TWY B1 and TWY B12 to safeguard RWY 07C/25C from taxiing aircraft via TWY B1 or TWY B12 depending on the use of RWY 07C/25C. |
| | | 3) | Stop bars at the entrances of TWY B1 and TWY B12 will be illuminated depending on the use of RWY 07C/25C. |
| | | 4) | Stop bars at runway holding positions E9, F9, E11 and F11 will be illuminated depending on the use of RWY 07C/25C. |

## VHHH AD 2.10 AERODROME OBSTACLES

1 **Obstacles in Approach/Take-off Areas**

1.1 RWY 07L Approach, RWY 07C Approach, RWY 07R Approach, RWY 25L Approach, RWY 25C Approach and RWY 25R Approach - NIL

1.2 RWY 07L Take-off, RWY 07C Take-off, RWY 07R Take-off, RWY 25L Take-off, RWY 25C Take-off and RWY 25R Take-off - NIL

2 **On-Airport Obstacles**

NOTE 1 : All obstacles elevations are rounded up to the next foot.

NOTE 2 : Sky Bridge extends across and above Taxilane B7 between Passenger Terminal Building and T1 Satellite Concourse in the proximity of Stand N12 and Stand R16. Height clearance 28 metres for aircraft to taxi underneath.

| No | Type of Obstacle | Elevation (FT AMSL) | Lit | Co-ordinates |
|---|---|---|---|---|
| 1 | AnemometerA1 | 53.2 | LGTD | 221826.9N 1135545.9E |
| 2 | AnemometerA2 | 47.3 | LGTD | 221804.7N 1135502.5E |
| 3 | AnemometerA3 | 53.5 | LGTD | 221748.5N 1135412.2E |
| 4 | AnemometerA4 | 51.9 | LGTD | 221912.9N 1135523.1E |
| 5 | AnemometerA5 | 49.2 | LGTD | 221859.7N 1135443.0E |
| 6 | AnemometerA6 | 52.0 | LGTD | 221848.6N 1135407.4E |
| 7 | AnemometerA7 | 55.0 | LGTD | 221954.6N 1135436.9E |
| 8 | AnemometerA8 | 50.9 | LGTD | 221940.1N 1135351.9E |
| 9 | AnemometerA9 | 54.9 | LGTD | 221925.6N 1135307.0E |
| 10 | AnemometerA10 | 53.5 | LGTD | 221819.0N 1135547.0E |
| 11 | AnemometerA11 | 48.6 | LGTD | 221808.1N 1135514.0E |
| 12 | AnemometerA12 | 49.2 | LGTD | 221903.3N 1135454.6E |
| 13 | ATC Control Tower Building | 282.9 | LGTD | 221838.1N 1135516.8E |
| 14 | Back-up ATC Control Tower Building | 200.6 | LGTD | 221842.9N 1135515.6E |
| 15 | Forward ScatterR11 | 30.2 | LGTD | 221820.5N 1135548.9E |
| 16 | Forward ScatterR21 | 23.6 | LGTD | 221806.8N 1135503.5E |
| 17 | Forward ScatterR33 | 29.9 | LGTD | 221748.8N 1135411.1E |
| 18 | Forward ScatterR41 | 30.6 | LGTD | 221911.5N 1135523.6E |

| No | Type of Obstacle | Elevation (FT AMSL) | Lit | Co-ordinates |
|---|---|---|---|---|
| 19 | Forward ScatterR51 | 29.2 | LGTD | 221858.7N 1135444.2E |
| 20 | Forward ScatterR63 | 30.7 | LGTD | 221847.1N 1135408.0E |
| 21 | Forward ScatterR71 | 31.6 | LGTD | 221953.2N 1135437.4E |
| 22 | Forward ScatterR81 | 30.3 | LGTD | 221938.7N 1135352.4E |
| 23 | Forward ScatterR93 | 31.8 | LGTD | 221924.3N 1135307.5E |
| 24 | NAT Control Tower Building | 335.1 | LGTD | 221924.6N 1135454.2E |
| 25 | Radar Rain ReflectorR2 | 26.8 | | 221832.4N 1135605.8E |
| 26 | Radar Rain ReflectorR3 | 20.1 | | 221803.4N 1135434.6E |
| 27 | Radar Rain ReflectorR7 | 19.2 | | 221809.7N 1135518.5E |
| 28 | RVR TransmissometerR12 | 30.8 | LGTD | 221820.5N 1135548.8E |
| 29 | RVR TransmissometerR13 | 30.8 | LGTD | 221820.2N 1135547.8E |
| 30 | RVR TransmissometerR22 | 24.3 | LGTD | 221806.6N 1135503.2E |
| 31 | RVR TransmissometerR23 | 24.3 | LGTD | 221806.3N 1135502.1E |
| 32 | RVR TransmissometerR31 | 29.5 | LGTD | 221749.8N 1135414.0E |
| 33 | RVR TransmissometerR32 | 29.5 | LGTD | 221749.4N 1135413.0E |
| 34 | RVR TransmissometerR42 | 30.4 | LGTD | 221911.4N 1135523.2E |
| 35 | RVR TransmissometerR43 | 30.5 | LGTD | 221911.1N 1135522.2E |
| 36 | RVR TransmissometerR52 | 29.3 | LGTD | 221858.6N 1135443.8E |
| 37 | RVR TransmissometerR53 | 29.3 | LGTD | 221858.3N 1135442.8E |
| 38 | RVR TransmissometerR61 | 30.5 | LGTD | 221847.6N 1135409.3E |
| 39 | RVR TransmissometerR62 | 30.4 | LGTD | 221847.3N 1135408.3E |
| 40 | RVR TransmissometerR72 | 31.6 | LGTD | 221953.1N 1135437.0E |
| 41 | RVR TransmissometerR73 | 31.6 | LGTD | 221952.8N 1135436.1E |
| 42 | RVR TransmissometerR82 | 30.3 | LGTD | 221938.6N 1135352.1E |
| 43 | RVR TransmissometerR83 | 30.3 | LGTD | 221938.3N 1135351.1E |
| 44 | RVR TransmissometerR91 | 31.7 | LGTD | 221924.7N 1135308.8E |
| 45 | RVR TransmissometerR92 | 31.7 | LGTD | 221924.4N 1135307.8E |
| 46 | RWY 07C GP Aerial | 65.7 | LGTD | 221848.0N 1135405.7E |
| 47 | RWY 07L GP Aerial | 67.3 | LGTD | 221925.1N 1135305.4E |
| 48 | RWY 07R GP Aerial | 77.5 | LGTD | 221747.8N 1135409.5E |
| 49 | RWY 25C GP Aerial | 66.1 | LGTD | 221913.4N 1135524.7E |
| 50 | RWY 25L GP Aerial | 77.7 | LGTD | 221819.9N 1135549.2E |
| 51 | RWY 25R GP Aerial | 67.1 | LGTD | 221955.2N 1135438.6E |
| 52 | Sky Bridge (Note 2) | 167.0 | LGTD | 221857.7N 1135553.3E |
| 53 | Wind Direction IndicatorIWDI1E | 40.1 | LGTD | 221827.6N 1135546.7E |
| 54 | Wind Direction IndicatorIWDI2E | 25.7 | LGTD | 221947.9N 1135441.6E |
| 55 | Wind Direction IndicatorIWDI3E | 34.5 | LGTD | 221905.7N 1135526.5E |
| 56 | Wind Direction IndicatorIWDI1W | 37.8 | LGTD | 221755.0N 1135405.4E |
| 57 | Wind Direction IndicatorIWDI2W | 25.4 | LGTD | 221917.5N 1135307.4E |
| 58 | Wind Direction IndicatorIWDI3W | 34.6 | LGTD | 221840.6N 1135410.8E |

3 **Aeronautical Ground Lights**

3.1 Obstruction lights are located on peaks within the approach and take-off areas. They are omni-directional red strobe lights of 2 000 candelas power that flash every second. (See Aeronautical Ground Lights Chart page AD 2-VHHH-AERO-GND-LGT).

| No | Location of Peak | Elevation (FT AMSL) | Co-ordinates |
|---|---|---|---|
| 1 | CASTLE PEAK | 1919 | 222318N 1135712E |
| 2 | FA PENG TENG | 883 | 222004N 1140243E |
| 3 | HILL AT SHEK LUNG KUNG | 1550 | 222253N 1140514E |
| 4 | HILL AT TAI LAM CHUNG | 1123 | 222218N 1140202E |
| 5 | HILL AT TSING YI 1 | 1095 | 222013N 1140603E |
| 6 | HILL AT TSING YI 2 | 993 | 222027N 1140600E |
| 7 | HILL AT TUEN MUN 1 | 1576 | 222315N 1135942E |
| 8 | HILL AT TUEN MUN 2 | 1286 | 222321N 1140030E |
| 9 | TAI CHE TUNG | 956 | 221851N 1140024E |

## VHHH AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

| | | |
|---|---|---|
| 1 | *Associated MET office* | Hong Kong Airport MET Office |
| 2 | *Hours of service*<br>*MET office outside hours* | H24<br>Not applicable |
| 3 | *Office responsible for TAF preparation*<br>*Periods of validity*<br>*Interval of issuance* | Hong Kong Airport MET Office<br>30 hr<br>Normally every 3 hr |
| 4 | *Type of landing forecasts*<br>*Interval of issuance* | TREND<br>Normally every 30 minutes |
| 5 | *Briefing/consultation provided* | Self-briefing using AMIDS and telephone consultation |
| 6 | *Flight documentation*<br><br>*Language used* | Charts, METARs, TAFs, SIGMETs, VA and TC advisory information<br>English |
| 7 | *Charts and other information available for briefing or consultation* | S, U, P, W, T, satellite and radar pictures available from AMIDS. |
| 8 | *Supplementary equipment available for providing information* | AMIDS |
| 9 | *ATS units provided with information* | Hong Kong ACC/APP/TWR/RCC |
| 10 | *Additional information (limitation of service etc.)* | Nil |

## VHHH AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
| *RWY Designator* | *True and MAG BRG* | *Dimensions of RWY (m)* | *Strength (PCR) and surface of RWY - SWY* | *THR Co-ordinates* | *THR ELEV and highest point of TDZ of Precision APP RWY* |
| 07L | 070.90°T<br>073.90°M | 3800 x 60 | PCR 720/F/B/W/T<br>Asphalt | 221917.72N<br>1135256.26E | 23.3FT<br>23.2FT |
| 25R | 250.90°T<br>253.90°M | 3800 x 60 | PCR 720/F/B/W/T<br>Asphalt | 221954.45N<br>1135450.24E | 23.1FT<br>23.0FT |
| 7 | 8 | 9 | 10 | 11 | 12 |
| *Slope of RWY-SWY* | *SWY dimensions (m)* | *CWY dimensions (m)* | *Strip dimensions (m)* | *OFZ* | *Remarks* |
| 07L: NIL | NIL | 60 x 150 | 3920 x 300 | YES | Full length of RWY is grooved RESA 240 x 150 m |
| 25R: NIL | NIL | 60 x 150 | 3920 x 300 | YES | Full length of RWY is grooved RESA 240 x 150 m |

| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
| *RWY Designator* | *True and MAG BRG* | *Dimensions of RWY (m)* | *Strength (PCR) and surface of RWY - SWY* | *THR Co-ordinates* | *THR ELEV and highest point of TDZ of Precision APP RWY* |
| 07C | 070.90°T<br>073.90°M | 3800 x 60 | PCR 720/F/B/W/T<br>Asphalt | 221840.58N<br>1135356.64E | 22.3FT<br>22.4FT |
| 25C | 250.90°T<br>253.90°M | 3800 x 60 | PCR 720/F/B/W/T<br>Asphalt | 221912.85N<br>1135536.78E | 22.0FT<br>21.8FT |
| 7 | 8 | 9 | 10 | 11 | 12 |
| *Slope of RWY-SWY* | *SWY dimensions (m)* | *CWY dimensions (m)* | *Strip dimensions (m)* | *OFZ* | *Remarks* |
| 07C: NIL | NIL | 178 x 150 | 3920 x 300 | YES | Full length of RWY is grooved RESA 240 x 150 m |
| 25C: NIL | NIL | 178 x 150 | 3920 x 300 | YES | Full length of RWY is grooved RESA 240 x 150 m |

| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
| *RWY Designator* | *True and MAG BRG* | *Dimensions of RWY (m)* | *Strength (PCR) and surface of RWY - SWY* | *THR Co-ordinates* | *THR ELEV and highest point of TDZ of Precision APP RWY* |
| 07R | 070.90°T<br>073.90°M | 3800 x 60 | PCR 720/F/B/W/T<br>Asphalt | 221748.03N<br>1135357.99E | 27.0FT<br>26.6FT |
| 25L | 250.90°T<br>253.90°M | 3800 x 60 | PCR 720/F/B/W/T<br>Asphalt | 221826.75N<br>1135558.15E | 26.9FT<br>26.6FT |
| 7 | 8 | 9 | 10 | 11 | 12 |
| *Slope of RWY-SWY* | *SWY dimensions (m)* | *CWY dimensions (m)* | *Strip dimensions (m)* | *OFZ* | *Remarks* |
| 07R: NIL | NIL | 300 x 150 | 3920 x 300 | YES | Full length of RWY is grooved RESA 240 x 150 m |
| 25L: NIL | NIL | 300 x 150 | 3920 x 300 | YES | Full length of RWY is grooved RESA 240 x 150 m |

**VHHH AD 2.13 DECLARED DISTANCES**

| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
| *RWY Designator* | *TORA (m) (Note 1-6, 8-12)* | *TODA (m) (Note 1-6, 8-12)* | *ASDA (m) (Note 1-6, 8-12)* | *LDA (m)* | *Remarks* |
| 07L | 3800 | 3860 | 3800 | 3626 | THR displaced by 174 m. When entering RWY from TWY C3 the TORA/ASDA is 3317 m. |
| 25R | 3800 | 3860 | 3800 | 3626 | THR displaced by 174 m. When entering RWY from TWY C10 the TORA/ASDA is 3228 m. |
| 07C | 3800 | 3978 | 3800 | 3629 | THR displaced by 171 m from start of RWY 07C TORA/ASDA, i.e. TWY A1 or TWY F1. (Note 13)<br>When entering RWY from TWY A4 the TORA/ASDA is 3014 m. |
| 25C | 3800 | 3978 | 3800 | 3629 | THR displaced by 171 m from start of RWY 25C TORA/ASDA, i.e. TWY A12 or TWY F8. (Note 14)<br>When entering RWY from TWY A9 the TORA/ASDA is 3249 m. |
| 07R | 3800 | 4100 | 3800 | 3640 | THR displaced by 160 m. When entering RWY from TWY J3 the TORA/ASDA is 3130 m. When entering RWY from TWY K2 the TORA/ASDA is 2720 m. (Note 7 & 8) |
| 25L | 3800 | 4100 | 3800 | 3800 | When entering RWY from TWY J9 the TORA/ASDA is 3200 m. When entering RWY from TWY K6 the TORA/ASDA is 2880 m. (Note 8) |

Note 1 : The nosewheel guidelines from the lead-on taxiways J1, J11, K1 and K7 intersect the runway centreline 100 m from the commencement of the TORA/TODA/ASDA.

Note 2 : The nosewheel guideline from lead-on taxiway C1 intersects the runway centreline 121 m from the commencement of the TORA/TODA/ASDA.

Note 3 : The nosewheel guideline from lead-on taxiway C2 intersects the runway centreline 241 m from the commencement of the TORA/TODA/ASDA.

Note 4 : The nosewheel guideline from lead-on taxiway C11 intersects the runway centreline 295 m from the commencement of the TORA/TODA/ASDA.

Note 5 : The nosewheel guideline from lead-on taxiway C12 intersects the runway centreline 61 m from the commencement of the TORA/TODA/ASDA.

Note 6 : The nosewheel guideline from the lead-on taxiway J10 intersects the runway centreline 199 m from the commencement of the TORA/TODA/ASDA.

Note 7 : The nosewheel guideline from the lead-on taxiway J2 intersects the runway centreline 180 m from the commencement of the TORA/TODA/ASDA.

Note 8 : The TORA/ASDA when entering RWY from taxiways A4, A9, C3, C10, J3, J9, K2 and K6 is measured from the intersection of the lead-on taxiway centreline and runway centreline.

Note 9 : The nosewheel guideline from lead-on taxiway A1 and F1 intersects the runway centreline 121 m from the commencement of the TORA/TODA/ASDA.

Note 10 : The nosewheel guideline from lead-on taxiway A2 and F2 intersects the runway centreline 219 m from the commencement of the TORA/TODA/ASDA.

Note 11 : The nosewheel guideline from lead-on taxiway A11 and F7 intersects the runway centreline 219 m from the commencement of the TORA/TODA/ASDA.

Note 12 : The nosewheel guideline from lead-on taxiway A12 and F8 intersects the runway centreline 121 m from the commencement of the TORA/TODA/ASDA.

Note 13 : The section of the runway with arrow markings between taxiways B2 or B3 and taxiways A1 or F1 shall not be used for RWY 07C landing and take-off.

Note 14 : The section of the runway with arrow markings between taxiways A12 or F8 and taxiways B10 or B11 shall not be used for RWY 25C landing and take-off.

## VHHH AD 2.14 APPROACH AND RUNWAY LIGHTING

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| RWY Designator | APCH LGT Type LEN (Note 1) | THR LGT colour WBAR | VASIS (MEHT) PAPI | TDZ LGT LEN | RWY Centre Line LGT length, spacing, colour, INTST | RWY edge LGT LEN, spacing, colour | RWY End LGT colour WBAR | SWY LGT LEN (M) colour | Remarks |
| 07L | CAT III<br>900M<br>LIH<br>Sequenced strobe lights (2 flashes/sec) on centreline from 900M to 300M from THR | Green<br>Green | PAPI<br>65.3FT<br>BOTH SIDES<br>3° | 900m | 3800M, 15M<br>FM 0 M-2891M White;<br>FM 2891-3491M Red/ White;<br>FM 3491M Red LIH | 3800M, 58M-60M<br>FM 0 M-176M Red;<br>FM 176M-3146M White;<br>FM 3146M-3800M Yellow- | RED<br>- | NIL | RETIL for TWY C7, C8 and C9 |
| 25R | CAT I<br>900M<br>LIH<br>Sequenced strobe lights (2 flashes/sec) on centreline from 900M to 300M from THR | Green<br>Green | PAPI<br>65.3FT<br>BOTH SIDES<br>3.1° | 900m | 3800M, 15M<br>FM 0 M-2891M White;<br>FM 2891-3491M Red/ White;<br>FM 3491M Red LIH | 3800M, 58M-60M<br>FM 0M-176M Red;<br>FM 176M-3146M White;<br>FM 3146M-3800M Yellow- | RED<br>- | NIL | RETIL for TWY C4, C5 and C6 |
| 07C | CAT II<br>900M<br>LIH<br>Sequenced strobe lights (2 flashes/sec) on centreline from 900M to 300M from THR | Green<br>Green | PAPI<br>72.3FT<br>LEFT SIDE<br>3° | 900m | 3800M, 15M<br>FM 0 M - 2900M White;<br>FM 2900-3500M Red/ White;<br>FM 3500M Red LIH | 3800M, 58M-60M<br>FM 0 M-180M Red;<br>FM 180M-3200M White;<br>FM 3200M-3800M Yellow- | RED<br>- | NIL | RETIL for TWY A7, A8, A10, F5 and F6 |
| 25C | CAT III<br>900M<br>LIH<br>Sequenced strobe lights (2 flashes/sec) on centreline from 900M to 300M from THR | Green<br>Green | PAPI<br>72.3FT<br>BOTH SIDES<br>3° | 900m | 3800M, 15M<br>FM 0 M - 2900M White;<br>FM 2900-3500M Red/ White;<br>FM 3500M Red LIH | 3800M, 58M-60M<br>FM 0 M-180M Red;<br>FM 180M-3200M White;<br>FM 3200M-3800M Yellow- | RED<br>- | NIL | RETIL for TWY A3, A5, A6, F3 and F4 |
| 07R | CAT II<br>900M<br>LIH<br>Sequenced strobe lights (2 flashes/sec) on centreline from 900M to 300M from THR | Green<br>Green | PAPI<br>71.2FT<br>BOTH SIDES<br>3° | 900m | 3800M, 30M<br>FM 0 M - 2900M White;<br>FM 2900-3500M Red/ White;<br>FM 3500M Red LIH | 3800M, 60M<br>FM 0 M-160M Red;<br>FM 160M-3200M White;<br>FM 3200M-3800M Yellow- | RED<br>- | NIL | RETIL for TWY K5 |
| 25L | CAT II<br>900M<br>LIH<br>Sequenced strobe lights (2 flashes/sec) on centreline from 900M to 300M from THR | Green<br>Green | PAPI<br>77.4FT<br>BOTH SIDES<br>3° | 900m | 3800M, 30M<br>FM 0 M - 2900M White;<br>FM 2900-3500M Red/ White;<br>FM 3500M Red LIH | 3800M, 60M<br>FM 0 M-3200M White;<br>FM 3200M-3800M Yellow- | RED<br>- | NIL | RETIL for TWY K3 |

Note 1: The APCH LGT Type is declared depending on the limitation of operation mode of the respective RWY.

## VHHH AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

| | | |
|---|---|---|
| 1 | *ABN/IBN location, characteristics and hours of operation* | Nil |
| 2 | *LDI location and LGT*<br><br>*Anemometer location and LGT* | LDI: Nil<br><br>RWY 07L/25R Anemometers:<br>390 m from DISP THR 07L to N of RWY; mid-point to N of RWY; 380 m from DISP THR 25R to N of RWY<br><br>RWY 07C/25C Anemometers:<br>372 m from DISP THR 07C to N of RWY; 69 m & 279 m from mid-point to N of RWY; 371 m from THR 25C to N of RWY<br><br>RWY 07R/25L Anemometers:<br>280 m from DISP THR 07R to S of RWY; mid-point to S of RWY; 335 m from THR 25L to N of RWY |
| 3 | *TWY edge and centre line lighting* | Taxiway centreline lights - all taxiways<br>Taxiway edge lights - on some sections of taxiways |
| 4 | *Secondary power supply/switch-over time* | Stand-by generator as secondary power supply to all lighting at AD. Switch-over time within 1 sec for all CAT II/III facilities, others within 15 sec. |
| 5 | *Remarks* | Nil |

## VHHH AD 2.16 HELICOPTER LANDING AREA

NIL

## VHHH AD 2.17 ATS AIRSPACE

1 **Hong Kong Aerodrome Traffic Zone**

| | | |
|---|---|---|
| 1 | *Designation and lateral limits* | Hong Kong ATZ<br>Straight lines joining the following points:<br>22 19 58N 113 51 11E<br>22 21 45N 113 56 58E<br>22 17 05N 113 58 41E<br>22 15 24N 113 53 00E<br>22 19 58N 113 51 11E |
| 2 | *Vertical limits* | SFC to 2 000 ft AAL |
| 3 | *Airspace classification* | C |
| 4 | *ATS unit call sign*<br>*Language* | Hong Kong Tower<br>English |
| 5 | *Transition altitude* | 9 000 ft |
| 6 | *Remarks* | Nil |

2 **Hong Kong Control Zone**

| | | |
|---|---|---|
| 1 | *Designation and Lateral Limits* | Hong Kong CTR (see note below)<br>Straight lines joining the following points:<br>22 28 34N 114 00 54E<br>22 26 59N 114 00 25E<br>22 25 51N 114 03 03E<br>22 24 20N 114 04 10E<br>22 25 15N 114 07 08E<br>22 24 40N 114 10 40E<br>22 22 40N 114 13 20E<br>22 20 30N 114 13 25E<br>22 15 15N 114 21 00E<br>22 08 50N 114 21 00E<br>22 08 50N 114 17 05E<br>22 08 20N 114 15 20E<br>22 08 50N 114 14 10E<br>22 08 50N 114 11 45E<br>22 06 40N 114 11 45E<br>21 56 25N 113 48 00E<br>22 13 44N 113 39 57E<br>22 24 34N 113 49 44E |
| 2 | *Vertical limits* | SFC to 9 000 ft AMSL |
| 3 | *Airspace classification* | C |
| 4 | *ATS Unit call sign*<br>*Language* | Hong Kong Tower/Zone/Approach<br>English |
| 5 | *Transition altitude* | 9 000 ft |
| 6 | *Remarks* | Nil |

Note: Subdivision of CTR
That portion of the CTR from surface to 2 000 ft AMSL is subdivided into 7 smaller zones, viz: DELTA ZONE, ISLAND ZONE, LANTAU ZONE, MA WAN ZONE, SOUTH OUTER ZONE, TUEN MUN ZONE and WAGLAN ZONE. The lateral limits of these 7 CTR zones are shown in Uncontrolled Airspace Reporting Areas and CTR Zones Chart, AD 2-VHHH-CTR-1.

**VHHH AD 2.18 ATS COMMUNICATION FACILITIES**

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Service Designator | Call sign | Frequency | Hours of Operation | Remarks |
| APP | HONG KONG APPROACH | 119.1 MHZ | H24 | |
| | HONG KONG APPROACH | 119.35 MHZ | | Secondary |
| | HONG KONG DEPARTURE | 123.8 MHZ | H24 | |
| | HONG KONG DEPARTURE | 122.0 MHZ | H24 | |
| | HONG KONG DEPARTURE | 122.65 MHZ | As advised | |
| | HONG KONG DEPARTURE | 124.05 MHZ | | Secondary |
| | HONG KONG DIRECTOR | 119.5 MHZ | As advised | |
| | HONG KONG DIRECTOR | 123.225 MHZ | | Secondary |
| | | 121.5 MHZ | H24 | Emergency frequency |
| TWR | HONG KONG TOWER | 118.2 MHZ | H24 | |
| | HONG KONG TOWER | 118.4 MHZ | H24 | |
| | HONG KONG TOWER | 118.7 MHZ | H24 | |
| | | 124.65 MHZ | | Secondary |
| | | 121.5 MHZ | H24 | Emergency frequency |

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Service Designator | Call sign | Frequency | Hours of Operation | Remarks |
| GMC | HONG KONG GROUND | 121.6 MHZ | H24 | |
| | HONG KONG GROUND | 121.875 MHZ | H24 | |
| | HONG KONG GROUND | 122.125 MHZ | H24 | |
| | HONG KONG GROUND | 122.55 MHZ | H24 | |
| | HONG KONG GROUND | 122.6 MHZ | H24 | |
| | | 121.925 MHZ | | Secondary |
| ZNC | HONG KONG ZONE | 120.6 MHZ | H24 | |
| | | 122.075 MHZ | | Secondary |
| FIS | HONG KONG INFORMATION | 121.0 MHZ | 01:00-SS | |
| | | 122.075 MHZ | | Secondary |
| CDC | HONG KONG DELIVERY | 122.15 MHZ | H24 | 2-way PDC via data-link available |
| | | 121.925 MHZ | | Secondary |
| ATIS | HONG KONG INTERNATIONAL AIRPORT ARRIVAL INFORMATION | 128.2 MHZ | H24 | Data-link D-ATIS available at VHHHA<br>Tel +852 3141 2820<br>http://www.hkatc.gov.hk |
| | HONG KONG INTERNATIONAL AIRPORT DEPARTURE INFORMATION | 127.05 MHZ | H24 | Data-link D-ATIS available at VHHHD<br>Tel. +852 3141 2705<br>http://www.hkatc.gov.hk |

## VHHH AD 2.19 RADIO NAVIGATION AND LANDING AIDS

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| *Type of aid, CAT of ILS/MLS* | *ID* | *Frequency* | *Hours of operation* | *Site of transmitting antenna coordinates* | *Elevation of DME transmitting antenna* | *Remarks* |
| DME25C | ITFC | CH 30X | H24 | 221913.45N 1135524.77E | 6.26M | Co-located with GP 25C |
| GP25C CAT III | ITFC | 332 MHZ | H24 | 221913.45N 1135524.77E | | GP 3° (Nominal) |
| LOC25C CAT III | ITFC | 109.3 MHZ | H24 | 221830.88N 1135326.53E | | Unusable beyond 19° right of course |
| DME25L | ITFL | CH 46X | H24 | 221819.93N 1135549.28E | 6.16M | Co-located with GP 25L |
| GP25L CAT II | ITFL | 330.8 MHZ | H24 | 221819.93N 1135549.28E | | Unusable beyond 7° left of course<br><br>GP 3° (Nominal) |
| LOC25L CAT II | ITFL | 110.9 MHZ | H24 | 221742.98N 1135342.30E | | Unusable beyond 28° left of course and beyond 22° right of course |
| DME25R | ITFR | CH 24Y | H24 | 221955.16N 1135438.56E | 6.36M | Co-located with GP 25R |
| GP25R CAT I | ITFR | 330.35 MHZ | H24 | 221955.16N 1135438.56E | | GP 3.1º (Nominal) Unusable below elevation angle of 1.8º |
| LOC25R CAT I | ITFR | 108.75 MHZ | H24 | 221912.67N 1135240.61E | | Unusable beyond 16º right of course |
| DME07C | IZSC | CH 30X | H24 | 221847.96N 1135405.67E | 6.26M | Co-located with GP 07C |
| GP07C CAT II | IZSC | 332 MHZ | H24 | 221847.96N 1135405.67E | | GP 3° (Nominal) |
| LOC07C CAT II | IZSC | 109.3 MHZ | H24 | 221922.54N 1135606.89E | | Unusable beyond 22° left of course and beyond 26° right of course |
| DME07L | IZSL | CH 52Y | H24 | 221925.10N 1135305.29E | 6.50M | Co-located with GP 07L |
| GP07L CAT III | IZSL | 332.75 MHZ | H24 | 221925.10N 1135305.29E | | Unusable beyond 6º left of course |
| LOC07L CAT III | IZSL | 111.55 MHZ | H24 | 222000.02N 1135507.54E | | |
| DME07R | IZSR | CH 46X | H24 | 221747.78N 1135409.48E | 6.21M | Co-located with GP 07R |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| *Type of aid, CAT of ILS/MLS* | *ID* | *Frequency* | *Hours of operation* | *Site of transmitting antenna coordinates* | *Elevation of DME transmitting antenna* | *Remarks* |
| GP07R CAT II | IZSR | 330.8 MHZ | H24 | 221747.78N 1135409.48E | | GP 3° (Nominal) |
| LOC07R CAT II | IZSR | 110.9 MHZ | H24 | 221830.05N 1135608.39E | | Unusable beyond 19° right of course |
| DVOR/DME | SMT | 114.8 MHZ CH 95X | H24 | 222015.43N 1135855.46E | 12M | (See Note 1) |
| DVOR/DME 3°W (2020) | TD | 116.1 MHZ CH 108X | H24 | 221452.42N 1141735.30E | 249.87M | (See Note 2) |

**Notes**:

1. Coverage not less than 25 NM from SMT DVOR/DME with the following restrictions:-
   (a) unusable between radials 041 and 051 beyond 15 NM,
   (b) unusable between radials 051 and 071 beyond 15 NM below 7 000 ft,
   (c) unusable between radials 112 and 155 beyond 20 NM below 9 000 ft,
   (d) unusable between radials 155 and 216 beyond 13 NM below 12 000 ft,
   (e) unusable between radials 216 and 301 beyond 15 NM,
   (f) unusable between radials 301 and 041 beyond 10 NM.
2. Coverage not less than 200 NM from TD DVOR at 35 000 ft and above.

## VHHH AD 2.20 LOCAL TRAFFIC REGULATIONS

### 1 Regulations for Local Flights in Hong Kong

1.1 GENERAL

1.1.1 The attention of pilots is drawn to ICAO Annex 2 and the Air Navigation (Hong Kong) Order 1995, Schedule 14, which detail the Rules of the Air applicable to all aircraft operating in Hong Kong, including low flying, the display of lights by aircraft, and general flying rules.

1.1.2 Pilots are reminded that it is the direct responsibility of the pilot-in-command of an aircraft to avoid collision with other aircraft when flying under VFR, notwithstanding that the flight is being conducted on an ATC clearance.

1.1.3 Flight notification for a local flight shall be submitted to Hong Kong ATC in accordance with the following procedures:

a) IFR Flight - by filing a CAD Flight Plan form DCA6a (see ENR 1.10 paragraph 2.4), or for authorised operators, filing a CAD approved flight notification form at least 60 minutes prior to the estimated off-block time (EOBT);

b) VFR Flight - by filing a CAD VFR Local Flight Notification Form DCA 6b which is downloadable from the CAD website (http://www.cad.gov.hk/application/DCA6b.pdf) or a CAD approved flight notification form at least 20 minutes prior to the estimated time of departure (ETD).

1.1.4 Aircraft are required to carry communication equipment enabling them to maintain two-way communications with the appropriate ATS unit serving the airspace within which they intend to operate.

1.1.5 The pilot of a helicopter departing from any location within the Territory, except for Hong Kong International Airport, shall contact ATC immediately after lift off and inform them of their position and intentions.

1.1.6 The pilot of a helicopter landing at any location within the Territory, except for Hong Kong International Airport, shall inform ATC prior to descent to the landing site and state their intentions, including the duration of ground stop-over.

1.1.7 The attention of all pilots is drawn to Section ENR 5 of this document, which details airspace restrictions and hazardous areas within the Hong Kong FIR.

1.1.8 Prior approval should be obtained from ATC for any deviation from the published procedures due to adverse weather conditions, or operational necessity.

1.1.9 ATC may waive such of these procedures as considered necessary under special circumstances, such as search and rescue operations.

1.1.10 The pilot of non-Hong Kong registered fixed wing aircraft or helicopter that intends to conduct a local flight in Hong Kong may be required to produce the necessary flight documents as listed in GEN 1.5 para 4 prior to undertaking the flight.

1.1.11 The following conditions have also been laid down to govern flights by foreign military helicopters within the Territory:

a) Advance approval for such flights must be obtained from the Director-General of Civil Aviation.

b) The flight plan is to be approved by the ATC Watch Manager at Hong Kong International Airport, who will brief the pilot as necessary. If considered necessary, the pilot will be required to report in person to the ATC Supervisor for a detailed briefing.

c) The area of the flight is to be restricted to that sanctioned by the Director-General of Civil Aviation, and approved by ATC for a particular flight.

d) Under no circumstances are helicopters to take-off without clearance from the duty Aerodrome Controller, whose decision as to whether the flight may take place, will be final.

**2 Regulations for Local Flights at Hong Kong International Airport (HKIA)**

2.1 All training, test or demonstration flights at HKIA must have prior approval from the Director-General of Civil Aviation. Note that training flights at HKIA will be approved only in exceptional circumstances.

2.2 All non-commercial fixed wing aircraft and helicopter flights at HKIA must have prior approval from the Director-General of Civil Aviation. In addition, helicopter flights also require prior approval from the Airport Authority Hong Kong.

2.3 Recreational flights are not normally permitted at HKIA.

2.4 Notwithstanding having obtained prior approval, the pilot of any fixed wing aircraft or helicopter intending to operate a local flight at Hong Kong International Airport must contact Aerodrome Control Supervisor (Tel: 2910 6822) for final approval on the day of flight.

2.5 HELICOPTER OPERATIONS AT HONG KONG INTERNATIONAL AIRPORT

2.5.1 Helicopter operations at Hong Kong International Airport are categorised depending on the nature of the flight as tabulated below:

| Category | Nature of Flight | Designated Parking Location |
|---|---|---|
| Technical Flight | Maintenance flight | Maintenance Apron |
| Flights handled by Hong Kong Business Aviation Centre | Domestic flight, international charter flight and private non-revenue flights | Hong Kong Business Aviation Centre Apron, Stands X1, X2, X456 and X458 |
| CASEVAC | Medical | As instructed by ATC |

**3 Regulations for Local Flights in the Hong Kong Aerodrome Traffic Zone (ATZ) and Control Zone (CTR)**

3.1 GENERAL

3.1.1 Hong Kong Aerodrome Traffic Zone (ATZ) and Control Zone (CTR) airspace are classified as Category C.

3.1.2 ATC clearance for local flying will only be given if, in the opinion of Aerodrome Control, or Zone Control as appropriate, such flying will not interrupt or unnecessarily delay the normal operation of public transport aircraft.

3.1.3 Recreational and training flights, including practice approaches, landings or departures, by privately owned light aircraft are not normally permitted at Hong Kong International Airport.

3.1.4 Before entering the ATZ or CTR, pilots shall inform ATC of their entry route, altitude, subsequent route and destination, or other intentions and obtain an ATC clearance for the proposed flight.

3.1.5 Before leaving the ATZ or CTR, pilots shall inform ATC of their exit route and destination, before contacting the next ATS unit, and when Flight Information Service is not available, pilots should notify ATC of their ETA for the re-entry route and on their return adhere to within 15 minutes of that notified time.

3.1.6 Flights by fixed wing aircraft within the ATZ are normally restricted to joining the traffic circuit for landing or leaving the traffic circuit to proceed to the CTR or Uncontrolled Airspace Reporting Areas (UCARAs).

3.1.7 Flights by fixed wing aircraft and helicopters are restricted on the following CTR routes:

| | | |
|---|---|---|
| a) | Tung Chung Pass | fixed wing aircraft not permitted; |
| b) | Silvermine | fixed wing aircraft not permitted; |
| c) | Gold Coast Corridor | fixed wing aircraft not permitted; |
| d) | South Pass | fixed wing aircraft and single engine helicopters not permitted; |
| e) | East Pass | single engine aircraft not permitted; |
| f) | Sha Tin Pass | single engine aircraft not permitted. |

**4 Weather Minima**

4.1 VFR flights during daylight hours may be approved:

a) within the Hong Kong ATZ providing the weather observation at Hong Kong International Airport shows a visibility of at least 5 km and a cloud ceiling of not less than 1 500 ft;

b) within the Hong Kong CTR providing the weather conditions on the intended track of the aircraft are a visibility of at least 5 km and a cloud ceiling of not less than 1 500 ft;

**5 Regulations for Local Flights in the Uncontrolled Airspace Reporting Areas (UCARAs)**

5.1 GENERAL

5.1.1 All pilots intending to operate within UCARAs are required to have satisfactorily completed a border check of the areas with a company approved Training Captain, Qualified Flying Instructor or Assistant Flying Instructor.

5.1.2 UCARAs airspace is classified as Category G with an additional requirement of two-way radio communication.

5.1.3 Civil aircraft operators who wish to operate in UCARA North Border are required to submit flight notification to Hong Kong Police Headquarters (Command and Control Centre) Duty Officer, Tel 2860 2400, in addition to Hong Kong ATC.

5.1.4 Pilots in UCARAs will be requested to squawk discrete SSR codes. If Flight Information Service is not available, then pilots shall squawk code 5200 and continue to make regular blind transmissions on FIS frequency.

5.1.5 Use of transponder in UCARAs does not imply ATC service is provided. Pilots shall continue to be responsible for their own navigation and collision avoidance while in flight.

5.2 UNLICENSED PILOTS

5.2.1 Unlicensed pilots are restricted to flights within UCARAs Port Shelter and those parts of Tolo and New Town, south of ‘line a’. (See Uncontrolled Airspace Reporting Areas (UCARAs) and CTR Zones chart, AD 2-VHHH-CTR-1, for delineation of ‘line a’.)

## VHHH AD 2.21 NOISE ABATEMENT PROCEDURES

**1 ICAO Noise Abatement Departure Procedure RWY 07**

1.1 ICAO have developed aircraft operating procedures, Noise Abatement Departure Procedure 1 (NADP 1) and Noise Abatement Departure Procedure 2 (NADP 2), for the take-off climb to ensure that the necessary safety of flight operations is maintained whilst minimizing exposure to noise on the ground.

1.2 NADP 1 is intended to provide noise reduction for noise sensitive areas in close proximity to the departure end of the runway. NADP 2 provides noise reduction to areas more distant from the runway end.

1.3 All operators are to adopt either NADP 1 or NADP 2 procedures for all take-offs on RWY 07. Operators are not required to inform CAD of the adopted procedure.

1.4 Full details of NADP 1 and NADP 2 are contained in ICAO Procedures for Air Navigation Services - Aircraft Operations, Volume 1 - Flight Procedures, (PANS-OPS, Doc 8168 Volume 1).

**2 Noise Mitigating Measures**

2.1 GENERAL

2.1.1 The following measures are implemented daily between 1500 and 2300 UTC (the “Noise Mitigation period”) to manage aircraft noise exposure levels when operating conditions permit. These measures include:

a) South Runway (07R/25L) on Standby Mode where possible;

b) Preferential use of RWY 07;

c) Usage of southbound SID route via RAMEN for RWY 07;

d) Preferential use of RNP Y (AR) APCH procedures for RWY 25;

e) Continuous Descent Approach (CDA) procedure for RWY 25;

f) Special ATC handling procedures for RWY 25 departures.

2.1.2 Noise mitigating measures are not applicable to special authorised flights, flights with medical or SAR priority, and flights necessary for the calibration of procedures, navigation aids and landing aids.

2.2 SOUTH RUNWAY (07R/25L) ON STANDBY MODE WHERE POSSIBLE

2.2.1 South Runway (07R/25L) will be placed on Standby Mode during Noise Mitigation Period where possible.

2.2.2 Under emergency or declared contingency circumstances, the South Runway (07R/25L) may be returned to Operational Mode. (Note: The scheduled runway maintenance periods will override Standby Mode on selected nights, AD 1.1 para. 11 refers.)

2.3 PREFERENTIAL USE OF RWY 07

2.3.1 RWY 07 will be selected as the runway-in-use whenever the tailwind component is not greater than 5 knots. RWY 25 may be used if operationally required, e.g. unserviceability of navigation aids, adverse weather conditions, aircraft performance, traffic situations, etc.

2.4 USAGE OF SOUTHBOUND SID ROUTE VIA RAMEN FOR RWY 07

2.4.1 All departures from RWY 07 may expect the appropriate BEKOL, DALOL, LEKEN or PECAN SID via RAMEN (see list of Hong Kong International Airport SIDs in AD 2.22 para. 6.1). These SIDs route predominantly overwater via the West Lamma Channel and avoid overflight of densely populated areas at low altitude.

2.4.2 Pilots shall comply with the Standard Instrument Departure (SID) procedures and requirements (i.e. level and speed restrictions; terrain clearance, etc.) as specified in AD 2.22 para. 2 and on relevant SID charts published in AD 2.24.

2.5 PREFERENTIAL USE OF RNP Y (AR) APCH PROCEDURES FOR RUNWAY 25

2.5.1 When meteorological conditions are suitable and Runway 25 is nominated as the arrival runway, Hong Kong ATC will endeavor to preferentially sequence arrival flights having authorization to conduct RNP Y (AR) APCH to Hong Kong International Airport.

2.5.2 Flights with authorization will be facilitated and assigned the appropriate STAR or radar vectors to LUDLA for the RNP Y RWY 25 (AR) procedure to the appropriate runway.

2.5.3 Flights without RNP AR authorization will be processed via the ILS/LOC or RNP (LNAV/VNAV) approach procedures and may be accorded lower priority when sequencing is required.

2.6 CONTINUOUS DESCENT APPROACH (CDA) PROCEDURE FOR RWY 25

2.6.1 Arrivals to RWY 25 via straight-in ILS/LOC or RNP (LNAV/VNAV) instrument approach procedures may expect continuous descent approach (CDA) subject to the prevailing traffic situation.

2.6.2 CDA Procedure

a) Pilots may expect to commence a continuous descent profile from altitude of 8 000 ft or higher. Subject to ATC clearance, low thrust settings and a relatively clean configuration should be maintained to minimise noise nuisance.

b) If radar vectors are given, the estimated track miles to touchdown will be passed with descent clearance and further distance information may be given as required.

c) Pilots should maintain aircraft's minimum clean configuration speed as far as practicable and are expected to descend in a manner that complies with the published or assigned speed restrictions.

d) If aircraft cannot comply with the CDA procedures or speed restrictions, the pilot should advise ATC in good time so that alternative arrangements can be made.

2.7 SPECIAL ATC HANDLING PROCEDURES FOR RWY 25 DEPARTURES

2.7.1 Departures from RWY 25 may expect to remain on the appropriate SID track until passing 9 000 ft or until they are south of Lantau Island, before being provided with radar vectors, as appropriate.

## VHHH AD 2.22 FLIGHT PROCEDURES

### 1 ATC Clearance, Engine Start-Up and Push-back Procedures

1.1 All aircraft, other than helicopters and locally based light aircraft, shall obtain an ATC clearance prior to engine start. Pilots are to inform Hong Kong Ground/Delivery, as appropriate, of the following:

a) call sign,

b) parking stand number/location,

c) Identifier of the latest ATIS received unless it has been included in the RCD (Request for Departure Clearance Downlink) message via data link,

d) proposed flight level if it is different from the filed flight plan, and

e) when applicable, special requirements (e.g. request for another departure runway or inability to comply with SID climb profile).

Radius-to-Fix SID procedures (BEKOL 1X/1Z, DALOL 1X/1Z, LEKEN 1X/1Z or PECAN 3X/2Z) are issued as the default procedures H24 to all aircraft departing from RWY 07R/07L.

RWY 07C departures can expect to be assigned SIDs with 'T' designator (ADLAD 1T, LARIT 1T, DUMEP 1T, XEMEK 1T or SOSLU 1T) during three-runway operations and Radius-to-Fix SID procedures (BEKOL 1Y, DALOL 1Y, LEKEN 1Y or PECAN 1Y) during noise mitigating period (between 1500 and 2300 UTC).

For aircraft that are unable to fly the Radius-to-Fix SID procedures, pilots shall make voice request to Hong Kong Delivery to obtain the corresponding non-Radius-to-Fix SID procedures. For aircraft using 2-way Pre-Departure Clearance (PDC) data-link service, pilots shall make such voice request prior to sending 'Request for Departure Clearance Downlink' (RCD) message.

1.2 A 2-way Pre-Departure Clearance (PDC) data-link service is available to approved operators. Pilots should send a 'Request for Departure Clearance Downlink' (RCD) message to ATC not more than 40 minutes prior to EOBT. If a 'Departure Clearance Uplink' (CLD) message is not received within 5 minutes or there is any problem with data link exchanges, the pilot shall inform Hong Kong Delivery on frequency 122.15 MHZ.

1.3 Pilots not participating in the PDC service shall contact Hong Kong Delivery on frequency 122.15 MHZ, 5 minutes prior to start to put their ATC clearance on request. Upon receipt of the ATC clearance the pilot shall read back the following information:

a) aircraft call sign,

b) destination,

c) route,

d) SID and

e) transponder code.

1.4 Pilots shall comply with instructions issued by Hong Kong Delivery regarding when to contact the relevant Hong Kong Ground frequency.

1.5 Once an ATC clearance has been received, unless there is a specific time restriction included in the clearance, any delay in being ready to push-back, start engines or taxi may result in the clearance being cancelled.

1.6 Aircraft should not commence start-up, push-back, or any other manoeuvre on the apron, unless they have obtained approval from Hong Kong Ground.

1.7 Prior to requesting for push back or taxi from a parking stand, pilots of aircraft equipped with a 'weight-on-wheel' switch must ensure the transponder is operating (on 'AUTO' or 'XPNDR', and not 'STDBY' or 'OFF') and the assigned Mode A code is selected. Aircraft with Mode S transponder capable of reporting Aircraft Identification should have its identification in the ICAO flight plan format entered via FMS or Control Panel.

1.8 The majority of parking stands have two standard push-back procedures, Push-back BLUE and Push-back RED. The normal push-back procedure is to the taxi lane abeam the adjacent parking stand, but where this would result in the aircraft entering a critical area the push-back is extended to a Tug Stop Point clear of the critical area. A limited number of parking stands have a Push-back/Tow-forward procedure, Push-back GREEN. (The push-back procedures for each parking stand are shown on AD 2-VHHH-PBP-1 to AD 2-VHHH-PBP-3 for passenger aprons, AD 2-VHHH-PBP-4 for the cargo apron and AD 2-VHHH-PBP-5 for the maintenance and west cargo apron.)

1.9 Under certain traffic conditions it may be necessary for Hong Kong Ground to issue non-standard push-back instructions to expedite the flow of traffic. Pilots will be issued a 'non-standard push-back' to a defined location and direction.

1.10 Pilots shall ensure that the push-back colour code or non-standard push-back instructions issued by Hong Kong Ground are accurately relayed to their ground crew before push-back or engine start commences.

1.11 There is a restriction to the starting of engines for aircraft in parking stands S103, S108 and W123. If aircraft in these stands are required to push-back through 180°, only one engine shall be started during the push-back, other engines shall only be started when the push-back manoeuvre has been completed.

1.12 When known conditions exist which necessitate that engine start-up is carried out in the parking stand prior to the commencement of push-back, or greater than idle engine thrust will be required during engine start, (e.g. cross-bleed start procedure), the pilot shall advise Hong Kong Ground of the fact when engine start or push-back clearance is requested.

1.13 Whilst push-back procedure is being conducted it is essential for safety reasons that communication contact is maintained between pilot and ground engineer in charge. ATC clearance will not normally be issued to aircraft whilst being pushed back, unless the pilot so requests.

1.14 To avoid delay to other traffic using the apron, aircraft should be ready to taxi as soon as the push-back manoeuvre and engine start procedure are completed. The standard push-back for stands N68 and N70 is onto TWY B. Therefore, to avoid delays to other traffic, it is essential that the aircraft should be ready to taxi as soon as the push-back manoeuvre is complete. If aircraft are unable to comply with these procedures, pilots shall immediately inform Hong Kong Ground in order that alternative taxi instructions may be issued to other traffic.

1.15 Pilots are reminded that they should always use minimum power when starting engines or manoeuvring within the apron area. It is especially important when commencing to taxi that break-away thrust is kept to an absolute minimum and then reduced to idle thrust as soon as practicable.

**2 Standard Instrument Departures (SIDs)**

2.1 GENERAL

2.1.1 Due to the proximity of the FIR boundary to the west, pilots departing RWY 25C or RWY 25R are advised to maintain a careful cross-check of aircraft position after passing HH421 and HH422. In the event of any weather avoidance manoeuvre, permission must be obtained from ATC prior to making any turn away from the prescribed departure track.

2.2 RNP 1 REQUIREMENT

2.2.1 RNP 1 SIDs have been implemented in Hong Kong TMA. (See SID charts under AD 2.24 for details of the SID procedures). All aircraft departing HKIA, other than those specified in GEN 1.5 para 3.5.3.4 shall be equipped with appropriate systems and approved by the relevant State of Registry in accordance with ICAO RNP 1 standard. Carriage of a certified GNSS receiver is mandatory.

2.2.2 See GEN 1.5 para 3.5.3 for details of RNP 1 requirement and the Exemption Policy.

2.2.3 *Contingency Procedures.*

2.2.3.1 The Contingency Procedures are only available for flights exempted from RNP 1 requirement as specified in GEN 1.5 para 3.5.3.5.

2.2.3.2 *Failure of RNP 1 capability before departure at HKIA.* In case of failure or degradation of the RNP 1 system which is detected before departure at HKIA and it is not practicable to effect a repair, the aircraft concerned should be permitted to depart. For this purpose, the flight would be exempted under the category "Maintenance or delivery flights" (See GEN 1.5 para 3.5.3.5).

2.2.3.3 *Failure of RNP 1 capability whilst airborne.* In the event that PBN performance ceases to comply with the requirements for RNP 1, pilots must notify ATC with the phraseology **"UNABLE RNP 1 [DUE TO (reason)]"** as soon as possible. Dependent upon the nature of the reported system failure or degradation, continued operation with the current ATC clearance may be possible in many circumstances. When this cannot be achieved, ATC assistance would be provided as necessary.

2.2.3.4 It is important that pilots flying the contingency procedures in para 2.2.3.5 to OVERFLY the significant points as tabulated below. ATC assistance may also be provided when necessary.

| RWY | Significant Point | Cross Reference from Navaid |
|---|---|---|
| **RWY 07L** | SMT DVOR | IZSL ILS DME 5.5 NM |
| | ROVER | IZSL ILS DME 8.0 NM<br>SMT RDL 085/DME 2.6 NM |
| **RWY 07C** | SMT DVOR | IZSC ILS DME 4.7 NM |
| | ROVER | IZSC ILS DME 7.2 NM<br>SMT RDL 085/DME 2.6 NM |
| **RWY 07R** | PORPA | IZSR ILS DME 7.0 NM |
| **RWY 25L** | PRAWN | ITFL ILS DME 7.0 NM<br>SMT RDL 249/DME 10.4 NM |
| **RWY 25C** | PRAWN | ITFC ILS DME 7.0 NM<br>SMT RDL 249/DME 10.4 NM |
| **RWY 25R** | POVEG | ITFR ILS DME 6.5 NM<br>SMT RDL 259/DME 10.4 NM |

2.2.3.5 Hong Kong SID Contingency Procedures for aircraft with exemption from RNP 1 requirement:

| Hong Kong SID | Contingency Procedures |
|---|---|
| RAMEN 1C<br>(RWY 07C) | See AD 2-VHHH-SID-RAMEN-C for details. Expect vectors to join flight plan route. |
| RAMEN 1E<br>(RWY 07L) | See AD 2-VHHH-SID-RAMEN-E for details. Expect vectors to join flight plan route. |
| RAMEN 2A<br>(RWY 07R) | See AD 2-VHHH-SID-RAMEN-A for details. Expect vectors to join flight plan route. |
| RUMSY 1D<br>(RWY 25C) | See AD 2-VHHH-SID-RUMSY-D for details. Expect vectors to join flight plan route. |
| RUMSY 1F<br>(RWY 25R) | See AD 2-VHHH-SID-RUMSY-F for details. Expect vectors to join flight plan route. |
| RUMSY 2B<br>(RWY 25L) | See AD 2-VHHH-SID-RUMSY-B for details. Expect vectors to join flight plan route. |

2.3 TERRAIN CLEARANCE

2.3.1 To maintain terrain clearance on the appropriate SID the following climb gradients and procedures must be adhered to, except for the radius-to-fix SID or when directed by ATC.

| **Runway** | **SID Group** | **Rate of Climb (under normal operation conditions)** | **Flyover Point** |
|---|---|---|---|
| RWY 07R | RNP 1, RF | 4.8% or 292 ft/NM until passing 1200 ft | Nil |
| | RNP 1, non-RF | 4.8% or 292 ft/NM until passing 1200 ft | **Do not** turn right before passing PORPA |
| | RAMEN (Contingency) | 4.9% or 298 ft/NM until passing 1400 ft | **Do not** turn right before passing PORPA |

| Runway | SID Group | Rate of Climb (under normal operation conditions) | Flyover Point |
|---|---|---|---|
| RWY 07C | RNP 1 via TEGUB | 6.8% or 414 ft/NM until passing 3900 ft | Nil |
| | RNP 1 via ROVER, RF | 3.4% or 207 ft/NM until passing 1200 ft | Nil |
| | RNP 1 via ROVER, non RF | 3.8% or 231 ft/NM until passing 1300 ft | **Do not** turn right before passing ROVER |
| | RAMEN (Contingency) | 3.8% or 231 ft/NM until passing 1300 ft | **Do not** turn right before passing ROVER |
| RWY 07L | RNP 1, RF | 3.3% or 201 ft/NM | Nil |
| | RNP 1, non-RF | 3.3% or 201 ft/NM | **Do not** turn right before passing ROVER |
| | RAMEN (Contingency) | 3.4% or 207 ft/NM until passing 1400 ft | **Do not** turn right before passing ROVER |
| RWY 25L | RNP 1 | 4.7% or 286 ft/NM until passing 1600 ft | Nil |
| | RUMSY (Contingency) | 3.3% or 201 ft/NM | **Do not** turn left before passing PRAWN |
| RWY 25C | RNP 1 | 3.3% or 201 ft/NM | Nil |
| | RUMSY (Contingency) | 3.3% or 201 ft/NM | **Do not** turn left before passing PRAWN |
| RWY 25R | RNP 1 | 3.3% or 201 ft/NM | Nil |
| | RUMSY (Contingency) | 3.3% or 201 ft/NM | **Do not** turn left before passing POVEG |

2.4 DEPARTURE SPEED REQUIREMENT

2.4.1 To comply with the speed requirement, crossing PORPA, ROVER, HH412, HH421, PRAWN or POVEG at 205 KIAS or greater, it is recommended that the Noise Abatement Departure Procedure 2 (NADP 2) (see VHHH AD 2.21 for details) or the manufacturer's recommended procedure be used.

2.4.2 Pilots shall inform ATC prior to entering the runway if they will not be able to comply with the departure speed requirement due to aircraft performance limitations or other factors for safety consideration.

2.5 CLIMB REQUIREMENT

2.5.1 Hong Kong SID and STAR procedures are designed in accordance with the ICAO guidance for Continuous Climb Operations (CCO) and Continuous Descent Operations (CDO). Level requirements/restrictions are stipulated at key waypoints to ensure vertical separation is strategically achieved between arrivals and departures and adjacent FIR airspace. The table below listed the most critical waypoints for achievement of strategic separation.

| | |
|---|---|
| **ADLAD Departures** | |
| RWY 07C | Cross BEKOL at or above 4 800 m (FL157). |
| **BEKOL Departures** | |
| RWY 07R/07C/07L | Cross BEKOL at or above 4 800 m (FL157). |
| RWY 25L | Cross HH481 at or above 7 000 ft.<br>Cross HH482 at or above FL110.<br>Cross BEKOL at or above 4 800 m (FL157). |
| RWY 25C/25R | Cross HH485 at or above FL130.<br>Cross BEKOL at or above 4 800 m (FL157). |
| **DALOL and LEKEN Departures** | |
| RWY 07R/07C/07L | Cross VEDVO at or above FL110.<br>Cross SEGPO at or above FL140. |
| RWY 25L | Cross HH471 at or above 9 000 ft.<br>Cross SUDVA at or above FL140. |

| | |
|---|---|
| RWY 25C/25R | Cross SUPAD at or above FL150.<br>Cross HH477 at or above FL160. |
| **DUMEP, LARIT and XEMEK Departures** | |
| RWY 07C | Cross VEMSO at or above 9 000 ft.<br>Cross SAMED at or above FL130.<br>Cross LUBMO at or above FL160. |
| **PECAN Departures** | |
| RWY 07R/07C/07L | Cross VEDVO at or above FL110.<br>Cross SEGPO at or above FL140. |
| RWY 25L | Cross HH471 at or above 9 000 ft.<br>Cross HH477 and HH478 at FL140. |
| RWY 25C/25R | Cross SUGAP at or above FL140. |
| **SOSLU Departures** | |
| RWY 07C | Cross VEMSO at or above 9 000 ft.<br>Cross SAMED at or above FL130.<br>Cross SEGPO at or above FL140. |

2.5.2 Upon SID issuance, pilots of departing flights shall review their aircraft's capability to achieve the published climb requirements and inform Hong Kong Delivery prior to start-up if unable to comply. Pilots should advise the first requirement which cannot be complied with and what altitude/level is achievable at that waypoint so that alternative procedures/actions can be coordinated.

2.6 READBACK OF SID PRIOR TO DEPARTURE

2.6.1 Pilots departing from RWY 07C should note the existence of alternative SID procedures with either left or right turns after departure for use with difference runway operating modes.

2.6.2 In particular during independent parallel departure operations of RWY 07C and RWY 07R, which may be conducted in full IMC conditions, it is imperative that the correct SID is selected and entered into the Flight Management System to ensure separation with simultaneous departure on the adjacent runway.

2.6.3 To mitigate against incorrect SID selection when independent parallel departure operations are in progress, flight departing from RWY 07C will be instructed by Hong Kong Ground to report assigned SID to Hong Kong Tower on first contact. Pilots should verify that the correct SID has been entered and that the expected turn direction is valid.

2.7 LOSS OF COMMUNICATION

2.7.1 In the event of a loss of communication aircraft shall comply with the last acknowledged clearance up to the next reporting point/waypoint in the SID/Transition procedure listed in para 5.2 then climb to the flight planned cruising level and follow the SID/Transition track to the TMA exit point.

**3 Terminal Transition Routes**

3.1 Within the Hong Kong TMA a number of Terminal Transition Routes are established. Operators departing from Hong Kong International Airport shall flight plan via the relevant Terminal Transition Route until exiting the Hong Kong TMA to join the appropriate ATS route. (See ENR 3.1 para.(2) and Area Chart - Departure Routes under AD 2.24)

**4 SID Navigation Aids**

| Navaid | Frequency | Coordinates |
|---|---|---|
| SMT DVOR/DME | 114.8 MHZ<br>(CH 95X) | 222015.43N 1135855.46E |
| IZSR DME | CH 46X | 221747.78N 1135409.48E |
| ITFR LOC | 108.75 MHZ | 221912.67N 1135240.61E |
| ITFR DME | CH 24Y | 221955.16N 1135438.56E |
| ITFL DME | CH 46X | 221819.93N 1135549.28E |

**5 SID Locations**

5.1 SID FLYOVER WAYPOINTS (Note: PORPA and ROVER are flyby waypoints in the following radius-to-fix SIDs - BEKOL X/Y/Z, DALOL X/Y/Z, LEKEN X/Y/Z and PECAN X/Y/Z.)

| Flyover Waypoint | Coordinates (WGS 84) | Cross Reference from Navaid |
|---|---|---|
| PORPA | 222009.10N 1140116.30E | IZSR ILS DME 7.0NM<br>SMT RDL 096/DME 2.2 NM |
| POVEG | 221743.28N 1134803.62E | ITFR ILS DME 6.5 NM<br>SMT RDL 259/DME 10.4 NM |
| PRAWN | 221605.40N 1134840.10E | ITFL ILS DME 7.0NM<br>SMT RDL 249/DME 10.4 NM |
| ROVER | 222035.58N 1140139.12E | IZSL ILS DME 8.0 NM<br>SMT RDL 085/DME 2.6 NM |

5.2 SID REPORTING POINTS / FLYBY WAYPOINTS

| Reporting Point/ Flyby Waypoint | Coordinates (WGS 84) | Cross Reference from Navaid |
|---|---|---|
| ADLAD | 223040.74N 1141952.57E | PBN Waypoint |
| AGOMU | 223015.17N 1142229.86E | PBN Waypoint |
| ANRUX | 222705.73N 1141241.76E | PBN Waypoint |
| BEKOL | 223236.00N 1140800.00E | TD RDL 336/DME 19.8 NM |
| DAKIG | 215052.90N 1142633.33E | PBN Waypoint |
| DALOL | 214436.90N 1145045.34E | PBN Waypoint |
| DUMEP | 214436.30N 1151249.87E | PBN Waypoint |
| HH301 | 221929.01N 1135911.61E | PBN Waypoint |
| HH302 | 222000.43N 1135804.56E | PBN Waypoint |
| HH303 | 222050.02N 1135742.83E | PBN Waypoint |
| HH311 | 221452.34N 1140512.73E | PBN Waypoint |
| HH322 | 221508.88N 1140512.88E | PBN Waypoint |
| HH332 | 221522.17N 1140513.00E | PBN Waypoint |
| HH341 | 221925.15N 1140419.86E | PBN Waypoint |
| HH342 | 221712.51N 1140514.01E | PBN Waypoint |
| HH355 | 221945.97N 1140415.23E | PBN Waypoint |
| HH356 | 221722.57N 1140514.10E | PBN Waypoint |
| HH363 | 221929.68N 1140409.36E | PBN Waypoint |
| HH364 | 221656.52N 1140513.86E | PBN Waypoint |
| HH381 | 220902.10N 1141506.66E | PBN Waypoint |
| HH382 | 221123.06N 1142604.39E | PBN Waypoint |
| HH384 | 222311.51N 1142117.83E | PBN Waypoint |
| HH393 | 221943.83N 1141615.26E | PBN Waypoint |
| HH411 | 221708.52N 1135155.32E | PBN Waypoint |
| HH412 | 221510.92N 1134848.95E | PBN Waypoint |
| HH413 | 221148.90N 1134841.37E | PBN Waypoint |

| Reporting Point/ Flyby Waypoint | Coordinates (WGS 84) | Cross Reference from Navaid |
|---|---|---|
| HH414 | 220944.51N 1135109.66E | PBN Waypoint |
| HH421 | 221531.13N 1134409.41E | PBN Waypoint |
| HH422 | 221258.53N 1134227.41E | PBN Waypoint |
| HH423 | 220726.10N 1134459.40E | PBN Waypoint |
| HH471 | 220728.61N 1140333.28E | PBN Waypoint |
| HH472 | 220551.49N 1141305.41E | PBN Waypoint |
| HH477 | 215729.80N 1141254.07E | PBN Waypoint |
| HH478 | 215229.09N 1141247.31E | PBN Waypoint |
| HH481 | 221123.11N 1140129.60E | PBN Waypoint |
| HH482 | 221715.28N 1140722.59E | PBN Waypoint |
| HH484 | 220223.21N 1135601.92E | PBN Waypoint |
| HH485 | 220419.90N 1140035.87E | PBN Waypoint |
| HH486 | 220656.32N 1140643.85E | PBN Waypoint |
| HH487 | 221517.49N 1141246.60E | PBN Waypoint |
| HH941 (RF Turn Centre) | 221737.96N 1140212.36E | PBN Waypoint |
| HH942 (RF Turn Centre) | 221714.13N 1140144.03E | PBN Waypoint |
| HH955 (RF Turn Centre) | 221758.85N 1140208.75E | PBN Waypoint |
| HH956 (RF Turn Centre) | 221724.31N 1140127.97E | PBN Waypoint |
| HH963 (RF Turn Centre) | 221704.89N 1140124.20E | PBN Waypoint |
| HH964 (RF Turn Centre) | 221658.35N 1140116.75E | PBN Waypoint |
| LARIT | 215341.37N 1151606.56E | PBN Waypoint |
| LEKEN | 215301.06N 1145444.95E | PBN Waypoint |
| LUBMO | 215755.24N 1143152.98E | PBN Waypoint |
| PECAN | 212620.19N 1140205.64E | TD RDL 200/DME 50.5 NM |
| PORPA | 222009.10N 1140116.30E | PBN Waypoint |
| RAMEN | 220939.22N 1140509.89E | TD RDL 249/DME 12.6 NM |
| ROVER | 222035.58N 1140139.12E | PBN Waypoint |
| RUMSY | 220456.94N 1134816.79E | TD RDL 253/DME 28.9 NM |
| SAMED | 220443.00N 1142631.83E | PBN Waypoint |
| SEGPO | 215732.77N 1142118.59E | PBN Waypoint |
| SMT | 222015.43N 1135855.46E | Co-located with SMT DVOR/DME |
| SOSLU | 213844.03N 1140518.39E | PBN Waypoint |
| SUDVA | 220425.14N 1142133.87E | PBN Waypoint |
| SUGAP | 215557.44N 1140201.64E | PBN Waypoint |
| SUPAD | 220005.99N 1140730.72E | PBN Waypoint |
| TEGUB | 222418.28N 1140454.69E | PBN Waypoint |
| VANPU | 220357.95N 1134803.85E | PBN Waypoint |
| VEDMU | 220814.02N 1135508.18E | PBN Waypoint |
| VEDVO | 220438.19N 1141543.05E | PBN Waypoint |
| VEMSO | 221425.06N 1141852.28E | PBN Waypoint |
| XEMEK | 213816.17N 1145943.04E | PBN Waypoint |

## 6 Hong Kong International Airport SIDs

### 6.1 RUNWAY 07 SIDS

| SID | Runway | Remarks |
|---|---|---|
| ADLAD1T | RWY 07C | Between 1500-2300 UTC expect BEKOL1Y |
| BEKOL1C | RWY 07C | - |
| BEKOL1Y | RWY 07C | Radius-to-fix (RF) leg is required |
| BEKOL1Z | RWY 07L | Radius-to-fix (RF) leg is required |
| BEKOL2E | RWY 07L | - |
| BEKOL1X | RWY 07R | Radius-to-fix (RF) leg is required |
| BEKOL5A | RWY 07R | - |
| DALOL1C | RWY 07C | - |
| DALOL1Y | RWY 07C | Radius-to-fix (RF) leg is required |
| DALOL1E | RWY 07L | - |
| DALOL1Z | RWY 07L | Radius-to-fix (RF) leg is required |
| DALOL1A | RWY 07R | - |
| DALOL1X | RWY 07R | Radius-to-fix (RF) leg is required |
| DUMEP1T | RWY 07C | Between 1500-2300 UTC expect DALOL1Y |
| LARIT1T | RWY 07C | Between 1500-2300 UTC expect LEKEN1Y |
| LEKEN1C | RWY 07C | - |
| LEKEN1Y | RWY 07C | Radius-to-fix (RF) leg is required |
| LEKEN1E | RWY 07L | - |
| LEKEN1Z | RWY 07L | Radius-to-fix (RF) leg is required |
| LEKEN1A | RWY 07R | - |
| LEKEN1X | RWY 07R | Radius-to-fix (RF) leg is required |
| PECAN1C | RWY 07C | - |
| PECAN1Y | RWY 07C | Radius-to-fix (RF) leg is required |
| PECAN2E | RWY 07L | - |
| PECAN2Z | RWY 07L | Radius-to-fix (RF) leg is required |
| PECAN3A | RWY 07R | - |
| PECAN3X | RWY 07R | Radius-to-fix (RF) leg is required |
| SOSLU1T | RWY 07C | Between 1500-2300 UTC expect PECAN1Y |
| XEMEK1T | RWY 07C | Between 1500-2300 UTC expect DALOL1Y |

### 6.2 RUNWAY 25 SIDS

| SID | Runway | Remarks |
|---|---|---|
| BEKOL1D | RWY 25C | - |
| BEKOL3B | RWY 25L | - |
| BEKOL2F | RWY 25R | - |
| DALOL1D | RWY 25C | - |
| DALOL1B | RWY 25L | - |
| DALOL1F | RWY 25R | - |

| SID | Runway | Remarks |
|---|---|---|
| LEKEN1D | RWY 25C | - |
| LEKEN1B | RWY 25L | - |
| LEKEN1F | RWY 25R | - |
| PECAN1D | RWY 25C | - |
| PECAN2B | RWY 25L | - |
| PECAN2F | RWY 25R | - |

**7 Standard Instrument Arrivals (STARs)**

7.1 RNP 1 REQUIREMENT

7.1.1 RNP 1 STARs have been implemented in Hong Kong TMA. (See STAR charts under AD 2.24 for details of the STAR procedures). All aircraft arriving HKIA, other than those specified in GEN 1.5 para 3.5.3.5, shall be equipped with appropriate systems and approved by the relevant State of Registry in accordance with ICAO RNP 1 standard. Carriage of a certified GNSS receiver is mandatory.

7.1.2 See GEN 1.5 para 3.5.3 for details of RNP 1 requirement and the Exemption Policy.

7.1.3 *Failure of RNP 1 capability whilst airborne.* In the event that PBN performance ceases to comply with the requirements for RNP 1, pilots must notify ATC with phraseology “UNABLE RNP 1 [DUE TO (reason)]” as soon as possible. Dependent upon the nature of the reported system failure of degradation, continued operation with the current ATC clearance may be possible in many circumstances. When this cannot be achieved, ATC assistance would be provided as necessary.

7.1.4 For flights exempted from RNP 1 requirement as specified in GEN 1.5 para 3.5.3.5, pilots shall follow the RNP 1 STAR procedures as far as practicable and observe all instructions and requirements (i.e. level and speed restrictions, etc.) specified in the charts. ATC assistance would also be provided when necessary.

7.2 LOSS OF COMMUNICATION

7.2.1 In the event of a loss of communication:

a) if a STAR clearance has been issued and acknowledged, aircraft shall comply with the descent planning profile and the STAR track to RIVMI/LUDLA/LIMES as appropriate, join the relevant holding pattern and descend to 4 500 ft, then carry out the ILS approach (or RNP AR approach from LUDLA);

b) if a STAR clearance has not been issued or acknowledged, aircraft shall proceed in accordance with the STAR procedure appropriate for the ATS route and landing direction, (arrivals from SIERA should proceed in accordance with SIERA $_{n}$ A or SIERA $_{n}$ B STAR as appropriate), at RIVMI/LIMES as appropriate, join the relevant holding pattern and descend to 4 500 ft, then carry out the ILS approach.

7.3 UNSERVICEABILITY OF AIRCRAFT EQUIPMENT OR GROUND EQUIPMENT

7.3.1 Pilots shall inform ATC if they are unable to comply with the STAR procedure due to unserviceability of aircraft equipment or ground equipment and request radar assistance.

7.4 STAR COMMENCEMENT AND TERMINATION POINTS

7.4.1 Except for SIERA STARs, Hong Kong STARs commence from ABBEY, BETTY or CANTO and terminate at the Initial Approach Fix (IAF) (e.g. RIVMI/LUDLA (RWY 25) or LIMES (RWY 07) as appropriate).

7.4.2 While the SIERA STARs commence directly from the TMA boundary point SIERA, other STARs are connected to the TMA boundary points by Terminal Transition Routes (TTR). (See ENR 3.1 para. (2) and Area Chart - Arrival Routes and Terminal Holding Patterns under AD2.24)

**8 STAR Navigational Aids**

(Nil)

**9 STAR Waypoints**

| Waypoint | Coordinates (WGS 84) | Cross Reference from Navaid |
|---|---|---|
| *** ABBEY** | 221611.00N 1145525.92E | TD RDL 091/DME 35.1 NM |
| *** BETTY** | 212910.82N 1143331.92E | TD RDL 165/DME 47.9 NM |
| BORDA | 214132.37N 1132429.01E | TD RDL 239/DME 59.5 NM |
| *** CANTO** | 213902.63N 1134225.09E | TD RDL 226/DME 48.4 NM |
| HH511 | 215332.24N 1141131.99E | PBN Waypoint |
| HH512 | 220121.80N 1143156.70E | PBN Waypoint |
| HH622 | 215714.02N 1142643.79E | PBN Waypoint |
| HH623 | 215134.24N 1141232.62E | PBN Waypoint |
| HH631 | 220746.57N 1140738.63E | PBN Waypoint |
| HH632 | 220230.12N 1141028.02E | PBN Waypoint |
| HH633 | 215303.75N 1141523.47E | PBN Waypoint |
| HH634 | 215744.18N 1141257.27E | PBN Waypoint |
| HH635 | 215128.24N 1140844.19E | PBN Waypoint |
| # LIMES | 220625.60N 1134632.60E | PBN Waypoint |
| # LUDLA | 221340.79N 1140428.75E | PBN Waypoint |
| MANGO | 213649.00N 1143053.00E | TD RDL 165/DME 39.9 NM |
| MURRY | 214528.37N 1134841.97E | TD RDL 226/DME 39.7 NM |
| MUSEL | 221553.99N 1144652.13E | TD RDL 091/DME 27.2 NM |
| # RIVMI | 222403.96N 1141909.28E | PBN Waypoint |
| ROCCA | 213155.42N 1133451.44E | TD RDL 226/DME 58.4 NM |
| *** SIERA** | 215912.00N 1133312.00E | TD RDL 252/DME 44.1 NM |
| SILVA | 215104.50N 1135410.88E | TD RDL 226/DME 32.2 NM |
| TEDUR | 221118.77N 1142351.26E | PBN Waypoint |

* STAR commencement point
# IAF

**10 Instrument Landing System (ILS) - General**

10.1 RWY 25R ILS is equipped for CAT I landings. RWY 07R, RWY 25L and RWY 07C ILS are equipped for CAT II landings. RWY 07L and RWY 25C ILS are equipped for CAT III landings. Operators must obtain approval prior to conducting CAT II/III operations, (see AD 1.1 paragraph 7). Pilots wishing to make an ILS CAT II/III approach shall notify Approach Control on initial contact.

10.2 The standard instrument approach at Hong Kong International Airport is the ILS approach procedure.

10.3 No marker beacons are provided. DME equivalents for Outer Marker Fix (OMF) and Middle Marker Fix (MMF) with glidepath reference altitudes are established.

10.4 Due to the proximity of the FIR boundary to the west, pilots carrying out RWY 07L, RWY 07C or RWY 07R ILS approach are advised to maintain a careful cross-check of aircraft position after passing the initial approach fix LIMES by the use of appropriate navigational aids to ensure the aircraft remains on the prescribed track. In the event of any weather avoidance manoeuvre, permission must be obtained from ATC prior to making any turn away from the prescribed track.

10.5 The ILS approach procedures include specific speed restrictions. These speed restrictions are applicable to aircraft that are vectored to join the initial or intermediate approach as well as aircraft commencing the approach from the Initial Approach Fix. Pilots unable to comply with these speed restrictions shall

inform Approach Control on first contact so that additional inter-arrival spacing can be provided. Pilots shall also advise Approach Control on first contact if the planned final approach speed is below 125 KIAS. The final approach speed is defined as the Reference Landing Speed ($V_{ref}$) plus corrections.

10.6 Pilots are warned that during ILS CAT I operations RWY 07R and RWY 25L GP signals may be liable to interference from aircraft taxiing in the vicinity of the GP aerial. Pilots should therefore closely monitor their ILS approach profile and rate of descent.

10.7 Due to terrain and obstacles some of the ILS LOC and GP signals at Hong Kong International Airport do not have the standard ICAO protected areas. Pilots shall refer to flight procedure charts for service volume restrictions of LOC and GP. Using ILS signals outside of the coverage areas stated on flight procedure charts may lead to false capture or reverse sense indications.

10.8 If ground based navigational aids or GNSS are not available, ATC will provide an alternative clearance or give radar assistance.

**11 RWY 25R ILS Approach**

11.1 RWY 25R ILS approach consists of RNAV initial approach transition and ILS final approach transition. The ILS approach should be conducted via the RNAV transition only.

11.2 When flying an RNAV transition to RWY 25R ILS final approach, pilots are strongly cautioned to adhere to all published altitude restrictions. To safely overfly the critical terrain along the flight path, engagement of the ILS modes (i.e. LOC and Glideslope) before crossing waypoint TOPUN is not permitted for compliance with obstacle clearance requirements. Pilots planning to conduct the ILS approach for RWY 25R shall familiarize themselves with the operating requirements as prescribed in the updated AIC of “Operation Requirements for RWY 25R ILS Approach of Hong Kong International Airport”.

11.3 See AD 2-VHHH-IAC-06A and AD 2-VHHH-IAC-06B for procedure details.

**12 RNP AR APCH**

12.1 RNP AR APCH RWY 07 via north of HKIA

12.1.1 RNP Y RWY 07R (AR) is available to provide alternative approach path for arriving aircraft to approach from the north of HKIA on a left hand circuit (North Circuit).

12.1.2 The procedure is provided to cater for circumstances when weather precludes the conduct of approach from the south. Therefore, requests for this procedure in other situations would not normally be entertained.

12.1.3 Should the weather situation mentioned in para. 12.1.2 arise, pilots of authorized airline operators, who are qualified and wish to fly the RNP AR APCH procedure, shall make a request to Hong Kong Air Traffic control (ATC) unit. Subject to prevailing traffic situation, ATC may consider granting the approval of such request.

12.1.4 Special Authorization from Hong Kong CAD is required to conduct RNP AR APCH in Hong Kong.

12.2 RNP AR APCH Operational Approval

12.2.1 Refer to the relevant AIC regarding application to conduct RNP AR APCH procedures at HKIA by foreign aircraft operators.

12.3 Speed Control

12.3.1 Pilots unable to comply with the speed restrictions specified in RNP AR APCH procedures shall inform Approach Control on first contact so that additional inter-arrival spacing can be provided. Pilots shall also advise Approach Control on first contact if the planned final approach speed is below 125 KIAS. The final approach speed is defined as the Reference Landing Speed ($V_{ref}$) plus corrections.

**13 Procedures for Local Flights in Hong Kong Aerodrome Traffic Zone (ATZ) and Control Zone (CTR) Zones**

13.1 GENERAL

13.1.1 Local flights operating in the Aerodrome Traffic Zone (ATZ) are under the control of Hong Kong Aerodrome Control. The ATZ is split into two sectors – ATZ North and ATZ South sectors. The Dividing line is along the centreline of the centre runway. ATZ North is normally under the control of AMC North, operating on frequency 118.7 MHZ, call sign ‘Hong Kong Tower; ATZ South is normally under the control of AMC South, operating on frequency 118.4 MHZ, call sign ‘Hong Kong Tower’.

13.1.2 Non-IFR flights within the CTR Zones (see chart page AD 2-VHHH-CTR-1), are under the control of Hong Kong Zone Control operating on frequency 120.6 MHZ primary and 122.075 MHZ secondary, call sign 'Hong Kong Zone'.

13.1.3 Flights within the CTR above 2 000 ft AMSL are under the control of Hong Kong Approach Control on frequency 119.1 MHZ or Departure Control on frequency 123.8 MHZ/122.0 MHZ. The appropriate frequency will be advised by ATC.

13.1.4 To enhance flight safety, it is recommended that all local operators display landing lights whilst entering, leaving or operating within the ATZ or CTR Zones.

13.2 VERTICAL LIMITS AND ALTITUDE RESTRICTIONS

13.2.1 The vertical limits are:

a) ATZ surface up to 2 000 ft AAL;

b) CTR Zones surface up to 2 000 ft AMSL (subject to paras. 13.2.2 and 13.2.3 below).

13.2.2 In the following CTR Zones ATC will apply an altitude restriction dependent on the runway in use at Hong Kong International Airport:

| CTR Zone | RWY in Use | Altitude Restriction |
|---|---|---|
| South Outer Zone | RWY 07 | 500 ft |
| Delta Zone | | As instructed by ATC |
| Island Zone routes:<br>Green Island - Ma Wan Corridor<br>Green Island - Silvermine<br>Green Island - Cheung Chau<br>Green Island - Lamma<br>Green Island - west of Star Ferry | | <br>1 000 ft<br>800 ft<br>1 000 ft<br>1 000 ft<br>1 000 ft |
| South Outer Zone | RWY 25 | 1 200 ft |
| Delta Zone | | As instructed by ATC |

13.2.3 In addition, flights requesting to operate in Ma Wan Zone, Tuen Mun Zone north of Line B above 1 000 ft AMSL and Lantau Zone above 2 000 ft AMSL, including operations at landing sites above these levels, are subject to specific approval from Hong Kong Zone. The altitude restrictions and clearance limits will be instructed by ATC.

13.3 ATZ AND CTR ZONES ENTRY AND EXIT ROUTES

13.3.1 Subject to ATC approval, pilots shall normally comply with the following standard exit and entry routes and altitudes within the ATZ and CTR Zones (see chart page AD 2-VHHH-CTR-2):

| Radio Call Sign | Route Direction | Routeing |
|---|---|---|
| East Pass | In/Out | Entering/Leaving Island Zone from/to UCARA Port Shelter<br>Single engine aircraft not permitted |
| Fan Lau<br>(See Note 1) | North/South<br>East/West | Transiting to/from West Lantau Corridor and Island Zone and<br>Transiting to/from Island Zone and Delta Zone |
| Gold Coast Corridor<br>(See Note 2 and 7) | East/West<br>(one direction at a time) | Transiting Ma Wan Zone between Pearl Island and Brothers Point<br>Upper limit 500 ft AMSL Width 0.5 NM. Helicopters only |
| Lei Yue Mun | In/Out | Entering/Leaving Island Zone from/to Waglan Zone<br>Inbound to CTR 1 500 ft AMSL<br>Outbound from CTR not above 1 000 ft AMSL<br>(If weather precludes use of 1 500 ft AMSL inbound, operations shall be restricted to one direction at a time) |
| Ma Wan Corridor<br>(See Note 2 and 3) | In/Out | Transiting from/to Ma Wan Zone and Island Zone<br>Upper limit 1000 ft AMSL |
| Pak Mong | In/Out | Entering/Leaving ATZ for Ma Wan Zone |
| Pillar Point | In/Out | Entering/Leaving ATZ for Tuen Mun Zone |
| Sha Chau | In/Out | Entering/Leaving ATZ for Tuen Mun Zone |
| Sham Shek | In/Out<br>(one direction at a time) | Entering/Leaving ATZ for West Lantau Corridor |

| Radio Call Sign | Route Direction | Routeing |
|---|---|---|
| Sha Tin Pass | In/Out | Entering/Leaving Island Zone from/to UCARA New Town<br>Single engine aircraft not permitted |
| Silvermine | In/Out | Entering/Leaving ATZ and Ma Wan Zone for Lantau Zone<br>Helicopters only |
| South Pass | In/Out | Transiting Island Zone between Hong Kong South and Victoria Harbour<br>Fixed wing aircraft and single engine helicopters not permitted |
| Toll Plaza Route<br>(see Note 2, 4 and 5) | East/West<br>(one direction at a time) | Transiting from/to North Lantau Expressway and Kap Shui Mun.<br>Upper limit 800 ft AMSL for twin engine aircraft,<br>1 000 ft AMSL for single engine aircraft |
| Toll Plaza Crossing<br>(See Note 2) | North/South | Between Yam O and Brothers Point<br>Upper limit 500 ft AMSL |
| Tung Chung Pass | In/Out | Entering/Leaving ATZ for Lantau Zone<br>Helicopters only<br>Inbound to ATZ 2 000 ft AMSL<br>Outbound from ATZ not above 1 500 ft AMSL<br>(If weather precludes use of 2 000 ft AMSL inbound, operations shall be restricted to one direction at a time) |
| West Lantau Corridor<br>(See Note 6) | North/South<br>(one direction at a time) | Transiting from/to Yi O and Fan Lau<br>Width 1 NM between Fan Lau and Yi O, 0.5 NM between Yi O and Sham Shek<br>Upper Limit 500 ft AMSL |

Note 1: Pilots should note traffic information on non-IFR helicopters operating between Macao and Hong Kong routeing south of Lantau Island.

Note 2: Operators should limit their requests for use of these routes to essential operations only due to the close proximity of the Hong Kong International Airport approach/departure routes. The use of this route will be subject to ATC clearance.

Note 3: Silvermine is the primary route for helicopters to transit between ATZ, Ma Wan Zone and Lantau Zone.

Note 4: Helicopters with underslung load are not permitted.

Note 5: Traffic at 1 000 ft AMSL is not separated from RWY 25 arrivals or RWY 07 departures. Aircraft from Island Zone awaiting ATC clearance to transit the Toll Plaza route may hold to the west of Tsing Yi Island not above 500 ft AMSL, remaining clear of VHR12.

Note 6: Radio coverage on the western coast of Lantau may be intermittent, pilots should note relevant traffic information prior to entering the West Lantau Corridor.

Note 7: Traffic using this route is not separated from RWY 25 arrivals or RWY 07 departures. The use of this route is subject to specific approval from Hong Kong Zone.

**14 Helicopter Departure and Arrival Procedures**

14.1 DEPARTURE FROM GFS/BAC TO PAK MONG OR SILVERMINE

14.1.1 **Kilo East Departure** Subject to ATC approval and when traffic permits, lift off from TWY K in an easterly direction, then turn south between TXL Q3 and the Fire Station to follow the airport coastline until abeam the western roundabout on Chun Wan Road (see chart AD 2-VHHH-VFR-3, Route A).

14.1.2 **For departure in other directions**, turn south as soon as practicable after lift off and track along the airport coastline until abeam the western roundabout on Chun Wan Road.

14.1.3 From abeam the western roundabout, helicopters should keep 1 000 m south of the runway extended centreline, may track direct to Silvermine or Pak Mong at not above 1 500 ft AMSL (see chart AD 2-VHHH-VFR-3, Route B).

14.1.4 During Special VFR operations pilots are required to report passing AFFC (radio c/s ‘Freight Centre’) to Hong Kong Tower when departing from the airport.

14.1.5 Helicopters departing from sites at the airport that require to cross the south runway, e.g. HAECO maintenance area, shall initially route as directed by ATC.

14.2 ARRIVALS FROM PAK MONG OR SILVERMINE TO GFS/BAC

14.2.1 Follow the reciprocal of paras. 14.1.3 above to AFFC at not above 1 500 ft AMSL. From AFFC follow ATC instructions to commence an approach. ATC approval must be obtained before overflying or landing on TWY K.

14.2.2 Helicopters operating to sites on the airport that require to cross the south runway, e.g. Temporary Parking Apron, shall initially comply with para 14.2.1 above then the final approach route will be as directed by ATC.

14.2.3 If holding is required, follow ATC instructions and comply with para 14.4 below.

14.3 HELICOPTER LANDING LOCATIONS

14.3.1 Two locations on the airport are designated as landing/lift off locations for visiting helicopters. The locations are on taxiways and helicopter ground markings are NOT provided (see chart AD 2-VHHH-HLL).

14.3.2 JUNCTION OF TWY H AND TWY H2

14.3.2.1 For use by helicopters parking at Maintenance Apron, Stands X456 and X458. The final approach and initial departure tracks are over TWY H in the direction of the runway-in-use. Ground or air-taxi to / from the designated apron / parking stand as directed by ATC.

14.3.3 JUNCTION OF TWY K AND TXL Q3

14.3.3.1 For use by helicopters parking at the Business Aviation Centre (BAC) Apron, Stands X1 and X2. The final approach and initial departure tracks are over TWY K in the direction of the runway-in-use. Ground or air-taxi to / from the designated apron / parking stand as directed by ATC.

14.3.4 Direct approaches to the parking location are NOT permitted. Helicopters shall NOT overfly parked or taxiing aircraft and airport buildings when making an approach or departure at the airport.

14.3.5 Helicopters are not permitted to land or lift off when there is movement on RWY 07R/25L. Notwithstanding, helicopter arrivals and departures may still be subject to wake turbulence from aircraft operations on RWY 07R/25L, particularly during certain cross-wind conditions. Pilots should plan or adjust their flight path to minimise the possible effects of wake turbulence.

14.3.6 During landing and lift off pilots shall maintain a good lookout for vehicles operating on the taxiways.

14.4 HELICOPTER HOLDING PROCEDURES

14.4.1 The following holding procedures shall be used by helicopters awaiting clearance for landing at the airport.

| Location | VFR/SVFR | Altitude AMSL | Remarks |
|---|---|---|---|
| Mount Rooster | VFR and SVFR | Not above 500 ft | Over water west of Yi O. |
| Tai O | VFR and SVFR | Not above 1 000 ft | Over water west of Tai O. |
| Sham Shek | VFR | Not above 1 000 ft | |
| Pak Mong | VFR and SVFR | Not above 1 000 ft | |
| Tung Chung Bay | VFR | 800 ft - 1 000 ft | |
| Freight Centre | VFR and SVFR | Not below 800 ft | Bounded by roundabouts to the NE and W of AFFC building and Lantau coast. Remain 1 000 m south of South Runway and have full length of runway in sight at all times. |
| Cathay City | VFR and SVFR | Not above 800 ft | Secondary hold when weather precludes use of Freight Centre hold. Remain 1 000 m south of south runway. Hold over water between Cathay City and Tung Chung Ferry Pier. |

## 15 Helicopter Runway Crossing Procedures

15.1 ROUTES

15.1.1 Helicopters shall cross the runways via one of the two Runway Crossing Corridors - Runway 25 Crossing Corridor at the eastern boundary of the airport and Runway 07 Crossing Corridor at the western boundary of the airport (see chart AD 2-VHHH-VFR-2). Helicopters are not normally permitted to cross over the airport.

15.1.2 Runway 25 Crossing Corridor is between Holding Point ECHO and Abeam Cathay City, passing over RWY 25L/25C/25R approach lights and to the east of Sky City.

15.1.3 Runway 07 Crossing Corridor is between Holding Point WHISKEY and Sha Lo Wan, passing over RWY 07L/07C/07R approach lights and to the west of HAECO hangar.

15.1.4 The recommended altitude for the Runway Crossing Corridors is 800 ft - 1 000 ft AMSL for wake turbulence avoidance. The Crossing Corridors are wide enough to permit helicopters approaching or departing the airport to manoeuvre and cross above the glidepath profile of landing traffic.

15.1.5 ATC will normally issue a conditional crossing clearance with specific instructions to cross behind landing traffic. Pilots should be aware that the spacing between arrivals varies subject to wake turbulence separation minima. Once the relevant traffic has been visually identified, pilots should adjust their speed and track to ensure the crossing is completed with the minimum of delay after the landing aircraft has passed.

15.1.6 Pilots unable to comply with these procedures, e.g. when operating with underslung loads, should provide adequate prior notification to ATC to facilitate alternative plans.

15.1.7 VFR holding areas, West Sea Berth and Expo, are established between the North and South Runways at the extended runway centreline of RWY 07C and RWY 25C respectively to facilitate helicopter crossing all three runways at a suitable arrival gap.

15.2 HELICOPTER HOLDING PROCEDURES FOR RUNWAY CROSSING

15.2.1 The following holding procedures shall be used by helicopters awaiting a runway crossing:

| Location | VFR/SVFR | Altitude AMSL | Remarks |
|---|---|---|---|
| WHISKEY | VFR | Maximum 1 000 ft | Remain at least 1 000 m north of north runway |
| ECHO | VFR | Maximum 1 000 ft | Remain at least 1 000 m north of north runway |
| West Sea Berth (See Note 1 and 2) | VFR | 800 ft – 1 000 ft | Helicopter holding area dimensions: 600 m x 1 800 m<br>Remain at least 1 000 m from the extended centrelines of the north and south runways |
| Expo (See Note 1 and 2) | VFR | 800 ft – 1 000 ft | Helicopter holding area dimensions: 600 m x 1 800 m<br>Remain at least 1 000 m from the extended centrelines of the north and south runways |
| Sha Lo Wan | VFR | Not above 1 000 ft | Remain at least 1 000 m south of south runway |
| Cathay City | VFR | Not above 800 ft | Remain at least 1 000 m south of south runway |
| | SVFR | Not above 500 ft | |
| Tai O | VFR and SVFR | Not above 1 000 ft | |
| Pillar Point | VFR and SVFR | Not above 1 000 ft | |
| Sha Chau | VFR and SVFR | 500 ft - 1 000 ft | |

Note 1: West Sea Berth and Expo holding areas are mainly for essential helicopter operations. Helicopter with underslung load is permitted to use these holding areas.

Note 2: Holding at West Sea Berth and Expo shall be suspended when the Centre Runway (RWY 07C/25C) is operated as an arrival runway.

15.2.2 Helicopter holding patterns are right hand orbits with a speed restriction of not more than 70 KIAS.

15.2.3 Helicopters operating SVFR may be subject to extensive delay in waiting to cross the runways. Therefore, runway crossings should be limited to flights of an urgent nature only. Other flights should consider re-routeing and crossing the extended runway centre-line via Yam O - Brothers Point route. (When planning a SVFR flight operators should make allowances for possible holding delays and the alternative routeing.)

**16 Rejoining Procedures for Fixed Wing Aircraft**

16.1 Three visual holding areas are established over prominent geographical features in the CTR to assist in the sequencing of VFR flights with other traffic. The holding areas are:

| Location | Altitude AMSL | Runway in Use | Routeing |
|---|---|---|---|
| Green Island<br>Left hand hold | Maximum 2 000 ft | RWY 25 | For flights from the south |
| Soko Island<br>Left hand hold | Maximum 2 000 ft | RWY 07 | For flights from the south |
| Lung Kwu Chau/ Sha Chau<br>Left hand hold | Maximum 1 500 ft | RWY 07 | For flights from the north |
| | Maximum 1 000 ft | RWY 25 | |

**17 Procedures for Local Flights in Uncontrolled Airspace Reporting Areas (UCARAs)**

17.1 GENERAL

17.1.1 Special areas have been defined to permit aircraft operations to take place under VFR. The associated procedures have been developed to allow such flying to take place without interference to aircraft operating in accordance with IFR and/ or in the Hong Kong Aerodrome Traffic Zone and Control Zone. The six areas are designated as Uncontrolled Airspace Reporting Areas (UCARAs): Mirs Bay, North Border, New Town, Ninepins, Port Shelter and Tolo.

17.1.2 UCARA airspace is classified as Category G with an additional requirement for two-way radio communication.

17.2 LATERAL LIMITS

17.2.1 The lateral boundaries of the UCARAs are indicated on AD 2-VHHH-CTR-1.

17.3 VERTICAL LIMITS

17.3.1 The vertical limits of the UCARAs are:

a) New Town, Port Shelter and Ninepins — Surface to 2 000 ft AMSL
b) Mirs Bay and Tolo — Surface to 3 000 ft AMSL
c) North Border — Surface to 2 000 ft AMSL *

Note: * Normally aircraft will be restricted to 1 000 ft AMSL or below. For operations above 1 000 ft, prior permission from Hong Kong ATC is required which will be subject to co-ordination with Zhuhai ATC.

17.4 FLIGHT NOTIFICATION

17.4.1 Flight notification shall be submitted to Hong Kong Aerodrome Control in accordance with Regulations for Local Flights in Hong Kong (see AD 2.20 para 1.1.4).

17.4.2 Aircraft or helicopters landing at Shek Kong aerodrome or any other site in UCARAs shall report their arrival to ‘Hong Kong Information’ immediately prior to landing. If no radio contact is made with ‘Hong Kong Information’ or if outside the notified hours of operation, pilots shall report to Hong Kong Aerodrome Control by telephone (tel no 2910 6822) as soon as possible after landing.

17.4.3 Pilots must note that if no landing report is received within 30 minutes of the estimated time of arrival, alerting action will be initiated by ATC.

17.5 COMMUNICATIONS

17.5.1 Pilots shall establish and maintain two-way communication with ‘Hong Kong Information’ on entering and when operating within UCARAs.

17.5.2 Pilots shall report their position and altitude as follows:

a) When entering /leaving each UCARA;

b) Every 15 minutes if no other communication have been made within that period.

17.5.3 When ‘Hong Kong Information’ is not available, pilots should broadcast their positions on frequency 121.0 MHZ at appropriate intervals and when crossing UCARA boundaries, for the information of other aircraft in the area.

17.5.4 Flights in North Border have to be coordinated with Zhuhai ATC. Therefore, pilots must advise Hong Kong Information at least 2 minutes prior to entering North Border when operating at 1 000 feet AMSL and below, or give at least 3 minutes notice if operating above 1 000 feet AMSL.

17.5.5 In order to enhance flight safety in the vicinity of the entry/exit routes to/from the Shek Kong Aerodrome Reporting Area (SKARA), pilots are to include in their initial transmission on leaving the SKARA, the name of the entry/exit route, as well as the UCARA they are entering.

17.6 RADIO COMMUNICATION FAILURE PROCEDURES

17.6.1 Fixed wing aircraft shall proceed to Shek Kong Aerodrome, carry out a standard joining procedure to the circuit keeping a good look-out whilst making all normal transmissions. Carry out a standard circuit to land, at all times exercising extreme caution with respect to other aircraft in the vicinity. After landing pilots are to taxi clear of the runway and shutdown. Pilots shall contact Hong Kong Aerodrome Control by telephone (tel. no. 2910 6822) as soon as possible after landing.

17.6.2 Helicopters shall land at a suitable helicopter landing site and pilots shall contact Hong Kong Aerodrome Control by telephone as soon as possible after landing.

**18 Aerobatic Area**

18.1 An Aerobatic Area is established within the northern portions of MIRS BAY and TOLO UCARAs and the TMA airspace immediately above them (see chart page AD 2-VHHH-CTR-1). The vertical limits of the Aerobatic Area are SFC - 3 500 ft AMSL.

18.2 The Aerobatic Area is available daily from 0900 - 1700 (local time), subject to VMC within the area and the aircraft having a serviceable transponder with Mode C. Aircraft shall remain below 3 000 ft AMSL and request clearance to climb to 3 500 ft AMSL from Hong Kong Information on frequency 121.0 MHZ. Pilots are reminded that they are responsible for maintaining their own separation from other traffic operating in the UCARAs.

**19 Flight Information Service**

19.1 Hong Kong Flight Information Service provides a flight information service and an alerting service between 0900 local time and sunset, daily, to non-IFR flights operating within the UCARAs. Between sunset and 0859 local time, alerting service only is available. The radio call sign is ‘Hong Kong Information’ and the frequency is 121.0 MHZ primary and 122.075 MHZ secondary.

19.2 It is emphasised that the service offered by Hong Kong Flight Information Service is an information service only and collision avoidance is entirely the responsibility of the pilot-in-command. Traffic information will normally be provided to an aircraft only when it reports entering a UCARA sector or makes a periodic ‘ops normal’ report. Aircraft already operating within a UCARA are expected to maintain their own traffic watch between ‘ops normal’ reports by monitoring the FIS frequency for the transmissions of other aircraft.

19.3 Outside of the hours of operation of Hong Kong Flight Information Service pilots should make ‘blind’ transmissions on the Hong Kong Information frequency and maintain a particularly good look-out for any deterioration of weather conditions.

**20 Procedures for Entry and Exit to/from Shek Kong Aerodrome Reporting Area (SKARA)**

20.1 Prior permission must be obtained from the appropriate military authority for any flight intending to operate within the Shek Kong Aerodrome Reporting Area (SKARA). (Details of the flight procedures applicable within the SKARA will be provided by the military authority.)

20.2 Aircraft shall enter or exit the Shek Kong Aerodrome Reporting Area (SKARA) via the following routes

| Radio Call Sign | Route | Coordinates (WGS 84) | Coordinates (UTM Grid) |
|---|---|---|---|
| Kadoorie Gap | SKARA to/from UCARA New Town | 22 26 22N 114 07 23E | KK 039843 |
| Fire Station Gap | SKARA to/from UCARA New Town | 22 28 14N 114 06 38E | KK 027878 |
| Mai Po | SKARA to/from UCARA North Border | 22 27 41N 114 03 09E | JK 973868 |
| Pagoda | SKARA to/from CTR Tuen Mun Zone | 22 27 48N 114 00 25E | JK 920872 |

| Radio Call Sign | Route | Coordinates (WGS 84) | Coordinates (UTM Grid) |
|---|---|---|---|
| Kam Tin Gap | SKARA to/from CTR Tuen Mun Zone | 22 26 00N 114 02 57E | JK 963838 |

20.3 The SKARA reporting point 'PAGODA' is very close to the North Border boundary, therefore pilots exiting or entering the SKARA at this location should ensure they do not enter the North Border area without prior coordination.

## VHHH AD 2.23 ADDITIONAL INFORMATION

### 1 Low Level TCAS Alerts within Hong Kong CTR

1.1 IFR flights may experience TCAS alerts caused by transponder-equipped VFR or Special VFR flights operating on low-level routes in the vicinity of the airport.

1.2 Even though separation is provided, ATC will, under such circumstances, issue traffic information to the aircraft concerned as far as practicable so that pilots will be aware of the possible TCAS alerts.

### 2 Use of Mode S Transponder after Landing

2.1 Aircraft equipped with a 'weight-on-wheel' switch must continue to have its transponder operating (on 'AUTO' or 'XPNDR', and not 'STDBY' or 'OFF') until fully parked at a stand.

### 3 Aircraft Parking

#### 3.1 Frontal Parking Stands

3.1.1 Frontal parking stands are those stands which are served by airbridges with direct access to the passenger terminal building. Frontal parking stands that can accommodate wide-bodied aircraft have continuous yellow nosewheel guidance lines to indicate the correct parking centreline.

3.1.2 Some frontal parking stands can also accommodate narrow-bodied aircraft at a separate parking stand location displaced 9 m to the right of the wide-body centre-line and indicated by a dashed yellow guidance line. The narrow-body parking stand is referred to by an 'R' suffix, e.g. S25R. The following parking stands can accommodate narrow-bodied aircraft:

a) South Apron — S1R, S2R, S3R, S25R, S27R, S29R, S31R, S33R, S35R, S41R, S43R, S45R, S47R and S49R

b) North Apron — N6R, N7R, N24R, N26R, N28R, N30R, N32R, N34R, N60R, N62R, N64R, N66R, N68R and N70R

c) West Apron — W40R, W42R, W44R, W46R, W48R, W61R, W63R, W65R, W67R, W69R and W71R

#### 3.2 Remote Parking Stands

3.2.1 All remote parking stands in the South and North aprons, except parking stands S109, N145, and R13 to R21, can accommodate wide-bodied or narrow-bodied aircraft and have a single centreline with continuous yellow nosewheel guidance lines. Parking stands S109, N145, and R13 to R21 can only accommodate narrow-bodied aircraft and have a single centreline with continuous yellow nosewheel guidance lines.

3.2.2 The remote parking stands on the West apron are configured to accommodate up to 5 wide-bodied or up to 7 narrow-bodied aircraft, or a combination of wide and narrow-bodied aircraft. The wide-body parking locations have continuous yellow nosewheel guidance lines to indicate the correct parking centreline.

3.2.3 The remote parking stands D301 to D310 on Midfield apron are configured to accommodate up to 10 wide-bodied or up to a maximum of 18 narrow-bodied aircraft, or a combination of wide and narrow-bodied aircraft. The wide-body parking locations have continuous yellow nosewheel guidance lines to indicate the correct parking centreline.

3.2.4 The narrow-body parking locations are displaced to the left and the right of the wide-body centre-line and are indicated by dashed yellow nosewheel guidance lines. These narrow-body parking stands are referred to by an 'L' or 'R' suffix, eg W121L and W123R. The following parking stands can accommodate narrow-bodied aircraft: W121L, W122 L, W122R, W123R, W124L, W125L and W125R.

3.2.5 Remote parking stand W126 is a self-manoeuvring stand (ie taxi out with no push-back) and can only accommodate aircraft up to Code C size (e.g. A320, B737).

**4 Safegate Docking System**

4.1 All frontal parking stands are equipped with a docking system to enable wide-bodied aircraft to park at the correct position on the parking stands without the assistance of a marshaller.

4.2 Detailed information on the operation of the Safegate Docking System may be obtained from Aeronautical Information Circulars or the Airport Authority Hong Kong.

**5 Lighting Provisions on Hong Kong-Zhuhai-Macao Bridge (HZMB), Hong Kong Link Road (HKLR) and Hong Kong Boundary Crossing Facilities (HKBCF) Nearby**

5.1 To provide illumination, the lighting provisions on the HZMB, HKLR and HKBCF include lights outlining the boundary of two Artificial Islands, street and traffic sign lights, high mast lights, etc. The locations of the HZMB, HKLR and HKBCF are shown in Diagram: The HZMB and Artificial Islands, HKLR and HKBCF (AD 2-VHHH-HZMB-LGT), and the coordinates of the Artificial Islands (viz. A and B in the Diagram) are as follows:

A - 221657N 1135031E
B - 221659N 1134707E

5.2 Given their close proximity to the HKIA, pilots are reminded to remain vigilant to avoid any possible distractions and confusion by these lights when operating into the HKIA.

**6 Procedures for Airlines to Adopt Reduced Engine Taxi Out (RETO) Operation in HKIA (for A320 Series only)**

6.1 Due to potential jet blast hazards which may adversely affect the safety of ground personnel in apron, RETO operations are only permitted for particular aircraft type and engine type combination of Airbus A320 series in HKIA.

6.2 Airlines concerned shall submit the Standard Operating Procedure (SOP) of RETO operation and Quality Control Plan of SOP compliance for AAHK's consideration. A written approval from AAHK shall be obtained before commencing RETO operation in HKIA.

6.3 The single engine operation thrust for taxi out maneuver must not exceed 40% N1.

6.4 Airlines that have been given approval for RETO operation in HKIA shall monitor and ensure full compliance with the SOP by their pilots to safeguard the safety of ground personnel operating on the ramp and in apron areas. Statistical analysis reports demonstrating full compliance of thrust applied not exceeding 40% N1 for each RETO operation shall be submitted to AAHK on a monthly basis.

6.5 Further information in connection with the RETO operation in HKIA may be obtained from:

Airport Authority Hong Kong
1 Cheong Yip Road
Hong Kong International Airport
Lantau
Hong Kong

**7 Visual Segment Surface (VSS) Penetration**

7.1 There is no penetration of VSS for all instrument approach procedures.

**8 Maritime Facilities and Tall Vessels to the West of the Hong Kong International Airport**

8.1 The following five maritime facilities are located to the west of the HKIA:

i) Dayushan (Lantau) Anchorage No. 1
ii) Dayushan (Lantau) Anchorage No. 2
iii) Longgu West Fairway
iv) Tonggu Fairway
v) Lingding Fairway

8.2 Refer to AD 2-VHHH-AOC-1, AD 2-VHHH-AOC-2, AD 2-VHHH-AOC-3 and AD 2-VHHH-AOC-4 for the locations of these maritime facilities.

8.3 Tall vessels of variable heights up to 170 metres air-draft may enter Dayushan (Lantau) Anchorage No.1 during contingency and relevant information will be promulgated by NOTAM.

8.4 Tall vessels operating along Longgu West Fairway (2.8 NM from RWY 07L/25R) or mooring in Dayushan (Lantau) Anchorage No. 2 (1.3 NM from RWY 07L/25R), depending on the locations and heights of the vessels, affect the instrument approach and departure procedures of RWY 07L/25R, and the departure procedures of RWY 25C. Relevant information of these vessel movements and flight procedures affected will be promulgated by NOTAM and advised by ATC. Restrictions on flight procedures are listed below:

| Maritime Facilities / Vessel Height (Air-draft [see Note]) | | Affected Flight Procedures | | |
|---|---|---|---|---|
| Longgu West Fairway | Dayushan (Lantau) Anchorage No. 2 | RWY 07L APCH | All RWY 25R SID | ALL RWY 25C SID |
| | Above 49 m and up to 55 m | **RNP: Suspended**<br>ILS: Available<br>LOC: Available | (No Change) | (No Change) |
| | Above 55 m and up to 63 m | **RNP: Suspended**<br>ILS: Available<br>LOC: Available | Increase minimum climb gradient to 3.8% (231 ft/NM) until passing 700 ft | (No Change) |
| | Above 63 m and up to 66 m | **RNP: Suspended**<br>**ILS: Suspended**<br>LOC: Available | Increase minimum climb gradient to 4.3% (262 ft/NM) until passing 700 ft | (No Change) |
| Above 110 m and up to 170 m | | **RNP: Suspended**<br>**ILS: Suspended**<br>LOC: Available | Increase minimum climb gradient to 5.0% (304 ft/NM) until passing 700 ft | Increase minimum climb gradient to 3.6% (219 ft/NM) until passing 700 ft |

Note: Air-draft of a vessel is assumed to be measured from 2.65 metres above mean sea level (AMSL). For example, 170 metres of air-draft is equivalent to 172.65 metres AMSL.

## VHHH AD 2.24 CHARTS RELATED TO AN AERODROME

| | |
|---|---|
| Aerodrome Chart (Aerodrome Layout) - ICAO | AD 2-VHHH-ADC-1 |
| Aerodrome Chart (Visual markings) - ICAO | AD 2-VHHH-ADC-2 |
| Aerodrome Chart (Lighting Plan) - ICAO | AD 2-VHHH-ADC-3 |
| Aircraft Parking/Docking Chart – ICAO | AD 2-VHHH-ADC-4 |
| Pavement Types and PCN Numbers | AD 2-VHHH-ADC-5 |
| Taxiways/Taxilanes for Code F Aircraft | AD 2-VHHH-ADC-6 |
| Aerodrome Obstacle Chart - ICAO Type A (RWY 07R/25L) | AD 2-VHHH-AOC-1 |
| Aerodrome Obstacle Chart - ICAO Type A (RWY 07C/25C) | AD 2-VHHH-AOC-2 |
| Aerodrome Obstacle Chart - ICAO Type A (RWY 07L/25R) | AD 2-VHHH-AOC-3 |
| Aerodrome Obstacle Chart - ICAO Type B | AD 2-VHHH-AOC-4 |
| Precision Approach Terrain Chart - ICAO (RWY 07R) | AD 2-VHHH-PATC-1 |
| Precision Approach Terrain Chart - ICAO (RWY 25L) | AD 2-VHHH-PATC-2 |
| Precision Approach Terrain Chart - ICAO (RWY 07L) | AD 2-VHHH-PATC-5 |
| Precision Approach Terrain Chart - ICAO (RWY 25R) | AD 2-VHHH-PATC-6 |
| Aerodrome Terrain and Obstacle Chart - ICAO (Electronic) | AD 2-VHHH-ATOC-1 |
| Area Chart - Departure Routes | AD 2-VHHH-AC-DEP |
| RNAV(GNSS) ADLAD SID RWY 07C | AD 2-VHHH-SID-ADLAD-T |
| RNAV(GNSS) LARIT SID RWY 07C | AD 2-VHHH-SID-LARIT-T |
| RNAV(GNSS) DUMEP SID RWY 07C | AD 2-VHHH-SID-DUMEP-T |
| RNAV(GNSS) XEMEK SID RWY 07C | AD 2-VHHH-SID-XEMEK-T |
| RNAV(GNSS) SOSLU SID RWY 07C | AD 2-VHHH-SID-SOSLU-T |
| RNAV(GNSS) BEKOL SID RWY 07R | AD 2-VHHH-SID-BEKOL-A |
| RNAV(GNSS) BEKOL SID RWY 25L | AD 2-VHHH-SID-BEKOL-B |
| RNAV(GNSS) BEKOL SID RWY 07C | AD 2-VHHH-SID-BEKOL-C |
| RNAV(GNSS) BEKOL SID RWY 25C | AD 2-VHHH-SID-BEKOL-D |
| RNAV(GNSS) BEKOL SID RWY 07L | AD 2-VHHH-SID-BEKOL-E |
| RNAV(GNSS) BEKOL SID RWY 25R | AD 2-VHHH-SID-BEKOL-F |
| RNAV(GNSS) BEKOL SID RWY 07R (RF capability required) | AD 2-VHHH-SID-BEKOL-X |
| RNAV(GNSS) BEKOL SID RWY 07C (RF capability required) | AD 2-VHHH-SID-BEKOL-Y |
| RNAV(GNSS) BEKOL SID RWY 07L (RF capability required) | AD 2-VHHH-SID-BEKOL-Z |
| RNAV(GNSS) LEKEN SID RWY 07R | AD 2-VHHH-SID-LEKEN-A |
| RNAV(GNSS) LEKEN SID RWY 25L | AD 2-VHHH-SID-LEKEN-B |
| RNAV(GNSS) LEKEN SID RWY 07C | AD 2-VHHH-SID-LEKEN-C |
| RNAV(GNSS) LEKEN SID RWY 25C | AD 2-VHHH-SID-LEKEN-D |
| RNAV(GNSS) LEKEN SID RWY 07L | AD 2-VHHH-SID-LEKEN-E |
| RNAV(GNSS) LEKEN SID RWY 25R | AD 2-VHHH-SID-LEKEN-F |
| RNAV(GNSS) LEKEN SID RWY 07R (RF capability required) | AD 2-VHHH-SID-LEKEN-X |
| RNAV(GNSS) LEKEN SID RWY 07C (RF capability required) | AD 2-VHHH-SID-LEKEN-Y |
| RNAV(GNSS) LEKEN SID RWY 07L (RF capability required) | AD 2-VHHH-SID-LEKEN-Z |
| RNAV(GNSS) DALOL SID RWY 07R | AD 2-VHHH-SID-DALOL-A |
| RNAV(GNSS) DALOL SID RWY 25L | AD 2-VHHH-SID-DALOL-B |

| | |
|---|---|
| RNAV(GNSS) DALOL SID RWY 07C | AD 2-VHHH-SID-DALOL-C |
| RNAV(GNSS) DALOL SID RWY 25C | AD 2-VHHH-SID-DALOL-D |
| RNAV(GNSS) DALOL SID RWY 07L | AD 2-VHHH-SID-DALOL-E |
| RNAV(GNSS) DALOL SID RWY 25R | AD 2-VHHH-SID-DALOL-F |
| RNAV(GNSS) DALOL SID RWY 07R (RF capability required) | AD 2-VHHH-SID-DALOL-X |
| RNAV(GNSS) DALOL SID RWY 07C (RF capability required) | AD 2-VHHH-SID-DALOL-Y |
| RNAV(GNSS) DALOL SID RWY 07L (RF capability required) | AD 2-VHHH-SID-DALOL-Z |
| RNAV(GNSS) PECAN SID RWY 07R | AD 2-VHHH-SID-PECAN-A |
| RNAV(GNSS) PECAN SID RWY 25L | AD 2-VHHH-SID-PECAN-B |
| RNAV(GNSS) PECAN SID RWY 07C | AD 2-VHHH-SID-PECAN-C |
| RNAV(GNSS) PECAN SID RWY 25C | AD 2-VHHH-SID-PECAN-D |
| RNAV(GNSS) PECAN SID RWY 07L | AD 2-VHHH-SID-PECAN-E |
| RNAV(GNSS) PECAN SID RWY 25R | AD 2-VHHH-SID-PECAN-F |
| RNAV(GNSS) PECAN SID RWY 07R (RF capability required) | AD 2-VHHH-SID-PECAN-X |
| RNAV(GNSS) PECAN SID RWY 07C (RF capability required) | AD 2-VHHH-SID-PECAN-Y |
| RNAV(GNSS) PECAN SID RWY 07L (RF capability required) | AD 2-VHHH-SID-PECAN-Z |
| RAMEN SID RWY 07R | AD 2-VHHH-SID-RAMEN-A |
| RAMEN SID RWY 07C | AD 2-VHHH-SID-RAMEN-C |
| RAMEN SID RWY 07L | AD 2-VHHH-SID-RAMEN-E |
| RUMSY SID RWY 25L | AD 2-VHHH-SID-RUMSY-B |
| RUMSY SID RWY 25C | AD 2-VHHH-SID-RUMSY-D |
| RUMSY SID RWY 25R | AD 2-VHHH-SID-RUMSY-F |
| Area Chart – Arrival Routes and Terminal Holding Patterns | AD 2-VHHH-AC-ARR |
| RNAV(GNSS) ABBEY 4A / 3B STAR | AD 2-VHHH-STAR-ABBEY |
| RNAV(GNSS) BETTY 3A / 3B STAR | AD 2-VHHH-STAR-BETTY |
| RNAV(GNSS) CANTO 3A STAR RWY 07L/C/R | AD 2-VHHH-STAR-CANTO-A |
| RNAV(GNSS) CANTO 3B STAR RWY 25L/C/R | AD 2-VHHH-STAR-CANTO-B |
| RNAV(GNSS) SIERA 7A / 7C STAR RWY 07L/C/R | AD 2-VHHH-STAR-SIERA-AC |
| RNAV(GNSS) SIERA 7B / 7D STAR RWY 25L/C/R | AD 2-VHHH-STAR-SIERA-BD |
| RNAV(GNSS) ABBEY 2G / BETTY 2G / CANTO 2G / SIERA 2G STAR RWY 25L/C/R | AD 2-VHHH-STAR-G |
| ATC Surveillance Minimum Altitude Chart | AD 2-VHHH-SMAC-1 |
| Instrument Approach Chart - ICAO - ILS - RWY 07R | AD 2-VHHH-IAC-01A |
| Instrument Approach Chart - ICAO - LOC - RWY 07R | AD 2-VHHH-IAC-01C |
| Instrument Approach Chart - ICAO - RNP Z - RWY 07R (AR) | AD 2-VHHH-IAC-01E |
| Instrument Approach Chart - ICAO - RNP Y - RWY 07R (AR) | AD 2-VHHH-IAC-01G |
| Instrument Approach Chart - ICAO - ILS - RWY 25L | AD 2-VHHH-IAC-02A |
| Instrument Approach Chart - ICAO - LOC - RWY 25L | AD 2-VHHH-IAC-02C |
| Instrument Approach Chart - ICAO - RNP Z - RWY 25L (AR) | AD 2-VHHH-IAC-02E |
| Instrument Approach Chart - ICAO - RNP Y - RWY 25L (AR) | AD 2-VHHH-IAC-02G |
| Instrument Approach Chart - ICAO - ILS or LOC - RWY 07C | AD 2-VHHH-IAC-03A |
| Instrument Approach Chart - ICAO - RNP RWY 07C (LNAV/VNAV only) | AD 2-VHHH-IAC-03E |
| Instrument Approach Chart - ICAO - ILS - RWY 25C | AD 2-VHHH-IAC-04A |
| Instrument Approach Chart - ICAO - LOC - RWY 25C | AD 2-VHHH-IAC-04C |
| Instrument Approach Chart - ICAO - RNP Z - RWY 25C (LNAV/VNAV only) | AD 2-VHHH-IAC-04E |

| | |
|---|---|
| Instrument Approach Chart - ICAO - RNP Y - RWY 25C (AR) | AD 2-VHHH-IAC-04G |
| Instrument Approach Chart - ICAO - ILS or LOC - RWY 07L | AD 2-VHHH-IAC-05A |
| Instrument Approach Chart - ICAO - RNP RWY 07L (LNAV/VNAV only) | AD 2-VHHH-IAC-05E |
| Instrument Approach Chart - ICAO - ILS - RWY 25R | AD 2-VHHH-IAC-06A |
| Approach Transition Chart - RNAV TRANSITION TO ILS - RWY 25R | AD 2-VHHH-IAC-06B |
| Instrument Approach Chart - ICAO - LOC - RWY 25R | AD 2-VHHH-IAC-06C |
| Instrument Approach Chart - ICAO - RNP Z - RWY 25R (LNAV/VNAV only) | AD 2-VHHH-IAC-06E |
| Instrument Approach Chart - ICAO - RNP Y - RWY 25R (AR) | AD 2-VHHH-IAC-06G |
| Aircraft Pushback Red / Green Procedures | AD 2-VHHH-PBP-1 |
| Aircraft Pushback Blue / Green Procedures | AD 2-VHHH-PBP-2 |
| Aircraft Pushback Procedures (Blue/Red) for T1 Midfield Apron | AD 2-VHHH-PBP-3 |
| Aircraft Pushback Procedure (Blue/Red) for Cargo Apron | AD 2-VHHH-PBP-4 |
| Aircraft Pushback Procedure (Blue/Red) for West Cargo Apron, Temporary Stands, Maintenance Apron and Long Term Parking Stands | AD 2-VHHH-PBP-5 |
| Subdivisions of the Control Zone (CTR Zones) and Uncontrolled Airspace Reporting Areas (UCARAs) | AD 2-VHHH-CTR-1 |
| Entry / Exit Routes from ATZ, CTR Zones and SKARA | AD 2-VHHH-CTR-2 |
| Fixed Wing VFR Holding Points | AD 2-VHHH-VFR-1 |
| Helicopter VFR Holding Areas | AD 2-VHHH-VFR-2 |
| Helicopter Holding Areas and Transit Routes in Tung Chung Area | AD 2-VHHH-VFR-3 |
| Helicopter Landing Locations in HKIA | AD 2-VHHH-HLL |
| The HZMB and Artificial Islands, HKLR and HKBCF | AD 2-VHHH-HZMB-LGT |
| Aeronautical Ground Lights | AD 2-VHHH-AERO-GND-LGT |

INTENTIONALLY

LEFT

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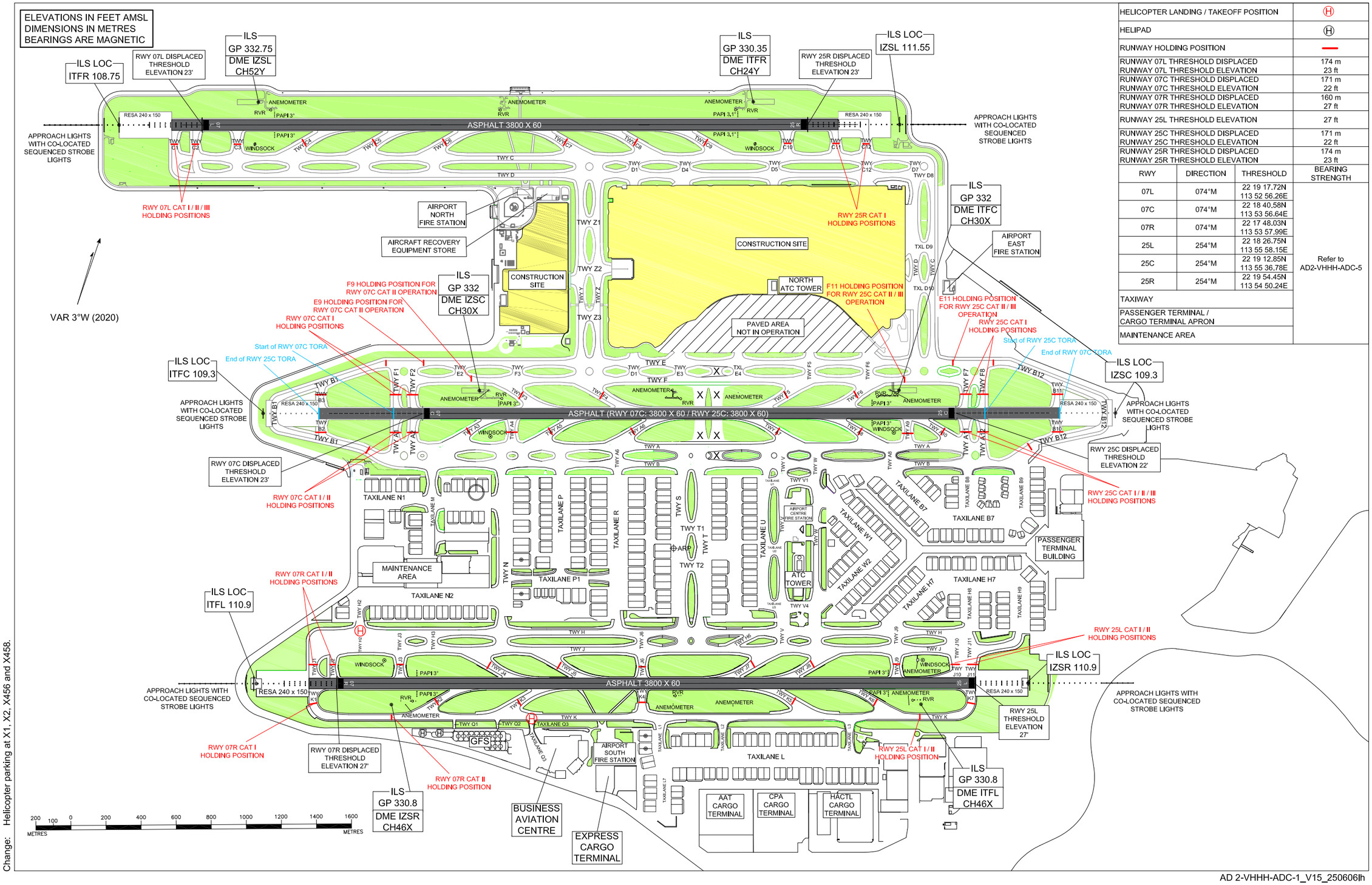
AERODROME CHART (AERODROME LAYOUT)

ARP 22° 18' 32.11"N 113° 54' 52.57"E

ELEVATION 28 FT AMSL

TWR 118.7 (North Runway) 118.2 (Centre Runway) 118.4 (South Runway)

VHHH / HONG KONG INTERNATIONAL AIRPORT




| | |
|---|---|
| HELICOPTER LANDING / TAKEOFF POSITION | Ⓗ |
| HELIPAD | Ⓗ |
| RUNWAY HOLDING POSITION | — |
| RUNWAY 07L THRESHOLD DISPLACED | 174 m |
| RUNWAY 07L THRESHOLD ELEVATION | 23 ft |
| RUNWAY 07C THRESHOLD DISPLACED | 171 m |
| RUNWAY 07C THRESHOLD ELEVATION | 22 ft |
| RUNWAY 07R THRESHOLD DISPLACED | 160 m |
| RUNWAY 07R THRESHOLD ELEVATION | 27 ft |
| RUNWAY 25L THRESHOLD ELEVATION | 27 ft |
| RUNWAY 25C THRESHOLD DISPLACED | 171 m |
| RUNWAY 25C THRESHOLD ELEVATION | 22 ft |
| RUNWAY 25R THRESHOLD DISPLACED | 174 m |
| RUNWAY 25R THRESHOLD ELEVATION | 23 ft |

| RWY | DIRECTION | THRESHOLD | BEARING STRENGTH |
|---|---|---|---|
| 07L | 074°M | 22 19 17.72N 113 52 56.26E | Refer to AD2-VHHH-ADC-5 |
| 07C | 074°M | 22 18 40.58N 113 53 56.64E | |
| 07R | 074°M | 22 17 48.03N 113 53 57.99E | |
| 25L | 254°M | 22 18 26.75N 113 55 58.15E | |
| 25C | 254°M | 22 19 12.85N 113 55 36.78E | |
| 25R | 254°M | 22 19 54.45N 113 54 50.24E | |

| |
|---|
| TAXIWAY |
| PASSENGER TERMINAL / CARGO TERMINAL APRON |
| MAINTENANCE AREA |

Change: Helicopter parking at X1, X2, X456 and X458.

AD 2-VHHH-ADC-1_V15_250606lh

AERODROME CHART (VISUAL MARKINGS)

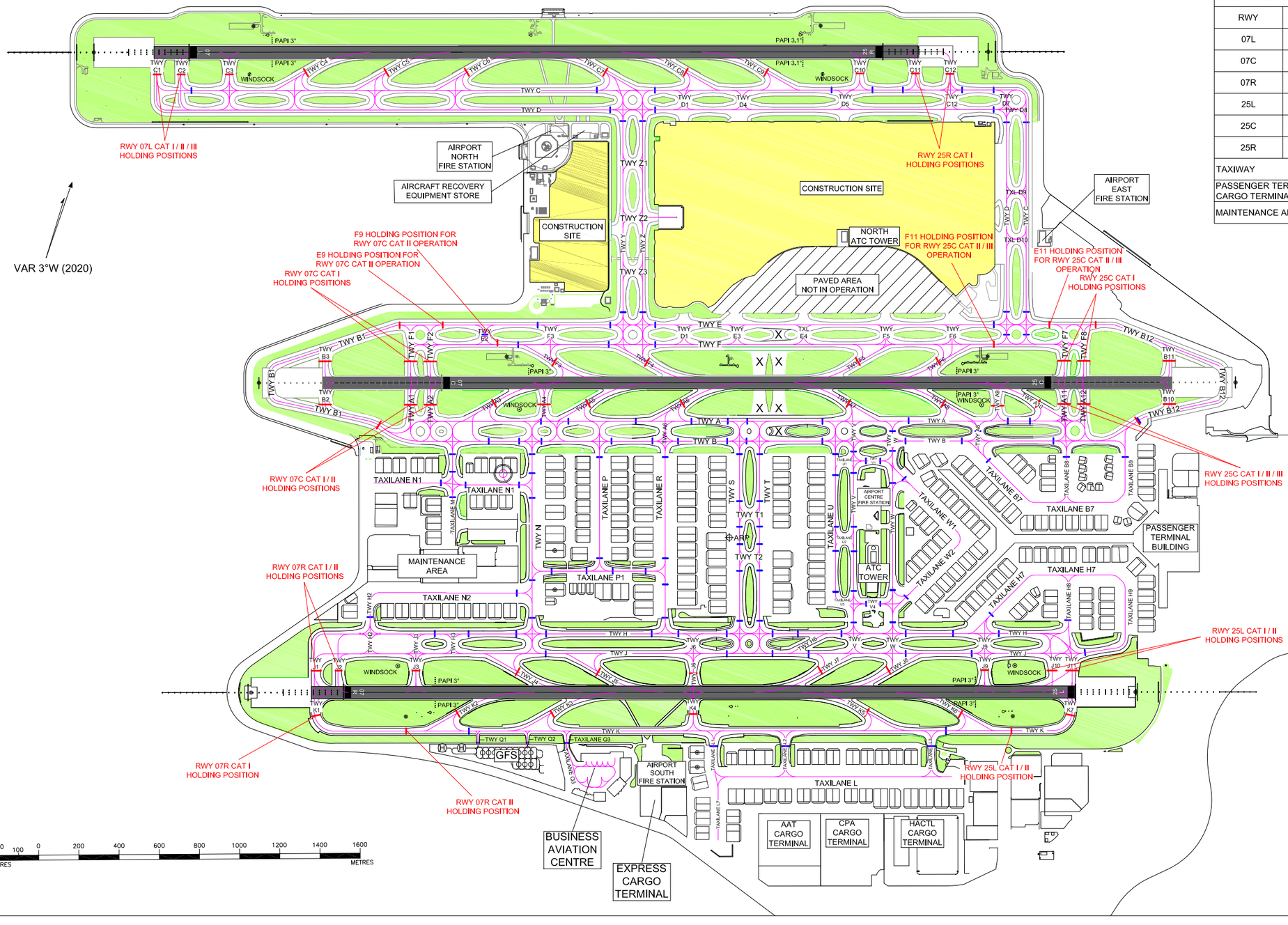
ARP 22° 18' 32.11"N 113° 54' 52.57"E

ELEVATION 28 FT AMSL

TWR 118.7 (North Runway) 118.2 (Centre Runway) 118.4 (South Runway)

VHHH / HONG KONG INTERNATIONAL AIRPORT

ELEVATIONS IN FEET AMSL
DIMENSIONS IN METRES
BEARINGS ARE MAGNETIC




| | |
|---|---|
| HELICOPTER LANDING / TAKEOFF POSITION | Ⓗ |
| RUNWAY HOLDING POSITION | — |
| INTERMEDIATE HOLDING POSITION | — |
| TAXIWAY CENTRELINE | TWY A |

| RWY | DIRECTION | THRESHOLD | BEARING STRENGTH |
|---|---|---|---|
| 07L | 074°M | 22 19 17.72N 113 52 56.26E | Refer to AD2-VHHH-ADC-5 |
| 07C | 074°M | 22 18 40.58N 113 53 56.64E | |
| 07R | 074°M | 22 17 48.03N 113 53 57.99E | |
| 25L | 254°M | 22 18 26.75N 113 55 58.15E | |
| 25C | 254°M | 22 19 12.85N 113 55 36.78E | |
| 25R | 254°M | 22 19 54.45N 113 54 50.24E | |
| TAXIWAY | | | |
| PASSENGER TERMINAL / CARGO TERMINAL APRON | | | |
| MAINTENANCE AREA | | | |

Change: Helicopter parking at X1, X2, X456 and X458.

AD 2-VHHH-ADC-2_V17_250606lh

AERODROME CHART (LIGHTING PLAN)

ARP 22° 18' 32.11"N 113° 54' 52.57"E

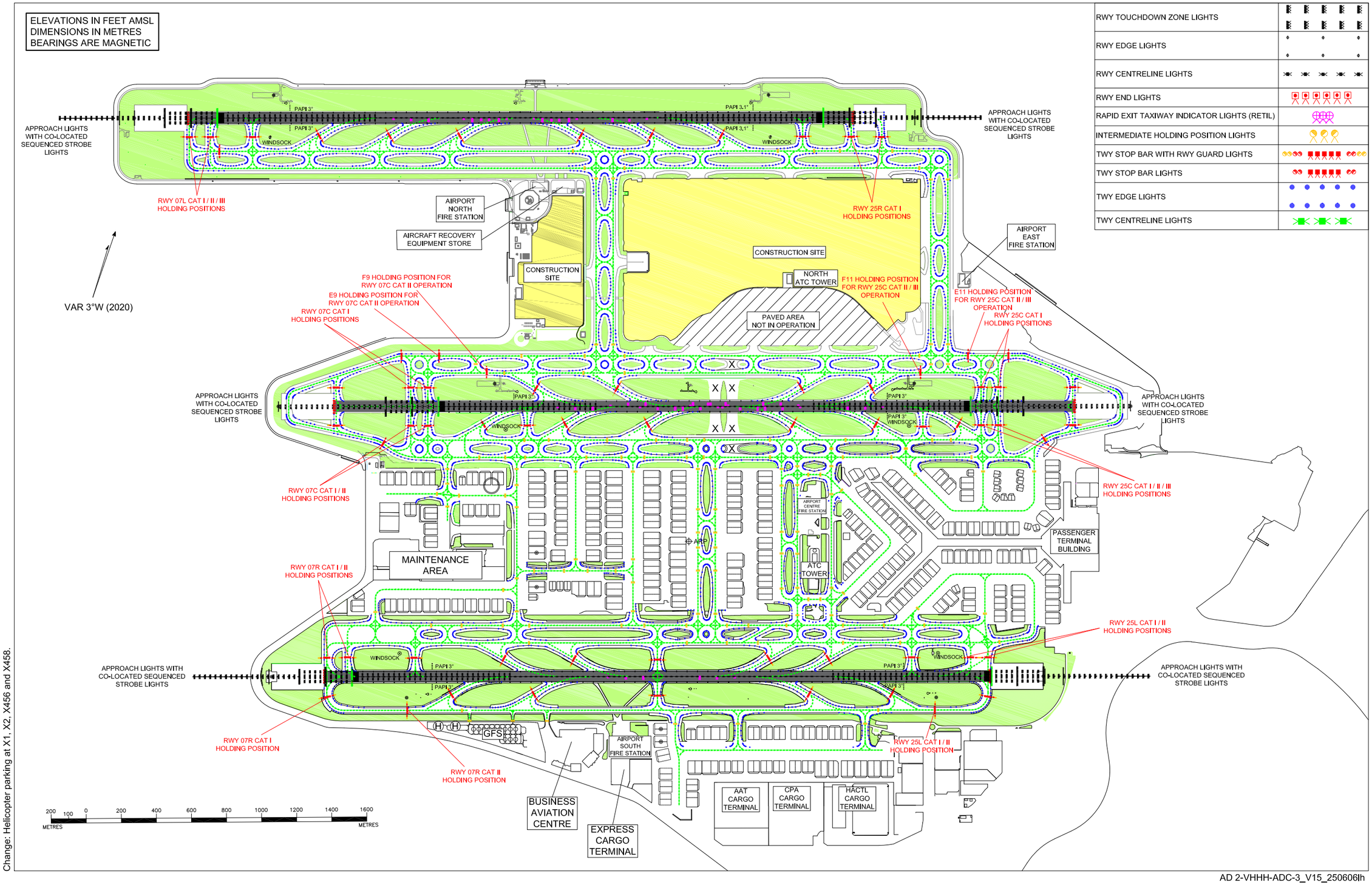
ELEVATION 28 FT AMSL

TWR 118.7 (North Runway) 118.2 (Centre Runway) 118.4 (South Runway)

VHHH / HONG KONG INTERNATIONAL AIRPORT

ELEVATIONS IN FEET AMSL
DIMENSIONS IN METRES
BEARINGS ARE MAGNETIC

| | |
|---|---|
| RWY TOUCHDOWN ZONE LIGHTS | |
| RWY EDGE LIGHTS | |
| RWY CENTRELINE LIGHTS | |
| RWY END LIGHTS | |
| RAPID EXIT TAXIWAY INDICATOR LIGHTS (RETIL) | |
| INTERMEDIATE HOLDING POSITION LIGHTS | |
| TWY STOP BAR WITH RWY GUARD LIGHTS | |
| TWY STOP BAR LIGHTS | |
| TWY EDGE LIGHTS | |
| TWY CENTRELINE LIGHTS | |




Change: Helicopter parking at X1, X2, X456 and X458.

AD 2-VHHH-ADC-3_V15_250606lh

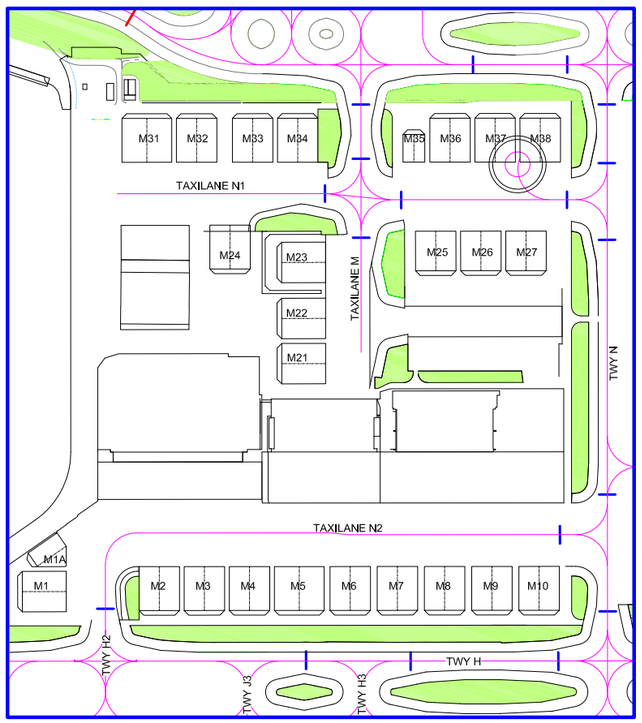
AIRCRAFT PARKING /
DOCKING CHART

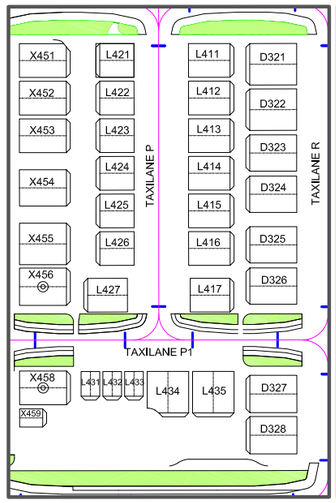
TWR 118.7 (North Runway) 118.2 (Centre Runway)
118.4 (South Runway)

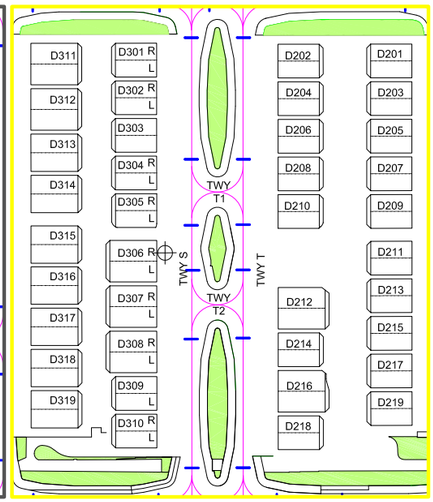
VHHH / HONG KONG
INTERNATIONAL AIRPORT

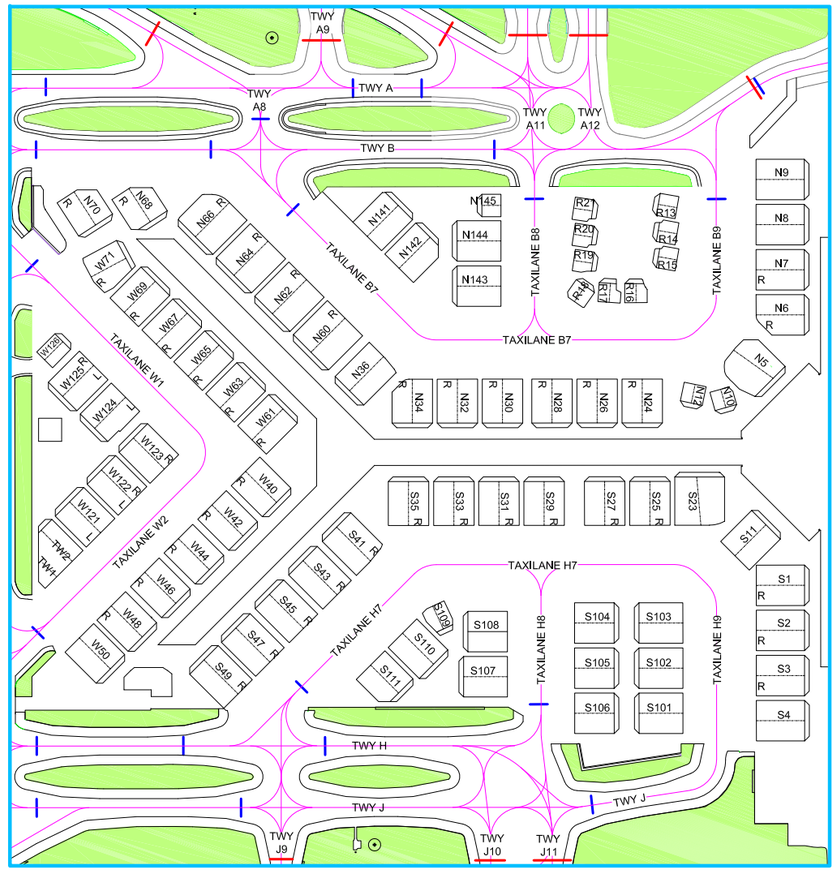
ELEVATIONS IN FEET AMSL
DIMENSIONS IN METRES
BEARINGS ARE MAGNETIC

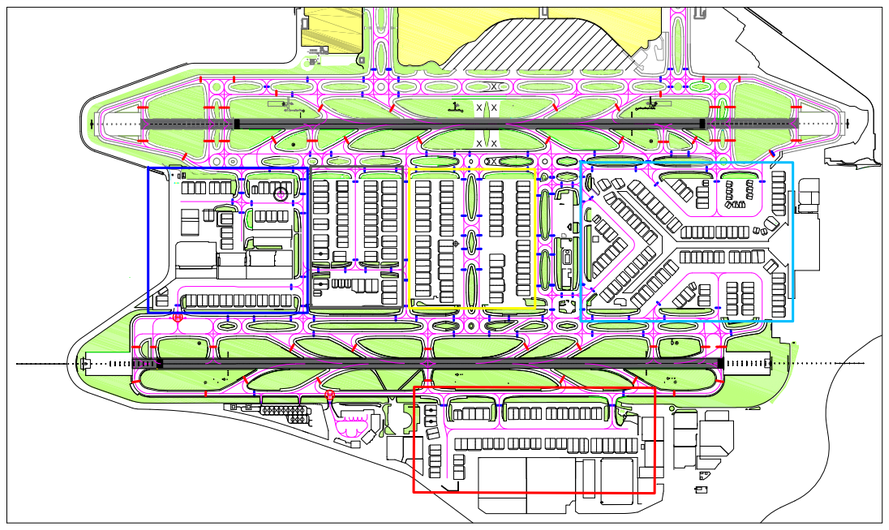
VAR 3°W (2020)

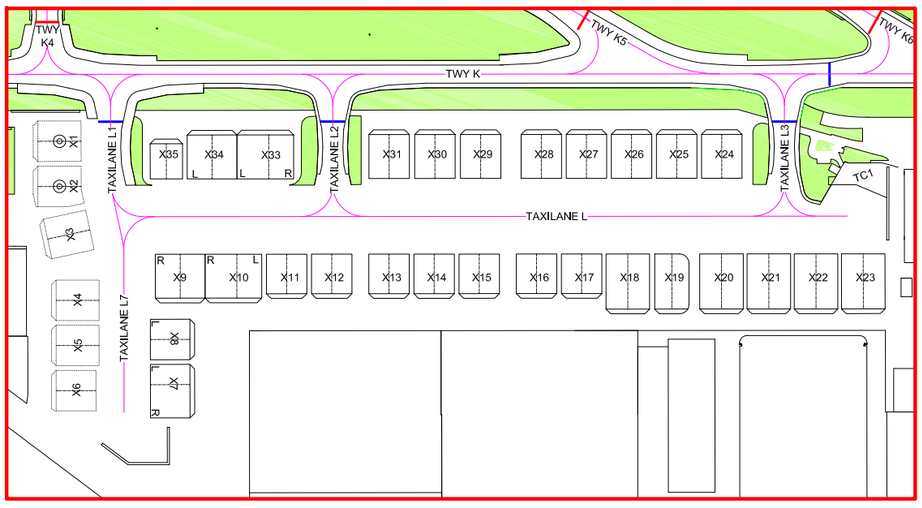


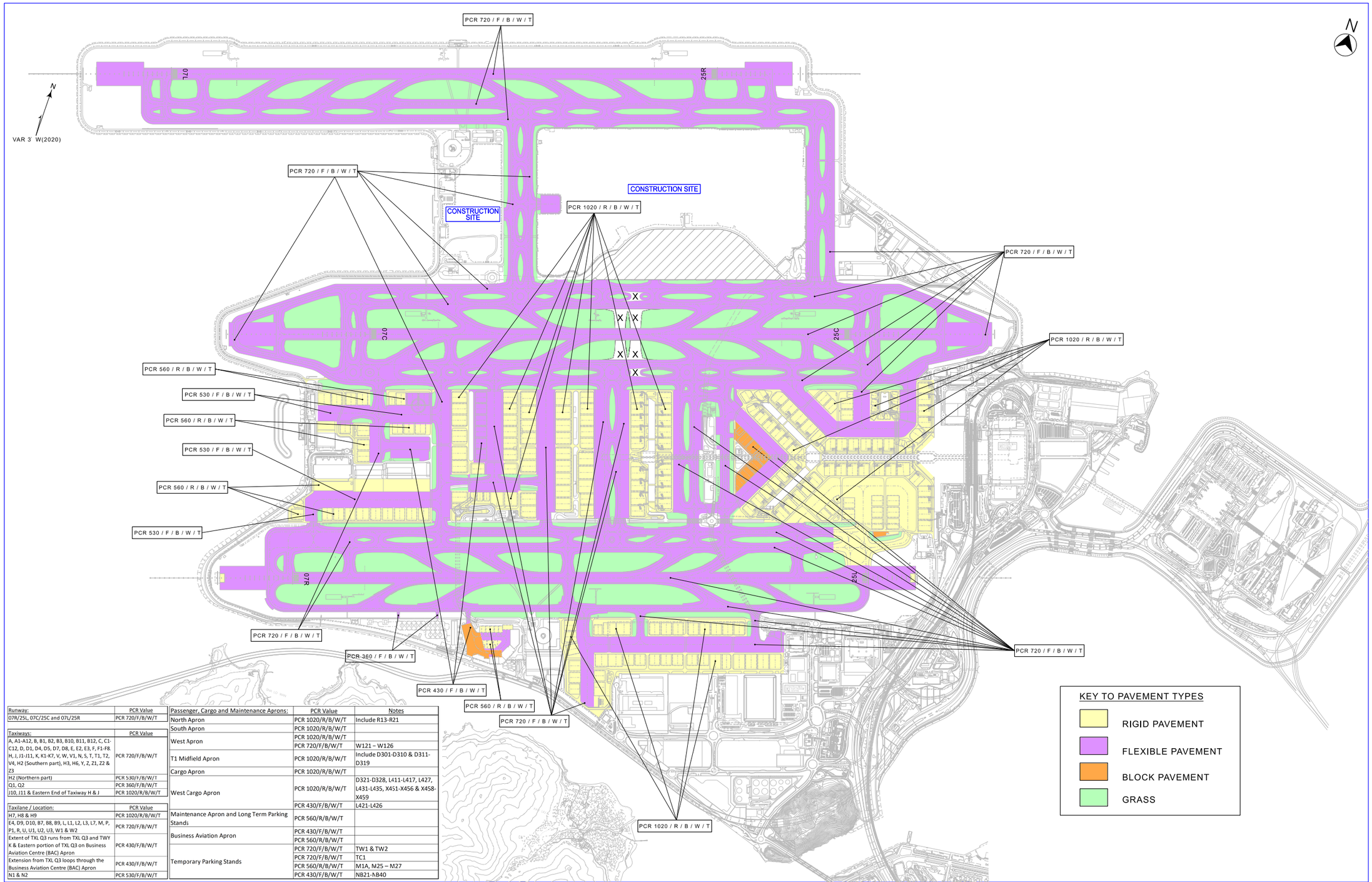




| | |
|---|---|
| RUNWAY HOLDING POSITION | |
| INTERMEDIATE HOLDING POSITION | |
| TAXIWAY CENTRELINE | TWY A |

NOT TO SCALE

Change: Helicopter parking at X1, X2, X456 and X458.

AD 2-VHHH-ADC-4_V20_250616km




| Runway: | PCR Value |
|---|---|
| 07R/25L, 07C/25C and 07L/25R | PCR 720/F/B/W/T |

| Taxiways: | PCR Value |
|---|---|
| A, A1-A12, B, B1, B2, B3, B10, B11, B12, C, C1-C12, D, D1, D4, D5, D7, D8, E, E2, E3, F, F1-F8 H, J, J1-J11, K, K1-K7, V, W, V1, N, S, T, T1, T2, V4, H2 (Southern part), H3, H6, Y, Z, Z1, Z2 & Z3 | PCR 720/F/B/W/T |
| H2 (Northern part) | PCR 530/F/B/W/T |
| Q1, Q2 | PCR 360/F/B/W/T |
| J10, J11 & Eastern End of Taxiway H & J | PCR 1020/R/B/W/T |

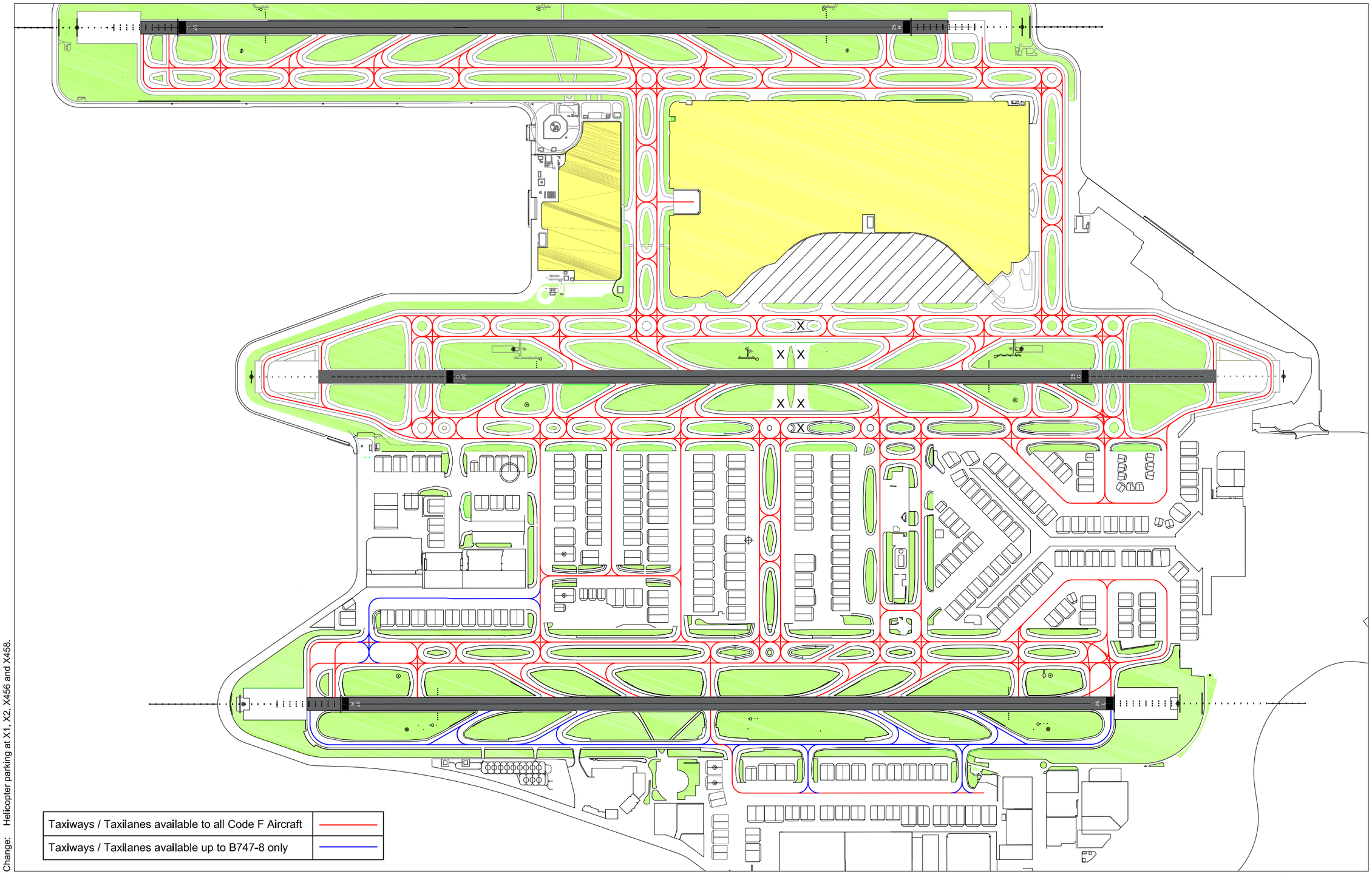
| Taxilane / Location: | PCR Value |
|---|---|
| H7, H8 & H9 | PCR 1020/R/B/W/T |
| E4, D9, D10, B7, B8, B9, L, L1, L2, L3, L7, M, P, P1, R, U, U1, U2, U3, W1 & W2 | PCR 720/F/B/W/T |
| Extent of TXL Q3 runs from TXL Q3 and TWY K & Eastern portion of TXL Q3 on Business Aviation Centre (BAC) Apron | PCR 430/F/B/W/T |
| Extension from TXL Q3 loops through the Business Aviation Centre (BAC) Apron | PCR 430/F/B/W/T |
| N1 & N2 | PCR 530/F/B/W/T |

| Passenger, Cargo and Maintenance Aprons: | PCR Value | Notes |
|---|---|---|
| North Apron | PCR 1020/R/B/W/T | include R13-R21 |
| South Apron | PCR 1020/R/B/W/T | |
| West Apron | PCR 1020/R/B/W/T | |
| | PCR 720/F/B/W/T | W121 – W126 |
| T1 Midfield Apron | PCR 1020/R/B/W/T | include D301-D310 & D311-D319 |
| Cargo Apron | PCR 1020/R/B/W/T | |
| West Cargo Apron | PCR 1020/R/B/W/T | D321-D328, L411-L417, L427, L431-L435, X451-X456 & X458-X459 |
| | PCR 430/F/B/W/T | L421-L426 |
| Maintenance Apron and Long Term Parking Stands | PCR 560/R/B/W/T | |
| Business Aviation Apron | PCR 430/F/B/W/T | |
| | PCR 560/R/B/W/T | |
| Temporary Parking Stands | PCR 720/F/B/W/T | TW1 & TW2 |
| | PCR 720/F/B/W/T | TC1 |
| | PCR 560/R/B/W/T | M1A, M25 – M27 |
| | PCR 430/F/B/W/T | NB21-NB40 |

# PLAN 13 - PAVEMENT TYPES & PCR VALUE

Effective Date : 31 MARCH 2025

# Taxiways / Taxilanes for Code F Aircraft




Change: Helicopter parking at X1, X2, X456 and X458.

AD 2-VHHH-ADC-6_V13_250606lh

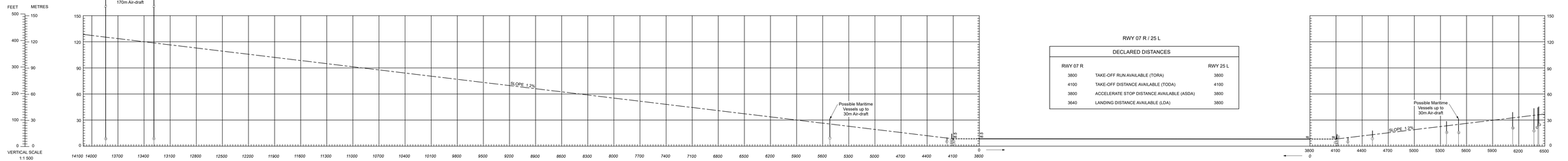
DIMENSIONS, ELEVATIONS AND HEIGHTS IN METRES
VERTICAL DATUM USED - MEAN SEA LEVEL

# AERODROME OBSTACLE CHART - ICAO

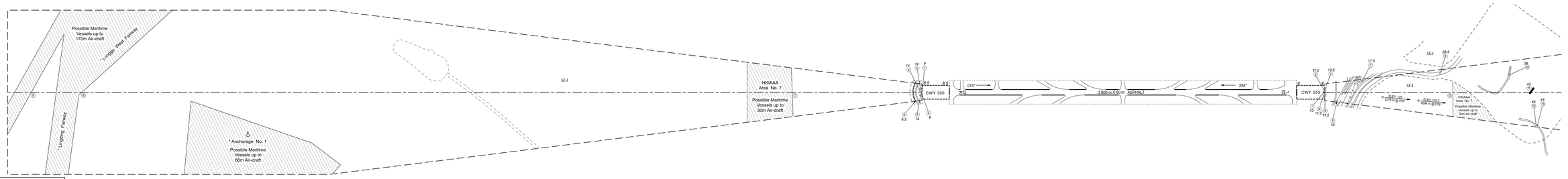
TYPE A (OPERATING LIMITATIONS)

AD 2-VHHH-AOC-1
27 NOV 25
HONG KONG INTERNATIONAL AIRPORT
RWY 07 R / 25 L

MAGNETIC VARIATION 3° W (2020)




| DECLARED DISTANCES | | |
|---|---|---|
| RWY 07 R | | RWY 25 L |
| 3800 | TAKE-OFF RUN AVAILABLE (TORA) | 3800 |
| 4100 | TAKE-OFF DISTANCE AVAILABLE (TODA) | 4100 |
| 3800 | ACCELERATE STOP DISTANCE AVAILABLE (ASDA) | 3800 |
| 3640 | LANDING DISTANCE AVAILABLE (LDA) | 3800 |




| LEGEND | |
|---|---|
| OBSTACLE IDENTIFICATION NUMBER | ① |
| APPROACH LIGHT | • |
| STREET LIGHT | ○ |
| ANTENNA, CCTV, POLE & MAST, ETC. | ✳ |
| ANCHORAGE AREA | ⚓ |
| BUILDING | ▬ |
| MAIN ROAD | |
| MARINE FACILITIES | |
| MOBILE OBSTACLES | 555555555555 |
| RAILROAD | |

* Refer to AIP Hong Kong VHHH AD 2.23 ADDITIONAL INFORMATION for further details

HORIZONTAL SCALE 1:15 000

METRES 500 0 500 1000 1500 2000 2500 3000 METRES
FEET 1000 500 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 FEET

ORDER OF ACCURACY
HORIZONTAL 00m
VERTICAL 00m

| AMENDMENT RECORD | | |
|---|---|---|
| No. | DATE | ENTERED BY |
| | | |

CIVIL AVIATION DEPARTMENT, HONG KONG
Cartography by Survey and Mapping Office, Lands Department

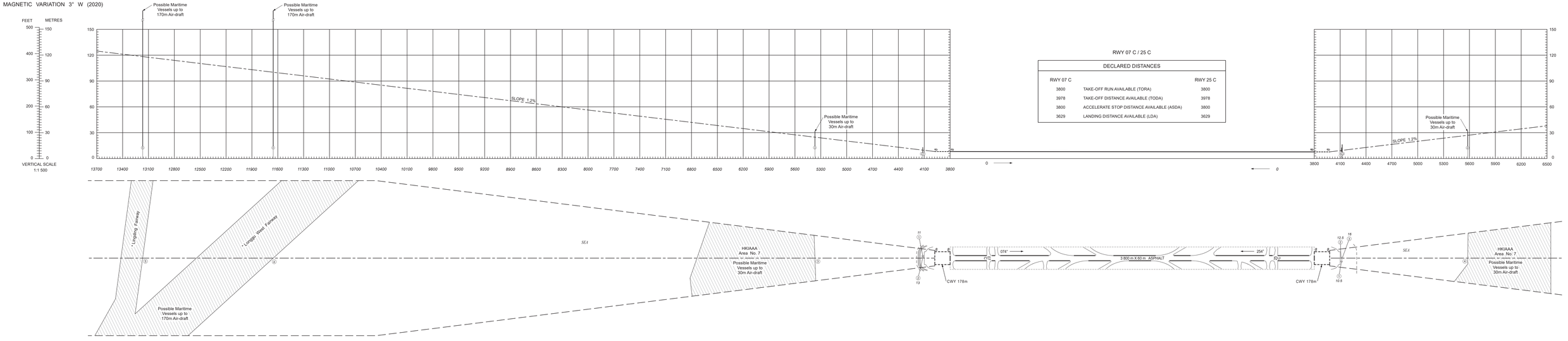
DIMENSIONS, ELEVATIONS AND HEIGHTS IN METRES
VERTICAL DATUM USED - MEAN SEA LEVEL

# AERODROME OBSTACLE CHART - ICAO

TYPE A (OPERATING LIMITATIONS)

AD 2-VHHH-AOC-2
23 JAN 25
HONG KONG INTERNATIONAL AIRPORT
RWY 07 C / 25 C

MAGNETIC VARIATION 3° W (2020)




HORIZONTAL SCALE 1:15 000

METRES 500 0 500 1000 1500 2000 2500 3000 METRES
FEET 1000 500 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 FEET

| LEGEND | |
|---|---|
| OBSTACLE IDENTIFICATION NUMBER | ① |
| POLE | ⊕ |
| MAIN ROAD | |
| MARINE FACILITIES | |

* Refer to AIP Hong Kong VHHH AD 2.23 ADDITIONAL INFORMATION for further details

ORDER OF ACCURACY
HORIZONTAL 00m
VERTICAL 00m

AMENDMENT RECORD

| No. | DATE | ENTERED BY |
|---|---|---|

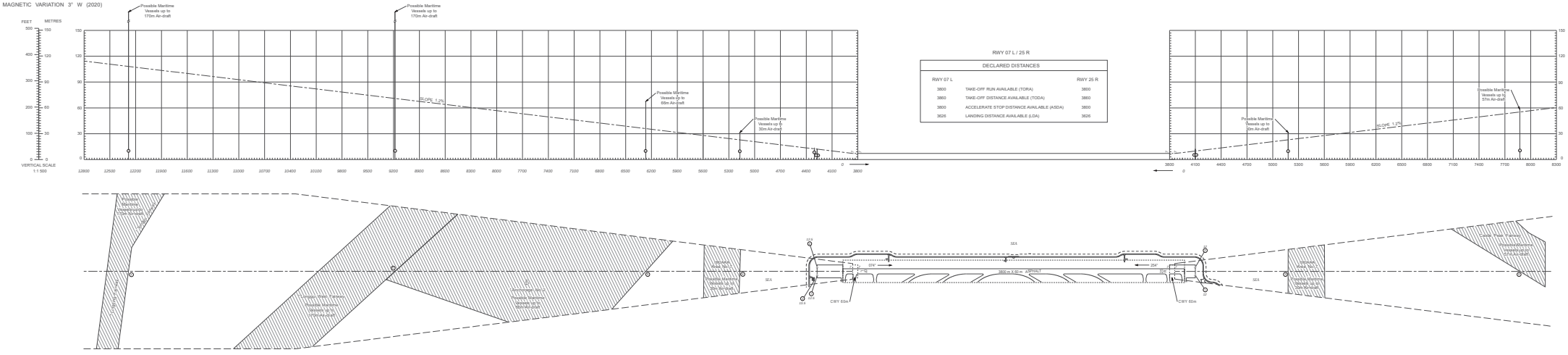

CIVIL AVIATION DEPARTMENT, HONG KONG
Cartography by Survey and Mapping Office, Lands Department

DIMENSIONS, ELEVATIONS AND HEIGHTS IN METRES
VERTICAL DATUM USED - MEAN SEA LEVEL

# AERODROME OBSTACLE CHART - ICAO
TYPE A (OPERATING LIMITATIONS)

AD 2-VHHH-AOC-3
28 NOV 24
HONG KONG INTERNATIONAL AIRPORT
RWY 07 L / 25 R

MAGNETIC VARIATION 3° W (2020)




RWY 07 L / 25 R

| DECLARED DISTANCES | | |
|---|---|---|
| RWY 07 L | | RWY 25 R |
| 3800 | TAKE-OFF RUN AVAILABLE (TORA) | 3800 |
| 3860 | TAKE-OFF DISTANCE AVAILABLE (TODA) | 3860 |
| 3800 | ACCELERATE STOP DISTANCE AVAILABLE (ASDA) | 3800 |
| 3626 | LANDING DISTANCE AVAILABLE (LDA) | 3626 |




HORIZONTAL SCALE 1:15 000

METRES 500 0 500 1000 1500 2000 2500 3000 METRES
FEET 1000 500 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 FEET

ORDER OF ACCURACY
HORIZONTAL 60m
VERTICAL 60m

| LEGEND | |
|---|---|
| OBSTACLE IDENTIFICATION NUMBER | ⊙ |
| POLE | ▲ |
| ANCHORAGE AREA | ⚓ |
| BUILDING | ▬ |
| MAIN ROAD | ═══ |
| MARINE FACILITIES | ▭▭▭ |

* Refer to AIP Hong Kong VHHH AD 2.23 ADDITIONAL INFORMATION for further details

| AMENDMENT RECORD | | |
|---|---|---|
| No. | DATE | ENTERED BY |

CIVIL AVIATION DEPARTMENT, HONG KONG
Cartography by Survey and Mapping Office, Lands Department

DIMENSIONS IN METRES
ELEVATION IN FEET AMSL ( in red ) / IN METERS AMSL ( in black )
WGS84 datum was adopted to Geographic Coordinates

# AERODROME OBSTACLE CHART - ICAO TYPE B

AD 2-VHHH-AOC-4
23 JAN 25
VHHH / HONG KONG INTERNATIONAL AIRPORT

AERODROME ELEVATION 9 METERS (28 FEET)




OBSTACLES SHOWN ARE THOSE WHICH PENETRATE
THE SURFACES SPECIFIED IN ANNEX 14, VOLUME I, CHAPTER 4

CONICAL SURFACE, SLOPE 1 : 20

INNER HORIZONTAL SURFACE

APPROACH SURFACE, SLOPE 1 : 40

WARNING
VISUAL CIRCLING IS PROHIBITED

NOTE
ANNEX 14 OBSTACLE LIMITATION SURFACES ARE PENETRATED BY EXTENSIVE HIGH GROUNDS AND MAN-MADE OBSTACLES IN THE AREA SOUTH OF THIS LINE

Umiston Road Fairway

Castle Peak Fairway

* Tonggu Fairway

* Lungju West Fairway

* Lungjing Fairway

Possible Maritime Vessels up to 170m Air-draft

Possible Maritime Vessels up to 67m Air-draft

HKIAAA Area No.7
Possible Maritime Vessels up to 30m Air-draft

* Anchorage No.2
Possible Maritime Vessels up to 66m Air-draft

* Anchorage No.1
Possible Maritime Vessels up to 66m Air-draft

TAKE-OFF CLIMB SURFACE, SLOPE 1 : 50

APPROACH SURFACE, SLOPE 1 : 50

TRANSITIONAL SURFACE, SLOPE 1 : 7

CLEARWAY 60

CLEARWAY 170

RUNWAY 07L/25R 3 800 m

RUNWAY 07R/25L 3 800 m

TAXIWAY

CONSTRUCTION SITE

ARP

Hong Kong International Airport

青山 CASTLE PEAK

青山灣 CASTLE PEAK BAY (TSING SHAN WAN)

龍鼓灘 LUNG KWU TAN

龍鼓洲 LUNG KWU CHAU

沙洲 SHA CHAU

大小磨刀 THE BROTHERS

EAST BROTHER (SIU MO TO)

WEST BROTHER (TAI MO TO)

TSZ KAN CHAU

TUNG CHUNG

LANTAU ISLAND

大嶼山 LANTAU PEAK (FUNG WONG SHAN)

SUNSET PEAK (TAI TUNG SHAN)

TAI O

MUI WO

SILVER MINE BAY

SO KWUN WAT

PEARL ISLAND

TUNG CHUNG BAY

SHA LO WAN

SHAM SHEK TSUEN

NGONG PING

Hong Kong-Zhuhai-Macao Bridge (Hong Kong Portion)

Tuen Mun-Chek Lap Kok Link

Tung Chung Line

Airport Express Line

ORDER OF ACCURACY
HORIZONTAL 0.5 M
VERTICAL 1.0 M

TRANSVERSE MERCATOR PROJECTION

HORIZONTAL SCALE 1:20 000

METRES 300 0 500 1 000 1 500 2 000 2 500 3 000 METRES
FEET 1 000 0 1 000 2 000 3 000 4 000 5 000 6 000 7 000 8 000 9 000 10 000 FEET

* Refer to AIP Hong Kong VHHH AD 2.23 ADDITIONAL INFORMATION for further details

| AMENDMENT RECORD | | |
|---|---|---|
| No. | DATE | ENTERED BY |
| | | |

| LEGEND | |
|---|---|
| AERODROME REFERENCE POINT 22°18'32.11" N 113°54'52.57" E | |
| POLE, TOWER, ANTENNA, ETC. | |
| BUILDING OR LARGE STRUCTURE | |
| TERRAIN PENETRATING OBSTACLE PLANE | |
| ANCHORAGE AREA | |
| MARINE FACILITIES | |
| HONG KONG SPECIAL ADMINISTRATIVE REGION BOUNDARY | |

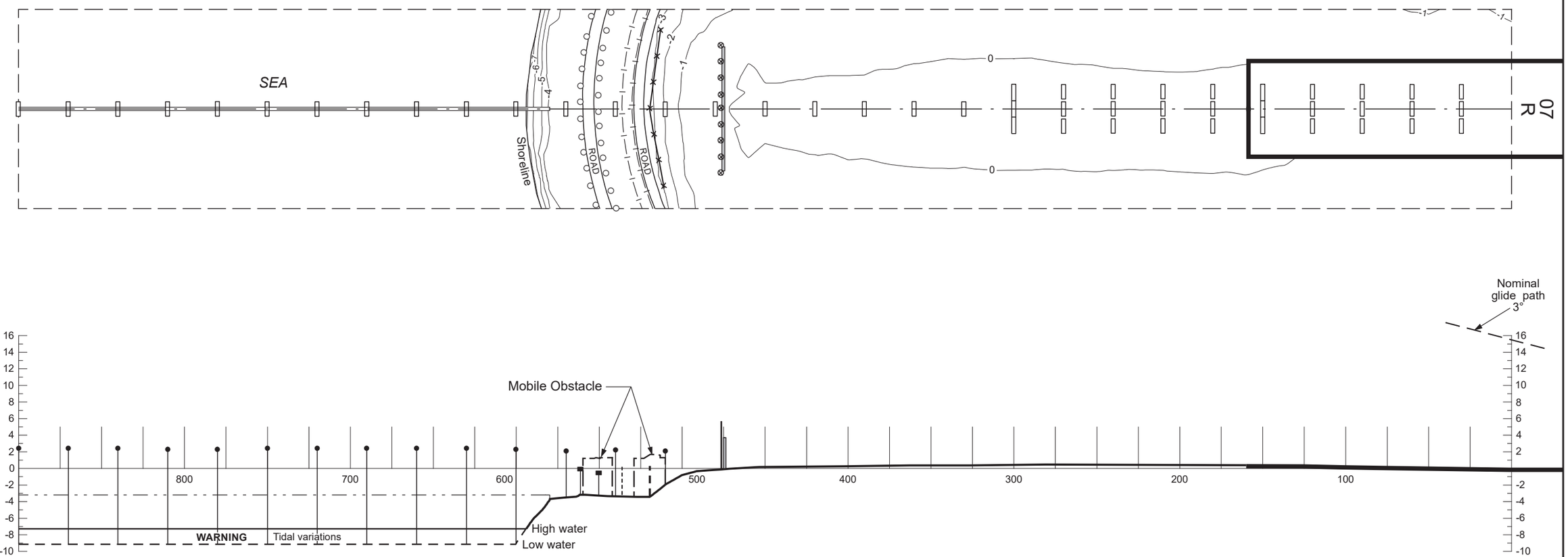
CIVIL AVIATION DEPARTMENT, HONG KONG
Cartography by Survey and Mapping Office, Lands Department

# PRECISION APPROACH TERRAIN CHART - ICAO

HONG KONG INTERNATIONAL AIRPORT

RWY 07R

DISTANCES AND HEIGHTS IN METRES




| LEGEND | |
|---|---|
| STREET LIGHTING | |
| LIGHTING MAST | |
| PERIMETER FENCE | |
| JET BLAST FENCE | |
| CONTOUR IN METRES WITH REFERENCE TO THR | -3 |
| CENTRE-LINE PROFILE | |
| APPROACH LIGHTS | |
| LLZ ANTENNA LOCATION | |
| OFFSHORE APPROACH LIGHTING WALKWAYS | |

HORIZONTAL SCALE 1 : 2 500

VERTICAL SCALE 1 : 500

CONTOURS AND HEIGHTS ARE RELATED TO ELEVATION OF RWY THR

| AMENDMENT RECORD | | |
|---|---|---|
| No. | DATE | ENTERED BY |
| | | |

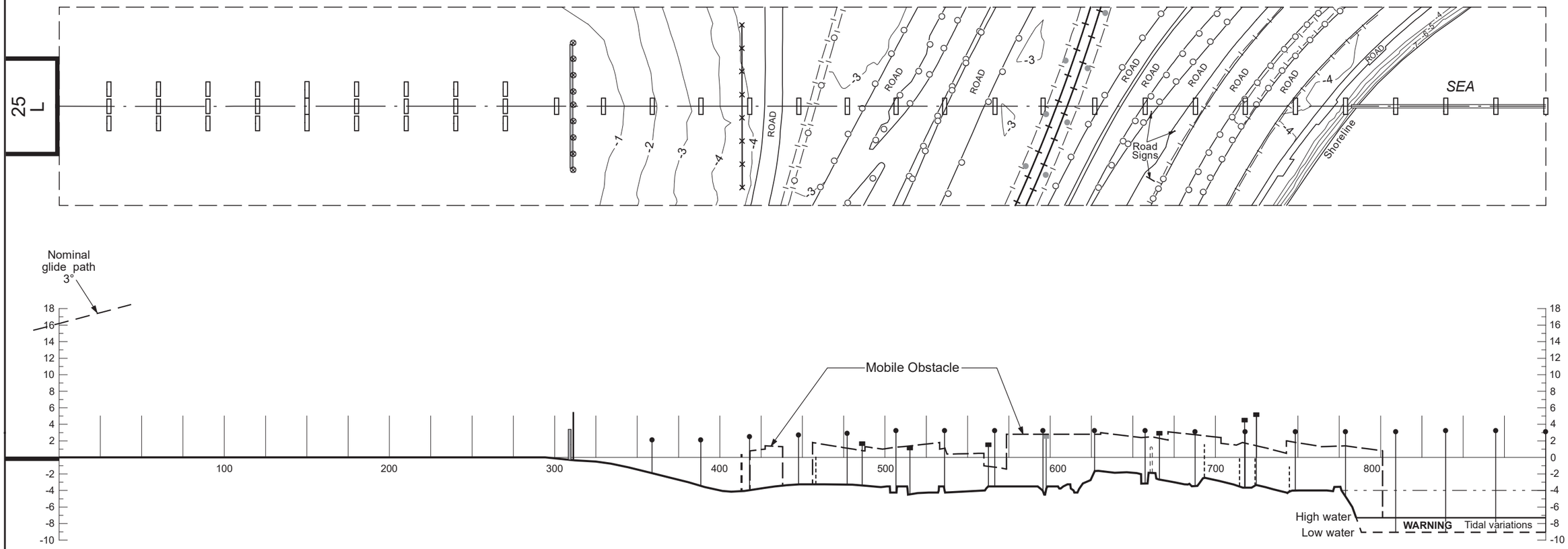
CIVIL AVIATION DEPARTMENT, HONG KONG
Cartography by Survey and Mapping Office, Lands Department

HONG KONG INTERNATIONAL AIRPORT

# PRECISION APPROACH TERRAIN CHART - ICAO

RWY 25L

DISTANCES AND HEIGHTS IN METRES




| LEGEND | |
|---|---|
| STREET LIGHTING | |
| MTR OVERHEAD LINE MAST | |
| LIGHTING MAST | |
| PERIMETER FENCE | |
| JET BLAST FENCE | |
| RAILROAD | |
| CONTOUR IN METRES WITH REFERENCE TO THR | -3 |
| CENTRE-LINE PROFILE | |
| ROAD SIGN | |
| APPROACH LIGHTS | |
| LLZ ANTENNA LOCATION | |
| OFFSHORE APPROACH LIGHTING WALKWAYS | |

HORIZONTAL SCALE 1 : 2 500

VERTICAL SCALE 1 : 500

CONTOURS AND HEIGHTS ARE RELATED TO ELEVATION OF RWY THR

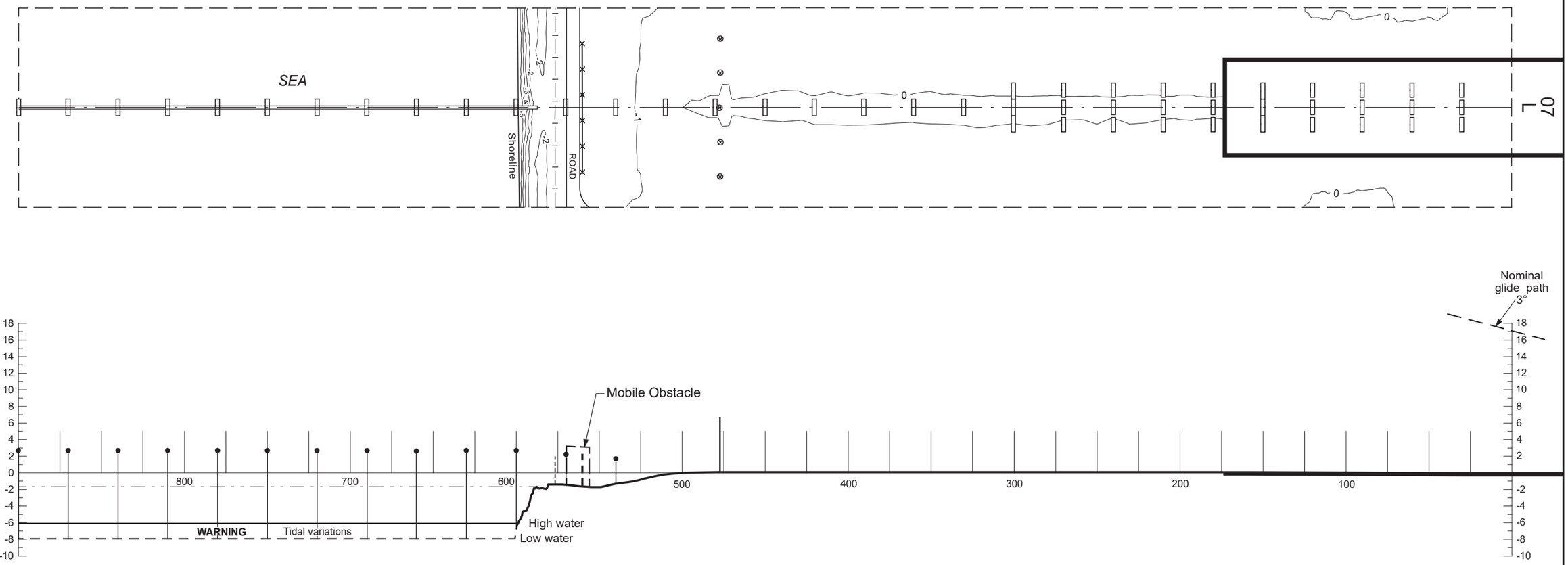
| AMENDMENT RECORD | | |
|---|---|---|
| No. | DATE | ENTERED BY |
| | | |

# PRECISION APPROACH TERRAIN CHART - ICAO

HONG KONG INTERNATIONAL AIRPORT

RWY 07L

DISTANCES AND HEIGHTS IN METRES




| LEGEND | |
|---|---|
| LIGHTING MAST | ⊗ \| |
| PERIMETER FENCE | —I—I— |
| JET BLAST FENCE | ×—×—× |
| CONTOUR IN METRES WITH REFERENCE TO THR | —-3— |
| CENTRE-LINE PROFILE | |
| APPROACH LIGHTS | ▭ ● |
| OFFSHORE APPROACH LIGHTING WALKWAYS | ═══ — - - — |

HORIZONTAL SCALE 1 : 2 500

VERTICAL SCALE 1 : 500

CONTOURS AND HEIGHTS ARE RELATED TO ELEVATION OF RWY THR

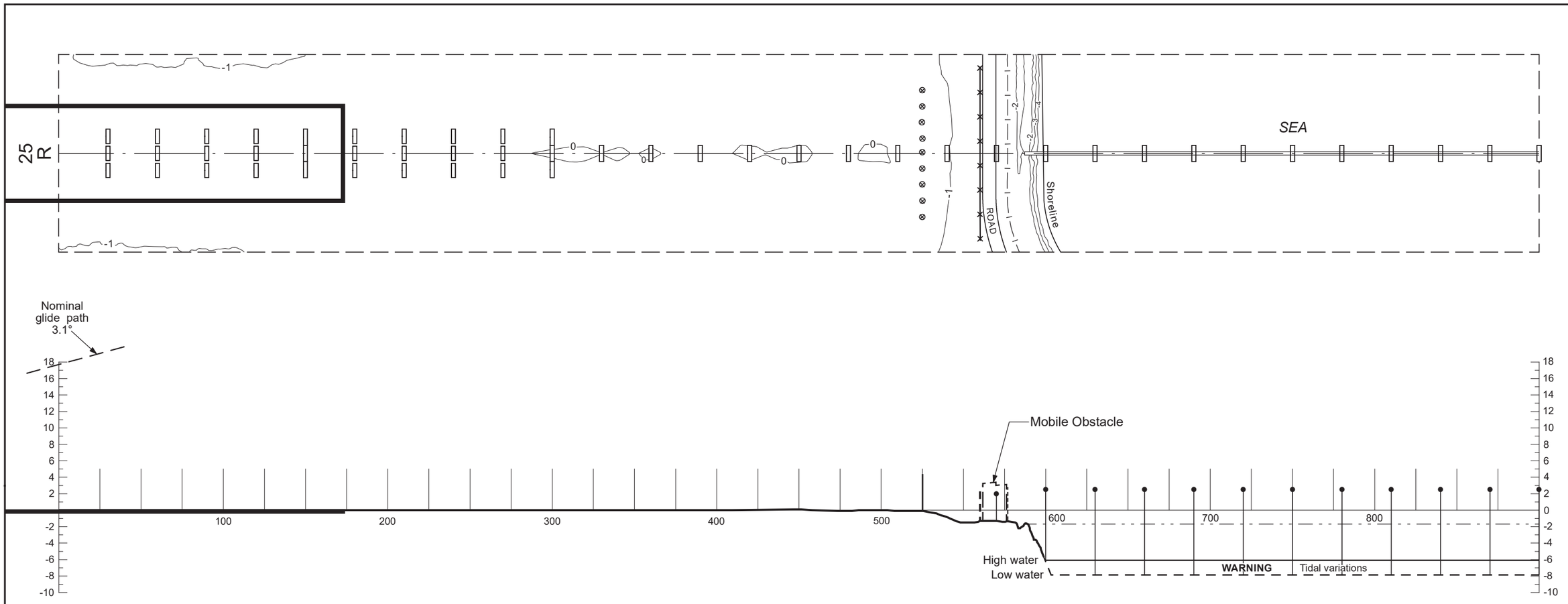
| AMENDMENT RECORD | | |
|---|---|---|
| No. | DATE | ENTERED BY |
| | | |

# PRECISION APPROACH TERRAIN CHART - ICAO

HONG KONG INTERNATIONAL AIRPORT

RWY 25R

DISTANCES AND HEIGHTS IN METRES




| LEGEND | |
|---|---|
| LIGHTING MAST | ⊗ \| |
| PERIMETER FENCE | —I—I— |
| JET BLAST FENCE | ×—×—× |
| CONTOUR IN METRES WITH REFERENCE TO THR | —-3— |
| CENTRE-LINE PROFILE | |
| APPROACH LIGHTS | ▭ ● |
| OFFSHORE APPROACH LIGHTING WALKWAYS | ═══ — - - — |

HORIZONTAL SCALE 1 : 2 500

VERTICAL SCALE 1 : 500

CONTOURS AND HEIGHTS ARE RELATED TO ELEVATION OF RWY THR

| AMENDMENT RECORD | | |
|---|---|---|
| No. | DATE | ENTERED BY |
| | | |

CIVIL AVIATION DEPARTMENT, HONG KONG
Cartography by Survey and Mapping Office, Lands Department

# Aerodrome Terrain and Obstacle Chart - ICAO (Electronic)

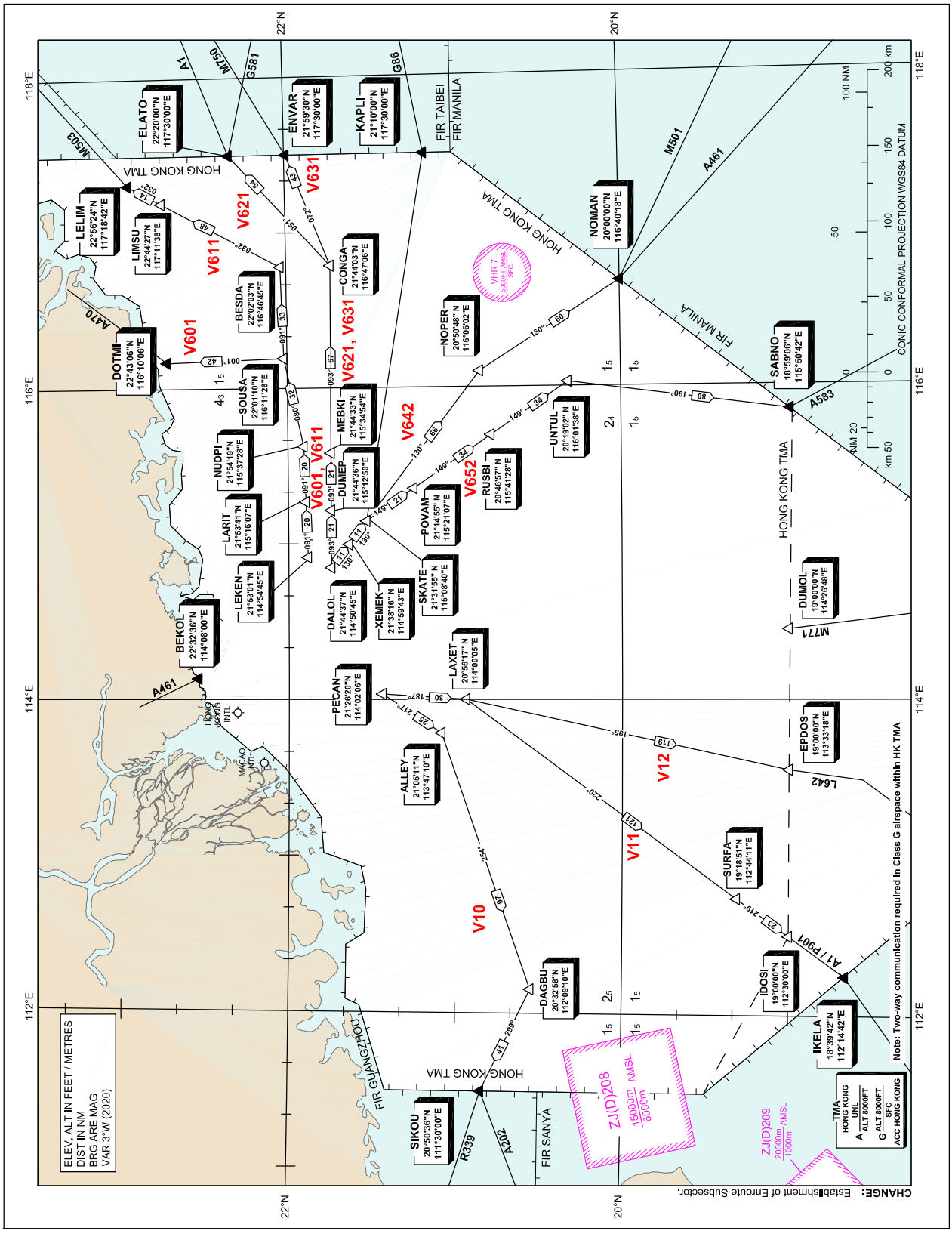
Electronic terrain data for Area 4 for all six runways (07C, 07L, 07R, 25C, 25L and 25R) at HKIA are available from the airport operator as follows:

Attn: Manager, Infrastructure Management & Coordination
Airfield Department
Hong Kong Airport Authority,
HKIA Tower, 1 Sky Plaza Rd,
Hong Kong International Airport.

Tel : +852 21887902
FAX : +852 21827902

VHHH / HONG KONG TMA

AREA CHART — DEPARTURE ROUTES



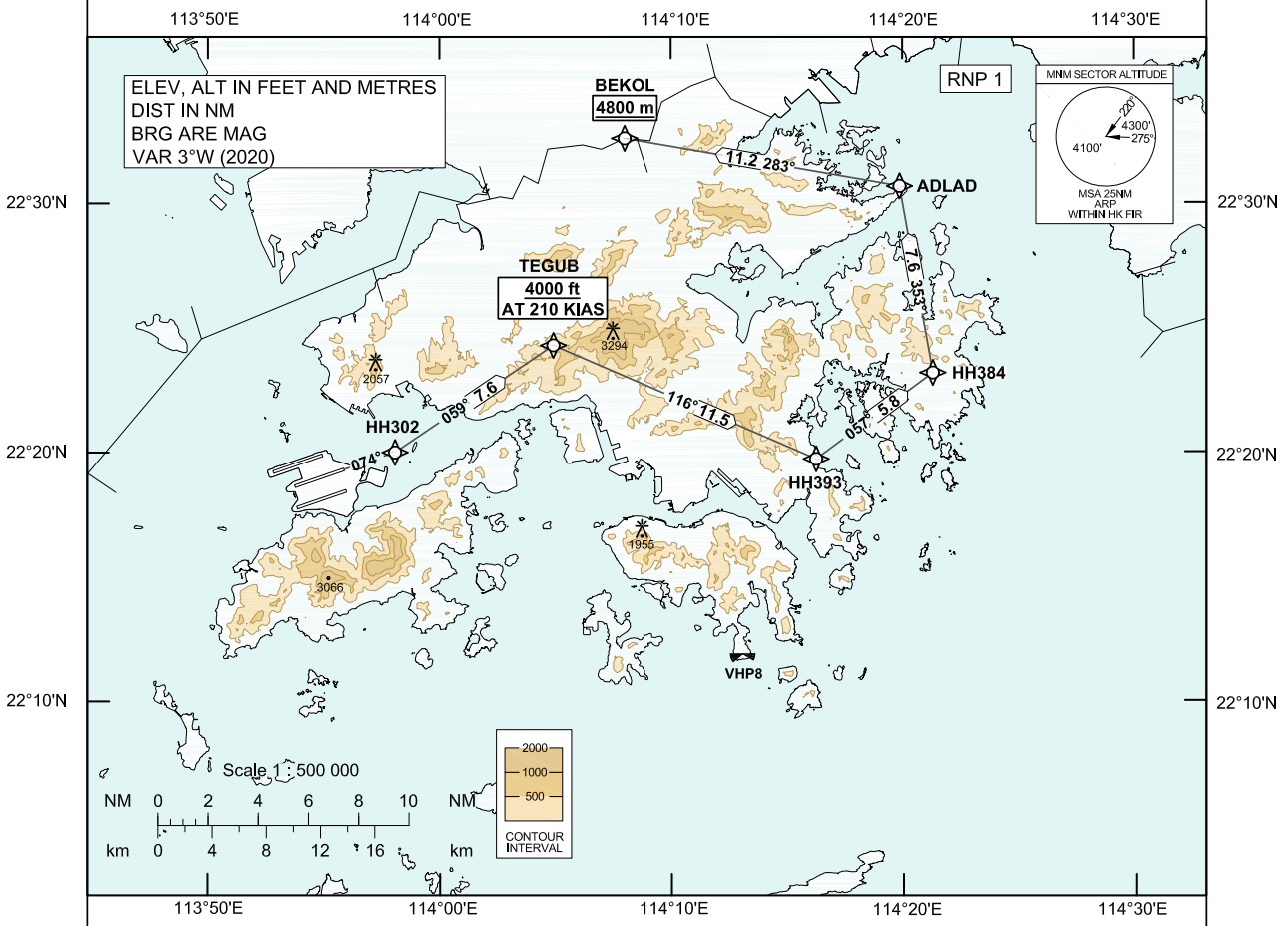

AD 2-VHHH-AC-DEP_V09_250319h

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

| Transition Altitude 9 000 ft | |
|---|---|
| Hong Kong Tower | 118.2 |
| Hong Kong Departure | 123.8 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) ADLAD 1T SID RWY 07C**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.
2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.




## ADLAD 1T SID RWY 07C

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 6.8% (414 ft/NM) until passing 3 900 ft is required.

**SPEED RESTRICTION**
Speed restriction of 210 KIAS at TEGUB.

**CHANGE:** New procedure.

AD 2-VHHH-SID-ADLAD-T_V01_240513km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: ADLAD 1T RWY 07C

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH302 | - | 074 (071) | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | TEGUB | - | 059 (056) | +3.0 | 7.6 | - | +4000 | @210 | RNP 1 |
| 03 | TF | HH393 | - | 116 (113) | +3.0 | 11.5 | - | - | - | RNP 1 |
| 04 | TF | HH384 | - | 057 (054) | +3.0 | 5.8 | - | - | - | RNP 1 |
| 05 | TF | ADLAD | - | 353 (350) | +3.0 | 7.6 | - | - | - | RNP 1 |
| 06 | TF | BEKOL | - | 283 (280) | +3.0 | 11.2 | - | +4800m | - | RNP 1 |

## WAYPOINT LIST

**ADLAD 1T RWY 07C**

| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| HH302 | 22 20 00.43N | 113 58 04.56E |
| TEGUB | 22 24 18.28N | 114 04 54.69E |
| HH393 | 22 19 43.83N | 114 16 15.26E |
| HH384 | 22 23 11.51N | 114 21 17.83E |
| ADLAD | 22 30 40.74N | 114 19 52.57E |
| BEKOL | 22 32 36.00N | 114 08 00.00E |

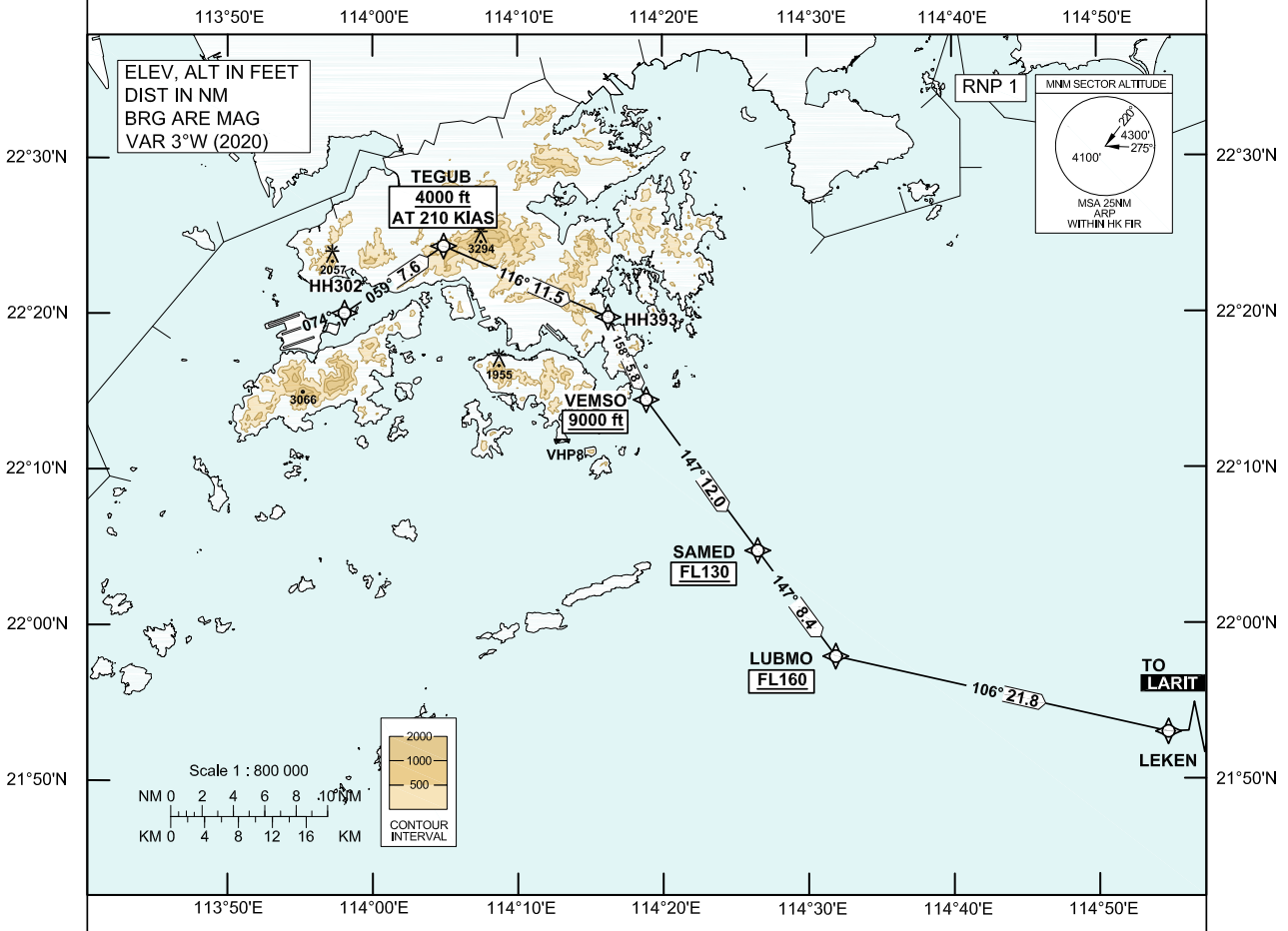
**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

| Transition Altitude 9 000 ft | |
|---|---|
| Hong Kong Tower | 118.2 |
| Hong Kong Departure | 123.8 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) LARIT 1T SID RWY 07C**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.




## LARIT 1T SID RWY 07C

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 6.8% (414 ft/NM) until passing 3 900 ft is required.

**SPEED RESTRICTION**
Speed restriction of 210 KIAS at TEGUB.

**CHANGE:** New procedure.

AD 2-VHHH-SID-LARIT-T_V01_240517km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: LARIT 1T RWY 07C

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH302 | - | 074 (071) | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | TEGUB | - | 059 (056) | +3.0 | 7.6 | - | +4000 | @210 | RNP 1 |
| 03 | TF | HH393 | - | 116 (113) | +3.0 | 11.5 | - | - | - | RNP 1 |
| 04 | TF | VEMSO | - | 158 (155) | +3.0 | 5.8 | - | +9000 | - | RNP 1 |
| 05 | TF | SAMED | - | 147 (144) | +3.0 | 12.0 | - | +FL130 | - | RNP 1 |
| 06 | TF | LUBMO | - | 147 (144) | +3.0 | 8.4 | - | +FL160 | - | RNP 1 |
| 07 | TF | LEKEN | - | 106 (103) | +3.0 | 21.8 | - | - | - | RNP 1 |
| 08 | TF | LARIT | - | 091 (088) | +3.0 | 19.9 | - | - | - | RNP 1 |

## WAYPOINT LIST

**LARIT 1T RWY 07C**

| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| HH302 | 22 20 00.43N | 113 58 04.56E |
| TEGUB | 22 24 18.28N | 114 04 54.69E |
| HH393 | 22 19 43.83N | 114 16 15.26E |
| VEMSO | 22 14 25.06N | 114 18 52.28E |
| SAMED | 22 04 43.00N | 114 26 31.83E |
| LUBMO | 21 57 55.24N | 114 31 52.98E |
| LEKEN | 21 53 01.06N | 114 54 44.95E |
| LARIT | 21 53 41.37N | 115 16 06.56E |

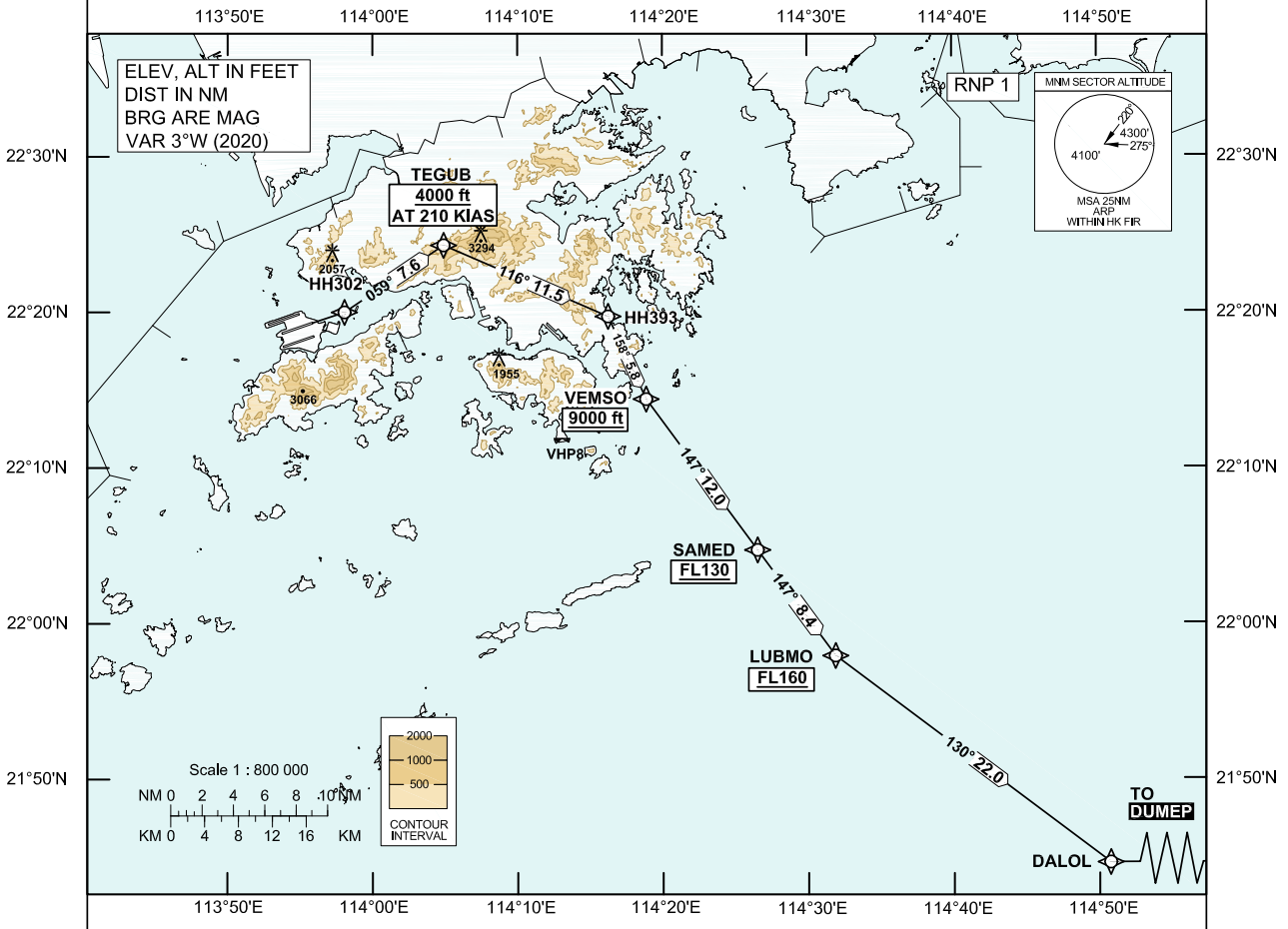
**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

| Transition Altitude 9 000 ft | |
|---|---|
| Hong Kong Tower | 118.2 |
| Hong Kong Departure | 123.8 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) DUMEP 1T SID RWY 07C**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.




## DUMEP 1T SID RWY 07C

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 6.8% (414 ft/NM) until passing 3 900 ft is required.

**SPEED RESTRICTION**
Speed restriction of 210 KIAS at TEGUB.

**CHANGE:** New procedure.

AD 2-VHHH-SID-DUMEP-T_V01_240517km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: DUMEP 1T RWY 07C

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH302 | - | 074 (071) | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | TEGUB | - | 059 (056) | +3.0 | 7.6 | - | +4000 | @210 | RNP 1 |
| 03 | TF | HH393 | - | 116 (113) | +3.0 | 11.5 | - | - | - | RNP 1 |
| 04 | TF | VEMSO | - | 158 (155) | +3.0 | 5.8 | - | +9000 | - | RNP 1 |
| 05 | TF | SAMED | - | 147 (144) | +3.0 | 12.0 | - | +FL130 | - | RNP 1 |
| 06 | TF | LUBMO | - | 147 (144) | +3.0 | 8.4 | - | +FL160 | - | RNP 1 |
| 07 | TF | DALOL | - | 130 (127) | +3.0 | 22.0 | - | - | - | RNP 1 |
| 08 | TF | DUMEP | - | 093 (090) | +3.0 | 20.6 | - | - | - | RNP 1 |

## WAYPOINT LIST

**DUMEP 1T RWY 07C**

| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| HH302 | 22 20 00.43N | 113 58 04.56E |
| TEGUB | 22 24 18.28N | 114 04 54.69E |
| HH393 | 22 19 43.83N | 114 16 15.26E |
| VEMSO | 22 14 25.06N | 114 18 52.28E |
| SAMED | 22 04 43.00N | 114 26 31.83E |
| LUBMO | 21 57 55.24N | 114 31 52.98E |
| DALOL | 21 44 36.90N | 114 50 45.34E |
| DUMEP | 21 44 36.30N | 115 12 49.87E |

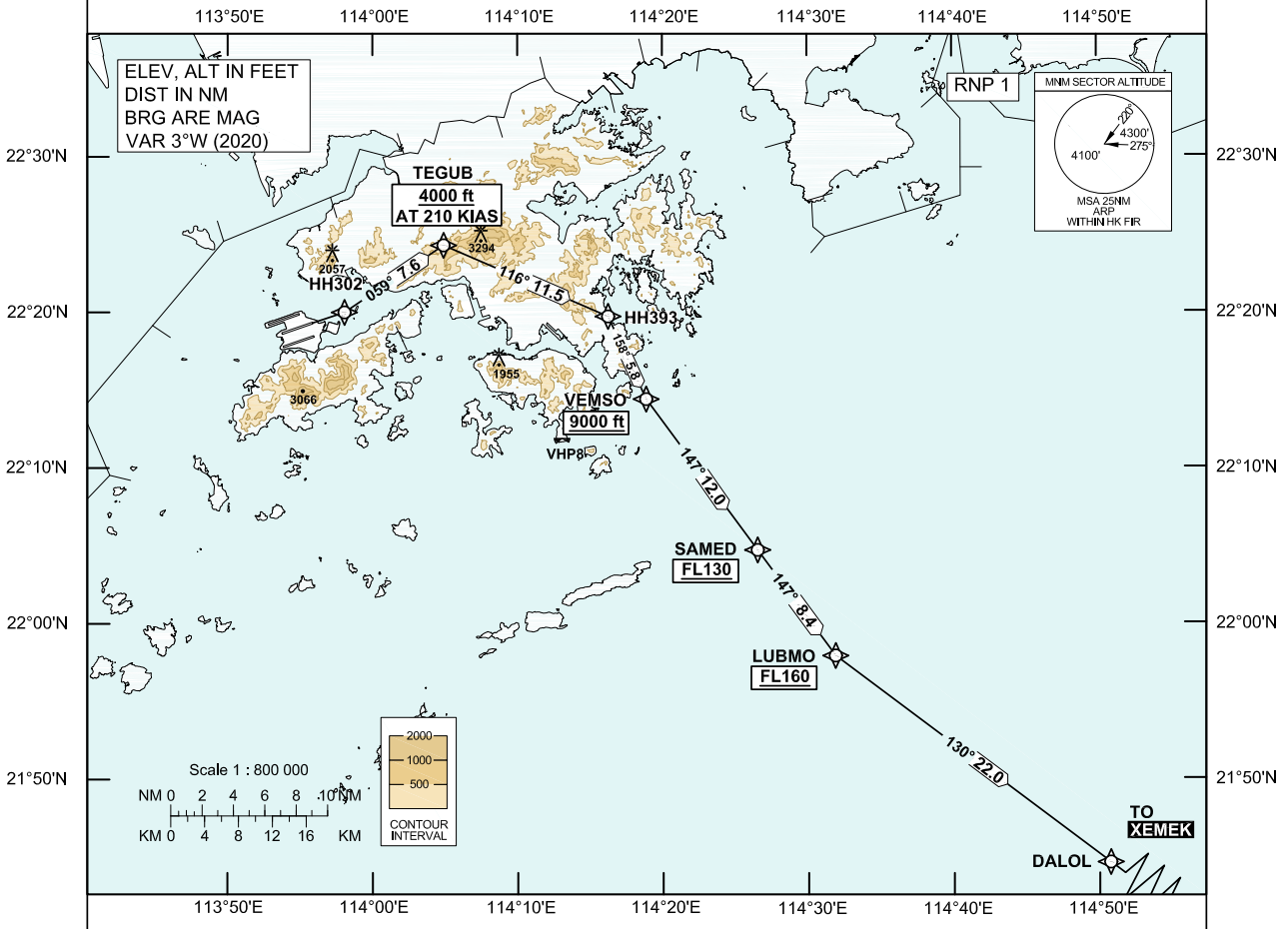
**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

| Transition Altitude 9 000 ft | |
|---|---|
| Hong Kong Tower | 118.2 |
| Hong Kong Departure | 123.8 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) XEMEK 1T SID RWY 07C**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.




## XEMEK 1T SID RWY 07C

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 6.8% (414 ft/NM) until passing 3 900 ft is required.

**SPEED RESTRICTION**
Speed restriction of 210 KIAS at TEGUB.

**CHANGE:** New procedure.

AD 2-VHHH-SID-XEMEK-T_V01_240513km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: XEMEK 1T RWY 07C

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH302 | - | 074 (071) | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | TEGUB | - | 059 (056) | +3.0 | 7.6 | - | +4000 | @210 | RNP 1 |
| 03 | TF | HH393 | - | 116 (113) | +3.0 | 11.5 | - | - | - | RNP 1 |
| 04 | TF | VEMSO | - | 158 (155) | +3.0 | 5.8 | - | +9000 | - | RNP 1 |
| 05 | TF | SAMED | - | 147 (144) | +3.0 | 12.0 | - | +FL130 | - | RNP 1 |
| 06 | TF | LUBMO | - | 147 (144) | +3.0 | 8.4 | - | +FL160 | - | RNP 1 |
| 07 | TF | DALOL | - | 130 (127) | +3.0 | 22.0 | - | - | - | RNP 1 |
| 08 | TF | XEMEK | - | 130 (127) | +3.0 | 10.5 | - | - | - | RNP 1 |

## WAYPOINT LIST

| XEMEK 1T RWY 07C | | |
|---|---|---|
| **Waypoint Identifier** | **Coordinates (WGS-84)** | |
| HH302 | 22 20 00.43N | 113 58 04.56E |
| TEGUB | 22 24 18.28N | 114 04 54.69E |
| HH393 | 22 19 43.83N | 114 16 15.26E |
| VEMSO | 22 14 25.06N | 114 18 52.28E |
| SAMED | 22 04 43.00N | 114 26 31.83E |
| LUBMO | 21 57 55.24N | 114 31 52.98E |
| DALOL | 21 44 36.90N | 114 50 45.34E |
| XEMEK | 21 38 16.17N | 114 59 43.04E |

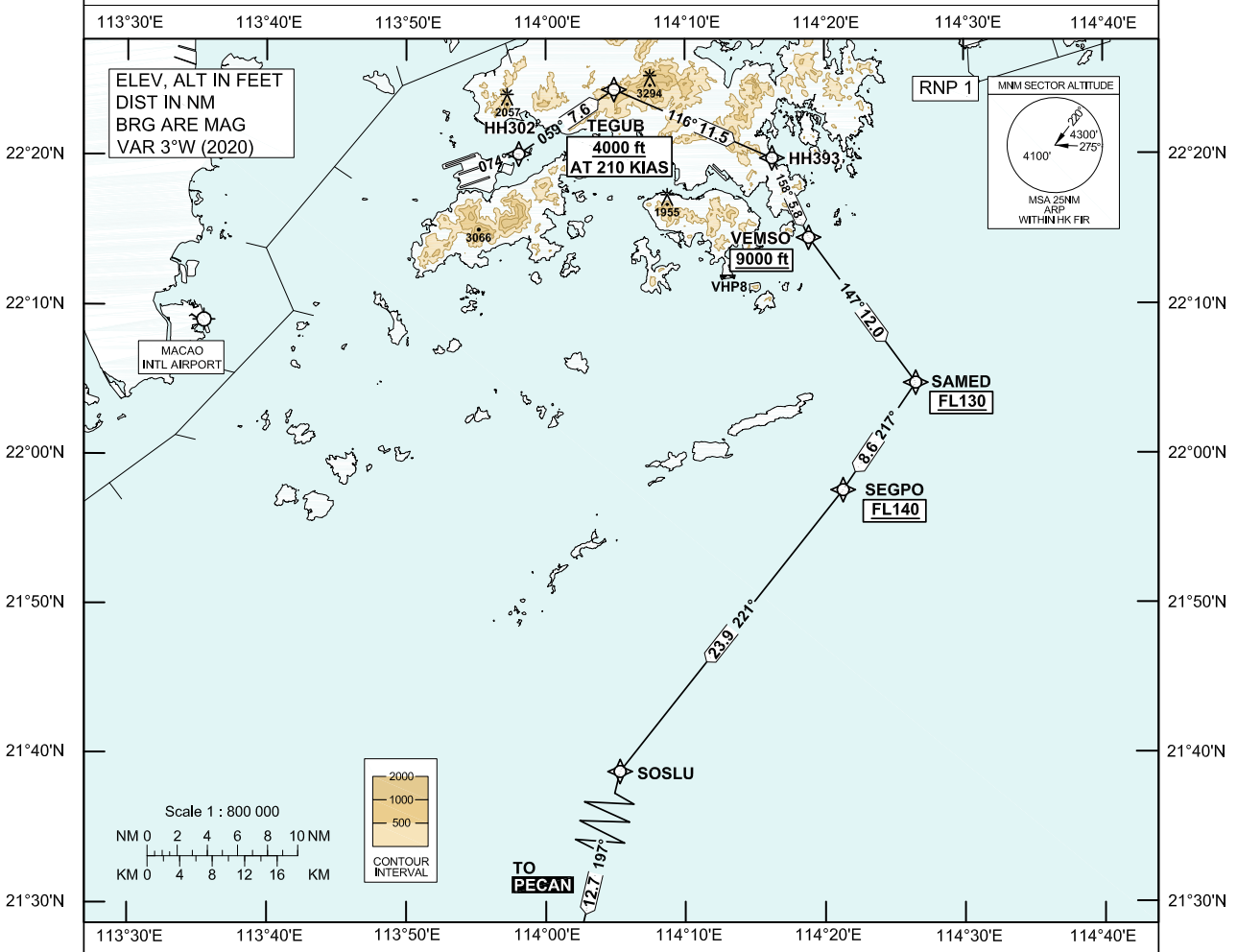
**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

| Transition Altitude 9 000 ft | |
|---|---|
| Hong Kong Tower | 118.2 |
| Hong Kong Departure | 123.8 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) SOSLU 1T SID RWY 07C**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.




## SOSLU 1T SID RWY 07C

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 6.8% (414 ft/NM) until passing 3 900 ft is required.

**SPEED RESTRICTION**
Speed restriction of 210 KIAS at TEGUB.

**CHANGE:** New procedure.

AD 2-VHHH-SID-SOSLU-T_V01_240916km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: SOSLU 1T RWY 07C

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH302 | - | 074 (071) | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | TEGUB | - | 059 (056) | +3.0 | 7.6 | - | +4000 | @210 | RNP 1 |
| 03 | TF | HH393 | - | 116 (113) | +3.0 | 11.5 | - | - | - | RNP 1 |
| 04 | TF | VEMSO | - | 158 (155) | +3.0 | 5.8 | - | +9000 | - | RNP 1 |
| 05 | TF | SAMED | - | 147 (144) | +3.0 | 12.0 | - | +FL130 | - | RNP 1 |
| 06 | TF | SEGPO | - | 217 (214) | +3.0 | 8.6 | - | +FL140 | - | RNP 1 |
| 07 | TF | SOSLU | - | 221 (218) | +3.0 | 23.9 | - | - | - | RNP 1 |
| 08 | TF | PECAN | - | 197 (194) | +3.0 | 12.7 | - | - | - | RNP 1 |

## WAYPOINT LIST

**SOSLU 1T RWY 07C**

| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| HH302 | 22 20 00.43N | 113 58 04.56E |
| TEGUB | 22 24 18.28N | 114 04 54.69E |
| HH393 | 22 19 43.83N | 114 16 15.26E |
| VEMSO | 22 14 25.06N | 114 18 52.28E |
| SAMED | 22 04 43.00N | 114 26 31.83E |
| SEGPO | 21 57 32.77N | 114 21 18.59E |
| SOSLU | 21 38 44.03N | 114 05 18.39E |
| PECAN | 21 26 20.19N | 114 02 05.64E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

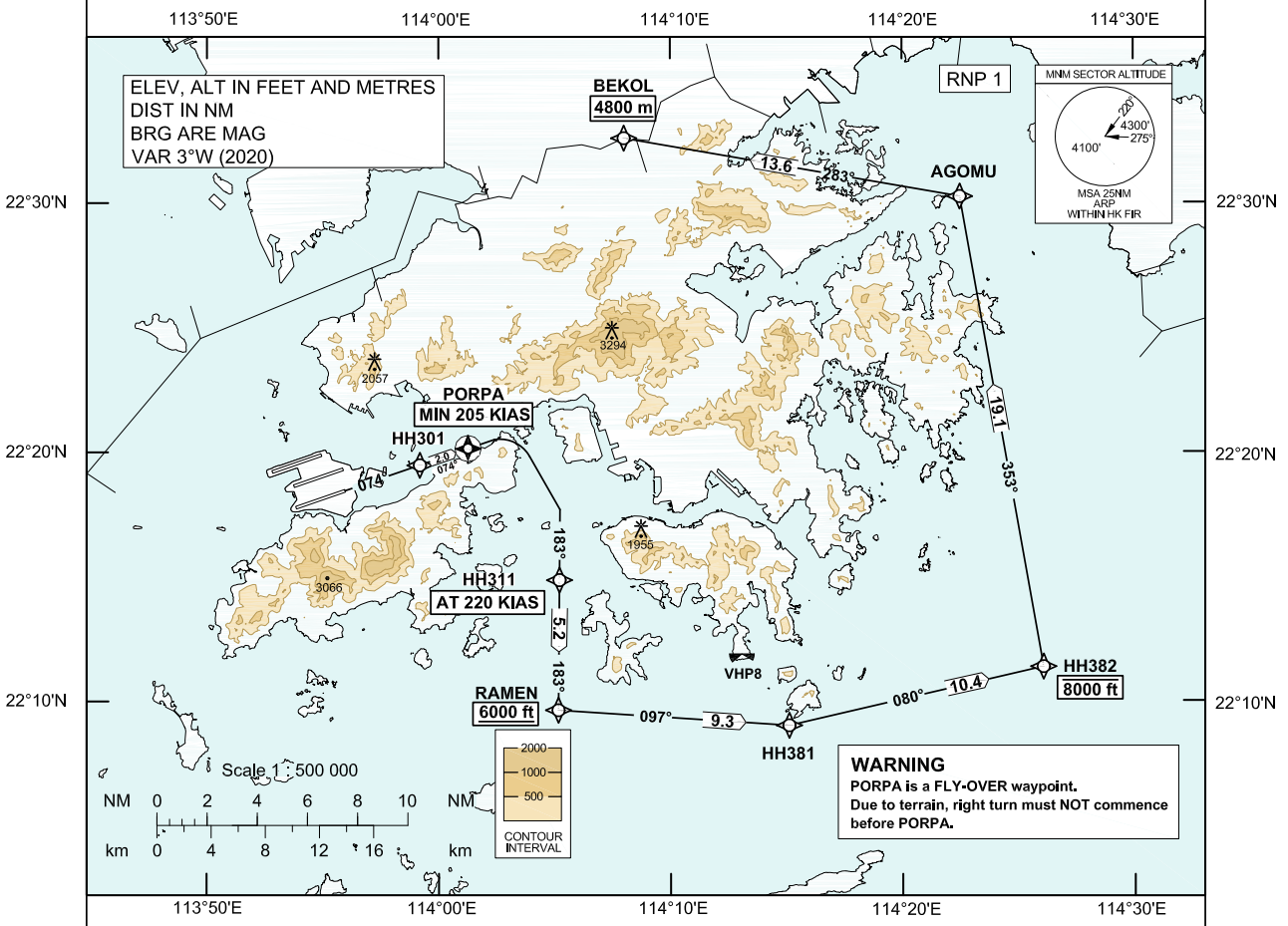
| Transition Altitude 9 000 ft | |
|---|---|
| Hong Kong Tower | 118.4 |
| Hong Kong Departure | 122.0 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) BEKOL 5A SID RWY 07R**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.

3. PORPA is a **FLY-OVER** waypoint. All other waypoints are fly-by.




## BEKOL 5A SID RWY 07R

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 4.8% (292 ft/NM) until passing 1 200 ft is required.

**SPEED RESTRICTION**
Speed restriction of 205 KIAS or greater at PORPA and 220 KIAS until HH311.

**CHANGE:** New procedure.

AD 2-VHHH-SID-BEKOL-A_V01_240522in

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: BEKOL 5A RWY 07R

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH301 | - | 074 (071) | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | PORPA | Y | 074 (071) | +3.0 | 2.0 | - | - | +205 | RNP 1 |
| 03 | CF | HH311 | - | 183 (180) | +3.0 | - | R | - | @220 | RNP 1 |
| 04 | TF | RAMEN | - | 183 (180) | +3.0 | 5.2 | - | +6000 | - | RNP 1 |
| 05 | TF | HH381 | - | 097 (094) | +3.0 | 9.3 | - | - | - | RNP 1 |
| 06 | TF | HH382 | - | 080 (077) | +3.0 | 10.4 | - | -8000 | - | RNP 1 |
| 07 | TF | AGOMU | - | 353 (350) | +3.0 | 19.1 | - | - | - | RNP 1 |
| 08 | TF | BEKOL | - | 283 (280) | +3.0 | 13.6 | - | +4800m | - | RNP 1 |

## WAYPOINT LIST

**BEKOL 5A RWY 07R**

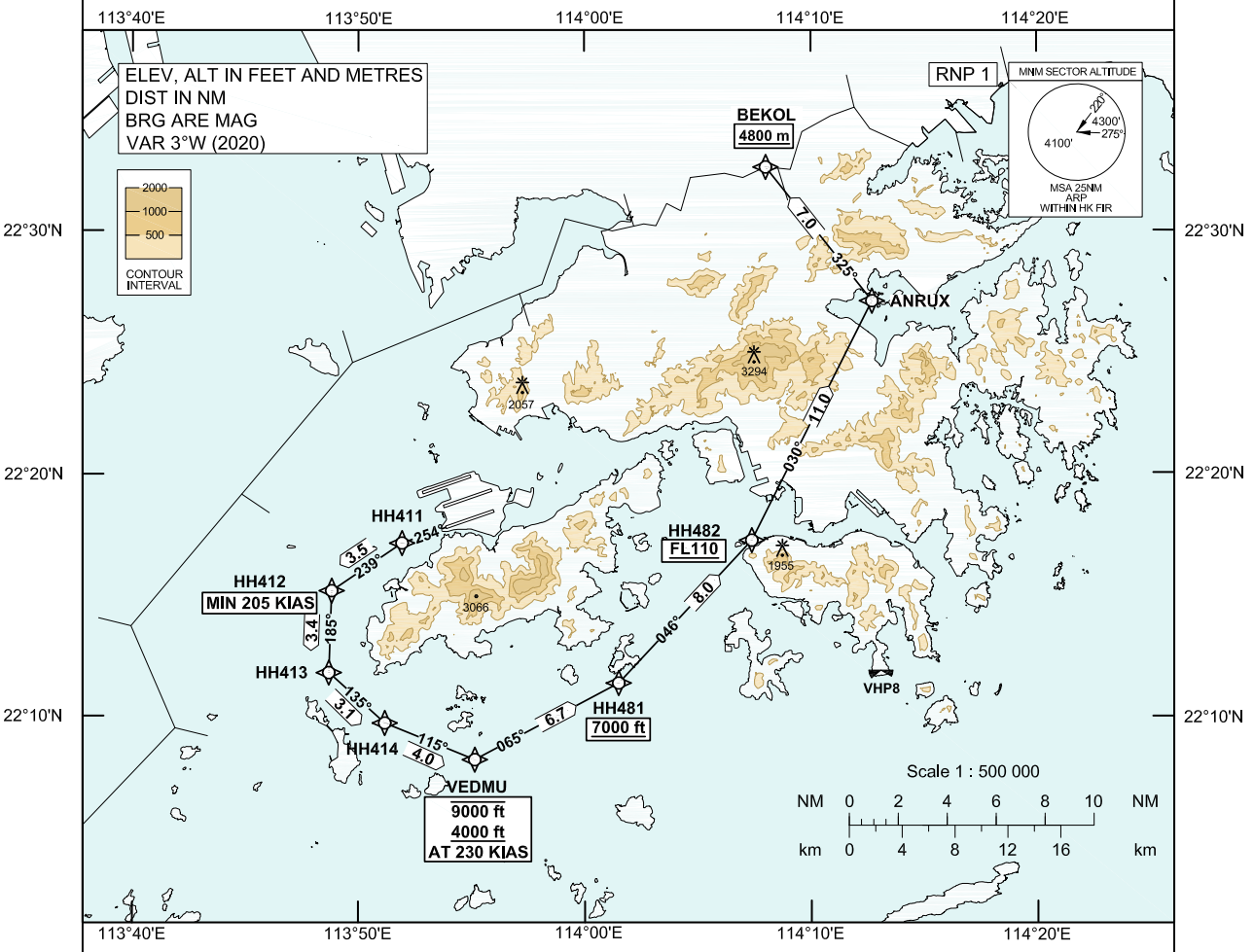
| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| HH301 | 22 19 29.01N | 113 59 11.61E |
| PORPA | 22 20 09.10N | 114 01 16.30E |
| HH311 | 22 14 52.34N | 114 05 12.73E |
| RAMEN | 22 09 39.22N | 114 05 09.89E |
| HH381 | 22 09 02.10N | 114 15 06.66E |
| HH382 | 22 11 23.06N | 114 26 04.39E |
| AGOMU | 22 30 15.17N | 114 22 29.86E |
| BEKOL | 22 32 36.00N | 114 08 00.00E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

| Transition Altitude 9 000 ft | |
|---|---|
| Hong Kong Tower | 118.4 |
| Hong Kong Departure | 122.0 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) BEKOL 3B SID RWY 25L**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.
2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.




## BEKOL 3B SID RWY 25L

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 4.7% (286 ft/NM) until passing 1 600 ft is required.

**SPEED RESTRICTION**
Speed restriction of 205 KIAS or greater at HH412 and 230 KIAS until VEDMU.

**CHANGE:** New procedure.

AD 2-VHHH-SID-BEKOL-B_V01_240513km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: BEKOL 3B RWY 25L

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH411 | - | 254 (251) | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | HH412 | - | 239 (236) | +3.0 | 3.5 | - | - | +205 | RNP 1 |
| 03 | TF | HH413 | - | 185 (182) | +3.0 | 3.4 | - | - | - | RNP 1 |
| 04 | TF | HH414 | - | 135 (132) | +3.0 | 3.1 | - | - | - | RNP 1 |
| 05 | TF | VEDMU | - | 115 (112) | +3.0 | 4.0 | - | -9000 +4000 | @230 | RNP 1 |
| 06 | TF | HH481 | - | 065 (062) | +3.0 | 6.7 | - | +7000 | - | RNP 1 |
| 07 | TF | HH482 | - | 046 (043) | +3.0 | 8.0 | - | +FL110 | - | RNP 1 |
| 08 | TF | ANRUX | - | 030 (027) | +3.0 | 11.0 | - | - | - | RNP 1 |
| 09 | TF | BEKOL | - | 325 (322) | +3.0 | 7.0 | - | +4800m | - | RNP 1 |

## WAYPOINT LIST

**BEKOL 3B RWY 25L**

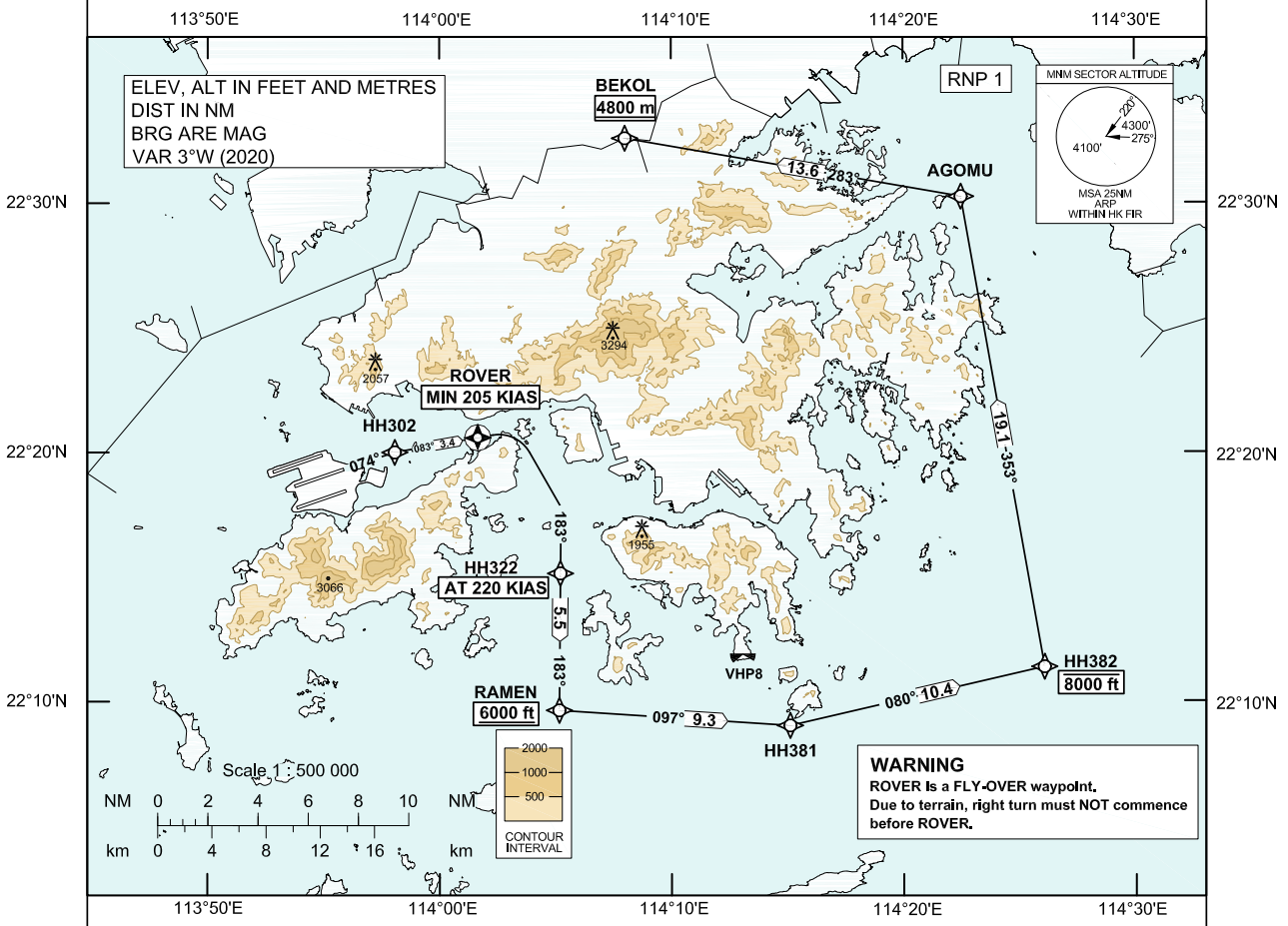
| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| HH411 | 22 17 08.52N | 113 51 55.32E |
| HH412 | 22 15 10.92N | 113 48 48.95E |
| HH413 | 22 11 48.90N | 113 48 41.37E |
| HH414 | 22 09 44.51N | 113 51 09.66E |
| VEDMU | 22 08 14.02N | 113 55 08.18E |
| HH481 | 22 11 23.11N | 114 01 29.60E |
| HH482 | 22 17 15.28N | 114 07 22.59E |
| ANRUX | 22 27 05.73N | 114 12 41.76E |
| BEKOL | 22 32 36.00N | 114 08 00.00E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

| Transition Altitude 9 000 ft | |
|---|---|
| Hong Kong Tower | 118.2 |
| Hong Kong Departure | 123.8 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) BEKOL 1C SID RWY 07C**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.
2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.
3. ROVER is a **FLY-OVER** waypoint. All other waypoints are fly-by.




## BEKOL 1C SID RWY 07C

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 3.8% (231 ft/NM) until passing 1 300 ft is required.

**SPEED RESTRICTION**
Speed restriction of 205 KIAS or greater at ROVER and 220 KIAS until HH322.

**CHANGE:** New procedure.

AD 2-VHHH-SID-BEKOL-C_V01_240513km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: BEKOL 1C RWY 07C

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH302 | - | 074 (071) | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | ROVER | Y | 083 (080) | +3.0 | 3.4 | - | - | +205 | RNP 1 |
| 03 | CF | HH322 | - | 183 (180) | +3.0 | - | R | - | @220 | RNP 1 |
| 04 | TF | RAMEN | - | 183 (180) | +3.0 | 5.5 | - | +6000 | - | RNP 1 |
| 05 | TF | HH381 | - | 097 (094) | +3.0 | 9.3 | - | - | - | RNP 1 |
| 06 | TF | HH382 | - | 080 (077) | +3.0 | 10.4 | - | -8000 | - | RNP 1 |
| 07 | TF | AGOMU | - | 353 (350) | +3.0 | 19.1 | - | - | - | RNP 1 |
| 08 | TF | BEKOL | - | 283 (280) | +3.0 | 13.6 | - | +4800m | - | RNP 1 |

## WAYPOINT LIST

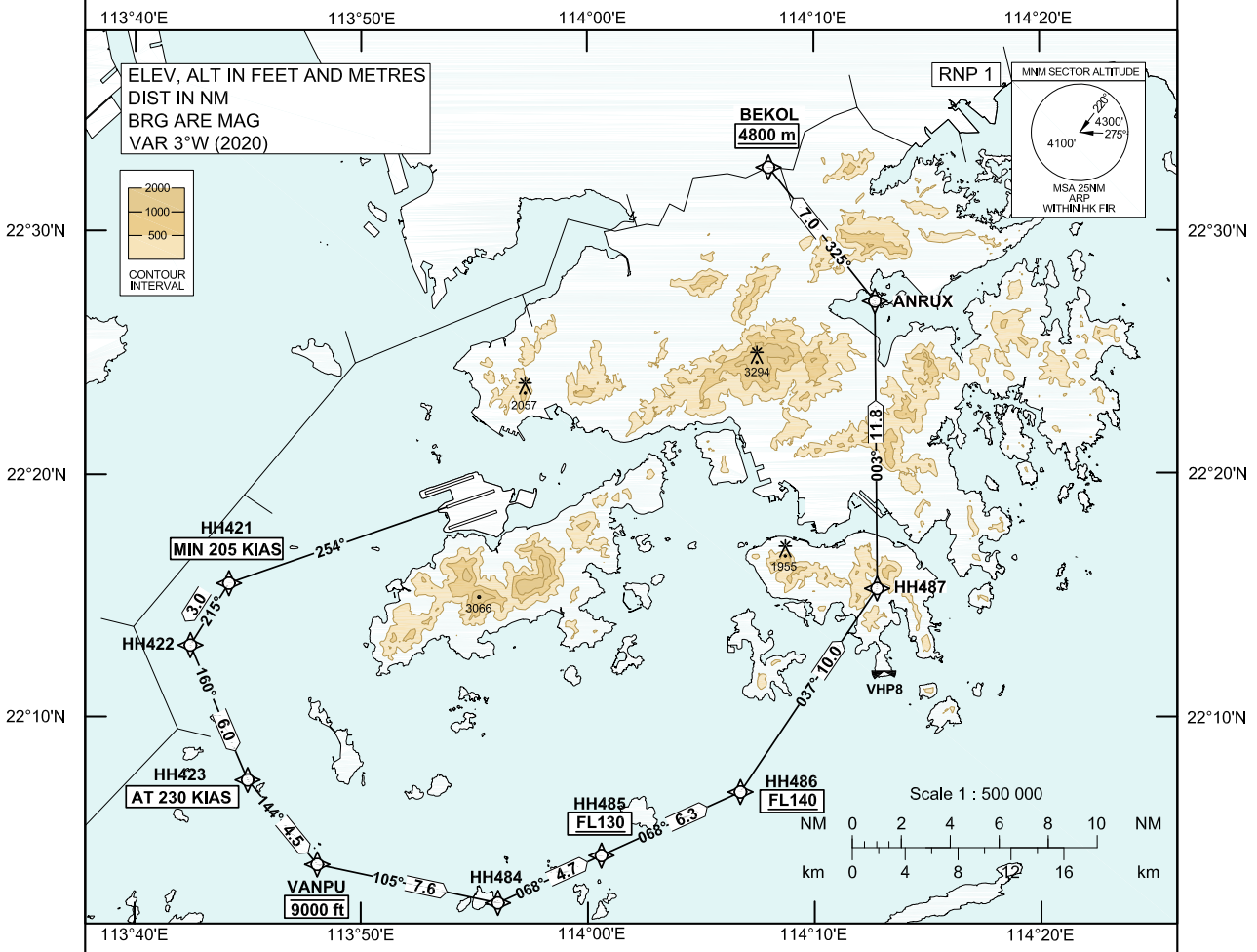
| BEKOL 1C RWY 07C | | |
|---|---|---|
| **Waypoint Identifier** | **Coordinates (WGS-84)** | |
| HH302 | 22 20 00.43N | 113 58 04.56E |
| ROVER | 22 20 35.58N | 114 01 39.12E |
| HH322 | 22 15 08.88N | 114 05 12.88E |
| RAMEN | 22 09 39.22N | 114 05 09.89E |
| HH381 | 22 09 02.10N | 114 15 06.66E |
| HH382 | 22 11 23.06N | 114 26 04.39E |
| AGOMU | 22 30 15.17N | 114 22 29.86E |
| BEKOL | 22 32 36.00N | 114 08 00.00E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

| Transition Altitude 9 000 ft | |
|---|---|
| Hong Kong Tower | 118.2 |
| Hong Kong Departure | 123.8 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) BEKOL 1D SID RWY 25C**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.
2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.




## BEKOL 1D SID RWY 25C

**CLIMB REQUIREMENT**

Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**

Minimum climb gradient of 3.3% (201 ft/NM).

**SPEED RESTRICTION**

Speed restriction of 205 KIAS or greater at HH421 and 230 KIAS until HH423.

**CHANGE:** New procedure.

AD 2-VHHH-SID-BEKOL-D_V01_240513km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: BEKOL 1D RWY 25C

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH421 | - | 254 (251) | +3.0 | - | - | - | +205 | RNP 1 |
| 02 | TF | HH422 | - | 215 (212) | +3.0 | 3.0 | - | - | - | RNP 1 |
| 03 | TF | HH423 | - | 160 (157) | +3.0 | 6.0 | - | - | @230 | RNP 1 |
| 04 | TF | VANPU | - | 144 (141) | +3.0 | 4.5 | - | -9000 | - | RNP 1 |
| 05 | TF | HH484 | - | 105 (102) | +3.0 | 7.6 | - | - | - | RNP 1 |
| 06 | TF | HH485 | - | 068 (065) | +3.0 | 4.7 | - | +FL130 | - | RNP 1 |
| 07 | TF | HH486 | - | 068 (065) | +3.0 | 6.3 | - | +FL140 | - | RNP 1 |
| 08 | TF | HH487 | - | 037 (034) | +3.0 | 10.0 | - | - | - | RNP 1 |
| 09 | TF | ANRUX | - | 003 (000) | +3.0 | 11.8 | - | - | - | RNP 1 |
| 10 | TF | BEKOL | - | 325 (322) | +3.0 | 7.0 | - | +4800m | - | RNP 1 |

## WAYPOINT LIST

**BEKOL 1D RWY 25C**

| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| HH421 | 22 15 31.13N | 113 44 09.41E |
| HH422 | 22 12 58.53N | 113 42 27.41E |
| HH423 | 22 07 26.10N | 113 44 59.40E |
| VANPU | 22 03 57.95N | 113 48 03.85E |
| HH484 | 22 02 23.21N | 113 56 01.92E |
| HH485 | 22 04 19.90N | 114 00 35.87E |
| HH486 | 22 06 56.32N | 114 06 43.85E |
| HH487 | 22 15 17.49N | 114 12 46.60E |
| ANRUX | 22 27 05.73N | 114 12 41.76E |
| BEKOL | 22 32 36.00N | 114 08 00.00E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

Transition Altitude 9 000 ft

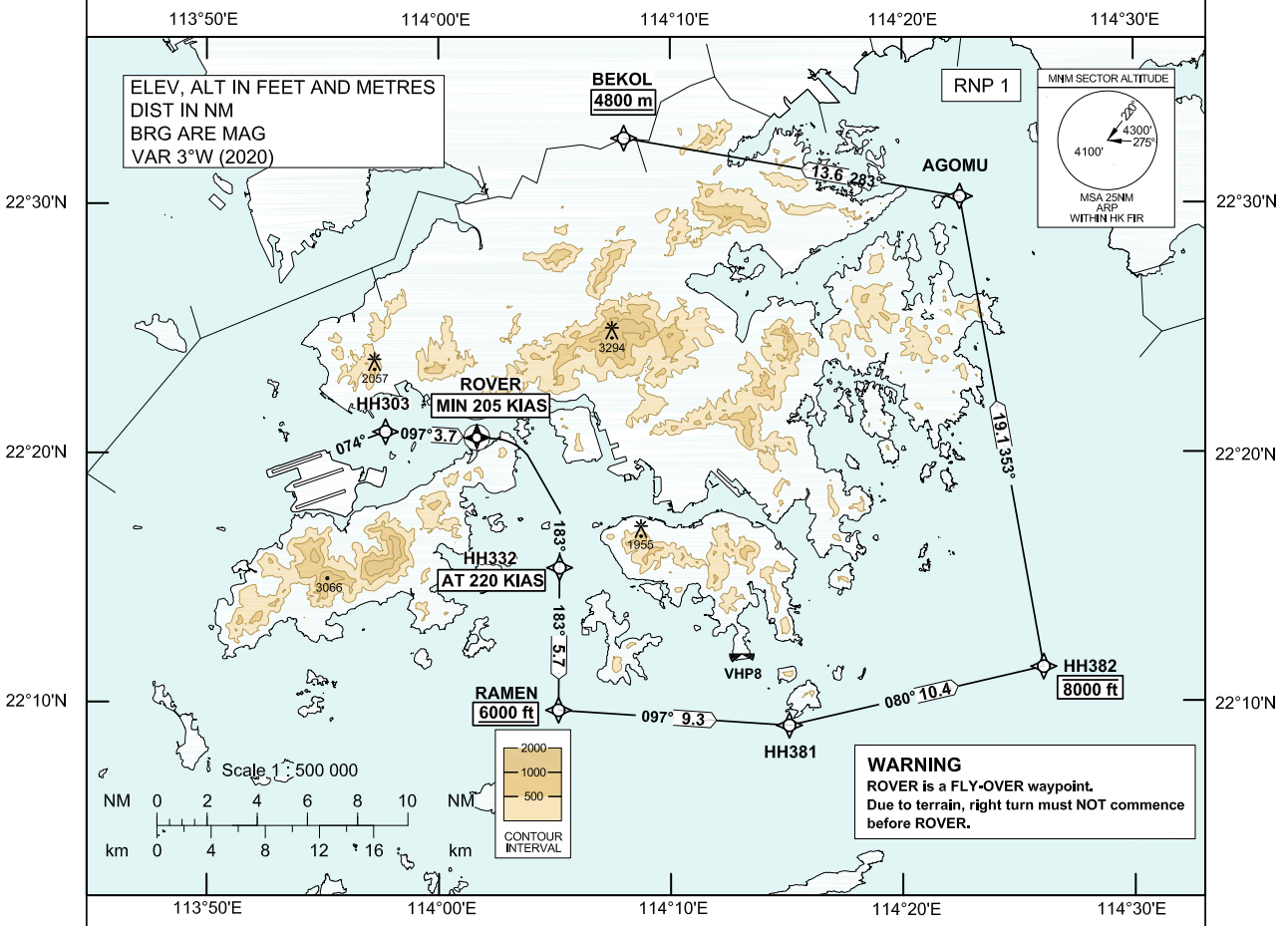
| | |
|---|---|
| Hong Kong Tower | 118.7 |
| Hong Kong Departure | 123.8 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) BEKOL 2E SID RWY 07L**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.

3. ROVER is a **FLY-OVER** waypoint. All other waypoints are fly-by.




## BEKOL 2E SID RWY 07L

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 3.3% (201 ft/NM).

**SPEED RESTRICTION**
Speed restriction of 205 KIAS or greater at ROVER and 220 KIAS until HH332.

CHANGE: New procedure.

AD 2-VHHH-SID-BEKOL-E_V01_240513km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: BEKOL 2E RWY 07L

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH303 | - | 074 (071) | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | ROVER | Y | 097 (094) | +3.0 | 3.7 | - | - | +205 | RNP 1 |
| 03 | CF | HH332 | - | 183 (180) | +3.0 | - | R | - | @220 | RNP 1 |
| 04 | TF | RAMEN | - | 183 (180) | +3.0 | 5.7 | - | +6000 | - | RNP 1 |
| 05 | TF | HH381 | - | 097 (094) | +3.0 | 9.3 | - | - | - | RNP 1 |
| 06 | TF | HH382 | - | 080 (077) | +3.0 | 10.4 | - | -8000 | - | RNP 1 |
| 07 | TF | AGOMU | - | 353 (350) | +3.0 | 19.1 | - | - | - | RNP 1 |
| 08 | TF | BEKOL | - | 283 (280) | +3.0 | 13.6 | - | +4800m | - | RNP 1 |

## WAYPOINT LIST

**BEKOL 2E RWY 07L**

| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| HH303 | 22 20 50.02N | 113 57 42.83E |
| ROVER | 22 20 35.58N | 114 01 39.12E |
| HH332 | 22 15 22.17N | 114 05 13.00E |
| RAMEN | 22 09 39.22N | 114 05 09.89E |
| HH381 | 22 09 02.10N | 114 15 06.66E |
| HH382 | 22 11 23.06N | 114 26 04.39E |
| AGOMU | 22 30 15.17N | 114 22 29.86E |
| BEKOL | 22 32 36.00N | 114 08 00.00E |

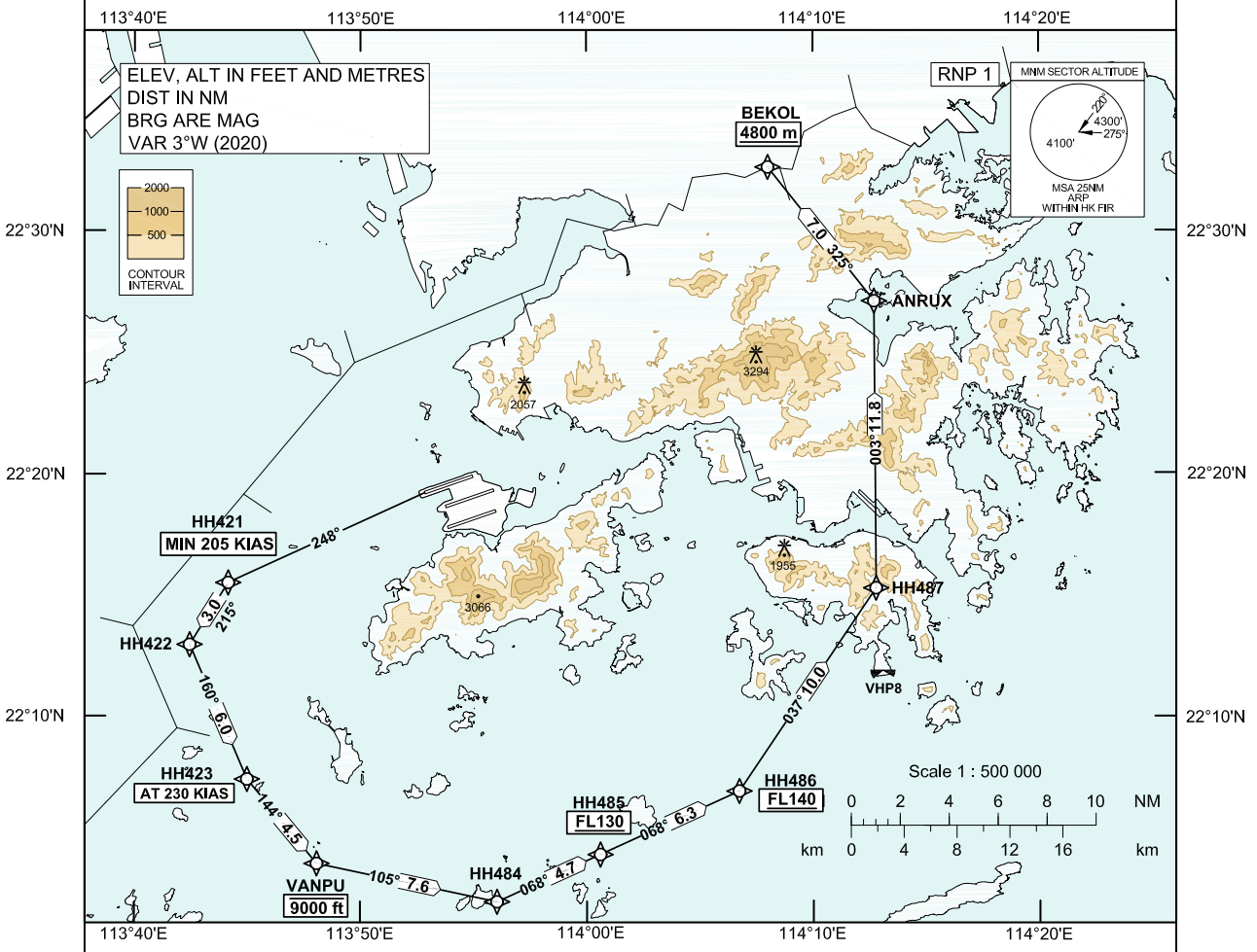
**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

| Transition Altitude 9 000 ft | |
|---|---|
| Hong Kong Tower | 118.7 |
| Hong Kong Departure | 123.8 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) BEKOL 2F SID RWY 25R**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.




## BEKOL 2F SID RWY 25R

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 3.3% (201 ft/NM).

**SPEED RESTRICTION**
Speed restriction of 205 KIAS or greater at HH421 and 230 KIAS at HH423.

**CHANGE:** New procedure.

AD 2-VHHH-SID-BEKOL-F_V01_240513km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: BEKOL 2F RWY 25R

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH421 | - | 248 (245) | +3.0 | - | - | - | +205 | RNP 1 |
| 02 | TF | HH422 | - | 215 (212) | +3.0 | 3.0 | - | - | - | RNP 1 |
| 03 | TF | HH423 | - | 160 (157) | +3.0 | 6.0 | - | - | @230 | RNP 1 |
| 04 | TF | VANPU | - | 144 (141) | +3.0 | 4.5 | - | -9000 | - | RNP 1 |
| 05 | TF | HH484 | - | 105 (102) | +3.0 | 7.6 | - | - | - | RNP 1 |
| 06 | TF | HH485 | - | 068 (065) | +3.0 | 4.7 | - | +FL130 | - | RNP 1 |
| 07 | TF | HH486 | - | 068 (065) | +3.0 | 6.3 | - | +FL140 | - | RNP 1 |
| 08 | TF | HH487 | - | 037 (034) | +3.0 | 10.0 | - | - | - | RNP 1 |
| 09 | TF | ANRUX | - | 003 (000) | +3.0 | 11.8 | - | - | - | RNP 1 |
| 10 | TF | BEKOL | - | 325 (322) | +3.0 | 7.0 | - | +4800m | - | RNP 1 |

## WAYPOINT LIST

**BEKOL 2F RWY 25R**

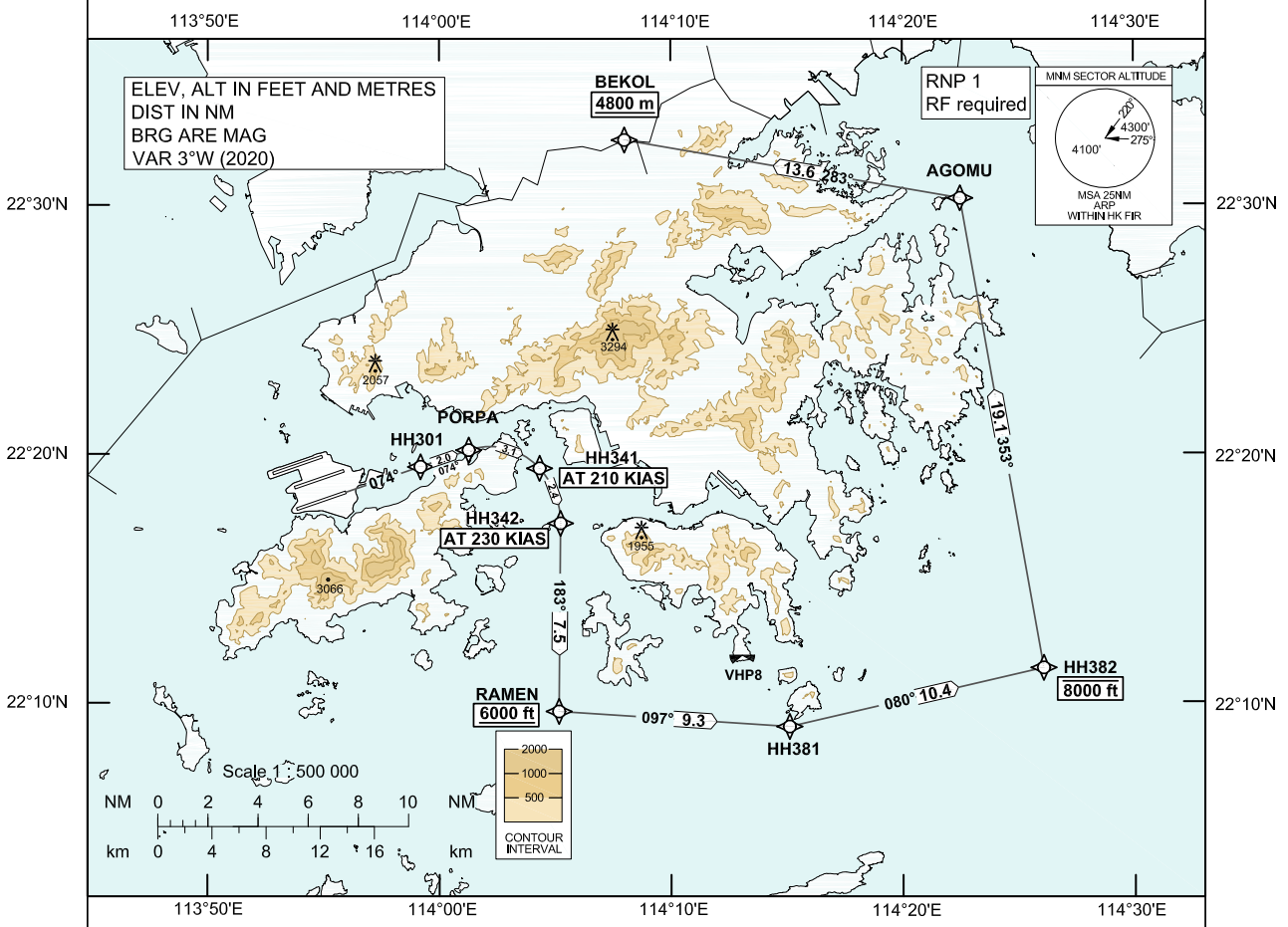
| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| HH421 | 22 15 31.13N | 113 44 09.41E |
| HH422 | 22 12 58.53N | 113 42 27.41E |
| HH423 | 22 07 26.10N | 113 44 59.40E |
| VANPU | 22 03 57.95N | 113 48 03.85E |
| HH484 | 22 02 23.21N | 113 56 01.92E |
| HH485 | 22 04 19.90N | 114 00 35.87E |
| HH486 | 22 06 56.32N | 114 06 43.85E |
| HH487 | 22 15 17.49N | 114 12 46.60E |
| ANRUX | 22 27 05.73N | 114 12 41.76E |
| BEKOL | 22 32 36.00N | 114 08 00.00E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

| Transition Altitude 9 000 ft | |
|---|---|
| Hong Kong Tower | 118.4 |
| Hong Kong Departure | 122.0 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) BEKOL 1X SID RWY 07R**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.
2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.
3. **Radius-to-fix (RF) leg is required.** Aircraft shall have RF capability as stipulated in the Aircraft Flight Manual or its FMS manual. For aircraft without RF capability, pilot shall request the corresponding non-RF SID procedure from Hong Kong Delivery.




## BEKOL 1X SID RWY 07R

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 4.8% (292 ft/NM) until passing 1 200 ft is required.

**SPEED RESTRICTION**
Speed restriction of 210 KIAS at HH341 and 230 KIAS at HH342.

**CHANGE:** New procedure.

AD 2-VHHH-SID-BEKOL-X_V01_240523km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: BEKOL 1X RWY 07R

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH301 | - | 074 (071) | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | PORPA | - | 074 (071) | +3.0 | 2.0 | - | - | - | RNP 1 |
| 03 | RF Centre: HH941 r=2.656 NM | HH341 | - | - | +3.0 | 3.1 | R | - | @210 | RNP 1 |
| 04 | RF Centre: HH942 r=3.246 NM | HH342 | - | - | +3.0 | 2.4 | R | - | @230 | RNP 1 |
| 05 | TF | RAMEN | - | 183 (180) | +3.0 | 7.5 | - | +6000 | - | RNP 1 |
| 06 | TF | HH381 | - | 097 (094) | +3.0 | 9.3 | - | - | - | RNP 1 |
| 07 | TF | HH382 | - | 080 (077) | +3.0 | 10.4 | - | -8000 | - | RNP 1 |
| 08 | TF | AGOMU | - | 353 (350) | +3.0 | 19.1 | - | - | - | RNP 1 |
| 09 | TF | BEKOL | - | 283 (280) | +3.0 | 13.6 | - | +4800m | - | RNP 1 |

## WAYPOINT LIST

**BEKOL 1X RWY 07R**

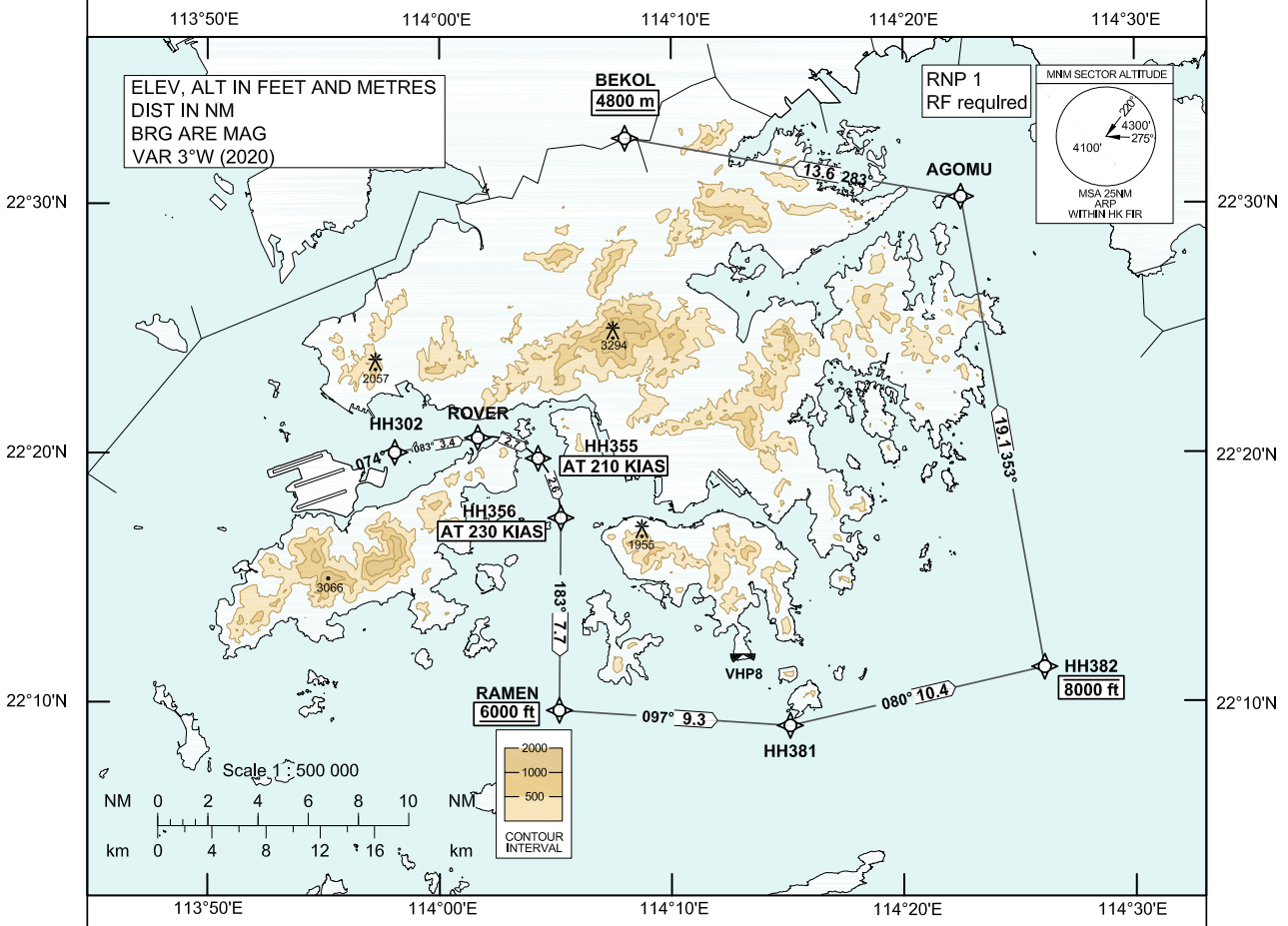
| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| HH301 | 22 19 29.01N | 113 59 11.61E |
| PORPA | 22 20 09.10N | 114 01 16.30E |
| HH341 | 22 19 25.15N | 114 04 19.86E |
| HH342 | 22 17 12.51N | 114 05 14.01E |
| RAMEN | 22 09 39.22N | 114 05 09.89E |
| HH381 | 22 09 02.10N | 114 15 06.66E |
| HH382 | 22 11 23.06N | 114 26 04.39E |
| AGOMU | 22 30 15.17N | 114 22 29.86E |
| BEKOL | 22 32 36.00N | 114 08 00.00E |
| **RF Arc Centre Identifier** | **Coordinates (WGS-84)** | |
| HH941 | 22 17 37.96N | 114 02 12.36E |
| HH942 | 22 17 14.13N | 114 01 44.03E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

| Transition Altitude 9 000 ft | |
|---|---|
| Hong Kong Tower | 118.2 |
| Hong Kong Departure | 123.8 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) BEKOL 1Y SID RWY 07C**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.
2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.
3. **Radius-to-fix (RF) leg is required.** Aircraft shall have RF capability as stipulated in the Aircraft Flight Manual or its FMS manual. For aircraft without RF capability, pilot shall request the corresponding non-RF SID procedure from Hong Kong Delivery.




## BEKOL 1Y SID RWY 07C

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 3.4% (207 ft/NM) until passing 1 200 ft is required.

**SPEED RESTRICTION**
Speed restriction of 210 KIAS at HH355 and 230 KIAS at HH356.

**CHANGE:** New procedure.

AD 2-VHHH-SID-BEKOL-Y_V01_240523km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: BEKOL 1Y RWY 07C

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH302 | - | 074 (071) | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | ROVER | - | 083 (080) | +3.0 | 3.4 | - | - | - | RNP 1 |
| 03 | RF Centre: HH955 r=2.642 NM | HH355 | - | - | +3.0 | 2.7 | R | - | @210 | RNP 1 |
| 04 | RF Centre: HH956 r=3.494 NM | HH356 | - | - | +3.0 | 2.6 | R | - | @230 | RNP 1 |
| 05 | TF | RAMEN | - | 183 (180) | +3.0 | 7.7 | - | +6000 | - | RNP 1 |
| 06 | TF | HH381 | - | 097 (094) | +3.0 | 9.3 | - | - | - | RNP 1 |
| 07 | TF | HH382 | - | 080 (077) | +3.0 | 10.4 | - | -8000 | - | RNP 1 |
| 08 | TF | AGOMU | - | 353 (350) | +3.0 | 19.1 | - | - | - | RNP 1 |
| 09 | TF | BEKOL | - | 283 (280) | +3.0 | 13.6 | - | +4800m | - | RNP 1 |

## WAYPOINT LIST

| BEKOL 1Y RWY 07C | | |
|---|---|---|
| **Waypoint Identifier** | **Coordinates (WGS-84)** | |
| HH302 | 22 20 00.43N | 113 58 04.56E |
| ROVER | 22 20 35.58N | 114 01 39.12E |
| HH355 | 22 19 45.97N | 114 04 15.23E |
| HH356 | 22 17 22.57N | 114 05 14.10E |
| RAMEN | 22 09 39.22N | 114 05 09.89E |
| HH381 | 22 09 02.10N | 114 15 06.66E |
| HH382 | 22 11 23.06N | 114 26 04.39E |
| AGOMU | 22 30 15.17N | 114 22 29.86E |
| BEKOL | 22 32 36.00N | 114 08 00.00E |
| **RF Arc Centre Identifier** | **Coordinates (WGS-84)** | |
| HH955 | 22 17 58.85N | 114 02 08.75E |
| HH956 | 22 17 24.31N | 114 01 27.97E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

Transition Altitude 9 000 ft

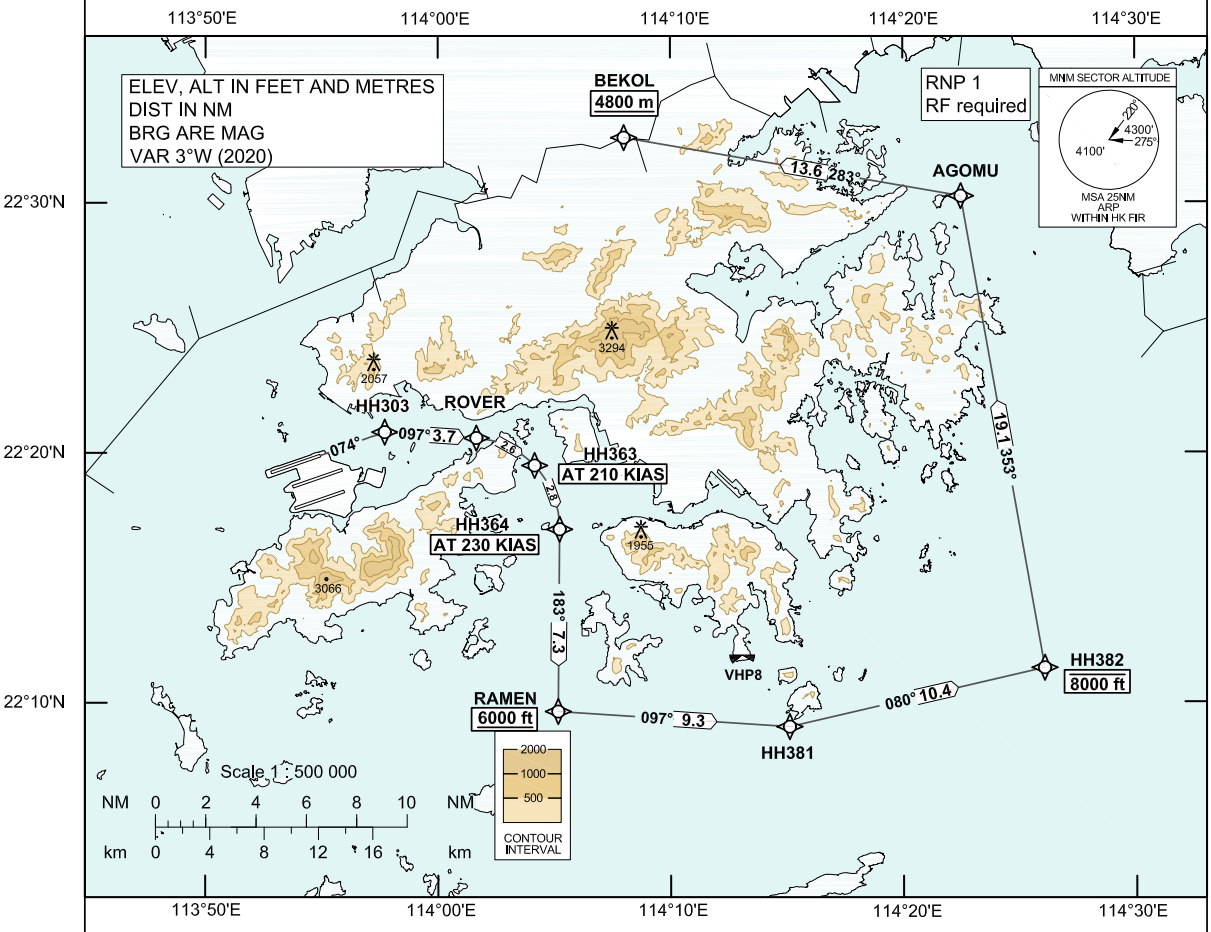
| | |
|---|---|
| Hong Kong Tower | 118.7 |
| Hong Kong Departure | 123.8 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) BEKOL 1Z SID RWY 07L**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.

3. **Radius-to-fix (RF) leg is required.** Aircraft shall have RF capability as stipulated in the Aircraft Flight Manual or its FMS manual. For aircraft without RF capability, pilot shall request the corresponding non-RF SID procedure from Hong Kong Delivery.




## BEKOL 1Z SID RWY 07L

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 3.3% (201 ft/NM).

**SPEED RESTRICTION**
Speed restriction of 210 KIAS at HH363 and 230 KIAS at HH364.

CHANGE: New procedure.

AD 2-VHHH-SID-BEKOL-Z_V01_240523km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: BEKOL 1Z RWY 07L

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH303 | - | 074 (071) | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | ROVER | - | 097 (094) | +3.0 | 3.7 | - | - | - | RNP 1 |
| 03 | RF Centre: HH963 r=3.507 NM | HH363 | - | - | +3.0 | 2.6 | R | - | @210 | RNP 1 |
| 04 | RF Centre: HH964 r=3.665 NM | HH364 | - | - | +3.0 | 2.8 | R | - | @230 | RNP 1 |
| 05 | TF | RAMEN | - | 183 (180) | +3.0 | 7.3 | - | +6000 | - | RNP 1 |
| 06 | TF | HH381 | - | 097 (094) | +3.0 | 9.3 | - | - | - | RNP 1 |
| 07 | TF | HH382 | - | 080 (077) | +3.0 | 10.4 | - | -8000 | - | RNP 1 |
| 08 | TF | AGOMU | - | 353 (350) | +3.0 | 19.1 | - | - | - | RNP 1 |
| 09 | TF | BEKOL | - | 283 (280) | +3.0 | 13.6 | - | +4800m | - | RNP 1 |

## WAYPOINT LIST

**BEKOL 1Z RWY 07L**

| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| HH303 | 22 20 50.02N | 113 57 42.83E |
| ROVER | 22 20 35.58N | 114 01 39.12E |
| HH363 | 22 19 29.68N | 114 04 09.36E |
| HH364 | 22 16 56.52N | 114 05 13.86E |
| RAMEN | 22 09 39.22N | 114 05 09.89E |
| HH381 | 22 09 02.10N | 114 15 06.66E |
| HH382 | 22 11 23.06N | 114 26 04.39E |
| AGOMU | 22 30 15.17N | 114 22 29.86E |
| BEKOL | 22 32 36.00N | 114 08 00.00E |
| **RF Arc Centre Identifier** | **Coordinates (WGS-84)** | |
| HH963 | 22 17 04.89N | 114 01 24.20E |
| HH964 | 22 16 58.35N | 114 01 16.75E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

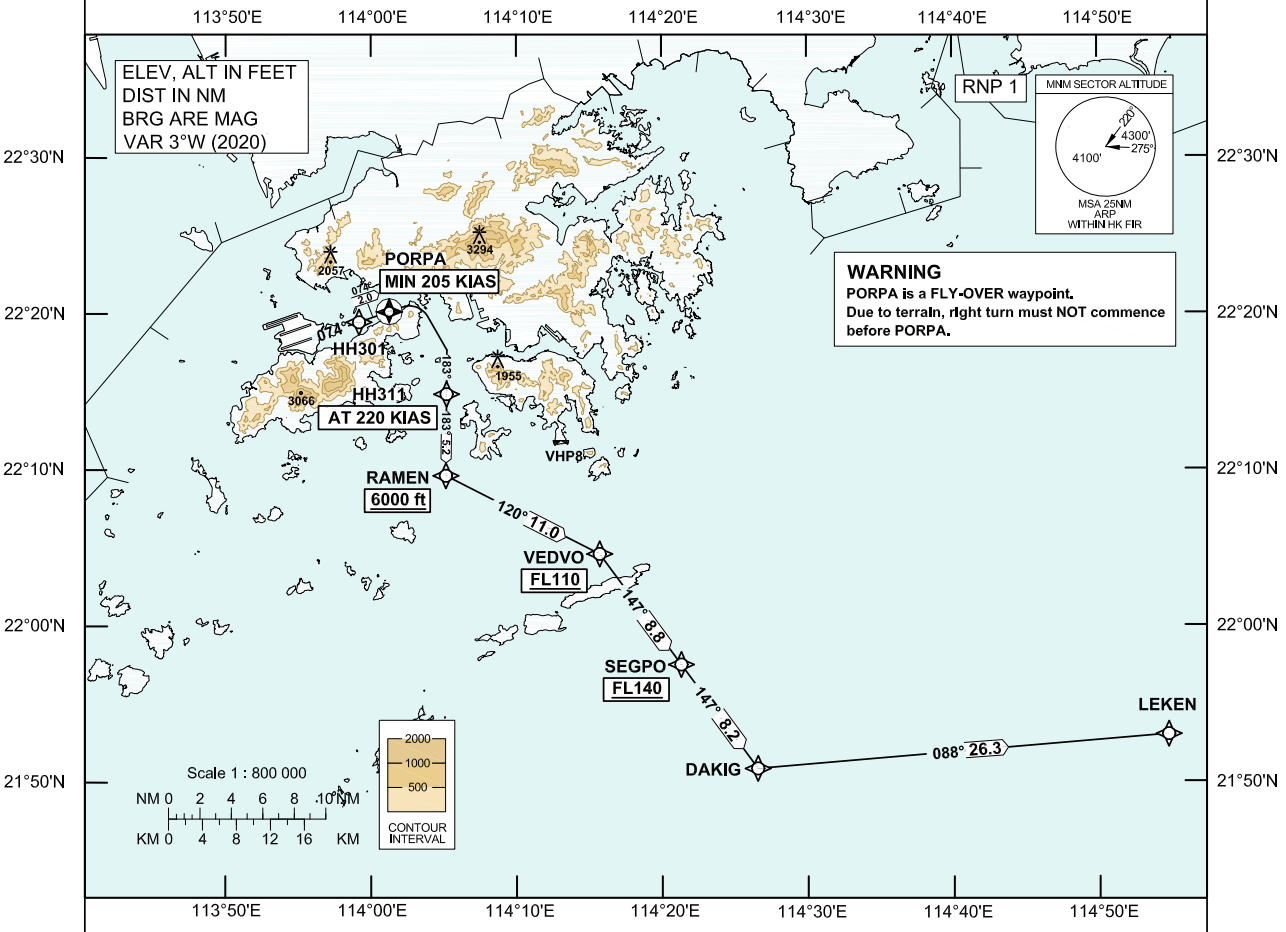
| Transition Altitude 9 000 ft | |
|---|---|
| Hong Kong Tower | 118.4 |
| Hong Kong Departure | 122.0 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) LEKEN 1A SID RWY 07R**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.

3. PORPA is a **FLY-OVER** waypoint. All other waypoints are fly-by.




## LEKEN 1A SID RWY 07R

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 4.8% (292 ft/NM) until passing 1 200 ft is required.

**SPEED RESTRICTION**
Speed restriction of 205 KIAS or greater at PORPA and 220 KIAS until HH311.

**CHANGE:** New procedure.

AD 2-VHHH-SID-LEKEN-A_V01_240522lh

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: LEKEN 1A RWY 07R

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH301 | - | 074 (071) | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | PORPA | Y | 074 (071) | +3.0 | 2.0 | - | - | +205 | RNP 1 |
| 03 | CF | HH311 | - | 183 (180) | +3.0 | - | R | - | @220 | RNP 1 |
| 04 | TF | RAMEN | - | 183 (180) | +3.0 | 5.2 | - | +6000 | - | RNP 1 |
| 05 | TF | VEDVO | - | 120 (117) | +3.0 | 11.0 | - | +FL110 | - | RNP 1 |
| 06 | TF | SEGPO | - | 147 (144) | +3.0 | 8.8 | - | +FL140 | - | RNP 1 |
| 07 | TF | DAKIG | - | 147 (144) | +3.0 | 8.2 | - | - | - | RNP 1 |
| 08 | TF | LEKEN | - | 088 (085) | +3.0 | 26.3 | - | - | - | RNP 1 |

## WAYPOINT LIST

**LEKEN 1A RWY 07R**

| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| HH301 | 22 19 29.01N | 113 59 11.61E |
| PORPA | 22 20 09.10N | 114 01 16.30E |
| HH311 | 22 14 52.34N | 114 05 12.73E |
| RAMEN | 22 09 39.22N | 114 05 09.89E |
| VEDVO | 22 04 38.19N | 114 15 43.05E |
| SEGPO | 21 57 32.77N | 114 21 18.59E |
| DAKIG | 21 50 52.90N | 114 26 33.33E |
| LEKEN | 21 53 01.06N | 114 54 44.95E |

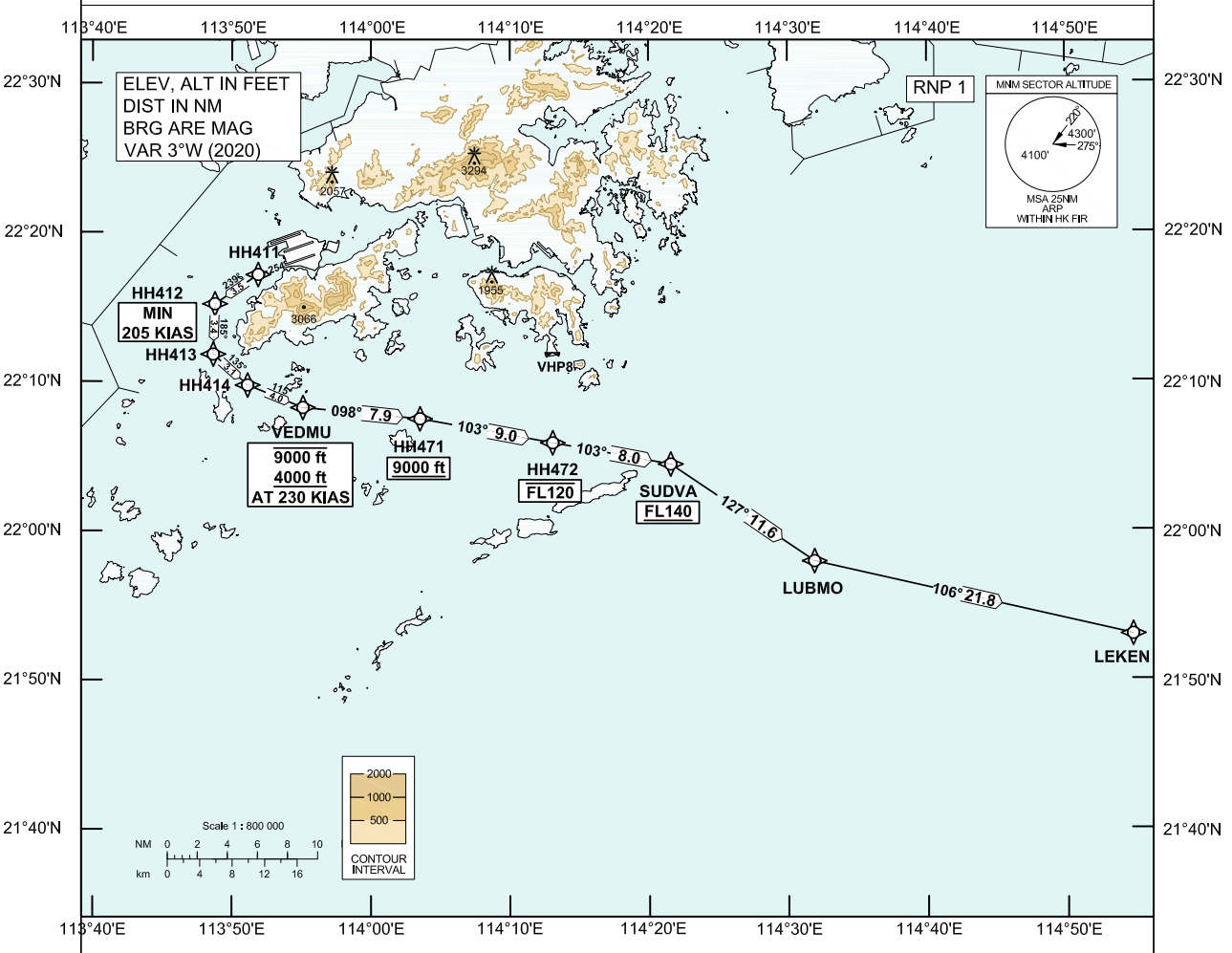
**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

| Transition Altitude 9 000 ft | |
|---|---|
| Hong Kong Tower | 118.4 |
| Hong Kong Departure | 122.0 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) LEKEN 1B SID RWY 25L**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detalled in VHHH AD 2.22 para 2.2.3.5.




## LEKEN 1B SID RWY 25L

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 4.7% (286 ft/NM) until passing 1 600 ft is required.

**SPEED RESTRICTION**
Speed restriction of 205 KIAS or greater at HH412 and 230 KIAS until VEDMU.

**CHANGE:** New procedure.

AD 2-VHHH-SID-LEKEN-B_V01_240513km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: LEKEN 1B RWY 25L

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH411 | - | 254 (251) | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | HH412 | - | 239 (236) | +3.0 | 3.5 | - | - | +205 | RNP 1 |
| 03 | TF | HH413 | - | 185 (182) | +3.0 | 3.4 | - | - | - | RNP 1 |
| 04 | TF | HH414 | - | 135 (132) | +3.0 | 3.1 | - | - | - | RNP 1 |
| 05 | TF | VEDMU | - | 115 (112) | +3.0 | 4.0 | - | -9000 +4000 | @230 | RNP 1 |
| 06 | TF | HH471 | - | 098 (095) | +3.0 | 7.9 | - | +9000 | - | RNP 1 |
| 07 | TF | HH472 | - | 103 (100) | +3.0 | 9.0 | - | -FL120 | - | RNP 1 |
| 08 | TF | SUDVA | - | 103 (100) | +3.0 | 8.0 | - | +FL140 | - | RNP 1 |
| 09 | TF | LUBMO | - | 127 (124) | +3.0 | 11.6 | - | - | - | RNP 1 |
| 10 | TF | LEKEN | - | 106 (103) | +3.0 | 21.8 | - | - | - | RNP 1 |

## WAYPOINT LIST

**LEKEN 1B RWY 25L**

| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| HH411 | 22 17 08.52N | 113 51 55.32E |
| HH412 | 22 15 10.92N | 113 48 48.95E |
| HH413 | 22 11 48.90N | 113 48 41.37E |
| HH414 | 22 09 44.51N | 113 51 09.66E |
| VEDMU | 22 08 14.02N | 113 55 08.18E |
| HH471 | 22 07 28.61N | 114 03 33.28E |
| HH472 | 22 05 51.49N | 114 13 05.41E |
| SUDVA | 22 04 25.14N | 114 21 33.87E |
| LUBMO | 21 57 55.24N | 114 31 52.98E |
| LEKEN | 21 53 01.06N | 114 54 44.95E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

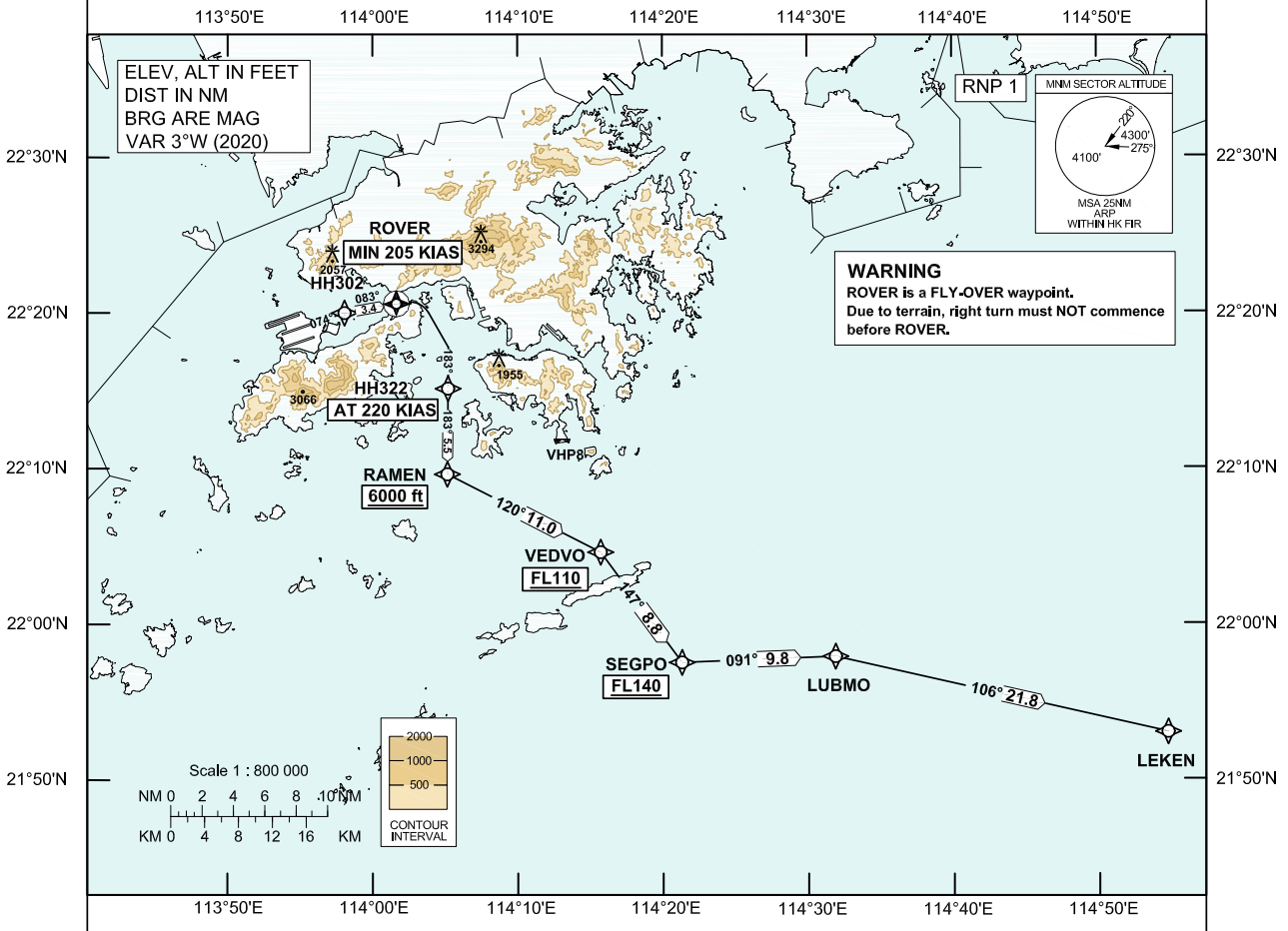
| Transition Altitude 9 000 ft | |
|---|---|
| Hong Kong Tower | 118.2 |
| Hong Kong Departure | 123.8 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) LEKEN 1C SID RWY 07C**

1. In the event that PBN performance ceases to comply wlth the requlrements for RNP 1 after departure, pllots must notlfy ATC as soon as possible. ATC assistance would be provided as necessary.

2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.

3. ROVER is a **FLY-OVER** waypoint. All other waypoints are fly-by.




## LEKEN 1C SID RWY 07C

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 3.8% (231 ft/NM) until passing 1 300 ft is required.

**SPEED RESTRICTION**
Speed restriction of 205 KIAS or greater at ROVER and 220 KIAS until HH322.

**CHANGE:** New procedure.

AD 2-VHHH-SID-LEKEN-C_V01_240513km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: LEKEN 1C RWY 07C

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH302 | - | 074 (071) | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | ROVER | Y | 083 (080) | +3.0 | 3.4 | - | - | +205 | RNP 1 |
| 03 | CF | HH322 | - | 183 (180) | +3.0 | - | R | - | @220 | RNP 1 |
| 04 | TF | RAMEN | - | 183 (180) | +3.0 | 5.5 | - | +6000 | - | RNP 1 |
| 05 | TF | VEDVO | - | 120 (117) | +3.0 | 11.0 | - | +FL110 | - | RNP 1 |
| 06 | TF | SEGPO | - | 147 (144) | +3.0 | 8.8 | - | +FL140 | - | RNP 1 |
| 07 | TF | LUBMO | - | 091 (088) | +3.0 | 9.8 | - | - | - | RNP 1 |
| 08 | TF | LEKEN | - | 106 (103) | +3.0 | 21.8 | - | - | - | RNP 1 |

## WAYPOINT LIST

**LEKEN 1C RWY 07C**

| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| HH302 | 22 20 00.43N | 113 58 04.56E |
| ROVER | 22 20 35.58N | 114 01 39.12E |
| HH322 | 22 15 08.88N | 114 05 12.88E |
| RAMEN | 22 09 39.22N | 114 05 09.89E |
| VEDVO | 22 04 38.19N | 114 15 43.05E |
| SEGPO | 21 57 32.77N | 114 21 18.59E |
| LUBMO | 21 57 55.24N | 114 31 52.98E |
| LEKEN | 21 53 01.06N | 114 54 44.95E |

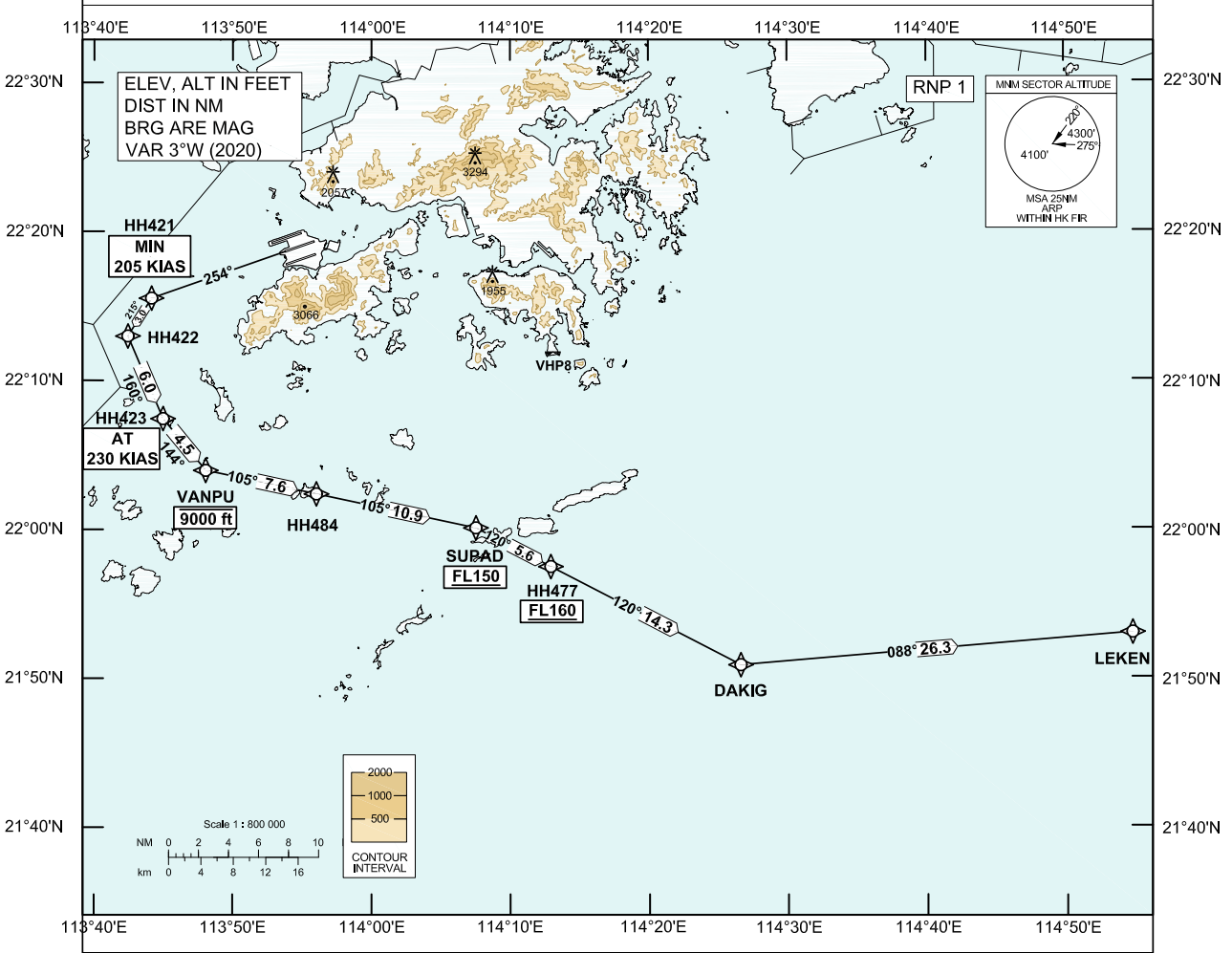
**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

| Transition Altitude 9 000 ft | |
|---|---|
| Hong Kong Tower | 118.2 |
| Hong Kong Departure | 123.8 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) LEKEN 1D SID RWY 25C**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.




## LEKEN 1D SID RWY 25C

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 3.3% (201 ft/NM).

**SPEED RESTRICTION**
Speed restriction of 205 KIAS or greater at HH421 and 230 KIAS until HH423.

**CHANGE:** New procedure.

AD 2-VHHH-SID-LEKEN-D_V01_240513km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: LEKEN 1D RWY 25C

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH421 | - | 254 (251) | +3.0 | - | - | - | +205 | RNP 1 |
| 02 | TF | HH422 | - | 215 (212) | +3.0 | 3.0 | - | - | - | RNP 1 |
| 03 | TF | HH423 | - | 160 (157) | +3.0 | 6.0 | - | - | @230 | RNP 1 |
| 04 | TF | VANPU | - | 144 (141) | +3.0 | 4.5 | - | -9000 | - | RNP 1 |
| 05 | TF | HH484 | - | 105 (102) | +3.0 | 7.6 | - | - | - | RNP 1 |
| 06 | TF | SUPAD | - | 105 (102) | +3.0 | 10.9 | - | +FL150 | - | RNP 1 |
| 07 | TF | HH477 | - | 120 (117) | +3.0 | 5.6 | - | +FL160 | - | RNP 1 |
| 08 | TF | DAKIG | - | 120 (117) | +3.0 | 14.3 | - | - | - | RNP 1 |
| 09 | TF | LEKEN | - | 088 (085) | +3.0 | 26.3 | - | - | - | RNP 1 |

## WAYPOINT LIST

**LEKEN 1D RWY 25C**

| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| HH421 | 22 15 31.13N | 113 44 09.41E |
| HH422 | 22 12 58.53N | 113 42 27.41E |
| HH423 | 22 07 26.10N | 113 44 59.40E |
| VANPU | 22 03 57.95N | 113 48 03.85E |
| HH484 | 22 02 23.21N | 113 56 01.92E |
| SUPAD | 22 00 05.99N | 114 07 30.72E |
| HH477 | 21 57 29.80N | 114 12 54.07E |
| DAKIG | 21 50 52.90N | 114 26 33.33E |
| LEKEN | 21 53 01.06N | 114 54 44.95E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

Transition Altitude 9 000 ft

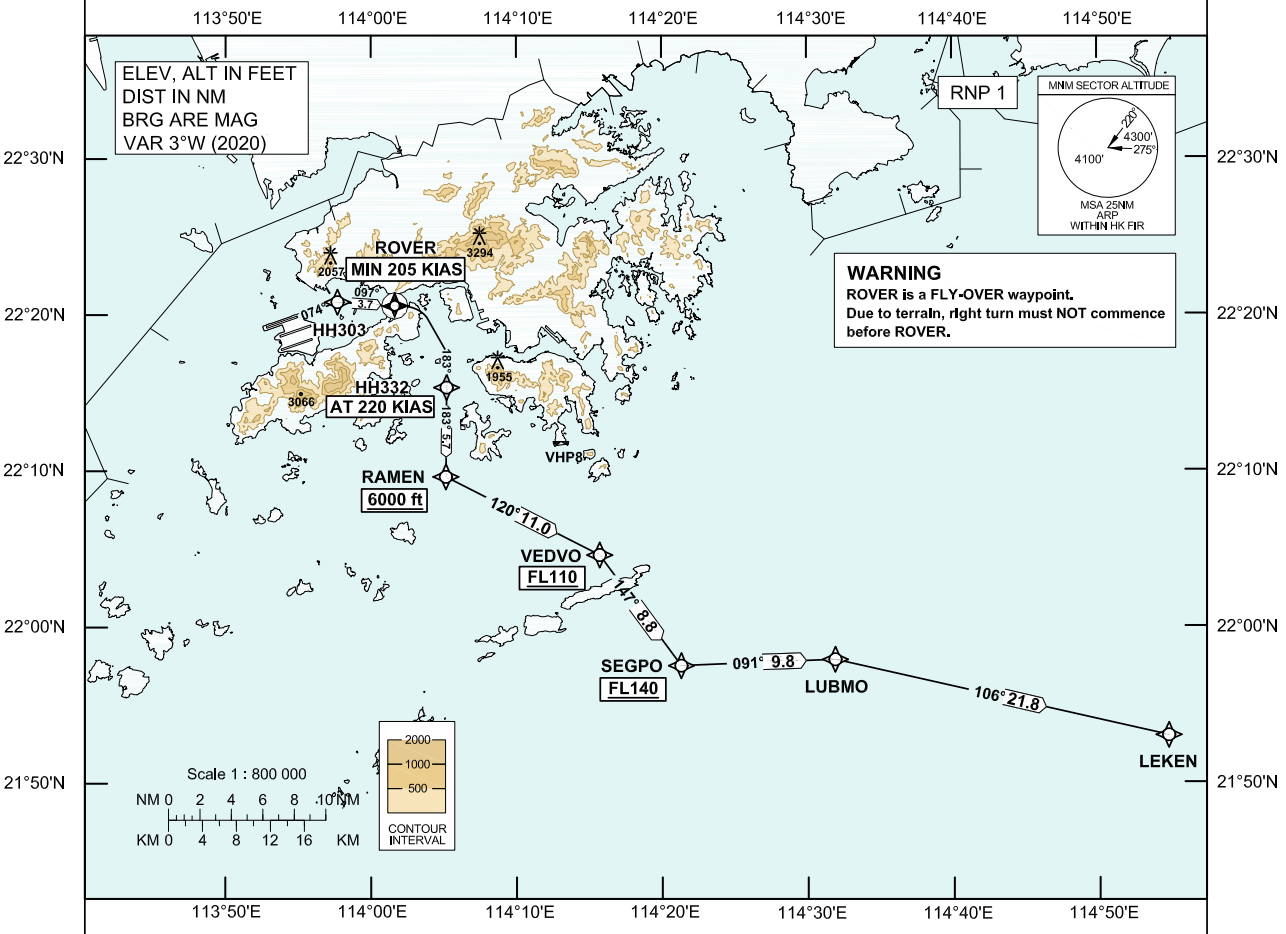
| | |
|---|---|
| Hong Kong Tower | 118.7 |
| Hong Kong Departure | 123.8 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) LEKEN 1E SID RWY 07L**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.

3. ROVER is a **FLY-OVER** waypoint. All other waypoints are fly-by.




## LEKEN 1E SID RWY 07L

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 3.3% (201 ft/NM).

**SPEED RESTRICTION**
Speed restriction of 205 KIAS or greater at ROVER and 220 KIAS until HH332.

CHANGE: New procedure.

AD 2-VHHH-SID-LEKEN-E_V01_240513km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: LEKEN 1E RWY 07L

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH303 | - | 074 (071) | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | ROVER | Y | 097 (094) | +3.0 | 3.7 | - | - | +205 | RNP 1 |
| 03 | CF | HH332 | - | 183 (180) | +3.0 | - | R | - | @220 | RNP 1 |
| 04 | TF | RAMEN | - | 183 (180) | +3.0 | 5.7 | - | +6000 | - | RNP 1 |
| 05 | TF | VEDVO | - | 120 (117) | +3.0 | 11.0 | - | +FL110 | - | RNP 1 |
| 06 | TF | SEGPO | - | 147 (144) | +3.0 | 8.8 | - | +FL140 | - | RNP 1 |
| 07 | TF | LUBMO | - | 091 (088) | +3.0 | 9.8 | - | - | - | RNP 1 |
| 08 | TF | LEKEN | - | 106 (103) | +3.0 | 21.8 | - | - | - | RNP 1 |

## WAYPOINT LIST

**LEKEN 1E RWY 07L**

| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| HH303 | 22 20 50.02N | 113 57 42.83E |
| ROVER | 22 20 35.58N | 114 01 39.12E |
| HH332 | 22 15 22.17N | 114 05 13.00E |
| RAMEN | 22 09 39.22N | 114 05 09.89E |
| VEDVO | 22 04 38.19N | 114 15 43.05E |
| SEGPO | 21 57 32.77N | 114 21 18.59E |
| LUBMO | 21 57 55.24N | 114 31 52.98E |
| LEKEN | 21 53 01.06N | 114 54 44.95E |

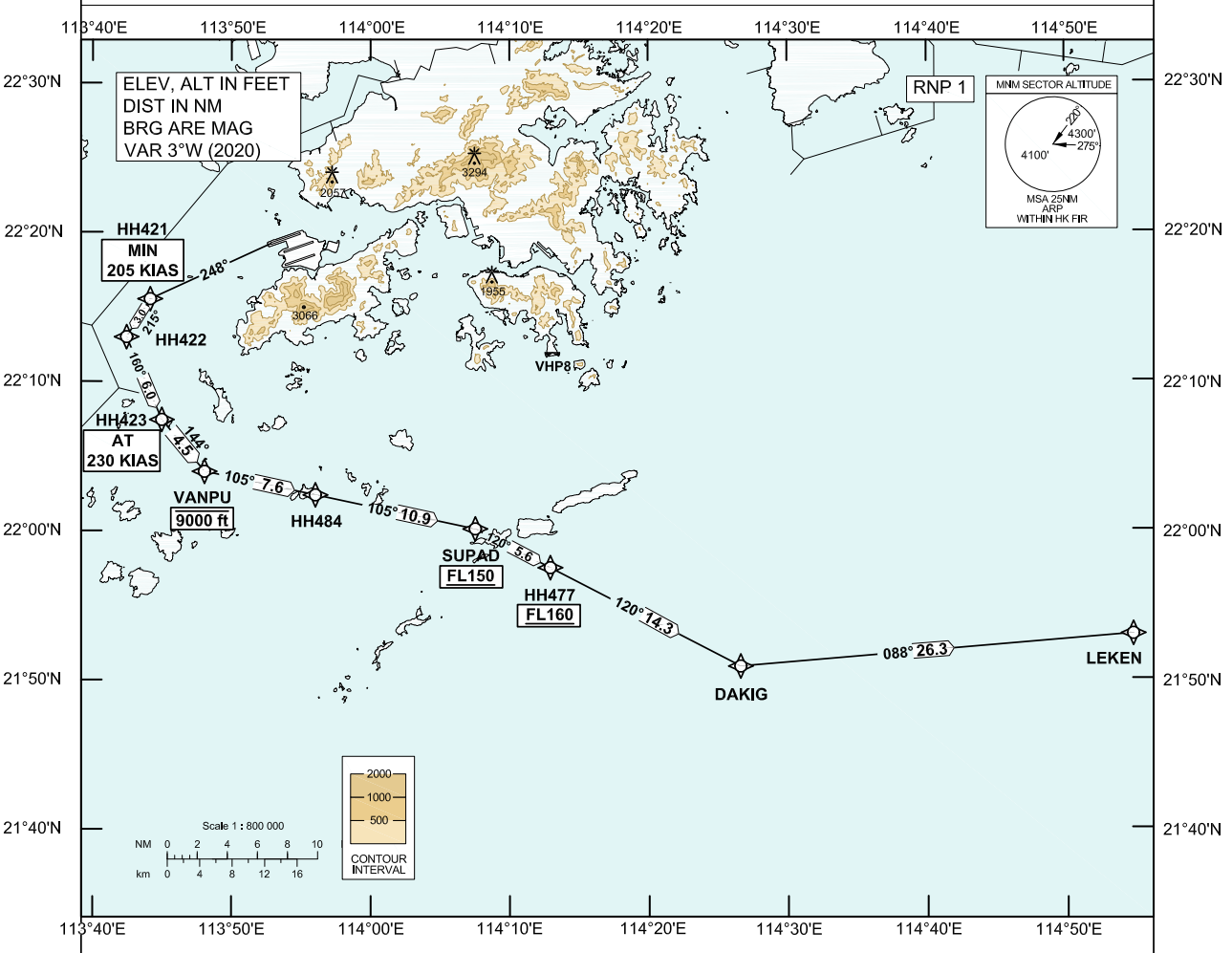
**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

| Transition Altitude 9 000 ft | |
|---|---|
| Hong Kong Tower | 118.7 |
| Hong Kong Departure | 123.8 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) LEKEN 1F SID RWY 25R**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.




## LEKEN 1F SID RWY 25R

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 3.3% (201 ft/NM).

**SPEED RESTRICTION**
Speed restriction of 205 KIAS or greater at HH421 and 230 KIAS until HH423.

**CHANGE:** New procedure.

AD 2-VHHH-SID-LEKEN-F_V01_240513km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: LEKEN 1F RWY 25R

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH421 | - | 248 (245) | +3.0 | - | - | - | +205 | RNP 1 |
| 02 | TF | HH422 | - | 215 (212) | +3.0 | 3.0 | - | - | - | RNP 1 |
| 03 | TF | HH423 | - | 160 (157) | +3.0 | 6.0 | - | - | @230 | RNP 1 |
| 04 | TF | VANPU | - | 144 (141) | +3.0 | 4.5 | - | -9000 | - | RNP 1 |
| 05 | TF | HH484 | - | 105 (102) | +3.0 | 7.6 | - | - | - | RNP 1 |
| 06 | TF | SUPAD | - | 105 (102) | +3.0 | 10.9 | - | +FL150 | - | RNP 1 |
| 07 | TF | HH477 | - | 120 (117) | +3.0 | 5.6 | - | +FL160 | - | RNP 1 |
| 08 | TF | DAKIG | - | 120 (117) | +3.0 | 14.3 | - | - | - | RNP 1 |
| 09 | TF | LEKEN | - | 088 (085) | +3.0 | 26.3 | - | - | - | RNP 1 |

## WAYPOINT LIST

**LEKEN 1F RWY 25R**

| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| HH421 | 22 15 31.13N | 113 44 09.41E |
| HH422 | 22 12 58.53N | 113 42 27.41E |
| HH423 | 22 07 26.10N | 113 44 59.40E |
| VANPU | 22 03 57.95N | 113 48 03.85E |
| HH484 | 22 02 23.21N | 113 56 01.92E |
| SUPAD | 22 00 05.99N | 114 07 30.72E |
| HH477 | 21 57 29.80N | 114 12 54.07E |
| DAKIG | 21 50 52.90N | 114 26 33.33E |
| LEKEN | 21 53 01.06N | 114 54 44.95E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

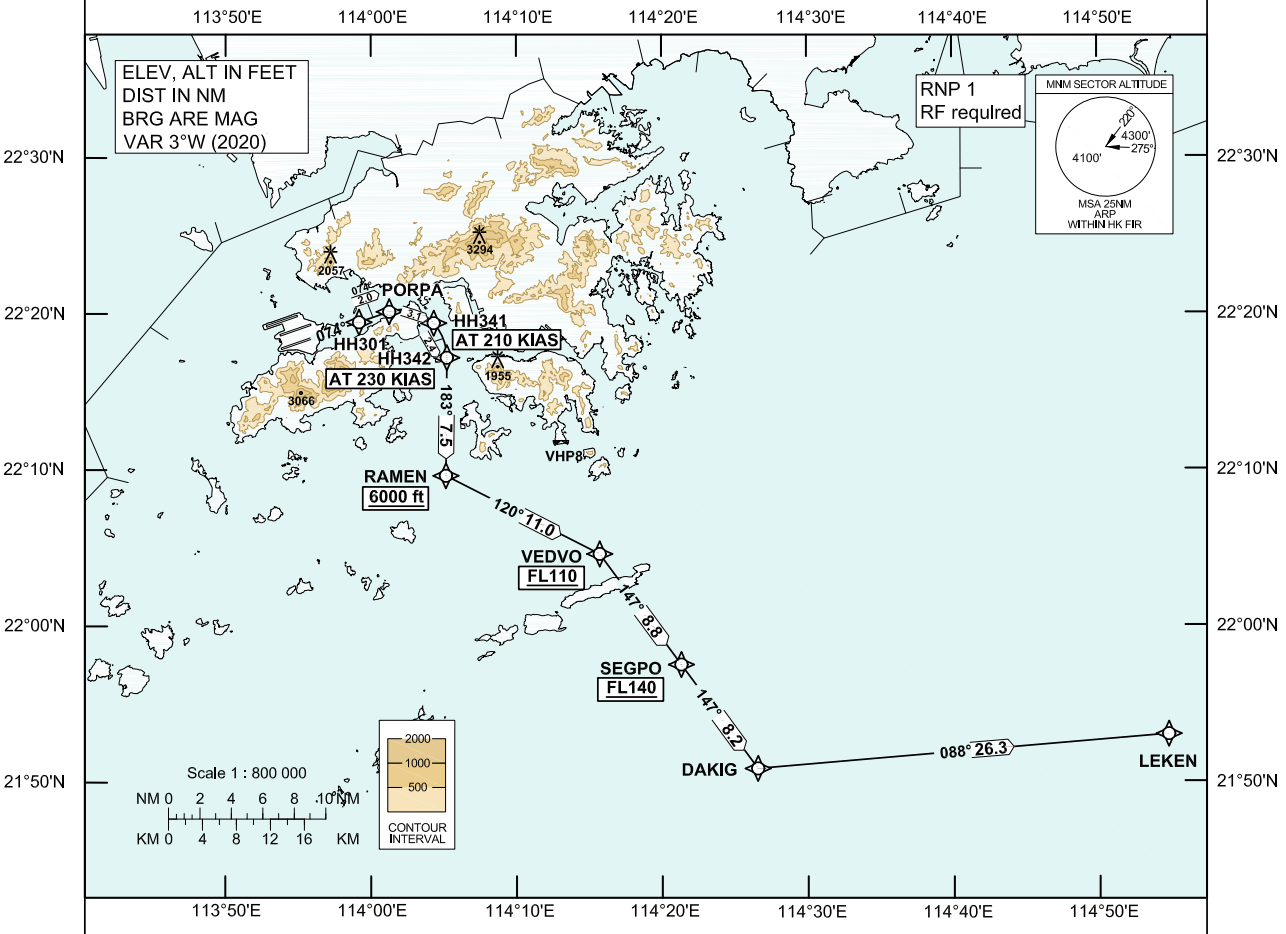
| Transition Altitude 9 000 ft | |
|---|---|
| Hong Kong Tower | 118.4 |
| Hong Kong Departure | 122.0 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) LEKEN 1X SID RWY 07R**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.

3. **Radius-to-fix (RF) leg is required.** Aircraft shall have RF capability as stipulated in the Aircraft Flight Manual or its FMS manual. For aircraft without RF capability, pilot shall request the corresponding non-RF SID procedure from Hong Kong Delivery.




## LEKEN 1X SID RWY 07R

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 4.8% (292 ft/NM) until passing 1 200 ft is required.

**SPEED RESTRICTION**
Speed restriction of 210 KIAS at HH341 and 230 KIAS at HH342.

**CHANGE:** New procedure.

AD 2-VHHH-SID-LEKEN-X_V01_240523km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: LEKEN 1X RWY 07R

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH301 | - | 074 (071) | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | PORPA | - | 074 (071) | +3.0 | 2.0 | - | - | - | RNP 1 |
| 03 | RF Centre: HH941 r=2.656 NM | HH341 | - | - | +3.0 | 3.1 | R | - | @210 | RNP 1 |
| 04 | RF Centre: HH942 r=3.246 NM | HH342 | - | - | +3.0 | 2.4 | R | - | @230 | RNP 1 |
| 05 | TF | RAMEN | - | 183 (180) | +3.0 | 7.5 | - | +6000 | - | RNP 1 |
| 06 | TF | VEDVO | - | 120 (117) | +3.0 | 11.0 | - | +FL110 | - | RNP 1 |
| 07 | TF | SEGPO | - | 147 (144) | +3.0 | 8.8 | - | +FL140 | - | RNP 1 |
| 08 | TF | DAKIG | - | 147 (144) | +3.0 | 8.2 | - | - | - | RNP 1 |
| 09 | TF | LEKEN | - | 088 (085) | +3.0 | 26.3 | - | - | - | RNP 1 |

## WAYPOINT LIST

**LEKEN 1X RWY 07R**

| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| HH301 | 22 19 29.01N | 113 59 11.61E |
| PORPA | 22 20 09.10N | 114 01 16.30E |
| HH341 | 22 19 25.15N | 114 04 19.86E |
| HH342 | 22 17 12.51N | 114 05 14.01E |
| RAMEN | 22 09 39.22N | 114 05 09.89E |
| VEDVO | 22 04 38.19N | 114 15 43.05E |
| SEGPO | 21 57 32.77N | 114 21 18.59E |
| DAKIG | 21 50 52.90N | 114 26 33.33E |
| LEKEN | 21 53 01.06N | 114 54 44.95E |
| **RF Arc Centre Identifier** | **Coordinates (WGS-84)** | |
| HH941 | 22 17 37.96N | 114 02 12.36E |
| HH942 | 22 17 14.13N | 114 01 44.03E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

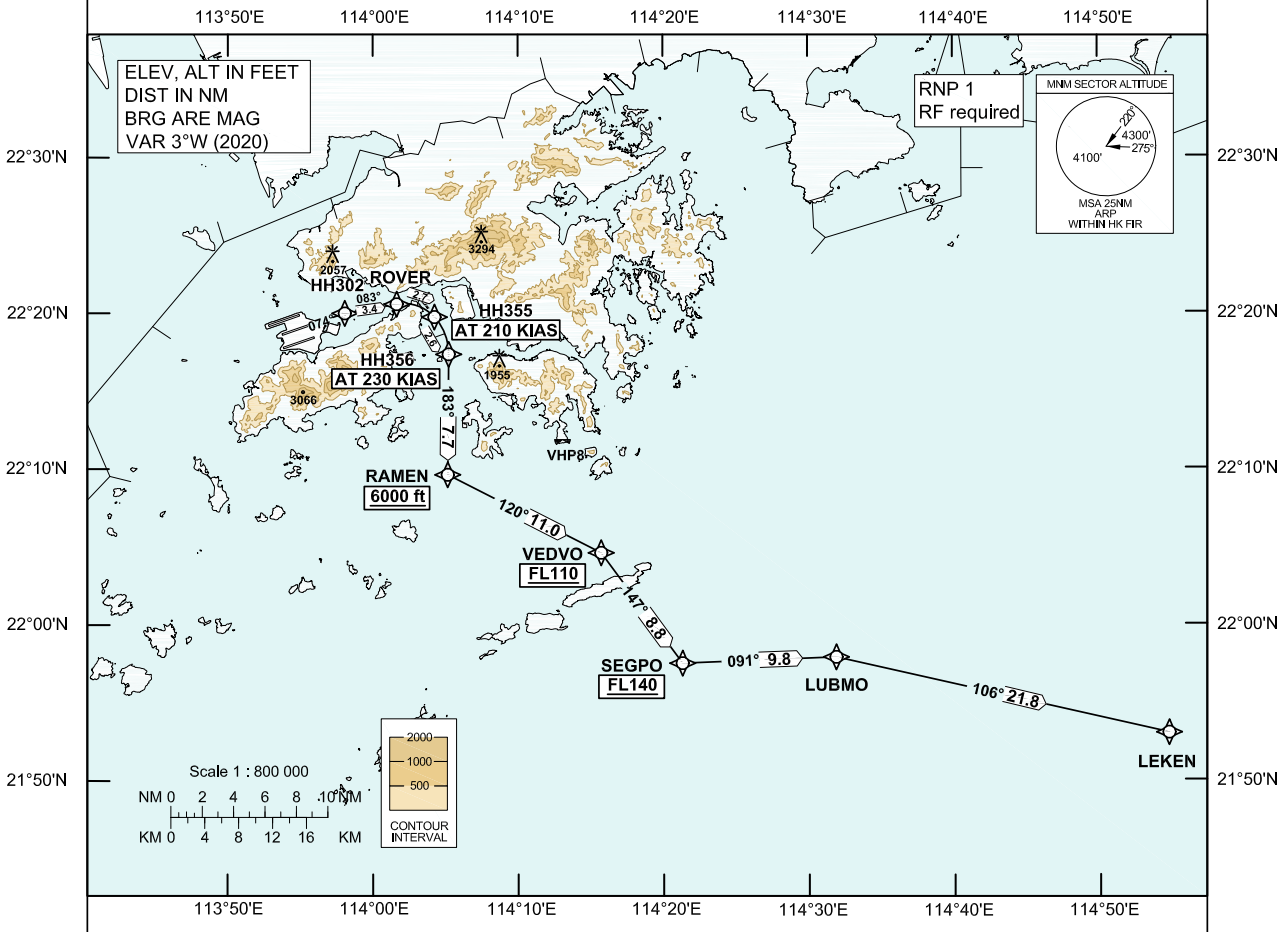
| Transition Altitude 9 000 ft | |
|---|---|
| Hong Kong Tower | 118.2 |
| Hong Kong Departure | 123.8 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) LEKEN 1Y SID RWY 07C**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.

3. **Radius-to-fix (RF) leg is required.** Aircraft shall have RF capability as stipulated in the Aircraft Flight Manual or its FMS manual. For aircraft without RF capability, pilot shall request the corresponding non-RF SID procedure from Hong Kong Delivery.




## LEKEN 1Y SID RWY 07C

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 3.4% (207 ft/NM) until passing 1 200 ft is required.

**SPEED RESTRICTION**
Speed restriction of 210 KIAS at HH355 and 230 KIAS at HH356.

**CHANGE:** New procedure.

AD 2-VHHH-SID-LEKEN-Y_V01_240523km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: LEKEN 1Y RWY 07C

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH302 | - | 074 (071) | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | ROVER | - | 083 (080) | +3.0 | 3.4 | - | - | - | RNP 1 |
| 03 | RF Centre: HH955 r=2.642 NM | HH355 | - | - | +3.0 | 2.7 | R | - | @210 | RNP 1 |
| 04 | RF Centre: HH956 r=3.494 NM | HH356 | - | - | +3.0 | 2.6 | R | - | @230 | RNP 1 |
| 05 | TF | RAMEN | - | 183 (180) | +3.0 | 7.7 | - | +6000 | - | RNP 1 |
| 06 | TF | VEDVO | - | 120 (117) | +3.0 | 11.0 | - | +FL110 | - | RNP 1 |
| 07 | TF | SEGPO | - | 147 (144) | +3.0 | 8.8 | - | +FL140 | - | RNP 1 |
| 08 | TF | LUBMO | - | 091 (088) | +3.0 | 9.8 | - | - | - | RNP 1 |
| 09 | TF | LEKEN | - | 106 (103) | +3.0 | 21.8 | - | - | - | RNP 1 |

## WAYPOINT LIST

**LEKEN 1Y RWY 07R**

| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| HH302 | 22 20 00.43N | 113 58 04.56E |
| ROVER | 22 20 35.58N | 114 01 39.12E |
| HH355 | 22 19 45.97N | 114 04 15.23E |
| HH356 | 22 17 22.57N | 114 05 14.10E |
| RAMEN | 22 09 39.22N | 114 05 09.89E |
| VEDVO | 22 04 38.19N | 114 15 43.05E |
| SEGPO | 21 57 32.77N | 114 21 18.59E |
| LUBMO | 21 57 55.24N | 114 31 52.98E |
| LEKEN | 21 53 01.06N | 114 54 44.95E |
| **RF Arc Centre Identifier** | **Coordinates (WGS-84)** | |
| HH955 | 22 17 58.85N | 114 02 08.75E |
| HH956 | 22 17 24.31N | 114 01 27.97E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

Transition Altitude 9 000 ft

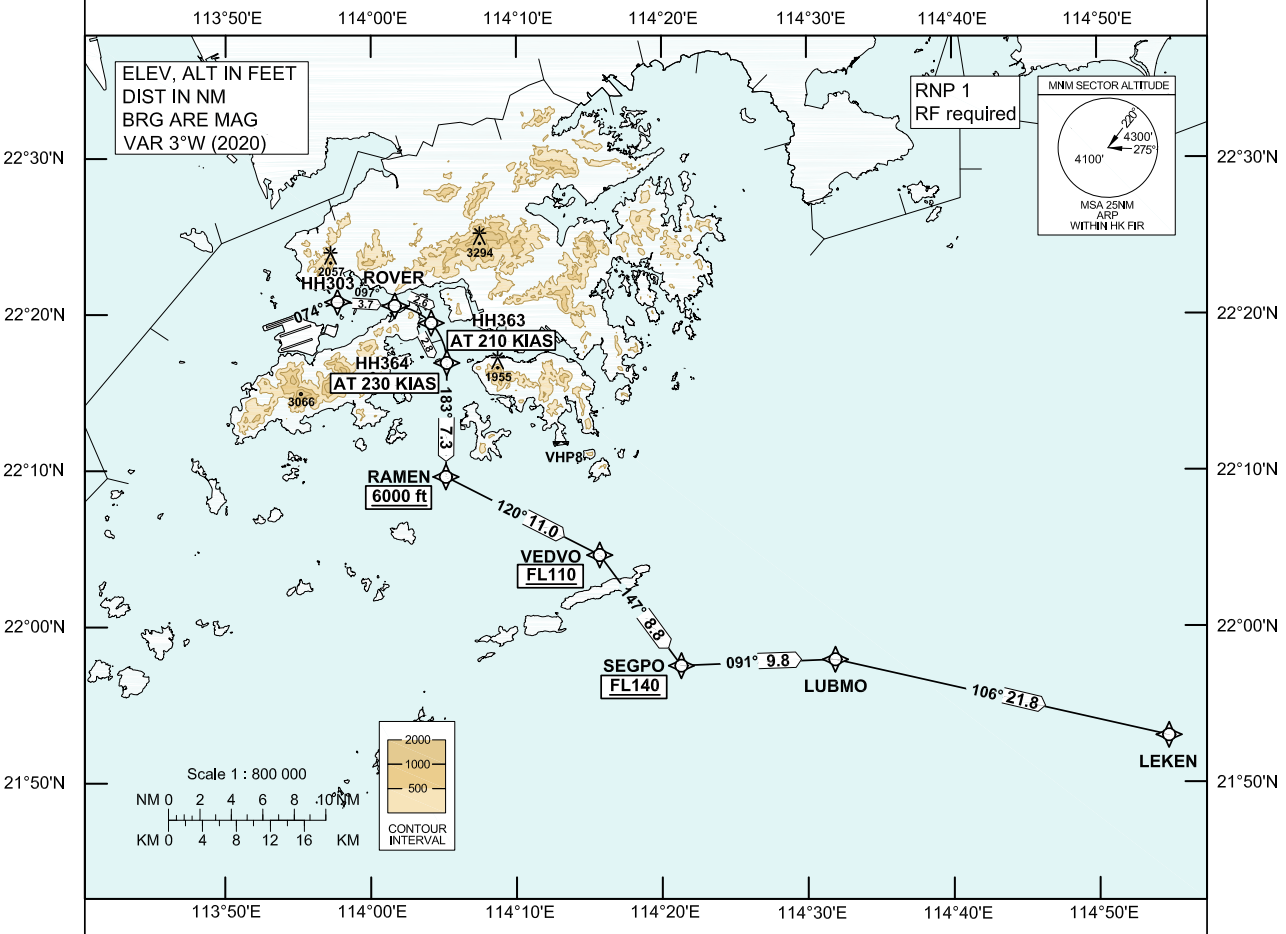
| | |
|---|---|
| Hong Kong Tower | 118.7 |
| Hong Kong Departure | 123.8 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) LEKEN 1Z SID RWY 07L**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.

3. **Radius-to-fix (RF) leg is required.** Aircraft shall have RF capability as stipulated in the Aircraft Flight Manual or its FMS manual. For aircraft without RF capability, pilot shall request the corresponding non-RF SID procedure from Hong Kong Delivery.




## LEKEN 1Z SID RWY 07L

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 3.3% (201 ft/NM).

**SPEED RESTRICTION**
Speed restriction of 210 KIAS at HH363 and 230 KIAS at HH364.

**CHANGE:** New procedure.

AD 2-VHHH-SID-LEKEN-Z_V01_240523km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: LEKEN 1Z RWY 07L

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH303 | - | 074 (071) | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | ROVER | - | 097 (094) | +3.0 | 3.7 | - | - | - | RNP 1 |
| 03 | RF Centre: HH963 r=3.507 NM | HH363 | - | - | +3.0 | 2.6 | R | - | @210 | RNP 1 |
| 04 | RF Centre: HH964 r=3.665 NM | HH364 | - | - | +3.0 | 2.8 | R | - | @230 | RNP 1 |
| 05 | TF | RAMEN | - | 183 (180) | +3.0 | 7.3 | - | +6000 | - | RNP 1 |
| 06 | TF | VEDVO | - | 120 (117) | +3.0 | 11.0 | - | +FL110 | - | RNP 1 |
| 07 | TF | SEGPO | - | 147 (144) | +3.0 | 8.8 | - | +FL140 | - | RNP 1 |
| 08 | TF | LUBMO | - | 091 (088) | +3.0 | 9.8 | - | - | - | RNP 1 |
| 09 | TF | LEKEN | - | 106 (103) | +3.0 | 21.8 | - | - | - | RNP 1 |

## WAYPOINT LIST

| LEKEN 1Z RWY 07L | | |
|---|---|---|
| **Waypoint Identifier** | **Coordinates (WGS-84)** | |
| HH303 | 22 20 50.02N | 113 57 42.83E |
| ROVER | 22 20 35.58N | 114 01 39.12E |
| HH363 | 22 19 29.68N | 114 04 09.36E |
| HH364 | 22 16 56.52N | 114 05 13.86E |
| RAMEN | 22 09 39.22N | 114 05 09.89E |
| VEDVO | 22 04 38.19N | 114 15 43.05E |
| SEGPO | 21 57 32.77N | 114 21 18.59E |
| LUBMO | 21 57 55.24N | 114 31 52.98E |
| LEKEN | 21 53 01.06N | 114 54 44.95E |
| **RF Arc Centre Identifier** | **Coordinates (WGS-84)** | |
| HH963 | 22 17 04.89N | 114 01 24.20E |
| HH964 | 22 16 58.35N | 114 01 16.75E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

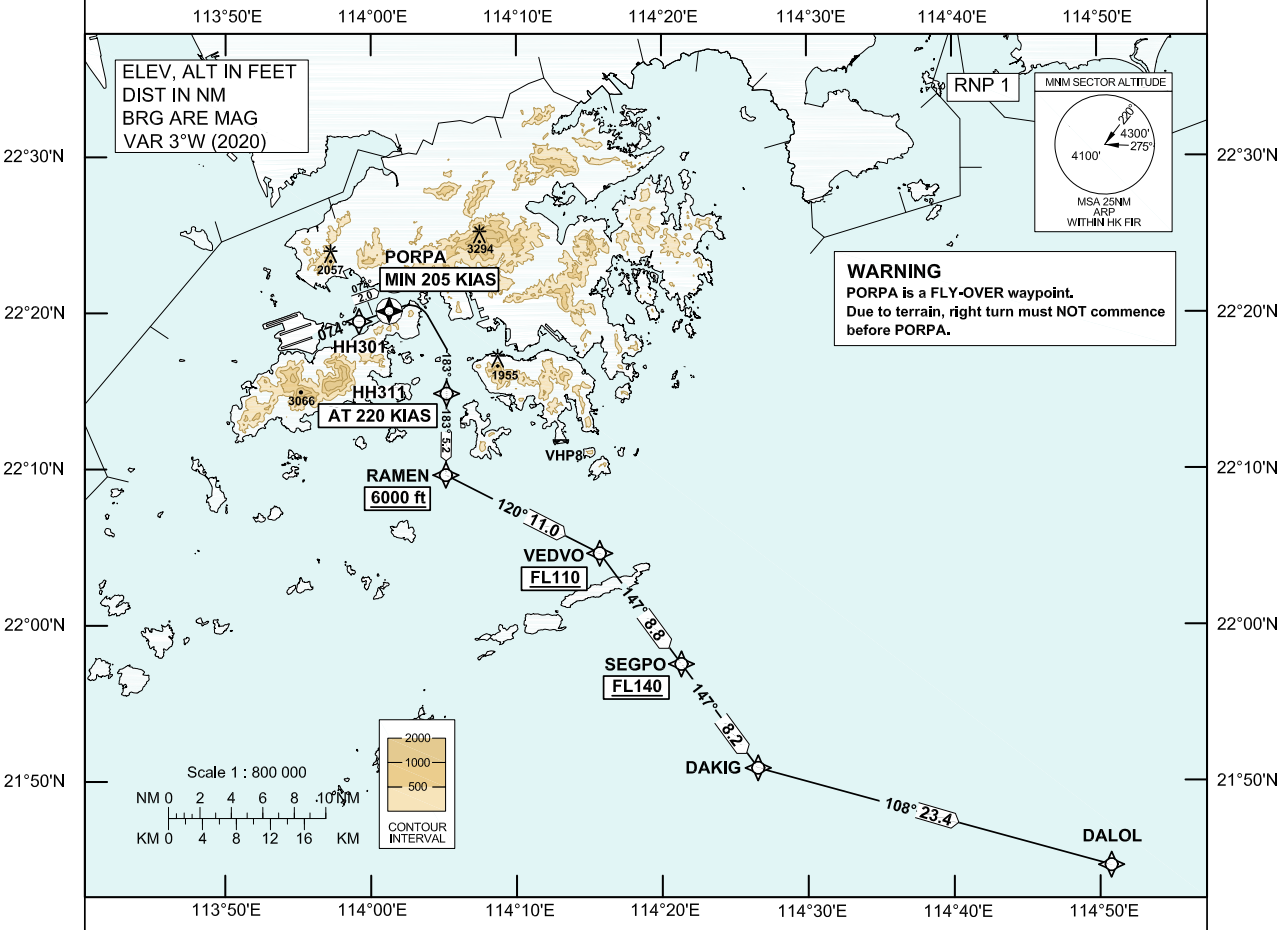
| Transition Altitude 9 000 ft | |
|---|---|
| Hong Kong Tower | 118.4 |
| Hong Kong Departure | 122.0 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) DALOL 1A SID RWY 07R**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.

3. PORPA is a **FLY-OVER** waypoint. All other waypoints are fly-by.




## DALOL 1A SID RWY 07R

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 4.8% (292 ft/NM) until passing 1 200 ft is required.

**SPEED RESTRICTION**
Speed restriction of 205 KIAS or greater at PORPA and 220 KIAS until HH311.

**CHANGE:** New procedure.

AD 2-VHHH-SID-DALOL-A_V01_240522lh

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: DALOL 1A RWY 07R

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH301 | - | 074 (071) | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | PORPA | Y | 074 (071) | +3.0 | 2.0 | - | - | +205 | RNP 1 |
| 03 | CF | HH311 | - | 183 (180) | +3.0 | - | R | - | @220 | RNP 1 |
| 04 | TF | RAMEN | - | 183 (180) | +3.0 | 5.2 | - | +6000 | - | RNP 1 |
| 05 | TF | VEDVO | - | 120 (117) | +3.0 | 11.0 | - | +FL110 | - | RNP 1 |
| 06 | TF | SEGPO | - | 147 (144) | +3.0 | 8.8 | - | +FL140 | - | RNP 1 |
| 07 | TF | DAKIG | - | 147 (144) | +3.0 | 8.2 | - | - | - | RNP 1 |
| 08 | TF | DALOL | - | 108 (105) | +3.0 | 23.4 | - | - | - | RNP 1 |

## WAYPOINT LIST

**DALOL 1A RWY 07R**

| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| HH301 | 22 19 29.01N | 113 59 11.61E |
| PORPA | 22 20 09.10N | 114 01 16.30E |
| HH311 | 22 14 52.34N | 114 05 12.73E |
| RAMEN | 22 09 39.22N | 114 05 09.89E |
| VEDVO | 22 04 38.19N | 114 15 43.05E |
| SEGPO | 21 57 32.77N | 114 21 18.59E |
| DAKIG | 21 50 52.90N | 114 26 33.33E |
| DALOL | 21 44 36.90N | 114 50 45.34E |

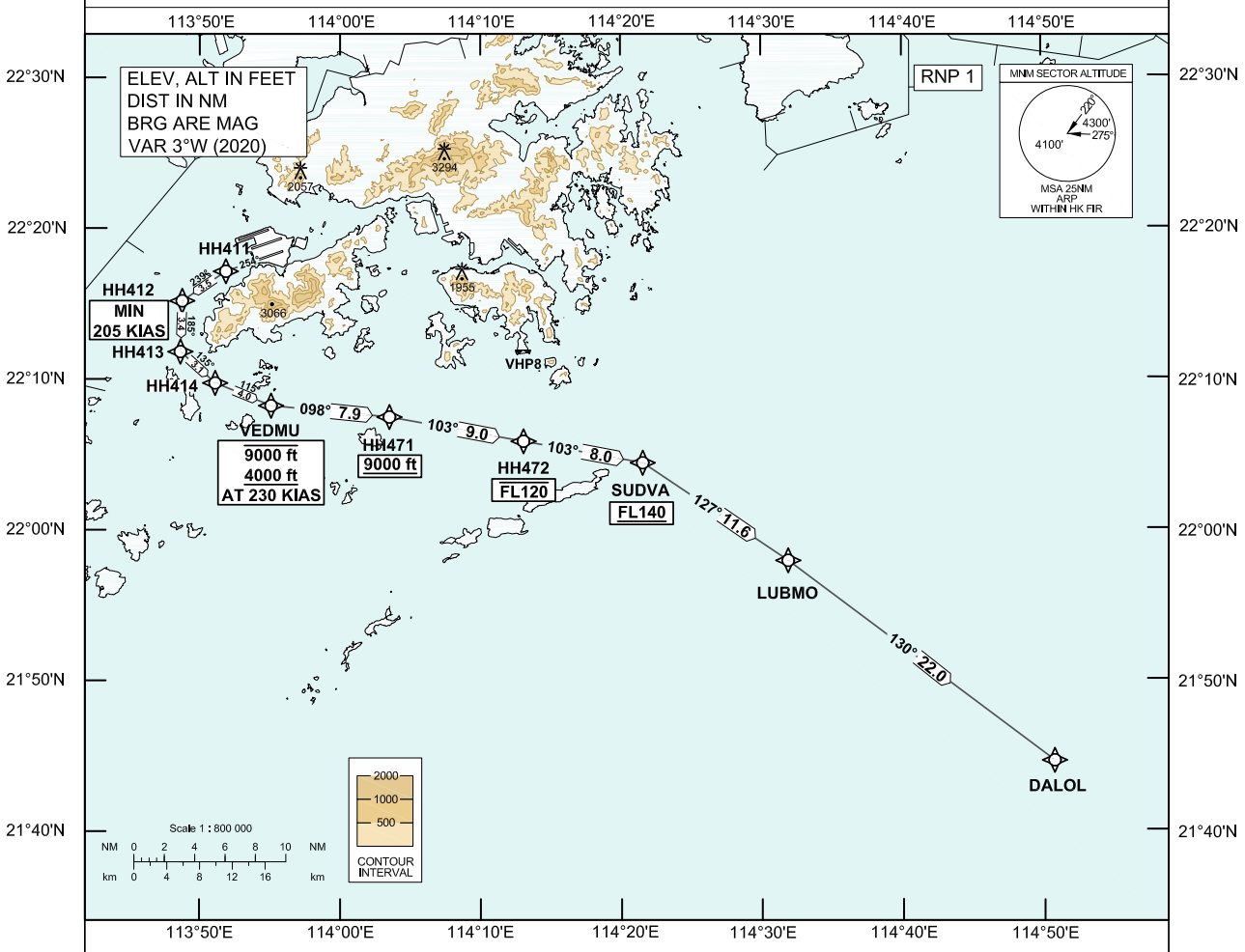
**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

| Transition Altitude 9 000 ft | |
|---|---|
| Hong Kong Tower | 118.4 |
| Hong Kong Departure | 122.0 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) DALOL 1B SID RWY 25L**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detalled in VHHH AD 2.22 para 2.2.3.5.




## DALOL 1B SID RWY 25L

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 4.7% (286 ft/NM) until passing 1 600 ft is required.

**SPEED RESTRICTION**
Speed restriction of 205 KIAS or greater at HH412 and 230 KIAS until VEDMU.

**CHANGE:** New procedure.

AD 2-VHHH-SID-DALOL-B_V01_240719km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: DALOL 1B RWY 25L

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH411 | - | 254 (251) | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | HH412 | - | 239 (236) | +3.0 | 3.5 | - | - | +205 | RNP 1 |
| 03 | TF | HH413 | - | 185 (182) | +3.0 | 3.4 | - | - | - | RNP 1 |
| 04 | TF | HH414 | - | 135 (132) | +3.0 | 3.1 | - | - | - | RNP 1 |
| 05 | TF | VEDMU | - | 115 (112) | +3.0 | 4.0 | - | -9000 +4000 | @230 | RNP 1 |
| 06 | TF | HH471 | - | 098 (095) | +3.0 | 7.9 | - | +9000 | - | RNP 1 |
| 07 | TF | HH472 | - | 103 (100) | +3.0 | 9.0 | - | -FL120 | - | RNP 1 |
| 08 | TF | SUDVA | - | 103 (100) | +3.0 | 8.0 | - | +FL140 | - | RNP 1 |
| 09 | TF | LUBMO | - | 127 (124) | +3.0 | 11.6 | - | - | - | RNP 1 |
| 10 | TF | DALOL | - | 130 (127) | +3.0 | 22.0 | - | - | - | RNP 1 |

## WAYPOINT LIST

**DALOL 1B RWY 25L**

| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| HH411 | 22 17 08.52N | 113 51 55.32E |
| HH412 | 22 15 10.92N | 113 48 48.95E |
| HH413 | 22 11 48.90N | 113 48 41.37E |
| HH414 | 22 09 44.51N | 113 51 09.66E |
| VEDMU | 22 08 14.02N | 113 55 08.18E |
| HH471 | 22 07 28.61N | 114 03 33.28E |
| HH472 | 22 05 51.49N | 114 13 05.41E |
| SUDVA | 22 04 25.14N | 114 21 33.87E |
| LUBMO | 21 57 55.24N | 114 31 52.98E |
| DALOL | 21 44 36.90N | 114 50 45.34E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

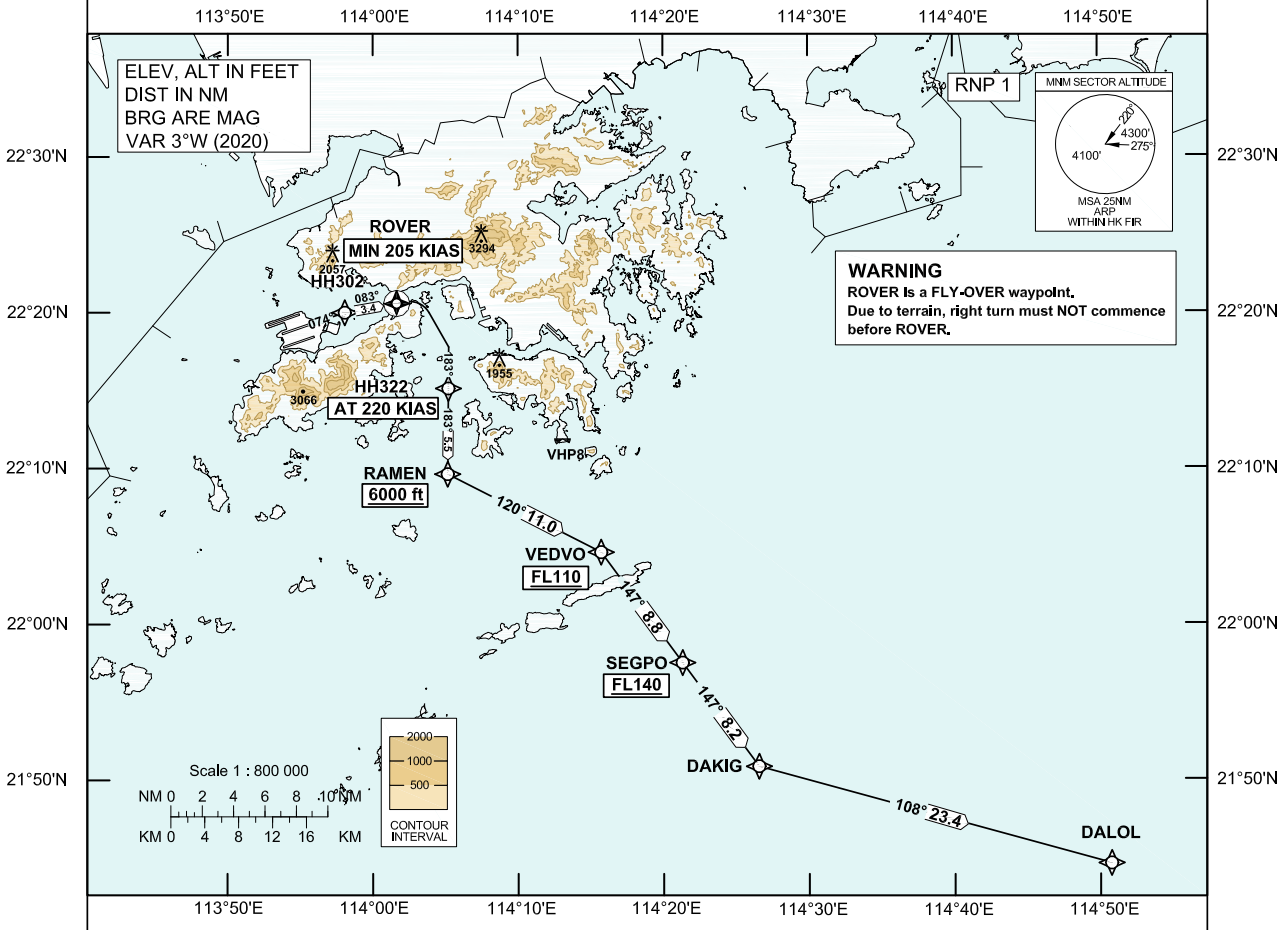
| Transition Altitude 9 000 ft | |
|---|---|
| Hong Kong Tower | 118.2 |
| Hong Kong Departure | 123.8 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) DALOL 1C SID RWY 07C**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.

3. ROVER is a **FLY-OVER** waypoint. All other waypoints are fly-by.




## DALOL 1C SID RWY 07C

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 3.8% (231 ft/NM) until passing 1 300 ft is required.

**SPEED RESTRICTION**
Speed restriction of 205 KIAS or greater at ROVER and 220 KIAS until HH322.

**CHANGE:** New procedure.

AD 2-VHHH-SID-DALOL-C_V01_240513km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: DALOL 1C RWY 07C

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH302 | - | 074 (071) | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | ROVER | Y | 083 (080) | +3.0 | 3.4 | - | - | +205 | RNP 1 |
| 03 | CF | HH322 | - | 183 (180) | +3.0 | - | R | - | @220 | RNP 1 |
| 04 | TF | RAMEN | - | 183 (180) | +3.0 | 5.5 | - | +6000 | - | RNP 1 |
| 05 | TF | VEDVO | - | 120 (117) | +3.0 | 11.0 | - | +FL110 | - | RNP 1 |
| 06 | TF | SEGPO | - | 147 (144) | +3.0 | 8.8 | - | +FL140 | - | RNP 1 |
| 07 | TF | DAKIG | - | 147 (144) | +3.0 | 8.2 | - | - | - | RNP 1 |
| 08 | TF | DALOL | - | 108 (105) | +3.0 | 23.4 | - | - | - | RNP 1 |

## WAYPOINT LIST

**DALOL 1C RWY 07C**

| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| HH302 | 22 20 00.43N | 113 58 04.56E |
| ROVER | 22 20 35.58N | 114 01 39.12E |
| HH322 | 22 15 08.88N | 114 05 12.88E |
| RAMEN | 22 09 39.22N | 114 05 09.89E |
| VEDVO | 22 04 38.19N | 114 15 43.05E |
| SEGPO | 21 57 32.77N | 114 21 18.59E |
| DAKIG | 21 50 52.90N | 114 26 33.33E |
| DALOL | 21 44 36.90N | 114 50 45.34E |

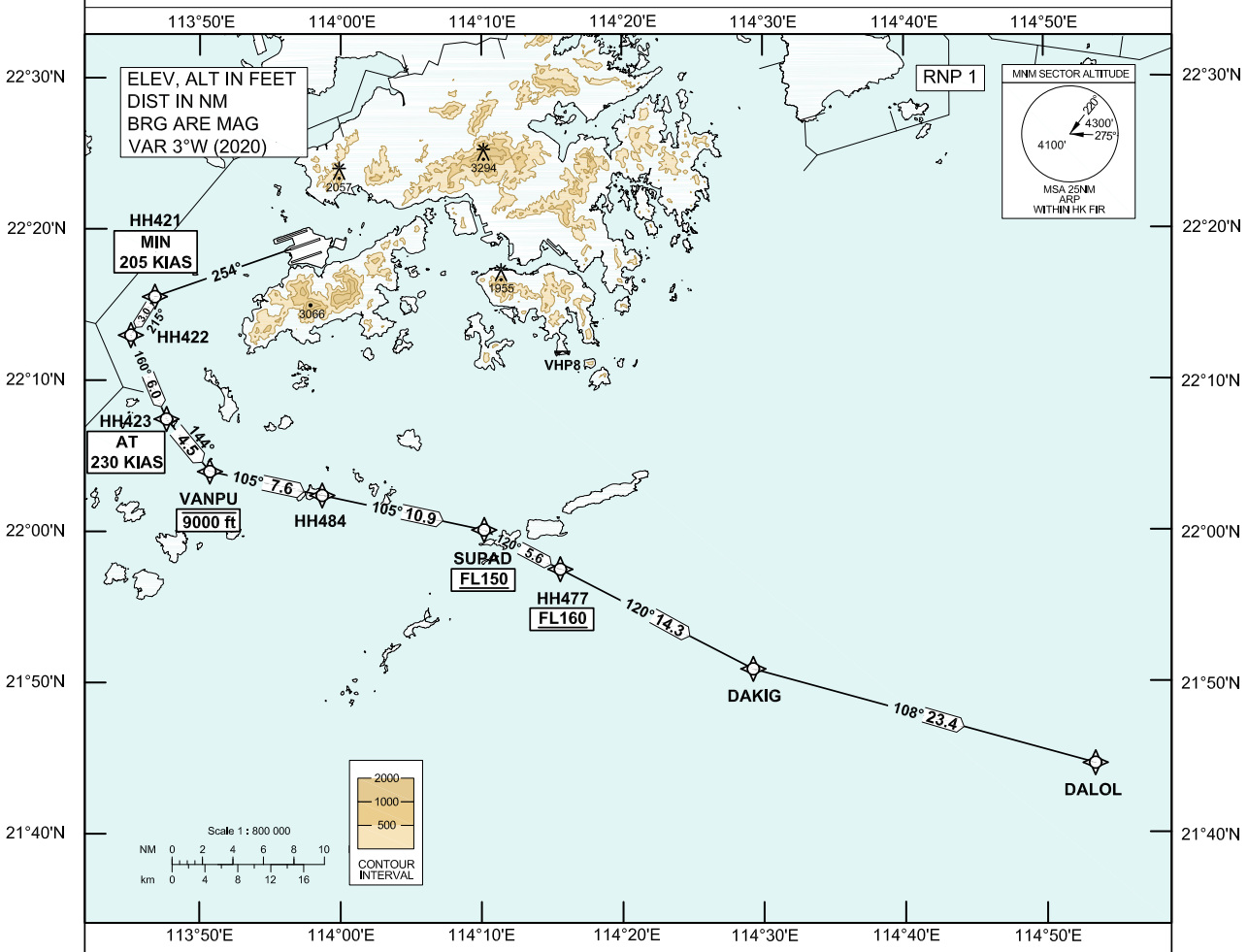
**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

| Transition Altitude 9 000 ft | |
|---|---|
| Hong Kong Tower | 118.2 |
| Hong Kong Departure | 123.8 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) DALOL 1D SID RWY 25C**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.




## DALOL 1D SID RWY 25C

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 3.3% (201 ft/NM).

**SPEED RESTRICTION**
Speed restriction of 205 KIAS or greater at HH421 and 230 KIAS until HH423.

**CHANGE:** New procedure.

AD 2-VHHH-SID-DALOL-D_V01_240513km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: DALOL 1D RWY 25C

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH421 | - | 254 (251) | +3.0 | - | - | - | +205 | RNP 1 |
| 02 | TF | HH422 | - | 215 (212) | +3.0 | 3.0 | - | - | - | RNP 1 |
| 03 | TF | HH423 | - | 160 (157) | +3.0 | 6.0 | - | - | @230 | RNP 1 |
| 04 | TF | VANPU | - | 144 (141) | +3.0 | 4.5 | - | -9000 | - | RNP 1 |
| 05 | TF | HH484 | - | 105 (102) | +3.0 | 7.6 | - | - | - | RNP 1 |
| 06 | TF | SUPAD | - | 105 (102) | +3.0 | 10.9 | - | +FL150 | - | RNP 1 |
| 07 | TF | HH477 | - | 120 (117) | +3.0 | 5.6 | - | +FL160 | - | RNP 1 |
| 08 | TF | DAKIG | - | 120 (117) | +3.0 | 14.3 | - | - | - | RNP 1 |
| 09 | TF | DALOL | - | 108 (105) | +3.0 | 23.4 | - | - | - | RNP 1 |

## WAYPOINT LIST

**DALOL 1D RWY 25C**

| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| HH421 | 22 15 31.13N | 113 44 09.41E |
| HH422 | 22 12 58.53N | 113 42 27.41E |
| HH423 | 22 07 26.10N | 113 44 59.40E |
| VANPU | 22 03 57.95N | 113 48 03.85E |
| HH484 | 22 02 23.21N | 113 56 01.92E |
| SUPAD | 22 00 05.99N | 114 07 30.72E |
| HH477 | 21 57 29.80N | 114 12 54.07E |
| DAKIG | 21 50 52.90N | 114 26 33.33E |
| DALOL | 21 44 36.90N | 114 50 45.34E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

Transition Altitude 9 000 ft

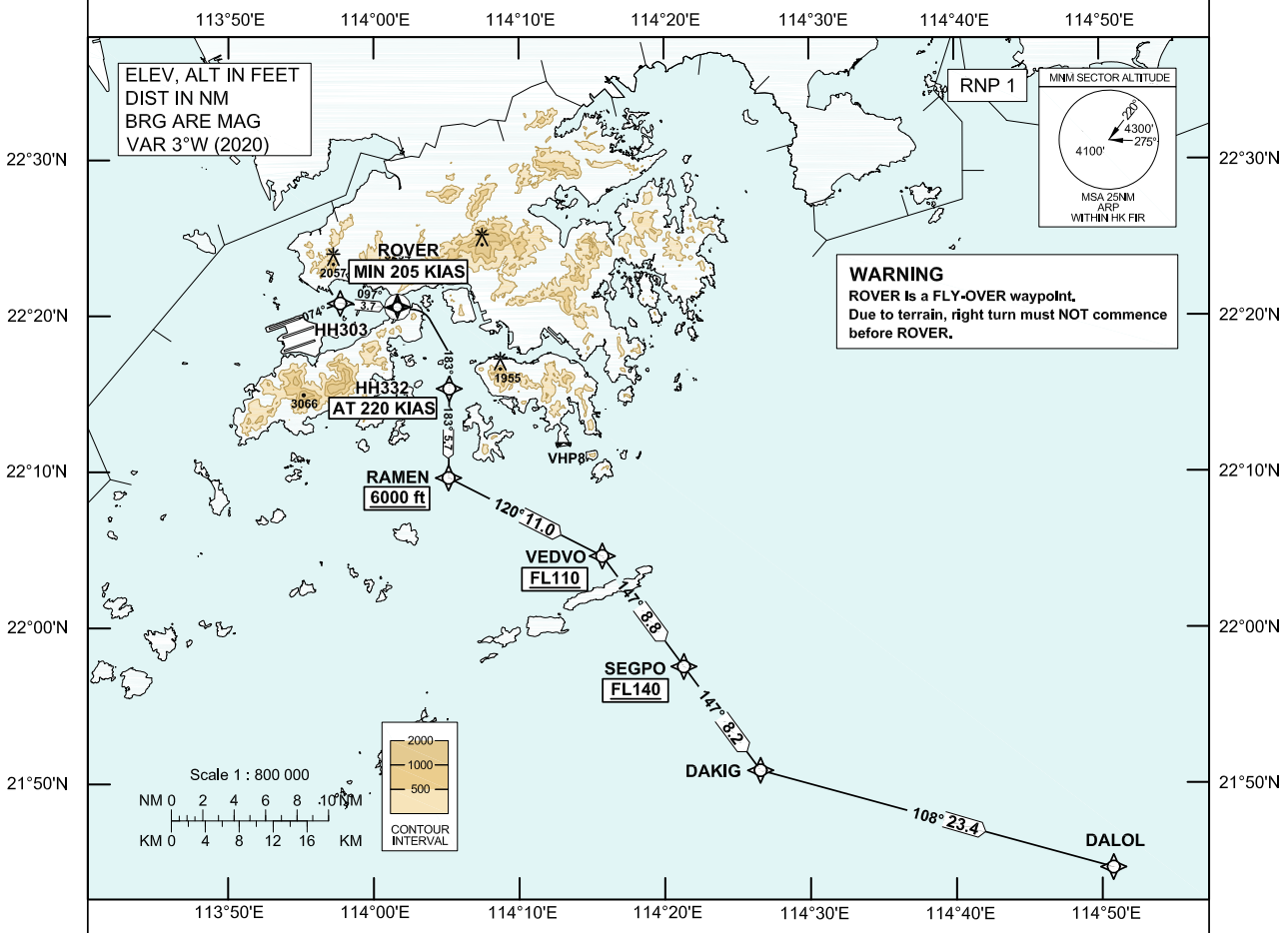
| | |
|---|---|
| Hong Kong Tower | 118.7 |
| Hong Kong Departure | 123.8 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) DALOL 1E SID RWY 07L**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.

3. ROVER is a **FLY-OVER** waypoint. All other waypoints are fly-by.




## DALOL 1E SID RWY 07L

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 3.3% (201 ft/NM).

**SPEED RESTRICTION**
Speed restriction of 205 KIAS or greater at ROVER and 220 KIAS until HH332.

**CHANGE:** New procedure.

AD 2-VHHH-SID-DALOL-E_V01_240513km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: DALOL 1E RWY 07L

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH303 | - | 074 (071) | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | ROVER | Y | 097 (094) | +3.0 | 3.7 | - | - | +205 | RNP 1 |
| 03 | CF | HH332 | - | 183 (180) | +3.0 | - | R | - | @220 | RNP 1 |
| 04 | TF | RAMEN | - | 183 (180) | +3.0 | 5.7 | - | +6000 | - | RNP 1 |
| 05 | TF | VEDVO | - | 120 (117) | +3.0 | 11.0 | - | +FL110 | - | RNP 1 |
| 06 | TF | SEGPO | - | 147 (144) | +3.0 | 8.8 | - | +FL140 | - | RNP 1 |
| 07 | TF | DAKIG | - | 147 (144) | +3.0 | 8.2 | - | - | - | RNP 1 |
| 08 | TF | DALOL | - | 108 (105) | +3.0 | 23.4 | - | - | - | RNP 1 |

## WAYPOINT LIST

**DALOL 1E RWY 07L**

| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| HH303 | 22 20 50.02N | 113 57 42.83E |
| ROVER | 22 20 35.58N | 114 01 39.12E |
| HH332 | 22 15 22.17N | 114 05 13.00E |
| RAMEN | 22 09 39.22N | 114 05 09.89E |
| VEDVO | 22 04 38.19N | 114 15 43.05E |
| SEGPO | 21 57 32.77N | 114 21 18.59E |
| DAKIG | 21 50 52.90N | 114 26 33.33E |
| DALOL | 21 44 36.90N | 114 50 45.34E |

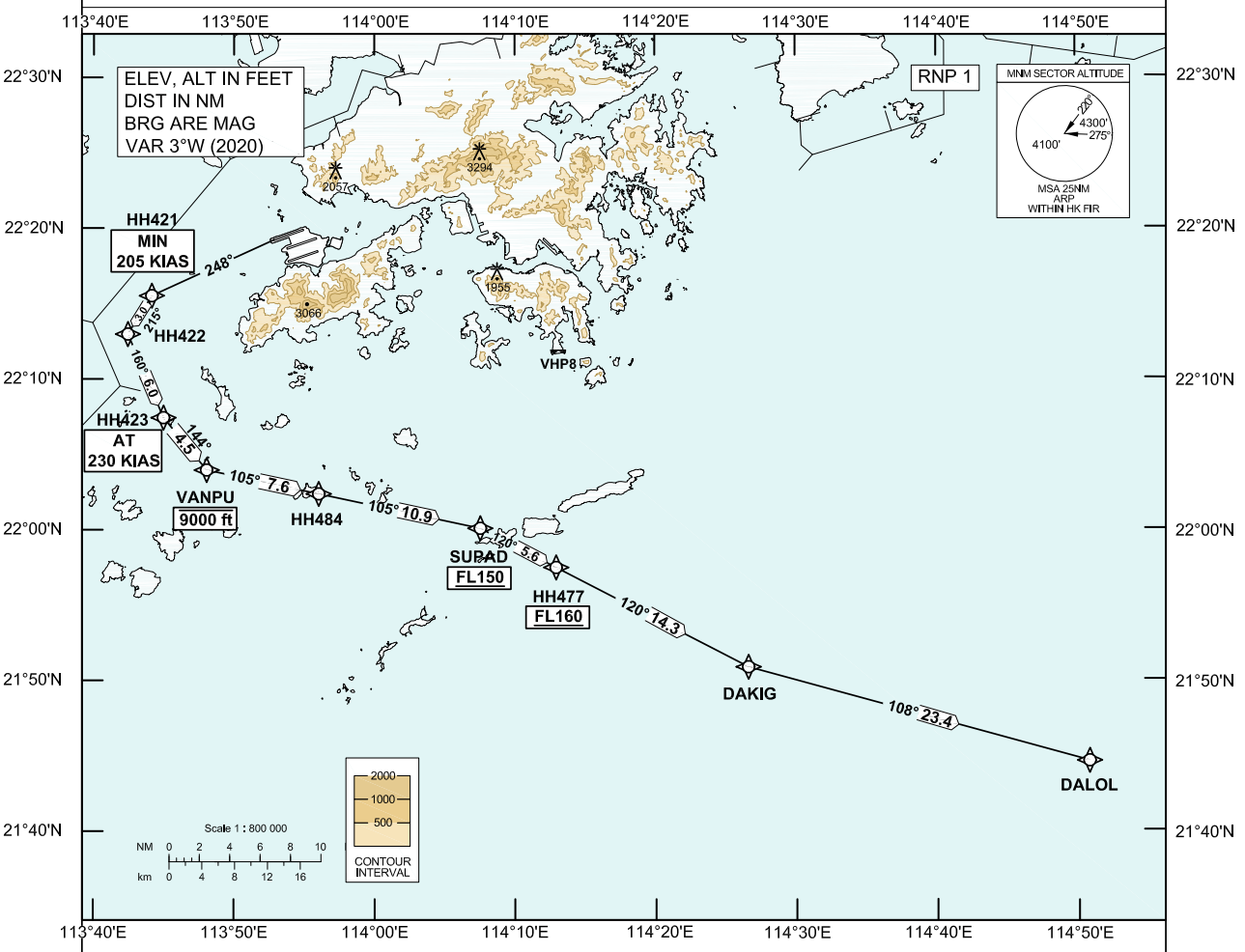
**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

| Transition Altitude 9 000 ft | |
|---|---|
| Hong Kong Tower | 118.7 |
| Hong Kong Departure | 123.8 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) DALOL 1F SID RWY 25R**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.




## DALOL 1F SID RWY 25R

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 3.3% (201 ft/NM).

**SPEED RESTRICTION**
Speed restriction of 205 KIAS or greater at HH421 and 230 KIAS until HH423.

**CHANGE:** New procedure.

AD 2-VHHH-SID-DALOL-F_V01_240513km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: DALOL 1F RWY 25R

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH421 | - | 248 (245) | +3.0 | - | - | - | +205 | RNP 1 |
| 02 | TF | HH422 | - | 215 (212) | +3.0 | 3.0 | - | - | - | RNP 1 |
| 03 | TF | HH423 | - | 160 (157) | +3.0 | 6.0 | - | - | @230 | RNP 1 |
| 04 | TF | VANPU | - | 144 (141) | +3.0 | 4.5 | - | -9000 | - | RNP 1 |
| 05 | TF | HH484 | - | 105 (102) | +3.0 | 7.6 | - | - | - | RNP 1 |
| 06 | TF | SUPAD | - | 105 (102) | +3.0 | 10.9 | - | +FL150 | - | RNP 1 |
| 07 | TF | HH477 | - | 120 (117) | +3.0 | 5.6 | - | +FL160 | - | RNP 1 |
| 08 | TF | DAKIG | - | 120 (117) | +3.0 | 14.3 | - | - | - | RNP 1 |
| 09 | TF | DALOL | - | 108 (105) | +3.0 | 23.4 | - | - | - | RNP 1 |

## WAYPOINT LIST

**DALOL 1F RWY 25R**

| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| HH421 | 22 15 31.13N | 113 44 09.41E |
| HH422 | 22 12 58.53N | 113 42 27.41E |
| HH423 | 22 07 26.10N | 113 44 59.40E |
| VANPU | 22 03 57.95N | 113 48 03.85E |
| HH484 | 22 02 23.21N | 113 56 01.92E |
| SUPAD | 22 00 05.99N | 114 07 30.72E |
| HH477 | 21 57 29.80N | 114 12 54.07E |
| DAKIG | 21 50 52.90N | 114 26 33.33E |
| DALOL | 21 44 36.90N | 114 50 45.34E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

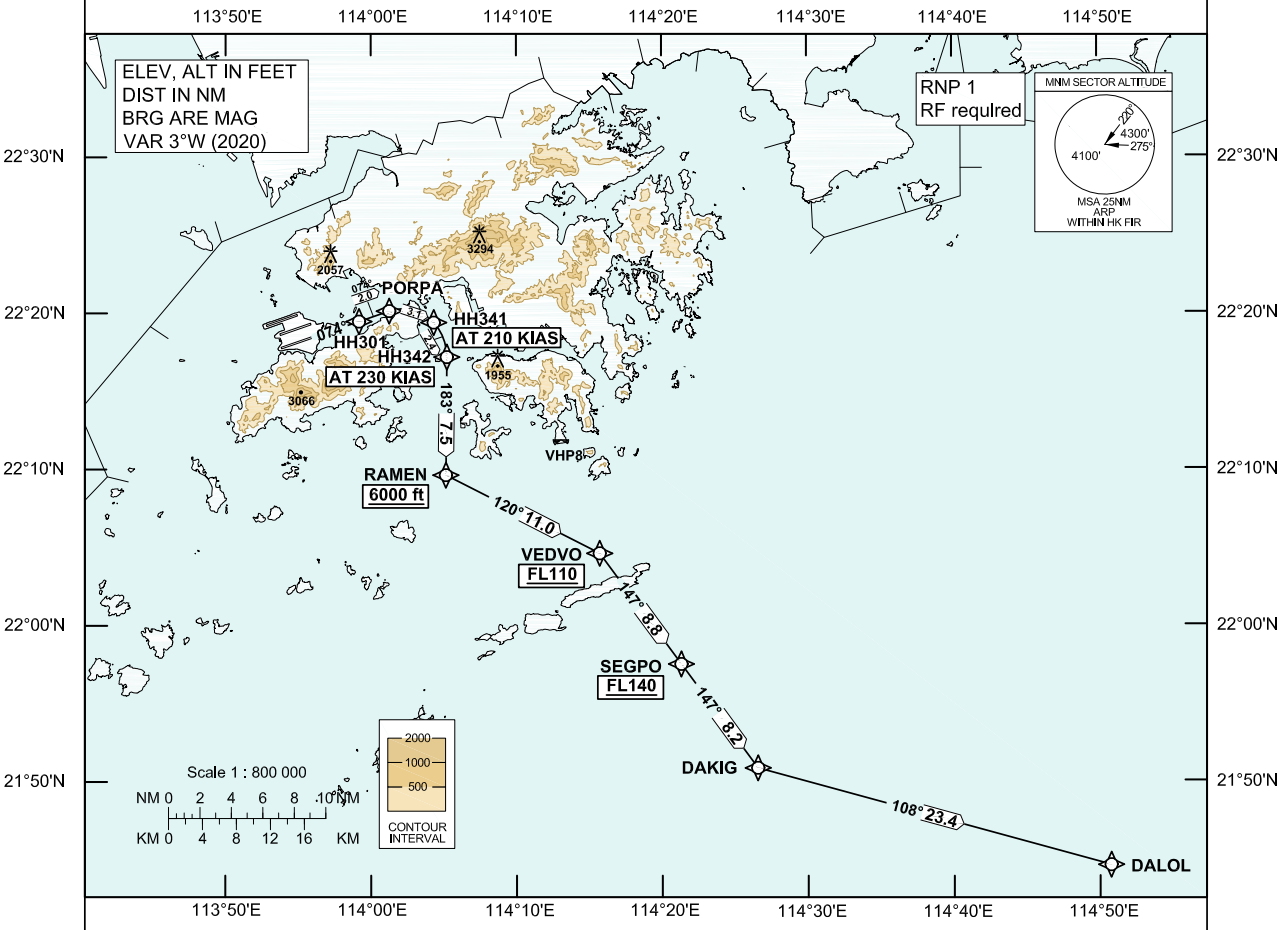
| Transition Altitude 9 000 ft | |
|---|---|
| Hong Kong Tower | 118.4 |
| Hong Kong Departure | 122.0 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) DALOL 1X SID RWY 07R**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.

3. **Radius-to-fix (RF) leg is required.** Aircraft shall have RF capability as stipulated in the Aircraft Flight Manual or its FMS manual. For aircraft without RF capability, pilot shall request the corresponding non-RF SID procedure from Hong Kong Delivery.




## DALOL 1X SID RWY 07R

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 4.8% (292 ft/NM) until passing 1 200 ft is required.

**SPEED RESTRICTION**
Speed restriction of 210 KIAS at HH341 and 230 KIAS at HH342.

**CHANGE:** New procedure.

AD 2-VHHH-SID-DALOL-X_V01_240523km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: DALOL 1X RWY 07R

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH301 | - | 074 (071) | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | PORPA | - | 074 (071) | +3.0 | 2.0 | - | - | - | RNP 1 |
| 03 | RF Centre: HH941 r=2.656 NM | HH341 | - | - | +3.0 | 3.1 | R | - | @210 | RNP 1 |
| 04 | RF Centre: HH942 r=3.246 NM | HH342 | - | - | +3.0 | 2.4 | R | - | @230 | RNP 1 |
| 05 | TF | RAMEN | - | 183 (180) | +3.0 | 7.5 | - | +6000 | - | RNP 1 |
| 06 | TF | VEDVO | - | 120 (117) | +3.0 | 11.0 | - | +FL110 | - | RNP 1 |
| 07 | TF | SEGPO | - | 147 (144) | +3.0 | 8.8 | - | +FL140 | - | RNP 1 |
| 08 | TF | DAKIG | - | 147 (144) | +3.0 | 8.2 | - | - | - | RNP 1 |
| 09 | TF | DALOL | - | 108 (105) | +3.0 | 23.4 | - | - | - | RNP 1 |

## WAYPOINT LIST

**DALOL 1X RWY 07R**

| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| HH301 | 22 19 29.01N | 113 59 11.61E |
| PORPA | 22 20 09.10N | 114 01 16.30E |
| HH341 | 22 19 25.15N | 114 04 19.86E |
| HH342 | 22 17 12.51N | 114 05 14.01E |
| RAMEN | 22 09 39.22N | 114 05 09.89E |
| VEDVO | 22 04 38.19N | 114 15 43.05E |
| SEGPO | 21 57 32.77N | 114 21 18.59E |
| DAKIG | 21 50 52.90N | 114 26 33.33E |
| DALOL | 21 44 36.90N | 114 50 45.34E |
| **RF Arc Centre Identifier** | **Coordinates (WGS-84)** | |
| HH941 | 22 17 37.96N | 114 02 12.36E |
| HH942 | 22 17 14.13N | 114 01 44.03E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

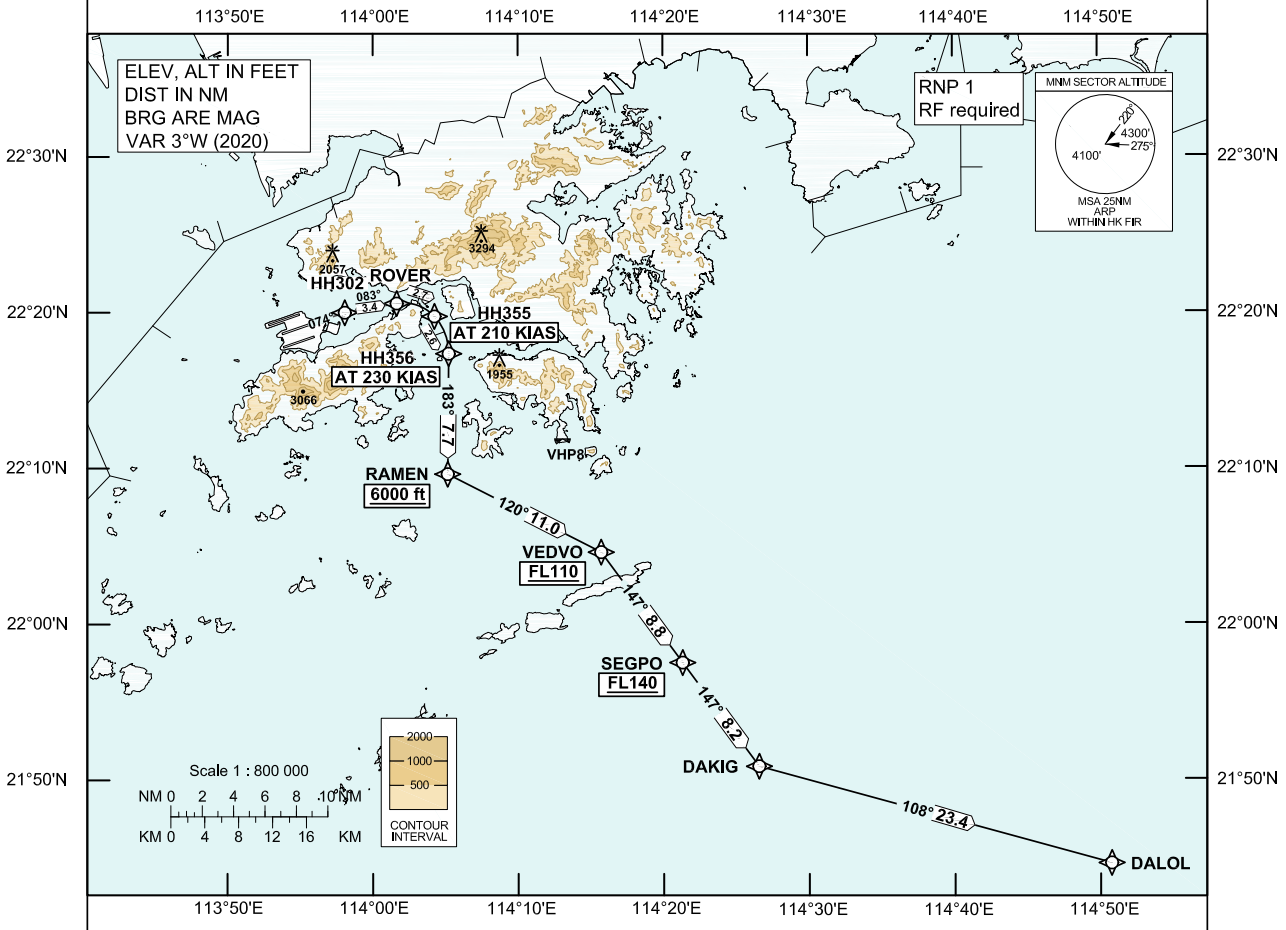
| Transition Altitude 9 000 ft | |
|---|---|
| Hong Kong Tower | 118.2 |
| Hong Kong Departure | 123.8 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) DALOL 1Y SID RWY 07C**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.

3. **Radius-to-fix (RF) leg is required.** Aircraft shall have RF capability as stipulated in the Aircraft Flight Manual or its FMS manual. For aircraft without RF capability, pilot shall request the corresponding non-RF SID procedure from Hong Kong Delivery.




## DALOL 1Y SID RWY 07C

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 3.4% (207 ft/NM) until passing 1 200 ft is required.

**SPEED RESTRICTION**
Speed restriction of 210 KIAS at HH355 and 230 KIAS at HH356.

**CHANGE:** New procedure.

AD 2-VHHH-SID-DALOL-Y_V01_240523km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: DALOL 1Y RWY 07C

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH302 | - | 074 (071) | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | ROVER | - | 083 (080) | +3.0 | 3.4 | - | - | - | RNP 1 |
| 03 | RF Centre: HH955 r=2.642 NM | HH355 | - | - | +3.0 | 2.7 | R | - | @210 | RNP 1 |
| 04 | RF Centre: HH956 r=3.494 NM | HH356 | - | - | +3.0 | 2.6 | R | - | @230 | RNP 1 |
| 05 | TF | RAMEN | - | 183 (180) | +3.0 | 7.7 | - | +6000 | - | RNP 1 |
| 06 | TF | VEDVO | - | 120 (117) | +3.0 | 11.0 | - | +FL110 | - | RNP 1 |
| 07 | TF | SEGPO | - | 147 (144) | +3.0 | 8.8 | - | +FL140 | - | RNP 1 |
| 08 | TF | DAKIG | - | 147 (144) | +3.0 | 8.2 | - | - | - | RNP 1 |
| 09 | TF | DALOL | - | 108 (105) | +3.0 | 23.4 | - | - | - | RNP 1 |

## WAYPOINT LIST

**DALOL 1Y RWY 07C**

| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| HH302 | 22 20 00.43N | 113 58 04.56E |
| ROVER | 22 20 35.58N | 114 01 39.12E |
| HH355 | 22 19 45.97N | 114 04 15.23E |
| HH356 | 22 17 22.57N | 114 05 14.10E |
| RAMEN | 22 09 39.22N | 114 05 09.89E |
| VEDVO | 22 04 38.19N | 114 15 43.05E |
| SEGPO | 21 57 32.77N | 114 21 18.59E |
| DAKIG | 21 50 52.90N | 114 26 33.33E |
| DALOL | 21 44 36.90N | 114 50 45.34E |
| **RF Arc Centre Identifier** | **Coordinates (WGS-84)** | |
| HH955 | 22 17 58.85N | 114 02 08.75E |
| HH956 | 22 17 24.31N | 114 01 27.97E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

Transition Altitude 9 000 ft

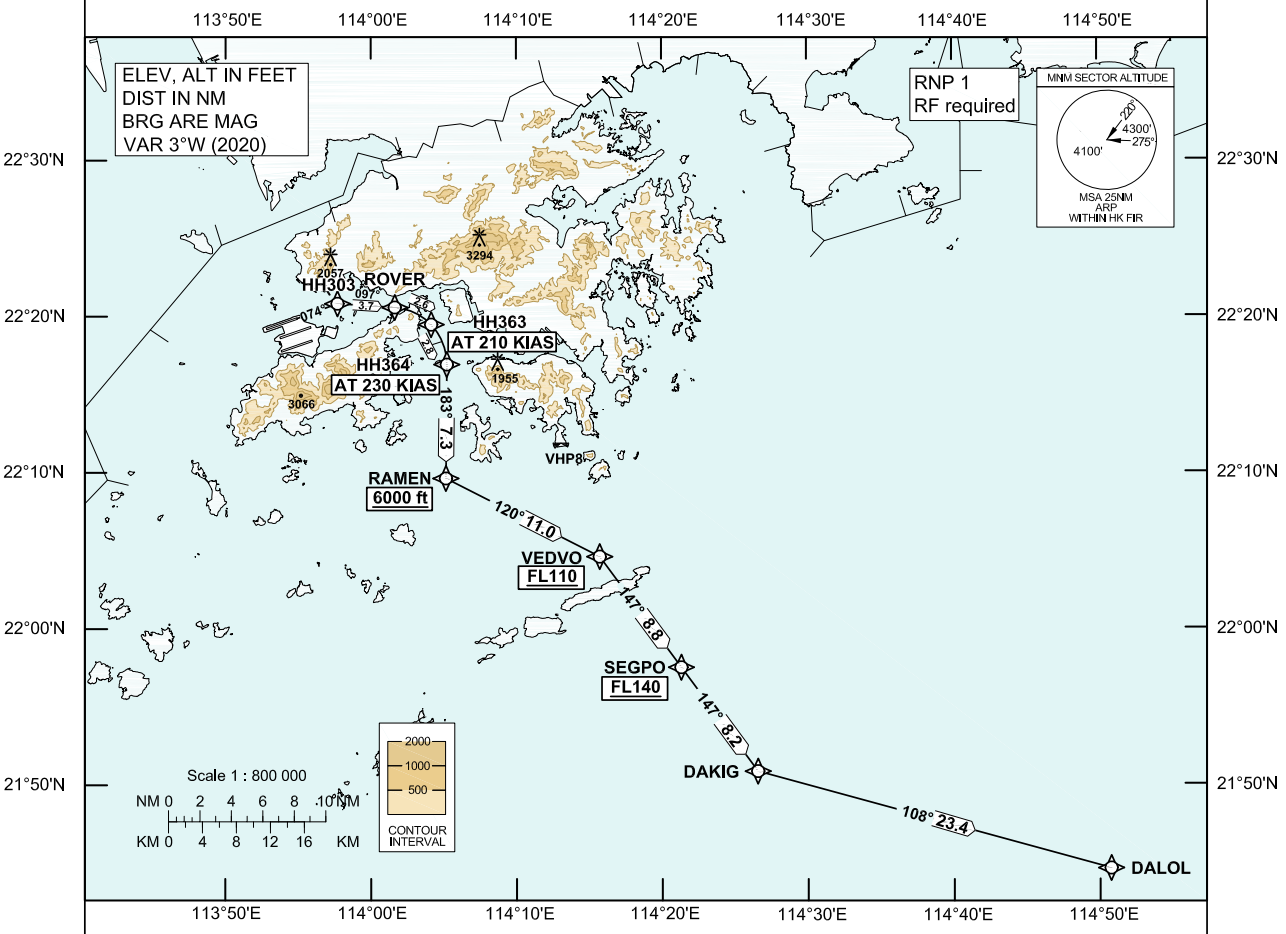
| | |
|---|---|
| Hong Kong Tower | 118.7 |
| Hong Kong Departure | 123.8 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) DALOL 1Z SID RWY 07L**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.

3. **Radius-to-fix (RF) leg is required.** Aircraft shall have RF capability as stipulated in the Aircraft Flight Manual or its FMS manual. For aircraft without RF capability, pilot shall request the corresponding non-RF SID procedure from Hong Kong Delivery.




## DALOL 1Z SID RWY 07L

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 3.3% (201 ft/NM).

**SPEED RESTRICTION**
Speed restriction of 210 KIAS at HH363 and 230 KIAS at HH364.

**CHANGE:** New procedure.

AD 2-VHHH-SID-DALOL-Z_V01_240523km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: DALOL 1Z RWY 07L

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH303 | - | 074 (071) | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | ROVER | - | 097 (094) | +3.0 | 3.7 | - | - | - | RNP 1 |
| 03 | RF Centre: HH963 r=3.507 NM | HH363 | - | - | +3.0 | 2.6 | R | - | @210 | RNP 1 |
| 04 | RF Centre: HH964 r=3.665 NM | HH364 | - | - | +3.0 | 2.8 | R | - | @230 | RNP 1 |
| 05 | TF | RAMEN | - | 183 (180) | +3.0 | 7.3 | - | +6000 | - | RNP 1 |
| 06 | TF | VEDVO | - | 120 (117) | +3.0 | 11.0 | - | +FL110 | - | RNP 1 |
| 07 | TF | SEGPO | - | 147 (144) | +3.0 | 8.8 | - | +FL140 | - | RNP 1 |
| 08 | TF | DAKIG | - | 147 (144) | +3.0 | 8.2 | - | - | - | RNP 1 |
| 09 | TF | DALOL | - | 108 (105) | +3.0 | 23.4 | - | - | - | RNP 1 |

## WAYPOINT LIST

**DALOL 1Z RWY 07L**

| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| HH303 | 22 20 50.02N | 113 57 42.83E |
| ROVER | 22 20 35.58N | 114 01 39.12E |
| HH363 | 22 19 29.68N | 114 04 09.36E |
| HH364 | 22 16 56.52N | 114 05 13.86E |
| RAMEN | 22 09 39.22N | 114 05 09.89E |
| VEDVO | 22 04 38.19N | 114 15 43.05E |
| SEGPO | 21 57 32.77N | 114 21 18.59E |
| DAKIG | 21 50 52.90N | 114 26 33.33E |
| DALOL | 21 44 36.90N | 114 50 45.34E |
| **RF Arc Centre Identifier** | **Coordinates (WGS-84)** | |
| HH963 | 22 17 04.89N | 114 01 24.20E |
| HH964 | 22 16 58.35N | 114 01 16.75E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

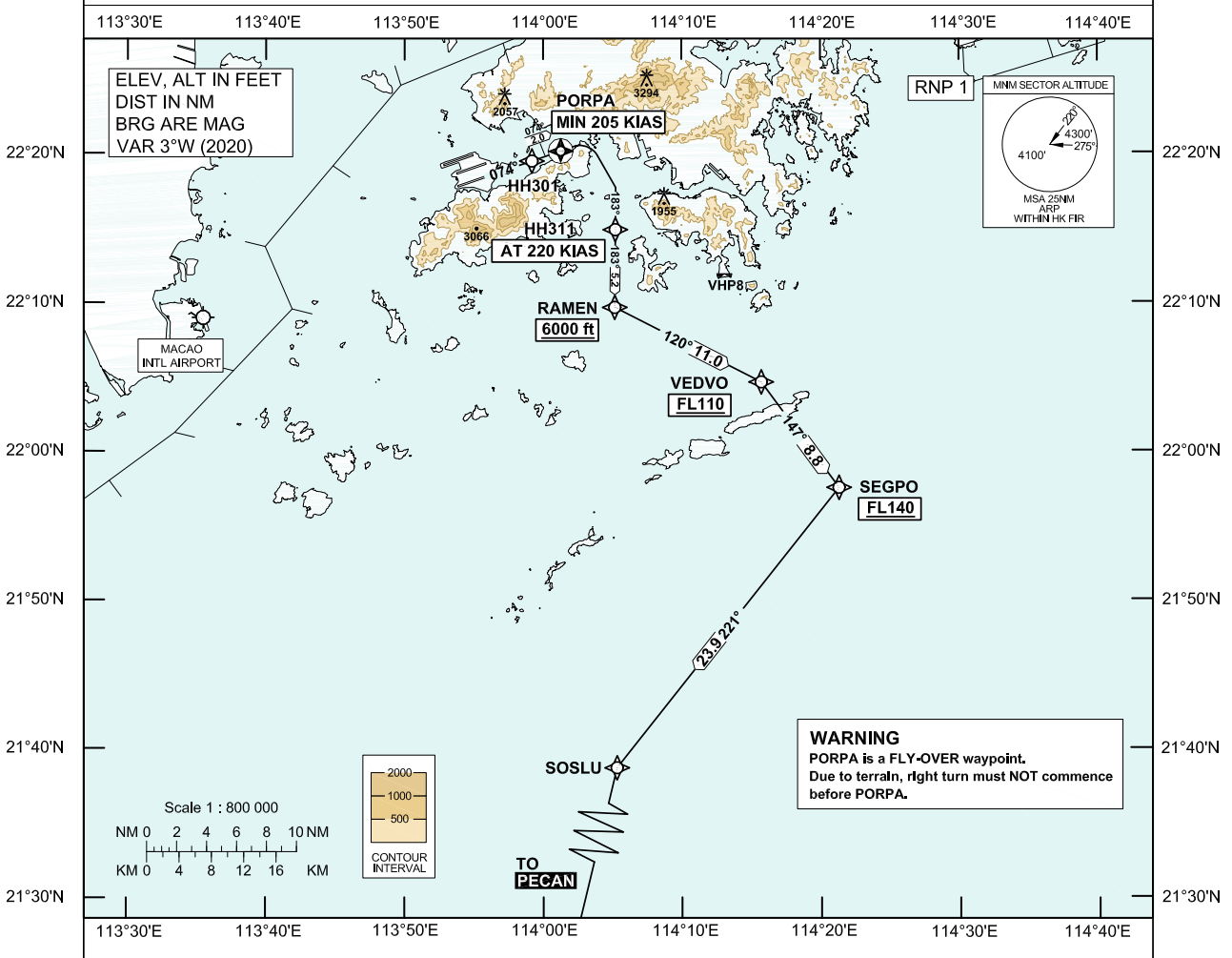
| Transition Altitude 9 000 ft | |
|---|---|
| Hong Kong Tower | 118.4 |
| Hong Kong Departure | 122.0 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) PECAN 3A SID RWY 07R**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.

3. PORPA is a **FLY-OVER** waypoint. All other waypoints are fly-by.




## PECAN 3A SID RWY 07R

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 4.8% (292 ft/NM) until passing 1 200 ft is required.

**SPEED RESTRICTION**
Speed restriction of 205 KIAS or greater at PORPA and 220 KIAS until HH311.

**CHANGE:** New procedure.

AD 2-VHHH-SID-PECAN-A_V01_240522lh

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: PECAN 3A RWY 07R

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH301 | - | 074 (071) | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | PORPA | Y | 074 (071) | +3.0 | 2.0 | - | - | +205 | RNP 1 |
| 03 | CF | HH311 | - | 183 (180) | +3.0 | - | R | - | @220 | RNP 1 |
| 04 | TF | RAMEN | - | 183 (180) | +3.0 | 5.2 | - | +6000 | - | RNP 1 |
| 05 | TF | VEDVO | - | 120 (117) | +3.0 | 11.0 | - | +FL110 | - | RNP 1 |
| 06 | TF | SEGPO | - | 147 (144) | +3.0 | 8.8 | - | +FL140 | - | RNP 1 |
| 07 | TF | SOSLU | - | 221 (218) | +3.0 | 23.9 | - | - | - | RNP 1 |
| 08 | TF | PECAN | - | 197 (194) | +3.0 | 12.7 | - | - | - | RNP 1 |

## WAYPOINT LIST

**PECAN 3A RWY 07R**

| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| HH301 | 22 19 29.01N | 113 59 11.61E |
| PORPA | 22 20 09.10N | 114 01 16.30E |
| HH311 | 22 14 52.34N | 114 05 12.73E |
| RAMEN | 22 09 39.22N | 114 05 09.89E |
| VEDVO | 22 04 38.19N | 114 15 43.05E |
| SEGPO | 21 57 32.77N | 114 21 18.59E |
| SOSLU | 21 38 44.03N | 114 05 18.39E |
| PECAN | 21 26 20.19N | 114 02 05.64E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

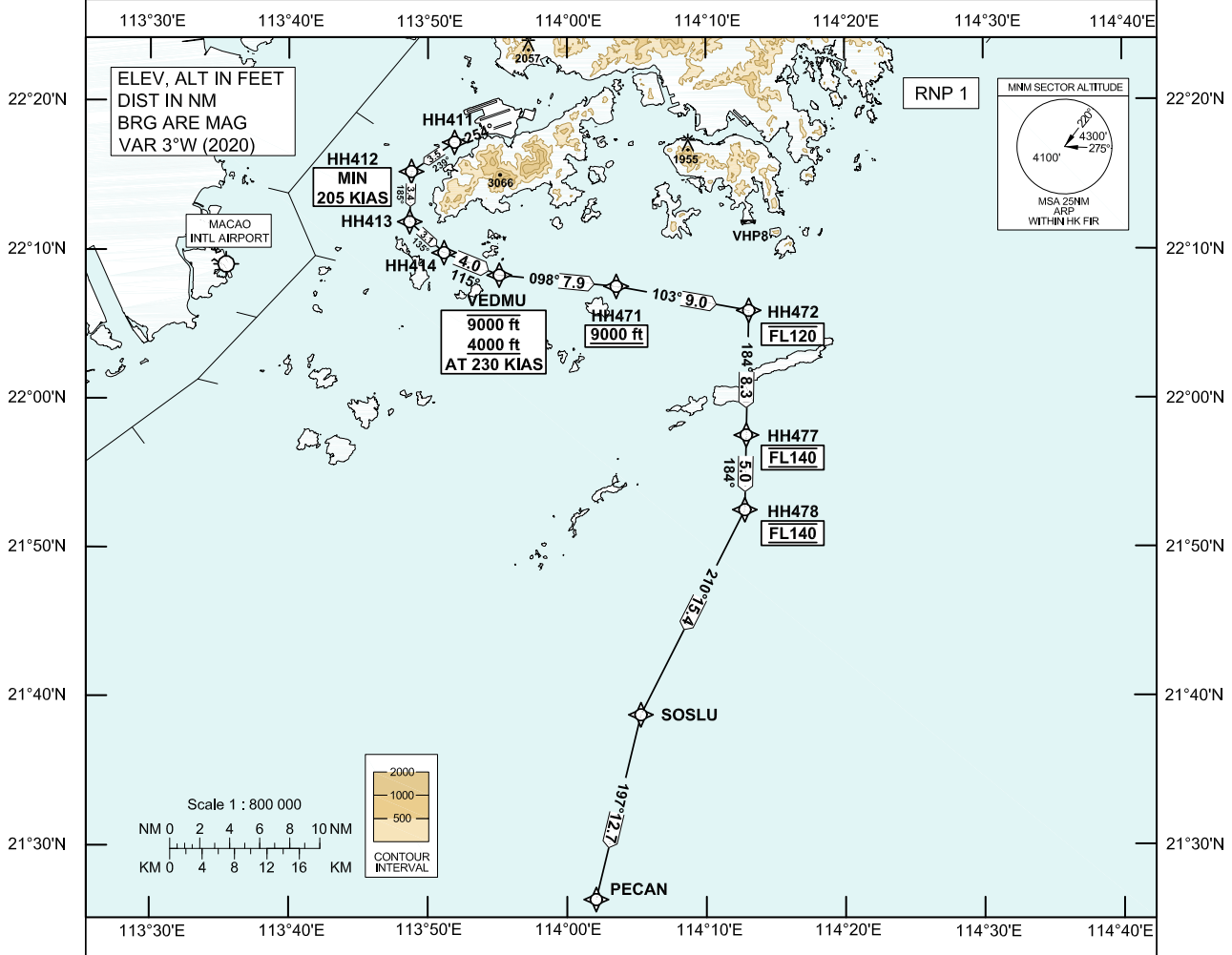
Transition Altitude 9 000 ft

| | |
|---|---|
| Hong Kong Tower | 118.4 |
| Hong Kong Departure | 122.0 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) PECAN 2B SID RWY 25L**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.




## PECAN 2B SID RWY 25L

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 4.7% (286 ft/NM) until passing 1 600 ft is required.

**SPEED RESTRICTION**
Speed restriction of 205 KIAS or greater at HH412 and 230 KIAS until VEDMU.

**CHANGE:** New procedure.

AD 2-VHHH-SID-PECAN-B_V01_240513km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: PECAN 2B RWY 25L

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH411 | - | 254 (251) | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | HH412 | - | 239 (236) | +3.0 | 3.5 | - | - | +205 | RNP 1 |
| 03 | TF | HH413 | - | 185 (182) | +3.0 | 3.4 | - | - | - | RNP 1 |
| 04 | TF | HH414 | - | 135 (132) | +3.0 | 3.1 | - | - | - | RNP 1 |
| 05 | TF | VEDMU | - | 115 (112) | +3.0 | 4.0 | - | -9000 +4000 | @230 | RNP 1 |
| 06 | TF | HH471 | - | 098 (095) | +3.0 | 7.9 | - | +9000 | - | RNP 1 |
| 07 | TF | HH472 | - | 103 (100) | +3.0 | 9.0 | - | -FL120 | - | RNP 1 |
| 08 | TF | HH477 | - | 184 (181) | +3.0 | 8.3 | - | @FL140 | - | RNP 1 |
| 09 | TF | HH478 | - | 184 (181) | +3.0 | 5.0 | - | @FL140 | - | RNP 1 |
| 10 | TF | SOSLU | - | 210 (207) | +3.0 | 15.4 | - | - | - | RNP 1 |
| 11 | TF | PECAN | - | 197 (194) | +3.0 | 12.7 | - | - | - | RNP 1 |

## WAYPOINT LIST

**PECAN 2B RWY 25L**

| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| HH411 | 22 17 08.52N | 113 51 55.32E |
| HH412 | 22 15 10.92N | 113 48 48.95E |
| HH413 | 22 11 48.90N | 113 48 41.37E |
| HH414 | 22 09 44.51N | 113 51 09.66E |
| VEDMU | 22 08 14.02N | 113 55 08.18E |
| HH471 | 22 07 28.61N | 114 03 33.28E |
| HH472 | 22 05 51.49N | 114 13 05.41E |
| HH477 | 21 57 29.80N | 114 12 54.07E |
| HH478 | 21 52 29.09N | 114 12 47.31E |
| SOSLU | 21 38 44.03N | 114 05 18.39E |
| PECAN | 21 26 20.19N | 114 02 05.64E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

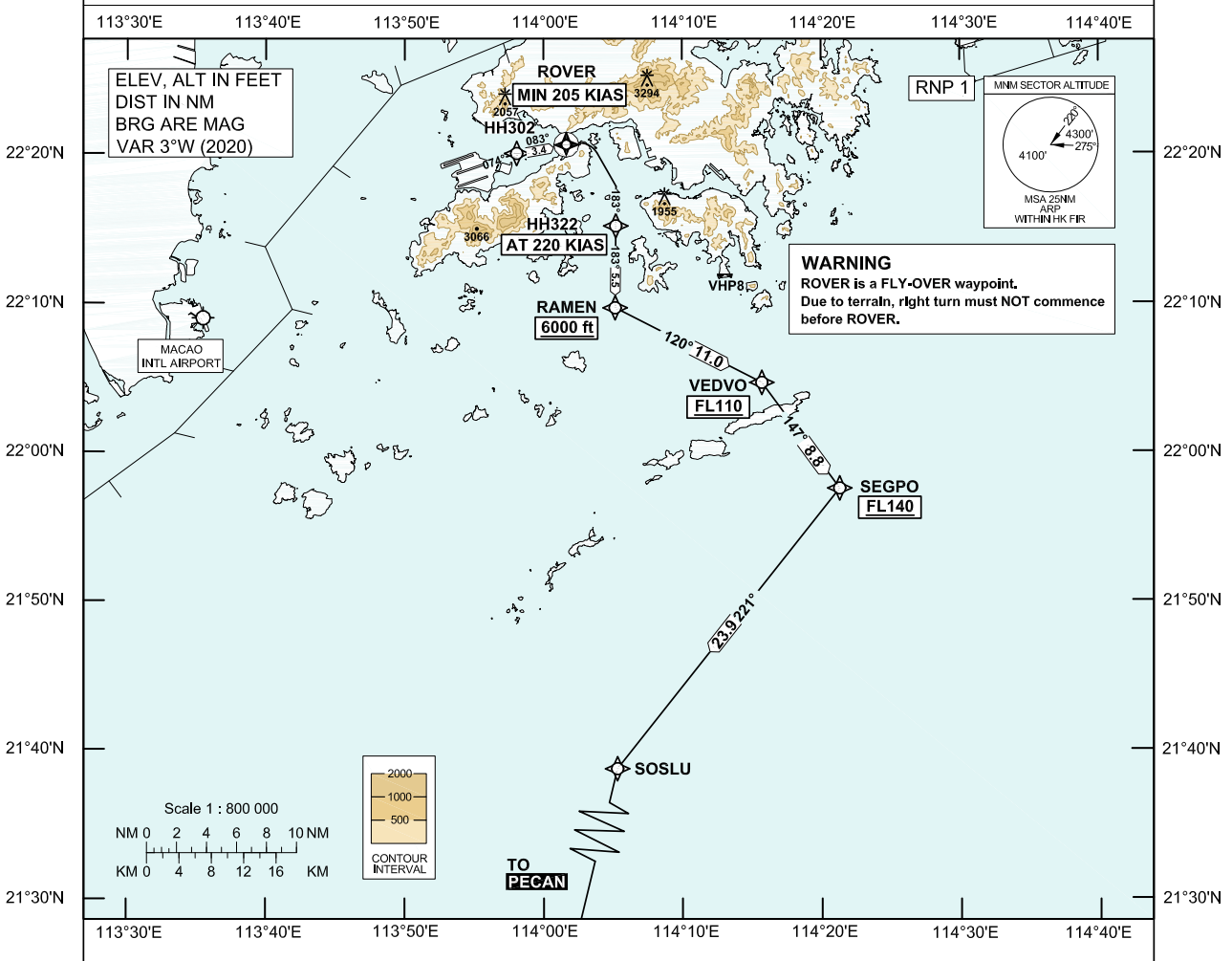
| Transition Altitude 9 000 ft | |
|---|---|
| Hong Kong Tower | 118.2 |
| Hong Kong Departure | 123.8 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) PECAN 1C SID RWY 07C**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.

3. ROVER is a **FLY-OVER** waypoint. All other waypoints are fly-by.




## PECAN 1C SID RWY 07C

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 3.8% (231 ft/NM) until passing 1 300 ft is required.

**SPEED RESTRICTION**
Speed restriction of 205 KIAS or greater at ROVER and 220 KIAS until HH322.

**CHANGE:** New procedure.

AD 2-VHHH-SID-PECAN-C_V01_240513km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: PECAN 1C RWY 07C

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH302 | - | 074 (071) | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | ROVER | Y | 083 (080) | +3.0 | 3.4 | - | - | +205 | RNP 1 |
| 03 | CF | HH322 | - | 183 (180) | +3.0 | - | R | - | @220 | RNP 1 |
| 04 | TF | RAMEN | - | 183 (180) | +3.0 | 5.5 | - | +6000 | - | RNP 1 |
| 05 | TF | VEDVO | - | 120 (117) | +3.0 | 11.0 | - | +FL110 | - | RNP 1 |
| 06 | TF | SEGPO | - | 147 (144) | +3.0 | 8.8 | - | +FL140 | - | RNP 1 |
| 07 | TF | SOSLU | - | 221 (218) | +3.0 | 23.9 | - | - | - | RNP 1 |
| 08 | TF | PECAN | - | 197 (194) | +3.0 | 12.7 | - | - | - | RNP 1 |

## WAYPOINT LIST

| PECAN 1C RWY 07C | | |
|---|---|---|
| **Waypoint Identifier** | **Coordinates (WGS-84)** | |
| HH302 | 22 20 00.43N | 113 58 04.56E |
| ROVER | 22 20 35.58N | 114 01 39.12E |
| HH322 | 22 15 08.88N | 114 05 12.88E |
| RAMEN | 22 09 39.22N | 114 05 09.89E |
| VEDVO | 22 04 38.19N | 114 15 43.05E |
| SEGPO | 21 57 32.77N | 114 21 18.59E |
| SOSLU | 21 38 44.03N | 114 05 18.39E |
| PECAN | 21 26 20.19N | 114 02 05.64E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

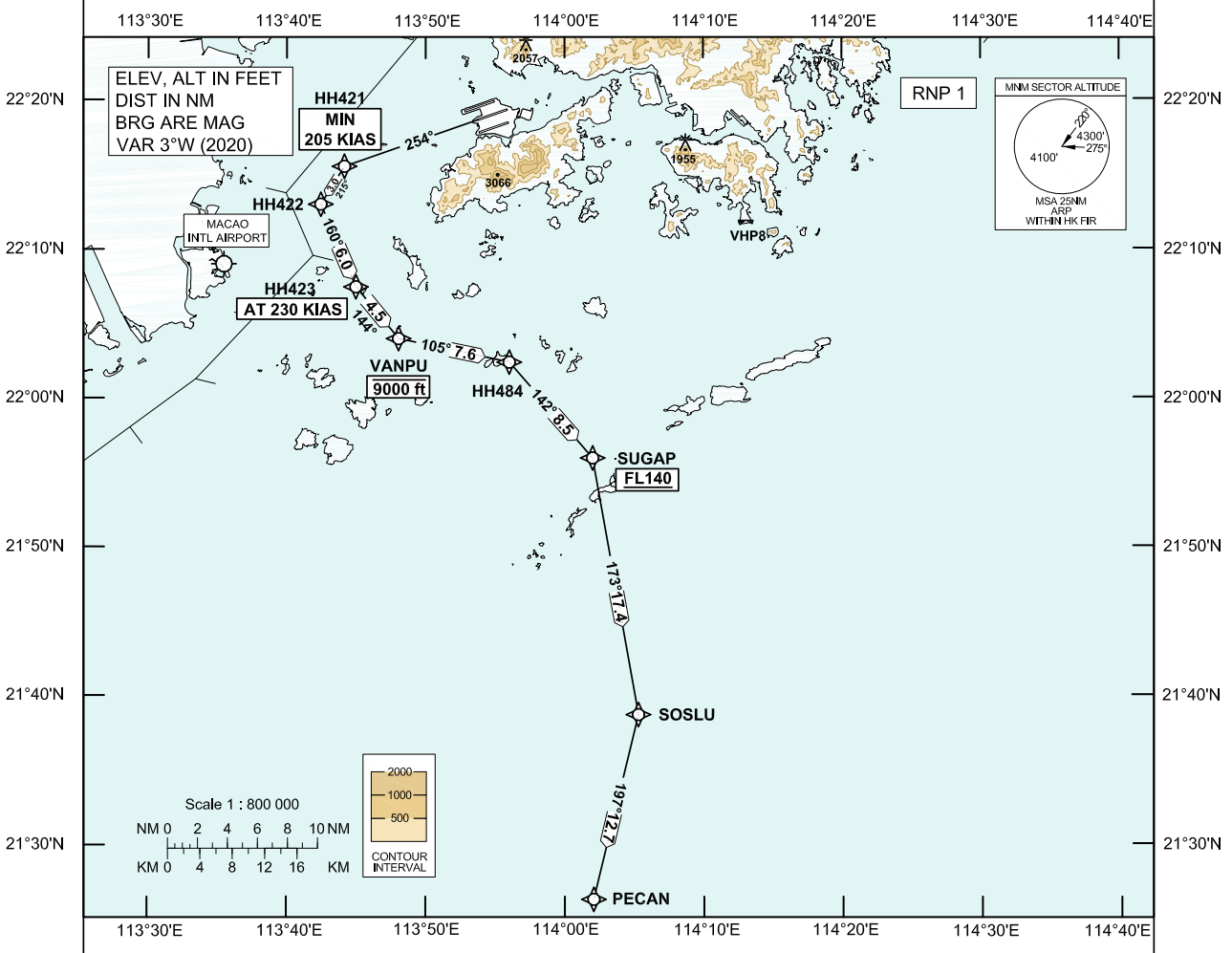
Transition Altitude 9 000 ft

| | |
|---|---|
| Hong Kong Tower | 118.2 |
| Hong Kong Departure | 123.8 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) PECAN 1D SID RWY 25C**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.




## PECAN 1D SID RWY 25C

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 3.3% (201 ft/NM).

**SPEED RESTRICTION**
Speed restriction of 205 KIAS or greater at HH421 and 230 KIAS until HH423.

**CHANGE:** New procedure.

AD 2-VHHH-SID-PECAN-D_V01_240513km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: PECAN 1D RWY 25C

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH421 | - | 254 (251) | +3.0 | - | - | - | +205 | RNP 1 |
| 02 | TF | HH422 | - | 215 (212) | +3.0 | 3.0 | - | - | - | RNP 1 |
| 03 | TF | HH423 | - | 160 (157) | +3.0 | 6.0 | - | - | @230 | RNP 1 |
| 04 | TF | VANPU | - | 144 (141) | +3.0 | 4.5 | - | -9000 | - | RNP 1 |
| 05 | TF | HH484 | - | 105 (102) | +3.0 | 7.6 | - | - | - | RNP 1 |
| 06 | TF | SUGAP | - | 142 (139) | +3.0 | 8.5 | | +FL140 | - | RNP 1 |
| 07 | TF | SOSLU | - | 173 (170) | +3.0 | 17.4 | | - | - | RNP 1 |
| 08 | TF | PECAN | - | 197 (194) | +3.0 | 12.7 | - | - | - | RNP 1 |

## WAYPOINT LIST

| PECAN 1D RWY 25C | | |
|---|---|---|
| **Waypoint Identifier** | **Coordinates (WGS-84)** | |
| HH421 | 22 15 31.13N | 113 44 09.41E |
| HH422 | 22 12 58.53N | 113 42 27.41E |
| HH423 | 22 07 26.10N | 113 44 59.40E |
| VANPU | 22 03 57.95N | 113 48 03.85E |
| HH484 | 22 02 23.21N | 113 56 01.92E |
| SUGAP | 21 55 57.44N | 114 02 01.64E |
| SOSLU | 21 38 44.03N | 114 05 18.39E |
| PECAN | 21 26 20.19N | 114 02 05.64E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

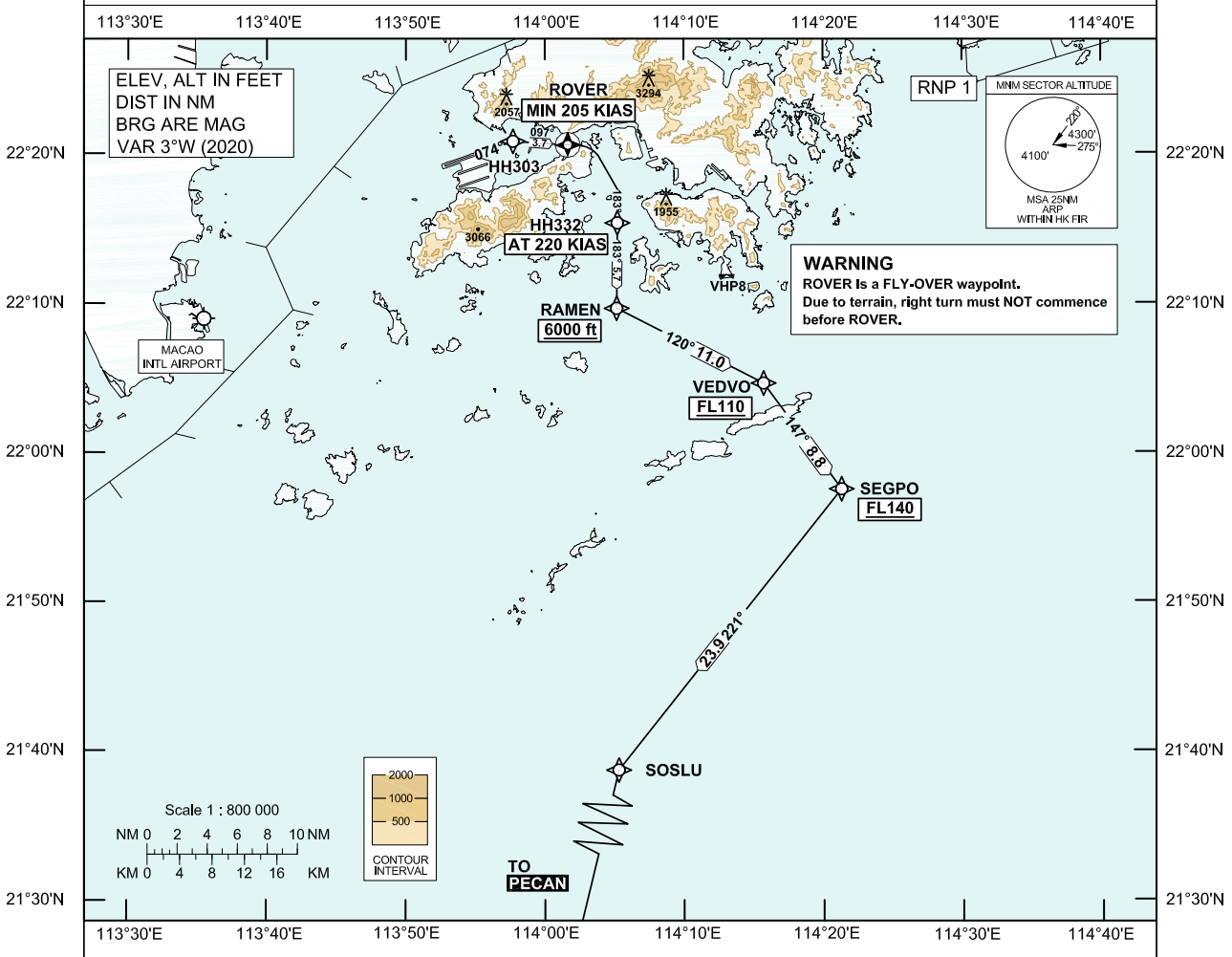
| Transition Altitude 9 000 ft | |
|---|---|
| Hong Kong Tower | 118.7 |
| Hong Kong Departure | 123.8 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) PECAN 2E SID RWY 07L**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.

3. ROVER is a **FLY-OVER** waypoint. All other waypoints are fly-by.




## PECAN 2E SID RWY 07L

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 3.3% (201 ft/NM).

**SPEED RESTRICTION**
Speed restriction of 205 KIAS or greater at ROVER and 220 KIAS until HH332.

**CHANGE:** New procedure.

AD 2-VHHH-SID-PECAN-E_V01_240513km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: PECAN 2E RWY 07L

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH303 | - | 074 (071) | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | ROVER | Y | 097 (094) | +3.0 | 3.7 | - | - | +205 | RNP 1 |
| 03 | CF | HH332 | - | 183 (180) | +3.0 | - | R | - | @220 | RNP 1 |
| 04 | TF | RAMEN | - | 183 (180) | +3.0 | 5.7 | - | +6000 | - | RNP 1 |
| 05 | TF | VEDVO | - | 120 (117) | +3.0 | 11.0 | - | +FL110 | - | RNP 1 |
| 06 | TF | SEGPO | - | 147 (144) | +3.0 | 8.8 | - | +FL140 | - | RNP 1 |
| 07 | TF | SOSLU | - | 221 (218) | +3.0 | 23.9 | - | - | - | RNP 1 |
| 08 | TF | PECAN | - | 197 (194) | +3.0 | 12.7 | - | - | - | RNP 1 |

## WAYPOINT LIST

| PECAN 2E RWY 07L | | |
|---|---|---|
| **Waypoint Identifier** | **Coordinates (WGS-84)** | |
| HH303 | 22 20 50.02N | 113 57 42.83E |
| ROVER | 22 20 35.58N | 114 01 39.12E |
| HH332 | 22 15 22.17N | 114 05 13.00E |
| RAMEN | 22 09 39.22N | 114 05 09.89E |
| VEDVO | 22 04 38.19N | 114 15 43.05E |
| SEGPO | 21 57 32.77N | 114 21 18.59E |
| SOSLU | 21 38 44.03N | 114 05 18.39E |
| PECAN | 21 26 20.19N | 114 02 05.64E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

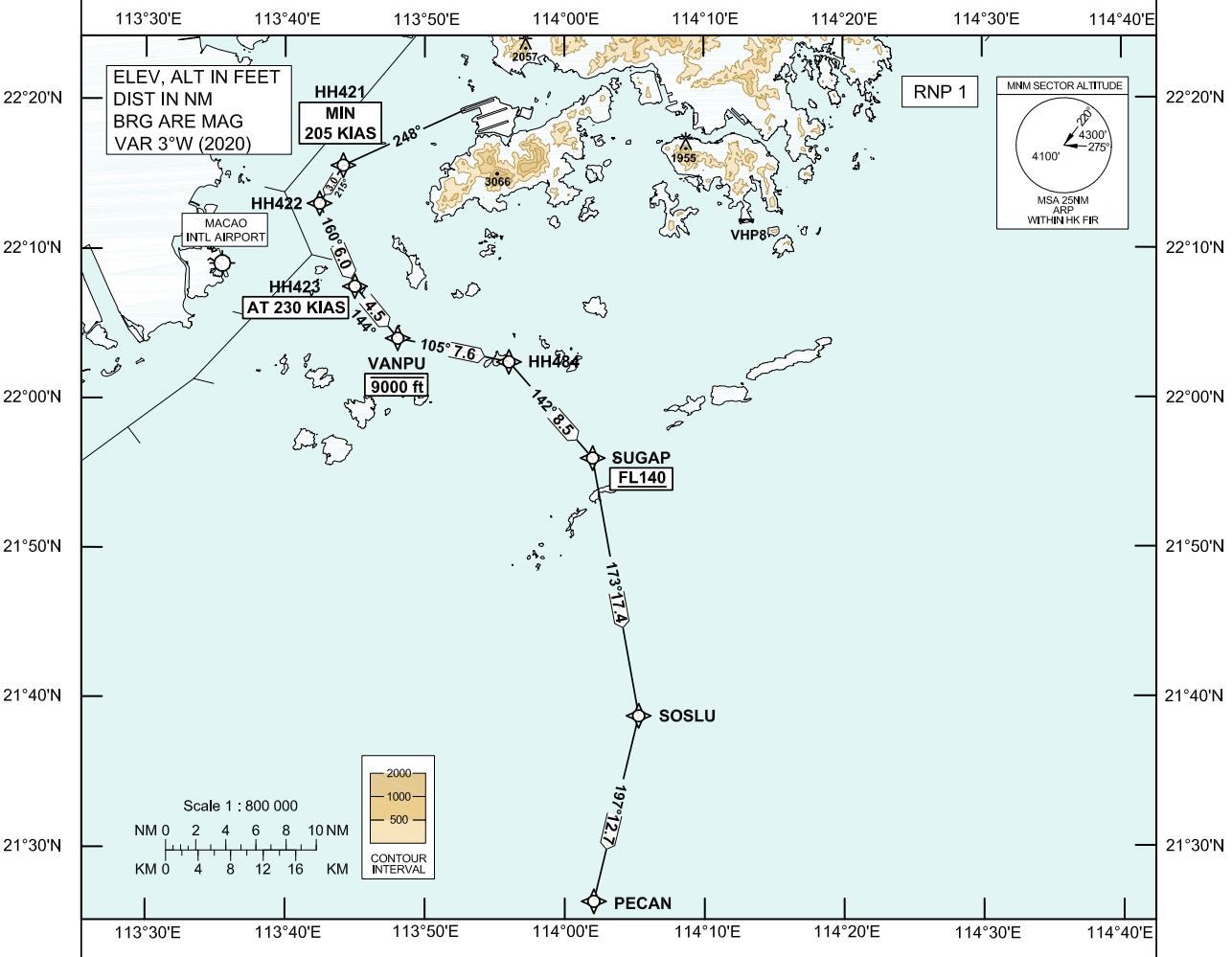
Transition Altitude 9 000 ft

| | |
|---|---|
| Hong Kong Tower | 118.7 |
| Hong Kong Departure | 123.8 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) PECAN 2F SID RWY 25R**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.




## PECAN 2F SID RWY 25R

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 3.3% (201 ft/NM).

**SPEED RESTRICTION**
Speed restriction of 205 KIAS or greater at HH421 and 230 KIAS until HH423.

**CHANGE:** New procedure.

AD 2-VHHH-SID-PECAN-F_V01_240513km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: PECAN 2F RWY 25R

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH421 | - | 248 (245) | +3.0 | - | - | - | +205 | RNP 1 |
| 02 | TF | HH422 | - | 215 (212) | +3.0 | 3.0 | - | - | - | RNP 1 |
| 03 | TF | HH423 | - | 160 (157) | +3.0 | 6.0 | - | - | @230 | RNP 1 |
| 04 | TF | VANPU | - | 144 (141) | +3.0 | 4.5 | - | -9000 | - | RNP 1 |
| 05 | TF | HH484 | - | 105 (102) | +3.0 | 7.6 | - | - | - | RNP 1 |
| 06 | TF | SUGAP | - | 142 (139) | +3.0 | 8.5 | - | +FL140 | - | RNP 1 |
| 07 | TF | SOSLU | - | 173 (170) | +3.0 | 17.4 | - | - | - | RNP 1 |
| 08 | TF | PECAN | - | 197 (194) | +3.0 | 12.7 | - | - | - | RNP 1 |

## WAYPOINT LIST

**PECAN 2F RWY 25R**

| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| HH421 | 22 15 31.13N | 113 44 09.41E |
| HH422 | 22 12 58.53N | 113 42 27.41E |
| HH423 | 22 07 26.10N | 113 44 59.40E |
| VANPU | 22 03 57.95N | 113 48 03.85E |
| HH484 | 22 02 23.21N | 113 56 01.92E |
| SUGAP | 21 55 57.44N | 114 02 01.64E |
| SOSLU | 21 38 44.03N | 114 05 18.39E |
| PECAN | 21 26 20.19N | 114 02 05.64E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

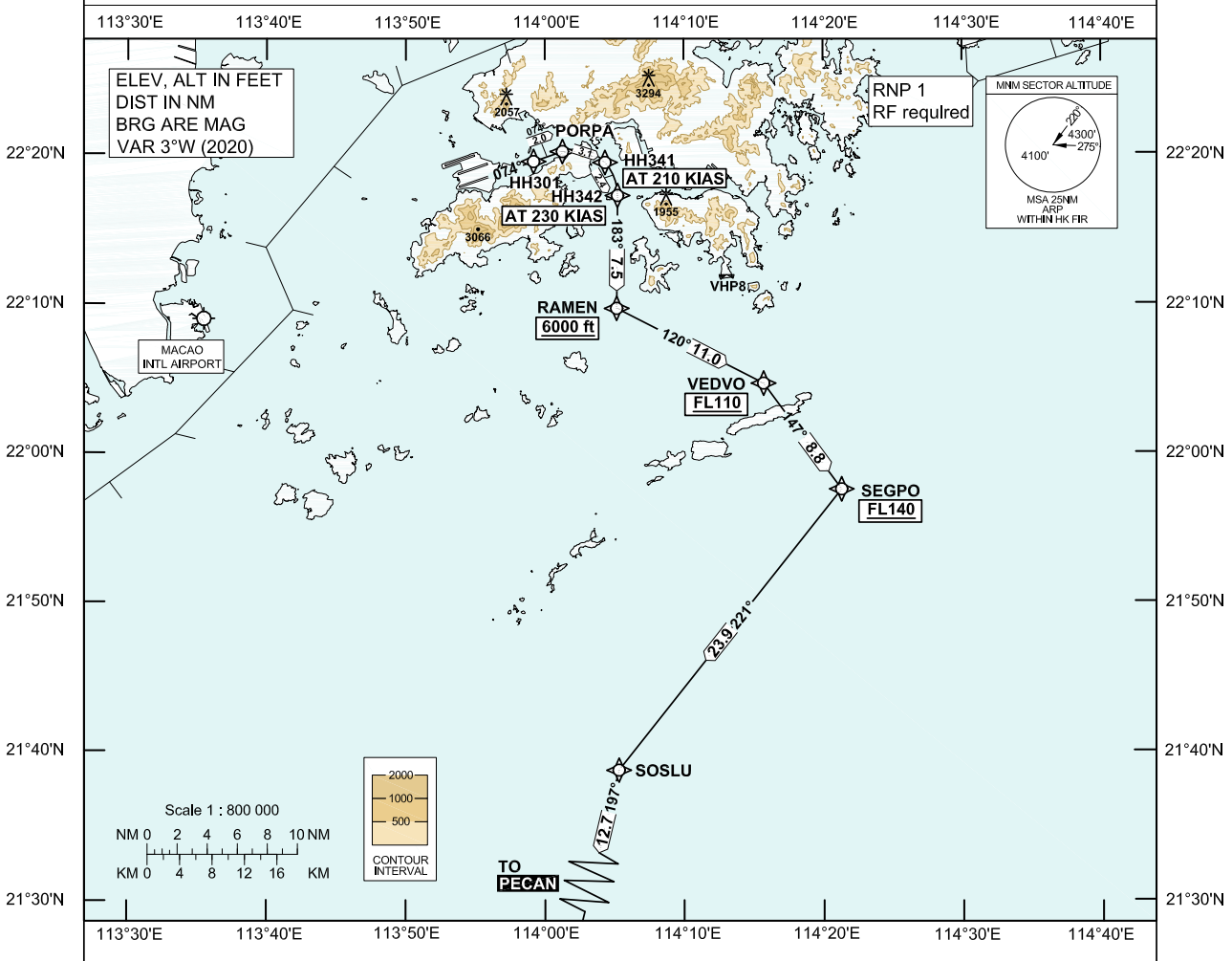
| Transition Altitude 9 000 ft | |
|---|---|
| Hong Kong Tower | 118.4 |
| Hong Kong Departure | 122.0 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) PECAN 3X SID RWY 07R**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.

3. **Radius-to-fix (RF) leg is required.** Aircraft shall have RF capability as stipulated in the Aircraft Flight Manual or its FMS manual. For aircraft without RF capability, pilot shall request the corresponding non-RF SID procedure from Hong Kong Delivery.




## PECAN 3X SID RWY 07R

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 4.8% (292 ft/NM) until passing 1 200 ft is required.

**SPEED RESTRICTION**
Speed restriction of 210 KIAS at HH341 and 230 KIAS at HH342.

**CHANGE:** New procedure.

AD 2-VHHH-SID-PECAN-X_V01_240524km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: PECAN 3X RWY 07R

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH301 | - | 074 (071) | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | PORPA | - | 074 (071) | +3.0 | 2.0 | - | - | - | RNP 1 |
| 03 | RF Centre: HH941 r=2.656 NM | HH341 | - | - | +3.0 | 3.1 | R | - | @210 | RNP 1 |
| 04 | RF Centre: HH942 r=3.246 NM | HH342 | - | - | +3.0 | 2.4 | R | - | @230 | RNP 1 |
| 05 | TF | RAMEN | - | 183 (180) | +3.0 | 7.5 | - | +6000 | - | RNP 1 |
| 06 | TF | VEDVO | - | 120 (117) | +3.0 | 11.0 | - | +FL110 | - | RNP 1 |
| 07 | TF | SEGPO | - | 147 (144) | +3.0 | 8.8 | - | +FL140 | - | RNP 1 |
| 08 | TF | SOSLU | - | 221 (218) | +3.0 | 23.9 | - | - | - | RNP 1 |
| 09 | TF | PECAN | - | 197 (194) | +3.0 | 12.7 | - | - | - | RNP 1 |

## WAYPOINT LIST

**PECAN 3X RWY 07R**

| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| HH301 | 22 19 29.01N | 113 59 11.61E |
| PORPA | 22 20 09.10N | 114 01 16.30E |
| HH341 | 22 19 25.15N | 114 04 19.86E |
| HH342 | 22 17 12.51N | 114 05 14.01E |
| RAMEN | 22 09 39.22N | 114 05 09.89E |
| VEDVO | 22 04 38.19N | 114 15 43.05E |
| SEGPO | 21 57 32.77N | 114 21 18.59E |
| SOSLU | 21 38 44.03N | 114 05 18.39E |
| PECAN | 21 26 20.19N | 114 02 05.64E |
| **RF Arc Centre Identifier** | **Coordinates (WGS-84)** | |
| HH941 | 22 17 37.96N | 114 02 12.36E |
| HH942 | 22 17 14.13N | 114 01 44.03E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

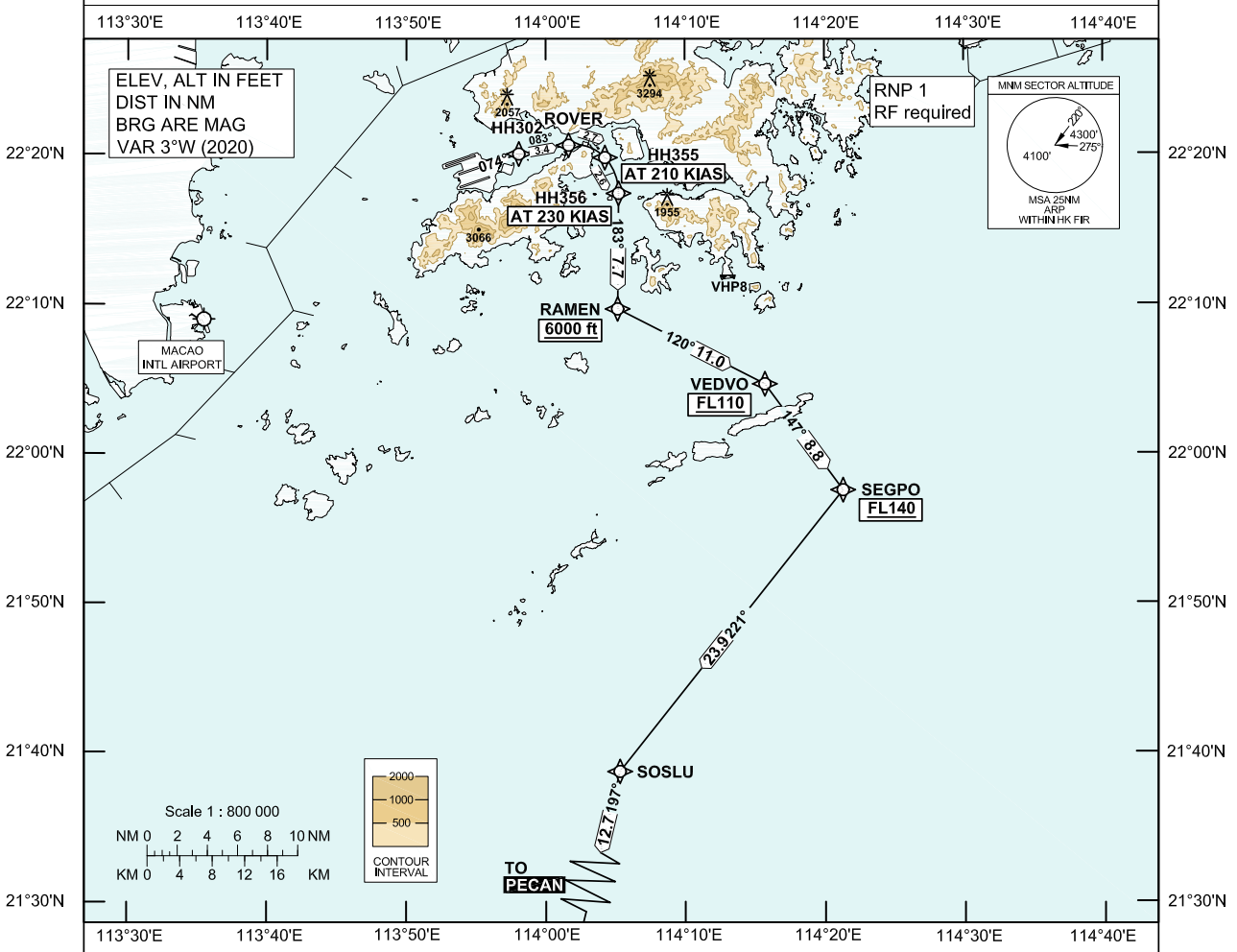
| Transition Altitude 9 000 ft | |
|---|---|
| Hong Kong Tower | 118.2 |
| Hong Kong Departure | 123.8 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) PECAN 1Y SID RWY 07C**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.

3. **Radius-to-fix (RF) leg is required.** Aircraft shall have RF capability as stipulated in the Aircraft Flight Manual or its FMS manual. For aircraft without RF capability, pilot shall request the corresponding non-RF SID procedure from Hong Kong Delivery.




## PECAN 1Y SID RWY 07C

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 3.4% (207 ft/NM) until passing 1 200 ft is required.

**SPEED RESTRICTION**
Speed restriction of 210 KIAS at HH355 and 230 KIAS at HH356.

**CHANGE:** New procedure.

AD 2-VHHH-SID-PECAN-Y_V01_240523km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: PECAN 1Y RWY 07C

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH302 | - | 074 (071) | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | ROVER | - | 083 (080) | +3.0 | 3.4 | - | - | - | RNP 1 |
| 03 | RF Centre: HH955 r=2.642 NM | HH355 | - | - | +3.0 | 2.7 | R | - | @210 | RNP 1 |
| 04 | RF Centre: HH956 r=3.494 NM | HH356 | - | - | +3.0 | 2.6 | R | - | @230 | RNP 1 |
| 05 | TF | RAMEN | - | 183 (180) | +3.0 | 7.7 | - | +6000 | - | RNP 1 |
| 06 | TF | VEDVO | - | 120 (117) | +3.0 | 11.0 | - | +FL110 | - | RNP 1 |
| 07 | TF | SEGPO | - | 147 (144) | +3.0 | 8.8 | - | +FL140 | - | RNP 1 |
| 08 | TF | SOSLU | - | 221 (218) | +3.0 | 23.9 | - | - | - | RNP 1 |
| 09 | TF | PECAN | - | 197 (194) | +3.0 | 12.7 | - | - | - | RNP 1 |

## WAYPOINT LIST

**PECAN 1Y RWY 07C**

| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| HH302 | 22 20 00.43N | 113 58 04.56E |
| ROVER | 22 20 35.58N | 114 01 39.12E |
| HH355 | 22 19 45.97N | 114 04 15.23E |
| HH356 | 22 17 22.57N | 114 05 14.10E |
| RAMEN | 22 09 39.22N | 114 05 09.89E |
| VEDVO | 22 04 38.19N | 114 15 43.05E |
| SEGPO | 21 57 32.77N | 114 21 18.59E |
| SOSLU | 21 38 44.03N | 114 05 18.39E |
| PECAN | 21 26 20.19N | 114 02 05.64E |
| **RF Arc Centre Identifier** | **Coordinates (WGS-84)** | |
| HH955 | 22 17 58.85N | 114 02 08.75E |
| HH956 | 22 17 24.31N | 114 01 27.97E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

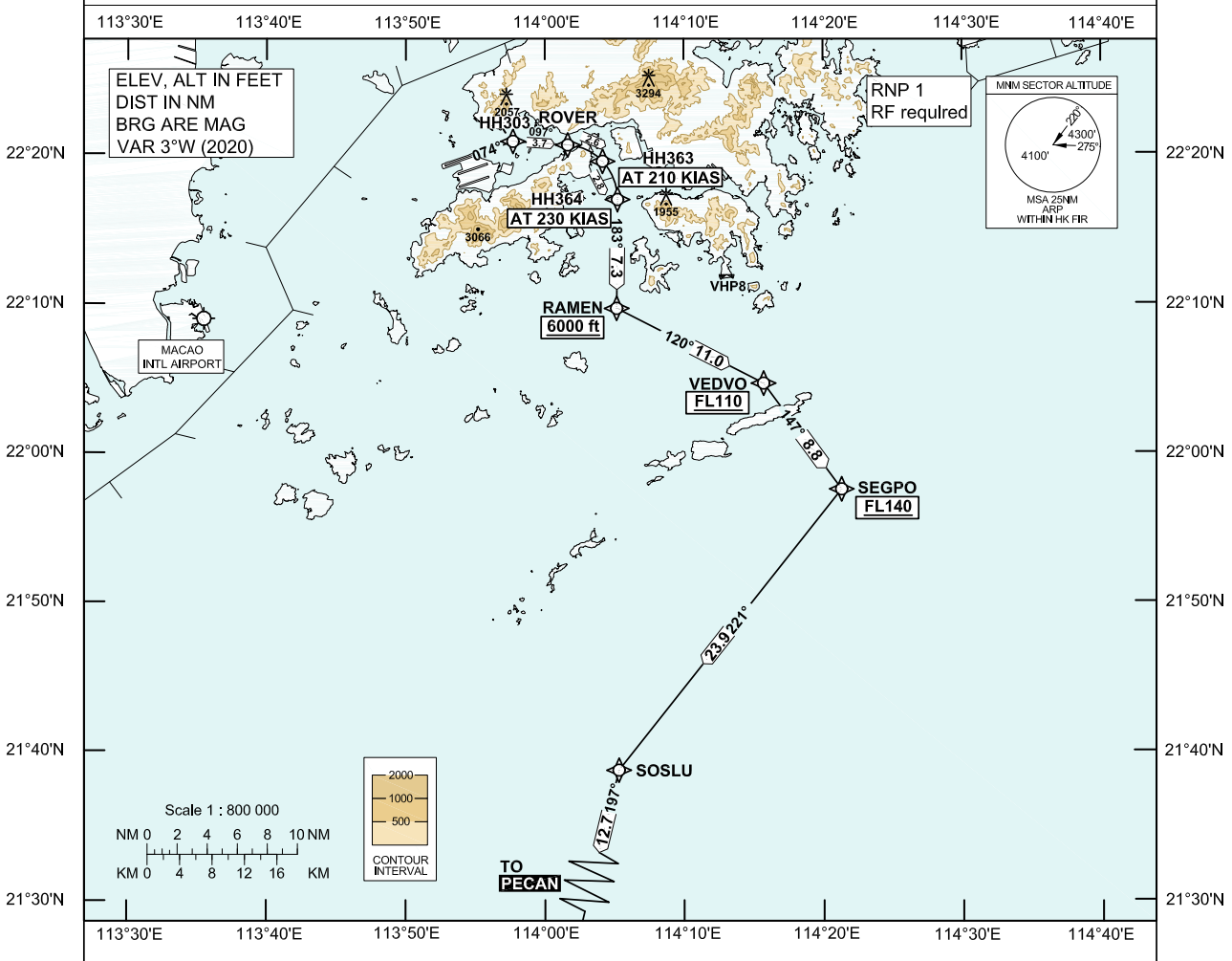
| Transition Altitude 9 000 ft | |
|---|---|
| Hong Kong Tower | 118.7 |
| Hong Kong Departure | 123.8 |

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) PECAN 2Z SID RWY 07L**

1. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

2. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.

3. **Radius-to-fix (RF) leg is required.** Aircraft shall have RF capability as stipulated in the Aircraft Flight Manual or its FMS manual. For aircraft without RF capability, pilot shall request the corresponding non-RF SID procedure from Hong Kong Delivery.




## PECAN 2Z SID RWY 07L

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Comply with all the published altitude restrictions. If unable to comply with the vertical profile, pilot shall inform ATC prior to start-up.

**TERRAIN CLEARANCE**
Minimum climb gradient of 3.3% (201 ft/NM).

**SPEED RESTRICTION**
Speed restriction of 210 KIAS at HH363 and 230 KIAS at HH364.

**CHANGE:** New procedure.

AD 2-VHHH-SID-PECAN-Z_V01_240523km

# FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

## TABULAR DESCRIPTION: PECAN 2Z RWY 07L

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | HH303 | - | 074 (071) | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | ROVER | - | 097 (094) | +3.0 | 3.7 | - | - | - | RNP 1 |
| 03 | RF Centre: HH963 r=3.507 NM | HH363 | - | - | +3.0 | 2.6 | R | - | @210 | RNP 1 |
| 04 | RF Centre: HH964 r=3.665 NM | HH364 | - | - | +3.0 | 2.8 | R | - | @230 | RNP 1 |
| 05 | TF | RAMEN | - | 183 (180) | +3.0 | 7.3 | - | +6000 | - | RNP 1 |
| 06 | TF | VEDVO | - | 120 (117) | +3.0 | 11.0 | - | +FL110 | - | RNP 1 |
| 07 | TF | SEGPO | - | 147 (144) | +3.0 | 8.8 | - | +FL140 | - | RNP 1 |
| 08 | TF | SOSLU | - | 221 (218) | +3.0 | 23.9 | - | - | - | RNP 1 |
| 09 | TF | PECAN | - | 197 (194) | +3.0 | 12.7 | - | - | - | RNP 1 |

## WAYPOINT LIST

**PECAN 2Z RWY 07L**

| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| HH303 | 22 20 50.02N | 113 57 42.83E |
| ROVER | 22 20 35.58N | 114 01 39.12E |
| HH363 | 22 19 29.68N | 114 04 09.36E |
| HH364 | 22 16 56.52N | 114 05 13.86E |
| RAMEN | 22 09 39.22N | 114 05 09.89E |
| VEDVO | 22 04 38.19N | 114 15 43.05E |
| SEGPO | 21 57 32.77N | 114 21 18.59E |
| SOSLU | 21 38 44.03N | 114 05 18.39E |
| PECAN | 21 26 20.19N | 114 02 05.64E |
| **RF Arc Centre Identifier** | **Coordinates (WGS-84)** | |
| HH963 | 22 17 04.89N | 114 01 24.20E |
| HH964 | 22 16 58.35N | 114 01 16.75E |

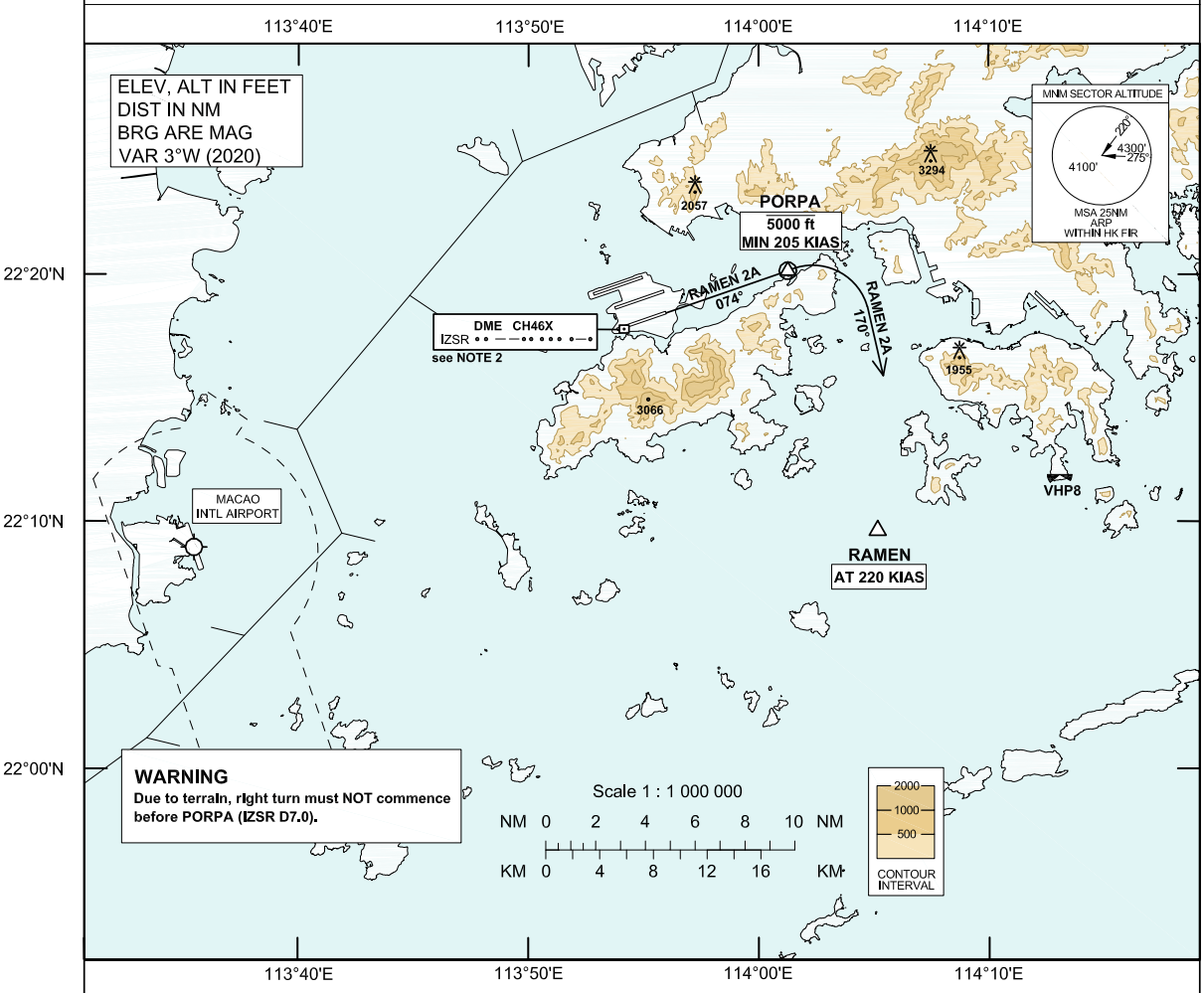
**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

Transition Altitude 9 000 ft

| | |
|---|---|
| Hong Kong Tower | 118.4 |
| Hong Kong Departure | 122.0 |

**HONG KONG / Intl (VHHH)**
**RAMEN 2A SID RWY 07R**

1. This is contingency procedure exclusive for flights exempted from RNP1 requirement as specified in GEN 1.5 para 3.5.3.5.
2. DME is required.
3. To maintain terrain clearance, **DO NOT** turn right before passing PORPA (IZSR D7.0).




## RAMEN 2A SID RWY 07R

**CONVENTIONAL PROCEDURE**
Track 074° to PORPA (IZSR D7.0). At PORPA, turn right track 170°, request radar vectors to RAMEN.

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Cross PORPA at 5 000 ft or below.

**TERRAIN CLEARANCE**
Minimum climb gradient of 4.9% (298 ft/NM) until leaving 1400 ft is required.

**SPEED RESTRICTION**
Speed restriction of 205 KIAS or greater at PORPA and 220 KIAS until RAMEN.

**CHANGE:** Hong Kong Departure frequency.

AD 2-VHHH-SID-RAMEN-A_V01_240315in

# RWY 07R RAMEN 2A DEPARTURE

## NAVIGATION AIDS

| Navaid/Ident | Frequency | Coordinates | Remarks |
|---|---|---|---|
| DME/IZSR | CH 46X | 22 17 47.78N 113 54 09.48E | |

## WAYPOINT LIST

| RAMEN 2A RWY 07R | | | |
|---|---|---|---|
| **Waypoint Identifier** | **Coordinates (WGS-84)** | | **Cross Reference from Navaid** |
| PORPA | 22 20 09.10N | 114 01 16.30E | IZSR DME 7.0 NM |
| RAMEN | 22 09 39.22N | 114 05 09.89E | - |

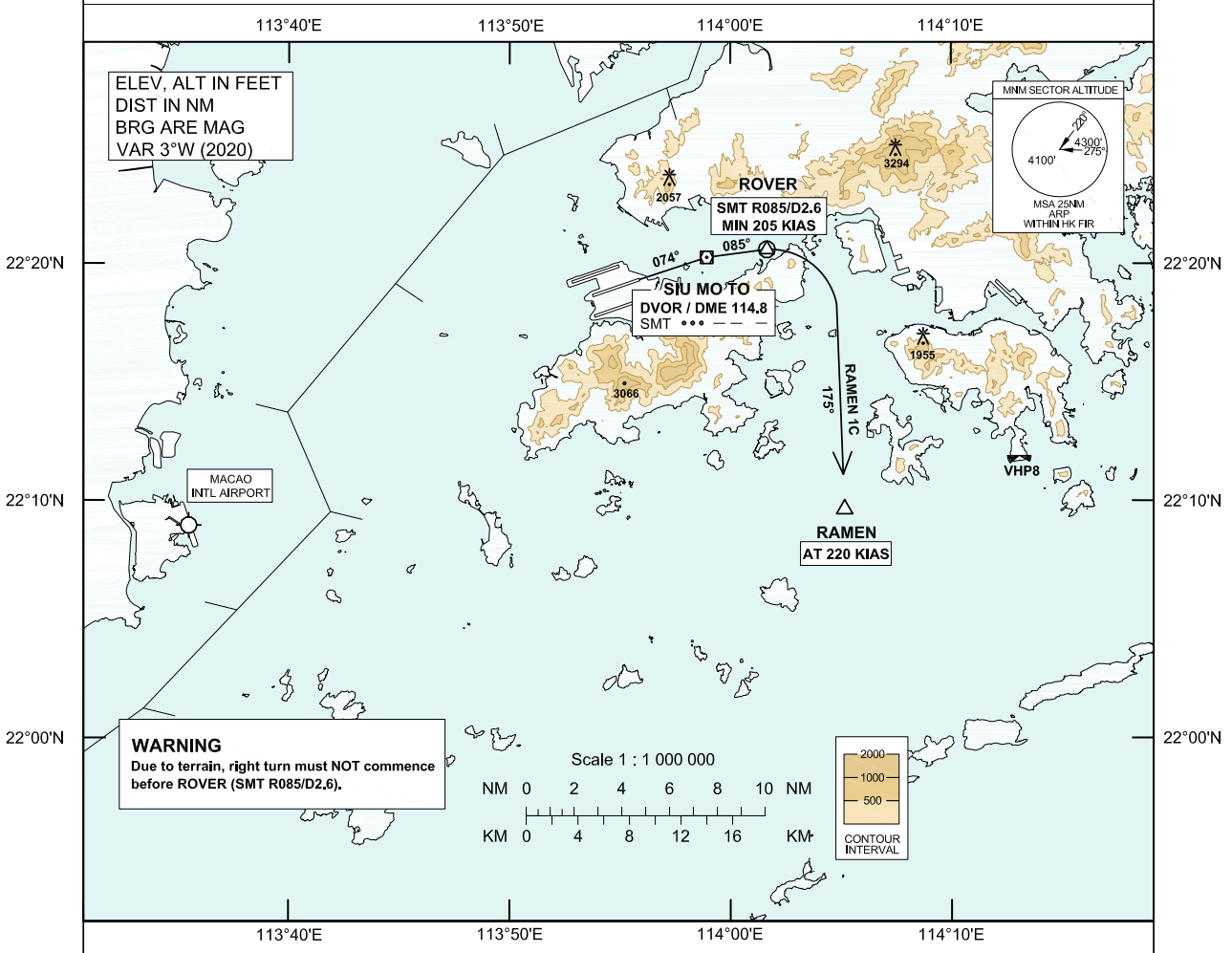
**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

Transition Altitude 9 000 ft

| | |
|---|---|
| Hong Kong Tower | 118.2 |
| Hong Kong Departure | 123.8 |

**HONG KONG / Intl (VHHH)**
**RAMEN 1C SID RWY 07C**

1. This is contingency procedure exclusive for flights exempted from RNP1 requirement as specified in GEN 1.5 para 3.5.3.5.
2. DME is required.
3. To maintain terrain clearance, **DO NOT** turn right before passing ROVER (SMT R085/D2.6).




## RAMEN 1C SID RWY 07C

**CONVENTIONAL PROCEDURE**
Track 074° SMT DVOR. Depart SMT DVOR on RDL085 to ROVER (SMT R085/D2.6). At ROVER, turn right to track 175°M, request radar vectors to RAMEN.

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC.

**TERRAIN CLEARANCE**
Minimum climb gradient of 3.8% (231 ft/NM) until leaving 1 300 ft is required.

**SPEED RESTRICTION**
Speed restriction of 205 KIAS or greater at ROVER and 220 KIAS until RAMEN.

**CHANGE:** New Procedure.

AD 2-VHHH-SID-RAMEN-C_V01_240719km

# RWY 07C RAMEN 1C DEPARTURE

## NAVIGATION AIDS

| Navaid/Ident | Frequency | Coordinates | Remarks |
|---|---|---|---|
| SMT DVOR | 114.8 MHz | 22 20 15.43N 113 58 55.46E | Co-located |
| SMT DME | CH 95X | | |

## WAYPOINT LIST

**RAMEN 1C RWY 07C**

| Waypoint Identifier | Coordinates (WGS-84) | | Cross Reference from Navaid |
|---|---|---|---|
| ROVER | 22 20 35.58N | 114 01 39.12E | SMT RDL 085 DME 2.6 NM |
| RAMEN | 22 09 39.22N | 114 05 09.89E | - |
| SMT | 22 20 15.43N | 113 58 55.46E | SMT DVOR/DME |

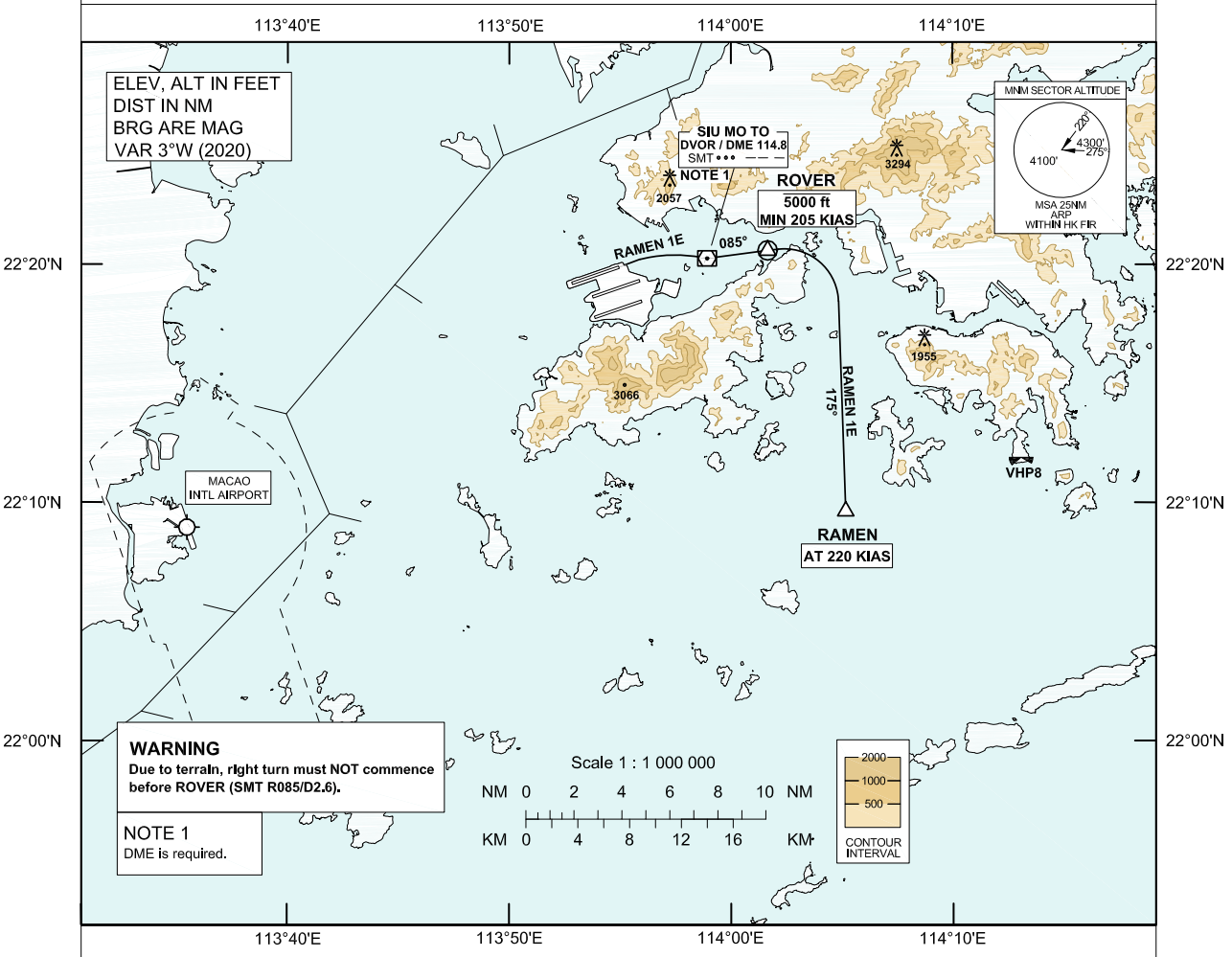
**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

Transition Altitude 9 000 ft

| | |
|---|---|
| Hong Kong Tower | 118.7 |
| Hong Kong Departure | 123.8 |

**HONG KONG / Intl (VHHH)**
**RAMEN 1E SID RWY 07L**

1. This is contingency procedure exclusive for flights exempted from RNP1 requirement as specified in GEN 1.5 para 3.5.3.5.
2. DME is required.
3. To maintain terrain clearance, **DO NOT** turn right before passing ROVER (SMT R085/D2.6).




## RAMEN 1E SID RWY 07L

**CONVENTIONAL PROCEDURE**
Climb straight ahead to 430ft. Then, turn right direct to SMT. At SMT, turn left to track 085° MAG to ROVER (SMT R085/D2.6). At ROVER, turn right to track 175° MAG, request radar vectors to RAMEN.

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Cross ROVER at 5 000 ft or below.

**TERRAIN CLEARANCE**
Minimum climb gradient of 3.4% (207 ft/NM) until leaving 1400 ft is required.

**SPEED RESTRICTION**
Speed restriction of 205 KIAS or greater at ROVER and 220 KIAS until RAMEN.

**CHANGE:** Runway 07C/25C reopened.

AD 2-VHHH-SID-RAMEN-E_V01_240315In

# RWY 07L RAMEN 1E DEPARTURE

## NAVIGATION AIDS

| Navaid/Ident | Frequency | Coordinates | Remarks |
|---|---|---|---|
| SMT DVOR | 114.8 MHz | 22 20 15.43N 113 58 55.46E | Co-located |
| SMT DME | CH 95X | | |

## WAYPOINT LIST

**RAMEN 2E RWY 07L**

| Waypoint Identifier | Coordinates (WGS-84) | | Cross Reference from Navaid |
|---|---|---|---|
| ROVER | 22 20 35.58N | 114 01 39.12E | SMT RDL 085 DME 2.6 NM |
| RAMEN | 22 09 39.22N | 114 05 09.89E | - |
| SMT | 22 20 15.43N | 113 58 55.46E | SMT DVOR/DME |

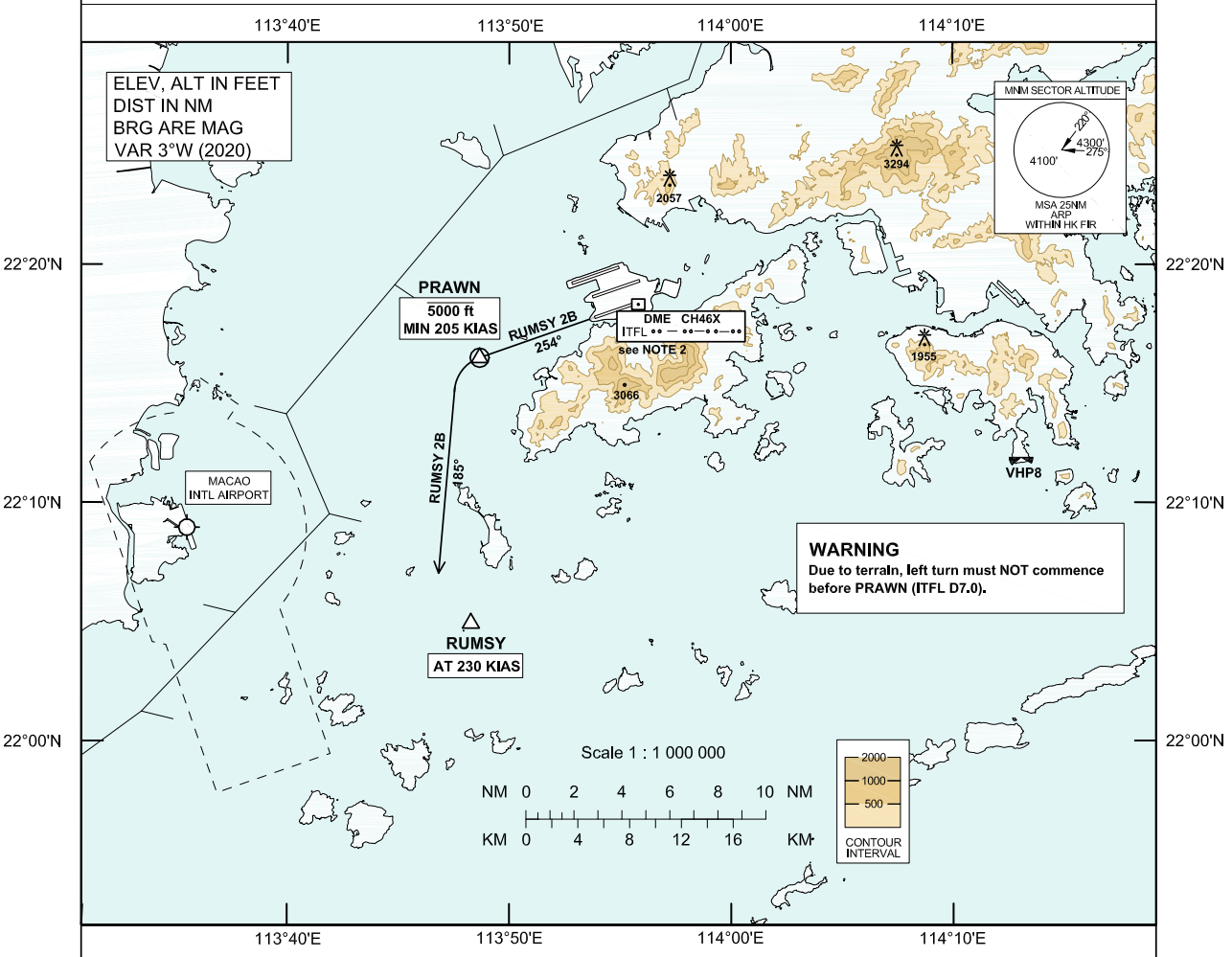
**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

Transition Altitude 9 000 ft

| | |
|---|---|
| Hong Kong Tower | 118.4 |
| Hong Kong Departure | 122.0 |

**HONG KONG / Intl (VHHH)**
**RUMSY 2B SID RWY 25L**

1. This is contingency procedure exclusive for flights exempted from RNP1 requirement as specified in GEN 1.5 para 3.5.3.5.
2. DME is required.
3. To maintain terrain clearance, **DO NOT** turn left before passing PRAWN (ITFL D7.0).




## RUMSY 2B SID RWY 25L

**CONVENTIONAL PROCEDURE**
Track 254° to PRAWN (ITFL D7.0). At PRAWN turn left track 185°, request radar vectors to RUMSY.

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Cross PRAWN at 5 000 ft or below.

**TERRAIN CLEARANCE**
Minimum climb gradient of 3.3% (201 ft/NM).

**SPEED RESTRICTION**
Speed restriction of 205 KIAS or greater at PRAWN and 230 KIAS until RUMSY.

**CHANGE:** Hong Kong Departure frequency.

AD 2-VHHH-SID-RUMSY-B_V01_240315In

# RWY 25L RUMSY 2B DEPARTURE

## NAVIGATION AIDS

| Navaid/Ident | Frequency | Coordinates | Remarks |
|---|---|---|---|
| DME/ITFL | CH 46X | 22 18 19.93N 113 55 49.28E | |

## WAYPOINT LIST

| RUMSY 2B RWY 25L | | |
|---|---|---|
| **Waypoint Identifier** | **Coordinates (WGS-84)** | **Cross Reference from Navaid** |
| PRAWN | 22 16 05.40N 113 48 40.10E | ITFL DME 7.0 NM |
| RUMSY | 22 04 56.94N 113 48 16.79E | - |

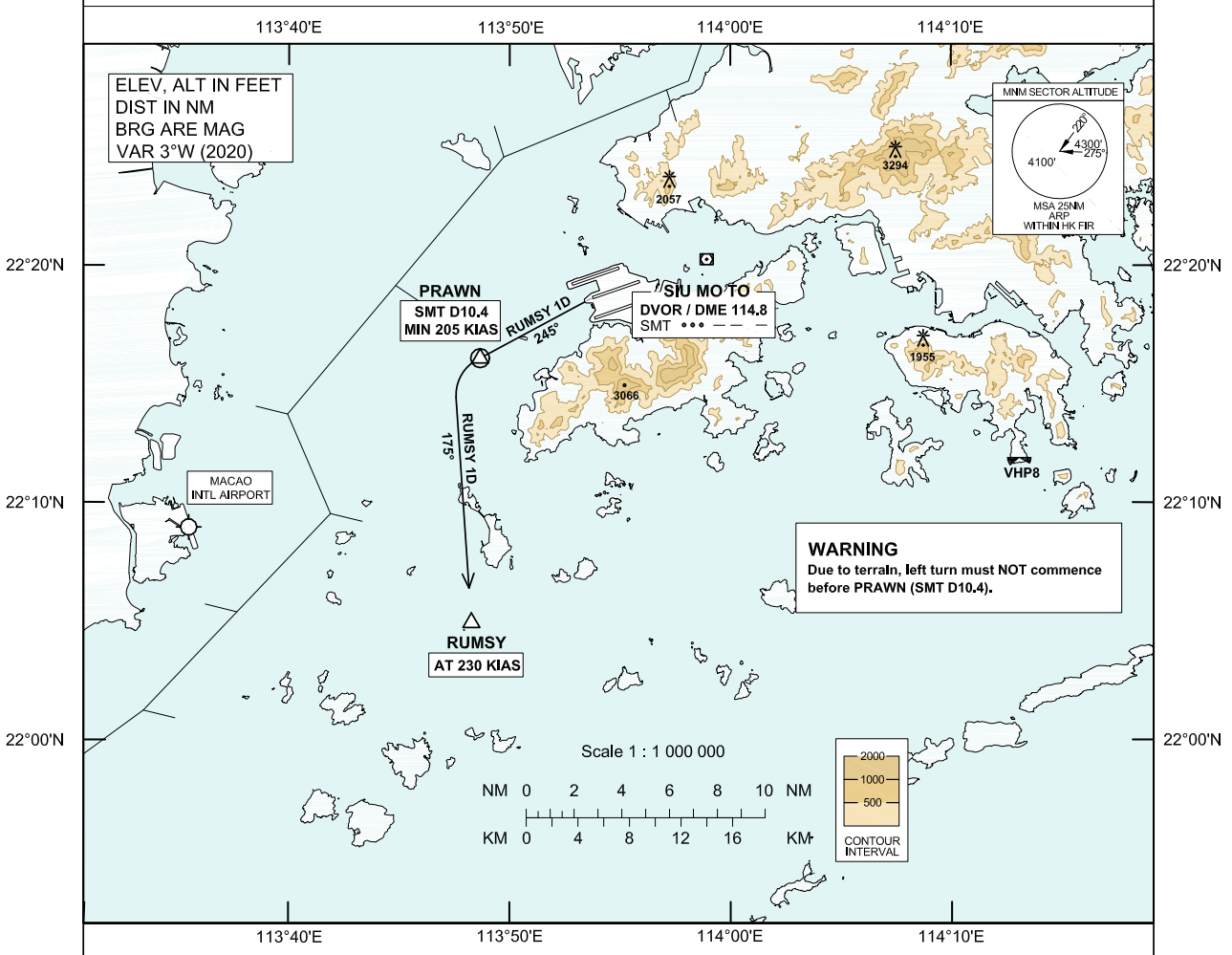
**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

Transition Altitude 9 000 ft

| | |
|---|---|
| Hong Kong Tower | 118.2 |
| Hong Kong Departure | 123.8 |

**HONG KONG / Intl (VHHH)**
**RUMSY 1D SID RWY 25C**

1. This is contingency procedure exclusive for flights exempted from RNP1 requirement as specified in GEN 1.5 para 3.5.3.5.
2. DME is required.
3. To maintain terrain clearance, **DO NOT** turn left before passing the departure end of runway and **DO NOT** turn left before passing PRAWN (SMT D10.4).




## RUMSY 1D SID RWY 25C

**CONVENTIONAL PROCEDURE**
Climb straight ahead to 430 ft. Then track 245° to PRAWN (SMT D10.4). At PRAWN turn left track 175°, request radar vectors to RUMSY.

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC.

**TERRAIN CLEARANCE**
Minimum climb gradient of 3.3% (201 ft/NM).

**SPEED RESTRICTION**
Speed restriction of 205 KIAS or greater at PRAWN and 230 KIAS until RUMSY.

**CHANGE:** New Procedure.

AD 2-VHHH-SID-RUMSY-D_V01_240506km

# RWY 25C RUMSY 1D DEPARTURE

## NAVIGATION AIDS

| Navaid/Ident | Frequency | Coordinates | Remarks |
|---|---|---|---|
| SMT DVOR | 114.8 MHz | 22 20 15.43N 113 58 55.46E | Co-located |
| SMT DME | CH 95X | | |

## WAYPOINT LIST

| RUMSY 1D RWY 25C | | |
|---|---|---|
| **Waypoint Identifier** | **Coordinates (WGS-84)** | **Cross Reference from Navaid** |
| PRAWN | 22 16 05.40N 113 48 40.10E | SMT DME 10.4NM |
| RUMSY | 22 04 56.94N 113 48 16.79E | - |

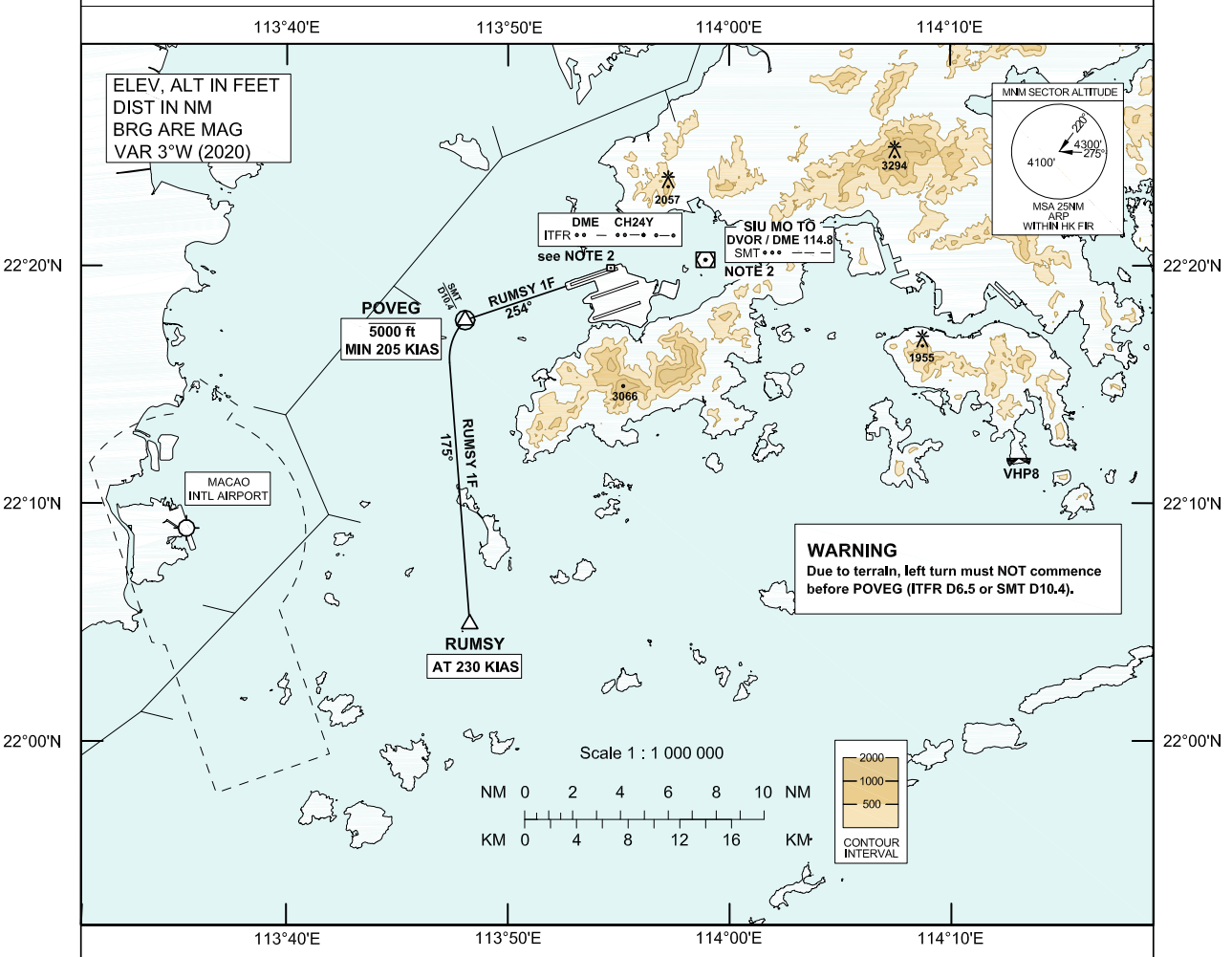
**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

Transition Altitude 9 000 ft

| | |
|---|---|
| Hong Kong Tower | 118.7 |
| Hong Kong Departure | 123.8 |

**HONG KONG / Intl (VHHH)**
**RUMSY 1F SID RWY 25R**

1. This is contingency procedure exclusive for flights exempted from RNP1 requirement as specified in GEN 1.5 para 3.5.3.5.
2. DME is required.
3. To maintain terrain clearance, **DO NOT** turn left before passing POVEG (ITFR D6.5 or SMT D10.4).




## RUMSY 1F SID RWY 25R

**CONVENTIONAL PROCEDURE**
Climb straight ahead to POVEG (ITFR D6.5 or SMT D10.4). At POVEG turn left track 175° MAG, request radar vector to RUMSY.

**CLIMB REQUIREMENT**
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Cross POVEG at 5 000 ft or below.

**TERRAIN CLEARANCE**
Minimum climb gradient of 3.3% (201 ft/NM).

**SPEED RESTRICTION**
Speed restriction of 205 KIAS or greater at POVEG and 230 KIAS until RUMSY.

**CHANGE:** Runway 07C/25C reopened.

AD 2-VHHH-SID-RUMSY-F_V01_240315In

# RWY 25R RUMSY 1F DEPARTURE

## NAVIGATION AIDS

| Navaid/Ident | Frequency | Coordinates | | Remarks |
|---|---|---|---|---|
| Localizer/ITFR | 108.75 MHz | 22 19 12.67N | 113 52 40.61E | Course 254°M |
| DME/ITFR | CH 24Y | 22 19 55.16N | 113 54 38.56E | |
| SMT DVOR | 114.8 MHz | 22 20 15.43N | 113 58 55.46E | Co-located |
| SMT DME | CH 95X | | | |

## WAYPOINT LIST

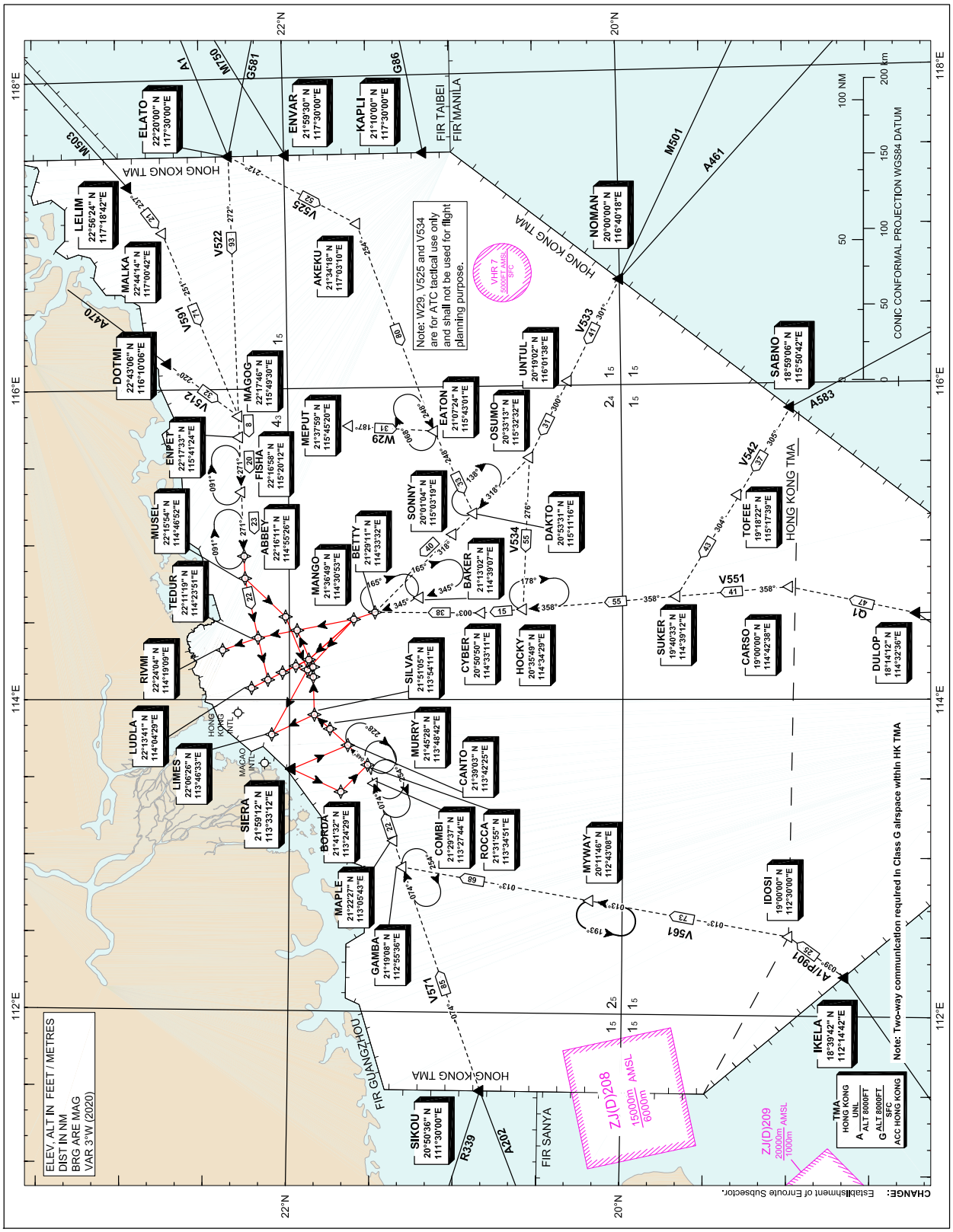
**RUMSY 1F RWY 25R**

| Waypoint Identifier | Coordinates (WGS-84) | | Cross Reference from Navaid |
|---|---|---|---|
| POVEG | 22 17 43.28N | 113 48 03.62E | SMT DME 10.4NM<br>ITFR DME 6.5NM |
| RUMSY | 22 04 56.94N | 113 48 16.79E | - |
| SMT | 22 20 15.43N | 113 58 55.46E | SMT DVOR/DME |

VHHH / HONG KONG TMA

ARRIVAL ROUTES AND TERMINAL HOLDING PATTERNS

AREA CHART



**STANDARD ARRIVAL CHART-INSTRUMENT (STAR) - ICAO**

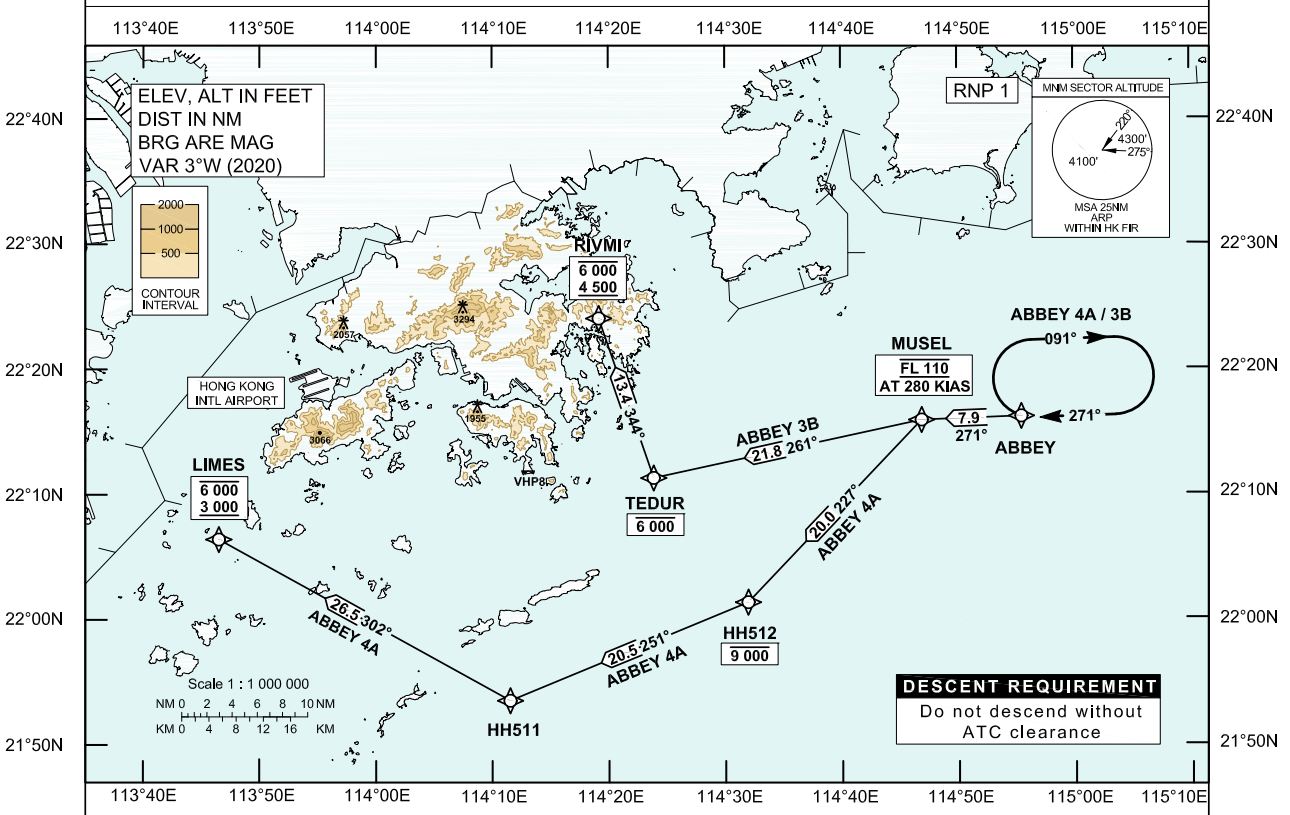
Transition Altitude 9 000 ft
HONG KONG RADAR 126.5

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) ABBEY 4A STAR RWY 07L/07C/07R**
**RNAV (GNSS) ABBEY 3B STAR RWY 25L/25C/25R**

1. For RNAV (GNSS) STAR, aircraft must be approved by State of Registry in accordance with ICAO RNP 1 standard or equivalent (see GEN 1.5 para 3.5.3). Carriage of certified GNSS receiver is mandatory.

2. In the event that PBN performance ceases to comply with the requirements for RNP 1 inflight, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

3. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement.




| ABBEY 4A STAR RWY 07L/07C/07R | ABBEY 3B STAR RWY 25L/25C/25R |
|---|---|
| Expect ILS approach. Descend as directed by ATC. | Expect ILS approach. Descend as directed by ATC. |

**DESCENT REQUIREMENT**
Cross MUSEL at FL110. **DO NOT DESCEND WITHOUT ATC CLEARANCE.**

**SPEED CONTROL**
Aircraft shall fly at 280 KIAS by MUSEL.

**HOLDING**
The holding pattern for ABBEY STARs is established at ABBEY. If holding is required, each flight will be instructed individually.

**ALTERNATIVE HOLDING**
In order to provide traffic management flexibility during peak periods of arrival or adverse weather situation in Hong Kong TMA, traffic may be instructed to hold at BETTY or other terminal holdings (see ENR 3.6) as directed by ATC.

**LOSS OF COMMUNICATION**
In the event of a loss of communication aircraft shall comply with the descent requirement and the STAR track above.

Thence:
For RWY 07L/07C/07R, maintain FL110 to LIMES. Join LIMES holding pattern and descend to 4 500 ft in the hold, then carry out the appropriate ILS approach procedure.

For RWY 25L/25C/25R, maintain FL110 to RIVMI. Join RIVMI holding pattern and descend to 4 500 ft in the hold, then carry out the appropriate ILS approach procedure.

**CHANGE:** New Procedures.

AD 2-VHHH-STAR-ABBEY_V07_240731km

## FMC Database Coding Reference for Hong Kong RNAV(GNSS) STARs

### Designator: ABBEY 4A Runway 07L / Runway 07C / Runway 07R

| *Serial Number* | *Path Descriptor* | *Waypoint Identifier* | *Fly-over* | *Course/ Track (°M)* | *Magnetic Variation* | *Distance (NM)* | *Turn Dir* | *Altitude (ft)* | *Speed (KIAS)* | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | ABBEY | - | - | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | MUSEL | - | 271 | +3.0 | 7.9 | - | @FL110 | @280 | RNP 1 |
| 03 | TF | HH512 | - | 227 | +3.0 | 20.0 | - | -9000 | - | RNP 1 |
| 04 | TF | HH511 | - | 251 | +3.0 | 20.5 | - | - | - | RNP 1 |
| 05 | TF | LIMES | - | 302 | +3.0 | 26.5 | - | -6000 +3000 | - | RNP 1 |

### Designator: ABBEY 3B Runway 25L / Runway 25C / Runway 25R

| *Serial Number* | *Path Descriptor* | *Waypoint Identifier* | *Fly-over* | *Course/ Track (°M)* | *Magnetic Variation* | *Distance (NM)* | *Turn Dir* | *Altitude (ft)* | *Speed (KIAS)* | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | ABBEY | - | - | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | MUSEL | - | 271 | +3.0 | 7.9 | - | @FL110 | @280 | RNP 1 |
| 03 | TF | TEDUR | - | 261 | +3.0 | 21.8 | - | -6000 | - | RNP 1 |
| 04 | TF | RIVMI | - | 344 | +3.0 | 13.4 | - | -6000 +4500 | - | RNP 1 |

### Waypoint and Coordinates

| *Waypoint Identifier* | *Coordinates (WGS-84)* |
|---|---|
| ABBEY | 22 16 11.00N 114 55 25.92E |
| MUSEL | 22 15 53.99N 114 46 52.13E |
| HH512 | 22 01 21.80N 114 31 56.70E |
| HH511 | 21 53 32.24N 114 11 31.99E |
| LIMES | 22 06 25.60N 113 46 32.60E |
| TEDUR | 22 11 18.77N 114 23 51.26E |
| RIVMI | 22 24 03.96N 114 19 09.28E |

**STANDARD ARRIVAL CHART-INSTRUMENT (STAR) - ICAO**

Transition Altitude 9 000 ft

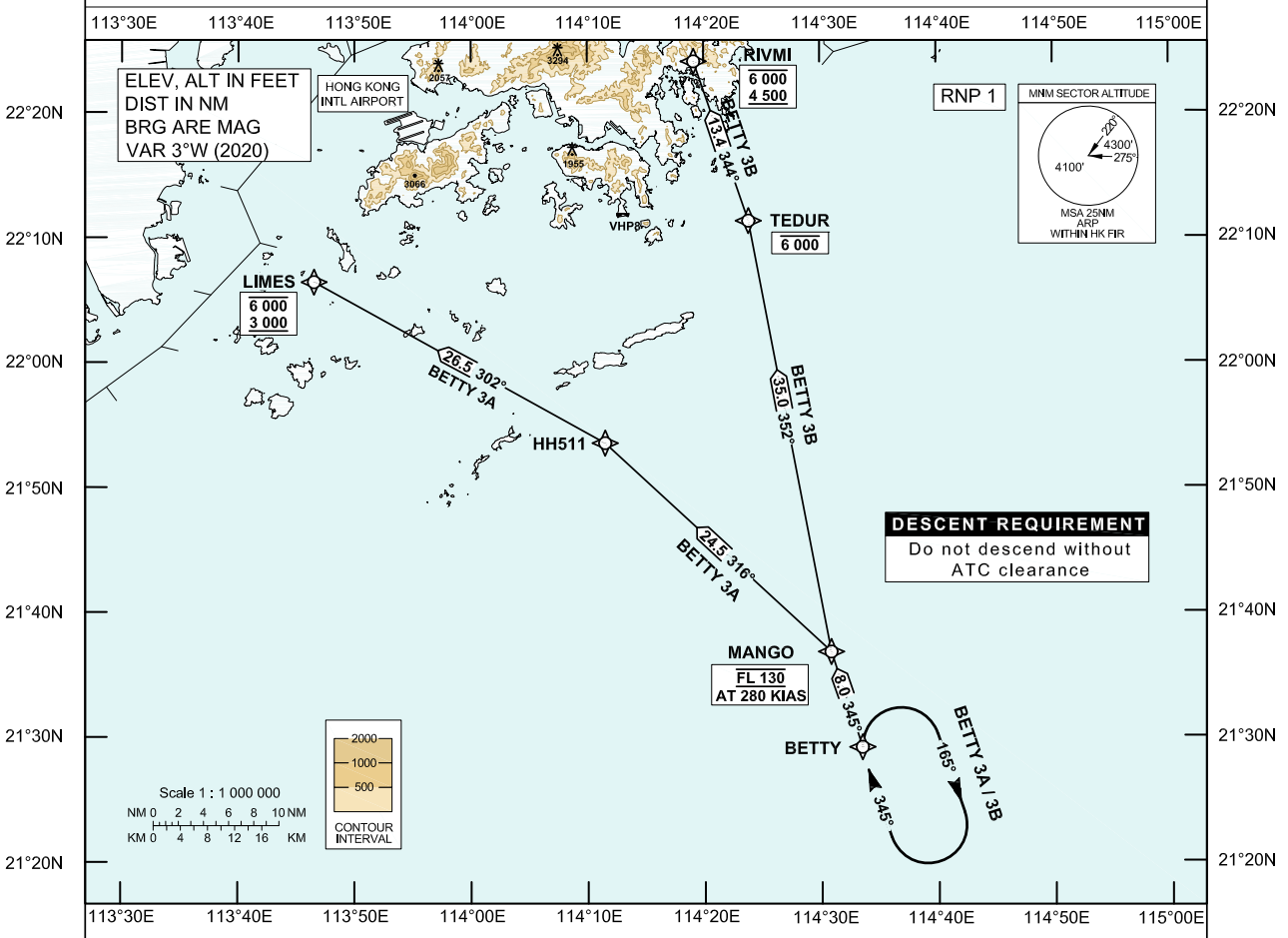
HONG KONG RADAR 126.3

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) BETTY 3A STAR RWY 07L/07C/07R**
**RNAV (GNSS) BETTY 3B STAR RWY 25L/25C/25R**

1. For RNAV (GNSS) STAR, aircraft must be approved by State of Registry in accordance with ICAO RNP 1 standard or equivalent (see GEN 1.5 para 3.5.3). Carriage of certified GNSS receiver is mandatory.

2. In the event that PBN performance ceases to comply with the requirements for RNP 1 inflight, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

3. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement.




| BETTY 3A STAR RWY 07L/07C/07R | BETTY 3B STAR RWY 25L/25C/25R |
|---|---|
| Expect ILS approach. Descend as directed by ATC. | Expect ILS approach. Descend as directed by ATC. |

**DESCENT REQUIREMENT**
Cross MANGO at FL130. **DO NOT DESCEND WITHOUT ATC CLEARANCE.**

**SPEED CONTROL**
Aircraft shall fly at 280 KIAS by MANGO.

**HOLDING**
The holding pattern for BETTY STARs is established at BETTY. If holding is required, each flight will be instructed individually.

**ALTERNATIVE HOLDING**
In order to provide traffic management flexibility during peak periods of arrival or adverse weather situation in Hong Kong TMA, traffic may be instructed to hold at BAKER, CANTO or other terminal holdings (see ENR 3.6) as directed by ATC.

**LOSS OF COMMUNICATION**
In the event of a loss of communication aircraft shall comply with the descent requirement and the STAR track above.

Thence:
For RWY 07L/07C/07R, maintain FL130 to LIMES. Join LIMES holding pattern and descend to 4 500 ft in the hold, then carry out the appropriate ILS approach procedure.

For RWY 25L/25C/25R, maintain FL130 to RIVMI. Join RIVMI holding pattern and descend to 4 500 ft in the hold, then carry out the appropriate ILS approach procedure.

**CHANGE:** New Procedures.

AD 2-VHHH-STAR-BETTY_V07_240731km

## FMC Database Coding Reference for Hong Kong RNAV(GNSS) STARs

### Designator: BETTY 3A Runway 07L / Runway 07C / Runway 07R

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course/ Track (°M) | Magnetic Variation | Distance (NM) | Turn Dir | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | BETTY | - | - | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | MANGO | - | 345 | +3.0 | 8.0 | - | @FL130 | @280 | RNP 1 |
| 03 | TF | HH511 | - | 316 | +3.0 | 24.5 | - | - | - | RNP 1 |
| 04 | TF | LIMES | - | 302 | +3.0 | 26.5 | - | -6000<br>+3000 | - | RNP 1 |

### Designator: BETTY 3B Runway 25L / Runway 25C / Runway 25R

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course/ Track (°M) | Magnetic Variation | Distance (NM) | Turn Dir | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | BETTY | - | - | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | MANGO | - | 345 | +3.0 | 8.0 | - | @FL130 | @280 | RNP 1 |
| 03 | TF | TEDUR | - | 352 | +3.0 | 35.0 | - | -6000 | - | RNP 1 |
| 04 | TF | RIVMI | - | 344 | +3.0 | 13.4 | - | -6000<br>+4500 | - | RNP 1 |

### Waypoint and Coordinates

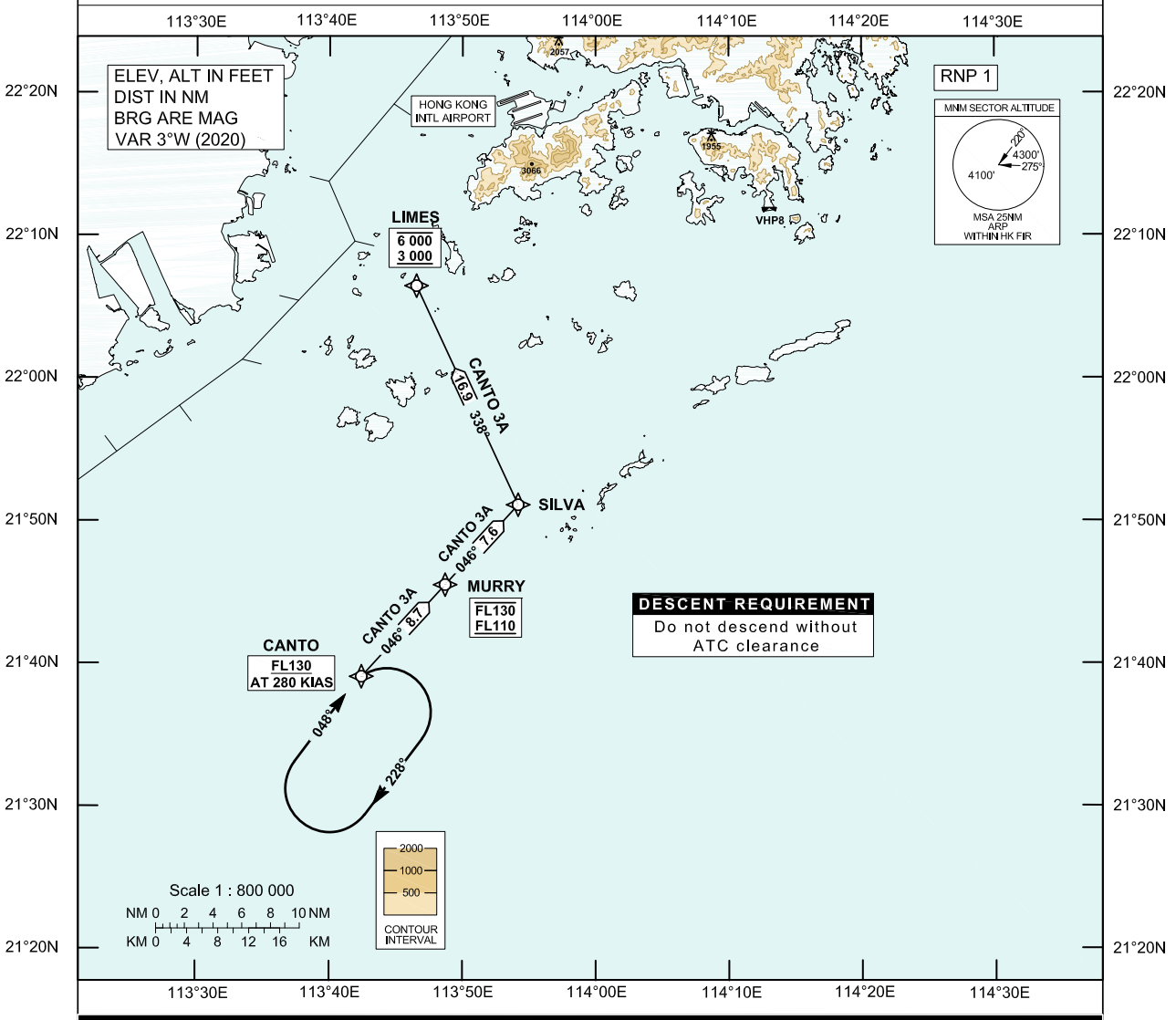
| Waypoint Identifier | Coordinates (WGS-84) |
|---|---|
| BETTY | 21 29 10.82N 114 33 31.92E |
| MANGO | 21 36 49.00N 114 30 53.00E |
| HH511 | 21 53 32.24N 114 11 31.99E |
| TEDUR | 22 11 18.77N 114 23 51.26E |
| RIVMI | 22 24 03.96N 114 19 09.28E |
| LIMES | 22 06 25.60N 113 46 32.60E |

**STANDARD ARRIVAL CHART-INSTRUMENT (STAR) - ICAO**

Transition Altitude 9 000 ft
HONG KONG RADAR 127.55

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) CANTO 3A STAR**
**RWY 07L/07C/07R**

1. For RNAV (GNSS) STAR, aircraft must be approved by State of Registry in accordance with ICAO RNP 1 standard or equivalent (see GEN 1.5 para 3.5.3). Carriage of certified GNSS receiver is mandatory.
2. In the event that PBN performance ceases to comply with the requirements for RNP 1 inflight, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.
3. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement.




## CANTO 3A STAR RWY 07L/07C/07R

Expect ILS approach. Descend as directed by ATC.

**DESCENT REQUIREMENT**
Cross CANTO FL130 or above. Cross MURRY between FL130 and FL110.
**DO NOT DESCEND WITHOUT ATC CLEARANCE.**

**SPEED CONTROL**
Aircraft shall fly at 280 KIAS by CANTO.

**HOLDING**
The holding pattern for CANTO STAR is established at CANTO. In the event of holding, each flight will be instructed individually.

**ALTERNATIVE HOLDING**
In order to provide traffic management flexibility during peak periods of arrivals or adverse weather situation in Hong Kong TMA, traffic may be instructed to hold at COMBI, BETTY or other terminal holdings (see ENR 3.6) as directed by ATC.

**LOSS OF COMMUNICATION**
In the event of a loss of communication aircraft shall comply with the descent requirement and the STAR track above. Maintain FL130 to LIMES. Join LIMES holding pattern and descend to 4 500 ft in the hold, then carry out the appropriate ILS approach procedure.

**CHANGE:** RWY07C, Altitude restriction at LIMES.

AD 2-VHHH-STAR-CANTO-A_V07_240731km

## FMC Database Coding Reference for Hong Kong RNAV(GNSS) STAR

### Designator: CANTO 3A Runway 07L / Runway 07C / Runway 07R

| *Serial Number* | *Path Descriptor* | *Waypoint Identifier* | *Fly-over* | *Course/ Track (°M)* | *Magnetic Variation* | *Distance (NM)* | *Turn Dir* | *Altitude (ft)* | *Speed (KIAS)* | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | CANTO | - | - | +3.0 | - | - | +FL130 | @280 | RNP 1 |
| 02 | TF | MURRY | - | 046 | +3.0 | 8.7 | - | -FL130<br>+FL110 | - | RNP 1 |
| 03 | TF | SILVA | - | 046 | +3.0 | 7.6 | - | - | - | RNP 1 |
| 04 | TF | LIMES | - | 338 | +3.0 | 16.9 | - | -6000<br>+3000 | - | RNP 1 |

### Waypoint and Coordinates

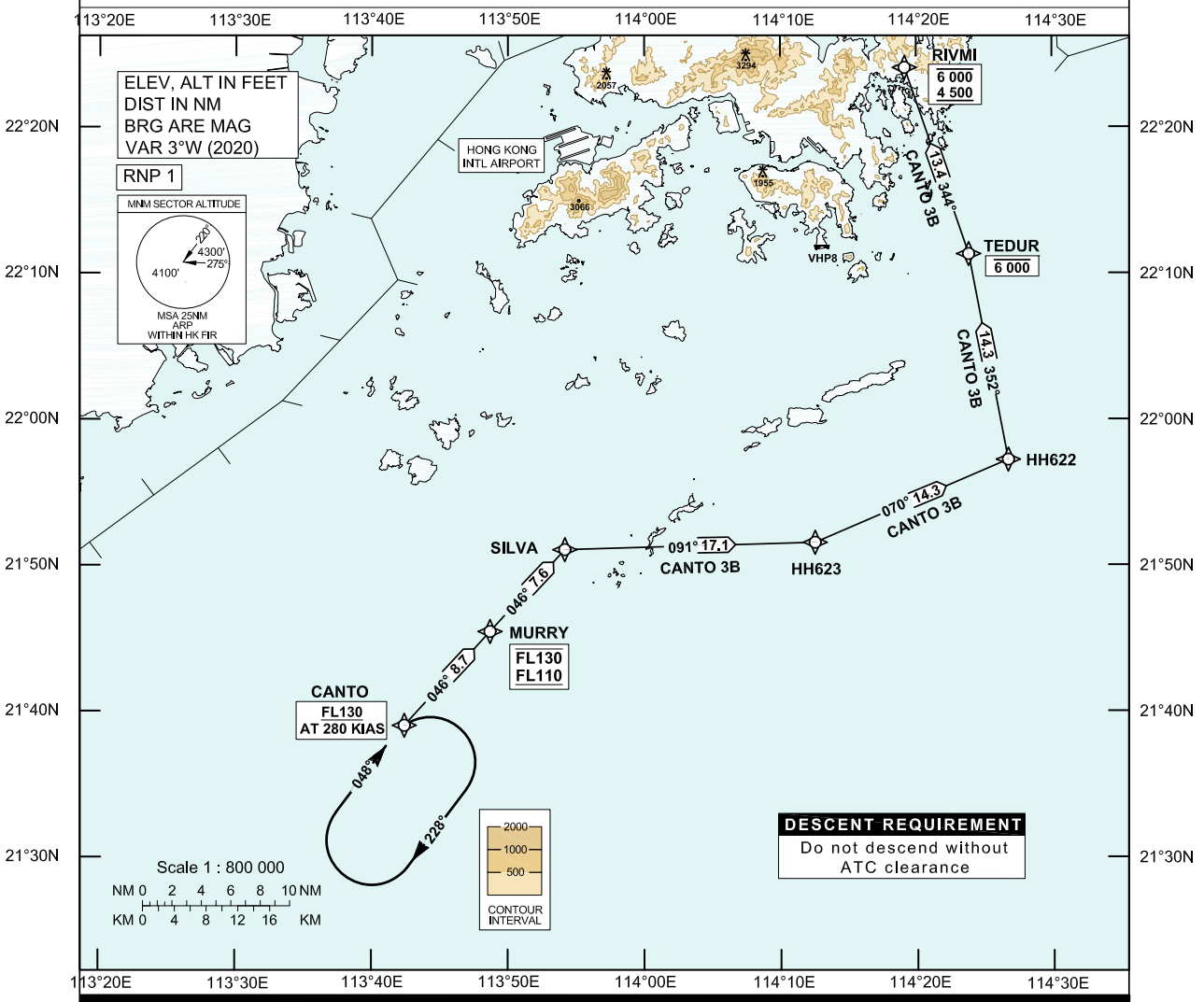
| *Waypoint Identifier* | *Coordinates (WGS-84)* |
|---|---|
| CANTO | 21 39 02.63N 113 42 25.09E |
| MURRY | 21 45 28.37N 113 48 41.97E |
| SILVA | 21 51 04.50N 113 54 10.88E |
| LIMES | 22 06 25.60N 113 46 32.60E |

**STANDARD ARRIVAL CHART-INSTRUMENT (STAR) - ICAO**

Transition Altitude 9 000 ft
HONG KONG RADAR 127.55

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) CANTO 3B STAR**
**RWY 25L/25C/25R**

1. For RNAV (GNSS) STAR, aircraft must be approved by State of Registry in accordance with ICAO RNP 1 standard or equivalent (see GEN 1.5 para 3.5.3). Carriage of certified GNSS receiver is mandatory.
2. In the event that PBN performance ceases to comply with the requirements for RNP 1 inflight, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.
3. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement.




## CANTO 3B STAR RWY 25L/25C/25R

Expect ILS approach. Descend as directed by ATC.

**DESCENT REQUIREMENT**
Cross CANTO FL130 or above. Cross MURRY between FL130 and FL110.
**DO NOT DESCEND WITHOUT ATC CLEARANCE.**

**SPEED CONTROL**
Aircraft shall fly at 280 KIAS by CANTO.

**HOLDING**
The holding pattern for CANTO STARs is established at CANTO. In the event of holding, each flight will be instructed individually.

**ALTERNATIVE HOLDING**
In order to provide traffic management flexibility during peak periods of arrival or adverse weather situation in Hong Kong TMA, traffic may be instructed to hold at COMBI, BETTY or other terminal holdings (see ENR 3.6) as directed by ATC.

**LOSS OF COMMUNICATION**
In the event of a loss of communication aircraft shall comply with the descent requirement and the STAR track above. Maintain FL130 to RIVMI. Join RIVMI holding pattern and descend to 4 500 ft in the hold, then carry out the appropriate ILS approach procedure.

**CHANGE:** New Procedure.

AD 2-VHHH-STAR-CANTO-B_V07_240731km

## FMC Database Coding Reference for Hong Kong RNAV(GNSS) STAR

### Designator: CANTO 3B Runway 25L / Runway 25C / Runway 25R

| *Serial Number* | *Path Descriptor* | *Waypoint Identifier* | *Fly-over* | *Course/ Track (°M)* | *Magnetic Variation* | *Distance (NM)* | *Turn Dir* | *Altitude (ft)* | *Speed (KIAS)* | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | CANTO | - | - | +3.0 | - | - | +FL130 | @280 | RNP 1 |
| 02 | TF | MURRY | - | 046 | +3.0 | 8.7 | - | -FL130<br>+FL110 | - | RNP 1 |
| 03 | TF | SILVA | - | 046 | +3.0 | 7.6 | - | - | - | RNP 1 |
| 04 | TF | HH623 | - | 091 | +3.0 | 17.1 | - | - | - | RNP 1 |
| 05 | TF | HH622 | - | 070 | +3.0 | 14.3 | - | - | - | RNP 1 |
| 06 | TF | TEDUR | - | 352 | +3.0 | 14.3 | - | -6000 | - | RNP 1 |
| 07 | TF | RIVMI | - | 344 | +3.0 | 13.4 | - | -6000<br>+4500 | - | RNP 1 |

### Waypoint and Coordinates

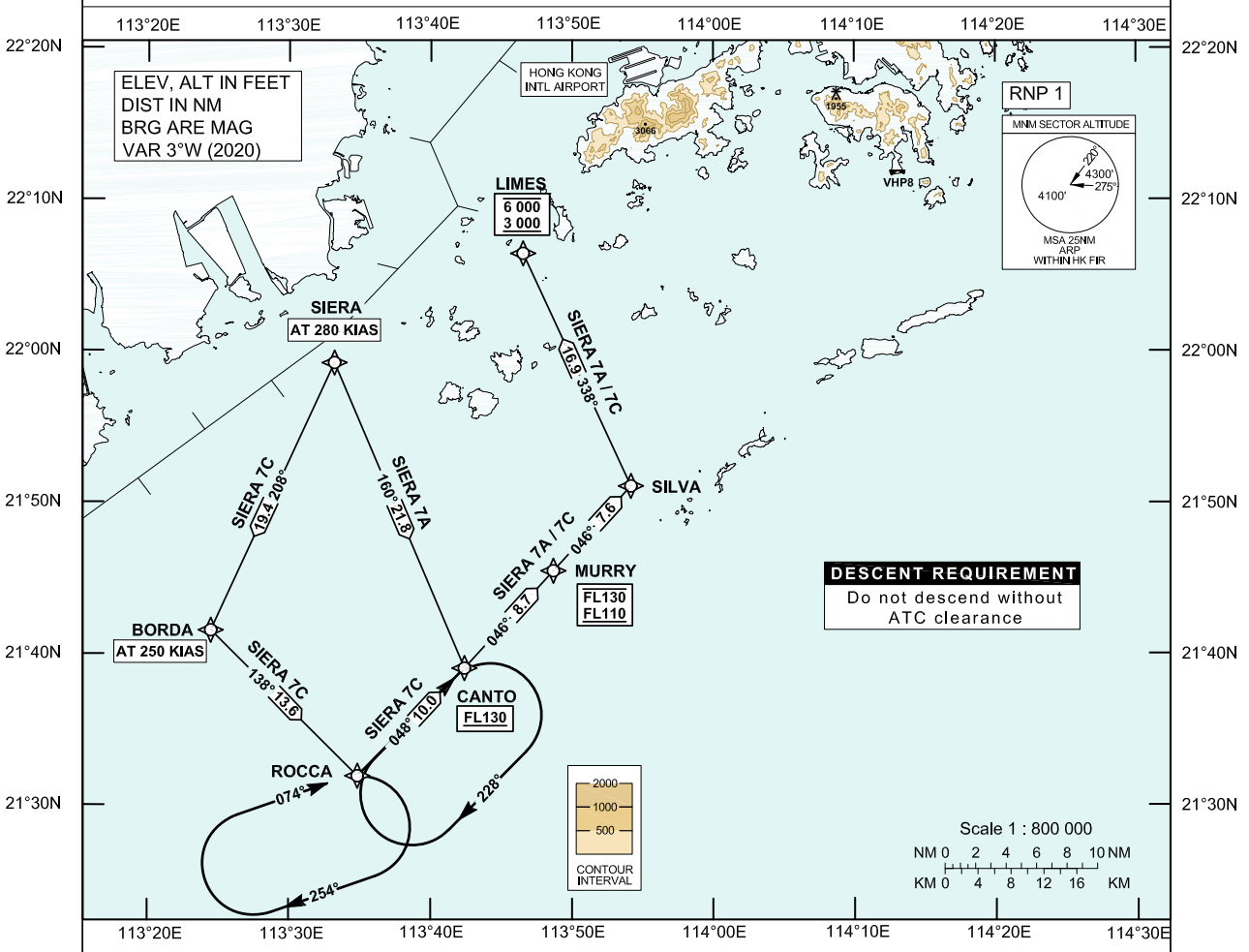
| *Waypoint Identifier* | *Coordinates (WGS-84)* |
|---|---|
| CANTO | 21 39 02.63N 113 42 25.09E |
| MURRY | 21 45 28.37N 113 48 41.97E |
| SILVA | 21 51 04.50N 113 54 10.88E |
| HH623 | 21 51 34.24N 114 12 32.62E |
| HH622 | 21 57 14.02N 114 26 43.79E |
| TEDUR | 22 11 18.77N 114 23 51.26E |
| RIVMI | 22 24 03.96N 114 19 09.28E |

**STANDARD ARRIVAL CHART-INSTRUMENT (STAR) - ICAO**

Transition Altitude 9 000 ft
HONG KONG RADAR 127.55

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) SIERA 7A / 7C STAR**
**RWY 07L/07C/07R**

1. For RNAV (GNSS) STAR, aircraft must be approved by State of Registry in accordance with ICAO RNP 1 standard or equivalent (see GEN 1.5 para 3.5.3). Carriage of certified GNSS receiver is mandatory.
2. In the event that PBN performance ceases to comply with the requirements for RNP 1 inflight, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.
3. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement.




## SIERA 7A STAR RWY 07L/07C/07R

Expect ILS approach. Descend as directed by ATC.

**SPEED CONTROL**
Aircraft shall fly at 280 KIAS by SIERA.

## SIERA 7C STAR RWY 07L/07C/07R

Expect ILS approach. Descend as directed by ATC.

**SPEED CONTROL**
Aircraft shall fly at 280 KIAS by SIERA and 250 KIAS by BORDA.

**DESCENT REQUIREMENT**
Cross CANTO FL130 or above. Cross MURRY between FL130 and FL110.
**DO NOT DESCEND WITHOUT ATC CLEARANCE.**

**HOLDING**
The holding pattern for SIERA STARs is established at CANTO / ROCCA. If holding is required, each flight will be instructed individually.

**ALTERNATIVE HOLDING**
In order to provide traffic management flexibility during peak periods of arrivals or adverse weather situation in Hong Kong TMA, traffic may be instructed to hold at BETTY, GAMBA or other terminal holdings (see ENR 3.6) as directed by ATC.

**LOSS OF COMMUNICATION**
In the event of a loss of communication aircraft shall comply with the descent requirement and the STAR track above. Maintain FL130 to LIMES. Join LIMES holding pattern and descend to 4 500 ft in the hold, then carry out the appropriate ILS approach procedure.

**CHANGE:** RWY07C, Altitude restriction at LIMES.

AD 2-VHHH-STAR-SIERA-AC_V07_240731km

## FMC Database Coding Reference for Hong Kong RNAV(GNSS) STARs

### Designator: SIERA 7A Runway 07L / Runway 07C / Runway 07R

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course/ Track (°M) | Magnetic Variation | Distance (NM) | Turn Dir | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | SIERA | - | - | +3.0 | - | - | - | @280 | RNP 1 |
| 02 | TF | CANTO | - | 160 | +3.0 | 21.8 | - | +FL130 | - | RNP 1 |
| 03 | TF | MURRY | - | 046 | +3.0 | 8.7 | L | -FL130<br>+FL110 | - | RNP 1 |
| 04 | TF | SILVA | - | 046 | +3.0 | 7.6 | - | - | - | RNP 1 |
| 05 | TF | LIMES | - | 338 | +3.0 | 16.9 | - | -6000<br>+3000 | - | RNP 1 |

### Designator: SIERA 7C Runway 07L / Runway 07C / Runway 07R

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course/ Track (°M) | Magnetic Variation | Distance (NM) | Turn Dir | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | SIERA | - | - | +3.0 | - | - | - | @280 | RNP 1 |
| 02 | TF | BORDA | - | 208 | +3.0 | 19.4 | - | - | @250 | RNP 1 |
| 03 | TF | ROCCA | - | 138 | +3.0 | 13.6 | - | - | - | RNP 1 |
| 04 | TF | CANTO | - | 048 | +3.0 | 10.0 | L | +FL130 | - | RNP 1 |
| 05 | TF | MURRY | - | 046 | +3.0 | 8.7 | - | -FL130<br>+FL110 | - | RNP 1 |
| 06 | TF | SILVA | - | 046 | +3.0 | 7.6 | - | - | - | RNP 1 |
| 07 | TF | LIMES | - | 338 | +3.0 | 16.9 | - | -6000<br>+3000 | - | RNP 1 |

### Waypoint and Coordinates

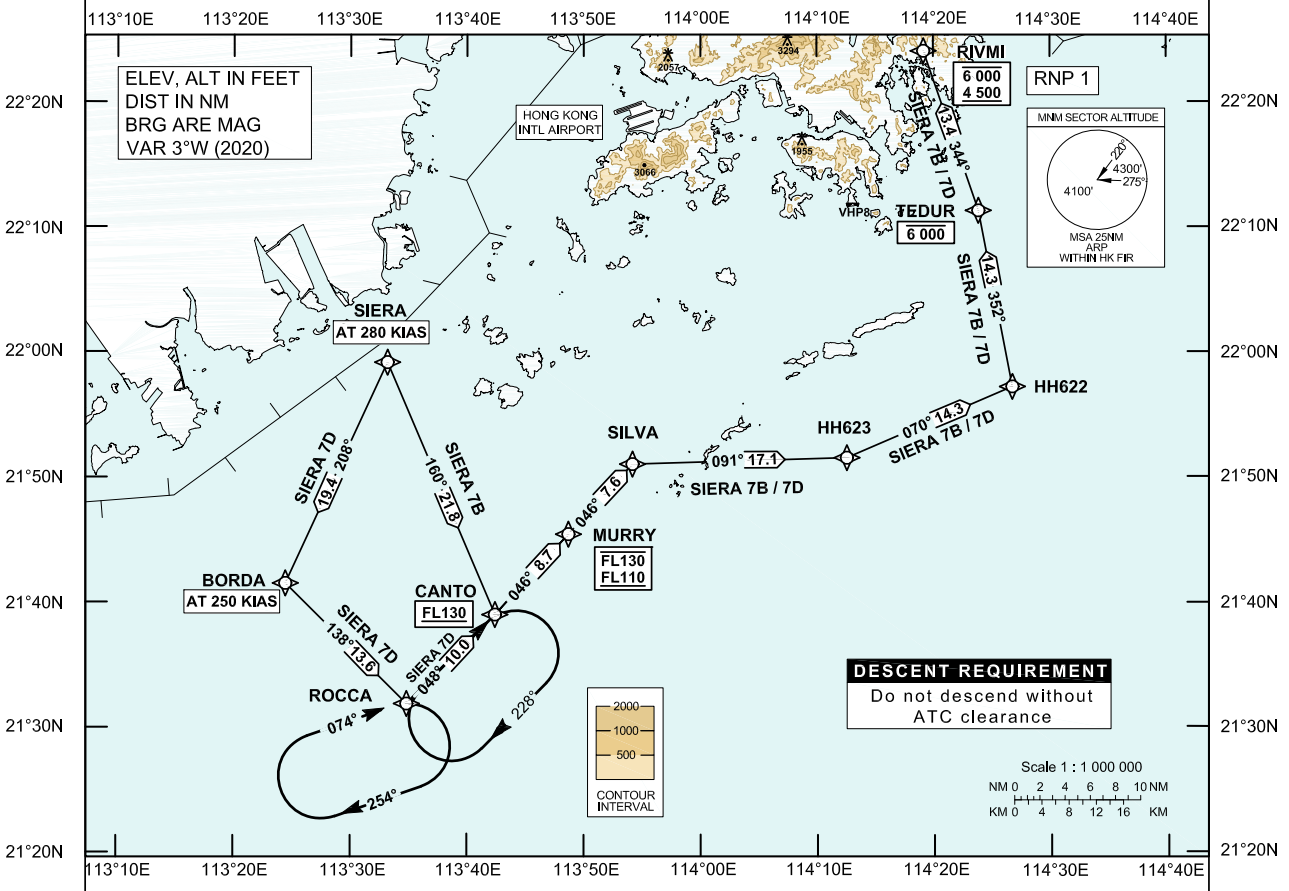
| Waypoint Identifier | Coordinates (WGS-84) |
|---|---|
| SIERA | 21 59 12.00N 113 33 12.00E |
| BORDA | 21 41 32.37N 113 24 29.01E |
| ROCCA | 21 31 55.42N 113 34 51.44E |
| CANTO | 21 39 02.63N 113 42 25.09E |
| MURRY | 21 45 28.37N 113 48 41.97E |
| SILVA | 21 51 04.50N 113 54 10.88E |
| LIMES | 22 06 25.60N 113 46 32.60E |

**STANDARD ARRIVAL CHART-INSTRUMENT (STAR) - ICAO**

Transition Altitude 9 000 ft
HONG KONG RADAR 127.55

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) SIERA 7B / 7D STAR**
**RWY 25L/25C/25R**

1. For RNAV (GNSS) STAR, aircraft must be approved by State of Registry in accordance with ICAO RNP 1 standard or equivalent (see GEN 1.5 para 3.5.3). Carriage of certified GNSS receiver is mandatory.
2. In the event that PBN performance ceases to comply with the requirements for RNP 1 inflight, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.
3. Only specific categories of flights (e.g. SAR) as stated in GEN 1.5 para 3.5.3.5 are exempted from the RNP 1 requirement.




| SIERA 7B STAR RWY 25L/25C/25R | SIERA 7D STAR RWY 25L/25C/25R |
|---|---|
| Expect ILS approach. Descend as directed by ATC.<br><br>**SPEED CONTROL**<br>Aircraft shall fly at 280 KIAS by SIERA. | Expect ILS approach. Descend as directed by ATC.<br><br>**SPEED CONTROL**<br>Aircraft shall fly at 280 KIAS by SIERA and 250 KIAS by BORDA. |

**DESCENT REQUIREMENT**
Cross CANTO FL130 or above. Cross MURRY between FL130 and FL110.
**DO NOT DESCEND WITHOUT ATC CLEARANCE.**

**HOLDING**
The holding pattern for SIERA STARs is established at CANTO / ROCCA. If holding is required, each flight will be instructed individually.

**ALTERNATIVE HOLDING**
In order to provide traffic management flexibility during peak periods of arrivals or adverse weather situation in Hong Kong TMA, traffic may be instructed to hold at BETTY, GAMBA or other terminal holdings (see ENR 3.6) as directed by ATC.

**LOSS OF COMMUNICATION**
In the event of a loss of communication aircraft shall comply with the descent requirement and the STAR track above. Maintain FL130 to RIVMI. Join RIVMI holding pattern and descend to 4 500 ft in the hold, then carry out the appropriate ILS approach procedure.

CHANGE: New Procedures.

AD 2-VHHH-STAR-SIERA-BD_V07_240731km

## FMC Database Coding Reference for Hong Kong RNAV(GNSS) STARs

### Designator: SIERA 7B Runway 25L / Runway 25C / Runway 25R

| *Serial Number* | *Path Descriptor* | *Waypoint Identifier* | *Fly-over* | *Course/ Track (°M)* | *Magnetic Variation* | *Distance (NM)* | *Turn Dir* | *Altitude (ft)* | *Speed (KIAS)* | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | SIERA | - | - | +3.0 | - | - | - | @280 | RNP 1 |
| 02 | TF | CANTO | - | 160 | +3.0 | 21.8 | - | +FL130 | - | RNP 1 |
| 03 | TF | MURRY | - | 046 | +3.0 | 8.7 | L | -FL130<br>+FL110 | - | RNP 1 |
| 04 | TF | SILVA | - | 046 | +3.0 | 7.6 | - | - | - | RNP 1 |
| 05 | TF | HH623 | - | 091 | +3.0 | 17.1 | - | - | - | RNP 1 |
| 06 | TF | HH622 | - | 070 | +3.0 | 14.3 | - | - | - | RNP 1 |
| 07 | TF | TEDUR | - | 352 | +3.0 | 14.3 | - | -6000 | - | RNP 1 |
| 08 | TF | RIVMI | - | 344 | +3.0 | 13.4 | - | -6000<br>+4500 | - | RNP 1 |

### Designator: SIERA 7D Runway 25L / Runway 25C / Runway 25R

| *Serial Number* | *Path Descriptor* | *Waypoint Identifier* | *Fly-over* | *Course/ Track (°M)* | *Magnetic Variation* | *Distance (NM)* | *Turn Dir* | *Altitude (ft)* | *Speed (KIAS)* | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | SIERA | - | - | +3.0 | - | - | - | @280 | RNP 1 |
| 02 | TF | BORDA | - | 208 | +3.0 | 19.4 | - | - | @250 | RNP 1 |
| 03 | TF | ROCCA | - | 138 | +3.0 | 13.6 | - | - | - | RNP 1 |
| 04 | TF | CANTO | - | 048 | +3.0 | 10.0 | L | +FL130 | - | RNP 1 |
| 05 | TF | MURRY | - | 046 | +3.0 | 8.7 | - | -FL130<br>+FL110 | - | RNP 1 |
| 06 | TF | SILVA | - | 046 | +3.0 | 7.6 | - | - | - | RNP 1 |
| 07 | TF | HH623 | - | 091 | +3.0 | 17.1 | - | - | - | RNP 1 |
| 08 | TF | HH622 | - | 070 | +3.0 | 14.3 | - | - | - | RNP 1 |
| 09 | TF | TEDUR | - | 352 | +3.0 | 14.3 | - | -6000 | - | RNP 1 |
| 10 | TF | RIVMI | - | 344 | +3.0 | 13.4 | - | -6000<br>+4500 | - | RNP 1 |

### Waypoint and Coordinates

| *Waypoint Identifier* | *Coordinates (WGS-84)* |
|---|---|
| SIERA | 21 59 12.00N 113 33 12.00E |
| BORDA | 21 41 32.37N 113 24 29.01E |
| ROCCA | 21 31 55.42N 113 34 51.44E |
| CANTO | 21 39 02.63N 113 42 25.09E |
| MURRY | 21 45 28.37N 113 48 41.97E |
| SILVA | 21 51 04.50N 113 54 10.88E |
| HH623 | 21 51 34.24N 114 12 32.62E |
| HH622 | 21 57 14.02N 114 26 43.79E |
| TEDUR | 22 11 18.77N 114 23 51.26E |
| RIVMI | 22 24 03.96N 114 19 09.28E |

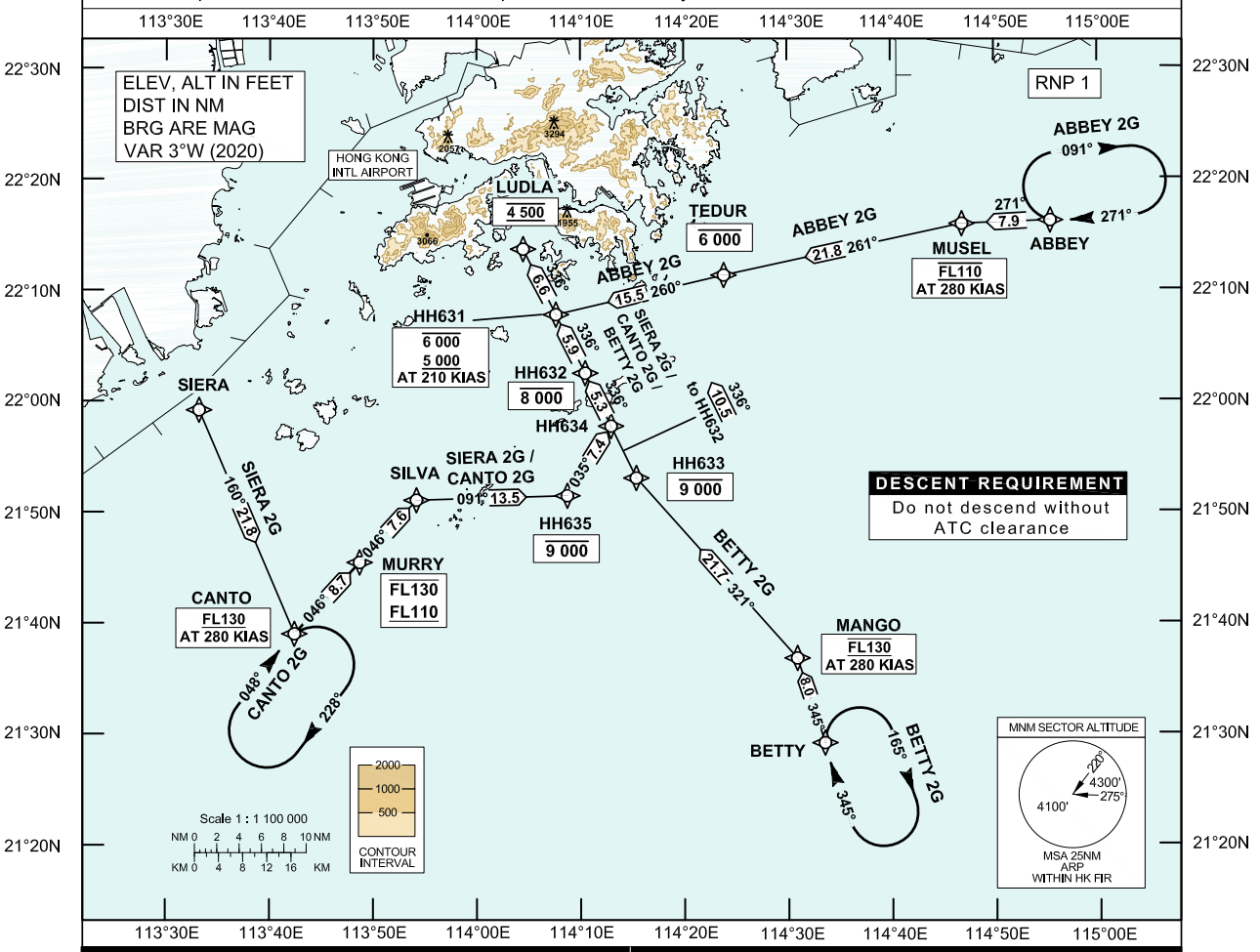
**STANDARD ARRIVAL CHART-INSTRUMENT (STAR) - ICAO**

Transition Altitude 9 000 ft

HONG KONG RADAR 126.3 (BETTY 2G)
HONG KONG RADAR 126.5 (ABBEY 2G)
HONG KONG RADAR 127.55 (CANTO 2G / SIERA 2G)

**HONG KONG / Intl (VHHH)**
**RNAV (GNSS) ABBEY 2G / BETTY 2G STAR**
**RNAV (GNSS) CANTO 2G / SIERA 2G STAR**
**RWY 25L/25C/25R**

1. For RNAV (GNSS) STAR, aircraft must be approved by State of Registry in accordance with ICAO RNP 1 standard or equivalent (see GEN 1.5 para 3.5.3). Carriage of certified GNSS receiver is mandatory.
2. In the event that PBN performance ceases to comply with the requirements for RNP 1 inflight, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.




| ABBEY 2G STAR RWY 25L/25C/25R | BETTY 2G STAR RWY 25L/25C/25R |
|---|---|
| Expect RNP AR APCH. Descend as directed by ATC. | Expect RNP AR APCH. Descend as directed by ATC. |
| **CANTO 2G STAR RWY 25L/25C/25R** | **SIERA 2G STAR RWY 25L/25C/25R** |
| Expect RNP AR APCH. Descend as directed by ATC. | Expect RNP AR APCH. Descend as directed by ATC. |

**DESCENT REQUIREMENT**
Cross LUDLA at 4 500 ft.
**ABBEY 2G** Cross MUSEL at FL110.
**BETTY 2G** Cross MANGO at FL130.
**CANTO 2G / SIERA 2G** Cross CANTO FL130 or above. Cross MURRY between FL130 and FL110.
**DO NOT DESCEND WITHOUT ATC CLEARANCE.**

**SPEED CONTROL**
Aircraft shall fly at 280 KIAS by MUSEL / MANGO / CANTO, or as directed by ATC.

**HOLDING**
The holding pattern is established at ABBEY / BETTY / CANTO. If holding is required, each flight will be instructed individually.

**ALTERNATIVE HOLDING**
In order to provide traffic management flexibility during peak periods of arrival or adverse weather situation in Hong Kong TMA, traffic may be instructed to hold at BAKER or other terminal holdings (see ENR 3.6) as directed by ATC.

**LOSS OF COMMUNICATION**
In the event of a loss of communication aircraft shall comply with the descent requirement and the STAR track above. Thence: Maintain FL110 (from MUSEL) or FL130 (from MANGO or CANTO) to LUDLA. Join LUDLA holding pattern and descend to 4 500 ft in the hold, then carry out the appropriate RNP AR APCH.

**CHANGE:** New Procedures.

AD 2-VHHH-STAR-G_V07_240517km

## FMC Database Coding Reference for Hong Kong RNAV(GNSS) STARs

### Designator: ABBEY 2G Runway 25L / Runway 25C / Runway 25R

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course/ Track (°M) | Magnetic Variation | Distance (NM) | Turn Dir | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | ABBEY | - | - | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | MUSEL | - | 271 | +3.0 | 7.9 | - | @FL110 | @280 | RNP 1 |
| 03 | TF | TEDUR | - | 261 | +3.0 | 21.8 | - | -6000 | - | RNP 1 |
| 04 | TF | HH631 | - | 260 | +3.0 | 15.5 | - | -6000 +5000 | @210 | RNP 1 |
| 05 | TF | LUDLA | - | 336 | +3.0 | 6.6 | - | @4500 | - | RNP 1 |

### Designator: BETTY 2G Runway 25L / Runway 25C / Runway 25R

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course/ Track (°M) | Magnetic Variation | Distance (NM) | Turn Dir | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | BETTY | - | - | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | MANGO | - | 345 | +3.0 | 8.0 | - | @FL130 | @280 | RNP 1 |
| 03 | TF | HH633 | - | 321 | +3.0 | 21.7 | - | -9000 | - | RNP 1 |
| 04 | TF | HH632 | - | 336 | +3.0 | 10.5 | - | -8000 | - | RNP 1 |
| 05 | TF | HH631 | - | 336 | +3.0 | 5.9 | - | -6000 +5000 | @210 | RNP 1 |
| 06 | TF | LUDLA | - | 336 | +3.0 | 6.6 | - | @4500 | - | RNP 1 |

### Designator: CANTO 2G Runway 25L / Runway 25C / Runway 25R

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course/ Track (°M) | Magnetic Variation | Distance (NM) | Turn Dir | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | CANTO | - | - | +3.0 | - | - | +FL130 | @280 | RNP 1 |
| 02 | TF | MURRY | - | 046 | +3.0 | 8.7 | - | -FL130 +FL110 | - | RNP 1 |
| 03 | TF | SILVA | - | 046 | +3.0 | 7.6 | - | - | - | RNP 1 |
| 04 | TF | HH635 | - | 091 | +3.0 | 13.5 | - | -9000 | - | RNP 1 |
| 05 | TF | HH634 | - | 035 | +3.0 | 7.4 | - | - | - | RNP 1 |
| 06 | TF | HH632 | - | 336 | +3.0 | 5.3 | - | -8000 | - | RNP 1 |
| 07 | TF | HH631 | - | 336 | +3.0 | 5.9 | - | -6000 +5000 | @210 | RNP 1 |
| 08 | TF | LUDLA | - | 336 | +3.0 | 6.6 | - | @4500 | - | RNP 1 |

### Designator: SIERA 2G Runway 25L / Runway 25C / Runway 25R

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course/ Track (°M) | Magnetic Variation | Distance (NM) | Turn Dir | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | SIERA | - | - | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | CANTO | - | 160 | +3.0 | 21.8 | - | +FL130 | @280 | RNP 1 |
| 03 | TF | MURRY | - | 046 | +3.0 | 8.7 | L | -FL130 +FL110 | - | RNP 1 |
| 04 | TF | SILVA | - | 046 | +3.0 | 7.6 | - | - | - | RNP 1 |
| 05 | TF | HH635 | - | 091 | +3.0 | 13.5 | - | -9000 | - | RNP 1 |
| 06 | TF | HH634 | - | 035 | +3.0 | 7.4 | - | - | - | RNP 1 |
| 07 | TF | HH632 | - | 336 | +3.0 | 5.3 | - | -8000 | - | RNP 1 |
| 08 | TF | HH631 | - | 336 | +3.0 | 5.9 | - | -6000 +5000 | @210 | RNP 1 |
| 09 | TF | LUDLA | - | 336 | +3.0 | 6.6 | - | @4500 | - | RNP 1 |

### Waypoint Coordinates

| Waypoint Identifier | Coordinates (WGS-84) |
|---|---|
| ABBEY | 22 16 11.00N 114 55 25.92E |
| BETTY | 21 29 10.82N 114 33 31.92E |
| CANTO | 21 39 02.63N 113 42 25.09E |
| MANGO | 21 36 49.00N 114 30 53.00E |
| MUSEL | 22 15 53.99N 114 46 52.13E |
| MURRY | 21 45 28.37N 113 48 41.97E |
| SILVA | 21 51 04.50N 113 54 10.88E |
| SIERA | 21 59 12.00N 113 33 12.00E |

| Waypoint Identifier | Coordinates (WGS-84) |
|---|---|
| LUDLA | 22 13 40.79N 114 04 28.75E |
| TEDUR | 22 11 18.77N 114 23 51.26E |
| HH631 | 22 07 46.57N 114 07 38.63E |
| HH632 | 22 02 30.12N 114 10 28.02E |
| HH633 | 21 53 03.75N 114 15 23.47E |
| HH634 | 21 57 44.18N 114 12 57.27E |
| HH635 | 21 51 28.24N 114 08 44.19E |
| - | - |

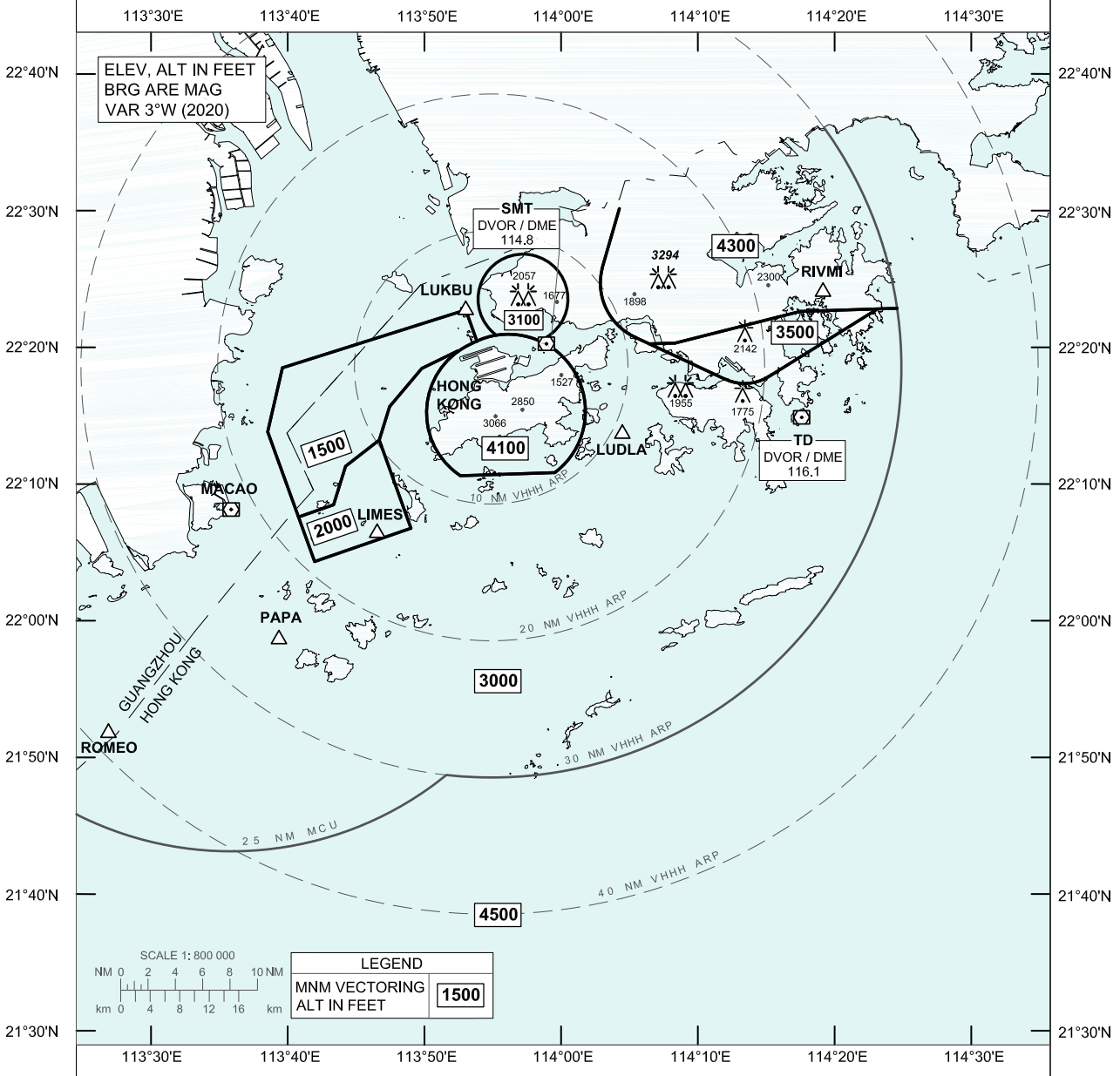
**ATC SURVEILLANCE MINIMUM ALTITUDE CHART - ICAO**

Aerodrome Elevation 28 ft
Transition Altitude 9 000 ft

Hong Kong Approach 119.1
Hong Kong Director 119.5

**HONG KONG / Intl (VHHH)**

Charts only to be used for cross-checking of altitudes assigned while under vectoring control.




**MINIMUM ALTITUDE**

Within 30 NM of Hong Kong International Airport the minimum altitude to be allocated by Hong Kong Radar is **3 000 ft** except within the indicated areas around the following locations:

1. Ma On Shan (minimum altitude **3 500 ft**);
2. Lantau Island (minimum altitude **4 100 ft**);
3. Tai Mo Shan (minimum altitude **4 300 ft**);
4. RWY 07L/07C/07R Intermediate Approach Area, (minimum altitude **1 500 ft** and **2 000 ft**).

**NOTE**

1. A vectoring control service cannot be provided to aircraft below the applicable minimum altitude.
2. Minimum altitudes are calculated in accordance with ICAO norms (PANS ATM and PANS OPS).
3. Only applicable in Hong Kong airspace.
4. Only significant spot heights are shown.

**COMMUNICATION FAILURE**

1. When under vectoring control, refer to AIP Hong Kong ENR 1.5 para 7.3, 7.6 and 7.7.
2. When following SID or STAR procedures, refer to AIP HONG KONG ENR 1.5 para 7.2, 7.4 and 7.7.

**CHANGE:** Runway 07C/25C reopened; update of waypoints.

AD 2-VHHH-SMAC-1_V08_240528km

**INSTRUMENT APPROACH CHART - ICAO**

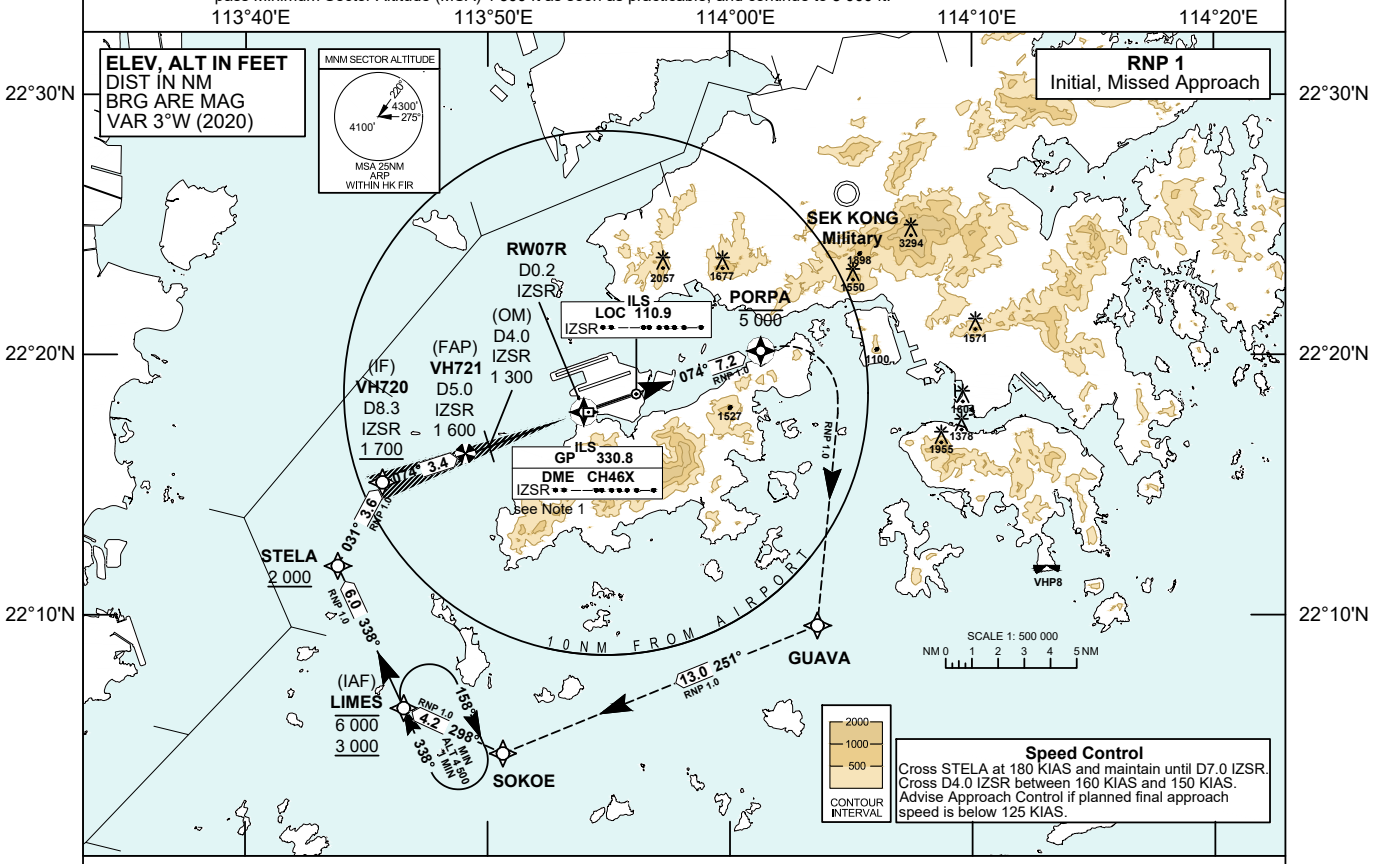
**AERODROME ELEV 28 FT**
HEIGHTS RELATED TO
THR RWY 07R - ELEV 27 FT

| | |
|---|---|
| TOWER | 118.4 |
| APPROACH | 119.1 |
| DIRECTOR | 119.5 |

**HONG KONG / INTL (VHHH)**
**ILS RWY 07R**
**CAT II**

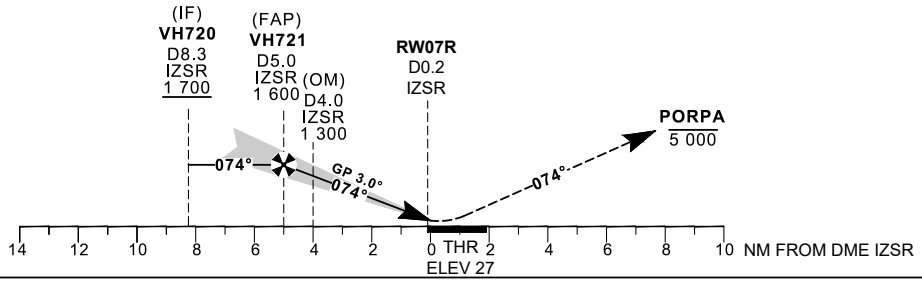
**Warnings**
1. LOC IZSR SIGNAL UNUSABLE BEYOND 19° RIGHT OF COURSE
2. GP SIGNAL MAY BE LIABLE TO INTERFERENCE FROM GROUND TRAFFIC DURING CAT I OPERATIONS
3. PILOTS SHOULD MONITOR FOR FALSE CAPTURE OF LOC AND GP BY COMPARING INDICATIONS WITH AIRCRAFT POSITION AND ALTITUDE

**Notes**
1. DME is required. If unable to receive IZSR DME pilot shall advise ATC and will receive equivalent radar ranges for FAP (D5.0 IZSR) and OM Fix (D4.0 IZSR).
2. Simultaneous dependent operation is authorized with RWY 07L or RWY 07C.
3. If unable RNP 1, inform ATC accordingly. If unable RNP 1 during missed approach, continue on the published missed approach track, climb and pass Minimum Sector Altitude (MSA) 4 300 ft as soon as practicable, and continue to 5 000 ft.




**TRANSITION ALTITUDE 9000**

ILS RDH 51 AT DISPLACED THR




**MISSED APPROACH**
Climb to 5 000 ft. Track to PORPA, then turn right direct to GUAVA, then SOKOE, then LIMES. Join LIMES holding pattern or as directed by ATC.
Speed restriction: 210 KIAS maximum until established on track to GUAVA, cross GUAVA at 210 KIAS, then maintain 230 KIAS until LIMES.
Initial missed approach turn must not be made before PORPA due to terrain.

| DME IZSR | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|
| DIST THR (NM) | 4.8 | 3.8 | 2.8 | 1.8 | 0.8 |
| ALTITUDE (FT) | 1600 | 1300 | 980 | 660 | 340 |

| Missed Approach Climb Gradient | | OCA (OCH) A | B | C | D |
|---|---|---|---|---|---|
| ILS CAT I | 2.5% | 594 (567) | 606 (579) | 615 (588) | 625 (598) |
| | 3.6% to 1400 | 227 (200) | | | |
| ILS CAT II | 3.6% to 1400 | 127 (100) | | | |
| VISUAL CIRCLING NOT AVAILABLE | | N / A | | | |

| Ground Speed | kt | 80 | 100 | 120 | 140 | 160 | 180 |
|---|---|---|---|---|---|---|---|
| VH721-THR (4.8 NM) | min:s | 3:36 | 2:53 | 2:24 | 2:04 | 1:48 | 1:36 |
| ROD (5.2%) | ft / min | 420 | 530 | 630 | 740 | 840 | 950 |

**CHANGE:** Editorial, Note 2, Runway 07C/25C reopened.

AD 2-VHHH-IAC-01A_V01_240522lh

# ILS RWY 07R APPROACH

## NAVIGATION AIDS

| Navaid/Ident | Frequency | Coordinates | | Remarks |
|---|---|---|---|---|
| Localizer/IZSR | 110.9 MHz | 22 18 30.05N | 113 56 08.39E | Course 074°M |
| Glide Path | 330.8 MHz | 22 17 47.78N | 113 54 09.48E | 3° glide slope<br>Co-located |
| DME/IZSR | CH 46X | | | |

## TABULAR DESCRIPTION: ILS RWY 07R

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | VPA | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | LIMES | - | - | +3.0 | - | - | -6000<br>+3000 | - | - | RNP 1 |
| 02 | TF | STELA | - | 338 (335) | +3.0 | 6.0 | - | +2000 | @180 | - | RNP 1 |
| 03 | TF | VH720 | - | 031 (028) | +3.0 | 3.6 | - | +1700 | @180 | - | RNP 1 |
| 04 | - | VH721 | - | 074 (071) | +3.0 | 3.4 | - | - | - | - | Conventional |
| 05 | - | RW07R | Y | 074 (071) | +3.0 | 4.8 | - | - | - | - | Conventional |
| 06 | TF | PORPA | Y | 074 (071) | +3.0 | 7.2 | - | -5000 | -210 | - | RNP 1 |
| 07 | DF | GUAVA | - | - | +3.0 | - | R | - | @210 | - | RNP 1 |
| 08 | TF | SOKOE | - | 251 (248) | +3.0 | 13.0 | - | - | @230 | - | RNP 1 |
| 09 | TF | LIMES | - | 298 (295) | +3.0 | 4.2 | - | - | @230 | - | RNP 1 |

Note: Coding is not provided for final approach segment. Please refer to the chart for altitude and speed restrictions.

## WAYPOINT LIST

**ILS RWY 07R**

| Waypoint Identifier | Coordinates (WGS-84) | | Cross Reference from Navaid |
|---|---|---|---|
| LIMES (IAF) | 22 06 25.60N | 113 46 32.60E | |
| STELA | 22 11 53.29N | 113 43 49.11E | |
| VH720 (IF) | 22 15 05.94N | 113 45 39.56E | IZSR DME 8.3 NM |
| VH721 (FAP) | 22 16 12.68N | 113 49 04.87E | IZSR DME 5.0 NM |
| RW07R (THR) | 22 17 48.03N | 113 53 57.99E | IZSR DME 0.2 NM |
| PORPA | 22 20 09.10N | 114 01 16.30E | IZSR DME 7.0 NM |
| GUAVA | 22 09 36.10N | 114 03 36.30E | |
| SOKOE | 22 04 41.20N | 113 50 38.10E | |

**INSTRUMENT APPROACH CHART - ICAO**

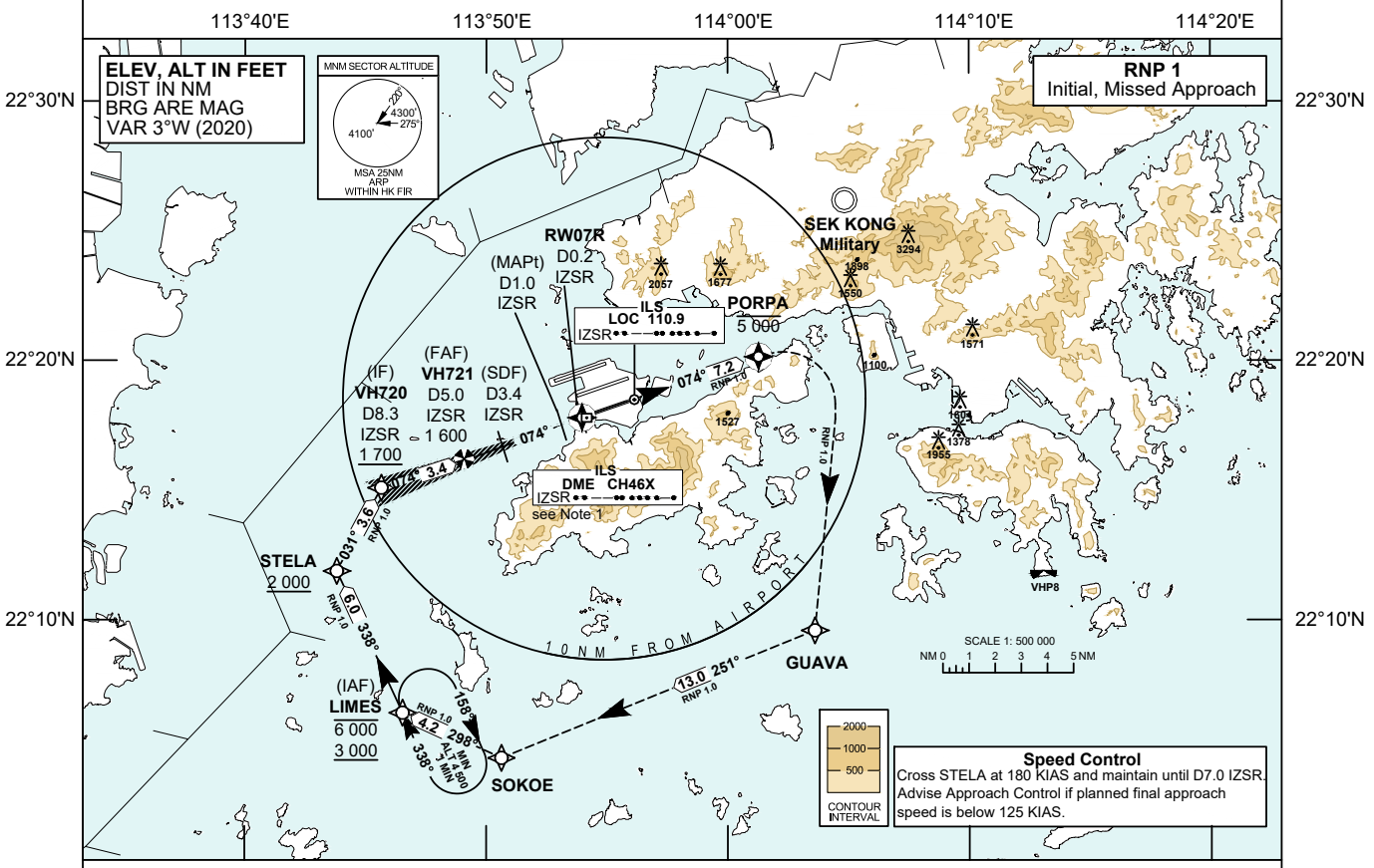
**AERODROME ELEV 28 FT**
THR ELEV 27 FT
HEIGHTS RELATED TO AD ELEV

| | |
|---|---|
| TOWER | 118.4 |
| APPROACH | 119.1 |
| DIRECTOR | 119.5 |

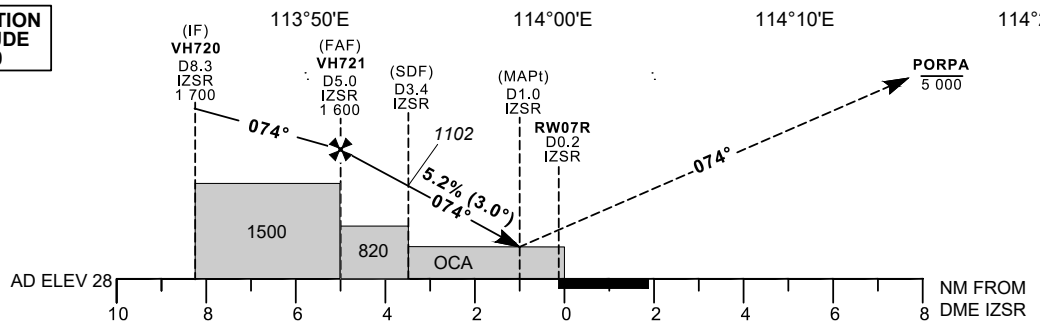
**HONG KONG / INTL (VHHH)**
**LOC RWY 07R**

**Warnings** 1. LOC IZSR SIGNAL UNUSABLE BEYOND 19° RIGHT OF COURSE

**Notes** 1. DME is required.
2. If unable RNP 1, inform ATC accordingly. If unable RNP 1 during missed approach, continue on the published missed approach track, climb and pass Minimum Sector Altitude (MSA) 4 300 ft as soon as practicable, and continue to 5 000 ft.




**TRANSITION ALTITUDE 9000**




**MISSED APPROACH**
Climb to 5 000 ft. Track to PORPA, then turn right direct to GUAVA, then SOKOE, then LIMES. Join LIMES holding pattern or as directed by ATC.
Speed restriction: 210 KIAS maximum until established on track to GUAVA, cross GUAVA at 210 KIAS, then maintain 230 KIAS until LIMES.
Initial missed approach turn must not be made before PORPA due to terrain.

| DME IZSR | 5 | 4 | 3 | 2 |
|---|---|---|---|---|
| DIST THR (NM) | 4.8 | 3.8 | 2.8 | 1.8 |
| ALTITUDE (FT) | 1600 | 1300 | 980 | 660 |

| Missed Approach Climb Gradient | | OCA (OCH) A | B | C | D |
|---|---|---|---|---|---|
| LOC | 2.5% | 880 (852) | | | |
| | 4.1% | 460 (432) | | | |
| VISUAL CIRCLING NOT AVAILABLE | | N / A | | | |

| Ground Speed | kt | 80 | 100 | 120 | 140 | 160 | 180 |
|---|---|---|---|---|---|---|---|
| VH721-THR (4.8 NM) | min:s | 3:36 | 2:53 | 2:24 | 2:04 | 1:48 | 1:36 |
| ROD (5.2%) | ft / min | 420 | 530 | 630 | 740 | 840 | 950 |

**CHANGE:** Editorial, notes, Runway 07C/25C reopened.

AD 2-VHHH-IAC-01C_V03_240522lh

# LOC RWY 07R APPROACH

## NAVIGATION AIDS

| Navaid/Ident | Frequency | Coordinates | | Remarks |
|---|---|---|---|---|
| Localizer/IZSR | 110.9 MHz | 22 18 30.05N | 113 56 08.39E | Course 074°M |
| DME/IZSR | CH 46X | 22 17 47.78N | 113 54 09.48E | 3° glide slope<br>Co-located |

## TABULAR DESCRIPTION: LOC RWY 07R

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | VPA | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | LIMES | - | - | +3.0 | - | - | -6000<br>+3000 | - | - | RNP 1 |
| 02 | TF | STELA | - | 338 (335) | +3.0 | 6.0 | - | +2000 | @180 | - | RNP 1 |
| 03 | TF | VH720 | - | 031 (028) | +3.0 | 3.6 | - | +1700 | @180 | - | RNP 1 |
| 04 | - | VH721 | - | 074 (071) | +3.0 | 3.4 | - | - | - | - | Conventional |
| 05 | - | RW07R | Y | 074 (071) | +3.0 | 4.8 | - | - | - | - | Conventional |
| 06 | TF | PORPA | Y | 074 (071) | +3.0 | 7.2 | - | -5000 | -210 | - | RNP 1 |
| 07 | DF | GUAVA | - | - | +3.0 | - | R | - | @210 | - | RNP 1 |
| 08 | TF | SOKOE | - | 251 (248) | +3.0 | 13.0 | - | - | @230 | - | RNP 1 |
| 09 | TF | LIMES | - | 298 (295) | +3.0 | 4.2 | - | - | @230 | - | RNP 1 |

Note: Coding is not provided for final approach segment. Please refer to the chart for altitude and speed restrictions.

## WAYPOINT LIST

**LOC RWY 07R**

| Waypoint Identifier | Coordinates (WGS-84) | | Cross Reference from Navaid |
|---|---|---|---|
| LIMES (IAF) | 22 06 25.60N | 113 46 32.60E | |
| STELA | 22 11 53.29N | 113 43 49.11E | |
| VH720 (IF) | 22 15 05.94N | 113 45 39.56E | IZSR DME 8.3 NM |
| VH721 (FAF) | 22 16 12.68N | 113 49 04.87E | IZSR DME 5.0 NM |
| SDF3.4 | 22 16 43.81N | 113 50 40.49E | IZSR DME 3.4 NM |
| MAPt | 22 17 31.52N | 113 53 07.21E | IZSR DME 1.0 NM |
| RW07R (THR) | 22 17 48.03N | 113 53 57.99E | IZSR DME 0.2 NM |
| PORPA | 22 20 09.10N | 114 01 16.30E | IZSR DME 7.0 NM |
| GUAVA | 22 09 36.10N | 114 03 36.30E | |
| SOKOE | 22 04 41.20N | 113 50 38.10E | |

**INSTRUMENT APPROACH CHART - ICAO**

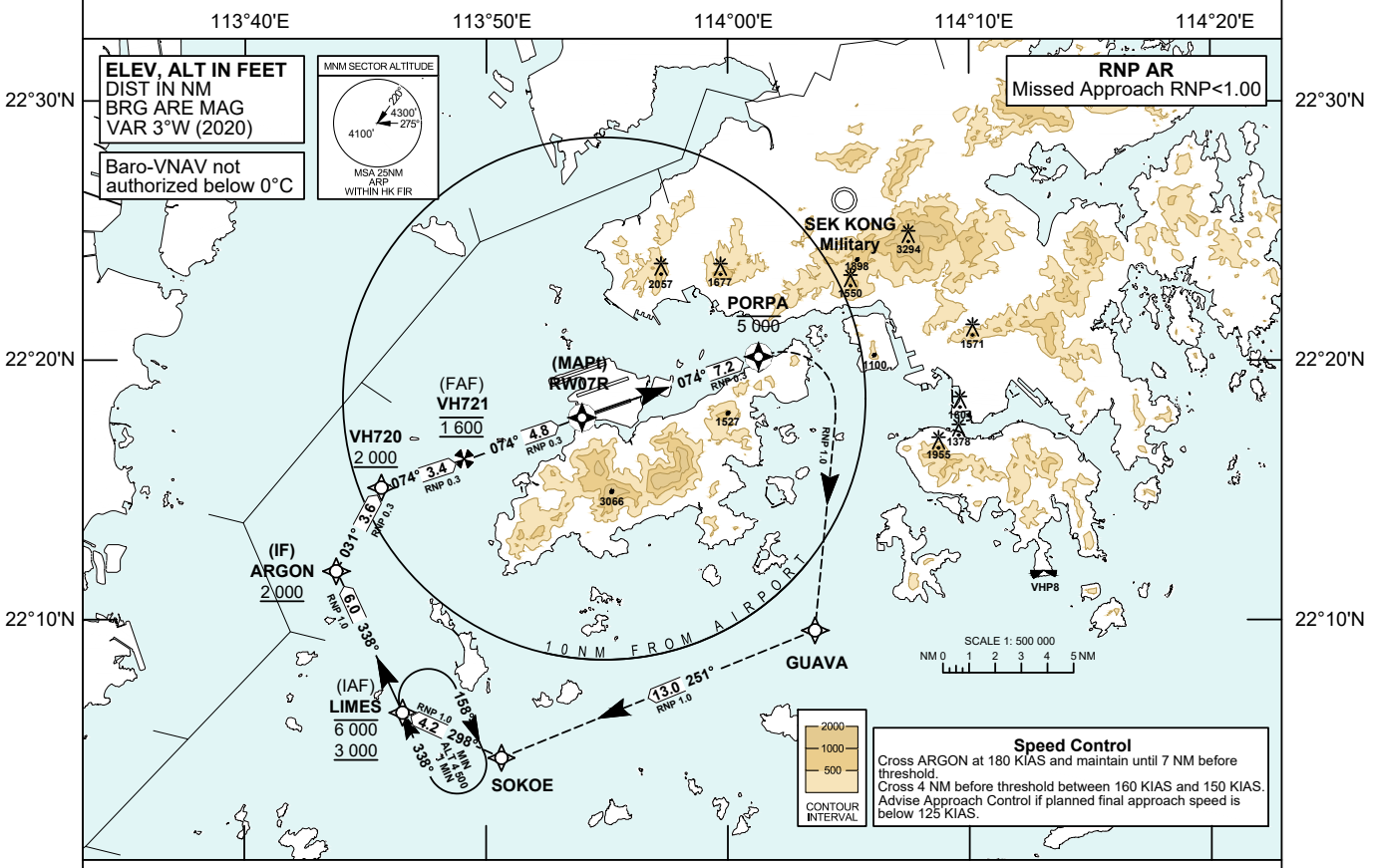
**AERODROME ELEV 28 FT**
HEIGHTS RELATED TO
THR RWY 07R - ELEV 27 FT

| | |
|---|---|
| TOWER | 118.4 |
| APPROACH | 119.1 |
| DIRECTOR | 119.5 |

**HONG KONG / INTL (VHHH)**
**RNP Z RWY 07R (AR)**

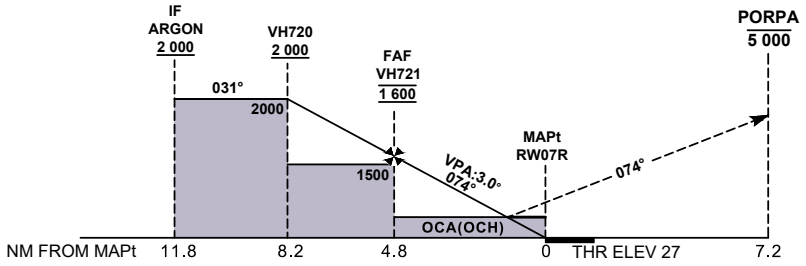
**Authorization from HONG KONG CAD is Required (Refer to the relevant AIC for application procedures)**

**Notes**
1. RNP AR APCH: RNP 0.3 in Intermediate and Missed Approach segments. RNP values are depicted on Plan View for each applicable leg.
2. Simultaneous dependent operation is authorized with RWY 07L or RWY 07C.
3. Do not accept radar vectors inside VH720.




**TRANSITION ALTITUDE 9000**

TCH 50 AT DISPLACED THR




**MISSED APPROACH**
Climb to 5 000 ft, track to PORPA, then turn right direct to GUAVA, then SOKOE, then LIMES. Join LIMES holding pattern or as directed by ATC.
Speed restriction: 210 KIAS maximum until established on track to GUAVA, cross GUAVA at 210 KIAS, then maintain 230 KIAS until LIMES.

| | | | | | |
|---|---|---|---|---|---|
| DIST THR (NM) | | 4.8 | 4 | 3 | 2 |
| ALTITUDE (FT) | | 1600 | 1350 | 1030 | 710 |

| Missed Approach Climb Gradient | | OCA (OCH) A | B | C | D |
|---|---|---|---|---|---|
| RNP 0.30 | 2.5% | 430 (410) | 430 (410) | 430 (410) | 430 (410) |
| VISUAL CIRCLING NOT AVAILABLE | | N / A | | | |

| Ground Speed | kt | 80 | 100 | 120 | 140 | 160 | 180 |
|---|---|---|---|---|---|---|---|
| VH721-THR (4.8NM) | min:s | 3:36 | 2:53 | 2:24 | 2:04 | 1:48 | 1:36 |
| ROD (5.2%) | ft / min | 420 | 530 | 630 | 740 | 840 | 950 |

CHANGE: Editorial, notes, speed control, Runway 07C/25C reopened.

AD 2-VHHH-IAC-01E_V08_240513km

# RNP Z RWY 07R (AR) APPROACH

## TABULAR DESCRIPTION: RNP Z RWY 07R (AR)

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | VPA | Navigation Specification (RNP Value) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | LIMES | - | - | +3.0 | - | - | -6000<br>+3000 | - | - | RNP AR APCH (RNP 1.0) |
| 02 | TF | ARGON | - | 338 (335) | +3.0 | 6.0 | - | +2000 | @180 | - | RNP AR APCH (RNP 1.0) |
| 03 | TF | VH720 | - | 031 (028) | +3.0 | 3.6 | - | +2000 | @180 | - | RNP AR APCH (RNP 0.3) |
| 04 | TF | VH721 | - | 074 (071) | +3.0 | 3.4 | - | @1600 | -160<br>+150 | - | RNP AR APCH (RNP 0.3) |
| 05 | TF | RW07R | Y | 074 (071) | +3.0 | 4.8 | - | @77 | - | -3.0 | RNP AR APCH (RNP 0.3) |
| 06 | TF | PORPA | Y | 074 (071) | +3.0 | 7.2 | - | -5000 | -210 | - | RNP AR APCH (RNP 0.3) |
| 07 | DF | GUAVA | - | - | +3.0 | - | R | - | @210 | - | RNP AR APCH (RNP 1.0) |
| 08 | TF | SOKOE | - | 251 (248) | +3.0 | 13.0 | - | - | @230 | - | RNP AR APCH (RNP 1.0) |
| 09 | TF | LIMES | - | 298 (295) | +3.0 | 4.2 | - | - | @230 | - | RNP AR APCH (RNP 1.0) |

## WAYPOINT LIST

**RNP Z RWY 07R (AR)**

| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| LIMES (IAF) | 22 06 25.60N | 113 46 32.60E |
| ARGON (IF) | 22 11 52.56N | 113 43 47.67E |
| VH720 | 22 15 05.94N | 113 45 39.56E |
| VH721 (FAF) | 22 16 12.68N | 113 49 04.87E |
| RW07R (MAPT) | 22 17 48.03N | 113 53 57.99E |
| PORPA | 22 20 09.10N | 114 01 16.30E |
| GUAVA | 22 09 36.10N | 114 03 36.30E |
| SOKOE | 22 04 41.20N | 113 50 38.10E |

**INSTRUMENT APPROACH CHART - ICAO**

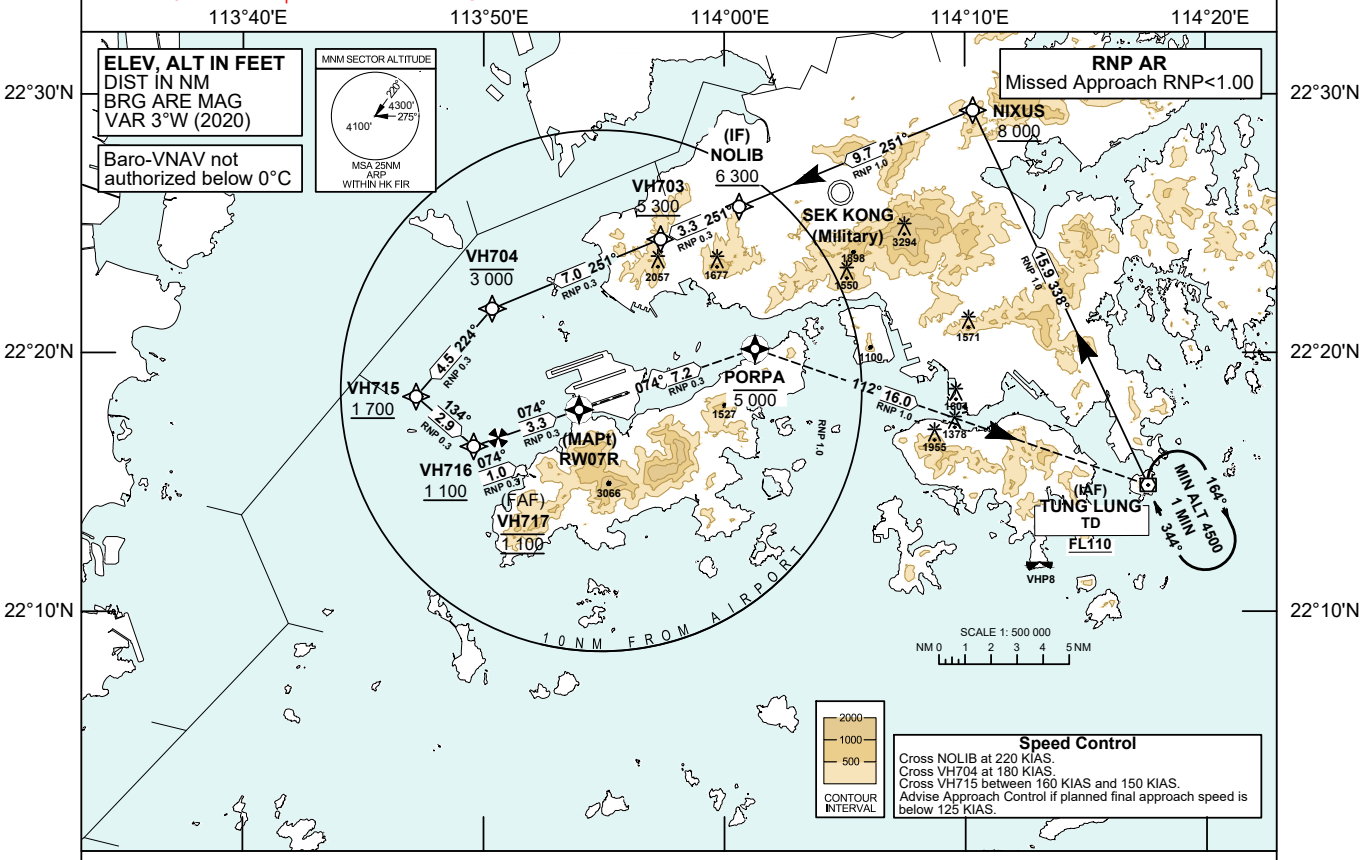
**AERODROME ELEV 28 FT**
HEIGHTS RELATED TO
THR RWY 07R - ELEV 27 FT

| | |
|---|---|
| TOWER | 118.4 |
| APPROACH | 119.1 |
| DIRECTOR | 119.5 |

# HONG KONG / INTL (VHHH)
# RNP Y RWY 07R (AR)

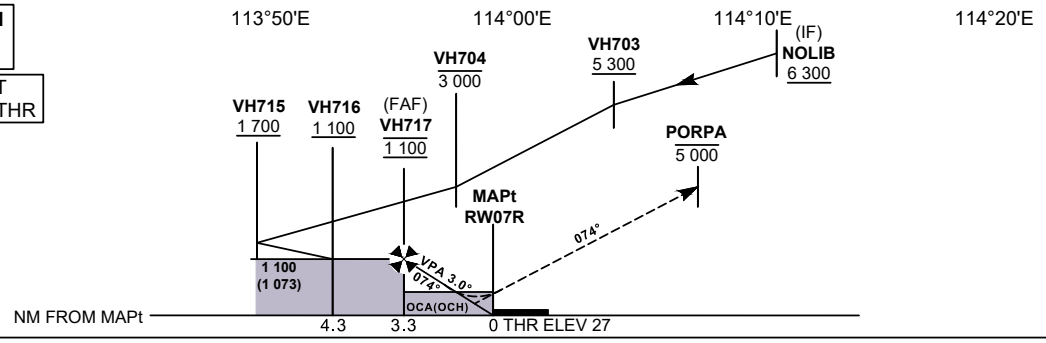
**Authorization from HONG KONG CAD is Required (Refer to the relevant AIC for application procedures)**

**Notes**
1. RNP AR APCH: RNP 0.3 in Intermediate and Missed Approach segments. RNP values are depicted on Plan View for each applicable leg.
2. The close proximity of the northern FIR boundary requires strict adherence to the procedure track. Execute a missed approach if unable to comply and expect radar vectors within Hong Kong FIR when above the minimum vector altitude.
3. This is the contingency procedure for RWY 07R when bad weather or other unforeseen circumstances block the flight path to the southwest of the airport.
4. Simultaneous dependent operation is authorized with RWY 07L or RWY 07C.
5. Do not accept radar vectors inside NOLIB.




**TRANSITION ALTITUDE 9000**

TCH 50 AT DISPLACED THR




**MISSED APPROACH**
Climb to 5 000 ft, track to PORPA, then to TD. Join TD holding pattern or as directed by ATC.
Speed restriction: 220 KIAS maximum until TD, cross TD at 220 KIAS.

| | | | |
|---|---|---|---|
| DIST THR (NM) | 3.3 | 3 | 2 |
| ALTITUDE (FT) | 1100 | 1010 | 700 |

| Missed Approach Climb Gradient | | OCA (OCH) A | B | C | D |
|---|---|---|---|---|---|
| RNP 0.30 | 2.5% | 430 (410) | | | |
| VISUAL CIRCLING NOT AVAILABLE | | N / A | | | |

CHANGE: VPA

| Ground Speed | kt | 80 | 100 | 120 | 140 | 160 | 180 |
|---|---|---|---|---|---|---|---|
| VH717-THR (3.3NM) | min:s | 2:28 | 1:59 | 1:39 | 1:25 | 1:14 | 1:06 |
| ROD (5.1%) | ft / min | 410 | 520 | 620 | 720 | 830 | 930 |

AD 2-VHHH-IAC-01G_V10_241101lh

# RNP Y RWY 07R (AR) APPROACH

## TABULAR DESCRIPTION: RNP Y RWY 07R (AR)

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | VPA | Navigation Specification (RNP Value) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | TD | - | - | +3.0 | - | - | +FL110 | - | - | RNP AR APCH (RNP 1.0) |
| 02 | TF | NIXUS | - | 338 (335) | +3.0 | 15.9 | - | +8000 | - | - | RNP AR APCH (RNP 1.0) |
| 03 | TF | NOLIB | - | 251 (248) | +3.0 | 9.7 | - | +6300 | @220 | - | RNP AR APCH (RNP 1.0) |
| 04 | TF | VH703 | - | 251 (248) | +3.0 | 3.3 | - | +5300 | - | - | RNP AR APCH (RNP 0.3) |
| 05 | TF | VH704 | - | 251 (248) | +3.0 | 7.0 | - | -3000 | @180 | - | RNP AR APCH (RNP 0.3) |
| 06 | TF | VH715 | - | 224 (221) | +3.0 | 4.5 | - | +1700 | -160 +150 | - | RNP AR APCH (RNP 0.3) |
| 07 | TF | VH716 | - | 134 (131) | +3.0 | 2.9 | - | +1100 | - | - | RNP AR APCH (RNP 0.3) |
| 08 | TF | VH717 | - | 074 (071) | +3.0 | 1.0 | - | @1100 | - | - | RNP AR APCH (RNP 0.3) |
| 09 | TF | RW07R | Y | 074 (071) | +3.0 | 3.3 | - | @77 | - | -3.0 | RNP AR APCH (RNP 0.3) |
| 10 | TF | PORPA | Y | 074 (071) | +3.0 | 7.2 | - | -5000 | -220 | - | RNP AR APCH (RNP 0.3) |
| 11 | TF | TD | - | 112 (109) | +3.0 | 16.0 | - | - | @220 | - | RNP AR APCH (RNP 1.0) |

## WAYPOINT LIST

**RNP Y RWY 07R (AR)**

| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| TD (IAF) | 22 14 52.42N | 114 17 35.30E |
| NIXUS | 22 29 22.05N | 114 10 19.70E |
| NOLIB (IF) | 22 25 38.95N | 114 00 36.84E |
| VH703 | 22 24 23.82N | 113 57 20.92E |
| VH704 | 22 21 42.46N | 113 50 21.18E |
| VH715 | 22 18 18.69N | 113 47 11.73E |
| VH716 | 22 16 23.23N | 113 49 35.17E |
| VH717 (FAF) | 22 16 42.96N | 113 50 36.28E |
| RW07R (MAPT) | 22 17 48.03N | 113 53 57.99E |
| PORPA | 22 20 09.10N | 114 01 16.30E |

**INSTRUMENT APPROACH CHART - ICAO**

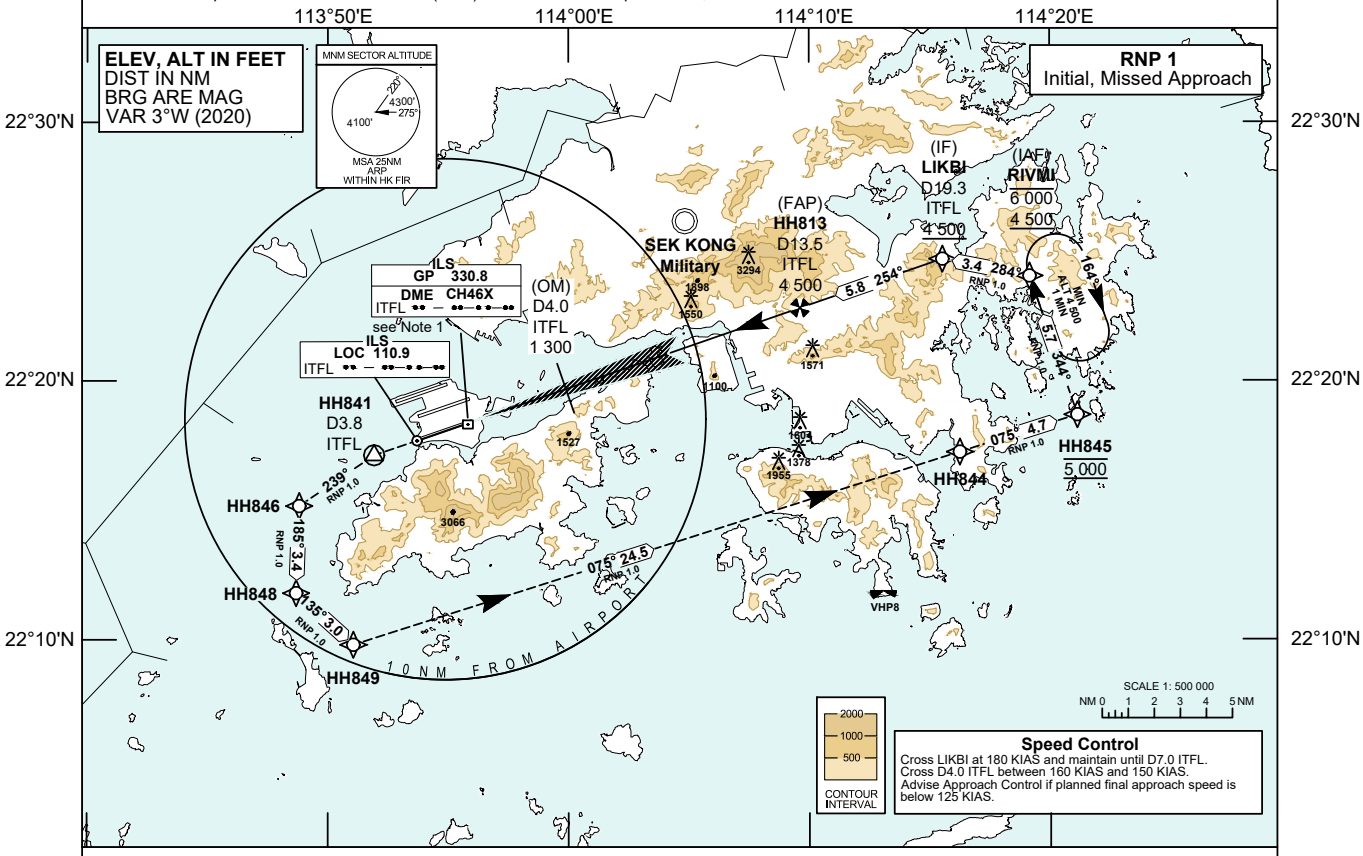
**AERODROME ELEV 28 FT**
HEIGHTS RELATED TO
THR RWY 25L - ELEV 27 FT

| | |
|---|---|
| TOWER | 118.4 |
| APPROACH | 119.1 |
| DIRECTOR | 119.5 |

**HONG KONG / INTL (VHHH)**
**ILS RWY 25L**
**CAT II**

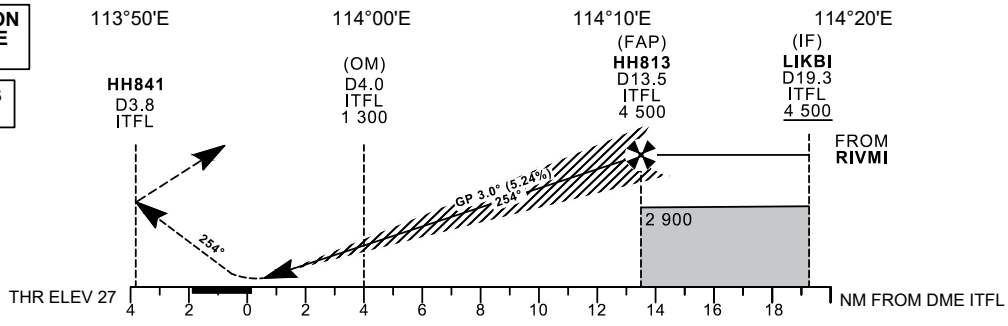
**Warnings**
1. LOC ITFL UNUSABLE BEYOND 28° LEFT OF COURSE AND BEYOND 22° RIGHT OF COURSE. GP UNUSABLE BEYOND 7° LEFT OF COURSE
2. GP SIGNAL MAY BE LIABLE TO INTERFERENCE FROM GROUND TRAFFIC DURING CAT I OPERATIONS
3. PILOTS SHOULD MONITOR FOR FALSE CAPTURE OF LOC AND GP BY COMPARING INDICATIONS WITH AIRCRAFT POSITION AND ALTITUDE

**Notes**
1. DME is required. If unable to receive ITFL DME pilot shall advise ATC and will receive equivalent radar ranges for FAP (D13.5 ITFL) and OM Fix (D4.0 ITFL).
2. Simultaneous dependent operation is authorized with RWY 25R or RWY 25C.
3. If unable RNP 1, inform ATC accordingly. If unable RNP 1 during missed approach, continue on the published missed approach track, climb and pass Minimum Sector Altitude (MSA) 4 300 ft as soon as practicable, and continue to 5 000 ft.




**TRANSITION ALTITUDE 9000**

ILS RDH 53 AT THR




**MISSED APPROACH**

Climb to 5 000 ft. Track 254°M to HH841 (ITFL D3.8). Turn left track 239°M to HH846, then proceed to HH848, HH849, HH844, HH845 and RIVMI.
Speed restriction: 185 KIAS maximum until HH849, then maintain 230 KIAS until HH844, then maintain 210 KIAS until RIVMI.
Initial missed approach turn must not be made before HH841 due to terrain.

| DME ITFL | 13.5 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DIST THR (NM) | 13.3 | 12.8 | 11.8 | 10.8 | 9.8 | 8.8 | 7.8 | 6.8 | 5.8 | 4.8 | 3.8 | 2.8 | 1.8 | 0.8 |
| ALTITUDE (FT) | 4500 | 4300 | 3960 | 3620 | 3280 | 2950 | 2610 | 2280 | 1950 | 1630 | 1300 | 980 | 650 | 330 |

| Missed Approach Climb Gradient | | OCA (OCH) A | B | C | D |
|---|---|---|---|---|---|
| ILS CAT I | 2.5% | 607 (580) | 619 (592) | 627 (600) | 638 (611) |
| | 4.0% | 227 (200) | | | |
| ILS CAT II | 4.0% | 127 (100) | | | |
| VISUAL CIRCLING NOT AVAILABLE | | N / A | | | |

| Ground Speed | kt | 80 | 100 | 120 | 140 | 160 | 180 |
|---|---|---|---|---|---|---|---|
| HH813-THR (13.4 NM) | min:s | 9:59 | 8:00 | 6:40 | 5:43 | 5:00 | 4:26 |
| ROD (5.2%) | ft / min | 440 | 550 | 660 | 770 | 880 | 990 |

**CHANGE:** New Procedure. Runway 07C/25C reopened.

AD 2-VHHH-IAC-02A_V01_240909lh

# ILS RWY 25L APPROACH

## NAVIGATION AIDS

| Navaid/Ident | Frequency | Coordinates | | Remarks |
|---|---|---|---|---|
| Localizer/ITFL | 110.9 MHz | 22 17 42.98N | 113 53 42.30E | Course 254°M |
| Glide Path | 330.8 MHz | 22 18 19.93N | 113 55 49.28E | 3° glide slope<br>Co-located |
| DME/ITFL | CH 46X | | | |

## TABULAR DESCRIPTION: ILS RWY 25L

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | VPA | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | TF | RIVMI | - | - | +3.0 | - | - | -6000<br>+4500 | - | - | RNP 1 |
| 02 | TF | LIKBI | - | 284 (281) | +3.0 | 3.4 | - | +4500 | @180 | - | RNP 1 |
| 03 | - | HH813 | - | 254 (251) | +3.0 | 5.8 | - | - | @180 | - | Conventional |
| 04 | - | RW25L | Y | 254 (251) | +3.0 | 13.4 | - | - | - | - | Conventional |
| 05 | - | HH841 | Y | 254 (251) | +3.0 | 4.0 | - | - | -185 | - | Conventional |
| 06 | CF | HH846 | - | 239 (236) | +3.0 | - | - | - | @185 | - | RNP 1 |
| 07 | TF | HH848 | - | 185 (182) | +3.0 | 3.4 | - | - | @185 | - | RNP 1 |
| 08 | TF | HH849 | - | 135 (132) | +3.0 | 3.0 | - | - | @185 | - | RNP 1 |
| 09 | TF | HH844 | - | 075 (072) | +3.0 | 24.5 | - | - | @230 | - | RNP 1 |
| 10 | TF | HH845 | - | 075 (072) | +3.0 | 4.7 | - | @5000 | @210 | - | RNP 1 |
| 11 | TF | RIVMI | - | 344 (341) | +3.0 | 5.7 | - | - | @210 | - | RNP 1 |

Note: Coding is not provided for final approach segment. Please refer to the chart for altitude and speed restrictions.

## WAYPOINT LIST

**ILS RWY 25L**

| Waypoint Identifier | Coordinates (WGS-84) | | Cross Reference from Navaid |
|---|---|---|---|
| RIVMI (IAF) | 22 24 03.96N | 114 19 09.28E | |
| LIKBI (IF) | 22 24 43.38N | 114 15 32.10E | ITFL DME 19.3 NM |
| HH813 (FAP) | 22 22 49.72N | 114 09 36.81E | ITFL DME 13.5 NM |
| RW25L (THR) | 22 18 26.75N | 113 55 58.15E | ITFL DME 0.2 NM |
| HH841 | 22 17 08.54N | 113 51 55.54E | ITFL DME 3.8 NM |
| HH846 | 22 15 10.93N | 113 48 48.94E | |
| HH848 | 22 11 48.89N | 113 48 41.36E | |
| HH849 | 22 09 49.33N | 113 51 03.91E | |
| HH844 | 22 17 16.04N | 114 16 15.09E | |
| HH845 | 22 18 42.08N | 114 21 08.00E | |

**INSTRUMENT APPROACH CHART - ICAO**

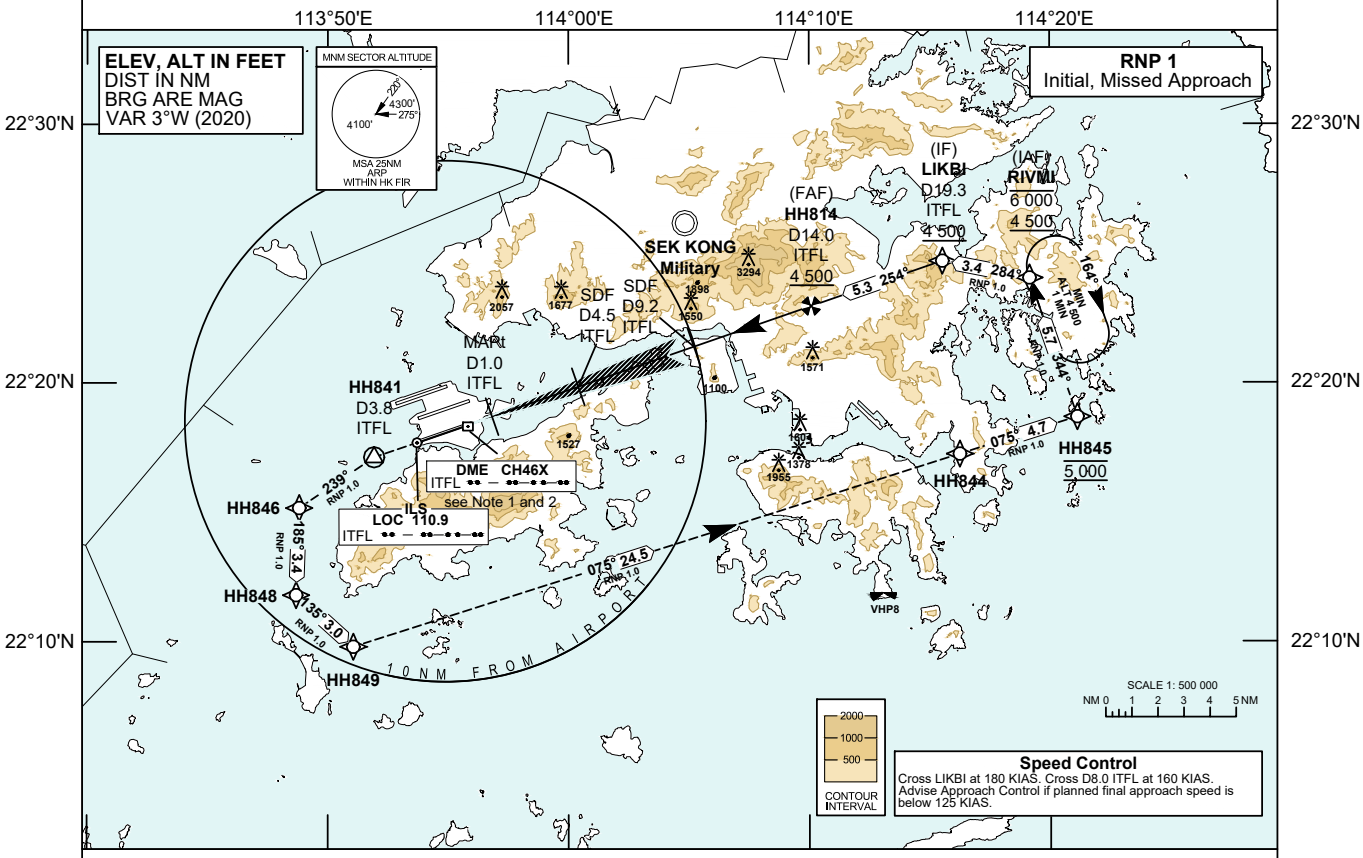
**AERODROME ELEV 28 FT**
THR ELEV 27 FT
HEIGHTS RELATED TO AD ELEV

| | |
|---|---|
| TOWER | 118.4 |
| APPROACH | 119.1 |
| DIRECTOR | 119.5 |

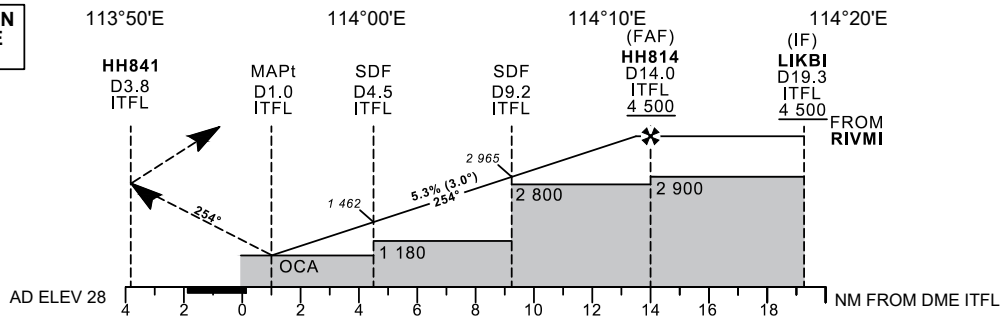
**HONG KONG / INTL (VHHH)**
**LOC RWY 25L**

**Warnings** 1. LOC ITFL UNUSABLE BEYOND 28° LEFT OF COURSE AND BEYOND 22° RIGHT OF COURSE

**Notes** 1. DME is required.
2. If unable RNP 1, inform ATC accordingly. If unable RNP 1 during missed approach, continue on the published missed approach track, climb and pass Minimum Sector Altitude (MSA) 4 300 ft as soon as practicable, and continue to 5 000 ft.




**TRANSITION ALTITUDE 9000**




**MISSED APPROACH**
Climb to 5 000 ft. Track 254°M to HH841 (ITFL D3.8). Turn left track 239°M to HH846, then proceed to HH848, HH849, HH844, HH845 and RIVMI.
Speed restriction: 185 KIAS maximum until HH849, then maintain 230 KIAS until HH844, then maintain 210 KIAS until RIVMI.
Initial missed approach turn must not be made before HH841 due to terrain.

| DME ITFL | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DIST THR (NM) | 13.8 | 12.8 | 11.8 | 10.8 | 9.8 | 8.8 | 7.8 | 6.8 | 5.8 | 4.8 | 3.8 | 2.8 | 1.8 |
| ALTITUDE (FT) | 4500 | 4170 | 3850 | 3530 | 3210 | 2890 | 2570 | 2250 | 1930 | 1610 | 1290 | 970 | 650 |

| Missed Approach Climb Gradient | | OCA (OCH) A | B | C | D |
|---|---|---|---|---|---|
| LOC | 2.5% | 690 (662) | | | |
| | 4.0% | 420 (392) | | | |
| VISUAL CIRCLING NOT AVAILABLE | | N / A | | | |

| Ground Speed | kt | 80 | 100 | 120 | 140 | 160 | 180 |
|---|---|---|---|---|---|---|---|
| HH814-THR (13.8 NM) | min:s | 10:22 | 8:18 | 6:55 | 5:55 | 5:11 | 4:36 |
| ROD (5.3%) | ft / min | 430 | 530 | 640 | 750 | 850 | 960 |

**CHANGE:** New Procedure. Runway 07C/25C reopened.

AD 2-VHHH-IAC-02C_V01_240909lh

# LOC RWY 25L APPROACH

## NAVIGATION AIDS

| Navaid/Ident | Frequency | Coordinates | | Remarks |
|---|---|---|---|---|
| Localizer/ITFL | 110.9 MHz | 22 17 42.98N | 113 53 42.30E | Course 254°M |
| DME/ITFL | CH 46X | 22 18 19.93N | 113 55 49.28E | |

## TABULAR DESCRIPTION: LOC RWY 25L

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | VPA | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | TF | RIVMI | - | - | +3.0 | - | - | -6000<br>+4500 | - | - | RNP 1 |
| 02 | TF | LIKBI | - | 284 (281) | +3.0 | 3.4 | - | +4500 | @180 | - | RNP 1 |
| 03 | - | HH814 | - | 254 (251) | +3.0 | 5.3 | - | +4500 | @180 | - | Conventional |
| 04 | - | RW25L | Y | 254 (251) | +3.0 | 13.8 | - | - | - | - | Conventional |
| 05 | - | HH841 | Y | 254 (251) | +3.0 | 4.0 | - | - | -185 | - | Conventional |
| 06 | CF | HH846 | - | 239 (236) | +3.0 | - | - | - | @185 | - | RNP 1 |
| 07 | TF | HH848 | - | 185 (182) | +3.0 | 3.4 | - | - | @185 | - | RNP 1 |
| 08 | TF | HH849 | - | 135 (132) | +3.0 | 3.0 | - | - | @185 | - | RNP 1 |
| 09 | TF | HH844 | - | 075 (072) | +3.0 | 24.5 | - | - | @230 | - | RNP 1 |
| 10 | TF | HH845 | - | 075 (072) | +3.0 | 4.7 | - | @5000 | @210 | - | RNP 1 |
| 11 | TF | RIVMI | - | 344 (341) | +3.0 | 5.7 | - | - | @210 | - | RNP 1 |

Note: Coding is not provided for final approach segment. Please refer to the chart for altitude and speed restrictions.

## WAYPOINT LIST

**LOC RWY 25L**

| Waypoint Identifier | Coordinates (WGS-84) | | Cross Reference from Navaid |
|---|---|---|---|
| RIVMI (IAF) | 22 24 03.96N | 114 19 09.28E | |
| LIKBI (IF) | 22 24 43.38N | 114 15 32.10E | ITFL DME 19.3 NM |
| HH814 (FAF) | 22 22 58.61N | 114 10 04.78E | ITFL DME 14.0 NM |
| SDF9.2 | 22 21 24.41N | 114 05 10.89E | ITFL DME 9.2 NM |
| SDF4.5 | 22 19 52.02N | 114 00 23.21E | ITFL DME 4.5 NM |
| MAPt | 22 18 43.11N | 113 56 48.97E | ITFL DME 1.0 NM |
| RW25L (THR) | 22 18 26.75N | 113 55 58.15E | ITFL DME 0.2 NM |
| HH841 | 22 17 08.54N | 113 51 55.54E | ITFL DME 3.8 NM |
| HH846 | 22 15 10.93N | 113 48 48.94E | |
| HH848 | 22 11 48.89N | 113 48 41.36E | |
| HH849 | 22 09 49.33N | 113 51 03.91E | |
| HH844 | 22 17 16.04N | 114 16 15.09E | |
| HH845 | 22 18 42.08N | 114 21 08.00E | |

**INSTRUMENT APPROACH CHART - ICAO**

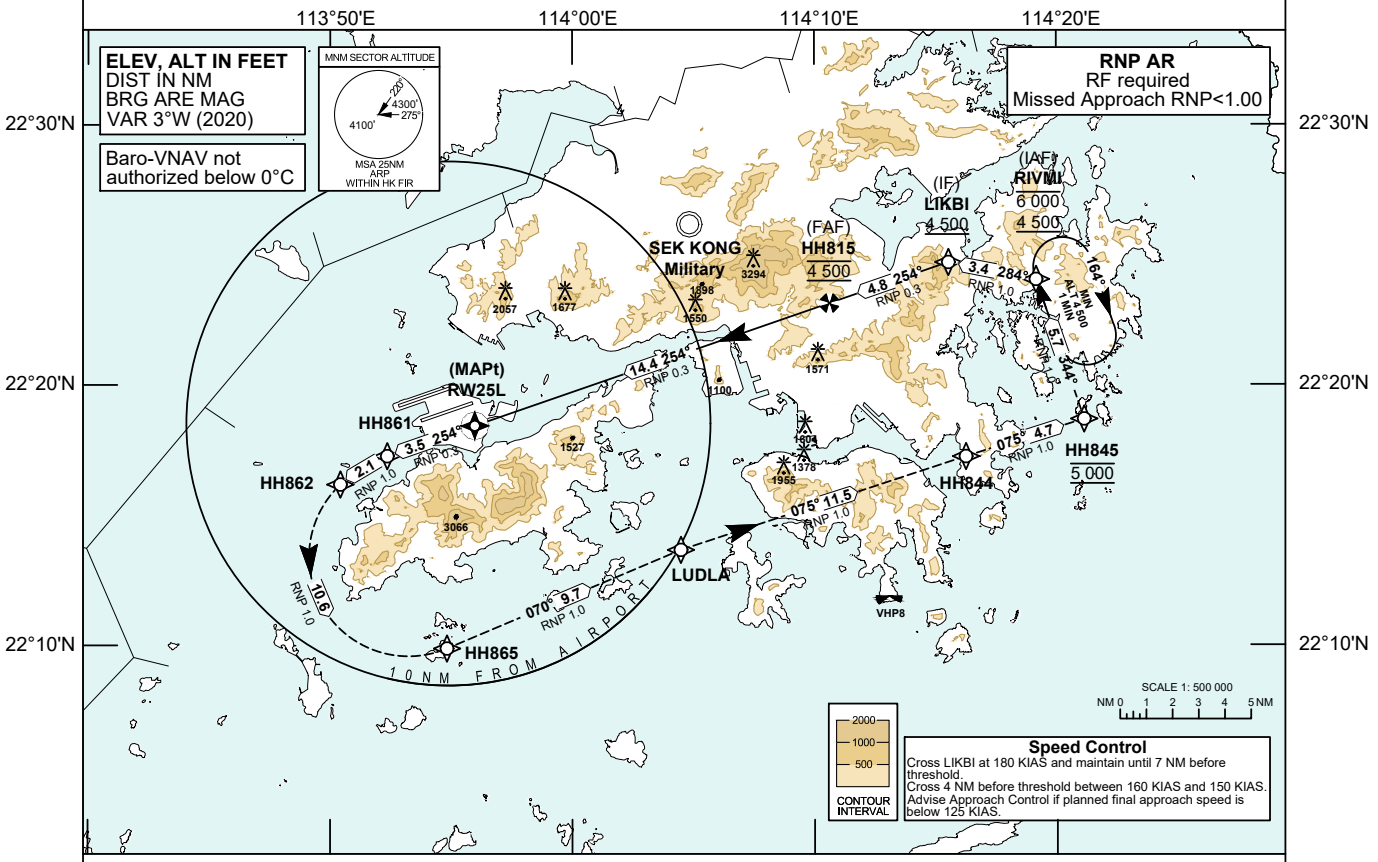
**AERODROME ELEV 28 FT**
HEIGHTS RELATED TO
THR RWY 25L - ELEV 27 FT

| | |
|---|---|
| TOWER | 118.4 |
| APPROACH | 119.1 |
| DIRECTOR | 119.5 |

# HONG KONG / INTL (VHHH)
# RNP Z RWY 25L (AR)

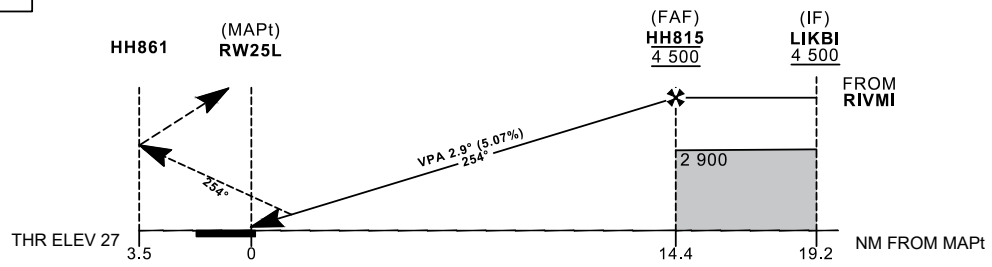
**Authorization from HONG KONG CAD is Required (Refer to the relevant AIC for application procedures)**

**Notes**
1. RNP AR APCH: RNP 0.3 in Intermediate and Missed Approach segments. RNP values are depicted on Plan View for each applicable leg.
2. Simultaneous dependent operation is authorized with RWY 25R or RWY 25C.
3. Do not accept radar vectors inside LIKBI.




**TRANSITION ALTITUDE 9000**

TCH 50




**MISSED APPROACH**
Climb to 5 000 ft. From RW25L track 254°M to HH861. Proceed to HH862, then to HH865, LUDLA, HH844, HH845 and RIVMI.
Speed restriction: 185 KIAS maximum until HH865, then maintain 230 KIAS until HH844, then maintain 210 KIAS until RIVMI.

| DIST THR (NM) | 14.4 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ALTITUDE (FT) | 4500 | 4390 | 4080 | 3770 | 3460 | 3160 | 2850 | 2540 | 2230 | 1920 | 1620 | 1310 | 1000 | 690 |

| Missed Approach Climb Gradient | | OCA (OCH) A | B | C | D |
|---|---|---|---|---|---|
| RNP 0.30 | 2.5% | 467 (440) | 486 (459) | 506 (479) | 518 (491) |
| VISUAL CIRCLING NOT AVAILABLE | | N / A | | | |

| Ground Speed | kt | 80 | 100 | 120 | 140 | 160 | 180 |
|---|---|---|---|---|---|---|---|
| HH815-THR (14.4 NM) | min:s | 10:46 | 8:37 | 7:11 | 6:09 | 5:23 | 4:47 |
| ROD (5.1%) | ft / min | 410 | 510 | 620 | 720 | 820 | 920 |

**CHANGE:** New Procedure. Runway 07C/25C reopened.

AD 2-VHHH-IAC-02E_V01_240513km

# RNP Z RWY 25L (AR) APPROACH

## TABULAR DESCRIPTION: RNP Z RWY 25L (AR)

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | VPA | Navigation Specification (RNP Value) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | RIVMI | - | - | +3.0 | - | - | -6000 +4500 | - | - | RNP AR APCH (RNP 1.0) |
| 02 | TF | LIKBI | - | 284 (281) | +3.0 | 3.4 | - | +4500 | @180 | - | RNP AR APCH (RNP 1.0) |
| 03 | TF | HH815 | - | 254 (251) | +3.0 | 4.8 | | @4500 | @180 | - | RNP AR APCH (RNP 0.3) |
| 04 | TF | RW25L | Y | 254 (251) | +3.0 | 14.4 | | @77 | - | -2.9 | RNP AR APCH (RNP 0.3) |
| 05 | TF | HH861 | - | 254 (251) | +3.0 | 3.5 | | - | -185 | - | RNP AR APCH (RNP 0.3) |
| 06 | RF Centre: HH982 r=5.026 NM | HH862 | - | - | +3.0 | 2.1 | L | - | -185 | - | RNP AR APCH (RNP 1.0) |
| 07 | RF Centre: HH985 r=3.802 NM | HH865 | - | - | +3.0 | 10.6 | L | - | -185 | - | RNP AR APCH (RNP 1.0) |
| 08 | TF | LUDLA | - | 070 (067) | +3.0 | 9.7 | - | - | @230 | - | RNP AR APCH (RNP 1.0) |
| 09 | TF | HH844 | - | 075 (072) | +3.0 | 11.5 | - | - | @230 | - | RNP AR APCH (RNP 1.0) |
| 10 | TF | HH845 | - | 075 (072) | +3.0 | 4.7 | - | @5000 | @210 | - | RNP AR APCH (RNP 1.0) |
| 11 | TF | RIVMI | - | 344 (341) | +3.0 | 5.7 | L | - | @210 | - | RNP AR APCH (RNP 1.0) |

## WAYPOINT LIST

| RNP Z RWY 25L (AR) | | |
|---|---|---|
| **Waypoint Identifier** | **Coordinates (WGS-84)** | |
| RIVMI | 22 24 03.96N | 114 19 09.28E |
| LIKBI (IF) | 22 24 43.38N | 114 15 32.10E |
| HH815 (FAF) | 22 23 09.08N | 114 10 37.30E |
| RW25L (MAPT) | 22 18 26.75N | 113 55 58.15E |
| HH861 | 22 17 16.92N | 113 52 21.60E |
| HH862 | 22 16 11.53N | 113 50 25.47E |
| HH865 | 22 09 53.61N | 113 54 49.53E |
| LUDLA | 22 13 40.79N | 114 04 28.75E |
| HH844 | 22 17 16.04N | 114 16 15.09E |
| HH845 | 22 18 42.08N | 114 21 08.00E |
| **RF Arc Centre Identifier** | **Coordinates (WGS-84)** | |
| HH982 | 22 12 30.91N | 113 54 08.12E |
| HH985 | 22 13 24.62N | 113 53 13.94E |

**INSTRUMENT APPROACH CHART - ICAO**

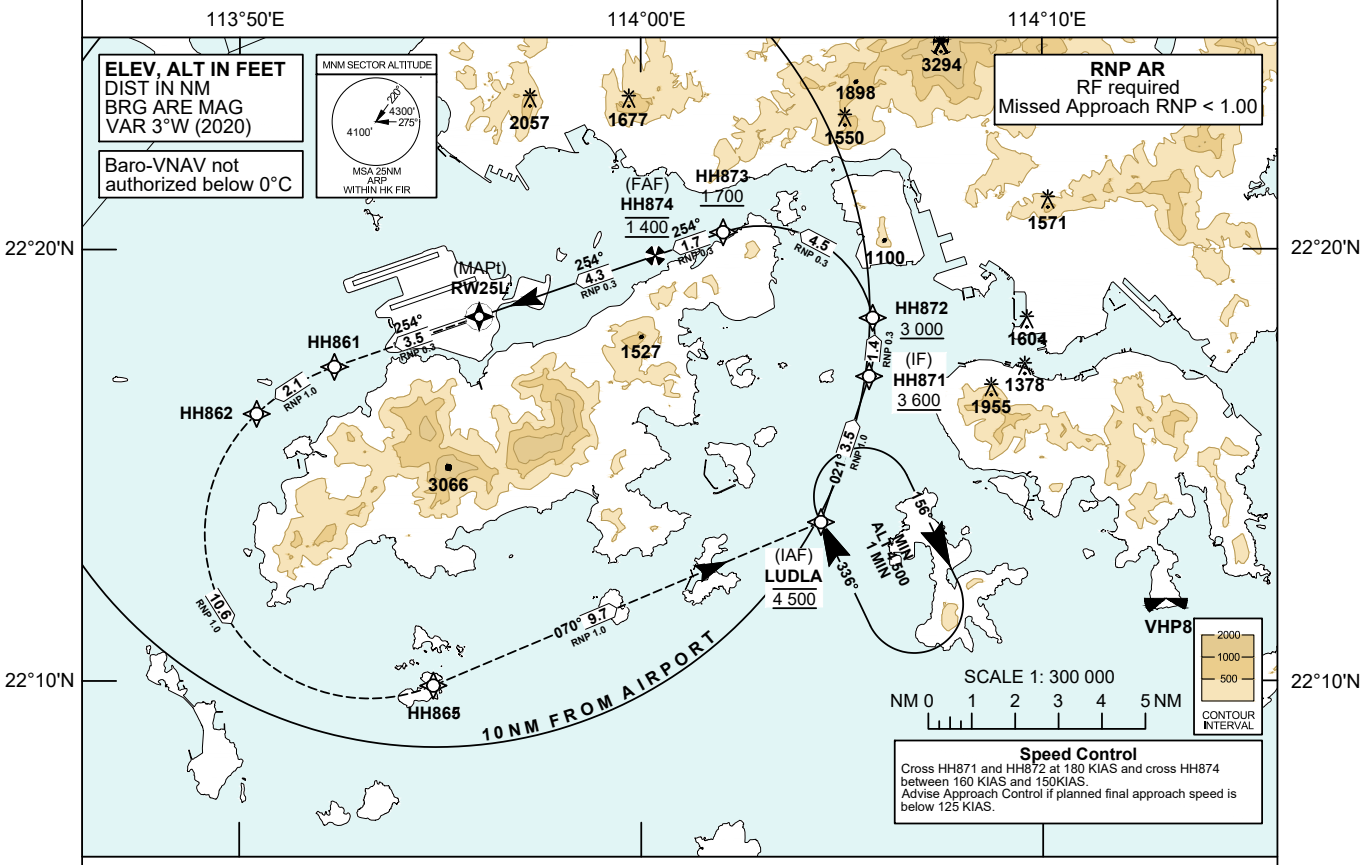
**AERODROME ELEV 28 FT**
HEIGHTS RELATED TO
THR RWY 25L - ELEV 27 FT

| | |
|---|---|
| TOWER | 118.4 |
| APPROACH | 119.1 |
| DIRECTOR | 119.5 |

**HONG KONG / INTL (VHHH)**
**RNP Y RWY 25L (AR)**

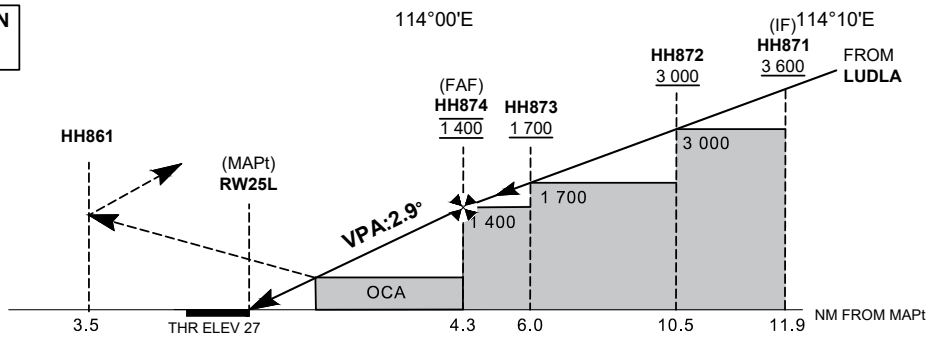
**Authorization from HONG KONG CAD is Required (Refer to the relevant AIC for application procedures)**

**Notes**
1. RNP AR APCH: RNP 0.3 in Intermediate and Missed Approach segments. RNP values are depicted on Plan View for each applicable leg.
2. Simultaneous dependent operation is authorized with RWY 25R or RWY 25C.
3. Do not accept radar vectors inside LUDLA.




**TRANSITION ALTITUDE 9000**

TCH 50




**MISSED APPROACH**
Climb to 5 000 ft. From RW25L track 254°M to HH861. Proceed to HH862, HH865, then to LUDLA.
Speed restriction: 185 KIAS maximum until HH865, then maintain 230 KIAS until LUDLA.

| DIST THR (NM) | 4.3 | 4 | 3 | 2 |
|---|---|---|---|---|
| ALTITUDE (FT) | 1400 | 1310 | 1000 | 690 |

| Missed Approach Climb Gradient | | OCA (OCH) A | B | C | D |
|---|---|---|---|---|---|
| RNP 0.30 | 2.5% | 467 (440) | 486 (459) | 506 (479) | 518 (491) |
| VISUAL CIRCLING NOT AVAILABLE | | N / A | | | |

| GS | kt | 80 | 100 | 120 | 140 | 160 | 180 |
|---|---|---|---|---|---|---|---|
| HH874-THR (4.3 NM) | min:s | 3:13 | 2:35 | 2:09 | 1:51 | 1:37 | 1:26 |
| ROD (5.1%) | ft / min | 410 | 510 | 620 | 720 | 820 | 920 |

**CHANGE:** New Procedure. Runway 07C/25C reopened.

AD 2-VHHH-IAC-02G_V09_240916km

# RNP Y RWY 25L (AR) APPROACH

## TABULAR DESCRIPTION: RNP Y RWY 25L (AR)

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | VPA | Navigation Specification (RNP Value) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | LUDLA | - | - | +3.0 | - | - | @4500 | - | - | RNP AR APCH (RNP 1.0) |
| 02 | TF | HH871 | - | 021 (018) | +3.0 | 3.5 | - | +3600 | @180 | - | RNP AR APCH (RNP 1.0) |
| 03 | RF Centre: HH981 r=2.642 NM | HH872 | - | - | +3.0 | 1.4 | L | +3000 | @180 | - | RNP AR APCH (RNP 0.3) |
| 04 | RF Centre: HH981 r=2.642 NM | HH873 | - | - | +3.0 | 4.5 | L | +1700 | - | - | RNP AR APCH (RNP 0.3) |
| 05 | TF | HH874 | - | 254 (251) | +3.0 | 1.7 | - | @1400 | -160 +150 | - | RNP AR APCH (RNP 0.3) |
| 06 | TF | RW25L | Y | 254 (251) | +3.0 | 4.3 | - | @77 | - | -2.9 | RNP AR APCH (RNP 0.3) |
| 07 | TF | HH861 | - | 254 (251) | +3.0 | 3.5 | - | - | -185 | - | RNP AR APCH (RNP 0.3) |
| 08 | RF Centre: HH982 r=5.026 NM | HH862 | - | - | +3.0 | 2.1 | L | - | -185 | - | RNP AR APCH (RNP 1.0) |
| 09 | RF Centre: HH985 r=3.802 NM | HH865 | - | - | +3.0 | 10.6 | L | - | -185 | - | RNP AR APCH (RNP 1.0) |
| 10 | TF | LUDLA | - | 070 (067) | +3.0 | 9.7 | - | - | @230 | - | RNP AR APCH (RNP 1.0) |

## WAYPOINT LIST

**RNP Y RWY 25L (AR)**

| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| LUDLA (IAF) | 22 13 40.79N | 114 04 28.75E |
| HH871 (IF) | 22 17 03.65N | 114 05 40.96E |
| HH872 | 22 18 24.89N | 114 05 46.32E |
| HH873 | 22 20 24.09N | 114 02 02.86E |
| HH874 (FAF) | 22 19 51.37N | 114 00 21.12E |
| RW25L (MAPT) | 22 18 26.75N | 113 55 58.15E |
| HH861 | 22 17 16.92N | 113 52 21.60E |
| HH862 | 22 16 11.53N | 113 50 25.47E |
| HH865 | 22 09 53.61N | 113 54 49.53E |
| **RF Arc Centre Identifier** | **Coordinates (WGS-84)** | |
| HH981 | 22 17 53.68N | 114 02 58.66E |
| HH982 | 22 12 30.91N | 113 54 08.12E |
| HH985 | 22 13 24.62N | 113 53 13.94E |

**INSTRUMENT APPROACH CHART - ICAO**

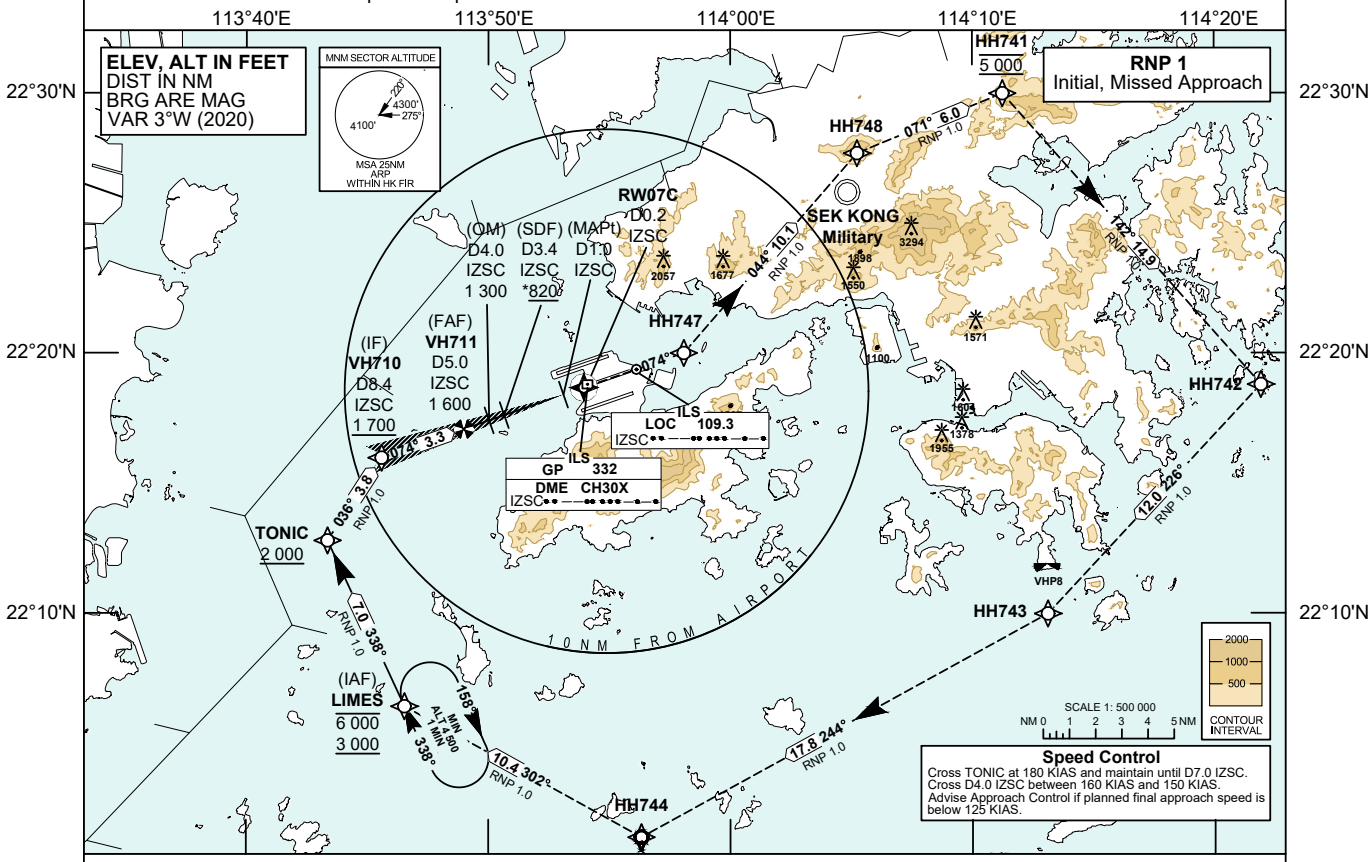
**AERODROME ELEV 28 FT**
HEIGHTS RELATED TO
THR RWY 07C - ELEV 22 FT

| | |
|---|---|
| TOWER | 118.2 |
| APPROACH | 119.1 |
| DIRECTOR | 119.5 |

**HONG KONG / INTL (VHHH)**
**ILS CAT II or LOC**
**RWY 07C**

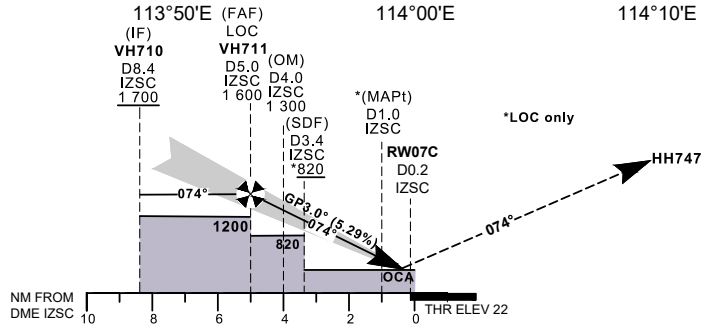
**Warnings** 1. LOC IZSC UNUSABLE BEYOND 22° LEFT OF COURSE AND BEYOND 26° RIGHT OF COURSE
2. PILOTS SHOULD MONITOR FOR FALSE CAPTURE OF LOC AND GP BY COMPARING INDICATIONS WITH AIRCRAFT POSITION AND ALTITUDE

**Notes** 1. DME is required.
2. If unable RNP 1, inform ATC accordingly. If unable RNP 1 during missed approach, continue on the published missed approach track, climb and pass Minimum Sector Altitude (MSA) 4 300 ft as soon as practicable, and continue to 5 000 ft.
3. Simultaneous dependent operation is authorized with RWY 07R.




**TRANSITION ALTITUDE 9000**

ILS RDH 50 AT DISPLACED THR




**MISSED APPROACH**
Climb to 5 000 ft. Track 074°M to HH747, then turn left to HH748. Track to HH741, then proceed to HH742, HH743, HH744 and LIMES.
Speed restriction: Maximum 200 KIAS until HH748, then maintain 230 KIAS until LIMES.

| DME IZSC | 5 | 4 | 3 | 2 |
|---|---|---|---|---|
| DIST THR (NM) | 4.8 | 3.8 | 2.8 | 1.8 |
| ALTITUDE (FT) | 1600 | 1280 | 960 | 640 |

| MISSED APPROACH CLIMB GRADIENT | | OCA (OCH) A | B | C | D |
|---|---|---|---|---|---|
| ILS CAT I | 2.5% | 781 (759) | | | |
| | 4.6% | 222 (200) | | | |
| ILS CAT II | 4.9% | 122 (100) | | | |
| LOC (GP INOP) | 2.5% | 930 (902) | | | |
| | 3.9% | 420 (392) | | | |
| VISUAL CIRCLING NOT AVAILABLE | | N / A | | | |

| Ground Speed | kt | 80 | 100 | 120 | 140 | 160 | 180 |
|---|---|---|---|---|---|---|---|
| VH711-THR (4.9 NM) | min:s | 3:39 | 2:55 | 2:26 | 2:05 | 1:49 | 1:37 |
| ROD (5.2%) | ft / min | 420 | 520 | 630 | 730 | 840 | 940 |

CHANGE: Editorial.

AD 2-VHHH-IAC-03A_V02_250220km

# ILS or LOC RWY 07C APPROACH

## NAVIGATION AIDS

| Navaid/Ident | Frequency | Coordinates | | Remarks |
|---|---|---|---|---|
| Localizer/IZSC | 109.3 MHz | 22 19 22.54N | 113 56 06.89E | Course 074°M |
| Glide Path | 332.0 MHz | 22 18 47.96N | 113 54 05.67E | 3° glide slope<br>Co-located |
| DME/IZSC | CH 30X | | | |

## TABULAR DESCRIPTION: ILS or LOC RWY 07C

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | VPA | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | LIMES | - | - | +3.0 | - | - | -6000<br>+3000 | - | - | RNP 1 |
| 02 | TF | TONIC | - | 338 (335) | +3.0 | 7.0 | - | +2000 | @180 | - | RNP 1 |
| 03 | TF | VH710 | - | 036 (033) | +3.0 | 3.8 | - | +1700 | @180 | - | RNP 1 |
| 04 | - | VH711 | - | 074 (071) | +3.0 | 3.3 | - | - | - | - | Conventional |
| 05 | - | RW07C | Y | 074 (071) | +3.0 | 4.9 | - | - | - | - | Conventional |
| 06 | CF | HH747 | - | 074 (071) | +3.0 | - | - | - | -200 | - | RNP 1 |
| 07 | TF | HH748 | - | 044 (041) | +3.0 | 10.1 | - | - | @200 | - | RNP 1 |
| 08 | TF | HH741 | - | 071 (068) | +3.0 | 6.0 | - | @5000 | @230 | - | RNP 1 |
| 09 | TF | HH742 | - | 142 (139) | +3.0 | 14.9 | - | - | @230 | - | RNP 1 |
| 10 | TF | HH743 | - | 226 (223) | +3.0 | 12.0 | - | - | @230 | - | RNP 1 |
| 11 | TF | HH744 | - | 244 (241) | +3.0 | 17.8 | - | - | @230 | - | RNP 1 |
| 12 | TF | LIMES | - | 302 (299) | +3.0 | 10.4 | - | - | @230 | - | RNP 1 |

Note: Coding is not provided for final approach segment. Please refer to the chart for altitude and speed restrictions.

## WAYPOINT LIST

**ILS or LOC RWY 07C**

| Waypoint Identifier | Coordinates (WGS-84) | | Cross Reference from Navaid |
|---|---|---|---|
| LIMES (IAF) | 22 06 25.60N | 113 46 32.60E | |
| TONIC | 22 12 47.88N | 113 43 21.85E | |
| VH710 (IF) | 22 15 58.80N | 113 45 35.61E | IZSC DME 8.4 NM |
| VH711 (FAF) | 22 17 04.63N | 113 48 59.26E | IZSC DME 5.0 NM |
| SDF, LOC only | 22 17 36.93N | 113 50 39.30E | IZSC DME 3.4 NM |
| MAPt, LOC only | 22 18 24.32N | 113 53 06.18E | IZSC DME 1.0 NM |
| RW07C (THR) | 22 18 40.58N | 113 53 56.64E | IZSC DME 0.2 NM |
| HH747 | 22 20 00.42N | 113 58 04.56E | |
| HH748 | 22 27 40.86N | 114 05 14.12E | |
| HH741 | 22 29 58.66N | 114 11 14.89E | |
| HH742 | 22 18 46.90N | 114 21 54.81E | |
| HH743 | 22 09 58.85N | 114 13 06.23E | |
| HH744 | 22 01 23.71N | 113 56 19.34E | |

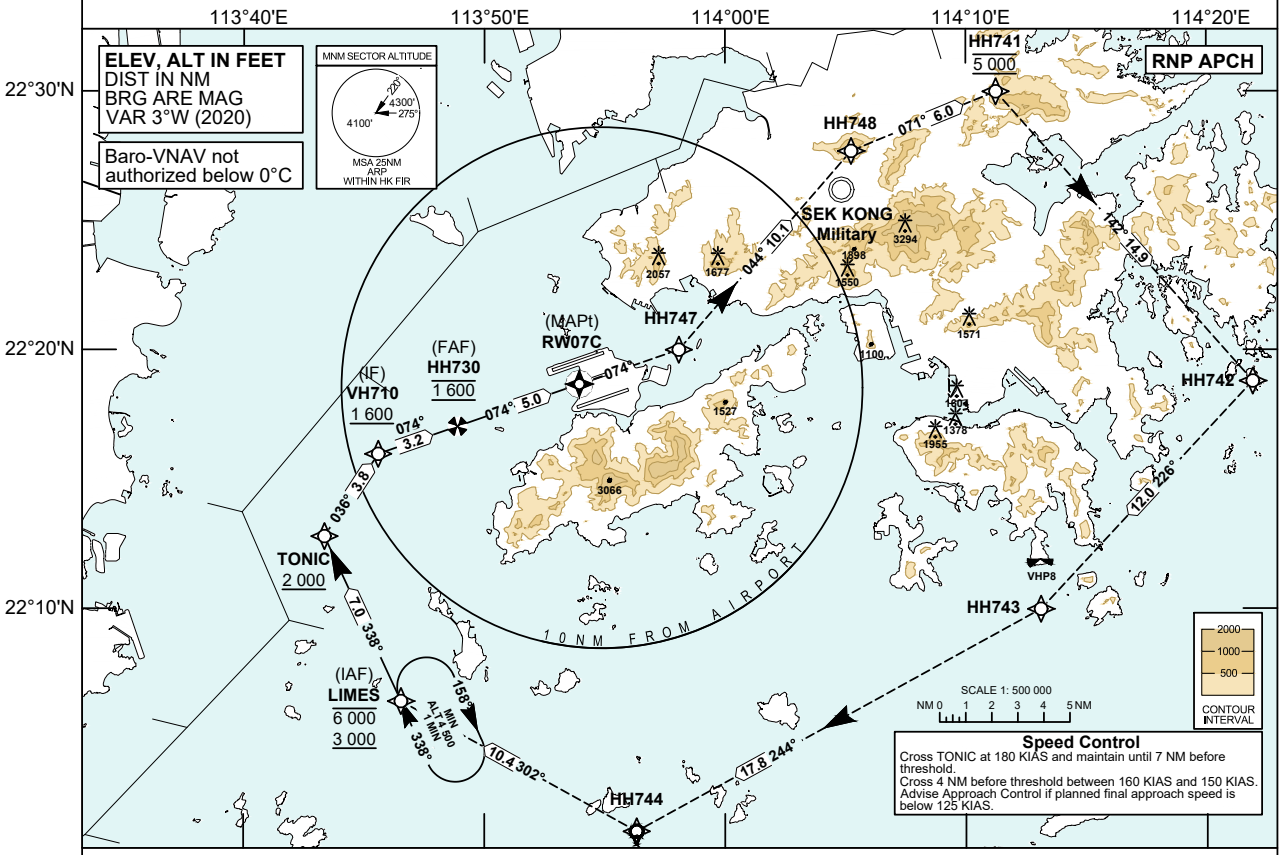
**INSTRUMENT APPROACH CHART - ICAO**

**AERODROME ELEV 28 FT**
HEIGHTS RELATED TO
THR RWY 07C - ELEV 22 FT

| | |
|---|---|
| TOWER | 118.2 |
| APPROACH | 119.1 |
| DIRECTOR | 119.5 |

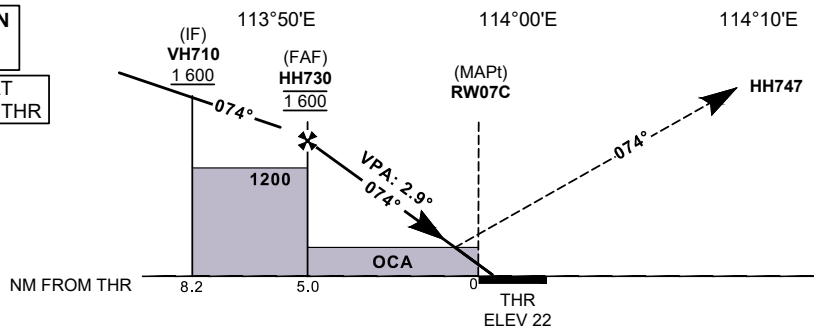
**HONG KONG / INTL (VHHH)**
**RNP RWY 07C**
**(LNAV/VNAV only)**

**Notes** 1. Simultaneous dependent operation is authorized with RWY 07R.




**TRANSITION ALTITUDE 9000**

TCH 50 AT DISPLACED THR




**MISSED APPROACH**
Climb to 5 000 ft. From RW07C, track 074°M to HH747, then turn left to HH748. Track to HH741, then proceed to HH742, HH743, HH744 and LIMES.
Speed restriction: Maximum 200 KIAS until HH748, then maintain 230 KIAS until LIMES.

| DIST THR (NM) | 5 | 4 | 3 | 2 |
|---|---|---|---|---|
| ALTITUDE (FT) | 1600 | 1300 | 1000 | 690 |

| Missed Approach Climb Gradient | | OCA (OCH) A | B | C | D |
|---|---|---|---|---|---|
| LNAV/VNAV | 2.5% | 808 (786) | | | |
| | 4.4% | 302 (280) | 312 (290) | 322 (300) | 331 (309) |
| VISUAL CIRCLING NOT AVAILABLE | | N / A | | | |

| Ground Speed | kt | 80 | 100 | 120 | 140 | 160 | 180 |
|---|---|---|---|---|---|---|---|
| HH730-THR (5.0 NM) | min:s | 3:43 | 2:59 | 2:29 | 2:08 | 1:52 | 1:39 |
| ROD (5.1%) | ft / min | 410 | 510 | 620 | 720 | 820 | 920 |

CHANGE: New Procedure.

AD 2-VHHH-IAC-03E_V01_240513km

# RNP RWY 07C APPROACH

## TABULAR DESCRIPTION: RNP RWY 07C

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | VPA | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | LIMES | - | - | +3.0 | - | - | -6000<br>+3000 | - | - | RNP APCH |
| 02 | TF | TONIC | - | 338 (335) | +3.0 | 7.0 | - | +2000 | @180 | - | RNP APCH |
| 03 | TF | VH710 | - | 036 (033) | +3.0 | 3.8 | - | +1600 | @180 | - | RNP APCH |
| 04 | TF | HH730 | - | 074 (071) | +3.0 | 3.2 | - | @1600 | -160<br>+150 | - | RNP APCH |
| 05 | TF | RW07C | Y | 074 (071) | +3.0 | 5.0 | - | @72 | - | -2.9 | RNP APCH |
| 06 | CF | HH747 | - | 074 (071) | +3.0 | - | - | - | -200 | - | RNP APCH |
| 07 | TF | HH748 | - | 044 (041) | +3.0 | 10.1 | - | - | @200 | - | RNP APCH |
| 08 | TF | HH741 | - | 071 (068) | +3.0 | 6.0 | - | @5000 | @230 | - | RNP APCH |
| 09 | TF | HH742 | - | 142 (139) | +3.0 | 14.9 | - | - | @230 | - | RNP APCH |
| 10 | TF | HH743 | - | 226 (223) | +3.0 | 12.0 | - | - | @230 | - | RNP APCH |
| 11 | TF | HH744 | - | 244 (241) | +3.0 | 17.8 | - | - | @230 | - | RNP APCH |
| 12 | TF | LIMES | - | 302 (299) | +3.0 | 10.4 | - | - | @230 | - | RNP APCH |

## WAYPOINT LIST

| RNP RWY 07C | | |
|---|---|---|
| **Waypoint Identifier** | **Coordinates (WGS-84)** | |
| LIMES (IAF) | 22 06 25.60N | 113 46 32.60E |
| TONIC | 22 12 47.88N | 113 43 21.85E |
| VH710 (IF) | 22 15 58.80N | 113 45 35.61E |
| HH730 (FAF) | 22 17 02.67N | 113 48 53.16E |
| RW07C (THR) | 22 18 40.58N | 113 53 56.64E |
| HH747 | 22 20 00.42N | 113 58 04.56E |
| HH748 | 22 27 40.86N | 114 05 14.12E |
| HH741 | 22 29 58.66N | 114 11 14.89E |
| HH742 | 22 18 46.90N | 114 21 54.81E |
| HH743 | 22 09 58.85N | 114 13 06.23E |
| HH744 | 22 01 23.71N | 113 56 19.34E |

**INSTRUMENT APPROACH CHART - ICAO**

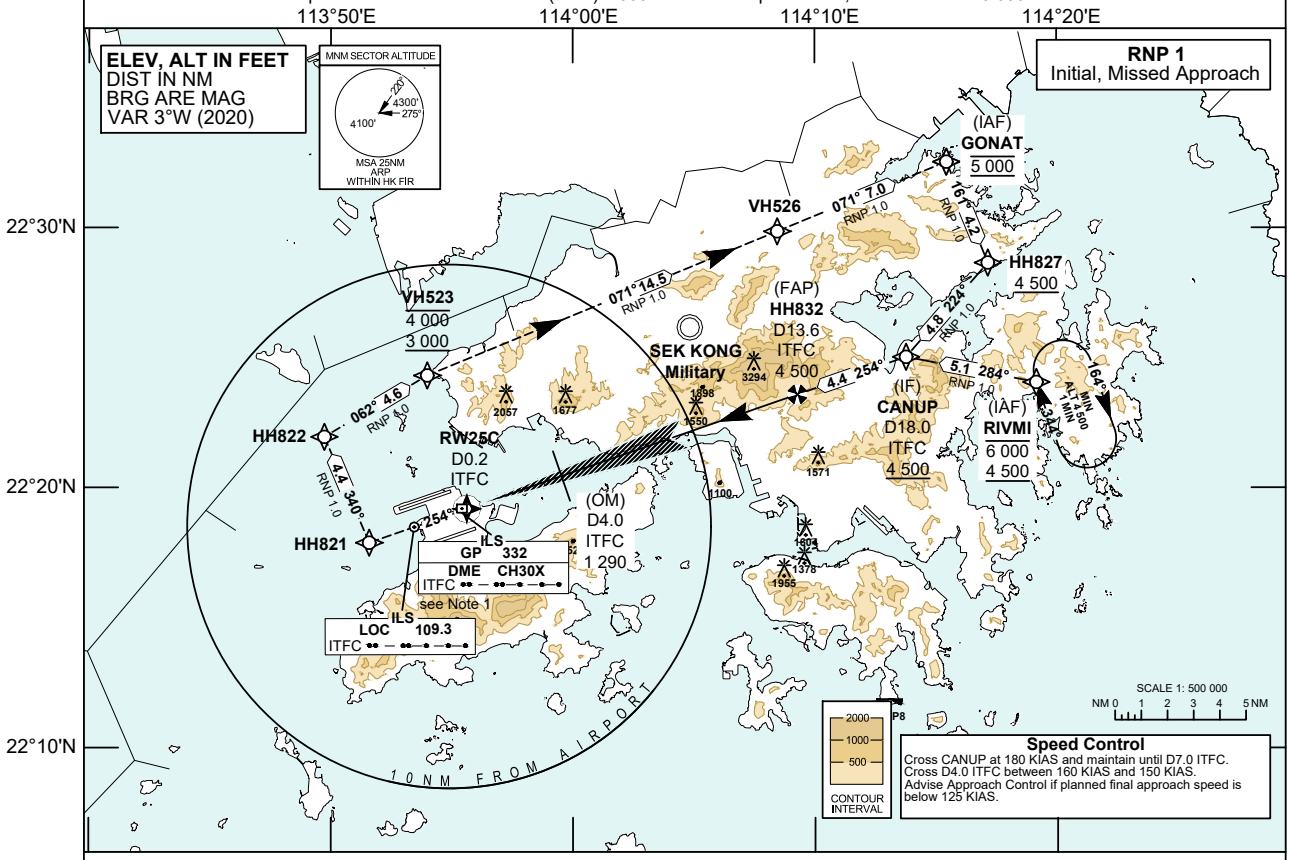
**AERODROME ELEV 28 FT**
HEIGHTS RELATED TO
THR RWY 25C - ELEV 22 FT

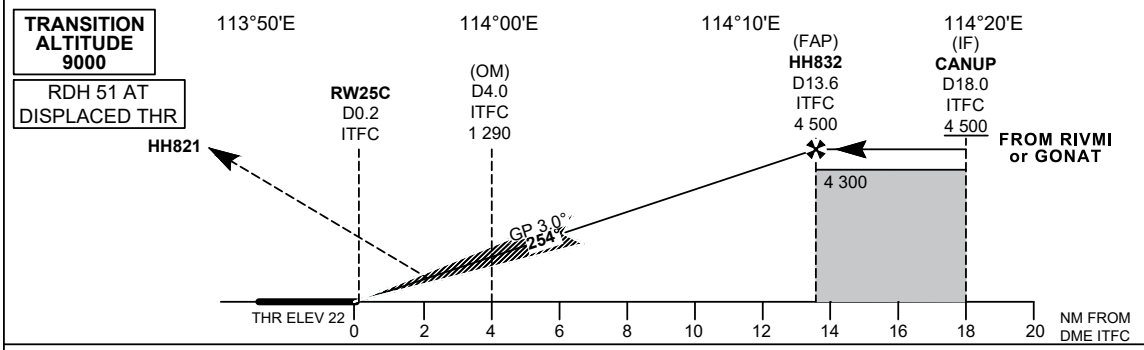
| | |
|---|---|
| TOWER | 118.2 |
| APPROACH | 119.1 |
| DIRECTOR | 119.5 |

# HONG KONG / INTL (VHHH)
# ILS RWY 25C
# CAT II & III

**Warnings**
1. LOC ITFC UNUSABLE BEYOND 19° RIGHT OF COURSE
2. PILOTS SHOULD MONITOR FOR FALSE CAPTURE OF LOC AND GP BY COMPARING INDICATIONS WITH AIRCRAFT POSITION AND ALTITUDE

**Notes**
1. DME is required. If unable to receive ITFC DME pilot shall advise ATC and will receive equivalent radar ranges for FAP (D13.6 ITFC) and OM Fix (D4.0 ITFC).
2. Simultaneous dependent operation is authorized with RWY 25L.
3. If unable RNP 1, inform ATC accordingly. If unable RNP 1 during missed approach, continue on the published missed approach track, climb and pass Minimum Sector Altitude (MSA) 4 300 ft as soon as practicable, and continue to 5 000 ft.




**MISSED APPROACH**
Climb initially to 4 000 ft and track 254°M to HH821, then turn right to HH822. Proceed to VH523 and cross VH523 between 3 000 ft and 4 000 ft. From VH523, climb to 5 000 ft and track to VH526 and GONAT.
Speed restriction: 185 KIAS maximum until VH523, then maintain 230 KIAS until VH526, then maintain 210 KIAS until GONAT.

| DME ITFC | 13.6 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DIST THR (NM) | 13.4 | 12.8 | 11.8 | 10.8 | 9.8 | 8.8 | 7.8 | 6.8 | 5.8 | 4.8 | 3.8 | 2.8 | 1.8 | 0.8 |
| ALTITUDE (FT) | 4500 | 4290 | 3950 | 3610 | 3280 | 2940 | 2610 | 2280 | 1950 | 1620 | 1290 | 970 | 650 | 330 |

| Missed Approach Climb Gradient | | OCA (OCH) A | B | C | D |
|---|---|---|---|---|---|
| ILS CAT I | 2.5% | 500 (478) | | | |
| | 4.0% | 222 (200) | | | |
| ILS CAT II | 4.0% | 122 (100) | | | |
| VISUAL CIRCLING NOT AVAILABLE | | N / A | | | |

| Ground Speed | kt | 80 | 100 | 120 | 140 | 160 | 180 |
|---|---|---|---|---|---|---|---|
| HH832-THR (13.4 NM) | min:s | 10:03 | 8:02 | 6:42 | 5:44 | 5:01 | 4:28 |
| ROD (5.2%) | ft / min | 420 | 530 | 640 | 740 | 850 | 960 |

CHANGE: Editorial.

AD 2-VHHH-IAC-04A_V02_250220km

# ILS RWY 25C APPROACH

## NAVIGATION AIDS

| Navaid/Ident | Frequency | Coordinates | | Remarks |
|---|---|---|---|---|
| Localizer/ITFC | 109.3 MHz | 22 18 30.88N | 113 53 26.53E | Course 254°M |
| Glide Path | 332.0 MHz | 22 19 13.45N | 113 55 24.77E | 3° glide slope<br>Co-located |
| DME/ITFC | CH 30X | | | |

## TABULAR DESCRIPTION: ILS RWY 25C

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | VPA | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | RIVMI | - | - | +3.0 | - | - | -6000<br>+4500 | - | - | RNP 1 |
| 02 | TF | CANUP | - | 284 (281) | +3.0 | 5.1 | - | +4500 | @180 | - | RNP 1 |
| 01 | IF | GONAT | - | - | +3.0 | - | - | @5000 | @210 | - | RNP 1 |
| 02 | TF | HH827 | - | 161 (158) | +3.0 | 4.2 | - | +4500 | - | - | RNP 1 |
| 03 | TF | CANUP | - | 224 (221) | +3.0 | 4.8 | - | +4500 | @180 | - | RNP 1 |
| 01 | IF | CANUP | - | - | +3.0 | - | - | +4500 | @180 | - | Conventional |
| 02 | - | HH832 | - | 254 (251) | +3.0 | 4.4 | - | - | @180 | - | Conventional |
| 03 | - | RW25C | Y | 254 (251) | +3.0 | 13.4 | - | - | - | - | Conventional |
| 04 | CF | HH821 | - | 254 (251) | +3.0 | - | - | - | -185 | - | RNP 1 |
| 05 | TF | HH822 | - | 340 (337) | +3.0 | 4.4 | - | - | @185 | - | RNP 1 |
| 06 | TF | VH523 | - | 062 (059) | +3.0 | 4.6 | - | -4000<br>+3000 | @185 | - | RNP 1 |
| 07 | TF | VH526 | - | 071 (068) | +3.0 | 14.5 | - | - | @230 | - | RNP 1 |
| 08 | TF | GONAT | - | 071 (068) | +3.0 | 7.0 | - | @5000 | @210 | - | RNP 1 |

Note: Coding is not provided for final approach segment. Please refer to the chart for altitude and speed restrictions.

## WAYPOINT LIST

**ILS RWY 25C**

| Waypoint Identifier | Coordinates (WGS-84) | | Cross Reference from Navaid |
|---|---|---|---|
| RIVMI (IAF) | 22 24 03.96N | 114 19 09.28E | |
| GONAT (IAF) | 22 32 32.30N | 114 15 27.06E | |
| HH827 | 22 28 39.55N | 114 17 09.59E | |
| CANUP (IF) | 22 25 02.54N | 114 13 46.40E | ITFC DME 18.0 NM |
| HH832 (FAP) | 22 23 36.12N | 114 09 16.39E | ITFC DME 13.6 NM |
| RW25C (THR) | 22 19 12.85N | 113 55 36.78E | ITFC DME 0.2 NM |
| HH821 | 22 17 54.88N | 113 51 34.92E | |
| HH822 | 22 21 58.90N | 113 49 43.76E | |
| VH523 | 22 24 20.51N | 113 53 58.89E | |
| VH526 | 22 29 52.41N | 114 08 27.15E | |

**INSTRUMENT APPROACH CHART - ICAO**

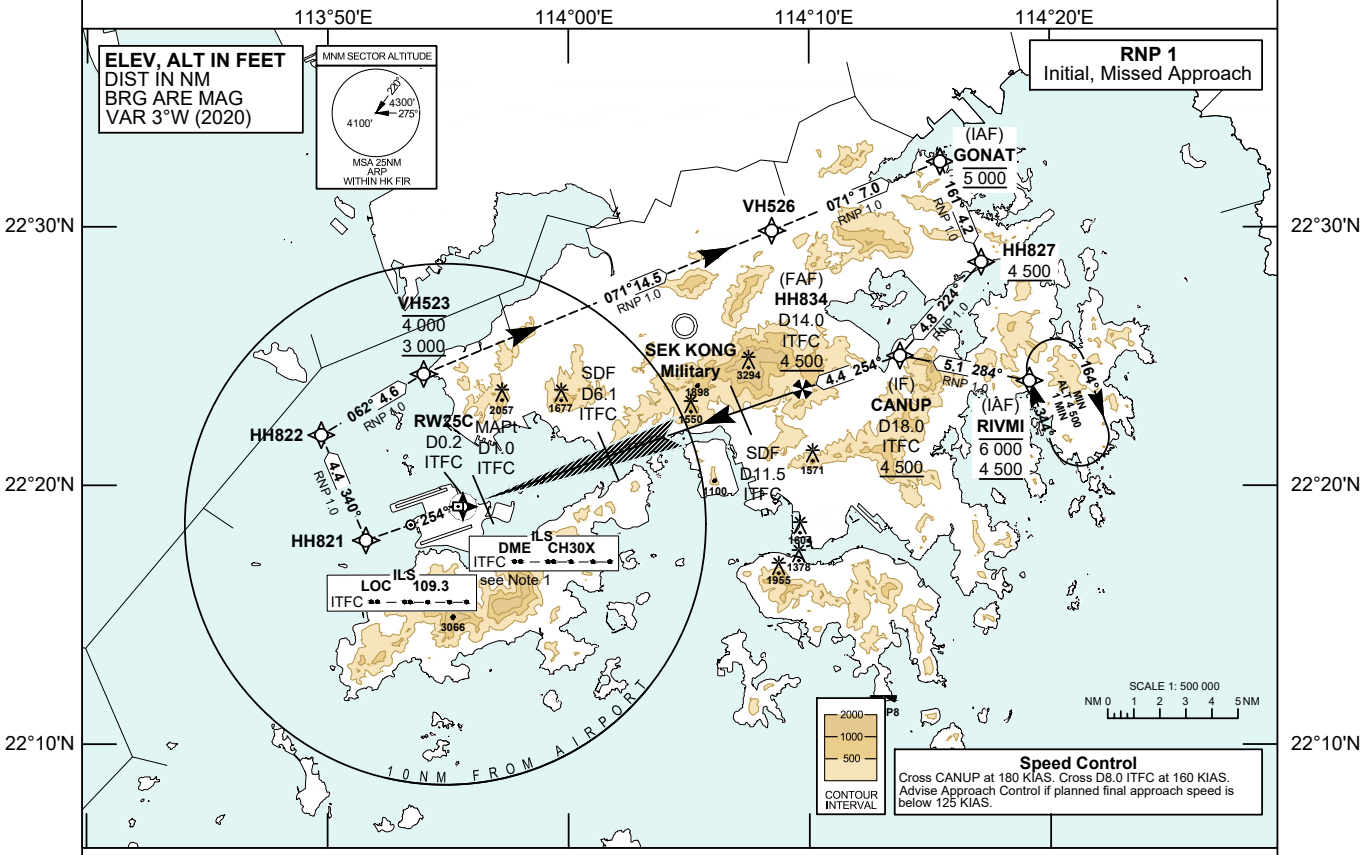
**AERODROME ELEV 28 FT**
THR ELEV 22 FT
HEIGHTS RELATED TO AD ELEV

| | |
|---|---|
| TOWER | 118.2 |
| APPROACH | 119.1 |
| DIRECTOR | 119.5 |

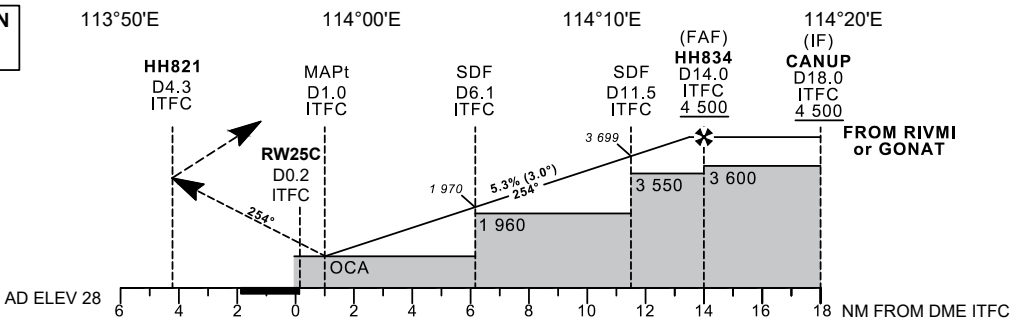
**HONG KONG / INTL (VHHH)**
**LOC RWY 25C**

**Warnings** 1. LOC ITFC UNUSABLE BEYOND 19° RIGHT OF COURSE

**Notes** 1. DME is required.
2. If unable RNP 1, inform ATC accordingly. If unable RNP 1 during missed approach, continue on the published missed approach track, climb and pass Minimum Sector Altitude (MSA) 4 300 ft as soon as practicable, and continue to 5 000 ft.




**TRANSITION ALTITUDE 9000**




**MISSED APPROACH**
Climb initially to 4 000 ft and track 254°M to HH821, then turn right to HH822. Proceed to VH523 and cross VH523 between 3 000 ft and 4 000 ft. From VH523, climb to 5 000 ft and track to VH526 and GONAT.
Speed restriction: 185 KIAS maximum until VH523, then maintain 230 KIAS until VH526, then maintain 210 KIAS until GONAT.

| DME ITFC | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DIST THR (NM) | 13.8 | 12.8 | 11.8 | 10.8 | 9.8 | 8.8 | 7.8 | 6.8 | 5.8 | 4.8 | 3.8 | 2.8 | 1.8 |
| ALTITUDE (FT) | 4500 | 4170 | 3850 | 3530 | 3210 | 2890 | 2570 | 2250 | 1930 | 1610 | 1290 | 970 | 650 |

| Missed Approach Climb Gradient | | OCA (OCH) A | B | C | D |
|---|---|---|---|---|---|
| LOC | 2.5% | 710 (682) | | | |
| | 4.0% | 420 (392) | | | |
| VISUAL CIRCLING NOT AVAILABLE | | N / A | | | |

| Ground Speed | kt | 80 | 100 | 120 | 140 | 160 | 180 |
|---|---|---|---|---|---|---|---|
| HH834-THR (13.8 NM) | min:s | 10:22 | 8:18 | 6:55 | 5:55 | 5:11 | 4:36 |
| ROD (5.3%) | ft / min | 430 | 530 | 640 | 750 | 850 | 960 |

**CHANGE:** New Procedure.

AD 2-VHHH-IAC-04C_V01_240909lh

# LOC RWY 25C APPROACH

## NAVIGATION AIDS

| Navaid/Ident | Frequency | Coordinates | Remarks |
|---|---|---|---|
| Localizer/ITFC | 109.3 MHz | 22 18 30.88N 113 53 26.53E | Course 254°M |
| DME/ITFC | CH 30X | 22 19 13.45N 113 55 24.77E | |

## TABULAR DESCRIPTION: LOC RWY 25C

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | VPA | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | RIVMI | - | - | +3.0 | - | - | -6000<br>+4500 | - | - | RNP 1 |
| 02 | TF | CANUP | - | 284 (281) | +3.0 | 5.1 | - | +4500 | @180 | - | RNP 1 |
| 01 | IF | GONAT | - | - | +3.0 | - | - | @5000 | @210 | - | RNP 1 |
| 02 | TF | HH827 | - | 161 (158) | +3.0 | 4.2 | - | +4500 | - | - | RNP 1 |
| 03 | TF | CANUP | - | 224 (221) | +3.0 | 4.8 | - | +4500 | @180 | - | RNP 1 |
| 01 | IF | CANUP | - | - | +3.0 | - | - | +4500 | @180 | - | Conventional |
| 02 | - | HH834 | - | 254 (251) | +3.0 | 4.0 | - | +4500 | @180 | - | Conventional |
| 03 | - | RW25C | Y | 254 (251) | +3.0 | 13.8 | - | - | - | - | Conventional |
| 04 | CF | HH821 | - | 254 (251) | +3.0 | - | - | - | -185 | - | RNP 1 |
| 05 | TF | HH822 | - | 340 (337) | +3.0 | 4.4 | - | - | @185 | - | RNP 1 |
| 06 | TF | VH523 | - | 062 (059) | +3.0 | 4.6 | - | -4000<br>+3000 | @185 | - | RNP 1 |
| 07 | TF | VH526 | - | 071 (068) | +3.0 | 14.5 | - | - | @230 | - | RNP 1 |
| 08 | TF | GONAT | - | 071 (068) | +3.0 | 7.0 | - | @5000 | @210 | - | RNP 1 |

Note: Coding is not provided for final approach segment. Please refer to the chart for altitude and speed restrictions.

## WAYPOINT LIST

**LOC RWY 25C**

| Waypoint Identifier | Coordinates (WGS-84) | Cross Reference from Navaid |
|---|---|---|
| RIVMI (IAF) | 22 24 03.96N 114 19 09.28E | |
| GONAT (IAF) | 22 32 32.30N 114 15 27.06E | |
| HH827 | 22 28 39.55N 114 17 09.59E | |
| CANUP (IF) | 22 25 02.54N 114 13 46.40E | ITFC DME 18.0 NM |
| HH834 (FAF) | 22 23 44.66N 114 09 43.13E | ITFC DME 14.0 NM |
| SDF11.5 | 22 22 55.61N 114 07 10.04E | ITFC DME 11.5 NM |
| SDF6.1 | 22 21 09.51N 114 01 39.45E | ITFC DME 6.1 NM |
| MAPt | 22 19 29.10N 113 56 27.24E | ITFC DME 1.0 NM |
| RW25C (THR) | 22 19 12.85N 113 55 36.78E | ITFC DME 0.2 NM |
| HH821 | 22 17 54.88N 113 51 34.92E | |
| HH822 | 22 21 58.90N 113 49 43.76E | |
| VH523 | 22 24 20.51N 113 53 58.89E | |
| VH526 | 22 29 52.41N 114 08 27.15E | |

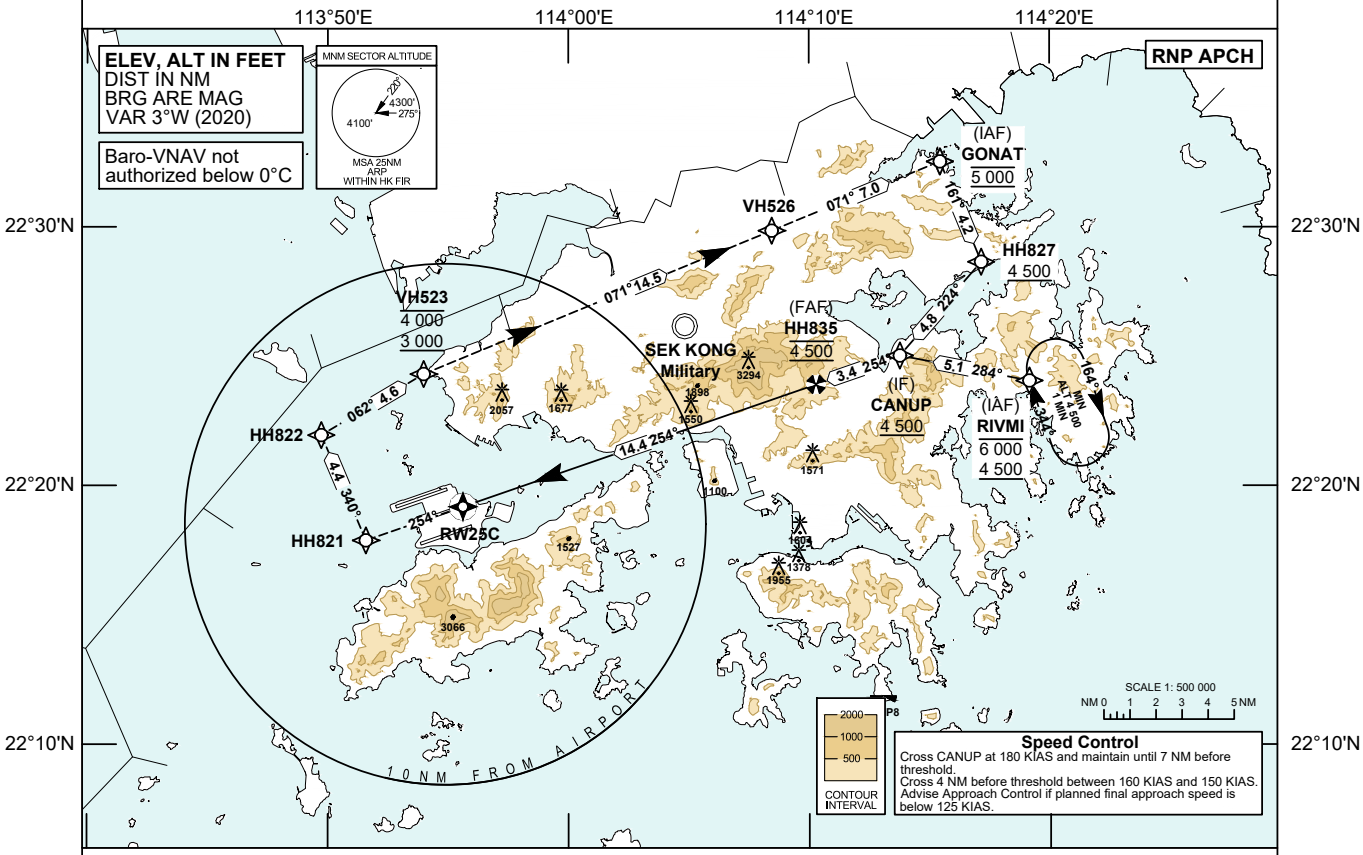
**INSTRUMENT APPROACH CHART - ICAO**

**AERODROME ELEV 28 FT**
HEIGHTS RELATED TO
THR RWY 25C - ELEV 22 FT

| | |
|---|---|
| TOWER | 118.2 |
| APPROACH | 119.1 |
| DIRECTOR | 119.5 |

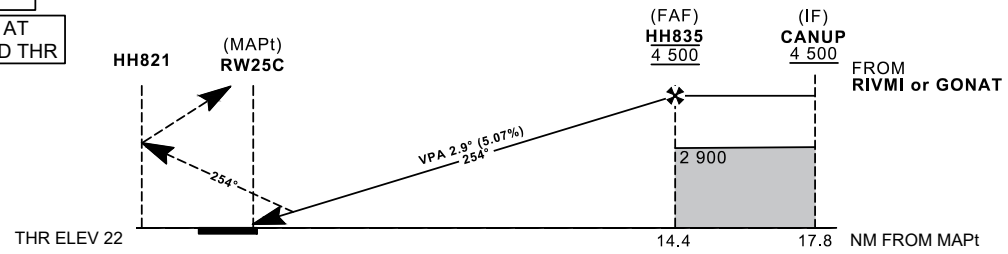
**HONG KONG / INTL (VHHH)**
**RNP Z RWY 25C**
**(LNAV/VNAV only)**

**Notes** 1. Simultaneous dependent operation is authorized with RWY 25L.




**TRANSITION ALTITUDE 9000**

TCH 50 AT DISPLACED THR




**MISSED APPROACH**

Climb initially to 4 000 ft, from RW25C, track 254°M to HH821, then turn right to HH822. Proceed to VH523 and cross VH523 between 3 000 ft and 4 000 ft. From VH523, climb to 5 000 ft and track to VH526 and GONAT.
Speed restriction: 185 KIAS maximum until VH523, then maintain 230 KIAS until VH526, then maintain 210 KIAS until GONAT.

| DIST THR (NM) | 14.4 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ALTITUDE (FT) | 4500 | 4380 | 4080 | 3770 | 3460 | 3150 | 2840 | 2540 | 2230 | 1920 | 1610 | 1300 | 1000 | 690 |

| Missed Approach Climb Gradient | | OCA (OCH) A | B | C | D |
|---|---|---|---|---|---|
| LNAV/VNAV | 2.5% | 500 (478) | | | |
| VISUAL CIRCLING NOT AVAILABLE | | N / A | | | |

| Ground Speed | kt | 80 | 100 | 120 | 140 | 160 | 180 |
|---|---|---|---|---|---|---|---|
| HH835-THR (14.4 NM) | min:s | 10:47 | 8:38 | 7:11 | 6:10 | 5:24 | 4:48 |
| ROD (5.1%) | ft / min | 410 | 510 | 620 | 720 | 820 | 920 |

CHANGE: New Procedure.

AD 2-VHHH-IAC-04E_V01_240524km

# RNP Z RWY 25C APPROACH

## TABULAR DESCRIPTION: RNP Z RWY 25C

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | VPA | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | RIVMI | - | - | +3.0 | - | - | -6000<br>+4500 | - | - | RNP APCH |
| 02 | TF | CANUP | - | 284 (281) | +3.0 | 5.1 | - | +4500 | @180 | - | RNP APCH |
| 01 | IF | GONAT | - | - | +3.0 | - | - | @5000 | @210 | - | RNP APCH |
| 02 | TF | HH827 | - | 161 (158) | +3.0 | 4.2 | - | +4500 | - | - | RNP APCH |
| 03 | TF | CANUP | - | 224 (221) | +3.0 | 4.8 | - | +4500 | @180 | - | RNP APCH |
| 01 | IF | CANUP | - | - | +3.0 | - | - | +4500 | @180 | - | RNP APCH |
| 02 | TF | HH835 | - | 254 (251) | +3.0 | 3.4 | - | @4500 | @180 | - | RNP APCH |
| 03 | TF | RW25C | Y | 254 (251) | +3.0 | 14.4 | - | @72 | - | -2.9 | RNP APCH |
| 04 | CF | HH821 | - | 254 (251) | +3.0 | - | - | - | -185 | - | RNP APCH |
| 05 | TF | HH822 | - | 340 (337) | +3.0 | 4.4 | - | - | @185 | - | RNP APCH |
| 06 | TF | VH523 | - | 062 (059) | +3.0 | 4.6 | - | -4000<br>+3000 | @185 | - | RNP APCH |
| 07 | TF | VH526 | - | 071 (068) | +3.0 | 14.5 | - | - | @230 | - | RNP APCH |
| 08 | TF | GONAT | - | 071 (068) | +3.0 | 7.0 | - | @5000 | @210 | - | RNP APCH |

## WAYPOINT LIST

| RNP Z RWY 25C | | |
|---|---|---|
| **Waypoint Identifier** | **Coordinates (WGS-84)** | |
| RIVMI (IAF) | 22 24 03.96N | 114 19 09.28E |
| GONAT (IAF) | 22 32 32.30N | 114 15 27.06E |
| HH827 | 22 28 39.55N | 114 17 09.59E |
| CANUP (IF) | 22 25 02.54N | 114 13 46.40E |
| HH835 (FAF) | 22 23 55.53N | 114 10 16.99E |
| RW25C (THR) | 22 19 12.85N | 113 55 36.78E |
| HH821 | 22 17 54.88N | 113 51 34.92E |
| HH822 | 22 21 58.90N | 113 49 43.76E |
| VH523 | 22 24 20.51N | 113 53 58.89E |
| VH526 | 22 29 52.41N | 114 08 27.15E |

**INSTRUMENT APPROACH CHART - ICAO**

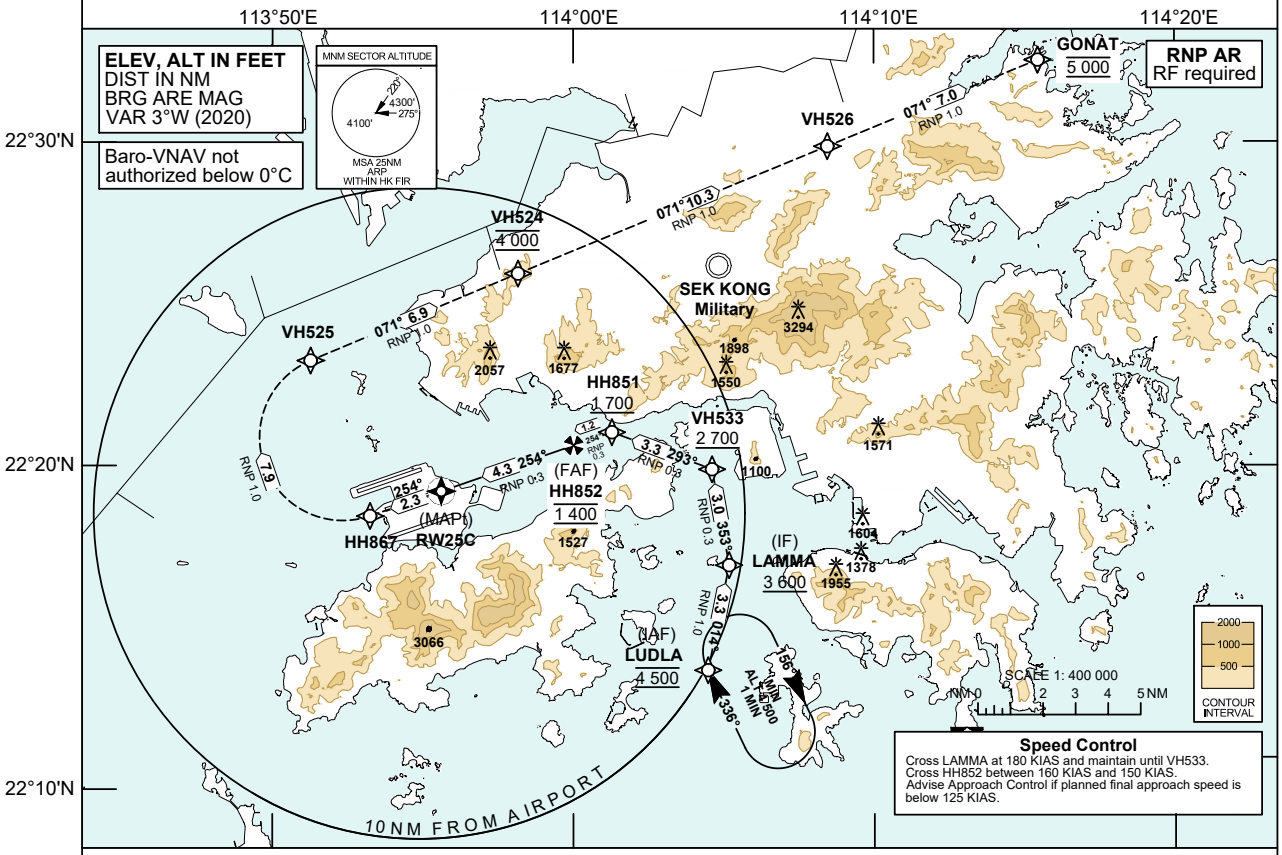
**AERODROME ELEV 28 FT**
HEIGHTS RELATED TO
THR RWY 25C - ELEV 22 FT

| | |
|---|---|
| TOWER | 118.2 |
| APPROACH | 119.1 |
| DIRECTOR | 119.5 |

# HONG KONG / INTL (VHHH)
# RNP Y RWY 25C (AR)

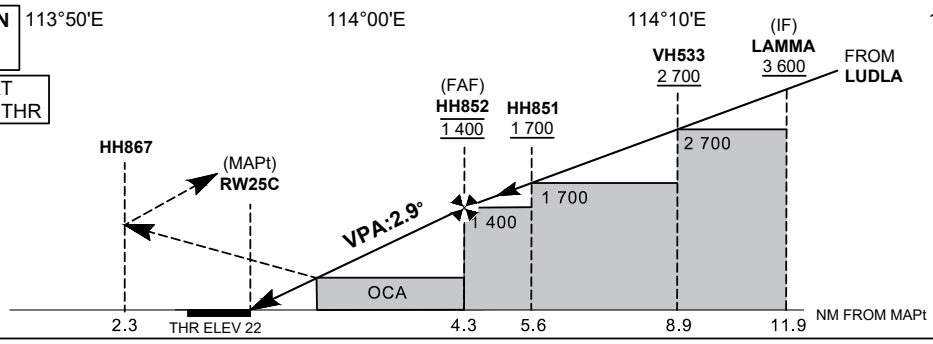
**Authorization from HONG KONG CAD is Required (Refer to the relevant AIC for application procedures)**

**Notes**
1. RNP AR APCH: RNP 0.3 in Intermediate segment. RNP values are depicted on Plan View for each applicable leg.
2. Simultaneous dependent operation is authorized with RWY 25L.
3. Do not accept radar vectors inside LUDLA.




**TRANSITION ALTITUDE 9000**

TCH 50 AT DISPLACED THR




**MISSED APPROACH**

Climb initially to 4 000 ft. From RW25C, track 254°M to HH867, then turn right to VH525. Proceed to VH524 and cross VH524 at 4 000 ft. From VH524, climb to 5 000 ft and track to VH526 and GONAT.
Speed restriction: 185 KIAS maximum until VH525, then maintain 230 KIAS until VH526, then maintain 210 KIAS until GONAT.

| DIST THR (NM) | 4.3 | 4 | 3 | 2 |
|---|---|---|---|---|
| ALTITUDE (FT) | 1400 | 1300 | 1000 | 690 |

| Missed Approach Climb Gradient | | OCA (OCH) A | B | C | D |
|---|---|---|---|---|---|
| RNP 0.30 | 2.5% | 470 (448) | 480 (458) | 490 (468) | 500 (478) |
| VISUAL CIRCLING NOT AVAILABLE | | N / A | | | |

| Ground Speed | kt | 80 | 100 | 120 | 140 | 160 | 180 |
|---|---|---|---|---|---|---|---|
| HH852-THR (4.3 NM) | min:s | 3:14 | 2:35 | 2:09 | 1:51 | 1:37 | 1:26 |
| ROD (5.1%) | ft / min | 410 | 510 | 620 | 720 | 820 | 920 |

CHANGE: New Procedure.

AD 2-VHHH-IAC-04G_V01_240805km

# RNP Y RWY 25C (AR) APPROACH

## TABULAR DESCRIPTION: RNP Y RWY 25C (AR)

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | VPA | Navigation Specification (RNP Value) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | LUDLA | - | - | +3.0 | - | - | @4500 | - | - | RNP AR APCH (RNP 1.0) |
| 02 | TF | LAMMA | - | 014 (011) | +3.0 | 3.3 | - | +3600 | @180 | - | RNP AR APCH (RNP 1.0) |
| 03 | TF | VH533 | - | 353 (350) | +3.0 | 3.0 | - | +2700 | @180 | - | RNP AR APCH (RNP 0.3) |
| 04 | TF | HH851 | - | 293 (290) | +3.0 | 3.3 | - | +1700 | - | - | RNP AR APCH (RNP 0.3) |
| 05 | TF | HH852 | - | 254 (251) | +3.0 | 1.2 | - | @1400 | -160 +150 | - | RNP AR APCH (RNP 0.3) |
| 06 | TF | RW25C | Y | 254 (251) | +3.0 | 4.3 | - | @72 | - | -2.9 | RNP AR APCH (RNP 0.3) |
| 07 | TF | HH867 | - | 254 (251) | +3.0 | 2.3 | - | - | - | - | RNP AR APCH (RNP 1.0) |
| 08 | RF Centre: HH987 r=2.565 NM | VH525 | - | - | +3.0 | 7.9 | R | - | @185 | - | RNP AR APCH (RNP 1.0) |
| 09 | TF | VH524 | - | 071 (068) | +3.0 | 6.9 | - | @4000 | - | - | RNP AR APCH (RNP 1.0) |
| 10 | TF | VH526 | - | 071 (068) | +3.0 | 10.3 | - | - | @230 | - | RNP AR APCH (RNP 1.0) |
| 11 | TF | GONAT | - | 071 (068) | +3.0 | 7.0 | - | @5000 | @210 | - | RNP AR APCH (RNP 1.0) |

## WAYPOINT LIST

| RNP Y RWY 25C (AR) | | |
|---|---|---|
| **Waypoint Identifier** | **Coordinates (WGS-84)** | |
| LUDLA (IAF) | 22 13 40.79N | 114 04 28.75E |
| LAMMA (IF) | 22 16 55.61N | 114 05 10.55E |
| VH533 | 22 19 53.47N | 114 04 36.72E |
| HH851 | 22 21 02.31N | 114 01 17.04E |
| HH852 (FAF) | 22 20 37.80N | 114 00 00.77E |
| RW25C (MAPT) | 22 19 12.85N | 113 55 36.78E |
| HH867 | 22 18 27.11N | 113 53 14.84E |
| VH525 | 22 23 15.38N | 113 51 16.25E |
| VH524 | 22 25 56.63N | 113 58 09.87E |
| VH526 | 22 29 52.41N | 114 08 27.15E |
| GONAT | 22 32 32.30N | 114 15 27.06E |
| **RF Arc Centre Identifier** | **Coordinates (WGS-84)** | |
| HH987 | 22 20 53.00N | 113 52 20.49E |

**INSTRUMENT APPROACH CHART - ICAO**

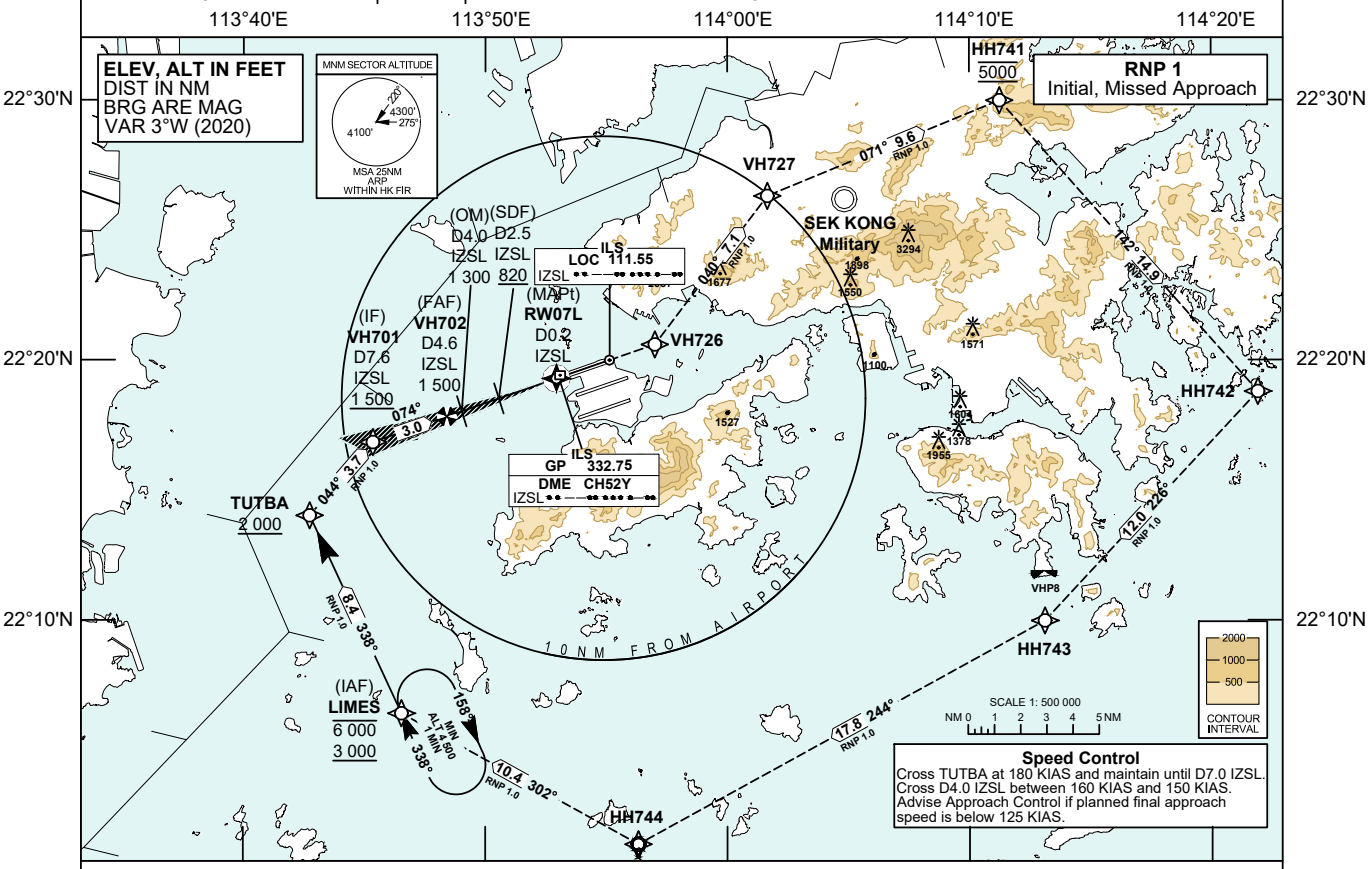
**AERODROME ELEV 28 FT**
HEIGHTS RELATED TO
THR RWY 07L - ELEV 23 FT

| | |
|---|---|
| TOWER | 118.7 |
| APPROACH | 119.1 |
| DIRECTOR | 119.5 |

# HONG KONG / INTL (VHHH)
# ILS CAT II & III or LOC RWY 07L

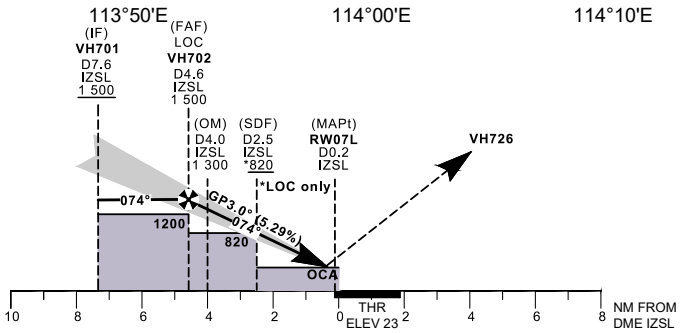
**Warning**
1. GP IZSL UNUSABLE BEYOND 6° LEFT OF COURSE
2. PILOTS SHOULD MONITOR FOR FALSE CAPTURE OF LOC AND GP BY COMPARING INDICATIONS WITH AIRCRAFT POSITION AND ALTITUDE

**Notes**
1. DME is required.
2. If unable RNP 1, inform ATC accordingly. If unable RNP 1 during missed approach, continue on the published missed approach track, climb and pass Minimum Sector Altitude (MSA) 4 300 ft as soon as practicable, and continue to 5 000 ft.
3. Simultaneous dependent operation is authorized with RWY 07R.




**TRANSITION ALTITUDE 9000**

ILS RDH 56 AT DISPLACED THR




**MISSED APPROACH**

Climb to 5 000 ft. Track 074°M to VH726. Then proceed to VH727, HH741, HH742, HH743, HH744 and LIMES.
Speed restriction: Maximum 200 KIAS until VH727, then maintain 230 KIAS until LIMES.

| **DME IZSL** | 4.6 | 4 | 3 | 2 |
|---|---|---|---|---|
| DIST THR (NM) | 4.4 | 3.8 | 2.8 | 1.8 |
| ALTITUDE (FT) | 1500 | 1300 | 970 | 650 |

| MISSED APPROACH CLIMB GRADIENT | | OCA (OCH) A | B | C | D |
|---|---|---|---|---|---|
| ILS CAT I | 2.5% | 1359 (1336) | 1369 (1346) | 1379 (1356) | 1388 (1365) |
| | 6.9% | 223 (200) | | | |
| ILS CAT II | 7.1% | 123 (100) | | | |
| LOC (GP INOP) | 6.6% (with SDF) | 500 (470) | | | |
| | 5.3% (without SDF) | 820 (790) | | | |
| VISUAL CIRCLING NOT AVAILABLE | | N / A | | | |

| Ground Speed | kt | 80 | 100 | 120 | 140 | 160 | 180 |
|---|---|---|---|---|---|---|---|
| VH702-THR (4.4 NM) | min:s | 3:20 | 2:40 | 2:13 | 1:54 | 1:40 | 1:29 |
| ROD (5.3%) | ft / min | 430 | 540 | 640 | 750 | 860 | 960 |

CHANGE: GP coverage restriction.

# ILS or LOC RWY 07L APPROACH

## NAVIGATION AIDS

| Navaid/Ident | Frequency | Coordinates | | Remarks |
|---|---|---|---|---|
| Localizer/IZSL | 111.55 MHz | 22 20 00.02N | 113 55 07.54E | Course 074°M |
| Glide Path | 332.75 MHz | 22 19 25.10N | 113 53 05.29E | 3° glide slope<br>Co-located |
| DME/IZSL | CH 52Y | | | |

## TABULAR DESCRIPTION: ILS or LOC RWY 07L

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | VPA | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | LIMES | - | - | +3.0 | - | - | -6000<br>+3000 | - | - | RNP 1 |
| 02 | TF | TUTBA | - | 338 (335) | +3.0 | 8.4 | - | +2000 | @180 | - | RNP 1 |
| 03 | TF | VH701 | - | 044 (041) | +3.0 | 3.7 | - | +1500 | @180 | - | RNP 1 |
| 04 | - | VH702 | - | 074 (071) | +3.0 | 3.0 | - | - | - | - | Conventional |
| 05 | - | RW07L | Y | 074 (071) | +3.0 | 4.4 | - | - | - | - | Conventional |
| 06 | CF | VH726 | - | 074 (071) | +3.0 | - | - | - | -200 | - | RNP 1 |
| 07 | TF | VH727 | - | 040 (037) | +3.0 | 7.1 | - | - | @200 | - | RNP 1 |
| 08 | TF | HH741 | - | 071 (068) | +3.0 | 9.6 | - | @5000 | @230 | - | RNP 1 |
| 09 | TF | HH742 | - | 142 (139) | +3.0 | 14.9 | - | - | @230 | - | RNP 1 |
| 10 | TF | HH743 | - | 226 (223) | +3.0 | 12.0 | - | - | @230 | - | RNP 1 |
| 11 | TF | HH744 | - | 244 (241) | +3.0 | 17.8 | - | - | @230 | - | RNP 1 |
| 12 | TF | LIMES | - | 302 (299) | +3.0 | 10.4 | - | - | @230 | - | RNP 1 |

Note: Coding is not provided for final approach segment. Please refer to the chart for altitude and speed restrictions.

## WAYPOINT LIST

**ILS or LOC RWY 07L**

| Waypoint Identifier | Coordinates (WGS-84) | | Cross Reference from Navaid |
|---|---|---|---|
| LIMES (IAF) | 22 06 25.60N | 113 46 32.60E | |
| TUTBA | 22 14 01.82N | 113 42 44.92E | |
| VH701 (IF) | 22 16 50.88N | 113 45 21.49E | IZSL DME 7.6 NM |
| VH702 (FAF) | 22 17 50.07N | 113 48 24.64E | IZSL DME 4.6 NM |
| SDF, LOC only | 22 18 31.81N | 113 50 33.93E | IZSL DME 2.5 NM |
| **RW07L (THR) (MAPt, LOC only)** | 22 19 17.72N | 113 52 56.26E | IZSL DME 0.2 NM |
| VH726 | 22 20 36.29N | 113 57 00.20E | |
| VH727 | 22 26 18.62N | 114 01 39.19E | |
| HH741 | 22 29 58.66N | 114 11 14.89E | |
| HH742 | 22 18 46.90N | 114 21 54.81E | |
| HH743 | 22 09 58.85N | 114 13 06.23E | |
| HH744 | 22 01 23.71N | 113 56 19.34E | |

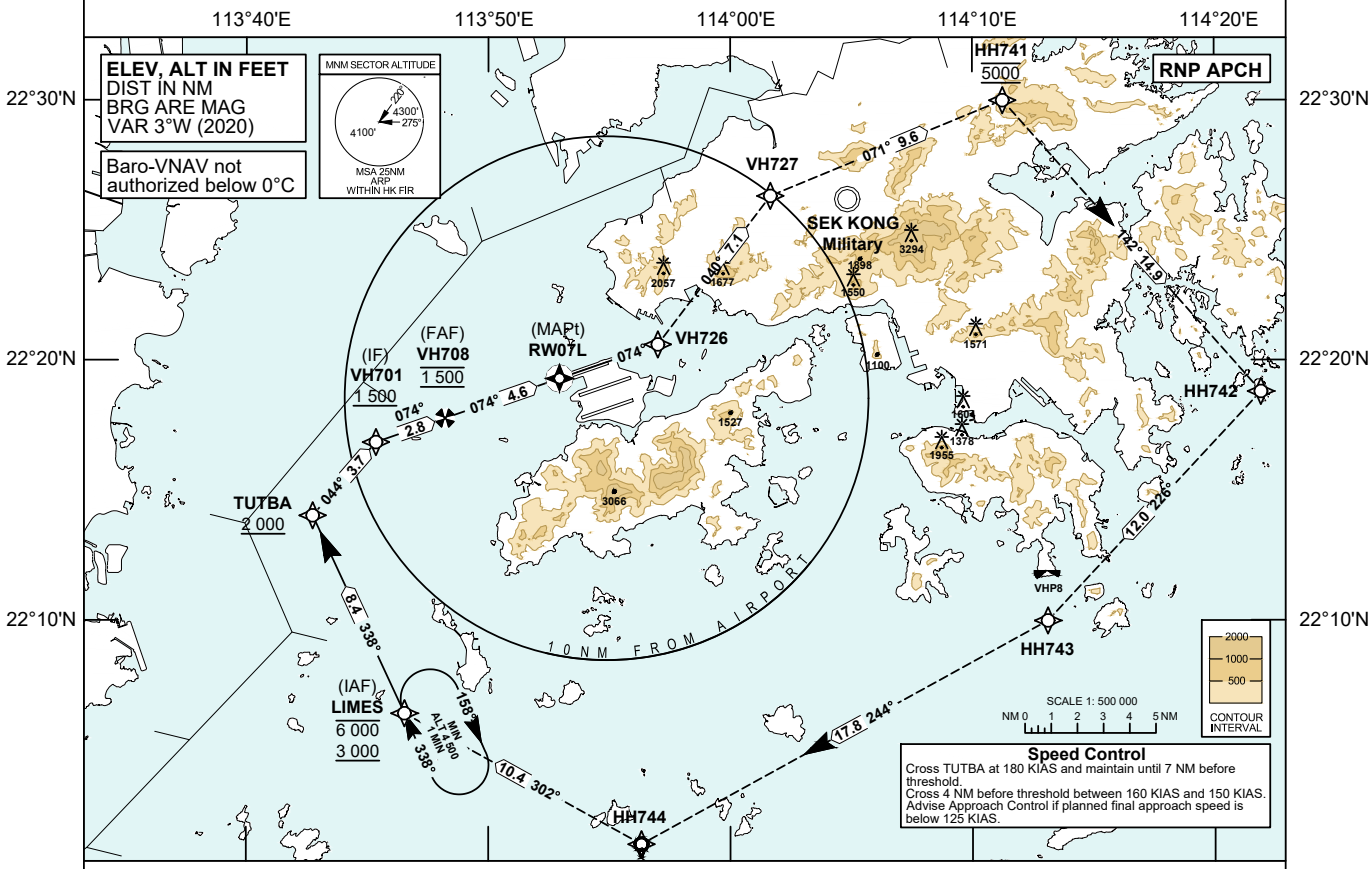
**INSTRUMENT APPROACH CHART - ICAO**

**AERODROME ELEV 28 FT**
HEIGHTS RELATED TO
THR RWY 07L - ELEV 23 FT

| | |
|---|---|
| TOWER | 118.7 |
| APPROACH | 119.1 |
| DIRECTOR | 119.5 |

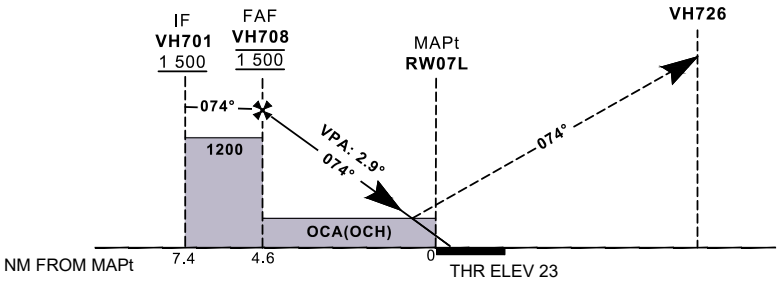
**HONG KONG / INTL (VHHH)**
**RNP RWY 07L**
**(LNAV/VNAV only)**

**Notes** 1. Simultaneous dependent operation is authorized with RWY 07R.




**TRANSITION ALTITUDE 9000**

TCH 50 AT DISPLACED THR




**MISSED APPROACH**
Climb to 5 000 ft. From RW07L track 074°M to VH726. Then proceed to VH727, HH741, HH742, HH743, HH744 and LIMES.
Speed restriction: Maximum 200 KIAS until VH727, then maintain 230 KIAS until LIMES.

| DIST THR (NM) | 4.6 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|
| ALTITUDE (FT) | 1500 | 1300 | 1000 | 690 | 380 |

| Missed Approach Climb Gradient | | OCA (OCH) A | B | C | D |
|---|---|---|---|---|---|
| LNAV/VNAV | 6.6% | 302 (279) | 312 (289) | 322 (299) | 332 (309) |
| VISUAL CIRCLING NOT AVAILABLE | | N / A | | | |

| Ground Speed | kt | 80 | 100 | 120 | 140 | 160 | 180 |
|---|---|---|---|---|---|---|---|
| VH708-THR (4.6 NM) | min:s | 3:29 | 2:47 | 2:19 | 1:59 | 1:44 | 1:33 |
| ROD (5.1%) | ft / min | 410 | 510 | 620 | 720 | 820 | 920 |

CHANGE: Editorial.

AD 2-VHHH-IAC-05E_V05_241203km

# RNP RWY 07L APPROACH

## TABULAR DESCRIPTION: RNP RWY 07L

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | VPA | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | LIMES | - | - | +3.0 | - | - | -6000<br>+3000 | - | - | RNP APCH |
| 02 | TF | TUTBA | - | 338 (335) | +3.0 | 8.4 | - | +2000 | @180 | - | RNP APCH |
| 03 | TF | VH701 | - | 044 (041) | +3.0 | 3.7 | - | +1500 | @180 | - | RNP APCH |
| 04 | TF | VH708 | - | 074 (071) | +3.0 | 2.8 | - | @1500 | -160<br>+150 | - | RNP APCH |
| 05 | TF | RW07L | Y | 074 (071) | +3.0 | 4.6 | - | @73 | - | -2.9 | RNP APCH |
| 06 | CF | VH726 | - | 074 (071) | +3.0 | - | - | - | -200 | - | RNP APCH |
| 07 | TF | VH727 | - | 040 (037) | +3.0 | 7.1 | - | - | @200 | - | RNP APCH |
| 08 | TF | HH741 | - | 071 (068) | +3.0 | 9.6 | - | @5000 | @230 | - | RNP APCH |
| 09 | TF | HH742 | - | 142 (139) | +3.0 | 14.9 | - | - | @230 | - | RNP APCH |
| 10 | TF | HH743 | - | 226 (223) | +3.0 | 12.0 | - | - | @230 | - | RNP APCH |
| 11 | TF | HH744 | - | 244 (241) | +3.0 | 17.8 | - | - | @230 | - | RNP APCH |
| 12 | TF | LIMES | - | 302 (299) | +3.0 | 10.4 | - | - | @230 | - | RNP APCH |

## WAYPOINT LIST

**RNP RWY 07L**

| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| LIMES (IAF) | 22 06 25.60N | 113 46 32.60E |
| TUTBA | 22 14 01.82N | 113 42 44.92E |
| VH701 (IF) | 22 16 50.88N | 113 45 21.49E |
| VH708 (FAF) | 22 17 46.18N | 113 48 12.62E |
| RW07L (MAPt) | 22 19 17.72N | 113 52 56.26E |
| VH726 | 22 20 36.29N | 113 57 00.20E |
| VH727 | 22 26 18.62N | 114 01 39.19E |
| HH741 | 22 29 58.66N | 114 11 14.89E |
| HH742 | 22 18 46.90N | 114 21 54.81E |
| HH743 | 22 09 58.85N | 114 13 06.23E |
| HH744 | 22 01 23.71N | 113 56 19.34E |

**INSTRUMENT APPROACH CHART - ICAO**

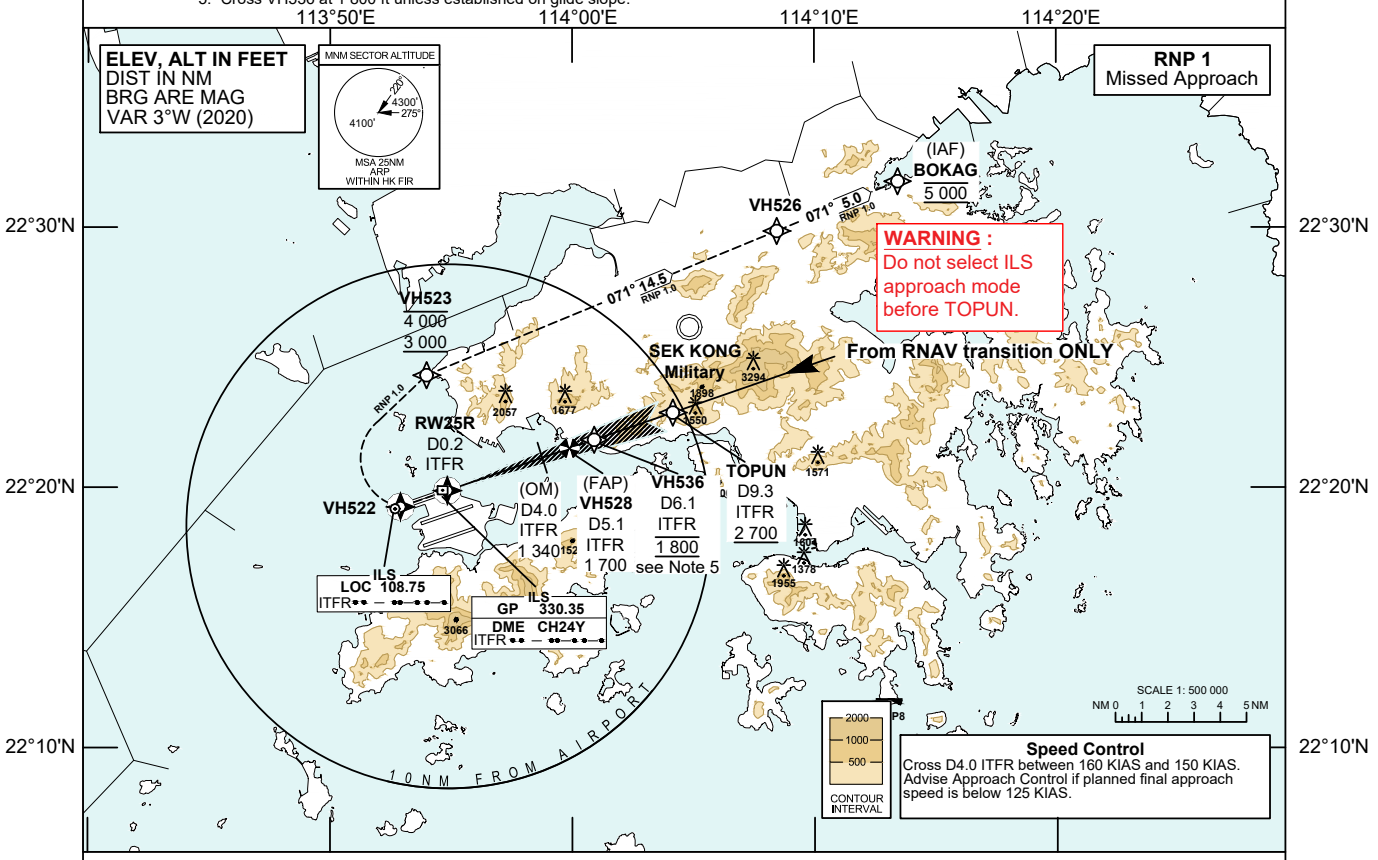
**AERODROME ELEV 28 FT**
HEIGHTS RELATED TO
THR RWY 25R - ELEV 23 FT

| | |
|---|---|
| TOWER | 118.7 |
| APPROACH | 119.1 |
| DIRECTOR | 119.5 |

**HONG KONG / INTL (VHHH)**
**ILS RWY 25R**

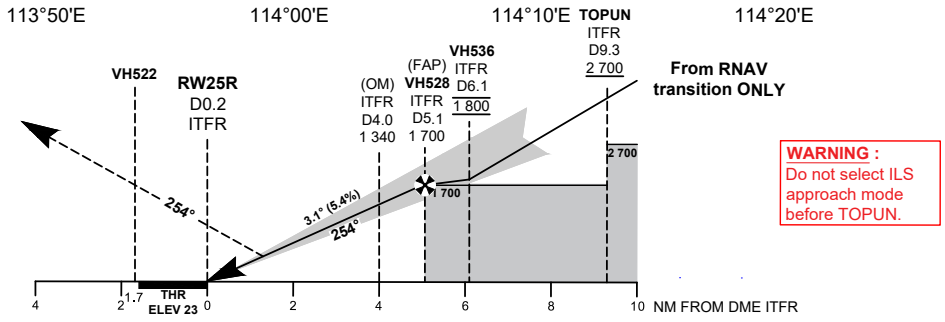
**Warnings**
1. GP SIGNAL UNUSABLE BELOW ELEVATION ANGLE OF 1.8°
2. PILOTS SHOULD MONITOR FOR FALSE CAPTURE OF LOC AND GP BY COMPARING INDICATIONS WITH AIRCRAFT POSITION AND ALTITUDE

**Notes**
1. Connect from RNAV transition only. See AD 2-VHHH-IAC-06B for details.
2. If unable RNP 1 during missed approach, continue on the published missed approach track, climb and pass Minimum Sector Altitude (MSA) 4 300 ft as soon as practicable, and continue to 5 000 ft.
3. DME is required. If unable to receive ITFR DME pilot shall advise ATC and will receive equivalent radar ranges for FAP (D5.1 ITFR) and OM Fix (D4.0 ITFR).
4. Simultaneous dependent operation is authorized with RWY 25L.
5. Cross VH536 at 1 800 ft unless established on glide slope.




**TRANSITION ALTITUDE 9000**

ILS RDH 58 AT DISPLACED THR




**MISSED APPROACH**

Climb initially to 4 000 ft and track 254°M to VH522, then turn right direct to VH523 and cross VH523 between 3000 ft and 4000 ft. From VH523, climb to 5 000 ft and track to VH526 and BOKAG.
Speed restriction: 185 KIAS maximum until VH523, then maintain 230 KIAS until VH526, then maintain 210 KIAS until BOKAG.

| DME ITFR | 5.1 | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|
| DIST THR (NM) | 4.9 | 4.8 | 3.8 | 2.8 | 1.8 | 0.8 |
| ALTITUDE (FT) | 1700 | 1670 | 1340 | 1000 | 670 | 340 |

| Missed Approach Climb Gradient | | OCA (OCH) A | B | C | D |
|---|---|---|---|---|---|
| ILS CAT I | 2.5% | 1425 (1402) | 1435 (1412) | 1445 (1422) | 1455 (1432) |
| | 6.5% | 223 (200) | | | |
| VISUAL CIRCLING NOT AVAILABLE | | N / A | | | |

| Ground Speed | kt | 80 | 100 | 120 | 140 | 160 | 180 |
|---|---|---|---|---|---|---|---|
| VH528-THR (4.9 NM) | min:s | 3:43 | 2:58 | 2:29 | 2:07 | 1:51 | 1:39 |
| ROD (5.4%) | ft / min | 440 | 550 | 660 | 770 | 880 | 990 |

CHANGE: Runway 07C/25C reopened.

AD 2-VHHH-IAC-06A_V01_240523km

# ILS RWY 25R APPROACH

## NAVIGATION AIDS

| Navaid/Ident | Frequency | Coordinates | | Remarks |
|---|---|---|---|---|
| Localizer/ITFR | 108.75 MHz | 22 19 12.67N | 113 52 40.61E | Course 254°M |
| Glide Path | 330.35 MHz | 22 19 55.16N | 113 54 38.56E | 3.1° glide slope<br>Co-located |
| DME/ITFR | CH 24Y | | | |

## TABULAR DESCRIPTION: Missed Approach Segment

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | VPA | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | CF | VH522 | Y | 254 (251) | +3.0 | - | - | - | - | - | RNP 1 |
| 02 | DF | VH523 | - | - | +3.0 | - | R | -4000<br>+3000 | @185 | - | RNP 1 |
| 03 | TF | VH526 | - | 071 (068) | +3.0 | 14.5 | - | - | @230 | - | RNP 1 |
| 04 | TF | BOKAG | - | 071 (068) | +3.0 | 5.0 | - | @5000 | @210 | - | RNP 1 |

Note: Coding is not provided for final approach segment. Please refer to the chart for altitude and speed restrictions.

## WAYPOINT LIST

**ILS RWY 25R**

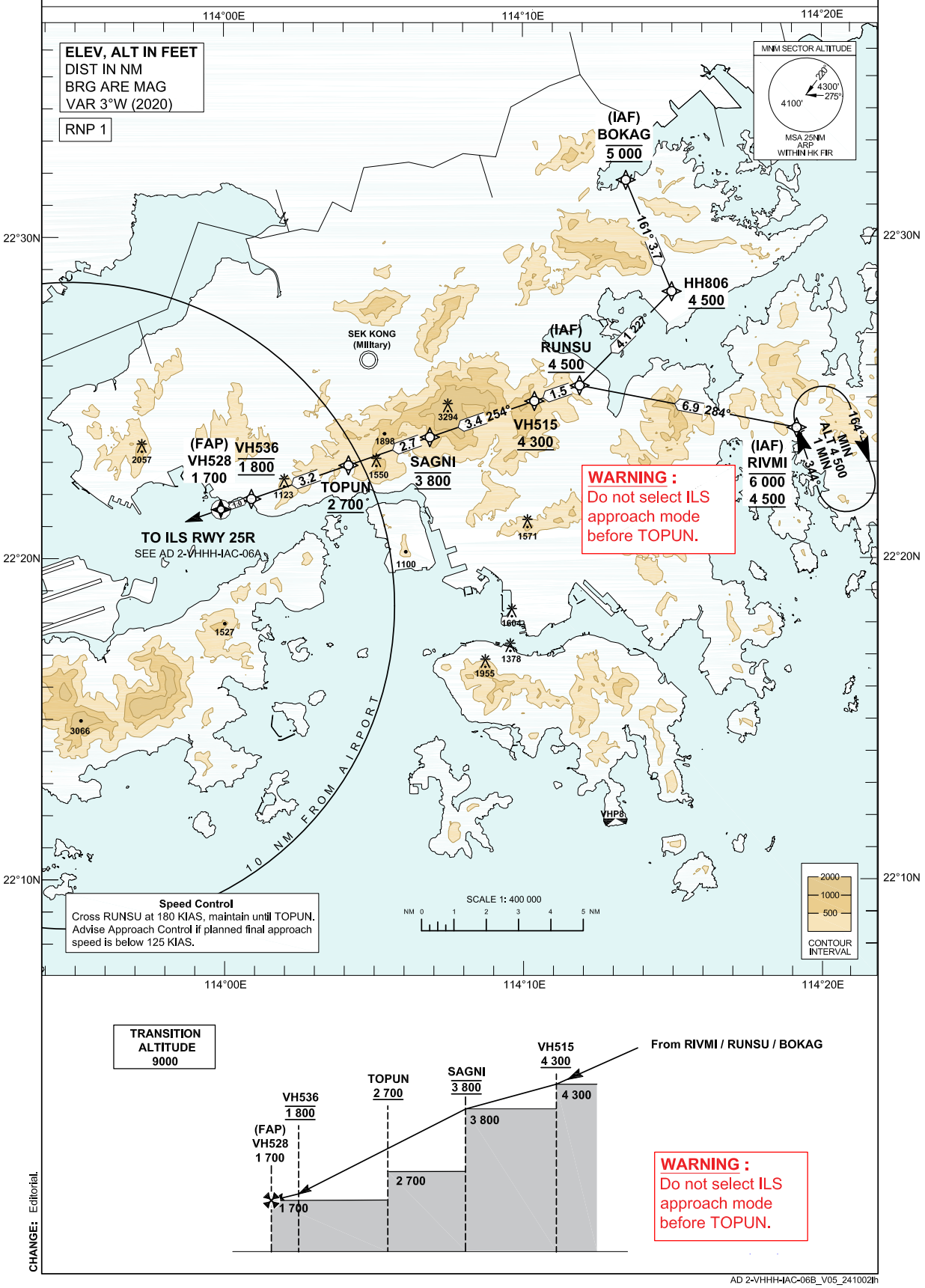
| Waypoint Identifier | Coordinates (WGS-84) | | Cross Reference from Navaid |
|---|---|---|---|
| TOPUN | 22 22 54.17N | 114 04 09.15E | ITFR DME 9.3 NM |
| VH536 | 22 21 51.55N | 114 00 54.18E | ITFR DME 6.1 NM |
| VH528 (FAP) | 22 21 31.88N | 113 59 52.97E | ITFR DME 5.1 NM |
| RW25R (THR) | 22 19 54.45N | 113 54 50.24E | ITFR DME 0.2 NM |
| VH522 | 22 19 17.08N | 113 52 54.28E | |
| VH523 | 22 24 20.51N | 113 53 58.89E | |
| VH526 | 22 29 52.41N | 114 08 27.15E | |
| BOKAG | 22 31 46.65N | 114 13 27.06E | |

**APPROACH TRANSITION CHART**

| | |
|---|---|
| HONG KONG APPROACH | 119.1 |
| HONG KONG DIRECTOR | 119.5 |

**VHHH / HONG KONG INTL**
**RNAV TRANSITION TO ILS RWY 25R**

NOTE 1 RNP 1 is required.
NOTE 2 Do not accept radar vectors inside RUNSU.
NOTE 3 Due to terrain, strictly comply with all charted altitude restrictions and DESCEND VIA RNAV TRANSITION PROFILE to FAP altitude.







CHANGE: Editorial.

AD 2-VHHH-IAC-06B_V05_241002lh

# RNAV Transition to ILS RWY 25R

## TABULAR DESCRIPTION: RNAV Transition from RIVMI

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | VPA | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | RIVMI | - | - | +3.0 | - | - | -6000<br>+4500 | - | - | RNP 1 |
| 02 | TF | RUNSU | - | 284 (281) | +3.0 | 6.9 | - | +4500 | @180 | - | RNP 1 |
| 03 | TF | VH515 | - | 254 (251) | +3.0 | 1.5 | - | +4300 | @180 | - | RNP 1 |
| 04 | TF | SAGNI | - | 254 (251) | +3.0 | 3.4 | - | @3800 | @180 | - | RNP 1 |
| 05 | TF | TOPUN | - | 254 (251) | +3.0 | 2.7 | - | +2700 | @180 | - | RNP 1 |
| 06 | TF | VH536 | - | 254 (251) | +3.0 | 3.2 | - | @1800 | - | - | RNP 1 |
| 07 | TF | VH528 | - | 254 (251) | +3.0 | 1.0 | - | - | @160 | - | RNP 1 |

## TABULAR DESCRIPTION: RNAV Transition from RUNSU

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | VPA | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | RUNSU | - | - | +3.0 | - | - | +4500 | @180 | - | RNP 1 |
| 02 | TF | VH515 | - | 254 (251) | +3.0 | 1.5 | - | +4300 | @180 | - | RNP 1 |
| 03 | TF | SAGNI | - | 254 (251) | +3.0 | 3.4 | - | @3800 | @180 | - | RNP 1 |
| 04 | TF | TOPUN | - | 254 (251) | +3.0 | 2.7 | - | +2700 | @180 | - | RNP 1 |
| 05 | TF | VH536 | - | 254 (251) | +3.0 | 3.2 | - | @1800 | - | - | RNP 1 |
| 06 | TF | VH528 | - | 254 (251) | +3.0 | 1.0 | - | - | @160 | - | RNP 1 |

## TABULAR DESCRIPTION: RNAV Transition from BOKAG

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | VPA | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | BOKAG | - | - | +3.0 | - | - | @5000 | @210 | - | RNP 1 |
| 02 | TF | HH806 | - | 161 (158) | +3.0 | 3.7 | - | +4500 | - | - | RNP 1 |
| 03 | TF | RUNSU | - | 227 (224) | +3.0 | 4.1 | - | +4500 | @180 | - | RNP 1 |
| 04 | TF | VH515 | - | 254 (251) | +3.0 | 1.5 | - | +4300 | @180 | - | RNP 1 |
| 05 | TF | SAGNI | - | 254 (251) | +3.0 | 3.4 | - | @3800 | @180 | - | RNP 1 |
| 06 | TF | TOPUN | - | 254 (251) | +3.0 | 2.7 | - | +2700 | @180 | - | RNP 1 |
| 07 | TF | VH536 | - | 254 (251) | +3.0 | 3.2 | - | @1800 | - | - | RNP 1 |
| 08 | TF | VH528 | - | 254 (251) | +3.0 | 1.0 | - | - | @160 | - | RNP 1 |

## WAYPOINT LIST

| RNAV Transition to ILS RWY 25R | | |
|---|---|---|
| **Waypoint Identifier** | **Coordinates (WGS-84)** | |
| RIVMI (IAF) | 22 24 03.96N | 114 19 09.28E |
| BOKAG (IAF) | 22 31 46.65N | 114 13 27.06E |
| HH806 | 22 28 18.61N | 114 14 58.76E |
| RUNSU (IAF) | 22 25 22.96N | 114 11 53.57E |
| VH515 | 22 24 53.87N | 114 10 22.72E |
| SAGNI | 22 23 46.63N | 114 06 52.68E |
| TOPUN | 22 22 54.17N | 114 04 09.15E |
| VH536 | 22 21 51.55N | 114 00 54.18E |
| VH528 (FAP) | 22 21 31.88N | 113 59 52.97E |

**INSTRUMENT APPROACH CHART - ICAO**

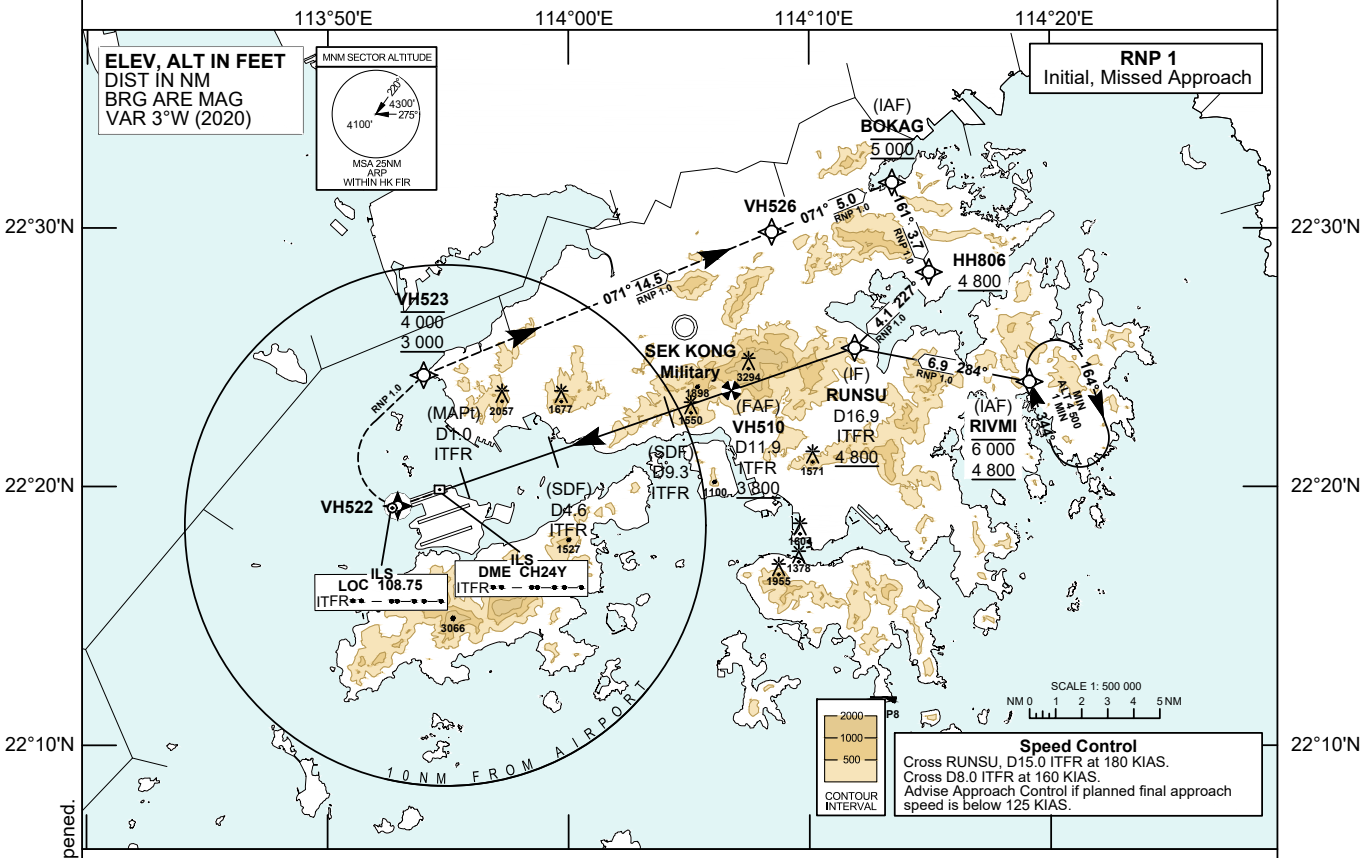
**AERODROME ELEV 28 FT**
THR ELEV 23 FT
HEIGHTS RELATED TO AD ELEV

| | |
|---|---|
| TOWER | 118.7 |
| APPROACH | 119.1 |
| DIRECTOR | 119.5 |

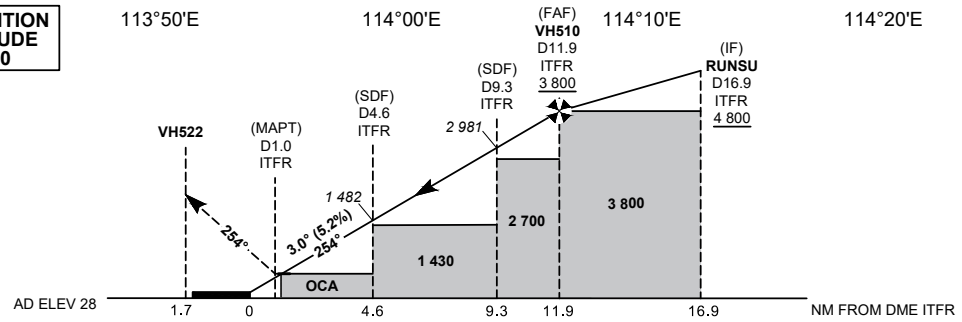
**HONG KONG / INTL (VHHH)**
**LOC RWY 25R**

**Warnings** 1. LOC ITFR UNUSABLE BEYOND 16° RIGHT OF COURSE

**Notes** 1. DME is required.
2. If unable RNP 1, inform ATC accordingly. If unable RNP 1 during missed approach, continue on the published missed approach track, climb and pass Minimum Sector Altitude (MSA) 4 300 ft as soon as practicable, and continue to 5 000 ft.




**TRANSITION ALTITUDE 9000**




**MISSED APPROACH**
The Missed Approach Point is at ITFR DME 1 NM. Climb initially to 4 000 ft and track 254°M to VH522, then turn right direct to VH523 and cross VH523 between 3 000 ft and 4 000 ft. From VH523, climb to 5 000 ft and track to VH526 and BOKAG.
Speed restriction: 185 KIAS maximum until VH523, then maintain 230 KIAS until VH526, then maintain 210 KIAS until BOKAG.

| DME ITFR | 11.9 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DIST THR (NM) | 11.7 | 10.8 | 9.8 | 8.8 | 7.8 | 6.8 | 5.8 | 4.8 | 3.8 | 2.8 | 1.8 |
| ALTITUDE (FT) | 3800 | 3520 | 3200 | 2880 | 2560 | 2240 | 1920 | 1600 | 1280 | 970 | 650 |

| Missed Approach Climb Gradient | | OCA (OCH) A | B | C | D |
|---|---|---|---|---|---|
| LOC | 5.1% | 430 (400) | | | |
| VISUAL CIRCLING NOT AVAILABLE | | N / A | | | |

| Ground Speed | kt | 80 | 100 | 120 | 140 | 160 | 180 |
|---|---|---|---|---|---|---|---|
| VH510-THR (11.7 NM) | min:s | 8:46 | 7:01 | 5:51 | 5:01 | 4:23 | 3:54 |
| ROD (5.2%) | ft / min | 430 | 530 | 640 | 740 | 850 | 960 |

**CHANGE:** Revised Initial Approach; navigation warnings; notes; Runway 07C/25C reopened.

AD 2-VHHH-IAC-06C_V04_240909lh

# LOC RWY 25R APPROACH

## NAVIGATION AIDS

| Navaid/Ident | Frequency | Coordinates | Remarks |
|---|---|---|---|
| Localizer/ITFR | 108.75 MHz | 22 19 12.67N 113 52 40.61E | Course 254°M |
| DME/ITFR | CH 24Y | 22 19 55.16N 113 54 38.56E | |

## TABULAR DESCRIPTION: LOC RWY 25R

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | VPA | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | TF | RIVMI | - | - | +3.0 | - | - | -6000<br>+4800 | - | - | RNP 1 |
| 02 | TF | RUNSU | - | 284 (281) | +3.0 | 6.9 | - | +4800 | @180 | - | RNP 1 |
| 01 | IF | BOKAG | - | - | - | - | - | @5000 | @210 | - | RNP 1 |
| 02 | TF | HH806 | - | 161 (158) | +3.0 | 3.7 | - | +4800 | - | - | RNP 1 |
| 03 | TF | RUNSU | - | 227 (224) | +3.0 | 4.1 | - | +4800 | @180 | - | RNP 1 |
| 01 | IF | RUNSU | - | 254 (251) | +3.0 | - | - | +4800 | @180 | - | Conventional |
| 02 | - | VH510 | - | 254 (251) | +3.0 | 5.0 | - | +3800 | @180 | - | Conventional |
| 03 | - | RW25R | Y | 254 (251) | +3.0 | 11.7 | - | - | - | - | Conventional |
| 04 | CF | VH522 | Y | 254 (251) | +3.0 | 1.9 | - | - | - | - | RNP 1 |
| 05 | DF | VH523 | - | - | - | - | R | -4000<br>+3000 | @185 | - | RNP 1 |
| 06 | TF | VH526 | - | 071 (068) | +3.0 | 14.5 | - | - | @230 | - | RNP 1 |
| 07 | TF | BOKAG | - | 071 (068) | +3.0 | 5.0 | - | @5000 | @210 | - | RNP 1 |

Note: Coding is not provided for final approach segment. Please refer to the chart for altitude and speed restrictions.

## WAYPOINT LIST

**LOC RWY 25R**

| Waypoint Identifier | Coordinates (WGS-84) | Cross Reference from Navaid |
|---|---|---|
| RIVMI (IAF) | 22 24 03.96N 114 19 09.28E | |
| BOKAG (IAF) | 22 31 46.65N 114 13 27.06E | |
| HH806 | 22 28 18.61N 114 14 58.76E | |
| RUNSU (IF) | 22 25 22.96N 114 11 53.57E | ITFR DME 16.9 NM |
| VH510 (FAF) | 22 23 44.37N 114 06 45.65E | ITFR DME 11.9 NM |
| SDF9.3 | 22 22 54.18N 114 04 09.19E | ITFR DME 9.3 NM |
| SDF4.6 | 22 21 21.75N 113 59 21.48E | ITFR DME 4.6 NM |
| MAPt | 22 20 10.82N 113 55 41.07E | ITFR DME 1.0 NM |
| RW25R (THR) | 22 19 54.45N 113 54 50.24E | |
| VH522 | 22 19 17.08N 113 52 54.28E | |
| VH523 | 22 24 20.51N 113 53 58.89E | |
| VH526 | 22 29 52.41N 114 08 27.15E | |

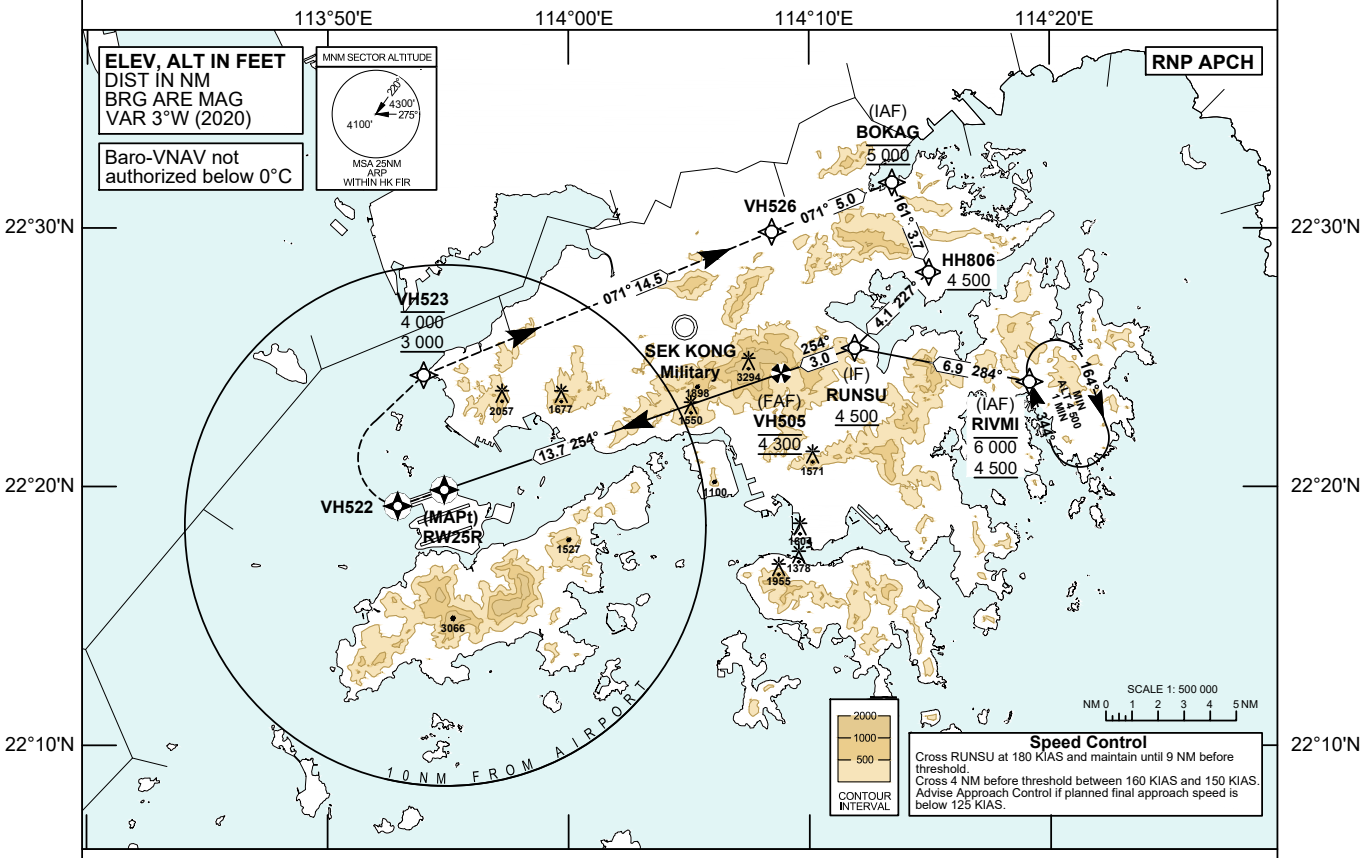
**INSTRUMENT APPROACH CHART - ICAO**

**AERODROME ELEV 28 FT**
HEIGHTS RELATED TO
THR RWY 25R - ELEV 23 FT

| | |
|---|---|
| TOWER | 118.7 |
| APPROACH | 119.1 |
| DIRECTOR | 119.5 |

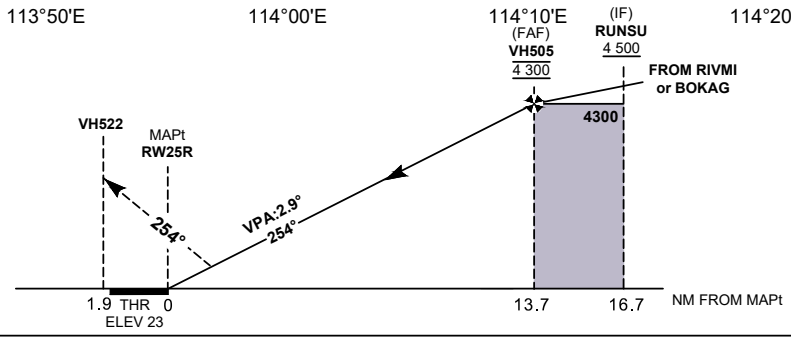
**HONG KONG / INTL (VHHH)**
**RNP Z RWY 25R**
**(LNAV/VNAV only)**

**Notes** 1. Simultaneous dependent operation is authorized with RWY 25L.




**TRANSITION ALTITUDE 9000**

TCH 50 AT DISPLACED THR




**MISSED APPROACH**
Climb initially to 4 000 ft. From RW25R track 254°M to VH522, then turn right direct to VH523 and cross VH523 between 3 000 ft and 4 000 ft. From VH523, climb to 5 000 ft and track to VH526 and BOKAG.
Speed restriction: 185 KIAS maximum until VH523, then maintain 230 KIAS until VH526, then maintain 210 KIAS until BOKAG.

| DIST THR (NM) | 13.7 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ALTITUDE (FT) | 4300 | 4070 | 3770 | 3460 | 3150 | 2840 | 2530 | 2230 | 1920 | 1610 | 1300 | 1000 | 690 |

| Missed Approach Climb Gradient | | OCA (OCH) A | B | C | D |
|---|---|---|---|---|---|
| LNAV/VNAV | 2.5% | 1425 (1402) | 1435 (1412) | 1445 (1422) | 1455 (1432) |
| | 5.6% | 485 (462) | 495 (472) | 505 (482) | 515 (492) |
| VISUAL CIRCLING NOT AVAILABLE | | N / A | | | |

| Ground Speed | kt | 80 | 100 | 120 | 140 | 160 | 180 |
|---|---|---|---|---|---|---|---|
| VH505-THR (13.7 NM) | min:s | 10:17 | 8:14 | 6:52 | 5:53 | 5:09 | 4:34 |
| ROD (5.1%) | ft / min | 410 | 510 | 620 | 720 | 820 | 920 |

**CHANGE:** Revised Initial Approach; speed control; Runway 07C/25C reopened.

AD 2-VHHH-IAC-06E_V05_240524km

# RNP Z RWY 25R APPROACH

## TABULAR DESCRIPTION: RNP Z RWY 25R

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | VPA | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | RIVMI | - | - | +3.0 | - | - | -6000<br>+4500 | - | - | RNP APCH |
| 02 | TF | RUNSU | - | 284 (281) | +3.0 | 6.9 | - | +4500 | @180 | - | RNP APCH |
| 01 | IF | BOKAG | - | - | +3.0 | - | - | @5000 | @210 | - | RNP APCH |
| 02 | TF | HH806 | - | 161 (158) | +3.0 | 3.7 | - | +4500 | - | - | RNP APCH |
| 03 | TF | RUNSU | - | 227 (224) | +3.0 | 4.1 | - | +4500 | @180 | - | RNP APCH |
| 01 | IF | RUNSU | - | - | +3.0 | - | - | +4500 | @180 | - | RNP APCH |
| 02 | TF | VH505 | - | 254 (251) | +3.0 | 3.0 | - | @4300 | @180 | - | RNP APCH |
| 03 | TF | RW25R | Y | 254 (251) | +3.0 | 13.7 | - | @73 | - | -2.9 | RNP APCH |
| 04 | CF | VH522 | Y | 254 (251) | +3.0 | 1.9 | - | - | - | - | RNP APCH |
| 05 | DF | VH523 | - | - | +3.0 | - | R | -4000<br>+3000 | @185 | - | RNP APCH |
| 06 | TF | VH526 | - | 071 (068) | +3.0 | 14.5 | - | - | @230 | - | RNP APCH |
| 07 | TF | BOKAG | - | 071 (068) | +3.0 | 5.0 | - | @5000 | @210 | - | RNP APCH |

## WAYPOINT LIST

**RNP Z RWY 25R**

| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| RIVMI (IAF) | 22 24 03.96N | 114 19 09.28E |
| BOKAG (IAF) | 22 31 46.65N | 114 13 27.06E |
| HH806 | 22 28 18.61N | 114 14 58.76E |
| RUNSU | 22 25 22.96N | 114 11 53.57E |
| VH505 (FAF) | 22 24 24.16N | 114 08 49.88E |
| RW25R (THR) | 22 19 54.45N | 113 54 50.24E |
| VH522 | 22 19 17.08N | 113 52 54.28E |
| VH523 | 22 24 20.51N | 113 53 58.89E |
| VH526 | 22 29 52.41N | 114 08 27.15E |

**INSTRUMENT APPROACH CHART - ICAO**

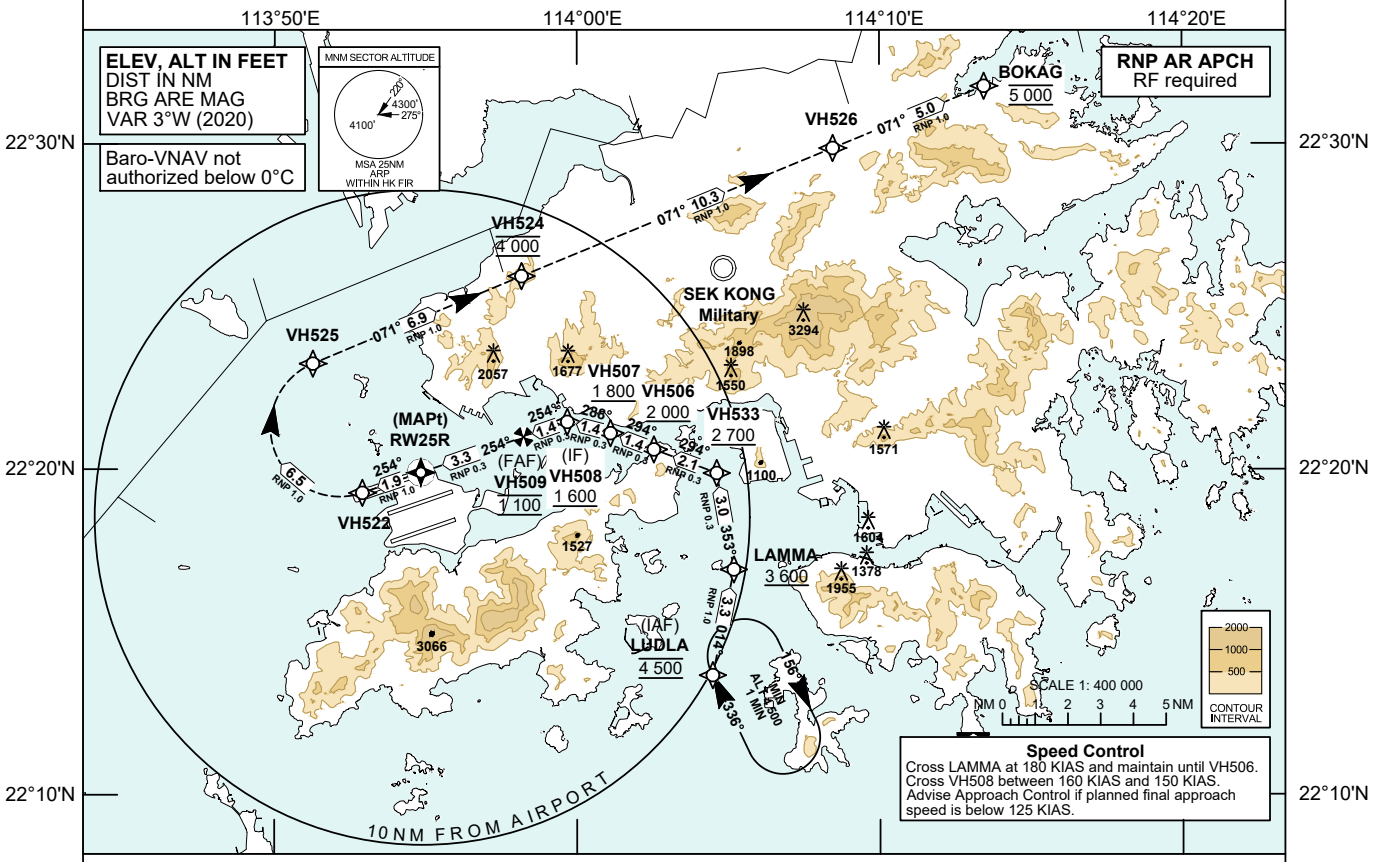
**AERODROME ELEV 28 FT**
HEIGHTS RELATED TO
THR RWY 25R - ELEV 23 FT

| | |
|---|---|
| TOWER | 118.7 |
| APPROACH | 119.1 |
| DIRECTOR | 119.5 |

**HONG KONG / INTL (VHHH)**
**RNP Y RWY 25R (AR)**

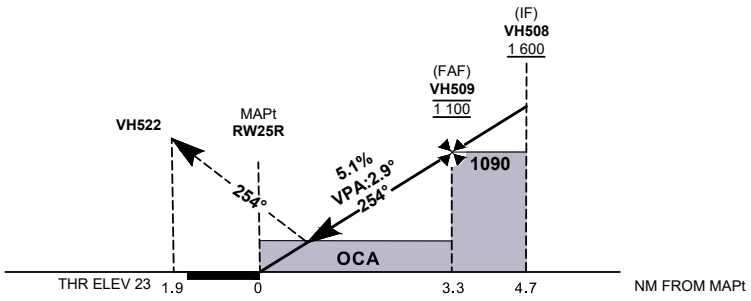
**Authorization from HONG KONG CAD is Required (Refer to the relevant AIC for application procedures)**

**Notes**
1. RNP AR APCH: RNP 0.3 within Initial and Intermediate segments. RNP values are depicted on Plan View for each applicable leg.
2. Aircraft must obtain approval from Hong Kong Civil Aviation Department for RNP AR APCH.
3. Simultaneous dependent operation is authorized with RWY 25L.
4. Do not accept radar vectors inside LUDLA.




**TRANSITION ALTITUDE 9000**

TCH 50 AT DISPLACED THR




**MISSED APPROACH**
Climb initially to 4 000 ft. From RW25R track 254°M to VH522, then turn right direct to VH525, then VH524 and cross VH524 at 4 000 ft. From VH524 climb to 5 000 ft and track to VH526 and BOKAG.
Speed restriction: 185 KIAS maximum until VH525, then maintain 230 KIAS until VH526, then maintain 210 KIAS until BOKAG.

| DIST THR (NM) | 3.3 | 3 | 2 |
|---|---|---|---|
| ALTITUDE (FT) | 1100 | 1000 | 690 |

| Missed Approach Climb Gradient | | OCA (OCH) A | B | C | D |
|---|---|---|---|---|---|
| RNP 0.30 | 4.0% | 485 (462) | 495 (472) | 505 (482) | 515 (492) |
| VISUAL CIRCLING NOT AVAILABLE | | N / A | | | |

| Ground Speed | kt | 80 | 100 | 120 | 140 | 160 | 180 |
|---|---|---|---|---|---|---|---|
| VH509-THR (3.3NM) | min:s | 2:29 | 2:00 | 1:40 | 1:25 | 1:15 | 1:06 |
| ROD (5.1%) | ft / min | 410 | 510 | 620 | 720 | 820 | 920 |

CHANGE: Revised Initial Approach; Runway 07C/25C reopened.

AD 2-VHHH-IAC-06G_V05_240522lh

# RNP Y RWY 25R (AR) APPROACH

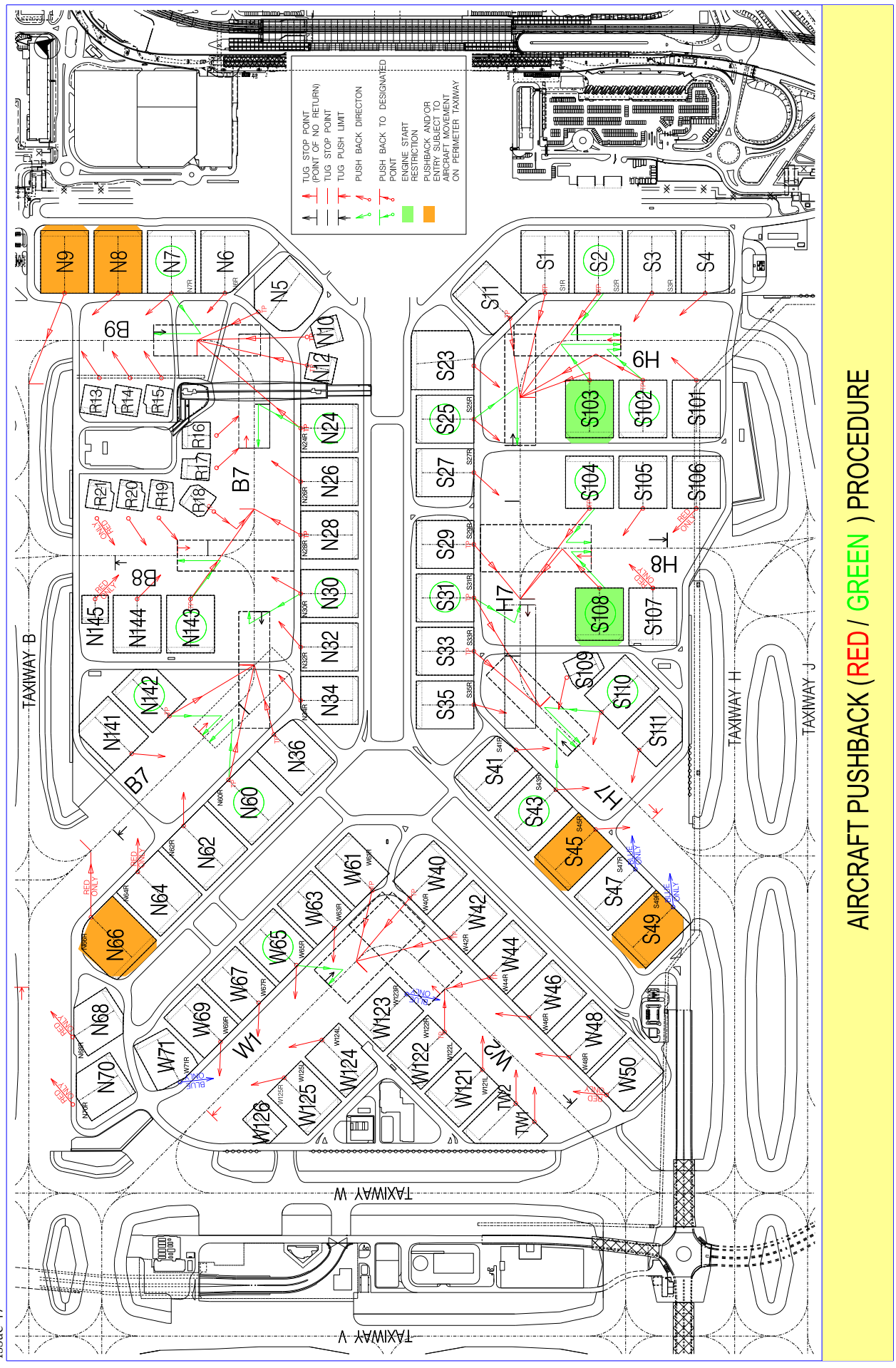
## TABULAR DESCRIPTION: RNP Y RWY 25R (AR)

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | VPA | Navigation Specification (RNP Value) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | LUDLA | - | - | +3.0 | - | - | @4500 | - | - | RNP AR APCH (RNP 1.0) |
| 02 | TF | LAMMA | - | 014 (011) | +3.0 | 3.3 | - | +3600 | @180 | - | RNP AR APCH (RNP 1.0) |
| 03 | TF | VH533 | - | 353 (350) | +3.0 | 3.0 | - | +2700 | @180 | - | RNP AR APCH (RNP 0.3) |
| 04 | TF | VH506 | - | 294 (291) | +3.0 | 2.1 | - | +2000 | @180 | - | RNP AR APCH (RNP 0.3) |
| 05 | TF | VH507 | - | 294 (291) | +3.0 | 1.4 | - | +1800 | - | - | RNP AR APCH (RNP 0.3) |
| 06 | TF | VH508 | - | 288 (285) | +3.0 | 1.4 | - | +1600 | -160 +150 | - | RNP AR APCH (RNP 0.3) |
| 07 | TF | VH509 | - | 254 (251) | +3.0 | 1.4 | - | @1100 | - | - | RNP AR APCH (RNP 0.3) |
| 08 | TF | RW25R | Y | 254 (251) | +3.0 | 3.3 | - | @73 | - | -2.9 | RNP AR APCH (RNP 0.3) |
| 09 | CF | VH522 | - | 254 (251) | +3.0 | 1.9 | - | - | - | - | RNP AR APCH (RNP 1.0) |
| 10 | RF Centre: VH994 r=2.120 NM | VH525 | - | - | +3.0 | 6.5 | R | - | @185 | - | RNP AR APCH (RNP 1.0) |
| 11 | TF | VH524 | - | 071 (068) | +3.0 | 6.9 | - | @4000 | - | - | RNP AR APCH (RNP 1.0) |
| 12 | TF | VH526 | - | 071 (068) | +3.0 | 10.3 | - | - | @230 | - | RNP AR APCH (RNP 1.0) |
| 13 | TF | BOKAG | - | 071 (068) | +3.0 | 5.0 | - | @5000 | @210 | - | RNP AR APCH (RNP 1.0) |

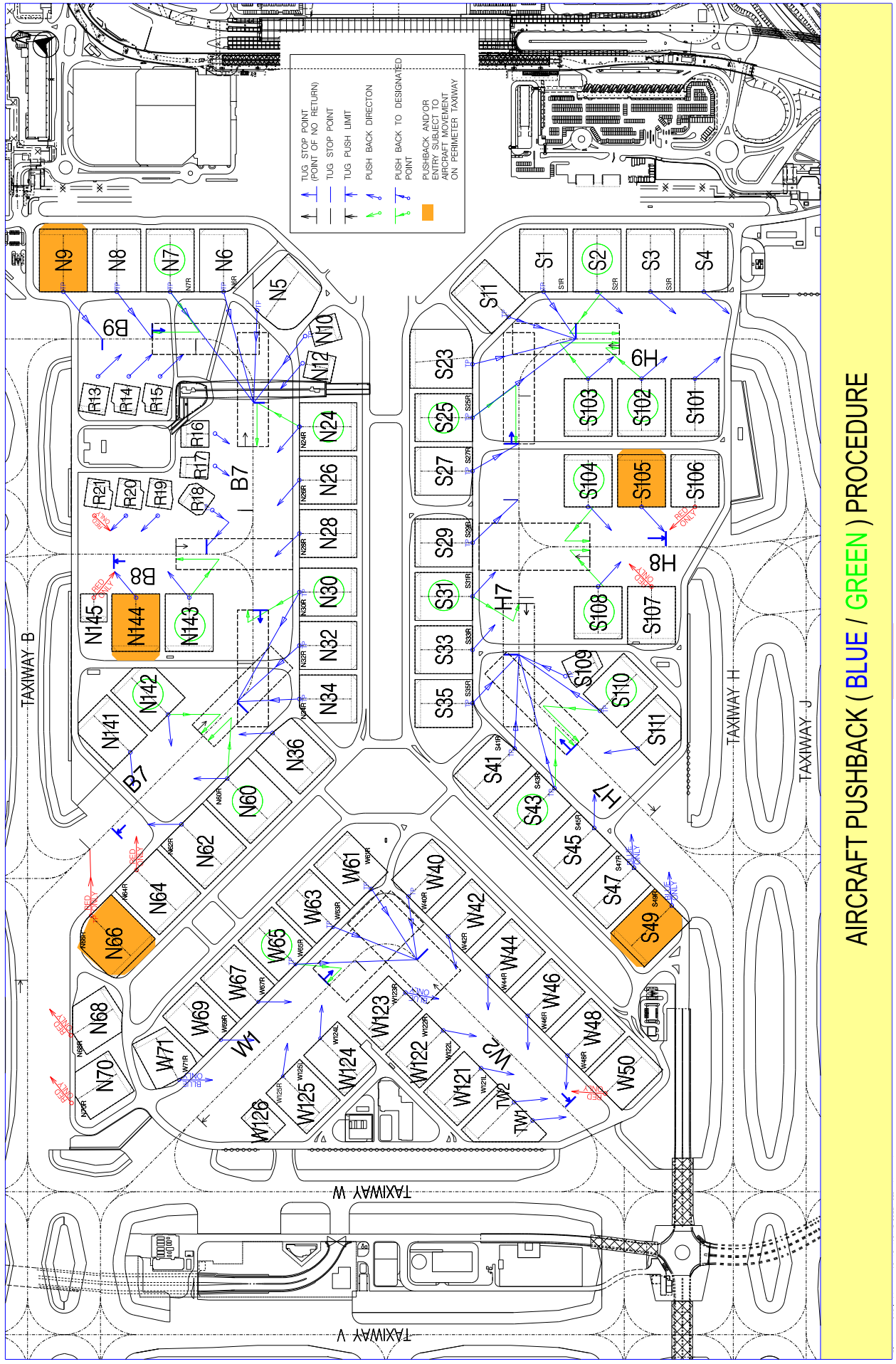
## WAYPOINT LIST

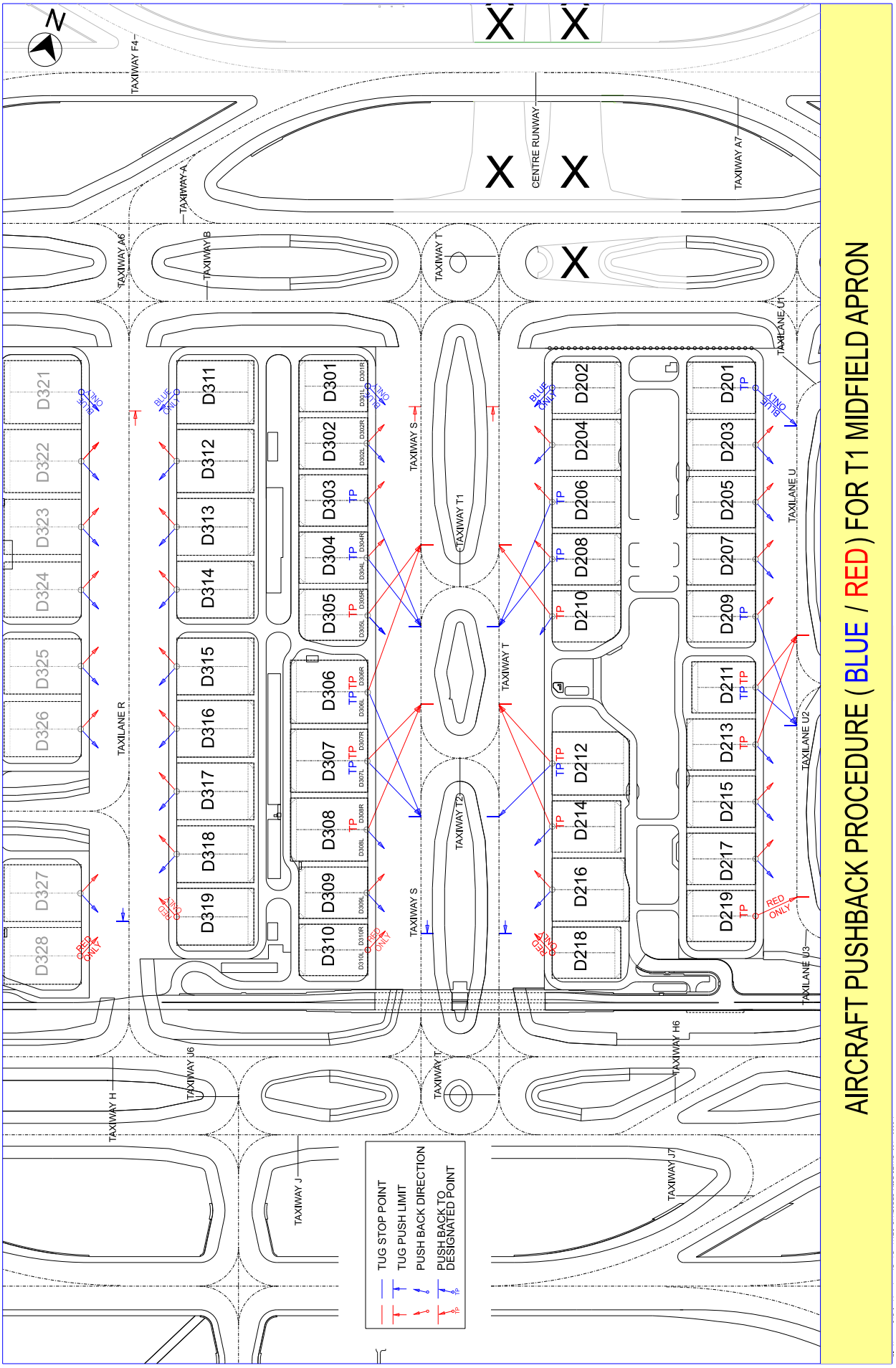
**RNP Y RWY 25R (AR)**

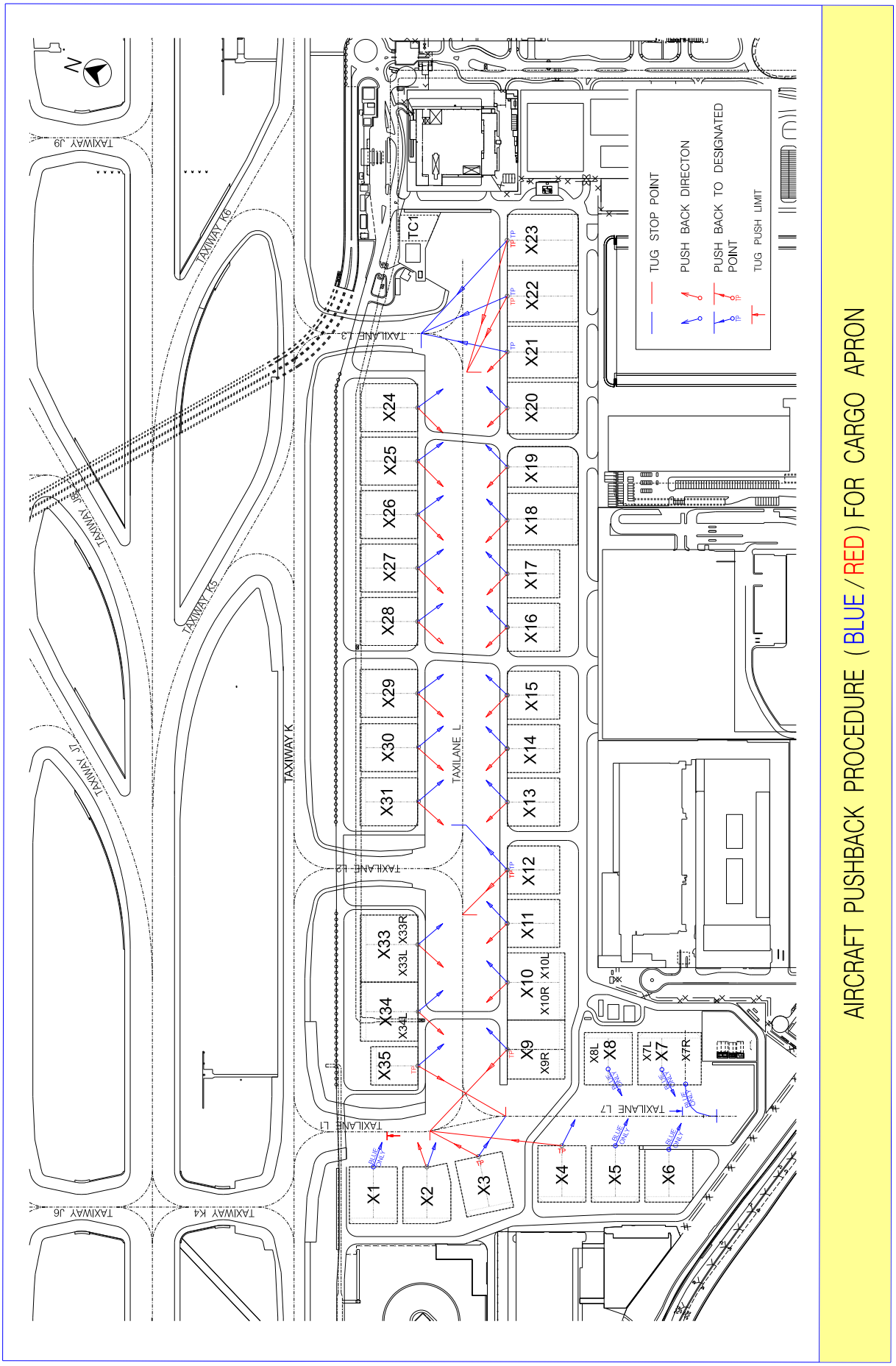
| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| LUDLA (IAF) | 22 13 40.79N | 114 04 28.75E |
| LAMMA | 22 16 55.61N | 114 05 10.55E |
| VH533 | 22 19 53.47N | 114 04 36.72E |
| VH506 | 22 20 36.99N | 114 02 32.27E |
| VH507 | 22 21 07.06N | 114 01 06.23E |
| VH508 (IF) | 22 21 27.88N | 113 59 40.53E |
| VH509 (FAF) | 22 20 59.94N | 113 58 13.67E |
| RW25R (MAPT) | 22 19 54.45N | 113 54 50.24E |
| VH522 | 22 19 17.08N | 113 52 54.28E |
| VH525 | 22 23 15.38N | 113 51 16.25E |
| VH524 | 22 25 56.63N | 113 58 09.87E |
| VH526 | 22 29 52.41N | 114 08 27.15E |
| BOKAG | 22 31 46.65N | 114 13 27.06E |
| **RF Arc Centre Identifier** | **Coordinates (WGS-84)** | |
| VH994 | 22 21 17.69N | 113 52 09.35E |


AIRCRAFT PUSHBACK (RED / GREEN ) PROCEDURE
TUG STOP POINT (POINT OF NO RETURN)
TUG STOP POINT
TUG PUSH LIMIT
PUSH BACK DIRECTON
PUSH BACK TO DESIGNATED POINT
ENGINE START RESTRICTION
PUSHBACK AND/OR ENTRY SUBJECT TO AIRCRAFT MOVEMENT ON PERIMETER TAXIWAY
TAXIWAY B
TAXIWAY H
TAXIWAY J
TAXIWAY W
TAXIWAY V
B9
B8
B7
H9
H8
H7
H1
N9
N8
N7
N6
N5
N10
N12
N24
N26
N28
N30
N32
N34
N36
N60
N62
N64
N66
N68
N70
N145
N144
N143
N142
N141
R13
R14
R15
R16
R17
R18
R19
R20
R21
S1
S2
S3
S4
S11
S23
S25
S27
S29
S31
S33
S35
S41
S43
S45
S47
S49
S103
S102
S101
S104
S105
S106
S108
S107
S109
S110
S111
W1
W2
W40
W42
W44
W46
W48
W50
W61
W63
W65
W67
W69
W71
W123
W122
W121
W124
W125
W126
TW1
TW2
RED ONLY
BLUE ONLY

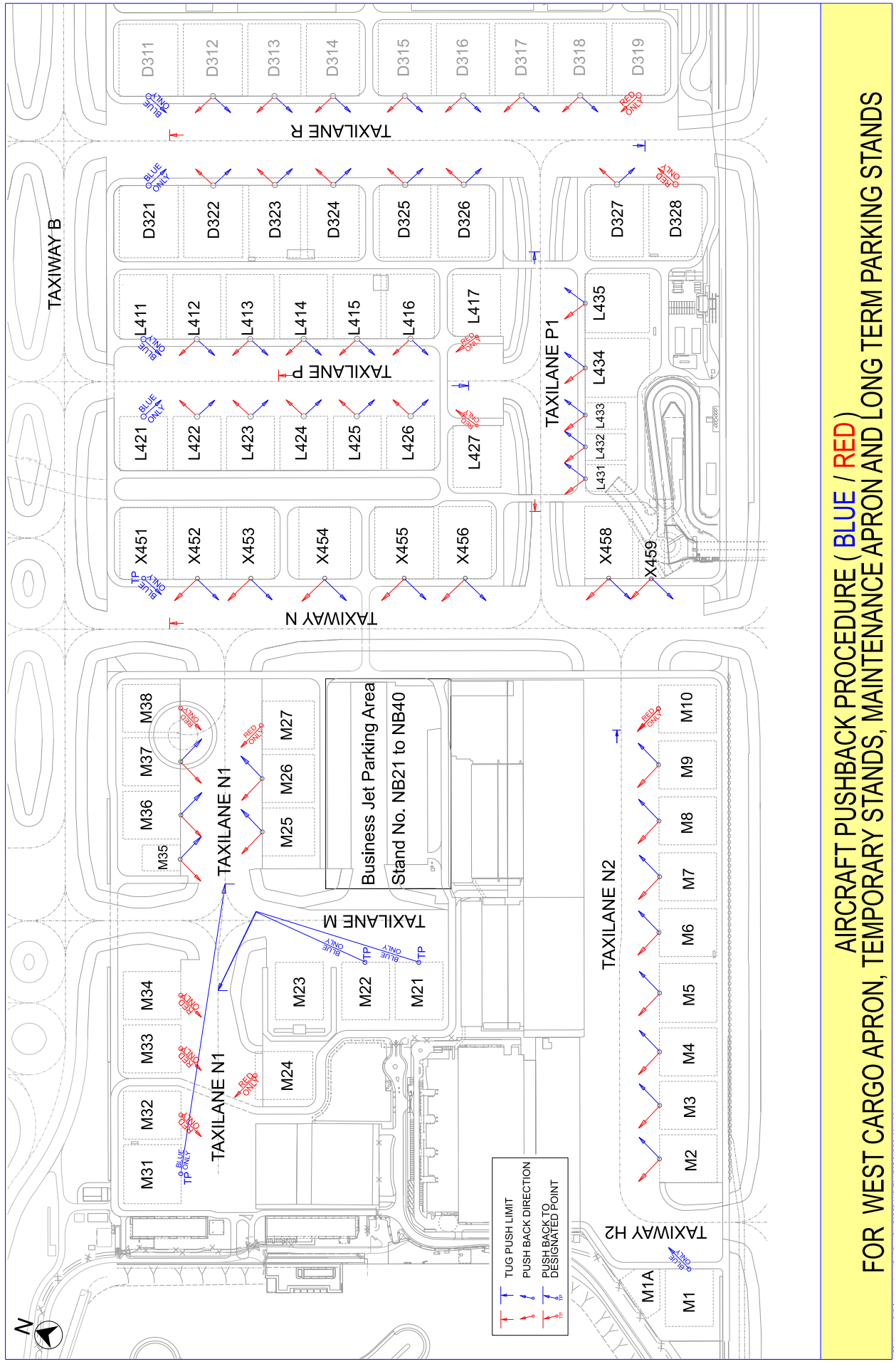
Issue 47


TUG STOP POINT (POINT OF NO RETURN)
TUG STOP POINT
TUG PUSH LIMIT
PUSH BACK DIRECTON
PUSH BACK TO DESIGNATED POINT
PUSHBACK AND/OR ENTRY SUBJECT TO AIRCRAFT MOVEMENT ON PERIMETER TAXIWAY
TAXIWAY B
TAXIWAY H
TAXIWAY J
TAXIWAY W
TAXIWAY V
AIRCRAFT PUSHBACK ( BLUE / GREEN ) PROCEDURE
Issue 47


AIRCRAFT PUSHBACK PROCEDURE ( BLUE / RED ) FOR T1 MIDFIELD APRON
N
TAXIWAY F4
TAXIWAY A
TAXIWAY A6
TAXIWAY B
TAXIWAY T
CENTRE RUNWAY
TAXIWAY A7
TAXILANE U1
TAXILANE U
TAXILANE U2
TAXILANE U3
TAXILANE R
TAXIWAY S
TAXIWAY T1
TAXIWAY T2
TAXIWAY H
TAXIWAY J6
TAXIWAY J
TAXIWAY J7
TAXIWAY H6
D321
D322
D323
D324
D325
D326
D327
D328
D311
D312
D313
D314
D315
D316
D317
D318
D319
D301
D302
D303
D304
D305
D306
D307
D308
D309
D310
D202
D204
D206
D208
D210
D212
D214
D216
D218
D201
D203
D205
D207
D209
D211
D213
D215
D217
D219
BLUE ONLY
RED ONLY
TP
TUG STOP POINT
TUG PUSH LIMIT
PUSH BACK DIRECTION
PUSH BACK TO DESIGNATED POINT

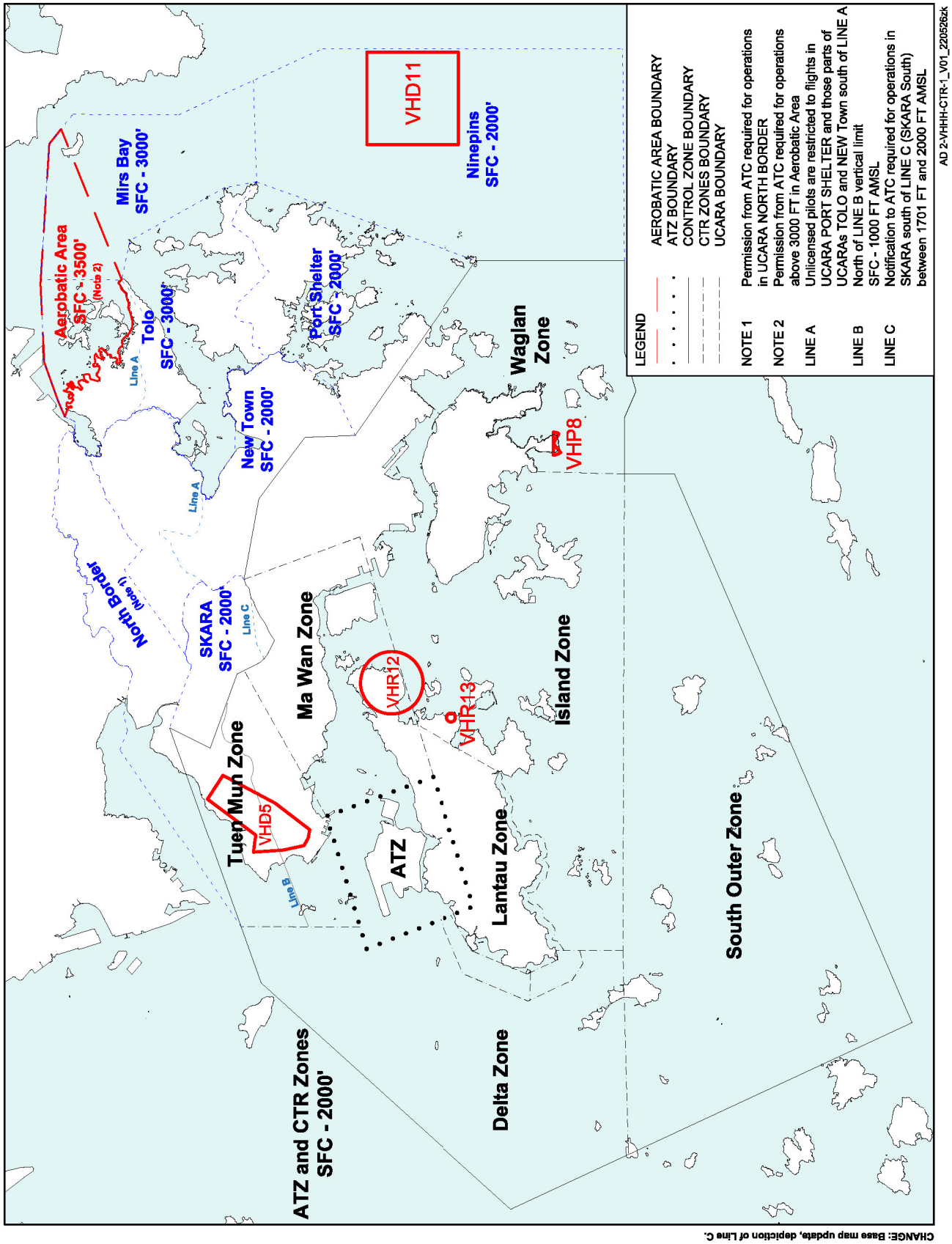

AIRCRAFT PUSHBACK PROCEDURE (BLUE / RED) FOR CARGO APRON
TUG STOP POINT
PUSH BACK DIRECTON
PUSH BACK TO DESIGNATED POINT
TUG PUSH LIMIT
TAXIWAY J9
TAXIWAY K6
TAXIWAY J8
TAXIWAY J7
TAXIWAY K5
TAXIWAY K
TAXILANE L3
TAXILANE L
TAXILANE L2
TAXILANE L7
TAXIWAY J6
TAXIWAY K4
TTC1
X1
X2
X3
X4
X5
X6
X7
X7L
X7R
X8
X8L
X9
X9R
X10
X10L
X10R
X11
X12
X13
X14
X15
X16
X17
X18
X19
X20
X21
X22
X23
X24
X25
X26
X27
X28
X29
X30
X31
X33
X33L
X33R
X34
X34L
X35
TP
BLUE ONLY

Issue 47

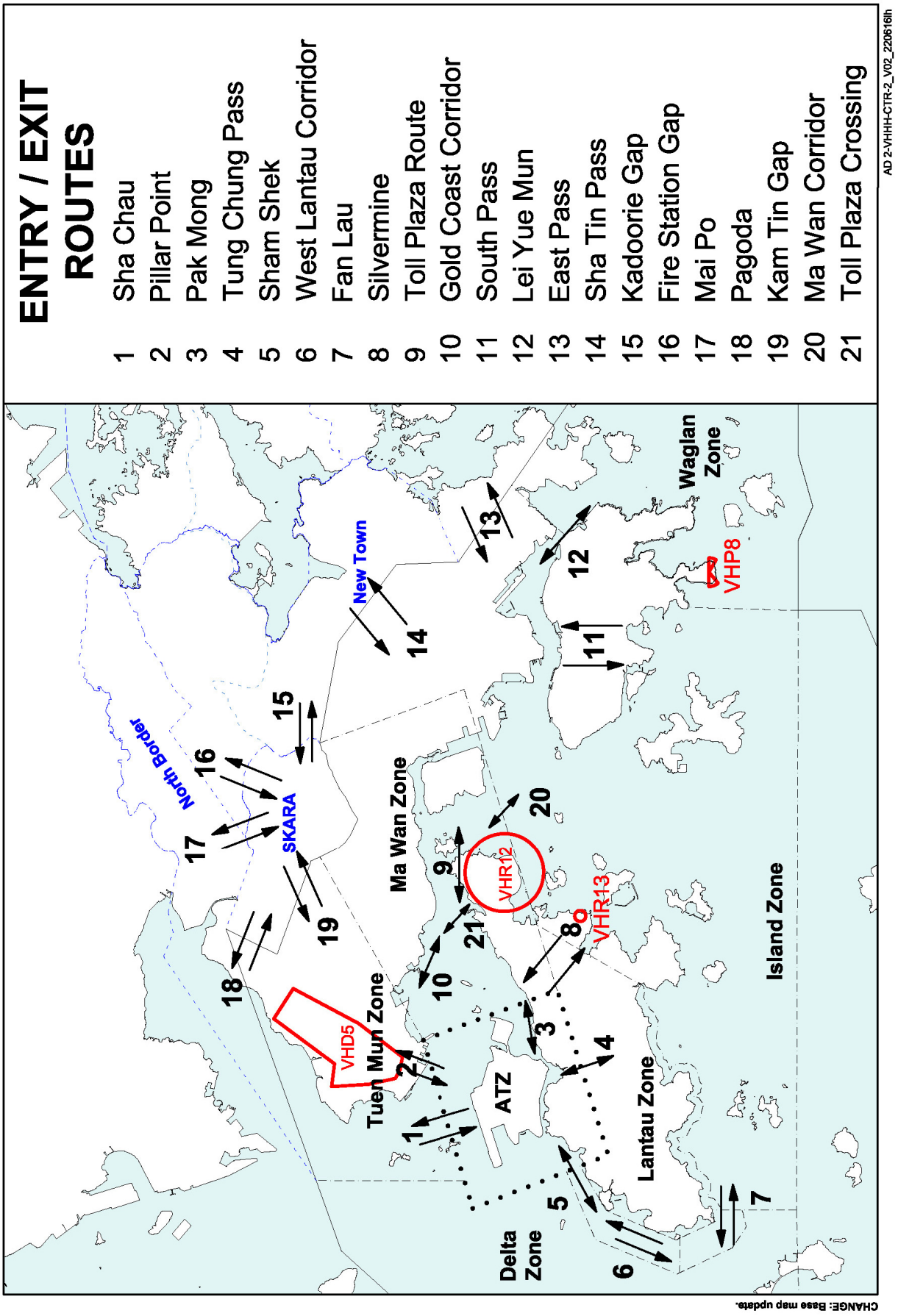

AIRCRAFT PUSHBACK PROCEDURE ( BLUE / RED )
FOR WEST CARGO APRON, TEMPORARY STANDS, MAINTENANCE APRON AND LONG TERM PARKING STANDS
TAXIWAY B
TAXILANE R
TAXIWAY N
TAXILANE P
TAXILANE P1
TAXILANE N1
TAXILANE M
TAXILANE N2
TAXIWAY H2
Business Jet Parking Area
Stand No. NB21 to NB40
TUG PUSH LIMIT
PUSH BACK DIRECTION
PUSH BACK TO DESIGNATED POINT
D311
D312
D313
D314
D315
D316
D317
D318
D319
D321
D322
D323
D324
D325
D326
D327
D328
L411
L412
L413
L414
L415
L416
L417
L421
L422
L423
L424
L425
L426
L427
L431
L432
L433
L434
L435
X451
X452
X453
X454
X455
X456
X458
X459
M1
M1A
M2
M3
M4
M5
M6
M7
M8
M9
M10
M21
M22
M23
M24
M25
M26
M27
M31
M32
M33
M34
M35
M36
M37
M38
BLUE ONLY
RED ONLY
TP

Issue 47

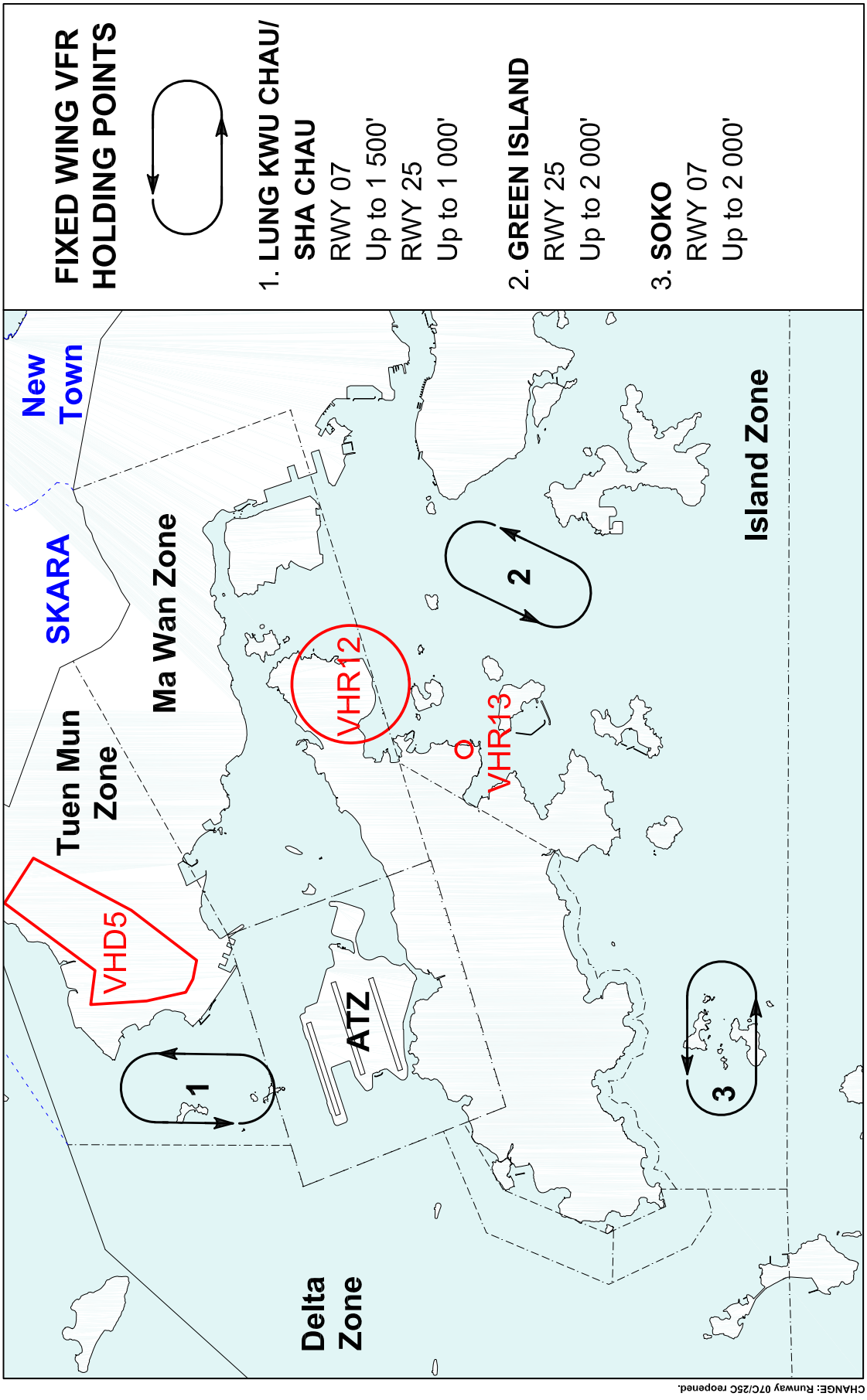
# Subdivisions of the Control Zone (CTR Zones) and Uncontrolled Airspace Reporting Areas (UCARAs)



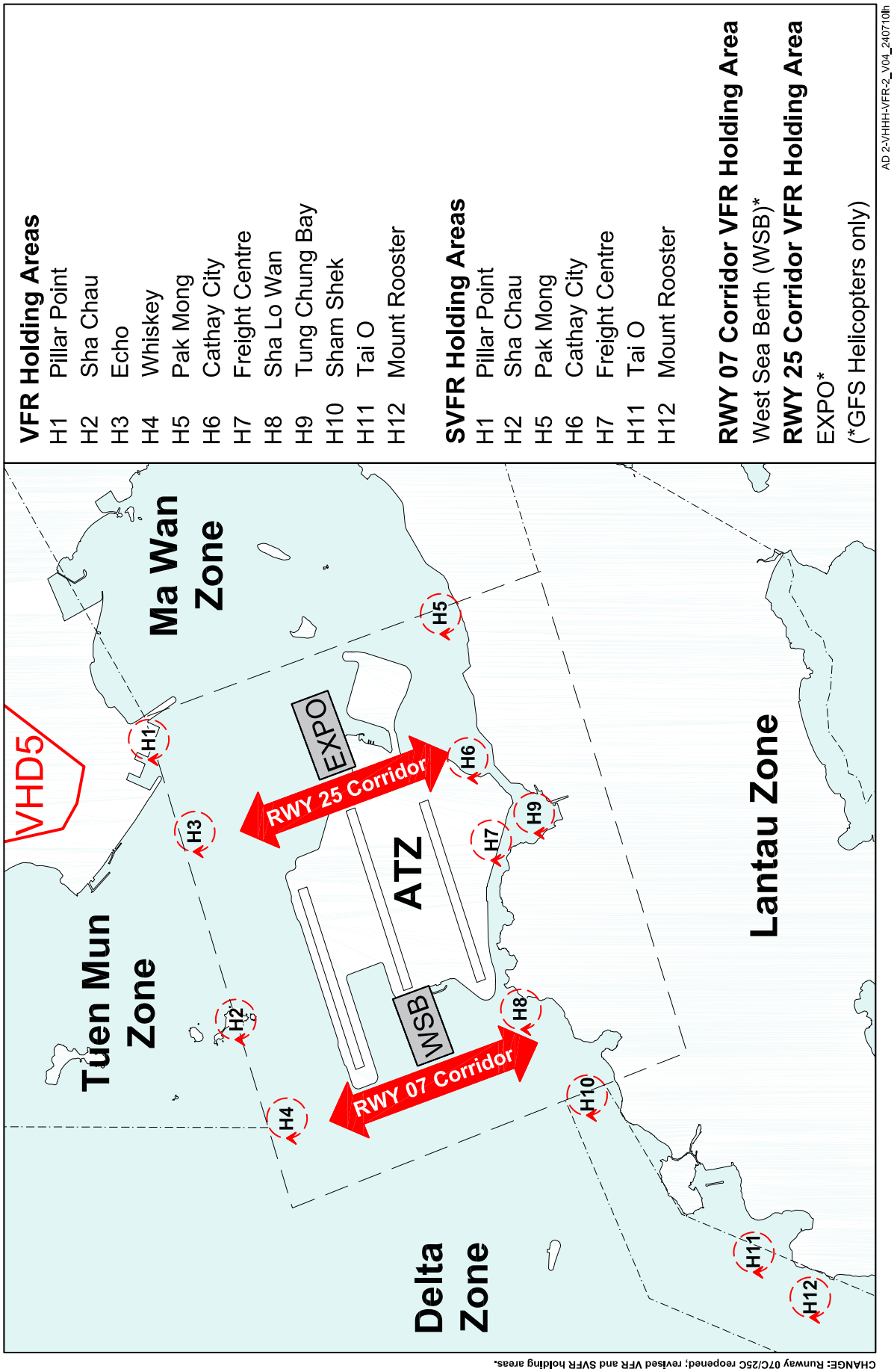
# Entry / Exit Routes from ATZ, CTR Zones and SKARA



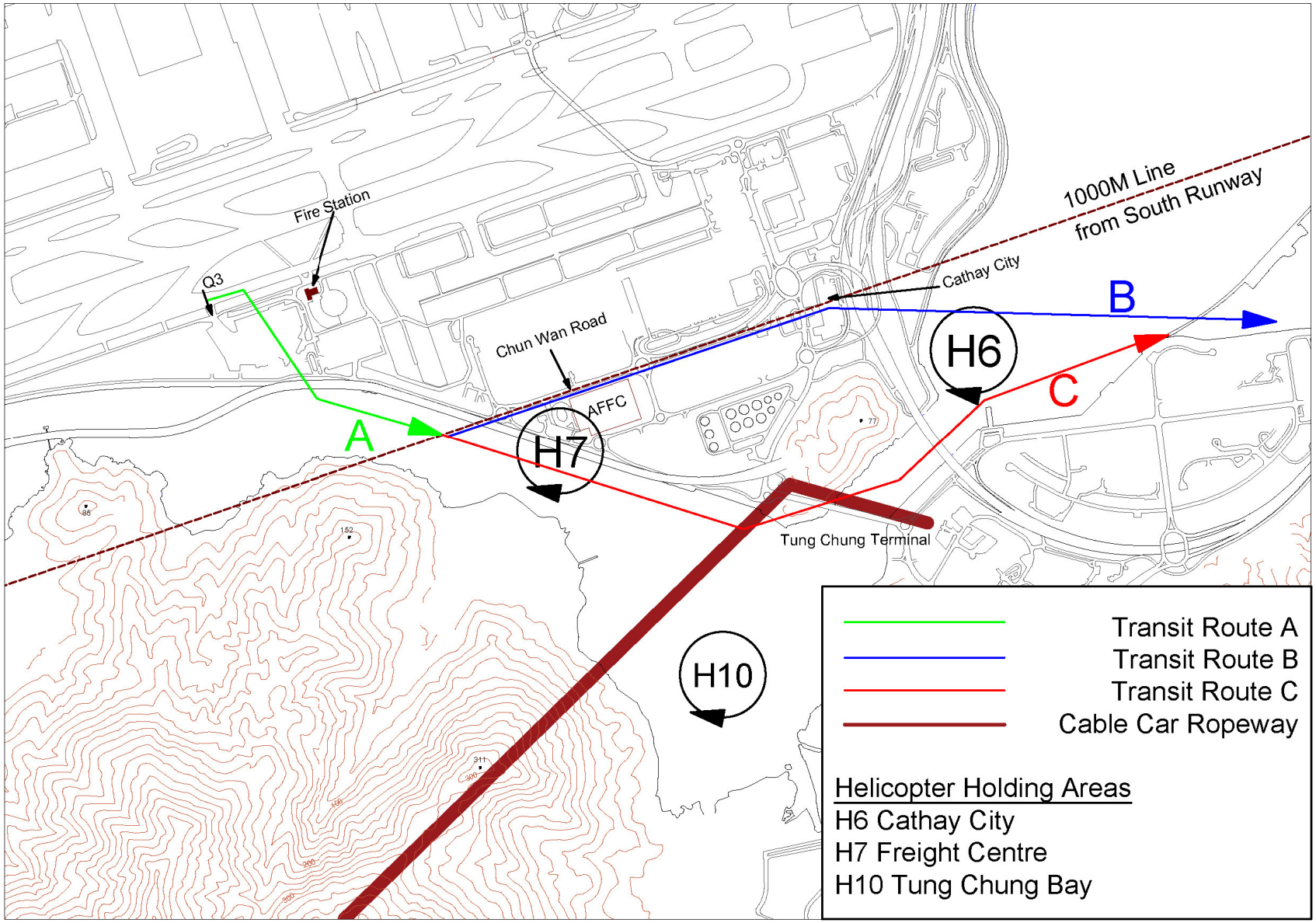
# FIXED WING VFR HOLDING POINTS



# HELICOPTER VFR HOLDING AREAS



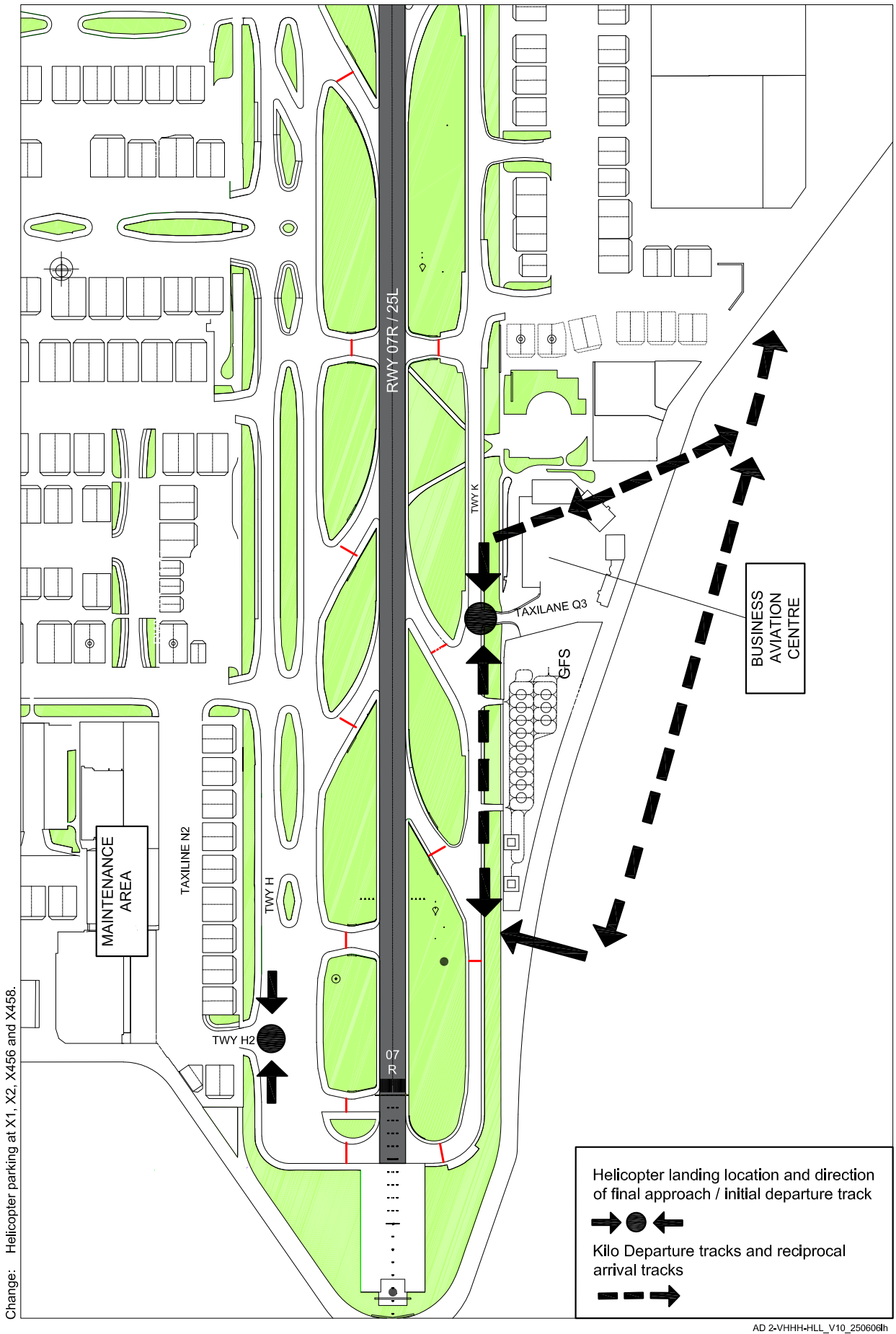
# Helicopter Holding Areas and Transit Routes in Tung Chung Area




CHANGE: Base map update.

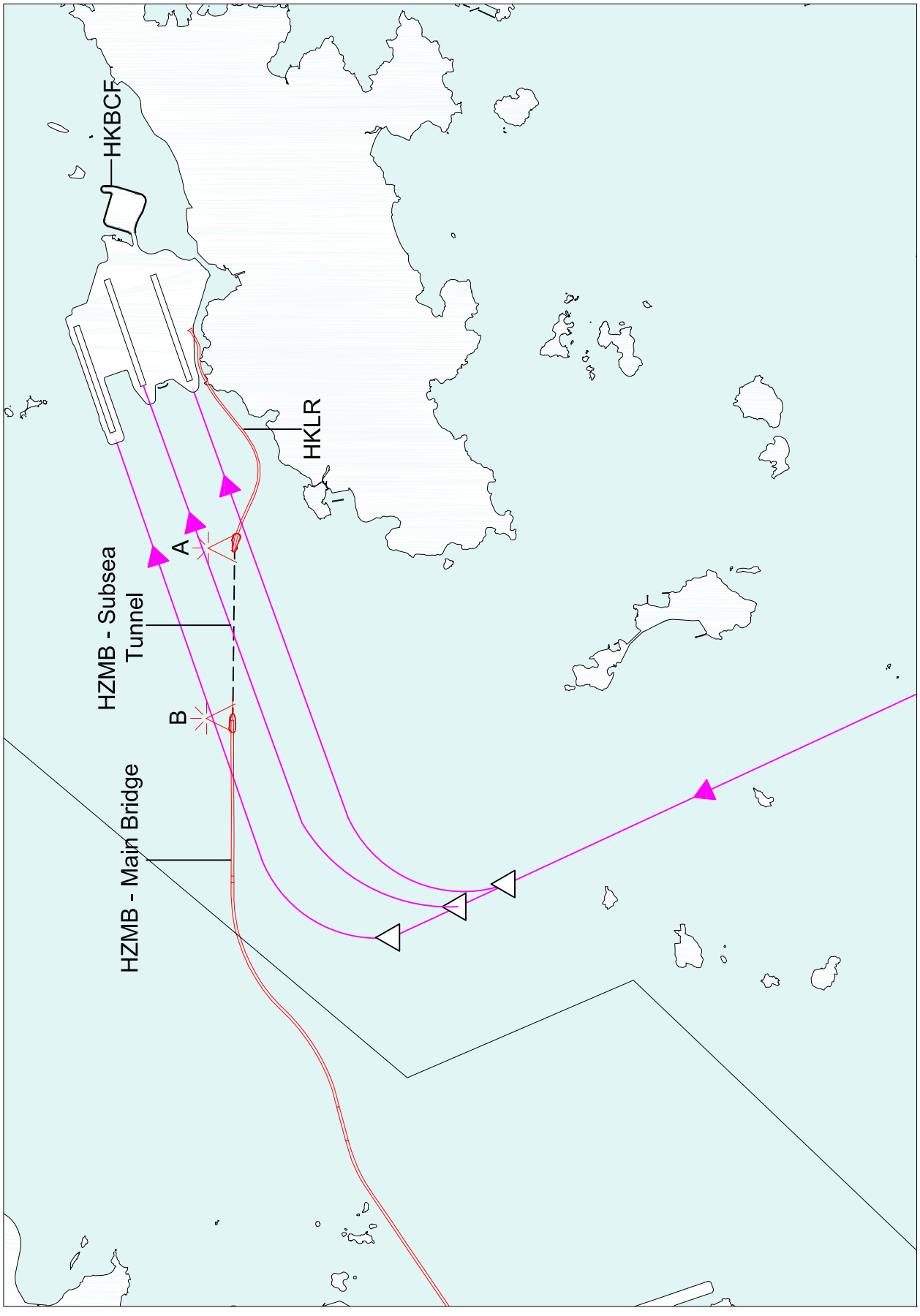
AD 2-VHHH-VFR-3_220228zk

# Helicopter Landing Locations in HKIA




Change: Helicopter parking at X1, X2, X456 and X458.

# The HZMB and Artificial Islands, HKLR and HKBCF



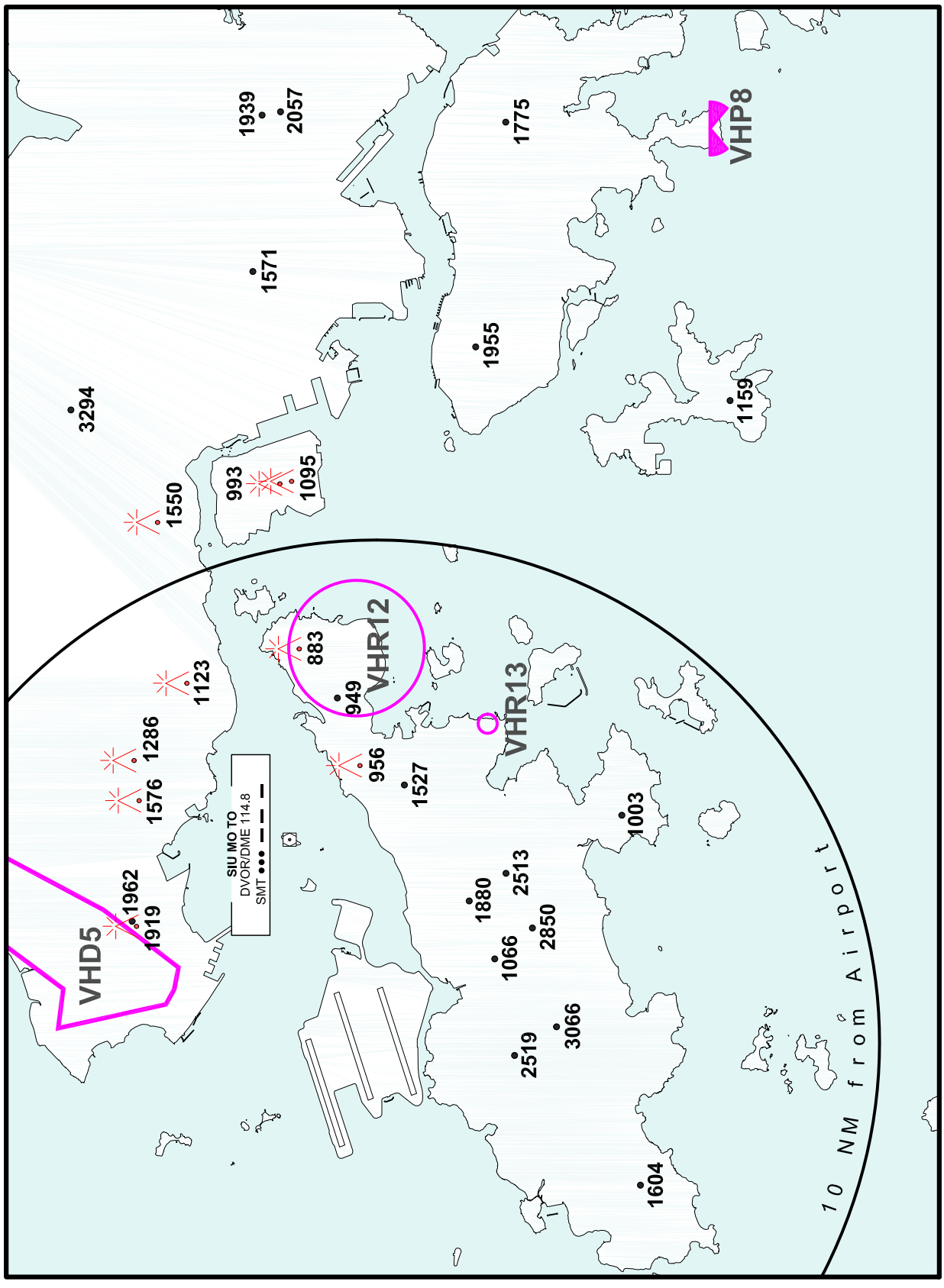

**CHANGE:** Runway 07C/25C reopened.

AD 2-VHHH-HZMB-LGT_V02_240710lh

# Aeronautical Ground Lights

## Hong Kong International Airport

### Elevations in Feet




CHANGE: RWY 07C/25C reopened.

## VMMC

### VMMC AD 2.1 AERODROME LOCATION INDICATOR AND NAME

VMMC - MACAO/ INTL AIRPORT

### VMMC AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

Macao International Airport locates in the territory of the Macao Special Administrative Region, People's Republic of China. The inclusion of part of aeronautical information related to Macao International Airport in AIP Hong Kong Aerodrome Section is to comply with ICAO Annex 15 and Doc 10066 PANS-AIM requirement, to publish Standard Departure Charts - Instrument (SID), Standard Arrival Charts - Instrument (STAR), associated flight procedures and aeronautical information for Macao International Airport which such flight procedures transit Hong Kong airspace.

Hong Kong ATC provides ATS surveillance service to aircraft on departure, approach and missed approach to/from Macao International Airport whilst they are transiting Hong Kong airspace. Refer to respective sections in AIP Macao and/or AIP China for other aeronautical information and flight procedures outside Hong Kong airspace.

Refer to AIP Macao for the Aerodrome Geographical and Administrative Data.

### VMMC AD 2.3 OPERATIONAL HOURS

Refer to AIP Macao

### VMMC AD 2.4 HANDLING SERVICES AND FACILITIES

Refer to AIP Macao

### VMMC AD 2.5 PASSENGER FACILITIES

Refer to AIP Macao

### VMMC AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

Refer to AIP Macao

### VMMC AD 2.7 SEASONAL AVAILABILITY - CLEARING

Refer to AIP Macao

### VMMC AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATION DATA

Refer to AIP Macao

## VMMC AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

Refer to AIP Macao

## VMMC AD 2.10 AERODROME OBSTACLES

Refer to AIP Macao

## VMMC AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

Refer to AIP Macao

## VMMC AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Refer to AIP Macao

## VMMC AD 2.13 DECLARED DISTANCES

Refer to AIP Macao

## VMMC AD 2.14 APPROACH AND RUNWAY LIGHTING

Refer to AIP Macao

## VMMC AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

Refer to AIP Macao

## VMMC AD 2.16 HELICOPTER LANDING AREA

Refer to AIP Macao

## VMMC AD 2.17 ATS AIRSPACE

Refer to AIP Macao

## VMMC AD 2.18 ATS COMMUNICATION FACILITIES

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| *Service Designator* | *Call sign* | *Frequency* | *Hours of operation* | *Remarks* |
| APP* | Hong Kong Radar | 123.95 MHZ | H24 | |
| | Hong Kong Radar | 132.225 MHZ | | Secondary |
| | Hong Kong Departure | 122.0 MHZ | H24 | |
| | Hong Kong Departure | 122.65 MHZ | As advised | |
| | Hong Kong Departure | 124.05 MHZ | | Secondary |

Remarks:

1) * Hong Kong ATC provides ATS surveillance service to aircraft on departure, approach and missed approach to/from Macao International Airport whilst they are transiting Hong Kong airspace.

2) Refer to AIP Macao for information of ATS Communication Facilities at Macao International Airport.

## VMMC AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Refer to AIP Macao

## VMMC AD 2.20 LOCAL TRAFFIC REGULATIONS

Refer to AIP Macao

## VMMC AD 2.21 NOISE ABATEMENT PROCEDURES

Refer to AIP Macao

## VMMC AD 2.22 FLIGHT PROCEDURES

1 General

1.1 Only SID and STAR procedures for Macao International Airport which transit Hong Kong airspace are published in AIP Hong Kong. Refer to AIP Macao for all instrument Approach Procedures of Macao International Airport; and refer to AIP Macao and/or AIP China for (part of) SID and STAR procedures for flights arriving and departing Macao International Airport outside Hong Kong airspace.

2 Departing Flights from Macao

2.1 Provision of Service

2.1.1 Hong Kong ATC will provide an ATS surveillance service to aircraft on departure from Macao whilst they are transiting Hong Kong airspace.

2.2 Speed Control

2.2.1 Pilots shall comply with speed control restrictions published in the SIDs.

2.2.2 Pilots unable to comply with the specified speed restriction should inform ATC as soon as possible so that alternative action can be taken.

2.3 Loss of Communication

2.3.1 In the event of loss of communication, aircraft shall comply with the last acknowledged clearance up to the next reporting point in the SID/ Terminal Transition Route procedure, then climb to the flight planned cruising level and follow the SID/ Terminal Transition Route track to the Hong Kong TMA exit point.

3 Standard Instrument Departure (SID) Procedures from Macao International Airport Transiting Hong Kong Airspace

3.1 SID Navigation Aids

| Navaid | Frequency | Coordinates |
|---|---|---|
| MCU DVOR * | 116.4 MHZ | 220808N 1133552E * |
| MCU DME * | CH 111X | 220808N 1133552E * |
| TD DVOR | 116.1 MHZ | 221452.42N 1141735.30E |
| TD DME | CH 108X | 221452.42N 1141735.30E |
| U NDB + | 272 KHZ | 215918N 1132118E + |
| ZAO DVOR * | 117.2 MHZ | 2214.7N 11336.7E * |
| ZAO DME * | CH 119X | 2214.7N 11336.7E * |

Note: * Information based on AIP Macao
+ Information based on AIP China

3.2 SID Significant Points

| Significant Point | Coordinates | Cross Reference from Navaids |
|---|---|---|
| ALLEY | 210511.15N 1134709.50E | TD RDL 205 / DME 75 NM |
| CONGA | 214402.50N 1164705.90E | TD RDL 105 / DME 142.3 NM |
| DAKIG | 215052.90N 1142633.33E | - |
| DALOL | 214436.90N 1145045.34E | - |
| DUMEP | 214436.30N 1151249.87E | - |
| LARIT | 215341.37N 1151606.56E | - |
| LEKEN | 215301.06N 1145444.95E | - |
| LUBMO | 215755.24N 1143152.98E | - |
| LUKBU | 222244.12N 1135301.50E | - |
| MC311 | 221318.51N 1135856.18E | - |
| MC312 | 220816.69N 1140802.37E | - |
| MC313 | 220318.39N 1135936.70E | - |
| MC314 | 221642.35N 1140226.88E | - |
| MC315 | 221121.09N 1141047.55E | - |
| MC411 | 222141.20N 1134737.58E * | - |
| MC501 | 220003.00N 1133845.76E * | - |
| MEBKI | 214432.75N 1153454.24E | - |
| MULET | 213501.95N 1134751.87E | MCU RDL 164 / DME 35 NM |
| NUDPI | 215418.90N 1153728.21E | - |
| PAPA | 215839.00N 1133922.00E | MCU RDL 164 / DME 10 NM |
| PECAN | 212620.19N 1140205.64E | TD RDL 200 / DME 50.5 NM |
| SEGPO | 215732.77N 1142118.59E | - |
| SKATE | 213154.99N 1150839.94E | TD RDL 135 / DME 64 NM |
| SOSLU | 213844.03N 1140518.39E | - |
| SOUSA | 220110.40N 1161127.80E | TD RDL 100 / DME 106.6 NM |
| SUDVA | 220425.14N 1142133.87E | - |
| VEDVO | 220438.19N 1141543.05E | - |
| XEMEK | 213816.17N 1145943.04E | - |

Note: * Information based on AIP Macao

4 Arriving Flights to Macao

4.1 Provision of Services

4.1.1 Hong Kong ATC will provide an ATS surveillance service to aircraft on approach and missed approach to/from Macao International Airport whilst they are transiting Hong Kong airspace.

4.2 Speed Control

4.2.1 The following speed restrictions are applicable to Macao instrument approach procedures:

a) maximum approach turning speed 190 KIAS;

b) maximum missed approach turning speed 185 KIAS.

4.2.2 Pilots unable to comply with the specified speed restriction should inform ATC as soon as possible so that alternative action can be taken.

4.3 Loss of Communication

4.3.1 In the event of loss of communication, aircraft shall comply with the STAR procedure and join the approach feed-in procedure for the notified runway.

5 Standard Instrument Arrival (STAR) Procedures to Macao International Airport Transiting Hong Kong Airspace

5.1 STAR Significant Points

| Significant Point | Coordinates | Cross Reference from Navaid |
|---|---|---|
| CHALI | 211745.00N 1133641.00E | - |
| HAZEL | 220126.49N 1134056.63E | SMT RDL 225/DME 25.1 NM |
| INDUS | 220241.00N 1133601.00E | - |
| MC513 | 220109.95N 1133720.04E* | ZUH RDL 147/DME 14.7 NM |
| MC601 | 221943.55N 1135643.60E* | - |
| MC611 | 213936.00N 1134630.00E* | - |
| RUNLI | 212659.72N 1134051.00E | - |
| SMT | 222015.43N 1135855.46E | Co-located with SMT DVOR/DME |

Note: * Information based on AIP Macao

5.2 STAR Navigation Aids

| **Navaid** | **Frequency** | **Coordinates** |
|---|---|---|
| SMT DVOR | 114.8 MHZ | 222015.43N 1135855.46E |
| SMT DME | CH 95X | 222015.43N 1135855.46E |
| TD DVOR | 116.1 MHZ | 221452.42N 1141735.30E |
| TD DME | CH 108X | 221452.42N 1141735.30E |
| MCU DVOR * | 116.4 MHZ | 220808N 1133552E * |
| MCU DME * | CH 111X | 220808N 1133552E * |
| ZUH VOR # | 116.7 MHZ | 221318N 1132800E # |
| ZUH DME # | CH 114X | 221318N 1132800E # |

Note: * Information based on AIP Macao.
# Information based on AIP China.

6 Missed Approach Procedures from Macao International Airport Transiting Hong Kong Airspace

6.1 Missed Approach Procedure RWY 34

6.1.1 Comply with the missed approach procedure RWY 34 as published in the Macao AIP to establish inbound to Hong Kong airspace via MC411 or on track 080°M, climbing to 6 000 ft or as instructed by ATC. Continue the missed approach procedure or expect radar vector to HAZEL.

6.1.2 In the event of a loss of communication, proceed as in para 6.1.1 above.

6.2 Missed Approach Procedure RWY 16

6.2.1 Comply with the missed approach procedure RWY 16 as published in the Macao AIP. Climb to 4 000 ft on MCU RDL 344 and depart MCU DVOR on RDL 171 to MCU DME 7.4 NM (ZUH RDL 148/DME 15NM). (When MCU DVOR/DME is not available, climb to 4 000 ft on ZAO RDL 181.) Expect further climb and vectors to cross INDUS at 1 800 m, then follow procedures published in AIP Macao or proceed as directed by ATC.

## VMMC AD 2.23 ADDITIONAL INFORMATION

Refer to AIP Macao

## VMMC AD 2.24 CHARTS RELATED TO AN AERODROME

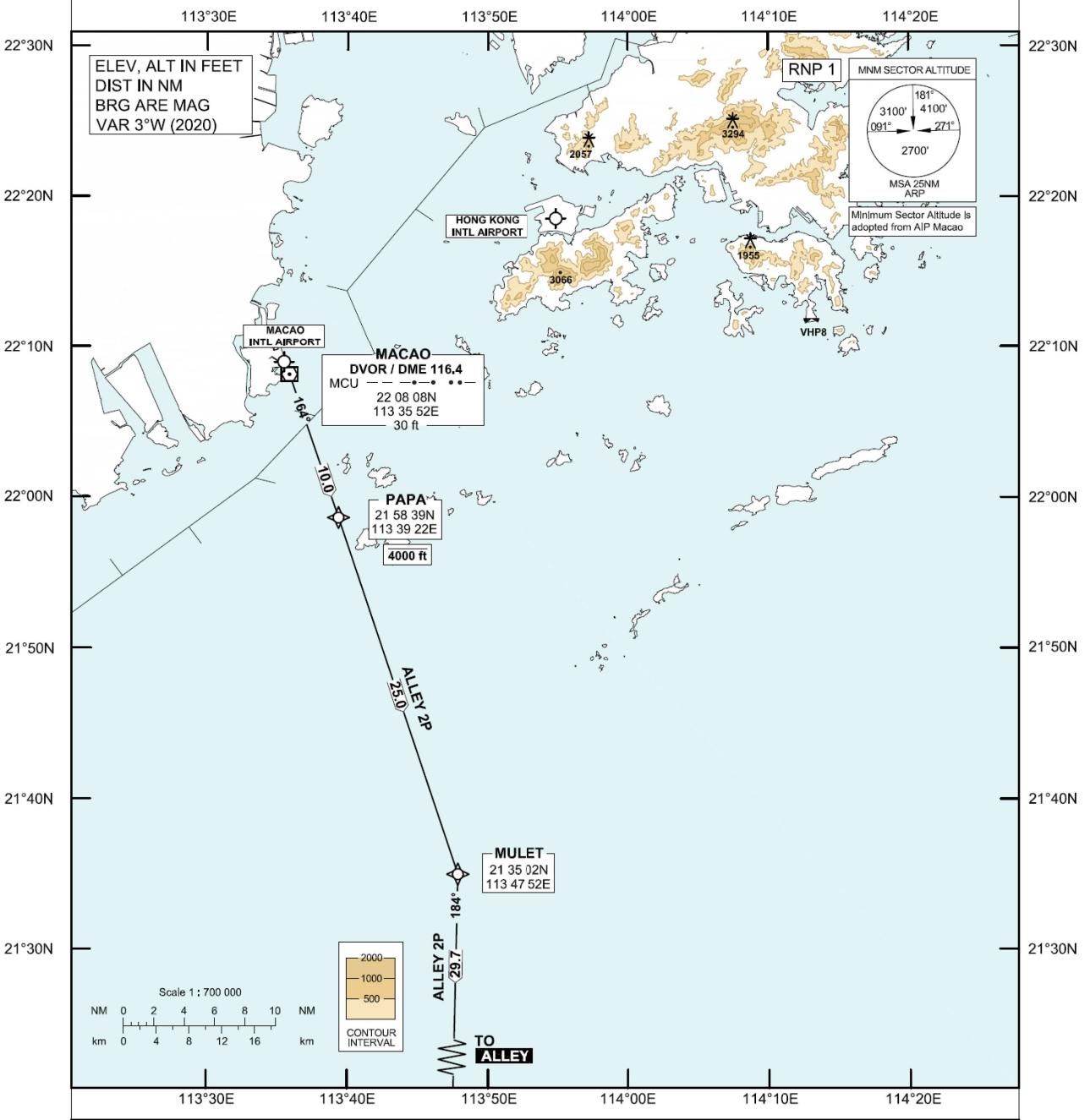
| | |
|---|---|
| RNAV(GNSS) ALLEY 2P SID | AD 2-VMMC-SID-ALLEY-P |
| RNAV(GNSS) ALLEY 4T SID | AD 2-VMMC-SID-ALLEY-T |
| RNAV(GNSS) ALLEY 4U SID | AD 2-VMMC-SID-ALLEY-U |
| RNAV(GNSS) CONGA 2P SID | AD 2-VMMC-SID-CONGA-P |
| RNAV(GNSS) CONGA 4T SID | AD 2-VMMC-SID-CONGA-T |
| RNAV(GNSS) CONGA 5U SID | AD 2-VMMC-SID-CONGA-U |
| RNAV(GNSS) SKATE 1P SID | AD 2-VMMC-SID-SKATE-P |
| RNAV(GNSS) SKATE 1T SID | AD 2-VMMC-SID-SKATE-T |
| RNAV(GNSS) SKATE 1U SID | AD 2-VMMC-SID-SKATE-U |
| RNAV(GNSS) NUDPI 1P SID | AD 2-VMMC-SID-NUDPI-P |
| RNAV(GNSS) NUDPI 1T SID | AD 2-VMMC-SID-NUDPI-T |
| RNAV(GNSS) NUDPI 1U SID | AD 2-VMMC-SID-NUDPI-U |
| BIGRO 1F SID | AD 2-VMMC-SID-BIGRO-F |
| RNAV(GNSS) BIGRO 1H SID | AD 2-VMMC-SID-BIGRO-H |
| MIPAG 2F/ NLG 1F/ IDUMA 1F SID | AD 2-VMMC-SID-MIPAG-F |
| RNAV(GNSS) MIPAG 1H/ RNAV(GNSS) NLG 1H/ RNAV(GNSS) IDUMA 1H SID | AD 2-VMMC-SID-MIPAG-H |
| RNAV(GNSS) CHALI 4A STAR | AD 2-VMMC-STAR-CHALI-A |
| RNAV(GNSS) CHALI 5B STAR | AD 2-VMMC-STAR-CHALI-B |
| RNAV(GNSS) SMT 4A STAR | AD 2-VMMC-STAR-SMT-A |
| RNAV(GNSS) SMT 5B STAR | AD 2-VMMC-STAR-SMT-B |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

Transition Altitude 9 000 ft
HONG KONG RADAR 123.95

**MACAO / Intl (VMMC)**
**RWY 16**
**RNAV (GNSS) ALLEY 2P SID**

1. Aircraft shall comply with the Macao RWY 16 SID procedure as published in the AIP Macao.
2. For RNAV (GNSS) SID, aircraft must be approved by State of Registry in accordance with ICAO RNP 1 standard or equivalent. Carriage of certified GNSS receiver is mandatory.
3. Aircraft that do not have approval or whose RNP 1 capability has been degraded shall use the Conventional Procedure described below.




## ALLEY 2P SID RWY 16

**RNP 1 Procedure**
**(Mandate procedure available to aircraft appropriately equipped and approved)**

PAPA - MULET - ALLEY

**Conventional Procedure**
Continue outbound on MCU RDL 164 to PAPA then MULET. From MULET turn right direct to ALLEY.

**If MCU DVOR is not available**
Continue tracking 164°M to MULET, then continue on the track above.

**CLIMB REQUIREMENT**
Climb to 4 000 ft. Expect further climb when instructed by ATC.

**SPEED RESTRICTION**
Aircraft shall fly at 250 KIAS or less below FL 110.

CHANGE: Update of MSA.

AD 2-VMMC-SID-ALLEY-P_V05_231213lh

# FMC Database Coding Reference for Macao RNAV(GNSS) SIDs

## Designator: ALLEY 2P Runway 16

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Track (°M) | Magnetic Variation | Distance (NM) | Turn Dir | Altitude | Speed (IAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| Aircraft shall comply with the Macao RWY16 SID procedure as published in the AIP Macao | | | | | | | | | | |
| 01 | CF | PAPA | - | 163 | +3.0 | - | - | -4000 | -250 | RNP 1 |
| 02 | TF | MULET | - | 163 | +3.0 | 25 | - | - | - | RNP 1 |
| 03 | TF | ALLEY | - | 184 | +3.0 | 29.7 | R | - | - | RNP 1 |

## Waypoint Coordinates

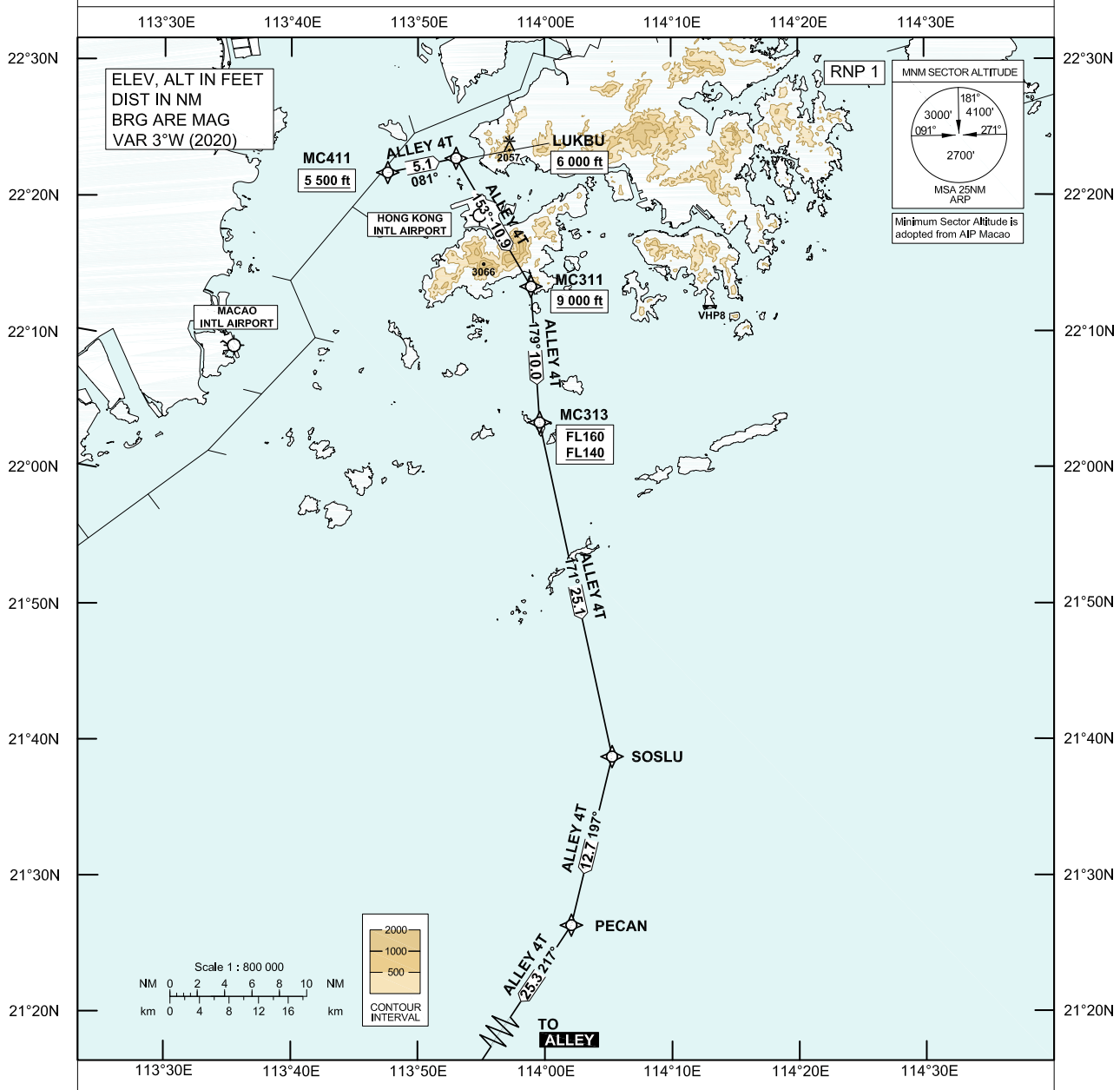
| Waypoint Name | Coordinates (WGS84) |
|---|---|
| PAPA | 21 58 39 N<br>113 39 22 E |
| MULET | 21 35 01.95 N<br>113 47 51.87 E |
| ALLEY | 21 05 11.15 N<br>113 47 09.50 E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

Transition Altitude 9 000 ft
HONG KONG DEPARTURE 122.0

**MACAO / Intl (VMMC)**
**RWY 34**
**RNAV (GNSS) ALLEY 4T SID**

1. Aircraft shall comply with the Macao RWY 34 SID procedure as published in the AIP Macao.
2. For RNAV (GNSS) SID, aircraft must be approved by State of Registry in accordance with ICAO RNP 1 standard or equivalent. Carriage of certified GNSS receiver is mandatory.
3. Aircraft that do not have approval or whose RNP 1 capability has been degraded shall use the Conventional Procedure described below.




# ALLEY 4T SID RWY 34

**RNP 1 Procedure**

**(Mandate procedure avallable to aircraft appropriately equlpped and approved)**

MC411 - LUKBU - MC311 - MC313 - SOSLU - PECAN - ALLEY

**Conventlonal Procedure**

Departures shall enter Hong Kong airspace via MC411.

From MC411 direct to LUKBU, then to MC311, MC313, SOSLU, PECAN and ALLEY.

**CLIMB REQUIREMENT**

Cross MC411 at or above 5 500 ft climbing to 6 000 ft. Cross LUKBU at 6 000 ft or above. Expect further climb when instructed by ATC.

**SPEED RESTRICTION**

Aircraft shall fly at 250 KIAS or less below FL 110.

**CHANGE:** Revised procedure; revised frequency.

AD 2-VMMC-SID-ALLEY-T_V07_240531km

# FMC Database Coding Reference for Macao RNAV(GNSS) SID

## TABULAR DESCRIPTION: ALLEY 4T Runway 34

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| Aircraft shall comply with the Macao RWY34 SID procedure as published in the AIP Macao | | | | | | | | | | |
| 01 | TF | MC411 | - | - | +3.0 | - | - | +5500 | -250 | RNP 1 |
| 02 | TF | LUKBU | - | 081 (078) | +3.0 | 5.1 | - | +6000 | - | RNP 1 |
| 03 | TF | MC311 | - | 153 (150) | +3.0 | 10.9 | - | +9000 | - | RNP 1 |
| 04 | TF | MC313 | - | 179 (176) | +3.0 | 10.0 | - | -FL160 +FL140 | - | RNP 1 |
| 05 | TF | SOSLU | - | 171 (168) | +3.0 | 25.1 | - | - | - | RNP 1 |
| 06 | TF | PECAN | - | 197 (194) | +3.0 | 12.7 | - | - | - | RNP 1 |
| 07 | TF | ALLEY | - | 217 (214) | +3.0 | 25.3 | - | - | - | RNP 1 |

## WAYPOINT LIST

**ALLEY 4T RWY 34**

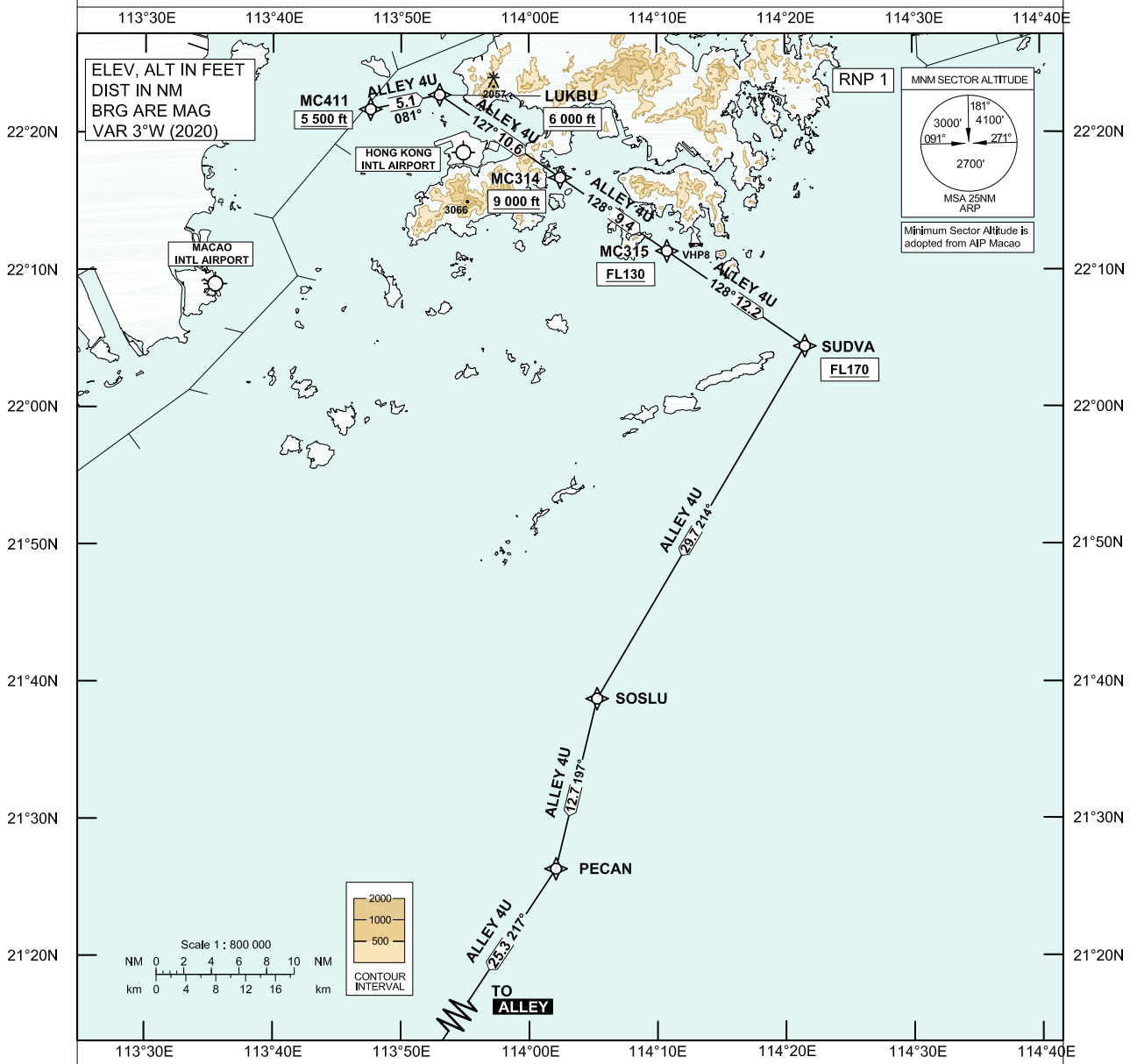
| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| MC411 | 22 21 41.20N | 113 47 37.58E |
| LUKBU | 22 22 44.12N | 113 53 01.50E |
| MC311 | 22 13 18.51N | 113 58 56.18E |
| MC313 | 22 03 18.39N | 113 59 36.70E |
| SOSLU | 21 38 44.03N | 114 05 18.39E |
| PECAN | 21 26 20.19N | 114 02 05.64E |
| ALLEY | 21 05 11.15N | 113 47 09.50E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

Transition Altitude 9 000 ft
HONG KONG DEPARTURE 122.0

**MACAO / Intl (VMMC)**
**RWY 34**
**RNAV (GNSS) ALLEY 4U SID**

1. Aircraft shall comply with the Macao RWY 34 SID procedure as published in the AIP Macao.
2. For RNAV (GNSS) SID, aircraft must be approved by State of Registry in accordance with ICAO RNP 1 standard or equivalent. Carriage of certified GNSS receiver is mandatory.
3. Aircraft that do not have approval or whose RNP 1 capability has been degraded shall use the Conventional Procedure described below.




# ALLEY 4U SID RWY 34

**RNP 1 Procedure**

**(Mandate procedure avallable to aircraft appropriately equlpped and approved)**

MC411 - LUKBU - MC314 - MC315 - SUDVA - SOSLU - PECAN - ALLEY

**Conventlonal Procedure**

Departures shall enter Hong Kong airspace via MC411.

From MC411 direct to LUKBU, then to MC314, MC315, SUDVA, SOSLU, PECAN and ALLEY.

**CLIMB REQUIREMENT**

Cross MC411 at or above 5 500 ft climbing to 6 000 ft. Cross LUKBU at 6 000 ft or above.
Expect further climb when instructed by ATC.

**SPEED RESTRICTION**

Aircraft shall fly at 250 KIAS or less below FL 110.

CHANGE: Revised procedure; revised frequency.

AD 2-VMMC-SID-ALLEY-U_V07_240531km

# FMC Database Coding Reference for Macao RNAV(GNSS) SID

## TABULAR DESCRIPTION: ALLEY 4U Runway 34

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| Aircraft shall comply with the Macao RWY34 SID procedure as published in the AIP Macao | | | | | | | | | | |
| 01 | TF | MC411 | - | - | +3.0 | - | - | +5500 | -250 | RNP 1 |
| 02 | TF | LUKBU | - | 081 (078) | +3.0 | 5.1 | - | +6000 | - | RNP 1 |
| 03 | TF | MC314 | - | 127 (124) | +3.0 | 10.6 | - | +9000 | - | RNP 1 |
| 04 | TF | MC315 | - | 128 (125) | +3.0 | 9.4 | - | +FL130 | - | RNP 1 |
| 05 | TF | SUDVA | - | 128 (125) | +3.0 | 12.2 | - | +FL170 | - | RNP 1 |
| 06 | TF | SOSLU | - | 214 (211) | +3.0 | 29.7 | - | - | - | RNP 1 |
| 07 | TF | PECAN | - | 197 (194) | +3.0 | 12.7 | - | - | - | RNP 1 |
| 08 | TF | ALLEY | - | 217 (214) | +3.0 | 25.3 | - | - | - | RNP 1 |

## WAYPOINT LIST

**ALLEY 4U RWY 34**

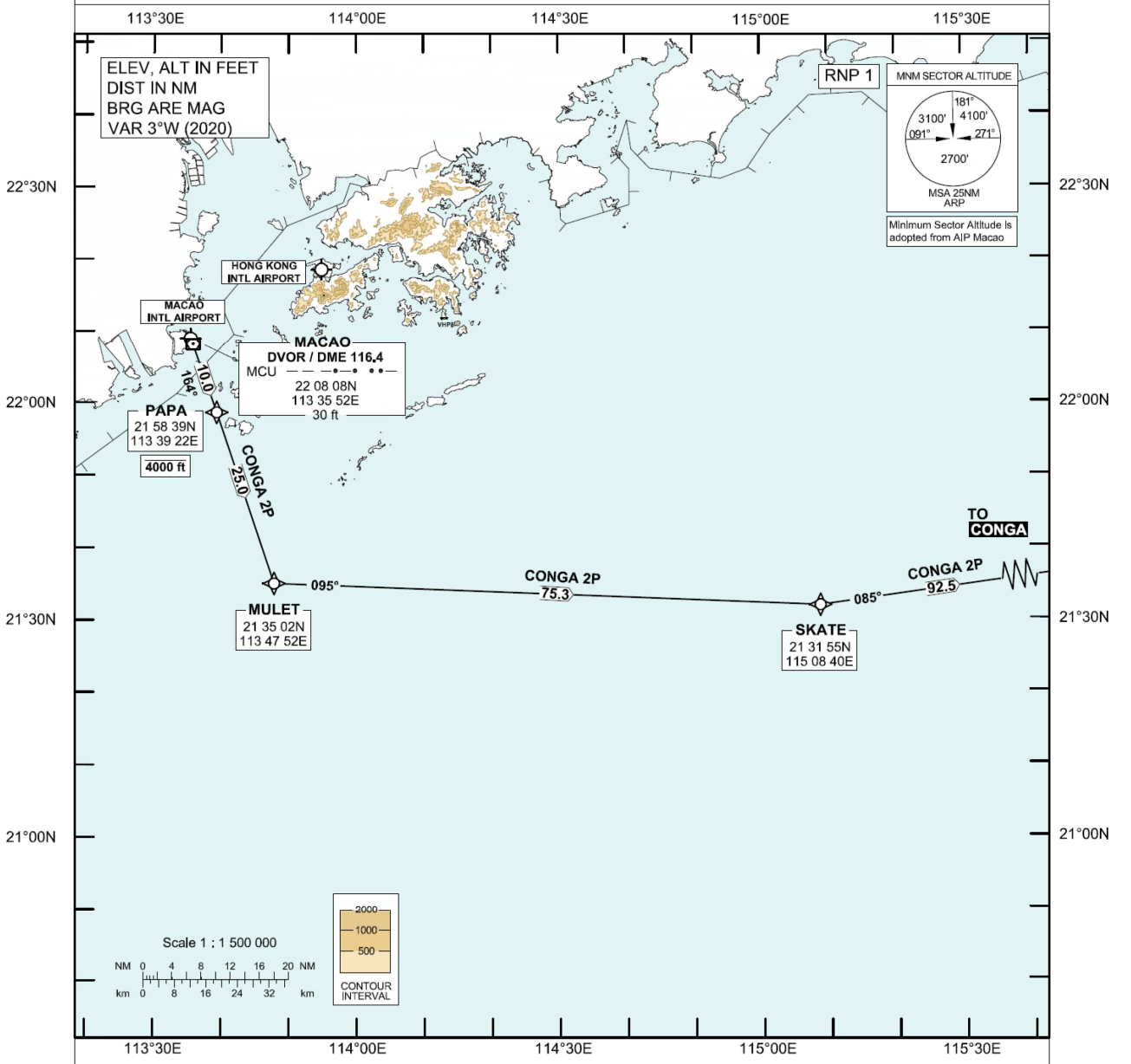
| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| MC411 | 22 21 41.20N | 113 47 37.58E |
| LUKBU | 22 22 44.12N | 113 53 01.50E |
| MC314 | 22 16 42.35N | 114 02 26.88E |
| MC315 | 22 11 21.09N | 114 10 47.55E |
| SUDVA | 22 04 25.14N | 114 21 33.87E |
| SOSLU | 21 38 44.03N | 114 05 18.39E |
| PECAN | 21 26 20.19N | 114 02 05.64E |
| ALLEY | 21 05 11.15N | 113 47 09.50E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

Transition Altitude 9 000 ft
HONG KONG RADAR 123.95

**MACAO / Intl (VMMC)**
**RWY 16**
**RNAV (GNSS) CONGA 2P SID**

1. Aircraft shall comply with the Macao RWY 16 SID procedure as published in the AIP Macao.
2. For RNAV (GNSS) SID, aircraft must be approved by State of Registry in accordance with ICAO RNP 1 standard or equivalent. Carriage of certified GNSS receiver is mandatory.
3. Aircraft that do not have approval or whose RNP 1 capability has been degraded shall use the Conventional Procedure described below.




## CONGA 2P SID RWY 16

**RNP 1 Procedure**
**(Mandate procedure available to aircraft appropriately equipped and approved)**

PAPA - MULET - SKATE - CONGA

**Conventional Procedure**
Continue outbound on MCU RDL 164 to PAPA then MULET. From MULET turn left direct to SKATE then turn left direct to CONGA.

**If MCU DVOR is not available**
Continue tracking 164°M to MULET, then continue on the track above.

**CLIMB REQUIREMENT**
Climb to 4 000 ft. Expect further climb when instructed by ATC.

**SPEED RESTRICTION**
Aircraft shall fly at 250 KIAS or less below FL 110.

CHANGE: Update of MSA.

AD 2-VMMC-SID-CONGA-P_V05_231213lh

# FMC Database Coding Reference for Macao RNAV(GNSS) SIDs

## Designator: CONGA 2P Runway 16

| *Serial Number* | *Path Descriptor* | *Waypoint Identifier* | *Fly-over* | *Track (°M)* | *Magnetic Variation* | *Distance (NM)* | *Turn Dir* | *Altitude* | *Speed (IAS)* | *Navigation Specification* |
|---|---|---|---|---|---|---|---|---|---|---|
| Aircraft shall comply with the Macao RWY16 SID procedure as published in the AIP Macao | | | | | | | | | | |
| 01 | CF | PAPA | - | - | +3.0 | - | - | -4000 | -250 | RNP 1 |
| 02 | TF | MULET | - | 163 | +3.0 | 25.0 | - | - | - | RNP 1 |
| 03 | TF | SKATE | - | 095 | +3.0 | 75.3 | L | - | - | RNP 1 |
| 04 | TF | CONGA | - | 085 | +3.0 | 92.5 | L | - | - | RNP 1 |

## Waypoint Coordinates

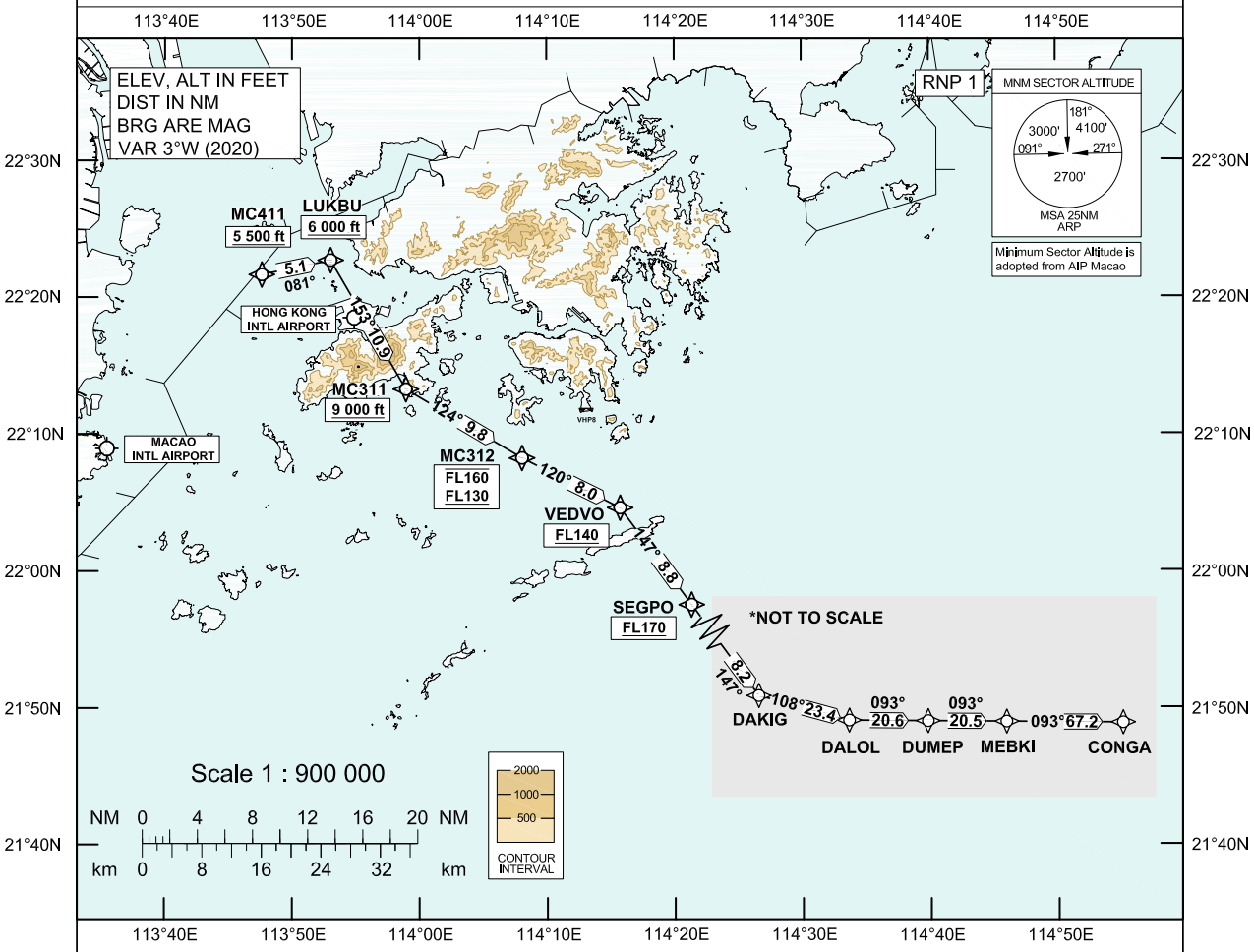
| Waypoint Name | Coordinates (WGS84) |
|---|---|
| PAPA | 21 58 39 N<br>113 39 22 E |
| MULET | 21 35 01.95 N<br>113 47 51.87 E |
| SKATE | 21 31 54.99 N<br>115 08 39.94 E |
| CONGA | 21 44 02.50 N<br>116 47 05.90 E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

Transition Altitude 9 000 ft
HONG KONG DEPARTURE 122.0

**MACAO / Intl (VMMC)**
**RWY 34**
**RNAV (GNSS) CONGA 4T SID**

1. Aircraft shall comply with the Macao RWY 34 SID procedure as published in the AIP Macao.
2. For RNAV (GNSS) SID, aircraft must be approved by State of Registry In accordance with ICAO RNP 1 standard or equivalent. Carriage of certified GNSS receiver is mandatory.
3. Aircraft that do not have approval or whose RNP 1 capability has been degraded shall use the Conventional Procedure described below.




## CONGA 4T SID RWY 34

**RNP 1 Procedure**

**(Mandate procedure available to aircraft appropriately equipped and approved)**

MC411 - LUKBU - MC311 - MC312 - VEDVO - SEGPO - DAKIG - DALOL - DUMEP - MEBKI - CONGA

**Conventional Procedure**

Departures shall enter Hong Kong airspace via MC411.

From MC411, direct to LUKBU, then to MC311, MC312, VEDVO, SEGPO, DAKIG, DALOL, DUMEP, MEBKI and CONGA.

**CLIMB REQUIREMENT**

Cross MC411 at or above 5 500 ft climbing to 6 000 ft. Cross LUKBU at 6 000 ft or above.
Expect further climb when instructed by ATC.

**SPEED RESTRICTION**

Aircraft shall fly at 250 KIAS or less below FL 110.

**CHANGE:** Revised procedure; revised frequency.

AD 2-VMMC-SID-CONGA-T_V01_240531km

# FMC Database Coding Reference for Macao RNAV(GNSS) SID

## TABULAR DESCRIPTION: CONGA 4T Runway 34

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| Aircraft shall comply with the Macao RWY34 SID procedure as published in the AIP Macao | | | | | | | | | | |
| 01 | TF | MC411 | - | - | +3.0 | - | - | +5500 | -250 | RNP 1 |
| 02 | TF | LUKBU | - | 081 (078) | +3.0 | 5.1 | - | +6000 | - | RNP 1 |
| 03 | TF | MC311 | - | 153 (150) | +3.0 | 10.9 | - | +9000 | - | RNP 1 |
| 04 | TF | MC312 | - | 124 (121) | +3.0 | 9.8 | - | -FL160<br>+FL130 | - | RNP 1 |
| 05 | TF | VEDVO | - | 120 (117) | +3.0 | 8.0 | - | +FL140 | - | RNP 1 |
| 06 | TF | SEGPO | - | 147 (144) | +3.0 | 8.8 | - | +FL170 | - | RNP 1 |
| 07 | TF | DAKIG | - | 147 (144) | +3.0 | 8.2 | - | - | - | RNP 1 |
| 08 | TF | DALOL | - | 108 (105) | +3.0 | 23.4 | - | - | - | RNP 1 |
| 09 | TF | DUMEP | - | 093 (090) | +3.0 | 20.6 | - | - | - | RNP 1 |
| 10 | TF | MEBKI | - | 093 (090) | +3.0 | 20.5 | - | - | - | RNP 1 |
| 11 | TF | CONGA | - | 093 (090) | +3.0 | 67.2 | - | - | | RNP 1 |

## WAYPOINT LIST

**CONGA 4T RWY 34**

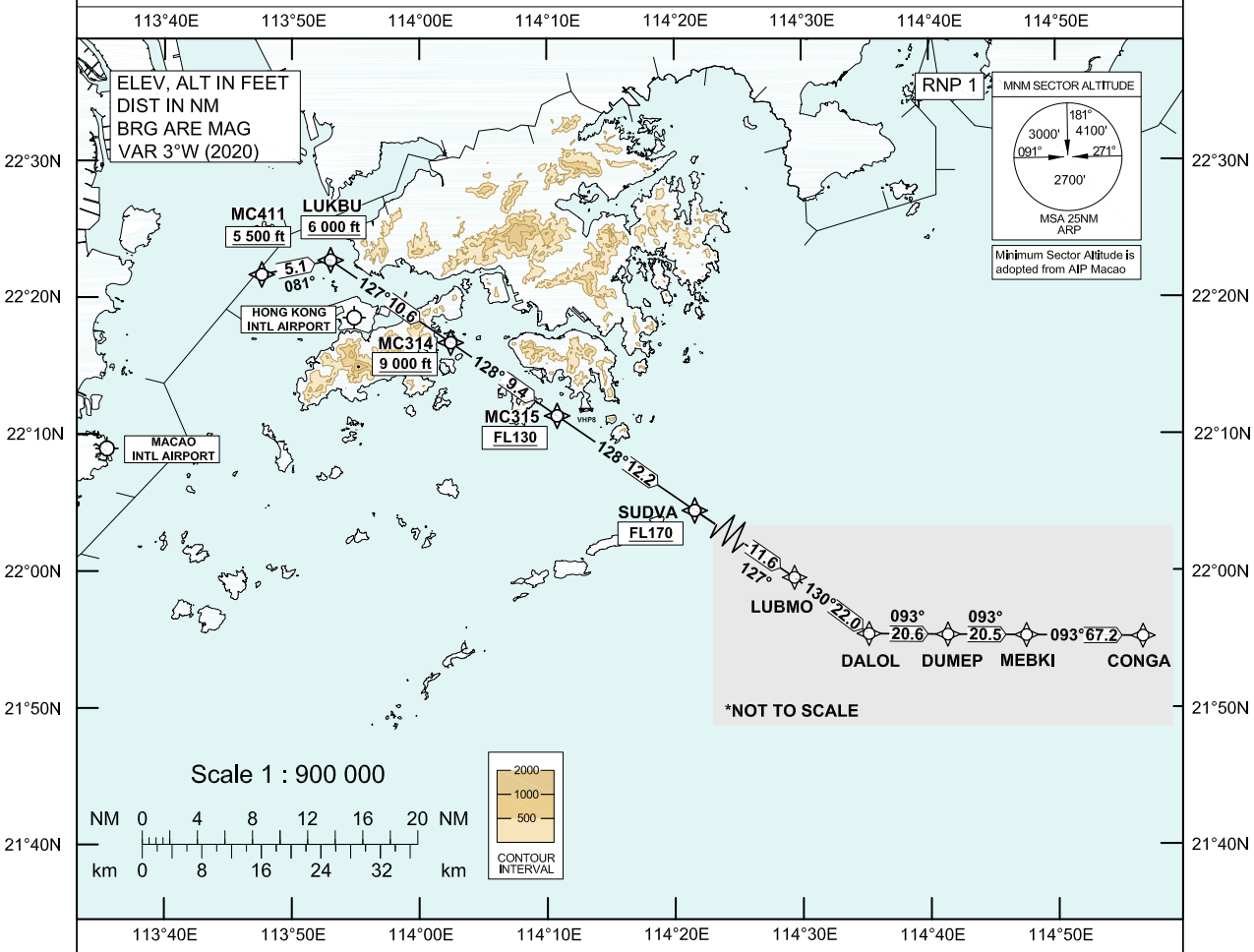
| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| MC411 | 22 21 41.20N | 113 47 37.58E |
| LUKBU | 22 22 44.12N | 113 53 01.50E |
| MC311 | 22 13 18.51N | 113 58 56.18E |
| MC312 | 22 08 16.69N | 114 08 02.37E |
| VEDVO | 22 04 38.19N | 114 15 43.05E |
| SEGPO | 21 57 32.77N | 114 21 18.59E |
| DAKIG | 21 50 52.90N | 114 26 33.33E |
| DALOL | 21 44 36.90N | 114 50 45.34E |
| DUMEP | 21 44 36.30N | 115 12 49.87E |
| MEBKI | 21 44 32.75N | 115 34 54.24E |
| CONGA | 21 44 02.50N | 116 47 05.90E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

Transition Altitude 9 000 ft
HONG KONG DEPARTURE 122.0

**MACAO / Intl (VMMC)**
**RWY 34**
**RNAV (GNSS) CONGA 5U SID**

1. Aircraft shall comply with the Macao RWY 34 SID procedure as published in the AIP Macao.
2. For RNAV (GNSS) SID, aircraft must be approved by State of Registry In accordance with ICAO RNP 1 standard or equivalent. Carriage of certified GNSS receiver is mandatory.
3. Aircraft that do not have approval or whose RNP 1 capability has been degraded shall use the Conventional Procedure described below.




# CONGA 5U SID RWY 34

## RNP 1 Procedure

**(Mandate procedure available to aircraft appropriately equipped and approved)**

MC411 - LUKBU - MC314 - MC315 - SUDVA - LUBMO - DALOL - DUMEP - MEBKI - CONGA

## Conventional Procedure

Departures shall enter Hong Kong airspace via MC411.

From MC411, direct to LUKBU, then to MC314, MC315, SUDVA, LUBMO, DALOL, DUMEP, MEBKI and CONGA.

## CLIMB REQUIREMENT

Cross MC411 at or above 5 500 ft climbing to 6 000 ft. Cross LUKBU at 6 000 ft or above. Expect further climb when instructed by ATC.

## SPEED RESTRICTION

Aircraft shall fly at 250 KIAS or less below FL 110.

**CHANGE:** Revised procedure; revised frequency.

AD 2-VMMC-SID-CONGA-U_V01_240531km

# FMC Database Coding Reference for Macao RNAV(GNSS) SID

## TABULAR DESCRIPTION: CONGA 5U Runway 34

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| Aircraft shall comply with the Macao RWY34 SID procedure as published in the AIP Macao | | | | | | | | | | |
| 01 | TF | MC411 | - | - | +3.0 | - | - | +5500 | -250 | RNP 1 |
| 02 | TF | LUKBU | - | 081 (078) | +3.0 | 5.1 | - | +6000 | - | RNP 1 |
| 03 | TF | MC314 | - | 127 (124) | +3.0 | 10.6 | - | +9000 | - | RNP 1 |
| 04 | TF | MC315 | - | 128 (125) | +3.0 | 9.4 | - | +FL130 | - | RNP 1 |
| 05 | TF | SUDVA | - | 128 (125) | +3.0 | 12.2 | - | +FL170 | | RNP 1 |
| 06 | TF | LUBMO | - | 127 (124) | +3.0 | 11.6 | - | - | - | RNP 1 |
| 07 | TF | DALOL | - | 130 (127) | +3.0 | 22.0 | - | - | - | RNP 1 |
| 08 | TF | DUMEP | - | 093 (090) | +3.0 | 20.6 | - | - | - | RNP 1 |
| 09 | TF | MEBKI | - | 093 (090) | +3.0 | 20.5 | - | - | - | RNP 1 |
| 10 | TF | CONGA | - | 093 (090) | +3.0 | 67.2 | - | - | - | RNP 1 |

## WAYPOINT LIST

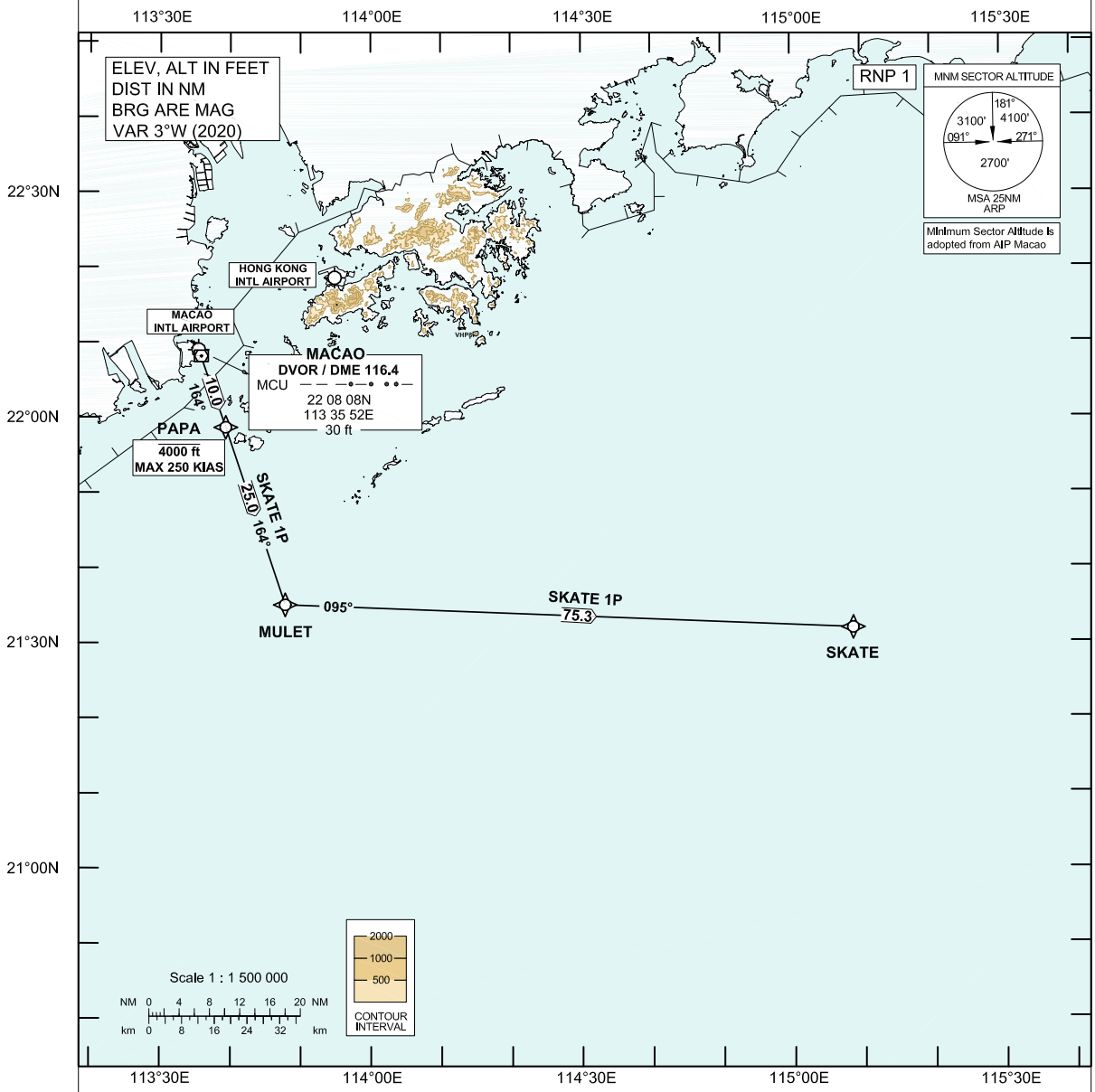
| CONGA 5U RWY 34 | | |
|---|---|---|
| **Waypoint Identifier** | **Coordinates (WGS-84)** | |
| MC411 | 22 21 41.20N | 113 47 37.58E |
| LUKBU | 22 22 44.12N | 113 53 01.50E |
| MC314 | 22 16 42.35N | 114 02 26.88E |
| MC315 | 22 11 21.09N | 114 10 47.55E |
| SUDVA | 22 04 25.14N | 114 21 33.87E |
| LUBMO | 21 57 55.24N | 114 31 52.98E |
| DALOL | 21 44 36.90N | 114 50 45.34E |
| DUMEP | 21 44 36.30N | 115 12 49.87E |
| MEBKI | 21 44 32.75N | 115 34 54.24E |
| CONGA | 21 44 02.50N | 116 47 05.90E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

Transition Altitude 9 000 ft
HONG KONG RADAR 123.95

**MACAO / Intl (VMMC)**
**RWY 16**
**RNAV (GNSS) SKATE 1P SID**

1. Aircraft shall comply with the Macao RWY 16 SID procedure as published in the AIP Macao.
2. For RNAV (GNSS) SID, aircraft must be approved by State of Registry in accordance with ICAO RNP 1 standard or equivalent. Carriage of certified GNSS receiver is mandatory.
3. Aircraft that do not have approval or whose RNP 1 capability has been degraded shall use the Conventional Procedure described below.




## SKATE 1P SID RWY 16

**RNP 1 Procedure**
**(Mandate procedure available to aircraft appropriately equipped and approved)**

PAPA - MULET - SKATE

**Conventional Procedure**
Continue outbound on MCU RDL 164 to PAPA then MULET. From MULET turn left direct to SKATE.

**If MCU DVOR is not available**
Continue tracking 164°M to MULET, then continue on the track above.

**CLIMB REQUIREMENT**
Climb to 4 000 ft. Expect further climb when instructed by ATC.

**SPEED RESTRICTION**
Aircraft shall fly at 250 KIAS or less below FL 110.

CHANGE: New Procedure.

AD 2-VMMC-SID-SKATE-P_V01_250804h

# FMC Database Coding Reference for Macao RNAV(GNSS) SIDs

## TABULAR DESCRIPTION: SKATE 1P Runway 16

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| Aircraft shall comply with the Macao RWY16 SID procedure as published in the AIP Macao | | | | | | | | | | |
| 01 | CF | PAPA | - | - | +3.0 | - | - | -4000 | -250 | RNP 1 |
| 02 | TF | MULET | - | 164 | +3.0 | 25.0 | - | - | - | RNP 1 |
| 03 | TF | SKATE | - | 095 | +3.0 | 75.3 | L | - | - | RNP 1 |

## WAYPOINT LIST

**SKATE 1P RWY 16**

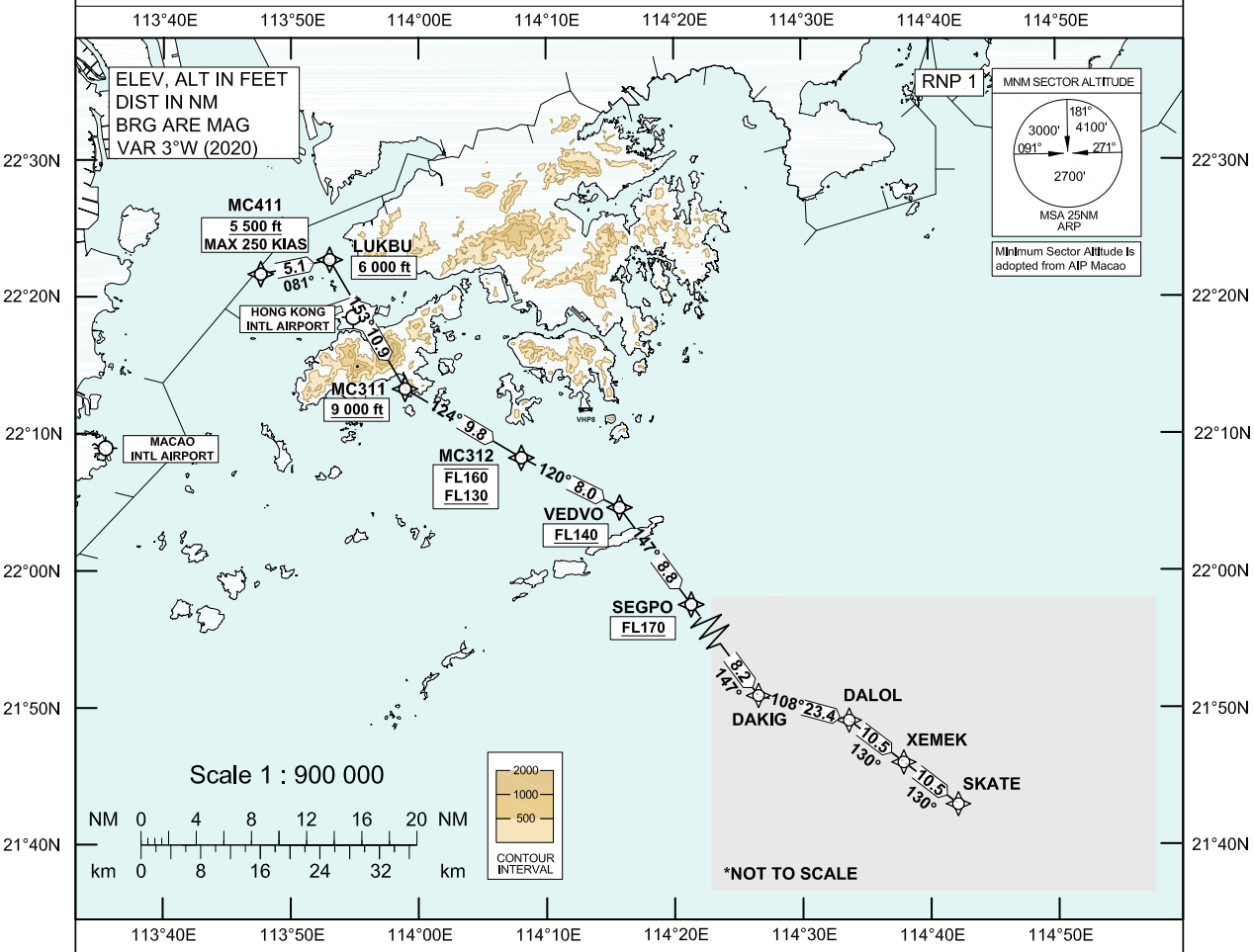
| Waypoint Identifier | Coordinates (WGS-84) |
|---|---|
| PAPA | 21 58 39 N 113 39 22 E |
| MULET | 21 35 01.95 N 113 47 51.87 E |
| SKATE | 21 31 54.99 N 115 08 39.94 E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

Transition Altitude 9 000 ft
HONG KONG DEPARTURE 122.0

**MACAO / Intl (VMMC)**
**RWY 34**
**RNAV (GNSS) SKATE 1T SID**

1. Aircraft shall comply with the Macao RWY 34 SID procedure as published in the AIP Macao.
2. For RNAV (GNSS) SID, aircraft must be approved by State of Registry in accordance with ICAO RNP 1 standard or equivalent. Carriage of certified GNSS receiver is mandatory.
3. Aircraft that do not have approval or whose RNP 1 capability has been degraded shall use the Conventional Procedure described below.




# SKATE 1T SID RWY 34

## RNP 1 Procedure

**(Mandate procedure available to aircraft appropriately equipped and approved)**

MC411 - LUKBU - MC311 - MC312 - VEDVO - SEGPO - DAKIG - DALOL - XEMEK - SKATE

## Conventional Procedure

Departures shall enter Hong Kong airspace via MC411.

From MC411, direct to LUKBU, then to MC311, MC312, VEDVO, SEGPO, DAKIG, DALOL, XEMEK, SKATE.

## CLIMB REQUIREMENT

Cross MC411 at or above 5 500 ft climbing to 6 000 ft. Cross LUKBU at 6 000 ft or above.
Expect further climb when instructed by ATC.

## SPEED RESTRICTION

Aircraft shall fly at 250 KIAS or less below FL 110.

CHANGE: New Procedure.

AD 2-VMMC-SID-SKATE-T_V01_250804lh

# FMC Database Coding Reference for Macao RNAV$_{(GNSS)}$ SID

## TABULAR DESCRIPTION: SKATE 1T Runway 34

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| Aircraft shall comply with the Macao RWY34 SID procedure as published in the AIP Macao | | | | | | | | | | |
| 01 | TF | MC411 | - | - | +3.0 | - | - | +5500 | -250 | RNP 1 |
| 02 | TF | LUKBU | - | 081 (078) | +3.0 | 5.1 | - | +6000 | - | RNP 1 |
| 03 | TF | MC311 | - | 153 (150) | +3.0 | 10.9 | - | +9000 | - | RNP 1 |
| 04 | TF | MC312 | - | 124 (121) | +3.0 | 9.8 | - | -FL160<br>+FL130 | - | RNP 1 |
| 05 | TF | VEDVO | - | 120 (117) | +3.0 | 8.0 | - | +FL140 | - | RNP 1 |
| 06 | TF | SEGPO | - | 147 (144) | +3.0 | 8.8 | - | +FL170 | - | RNP 1 |
| 07 | TF | DAKIG | - | 147 (144) | +3.0 | 8.2 | - | - | - | RNP 1 |
| 08 | TF | DALOL | - | 108 (105) | +3.0 | 23.4 | - | - | - | RNP 1 |
| 09 | TF | XEMEK | - | 130 (127) | +3.0 | 10.5 | - | - | - | RNP 1 |
| 10 | TF | SKATE | - | 130 (127) | +3.0 | 10.5 | - | - | - | RNP 1 |

## WAYPOINT LIST

**SKATE 1T RWY 34**

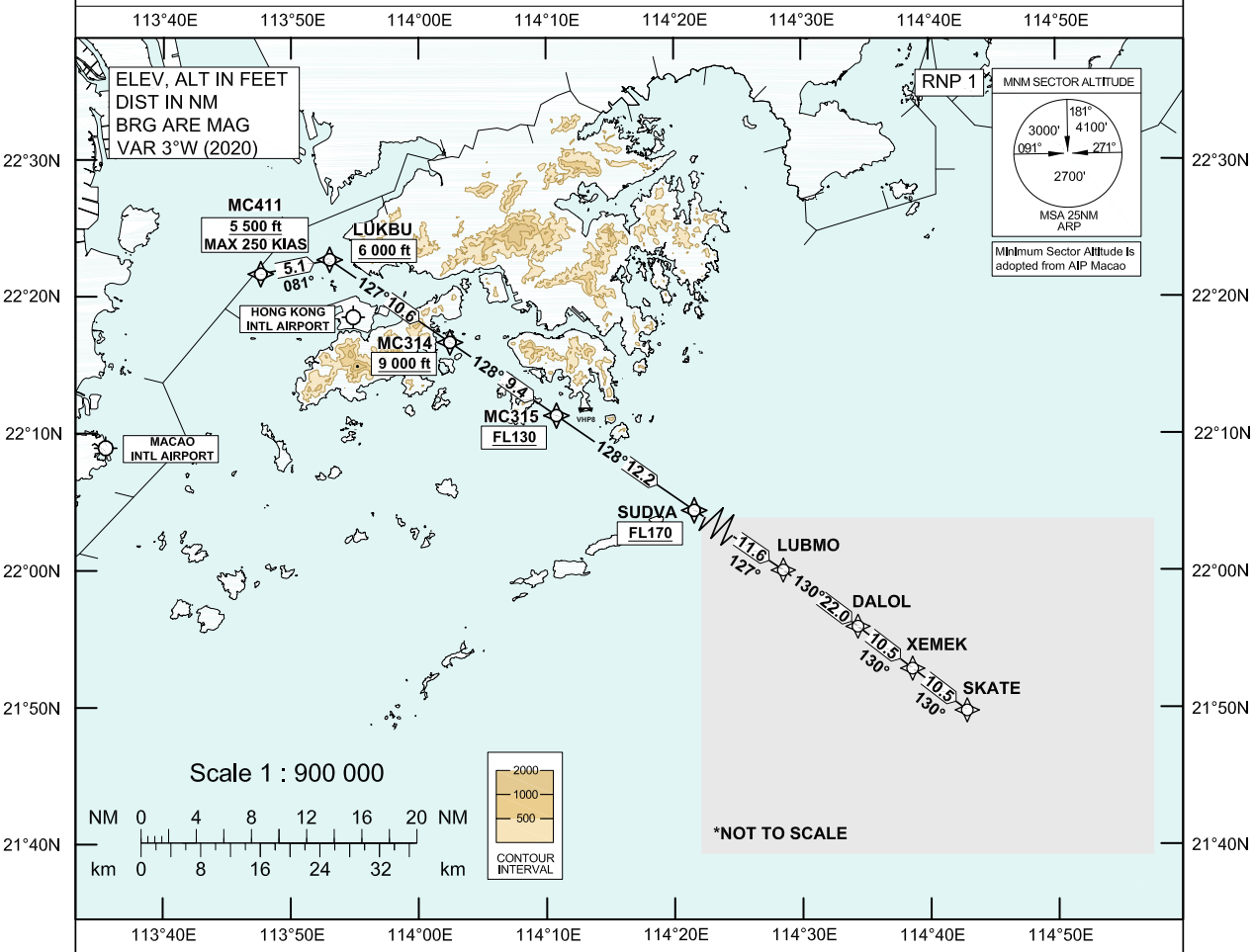
| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| MC411 | 22 21 41.20N | 113 47 37.58E |
| LUKBU | 22 22 44.12N | 113 53 01.50E |
| MC311 | 22 13 18.51N | 113 58 56.18E |
| MC312 | 22 08 16.69N | 114 08 02.37E |
| VEDVO | 22 04 38.19N | 114 15 43.05E |
| SEGPO | 21 57 32.77N | 114 21 18.59E |
| DAKIG | 21 50 52.90N | 114 26 33.33E |
| DALOL | 21 44 36.90N | 114 50 45.34E |
| XEMEK | 21 38 16.17N | 114 59 43.04E |
| SKATE | 21 31 54.99N | 115 08 39.94E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

Transition Altitude 9 000 ft
HONG KONG DEPARTURE 122.0

**MACAO / Intl (VMMC)**
**RWY 34**
**RNAV (GNSS) SKATE 1U SID**

1. Aircraft shall comply with the Macao RWY 34 SID procedure as published in the AIP Macao.
2. For RNAV (GNSS) SID, aircraft must be approved by State of Registry in accordance with ICAO RNP 1 standard or equivalent. Carriage of certified GNSS receiver is mandatory.
3. Aircraft that do not have approval or whose RNP 1 capability has been degraded shall use the Conventional Procedure described below.




# SKATE 1U SID RWY 34

## RNP 1 Procedure

**(Mandate procedure available to aircraft appropriately equipped and approved)**

MC411 - LUKBU - MC314 - MC315 - SUDVA - LUBMO - DALOL - XEMEK - SKATE

## Conventional Procedure

Departures shall enter Hong Kong airspace via MC411.

From MC411, direct to LUKBU, then to MC314, MC315, SUDVA, LUBMO, DALOL, XEMEK, SKATE

## CLIMB REQUIREMENT

Cross MC411 at or above 5 500 ft climbing to 6 000 ft. Cross LUKBU at 6 000 ft or above.
Expect further climb when instructed by ATC.

## SPEED RESTRICTION

Aircraft shall fly at 250 KIAS or less below FL 110.

CHANGE: New Procedure.

AD 2-VMMC-SID-SKATE-U_V01_250804lh

# FMC Database Coding Reference for Macao RNAV$_{(GNSS)}$ SID

## TABULAR DESCRIPTION: SKATE 1U Runway 34

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| Aircraft shall comply with the Macao RWY34 SID procedure as published in the AIP Macao | | | | | | | | | | |
| 01 | TF | MC411 | - | - | +3.0 | - | - | +5500 | -250 | RNP 1 |
| 02 | TF | LUKBU | - | 081 (078) | +3.0 | 5.1 | - | +6000 | - | RNP 1 |
| 03 | TF | MC314 | - | 127 (124) | +3.0 | 10.6 | - | +9000 | - | RNP 1 |
| 04 | TF | MC315 | - | 128 (125) | +3.0 | 9.4 | - | +FL130 | - | RNP 1 |
| 05 | TF | SUDVA | - | 128 (125) | +3.0 | 12.2 | - | +FL170 | | RNP 1 |
| 06 | TF | LUBMO | - | 127 (124) | +3.0 | 11.6 | - | - | - | RNP 1 |
| 07 | TF | DALOL | - | 130 (127) | +3.0 | 22.0 | - | - | - | RNP 1 |
| 08 | TF | XEMEK | - | 130 (127) | +3.0 | 10.5 | - | - | - | RNP 1 |
| 09 | TF | SKATE | - | 130 (127) | +3.0 | 10.5 | - | - | - | RNP 1 |

## WAYPOINT LIST

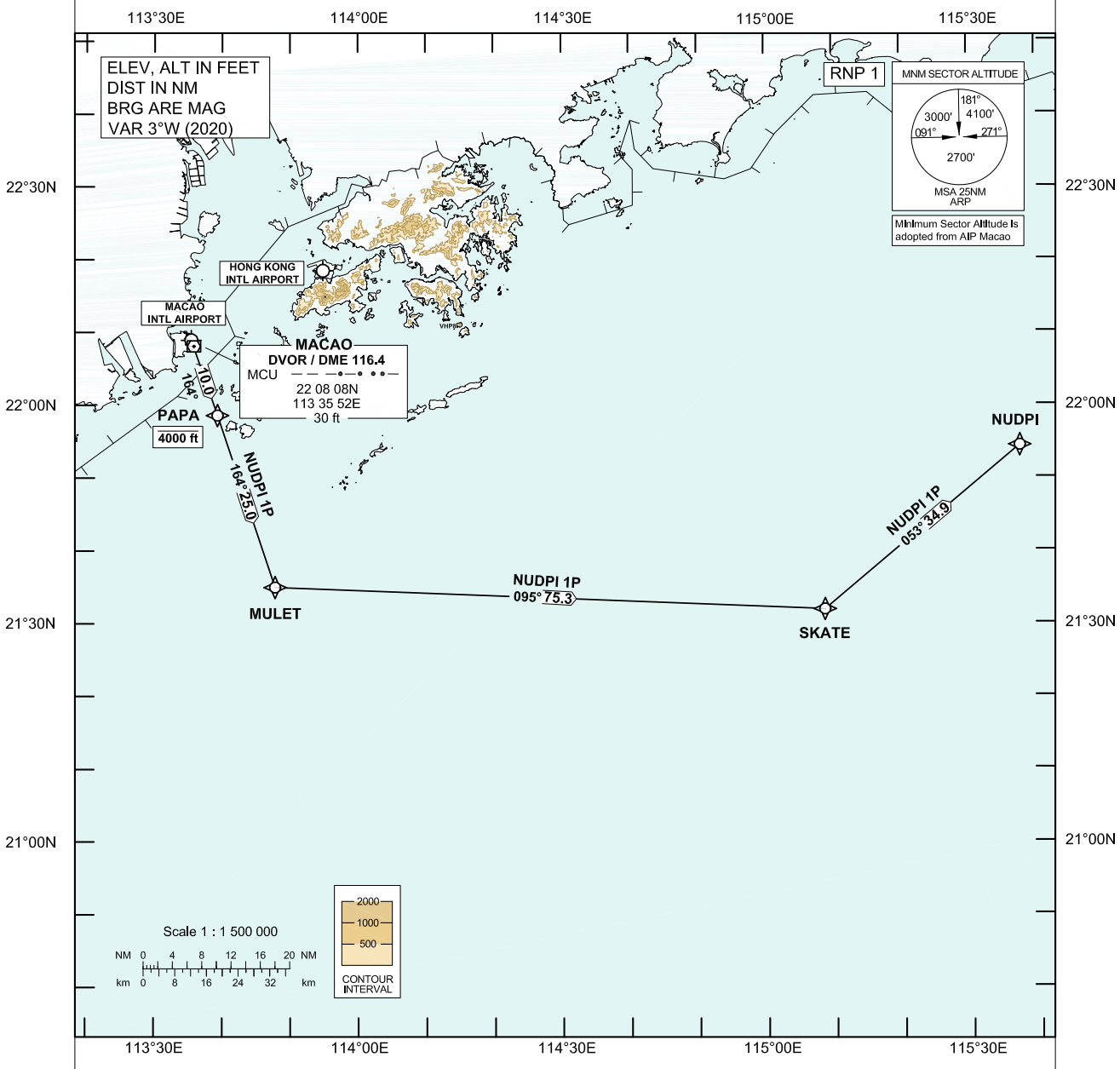
| SKATE 1U RWY 34 | | |
|---|---|---|
| **Waypoint Identifier** | **Coordinates (WGS-84)** | |
| MC411 | 22 21 41.20N | 113 47 37.58E |
| LUKBU | 22 22 44.12N | 113 53 01.50E |
| MC314 | 22 16 42.35N | 114 02 26.88E |
| MC315 | 22 11 21.09N | 114 10 47.55E |
| SUDVA | 22 04 25.14N | 114 21 33.87E |
| LUBMO | 21 57 55.24N | 114 31 52.98E |
| DALOL | 21 44 36.90N | 114 50 45.34E |
| XEMEK | 21 38 16.17N | 114 59 43.04E |
| SKATE | 21 31 54.99N | 115 08 39.94E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

Transition Altitude 9 000 ft
HONG KONG RADAR 123.95

**MACAO / Intl (VMMC)**
**RWY 16**
**RNAV (GNSS) NUDPI 1P SID**

1. Aircraft shall comply with the Macao RWY 16 SID procedure as published in the AIP Macao.
2. For RNAV (GNSS) SID, aircraft must be approved by State of Registry in accordance with ICAO RNP 1 standard or equivalent. Carriage of certified GNSS receiver is mandatory.
3. Aircraft that do not have approval or whose RNP 1 capability has been degraded shall use the Conventional Procedure described below.




# NUDPI 1P SID RWY 16

**RNP 1 Procedure**
**(Mandate procedure available to aircraft appropriately equipped and approved)**
PAPA - MULET - SKATE - NUDPI

**Conventional Procedure**
Continue outbound on MCU RDL 164 to PAPA then MULET. From MULET turn left direct to SKATE then turn left direct to NUDPI.

**If MCU DVOR is not available**
Continue tracking 164°M to MULET, then continue on the track above.

**CLIMB REQUIREMENT**
Climb to 4 000 ft. Expect further climb when instructed by ATC.

**SPEED RESTRICTION**
Aircraft shall fly at 250 KIAS or less below FL 110.

CHANGE: New procedure.

AD 2-VMMC-SID-NUDPI-P_V01_240531km

# FMC Database Coding Reference for Macao RNAV(GNSS) SID

## TABULAR DESCRIPTION: NUDPI 1P Runway 16

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| Aircraft shall comply with the Macao RWY34 SID procedure as published in the AIP Macao | | | | | | | | | | |
| 01 | CF | PAPA | - | 164 (161) | +3.0 | 10.0 | - | -4000 | -250 | RNP 1 |
| 02 | TF | MULET | - | 164 (161) | +3.0 | 25.0 | - | - | - | RNP 1 |
| 03 | TF | SKATE | - | 095 (092) | +3.0 | 75.3 | - | - | - | RNP 1 |
| 04 | TF | NUDPI | - | 053 (050) | +3.0 | 34.9 | - | - | - | RNP 1 |

## WAYPOINT LIST

**NUDPI 1P RWY 16**

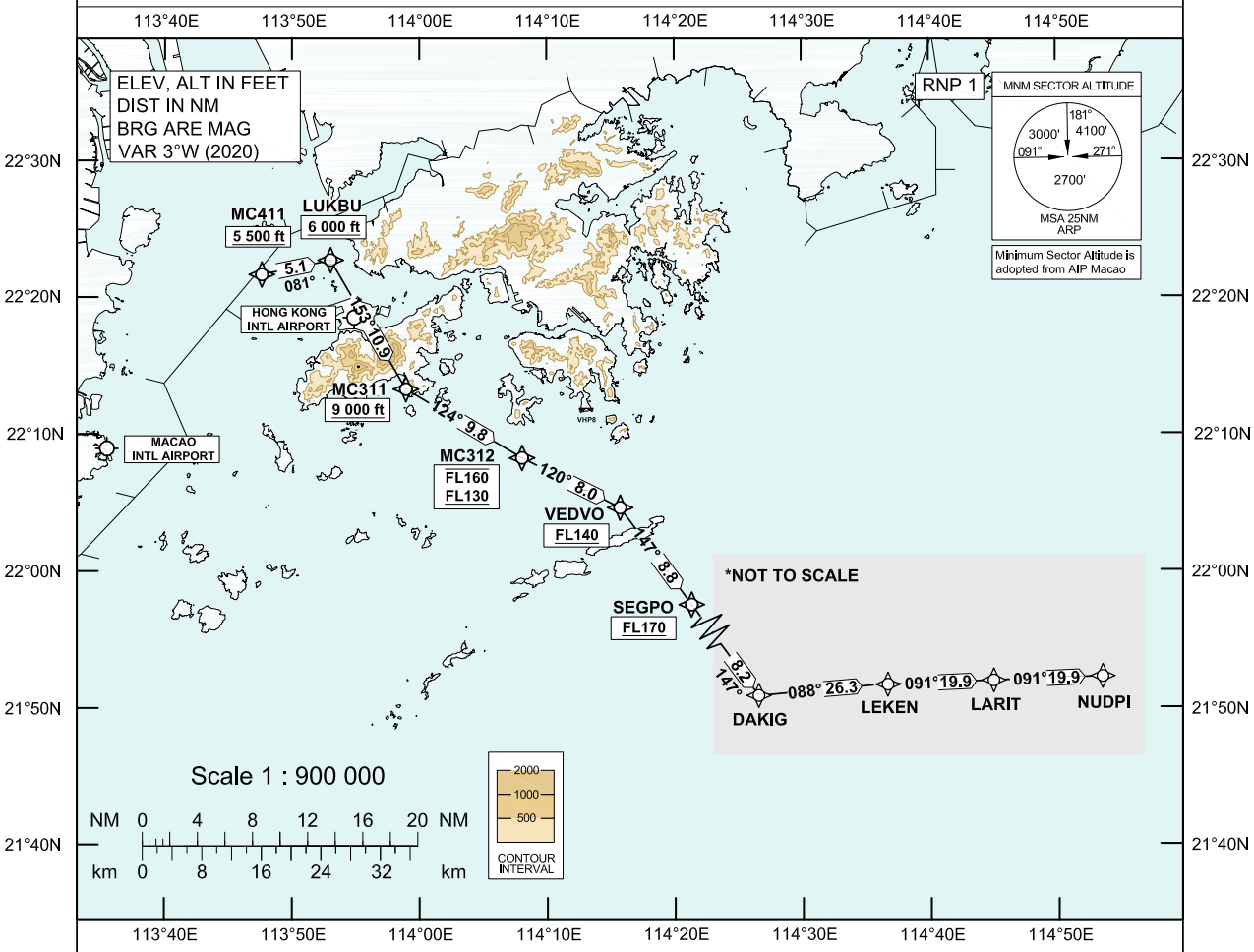
| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| PAPA | 21 58 39N | 113 39 22E |
| MULET | 21 35 01.95N | 113 47 51.87E |
| SKATE | 21 31 54.99N | 115 08 39.94E |
| NUDPI | 21 54 18.90N | 115 37 28.21E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

Transition Altitude 9 000 ft
HONG KONG DEPARTURE 122.0

**MACAO / Intl (VMMC)**
**RWY 34**
**RNAV (GNSS) NUDPI 1T SID**

1. Aircraft shall comply with the Macao RWY 34 SID procedure as published in the AIP Macao.
2. For RNAV (GNSS) SID, aircraft must be approved by State of Registry In accordance with ICAO RNP 1 standard or equivalent. Carriage of certified GNSS receiver is mandatory.
3. Aircraft that do not have approval or whose RNP 1 capability has been degraded shall use the Conventional Procedure described below.




# NUDPI 1T SID RWY 34

**RNP 1 Procedure**

**(Mandate procedure available to aircraft appropriately equipped and approved)**

MC411 - LUKBU - MC311 - MC312 - VEDVO - SEGPO - DAKIG - LEKEN - LARIT - NUDPI

**Conventional Procedure**

Departures shall enter Hong Kong airspace via MC411.

From MC411, direct to LUKBU, then to MC311, MC312, VEDVO, SEGPO, DAKIG, LEKEN, LARIT and NUDPI.

**CLIMB REQUIREMENT**

Cross MC411 at or above 5 500 ft climbing to 6 000 ft. Cross LUKBU at 6 000 ft or above.
Expect further climb when instructed by ATC.

**SPEED RESTRICTION**

Aircraft shall fly at 250 KIAS or less below FL 110.

CHANGE: New procedure.

AD 2-VMMC-SID-NUDPI-T_V01_240531km

# FMC Database Coding Reference for Macao RNAV(GNSS) SID

## TABULAR DESCRIPTION: NUDPI 1T Runway 34

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| Aircraft shall comply with the Macao RWY34 SID procedure as published in the AIP Macao | | | | | | | | | | |
| 01 | TF | MC411 | - | - | +3.0 | - | - | +5500 | -250 | RNP 1 |
| 02 | TF | LUKBU | - | 081 (078) | +3.0 | 5.1 | - | +6000 | - | RNP 1 |
| 03 | TF | MC311 | - | 153 (150) | +3.0 | 10.9 | - | +9000 | - | RNP 1 |
| 04 | TF | MC312 | - | 124 (121) | +3.0 | 9.8 | - | -FL160<br>+FL130 | - | RNP 1 |
| 05 | TF | VEDVO | - | 120 (117) | +3.0 | 8.0 | - | +FL140 | - | RNP 1 |
| 06 | TF | SEGPO | - | 147 (144) | +3.0 | 8.8 | - | +FL170 | - | RNP 1 |
| 07 | TF | DAKIG | - | 147 (144) | +3.0 | 8.2 | - | - | - | RNP 1 |
| 08 | TF | LEKEN | - | 088 (085) | +3.0 | 26.3 | - | - | - | RNP 1 |
| 09 | TF | LARIT | - | 091 (088) | +3.0 | 19.9 | - | - | - | RNP 1 |
| 10 | TF | NUDPI | - | 091 (088) | +3.0 | 19.9 | - | - | - | RNP 1 |

## WAYPOINT LIST

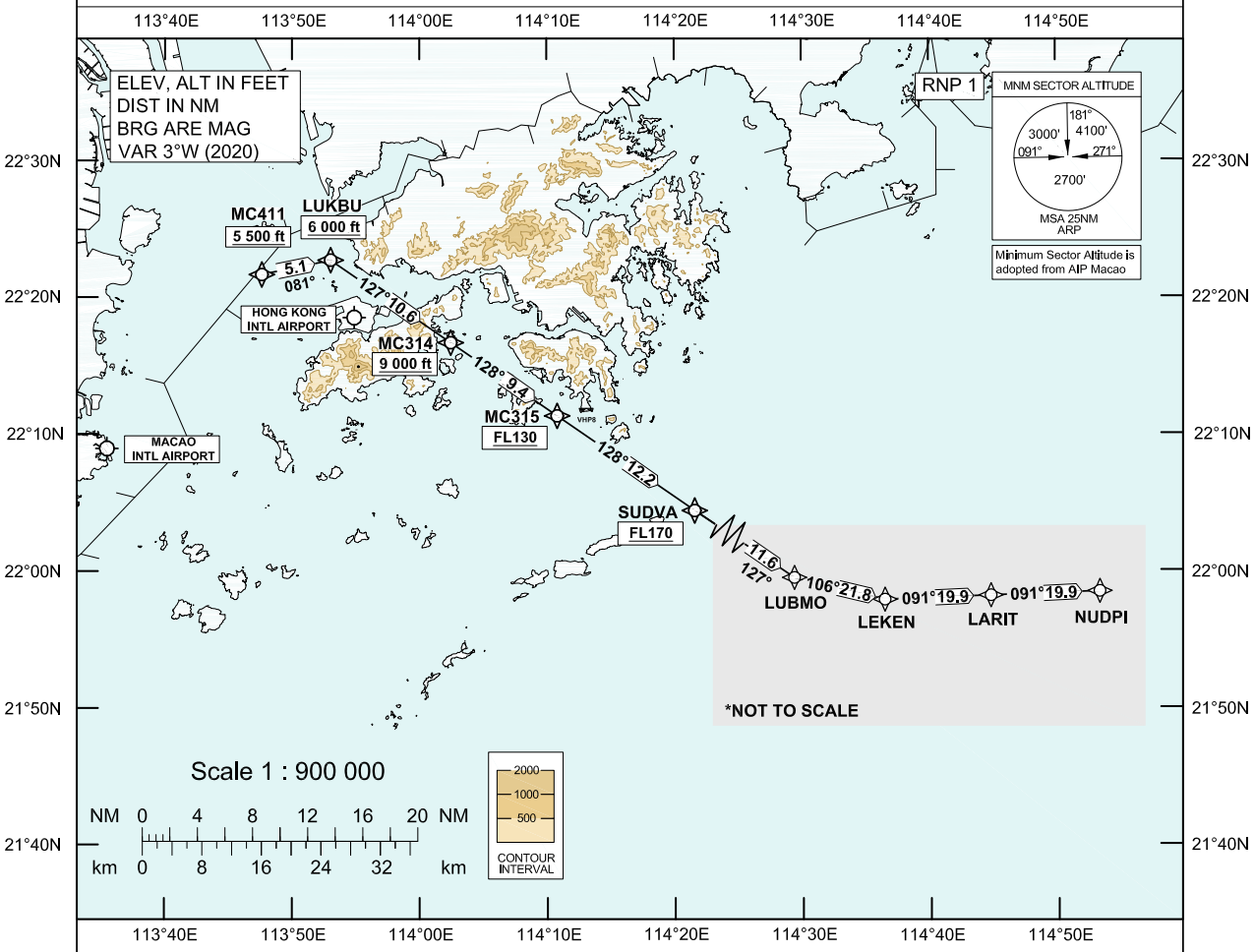
| NUDPI 1T RWY 34 | | |
|---|---|---|
| **Waypoint Identifier** | **Coordinates (WGS-84)** | |
| MC411 | 22 21 41.20N | 113 47 37.58E |
| LUKBU | 22 22 44.12N | 113 53 01.50E |
| MC311 | 22 13 18.51N | 113 58 56.18E |
| MC312 | 22 08 16.69N | 114 08 02.37E |
| VEDVO | 22 04 38.19N | 114 15 43.05E |
| SEGPO | 21 57 32.77N | 114 21 18.59E |
| DAKIG | 21 50 52.90N | 114 26 33.33E |
| LEKEN | 21 53 01.06N | 114 54 44.95E |
| LARIT | 21 53 41.37N | 115 16 06.56E |
| NUDPI | 21 54 18.90N | 115 37 28.21E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

Transition Altitude 9 000 ft
HONG KONG DEPARTURE 122.0

**MACAO / Intl (VMMC)**
**RWY 34**
**RNAV (GNSS) NUDPI 1U SID**

1. Aircraft shall comply with the Macao RWY 34 SID procedure as published in the AIP Macao.
2. For RNAV (GNSS) SID, aircraft must be approved by State of Registry In accordance with ICAO RNP 1 standard or equivalent. Carriage of certified GNSS receiver is mandatory.
3. Aircraft that do not have approval or whose RNP 1 capability has been degraded shall use the Conventional Procedure described below.




# NUDPI 1U SID RWY 34

## RNP 1 Procedure

**(Mandate procedure avallable to aircraft appropriately equlpped and approved)**

MC411 - LUKBU - MC314 - MC315 - SUDVA - LUBMO - LEKEN - LARIT - NUDPI

## Conventional Procedure

Departures shall enter Hong Kong airspace via MC411.

From MC411, direct to LUKBU, then to MC314, MC315, SUDVA, LUBMO, LEKEN, LARIT and NUDPI.

## CLIMB REQUIREMENT

Cross MC411 at or above 5 500 ft climbing to 6 000 ft. Cross LUKBU at 6 000 ft or above.
Expect further climb when instructed by ATC.

## SPEED RESTRICTION

Aircraft shall fly at 250 KIAS or less below FL 110.

CHANGE: New procedure.

AD 2-VMMC-SID-NUDPI-U_V01_240531km

# FMC Database Coding Reference for Macao RNAV(GNSS) SID

## TABULAR DESCRIPTION: NUDPI 1U Runway 34

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| Aircraft shall comply with the Macao RWY34 SID procedure as published in the AIP Macao | | | | | | | | | | |
| 01 | TF | MC411 | - | - | +3.0 | - | - | +5500 | -250 | RNP 1 |
| 02 | TF | LUKBU | - | 081 (078) | +3.0 | 5.1 | - | +6000 | - | RNP 1 |
| 03 | TF | MC314 | - | 127 (124) | +3.0 | 10.6 | - | +9000 | - | RNP 1 |
| 04 | TF | MC315 | - | 128 (125) | +3.0 | 9.4 | - | +FL130 | - | RNP 1 |
| 05 | TF | SUDVA | - | 128 (125) | +3.0 | 12.2 | - | +FL170 | | RNP 1 |
| 06 | TF | LUBMO | - | 127 (124) | +3.0 | 11.6 | - | - | - | RNP 1 |
| 07 | TF | LEKEN | - | 106 (103) | +3.0 | 21.8 | - | - | - | RNP 1 |
| 08 | TF | LARIT | - | 091 (088) | +3.0 | 19.9 | - | - | - | RNP 1 |
| 09 | TF | NUDPI | - | 091 (088) | +3.0 | 19.9 | - | - | - | RNP 1 |

## WAYPOINT LIST

**NUDPI 1U RWY 34**

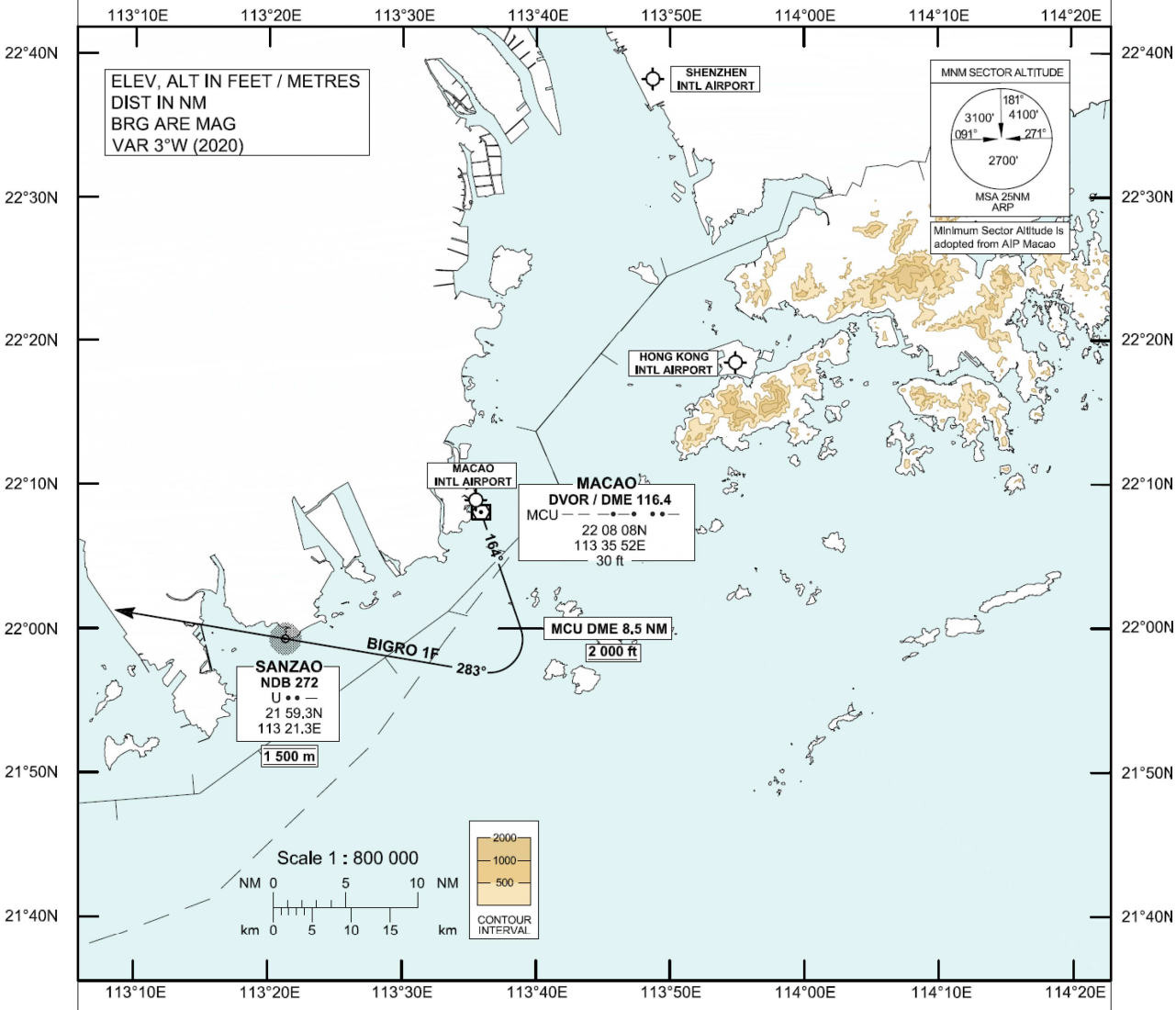
| Waypoint Identifier | Coordinates (WGS-84) | |
|---|---|---|
| MC411 | 22 21 41.20N | 113 47 37.58E |
| LUKBU | 22 22 44.12N | 113 53 01.50E |
| MC314 | 22 16 42.35N | 114 02 26.88E |
| MC315 | 22 11 21.09N | 114 10 47.55E |
| SUDVA | 22 04 25.14N | 114 21 33.87E |
| LUBMO | 21 57 55.24N | 114 31 52.98E |
| LEKEN | 21 53 01.06N | 114 54 44.95E |
| LARIT | 21 53 41.37N | 115 16 06.56E |
| NUDPI | 21 54 18.90N | 115 37 28.21E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

Transition Altitude 9 000 ft
HONG KONG RADAR 123.95

**MACAO / Intl (VMMC)**
**RWY 16**
**BIGRO 1F SID**

Aircraft shall comply with the Macao RWY 16 SID procedure as published in the AIP Macao.




## BIGRO 1F SID RWY 16

Continue outbound on MCU RDL 164 to MCU DME 8.5 NM then turn right to track direct to U NDB (nominal track 283°M). Continue in accordance with the SID procedure as published in the AIP Macao.

**If MCU DVOR is not available**
Climb straight ahead to 1 500 m and cross ZAO DME 14.8 NM at 2 000 ft (610 m) or above, then turn right on track 283°M. Continue in accordance with the SID procedure as published in AIP Macao.

**CLIMB INSTRUCTIONS**

Cross MCU RDL 164 / DME 8.5 NM at or above 2 000 ft (610 m) climbing to 1 500 m.

Cross U NDB at 1 500 m. Expect further climb in accordance with procedure published in the AIP Macao.

**This procedure requires a minimum climb gradient of 3.8% until reaching 1 500 m.**

**SPEED CONTROL**

Maximum departure turning speed: 205 KIAS.

CHANGE: Update of MSA.

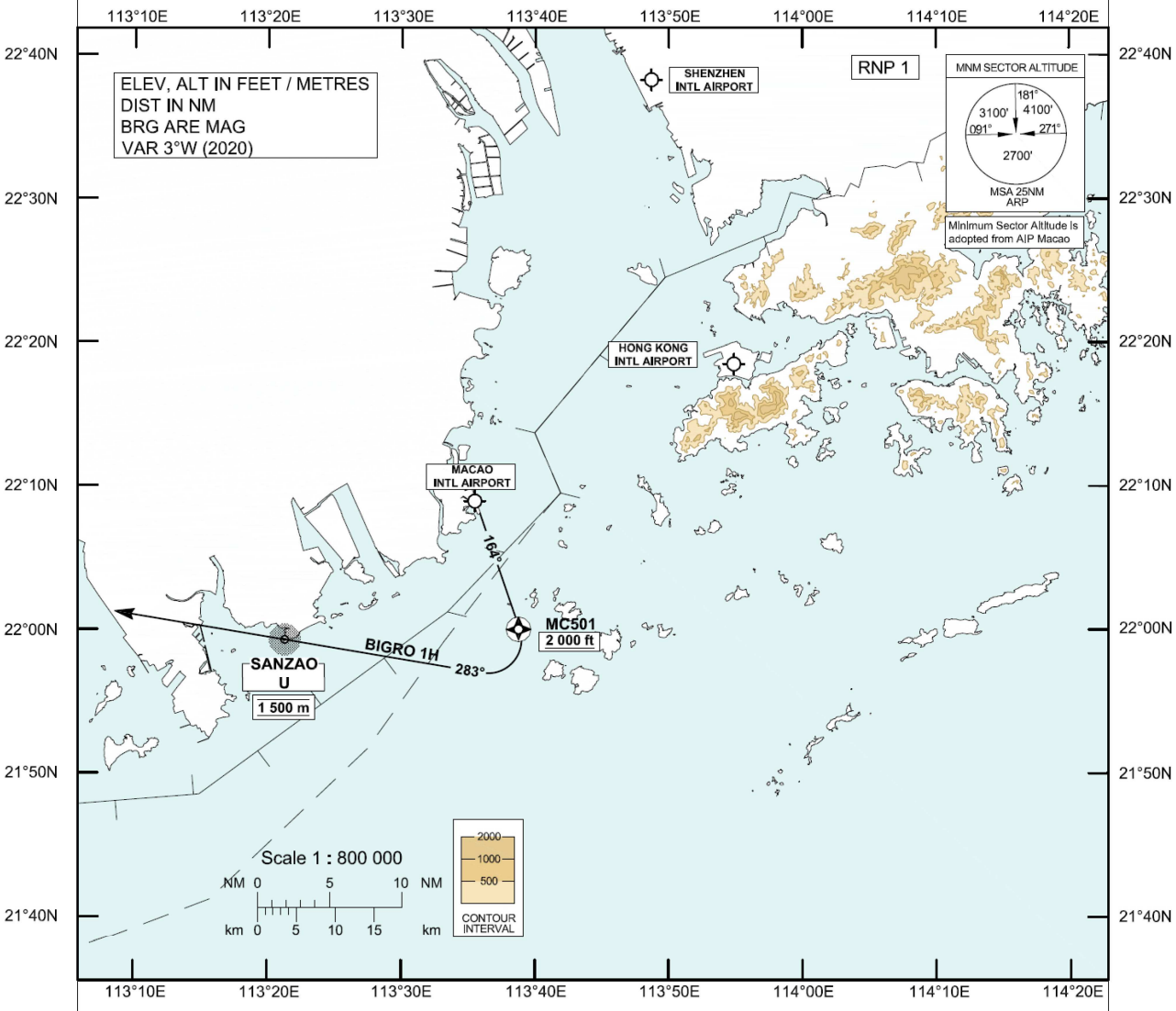
AD 2-VMMC-SID-BIGRO-F_V02_231213lh

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

Transition Altitude 9 000 ft
HONG KONG RADAR 123.95

**MACAO / Intl (VMMC)**
**RWY 16**
**RNAV (GNSS) BIGRO 1H SID**

1. For use when MCU DVOR is not available.
2. Aircraft shall comply with the Macao RWY 16 SID procedure as published in the AIP Macao.




## BIGRO 1H SID RWY 16

**RNP 1 Procedure**

**MC501 - U**

Continue in accordance with the SID procedure as published in the AIP Macao.

**CLIMB REQUIREMENT**

Cross MC501 at or above 2 000 ft (610 m).
Cross U NDB at 1 500 m. Expect further climb in accordance with procedure published in the AIP Macao.
**This procedure requires a minimum climb gradient of 3.8% until reaching 1 500 m.**

**SPEED CONTROL**

Maximum departure turning speed: 205 KIAS

**CHANGE:** Update of MSA.

AD 2-VMMC-SID-BIGRO-H_V02_231213lh

# FMC Database Coding Reference for Macao RNAV(GNSS) SIDs

**Designator: BIGRO 1H RWY 16**

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course /Track °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| Aircraft shall comply with the Macao RWY 16 SID procedure as published in the AIP Macao | | | | | | | | | | |
| | CF | MC501 | Y | 164 (161) | +3.0 | - | - | +2000 | -205 | RNP 1 |
| | CF | U | - | - | +3.0 | - | R | @1500M | -205 | RNP 1 |

## WAYPOINT LIST

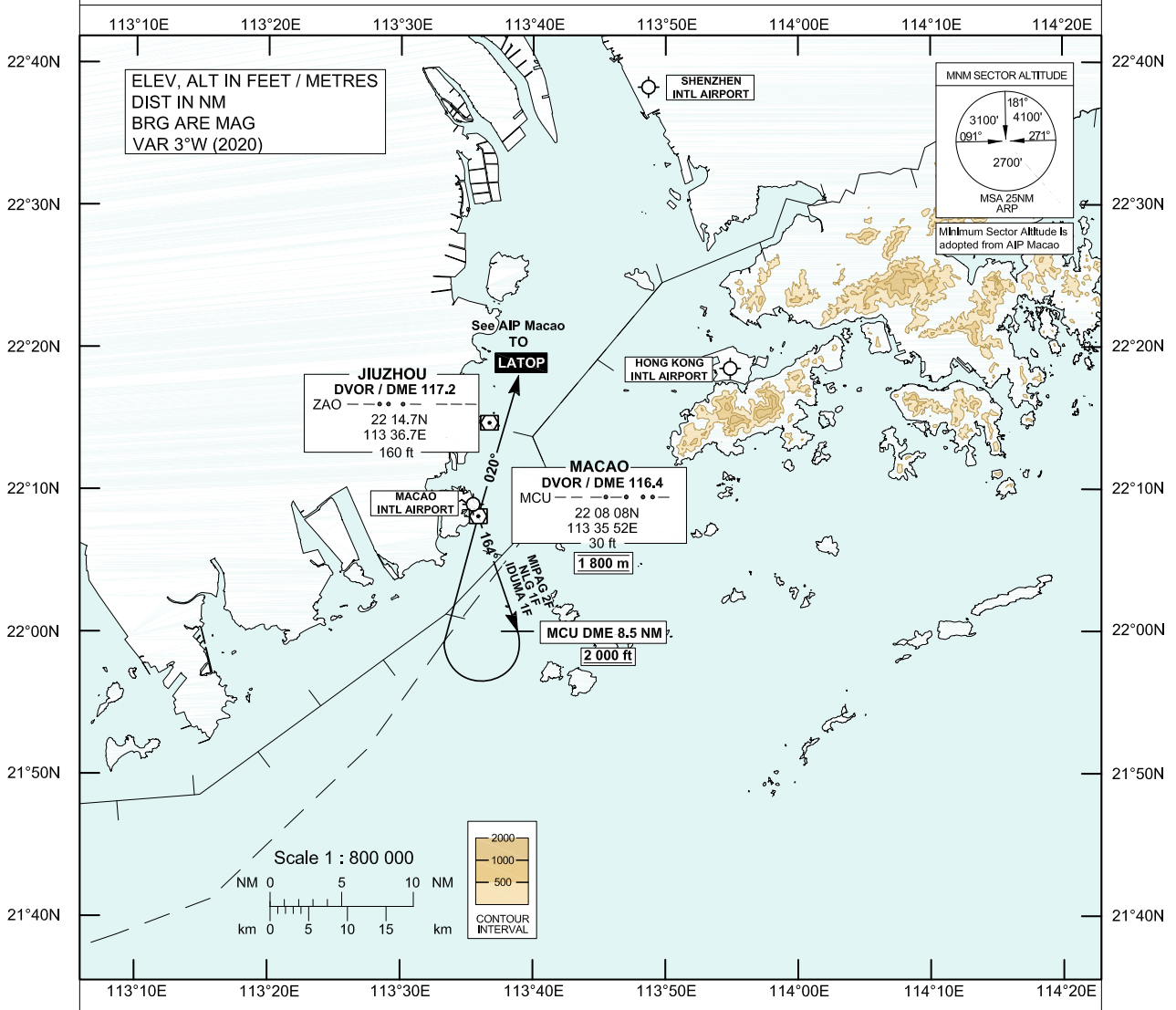
| BIGRO 1H RWY 16 | | |
|---|---|---|
| **Waypoint Identifier** | **Coordinates (WGS84)** | |
| MC501 | 22 00 03.00 N | 113 38 45.76 E |
| U | 21 59.3 N | 113 21.3 E |

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

Transition Altitude 9 000 ft
HONG KONG RADAR 123.95

**MACAO / Intl (VMMC)**
**RWY 16**
**MIPAG 2F SID**
**NLG 1F SID**
**IDUMA 1F SID**

Aircraft shall comply with the Macao RWY 16 SID procedure as published in the AIP Macao.




## MIPAG 2F / NLG 1F / IDUMA 1F SID RWY 16

Continue outbound on MCU RDL 164 to MCU DME 8.5 NM then turn right to establish inbound on MCU RDL 197. Leave MCU DVOR on RDL 020. Continue in accordance with the SID procedure as published in the AIP Macao.

**If MCU DVOR is not available**
Climb straight ahead to 1 800 m and cross ZAO DME 14.8 NM at 2 000 ft (610 m) or above, then turn right to ZAO via ZAO RDL 195 and cross ZAO DME 6.7 NM at 1 800 m. Continue in accordance with the SID procedure as published in AIP Macao.

**CLIMB INSTRUCTIONS**

Cross MCU RDL 164 / DME 8.5 NM at or above 2 000 ft (610 m) climbing to 1 800 m.

Cross MCU DVOR at 1 800 m. Expect further climb in accordance with procedure published in the AIP Macao.

**These procedures require a minimum climb gradient of 3.8% until reaching 2 400 m for NLG 1F and leaving 2 400 m for MIPAG 2F and IDUMA 1F.**

**SPEED CONTROL**

Maximum departure turning speed: 205 KIAS.

**CHANGE:** Update of IDUMA 1F SID.

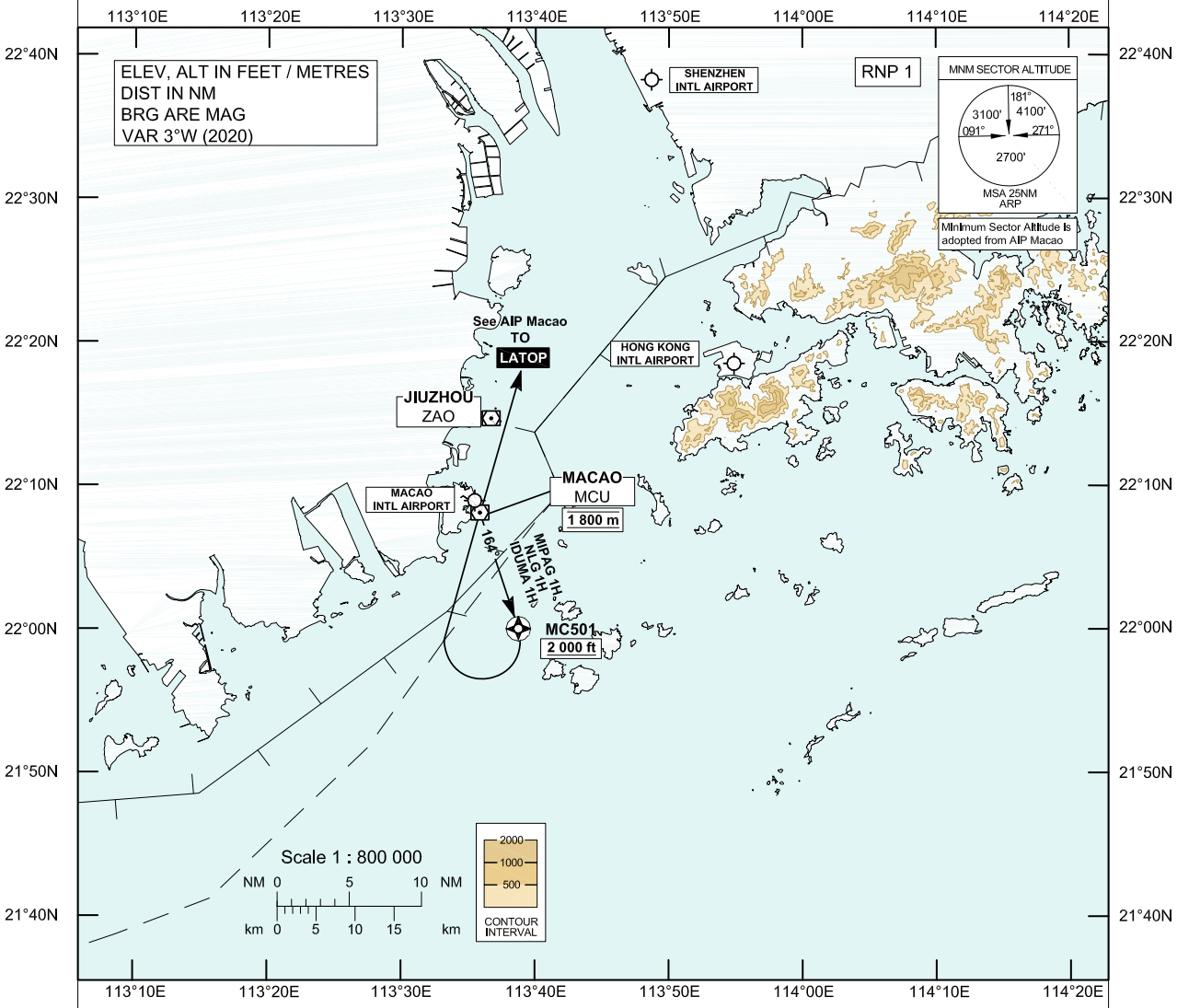
AD 2-VMMC-SID-MIPAG-F_V03_250430km

**STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO**

Transition Altitude 9 000 ft
HONG KONG RADAR 123.95

**MACAO / Intl (VMMC)**
**RWY 16**
**RNAV (GNSS) MIPAG 1H SID**
**RNAV (GNSS) NLG 1H SID**
**RNAV (GNSS) IDUMA 1H SID**

Aircraft shall comply with the Macao RWY 16 SID procedure as published in the AIP Macao.




## MIPAG 1H / NLG 1H / IDUMA 1H SID RWY 16

**Basic-RNP 1 Procedure**
**(Mandate procedure available to aircraft appropriately equipped and approved)**

**MC501 - MCU - LATOP**

Continue in accordance with the SID procedure as published in the AIP Macao.

**CLIMB REQUIREMENT**
Cross MC501 at or above 2 000 ft (610 m), climbing to 1 800 m.
Cross MCU at 1 800 m. Expect further climb in accordance with procedure published in the AIP Macao.
**These procedures require a minimum climb gradient of 3.8% until reaching 2 400 m for NLG 1H and leaving 2 400 m for MIPAG 1H and IDUMA 1H.**

**SPEED CONTROL**
Maximum departure turning speed: 205 KIAS.

**CHANGE:** Update of IDUMA 1H SID.

AD 2-VMMC-SID-MIPAG-H_V03_250430km

# FMC Database Coding Reference for Macao RNAV(GNSS) SIDs

**Designator: NLG 1H RWY 16**

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course /Track °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| Aircraft shall comply with the Macao RWY 16 SID procedure as published in the AIP Macao | | | | | | | | | | |
| | CF | MC501 | Y | 164 (161) | +3.0 | - | - | +2000 | -205 | RNP 1 |
| | DF | MCU | - | - | +3.0 | - | R | @1800M | -205 | RNP 1 |

**Designator: IDUMA 1H RWY 16**

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course /Track °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| Aircraft shall comply with the Macao RWY 16 SID procedure as published in the AIP Macao | | | | | | | | | | |
| | CF | MC501 | Y | 164 (161) | +3.0 | - | - | +2000 | -205 | RNP 1 |
| | DF | MCU | - | - | +3.0 | - | R | @1800M | -205 | RNP 1 |

**Designator: MIPAG 1H RWY 16**

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course /Track °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| Aircraft shall comply with the Macao RWY 16 SID procedure as published in the AIP Macao | | | | | | | | | | |
| | CF | MC501 | Y | 164 (161) | +3.0 | - | - | +2000 | -205 | RNP 1 |
| | DF | MCU | - | - | +3.0 | - | R | @1800M | -205 | RNP 1 |

## WAYPOINT LIST

**NLG 1H/IDUMA 1H/MIPAG 1H RWY 16**

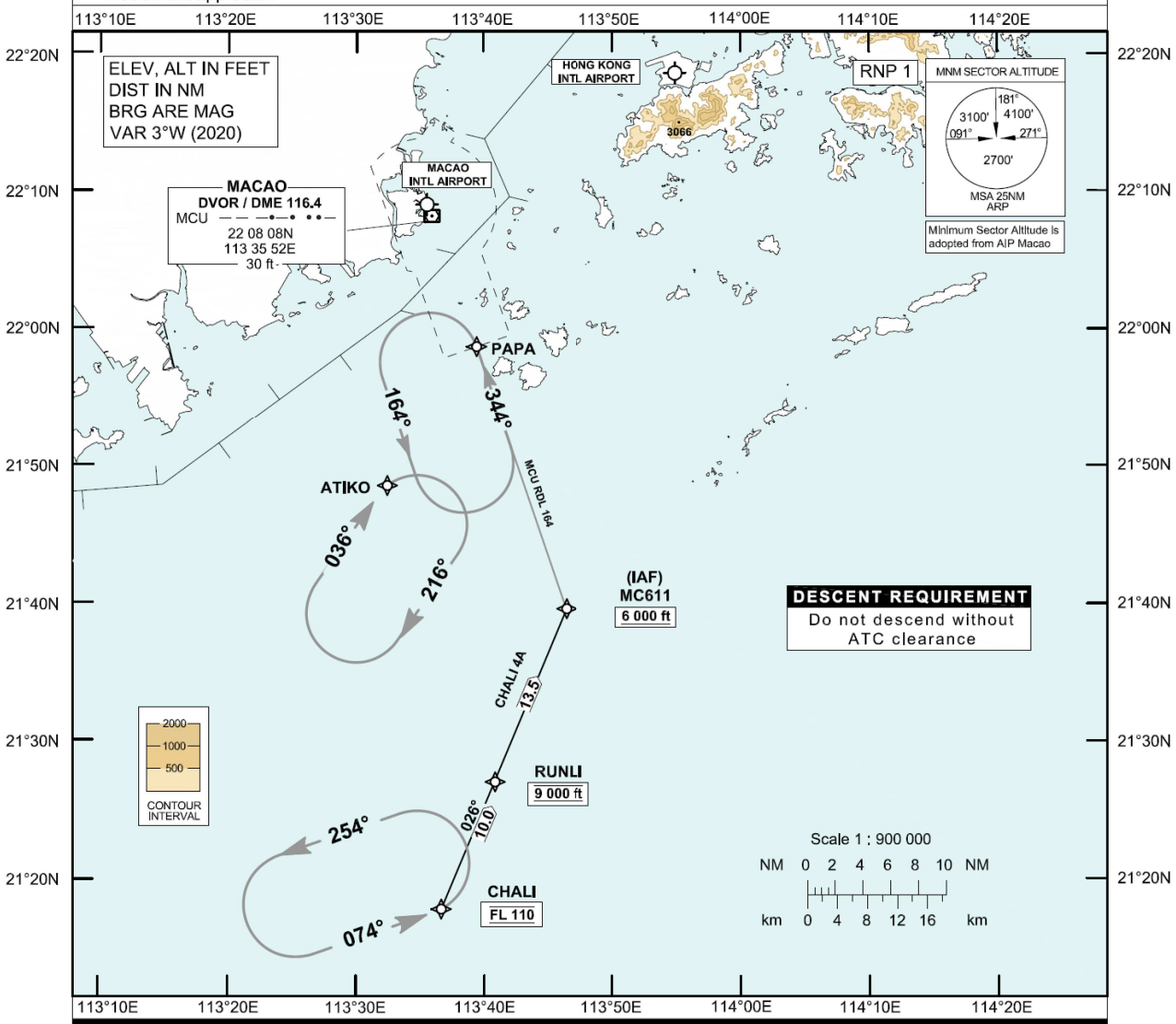
| Waypoint Identifier | Coordinates (WGS84) |
|---|---|
| MC501 | 22 00 03.00 N 113 38 45.76 E |
| MCU | 22 08 08 N 113 35 52 E |

**STANDARD ARRIVAL CHART-INSTRUMENT (STAR) - ICAO**

Transition Altitude 9 000 ft
HONG KONG RADAR 123.95

**MACAO / Intl (VMMC)**
**RWY 34**
**RNAV (GNSS) CHALI 4A STAR**

1. For RNAV (GNSS) STAR, aircraft must be approved by State of Registry in accordance with ICAO RNP 1 standard or equivalent. Carriage of certified GNSS receiver is mandatory.
2. Aircraft that do not have approval or whose RNP 1 capability has been degraded shall request ATC assistance for Macao instrument approach.




## CHALI 4A STAR RWY 34

### RNP 1 Procedure

**(Mandate procedure avallable to aircraft appropriately equlpped and approved)**
CHALI - RUNLI - MC611
Expect ILS approach to RWY 34.
Descend as directed by ATC.

### DESCENT REQUIREMENT

Cross CHALI at FL 110, RUNLI at 9 000 ft, MC611 at 6 000 ft or above.
**DO NOT DESCEND WITHOUT ATC CLEARANCE.**

### SPEED CONTROL

Speed control shall be in force unless otherwise advised. Aircraft on STAR clearance shall fly at 250 KIAS or less whilst below FL 110.

### HOLDING

The holding patterns for CHALI STAR are established at CHALI, PAPA and ATIKO. In the event of holding, each flight will be instructed individually.
In order to provide traffic management flexibility, traffic may be instructed to hold at other terminal holdings (see ENR 3.6) as directed by ATC.

### LOSS OF COMMUNICATION

In the event of a loss of communication aircraft shall comply with the descent requirement and STAR track above, and carry out the appropriate approach procedure to RWY 34.

CHANGE: Update of MSA.

AD 2-VMMC-STAR-CHALI-A_V07_231213lh

# FMC Database Coding Reference for Macao RNAV(GNSS) STARs

## Designator: CHALI 4A Runway 34

| *Serial Number* | *Path Descriptor* | *Waypoint Identifier* | *Fly-over* | *Track (°M)* | *Magnetic Variation* | *Distance (NM)* | *Turn Dir* | *Altitude (ft)* | *Speed (IAS)* | *Navigation Specification* |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | CHALI | - | - | +3.0 | - | - | @FL110 | - | RNP 1 |
| 02 | TF | RUNLI | - | 026 | +3.0 | 10 | - | @9000 | - | RNP 1 |
| 03 | TF | MC611 | - | 026 | +3.0 | 13.5 | - | +6000 | - | RNP 1 |

## Waypoint Coordinates

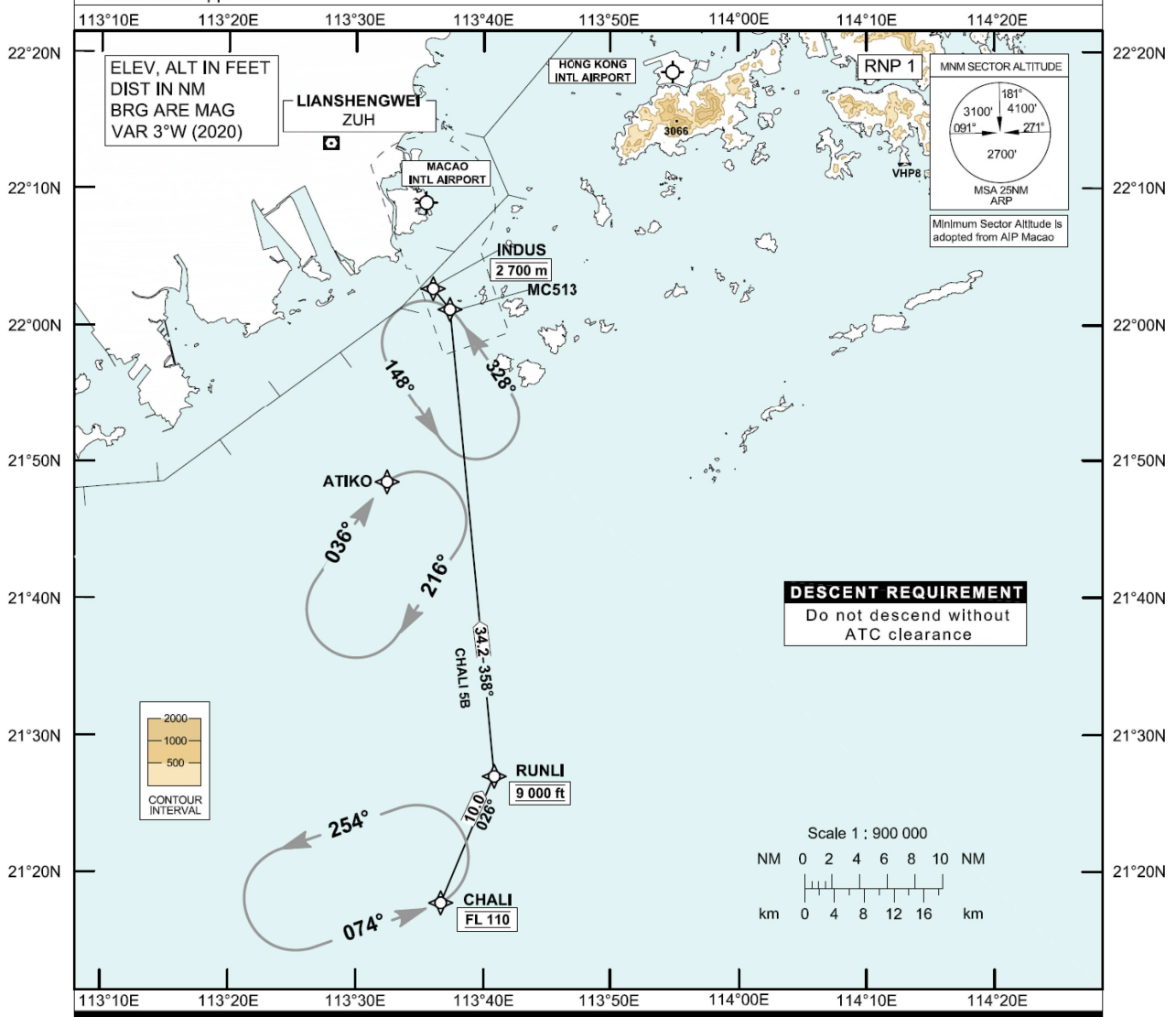
| Waypoint Name | Coordinates (WG584) |
|---|---|
| CHALI | 21 17 45.00N<br>113 36 41.00E |
| RUNLI | 21 26 59.72N<br>113 40 51.00E |
| MC611 | 21 39 36.00N<br>113 46 30.00E |

**STANDARD ARRIVAL CHART-INSTRUMENT (STAR) - ICAO**

Transition Altitude 9 000 ft
HONG KONG RADAR 123.95

**MACAO / Intl (VMMC)**
**RWY 16**
**RNAV (GNSS) CHALI 5B STAR**

1. For RNAV (GNSS) STAR, aircraft must be approved by State of Registry in accordance with ICAO RNP 1 standard or equivalent. Carriage of certified GNSS receiver is mandatory.
2. Aircraft that do not have approval or whose RNP 1 capability has been degraded shall request ATC assistance for Macao instrument approach.




## CHALI 5B STAR RWY 16

**RNP 1 Procedure**

**(Mandate procedure available to aircraft appropriately equipped and approved)**

CHALI - RUNLI - MC513 - INDUS.
Continue as instructed by Zhuhai ATC.
Descend as directed by ATC.

**DESCENT REQUIREMENT**

Cross CHALI at FL 110, RUNLI at 9 000 ft and INDUS at 2 700 m. **DO NOT DESCEND WITHOUT ATC CLEARANCE.**

**SPEED CONTROL**

Speed control shall be in force unless otherwise advised. Aircraft on STAR clearance shall fly at 250 KIAS or less whilst below FL 110.

**HOLDING**

The holding patterns for CHALI STAR are established at CHALI, MC513 and ATIKO. In the event of holding, each flight will be instructed individually.
In order to provide traffic management flexibility, traffic may be instructed to hold at other terminal holdings (see ENR 3.6) as directed by ATC.

**LOSS OF COMMUNICATION**

In the event of a loss of communication aircraft shall comply with the descent requirement and STAR track above, and carry out the appropriate approach procedure to RWY 16.

**CHANGE:** Update of MSA.

AD 2-VMMC-STAR-CHALI-B_V07_231213lh

# FMC Database Coding Reference for Macao RNAV(GNSS) STARs

## Designator: CHALI 5B Runway 16

| *Serial Number* | *Path Descriptor* | *Waypoint Identifier* | *Fly-over* | *Track (°M)* | *Magnetic Variation* | *Distance (NM)* | *Turn Dir* | *Altitude* | *Speed (IAS)* | *Navigation Specification* |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | CHALI | - | - | +3.0 | - | - | @FL110 | - | RNP 1 |
| 02 | TF | RUNLI | - | 026 | +3.0 | 10 | L | @9000ft | - | RNP 1 |
| 03 | TF | MC513 | - | 358 | +3.0 | 34.2 | L | - | - | RNP 1 |
| 04 | TF | INDUS | - | 328 | +3.0 | 1.9 | - | @2700M | - | RNP 1 |
| Aircraft shall continue with the Macao RWY16 STAR procedure as published in the AIP Macao | | | | | | | | | | |

## Waypoint Coordinates

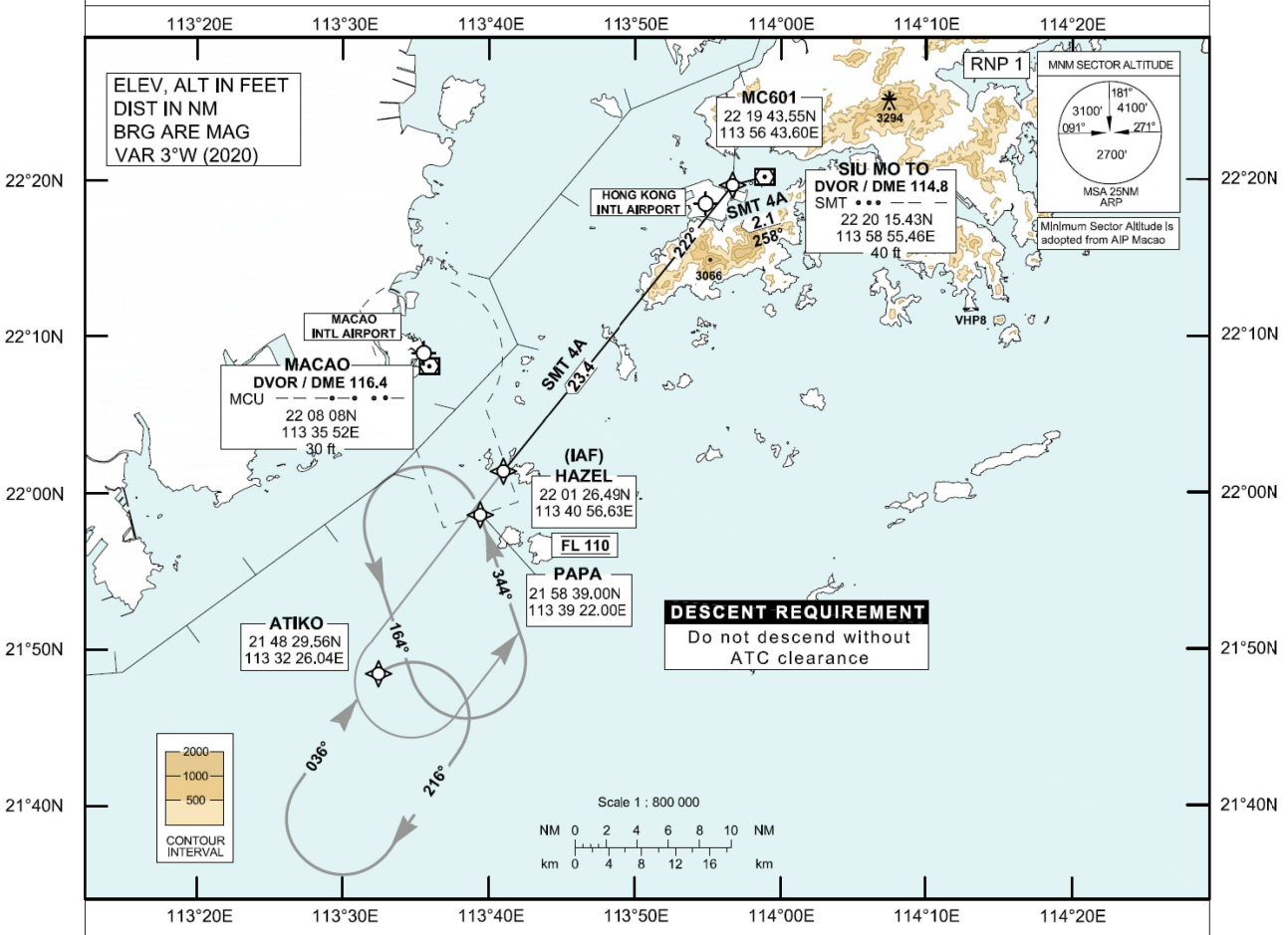
| *Waypoint Name* | *Coordinates (WGS84)* |
|---|---|
| CHALI | 21 17 45.00N<br>113 36 41.00E |
| RUNLI | 21 26 59.72N<br>113 40 51.00E |
| MC513 | 22 01 09.95N<br>113 37 20.04E |
| INDUS | 22 02 41.00N<br>113 36 01.00E |

**STANDARD ARRIVAL CHART-INSTRUMENT (STAR) - ICAO**

Transition Altitude 9 000 ft
HONG KONG DEPARTURE 122.0

**MACAO / Intl (VMMC)**
**RWY 34**
**RNAV (GNSS) SMT 4A STAR**

1. For RNAV (GNSS) STAR, aircraft must be approved by State of Registry in accordance with ICAO RNP 1 standard or equivalent. Carriage of certified GNSS receiver is mandatory.
2. Aircraft that do not have approval or whose RNP 1 capability has been degraded shall use the Conventional Procedure described below.




## SMT 4A STAR RWY 34

### RNP 1 Procedure

**(Mandate procedure available to aircraft appropriately equipped and approved)**

SMT - MC601 - HAZEL
Expect ILS approach.
Descend as directed by ATC.

### Conventional Procedure

Leave SMT DVOR on RDL 258. At SMT DME 2.1 NM turn left track direct to HAZEL.
Expect ILS approach.
Descend as directed by ATC.

### DESCENT REQUIREMENT

Cross HAZEL at FL 110. **DO NOT DESCEND WITHOUT ATC CLEARANCE.**

### SPEED CONTROL

Speed control shall be in force unless otherwise advised. Aircraft on STAR clearance shall fly at 250 KIAS or less whilst below FL 110.

### HOLDING

The holding patterns for SMT STAR are established at BUMDI, PAPA and ATIKO. In the event of holding, each flight will be instructed individually.
In order to provide traffic management flexibility, traffic may be instructed to hold at other terminal holdings (see ENR 3.6) as directed by ATC.

### LOSS OF COMMUNICATION

In the event of a loss of communication, aircraft shall comply with the descent requirement and STAR track above, and carry out the appropriate approach procedure to RWY 34.

CHANGE: Update of MSA.

AD 2-VMMC-STAR-SMT-A_V06_231213lh

# FMC Database Coding Reference for Macao RNAV(GNSS) STARs

## Designator: SMT 4A Runway 34

| *Serial Number* | *Path Descriptor* | *Waypoint Identifier* | *Fly-over* | *Track (°M)* | *Magnetic Variation* | *Distance (NM)* | *Turn Dir* | *Altitude (ft)* | *Speed (IAS)* | *Navigation Specification* |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | SMT | - | - | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | MC601 | - | 255 | +3.0 | 2.0 | - | - | - | RNP 1 |
| 03 | TF | HAZEL | - | 222 | +3.0 | 23.4 | L | @FL110 | - | RNP 1 |

## Waypoint Coordinates

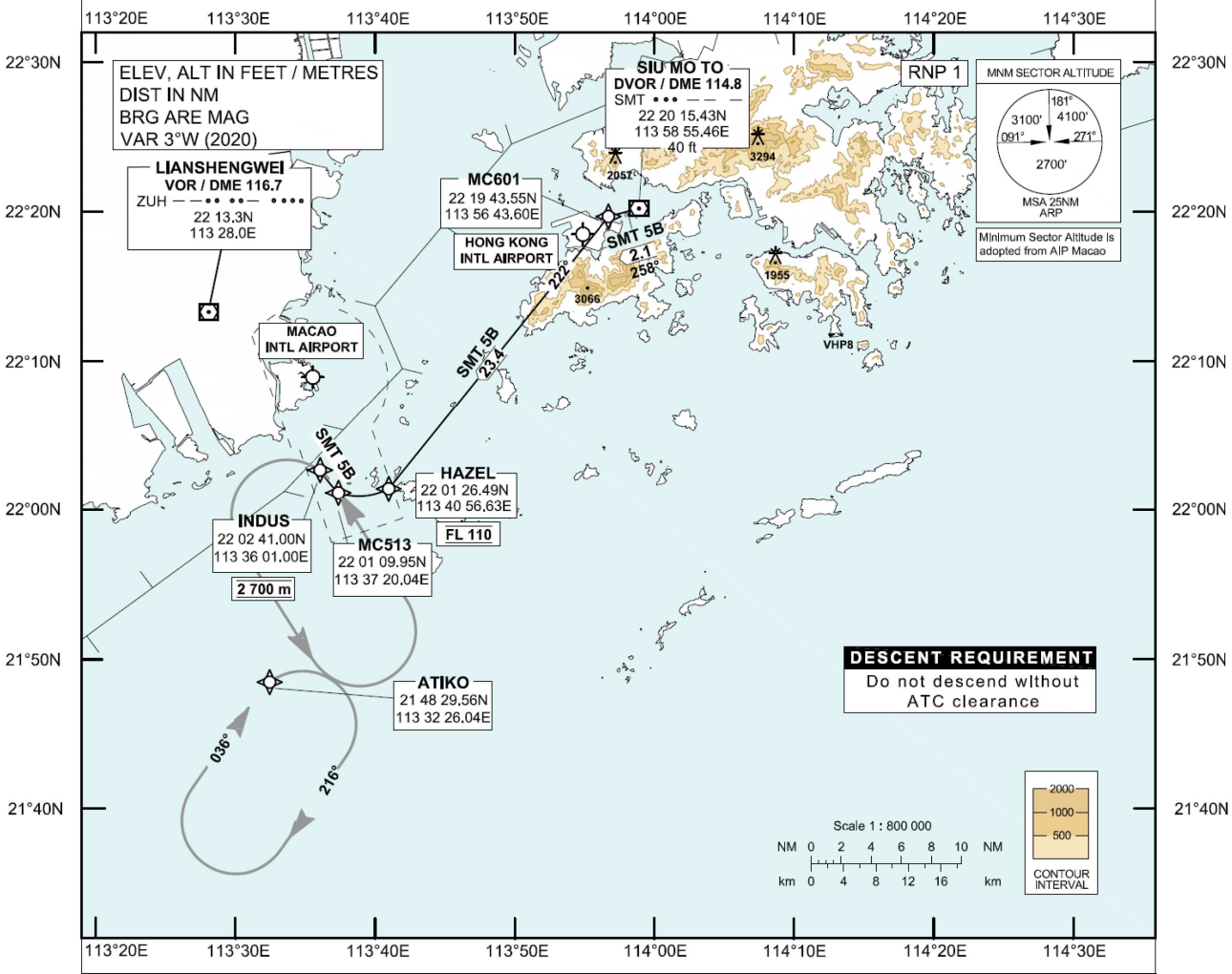
| Waypoint Name | Coordinates (WG584) |
|---|---|
| SMT | 22 20 15.43N<br>113 58 55.46E |
| MC601 | 22 19 43.55N<br>113 56 43.60E |
| HAZEL | 22 01 26.49N<br>113 40 56.63E |

**STANDARD ARRIVAL CHART-INSTRUMENT (STAR) - ICAO**

Transition Altitude 9 000 ft
HONG KONG DEPARTURE 122.0

**MACAO / Intl (VMMC)**
**RWY 16**
**RNAV (GNSS) SMT 5B STAR**

1. For RNAV (GNSS) STAR, aircraft must be approved by State of Registry in accordance with ICAO RNP 1 standard or equivalent. Carriage of certified GNSS receiver is mandatory.
2. Aircraft that do not have approval or whose RNP 1 capability has been degraded shall use the Conventional Procedure described below.




## SMT 5B STAR RWY 16

**RNP 1 Procedure**
**(Mandate procedure available to aircraft appropriately equipped and approved)**
SMT - MC601 - HAZEL - MC513 - INDUS
Continue as instructed by Zhuhai ATC.
Descend as directed by ATC.

**Conventional Procedure**

Leave SMT DVOR on RDL 258. At SMT DME 2.1 NM turn left track direct to HAZEL. At HAZEL, turn right track direct to INDUS.
Continue as instructed by Zhuhai ATC.
Descend as directed by ATC.

**DESCENT REQUIREMENT**
Cross HAZEL at FL 110 and INDUS at 2 700 m. **DO NOT DESCEND WITHOUT ATC CLEARANCE.**

**SPEED CONTROL**
Speed control shall be in force unless otherwise advised. Aircraft on STAR clearance shall fly at 250 KIAS or less whilst below FL 110.

**HOLDING**
The holding patterns for SMT STAR are established at BUMDI, MC513 and ATIKO. In the event of holding, each flight will be instructed individually.
In order to provide traffic management flexibility, traffic may be instructed to hold at other terminal holdings (see ENR 3.6) as directed by ATC.

**LOSS OF COMMUNICATION**
In the event of a loss of communication aircraft shall comply with the descent requirement and STAR track above, and carry out the appropriate approach procedure to RWY 16.

CHANGE: Update of MSA.

AD 2-VMMC-STAR-SMT-B_V06_231213h

# FMC Database Coding Reference for Macao RNAV(GNSS) STARs

## Designator: SMT 5B Runway 16

| *Serial Number* | *Path Descriptor* | *Waypoint Identifier* | *Fly-over* | *Track (°M)* | *Magnetic Variation* | *Distance (NM)* | *Turn Dir* | *Altitude* | *Speed (IAS)* | *Navigation Specification* |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | SMT | - | - | +3.0 | - | - | - | - | RNP 1 |
| 02 | TF | MC601 | - | 255 | +3.0 | 2.0 | - | - | - | RNP 1 |
| 03 | TF | HAZEL | - | 222 | +3.0 | 23.4 | L | @FL110 | - | RNP 1 |
| 04 | TF | MC513 | - | - | +3.0 | - | R | - | - | RNP 1 |
| 05 | TF | INDUS | - | 328 | +3.0 | - | R | @2700M | - | RNP 1 |
| Aircraft shall continue with the Macao RWY16 STAR procedure as published in the AIP Macao | | | | | | | | | | |

## Waypoint Coordinates

| Waypoint Name | Coordinates (WGS84) |
|---|---|
| SMT | 22 20 15.43N<br>113 58 55.46E |
| MC601 | 22 19 43.55N<br>113 56 43.60E |
| HAZEL | 22 01 26.49N<br>113 40 56.63E |
| MC513 | 22 01 09.95N<br>113 37 20.04E |
| INDUS | 22 02 41.00N<br>113 36 01.00E |

# AD 3 HELIPORTS

## VHSS

### VHSS AD 3.1 HELIPORT LOCATION INDICATOR AND NAME

VHSS - SHEUNG WAN / SKY SHUTTLE HELIPORT

### VHSS AD 3.2 HELIPORT GEOGRAPHICAL AND ADMINISTRATIVE DATA

| | | |
|---|---|---|
| 1 | *Heliport Reference Point coordinates and site at AD* | 221719.7N 1140908.4E |
| 2 | *Direction and distance from city* | N shore of Hong Kong Island, and W of Star Ferry Pier, Central |
| 3 | *Elevation* | 120 ft AMSL |
| 4 | *MAG VAR / Annual change* | 3°W (2020) / 4'W |
| 5 | *Heliport Administration, address, telephone, telefax* | Sky Shuttle Helicopters Ltd.<br>Room 1603, China Merchants Tower,<br>Shun Tak Centre,<br>200 Connaught Road Central<br>Hong Kong<br><br>Tel : + 852 2108 9873<br>Fax : + 852 2108 9875 |
| 6 | *Types of traffic permitted (IFR/VFR)* | VFR / SVFR |
| 7 | *Remarks* | Unlicensed heliport - PPR from Heliport Administration |

### VHSS AD 3.3 OPERATIONAL HOURS

| | | |
|---|---|---|
| 1 | *Heliport Administration* | 0100 - 1000 |
| 2 | *Customs and immigration* | 0000 - 1459 |
| 3 | *Health and sanitation* | Nil |
| 4 | *AIS Briefing office* | Available from Hong Kong International Airport |
| 5 | *ATS Reporting office* | Available from Hong Kong International Airport |
| 6 | *MET Briefing office* | Available from Hong Kong International Airport |
| 7 | *ATS* | Available from Hong Kong International Airport |
| 8 | *Fuelling* | Nil |
| 9 | *Handling* | 0000 - 1459 |
| 10 | *Security* | H24 |
| 11 | *De-icing* | Nil |
| 12 | *Remarks* | Heliport shall be closed and all operations shall be ceased when typhoon signal No. 8 is hoisted. |

### VHSS AD 3.4 HANDLING SERVICES AND FACILITIES

| | | |
|---|---|---|
| 1 | *Cargo handling facilities* | Nil |
| 2 | *Fuel/oil types* | Nil |
| 3 | *Fuelling facilities/capacity* | Nil |
| 4 | *De-icing facilities* | Nil |

| | | |
|---|---|---|
| 5 | *Hangar space for visiting aircraft* | Nil |
| 6 | *Repair facilities for visiting aircraft* | Nil |
| 7 | *Remarks* | Nil |

## VHSS AD 3.5 PASSENGER FACILITIES

| | | |
|---|---|---|
| 1 | *Hotels* | In the city |
| 2 | *Restaurants* | At Shun Tak Centre and in the city |
| 3 | *Transportation* | Buses, taxis and ferries |
| 4 | *Medical facilities* | At Shun Tak Centre and Hospital in city |
| 5 | *Bank and Post Office* | At Shun Tak Centre |
| 6 | *Tourist Office* | At Shun Tak Centre |
| 7 | *Remarks* | Passenger movement on helipad shall be suspended when wind speed measured by the anemometer installed at the outer pier is greater than 30 kts. |

## VHSS AD 3.6 RESCUE AND FIRE FIGHTING SERVICES

| | | |
|---|---|---|
| 1 | *Heliport category for fire fighting* | Category H2 |
| 2 | *Rescue equipment* | Light facilities |
| 3 | *Capability for removal of disabled aircraft* | Nil |
| 4 | *Remarks* | Rescue launches with rescue and fire fighting (foam with water) facility and life rafts available from Government Department at short notice. |

## VHSS AD 3.7 SEASONAL AVAILABILITY - CLEARING

| | | |
|---|---|---|
| 1 | *Types of clearing equipment* | Nil |
| 2 | *Clearance priorities* | Nil |
| 3 | *Remarks* | Nil |

## VHSS AD 3.8 APRONS, TAXIWAYS AND CHECK LOCATION DATA

| | | |
|---|---|---|
| 1 | *Apron surface and strength* | Nil |
| 2 | *Taxiway width, surface and strength* | Nil |
| 3 | *ACL location and elevation* | Nil |
| 4 | *VOR checkpoint*<br>*INS checkpoints* | Nil<br>Nil |
| 5 | *Remarks* | Heliport not available for parking during operational hours. |

## VHSS AD 3.9 MARKINGS AND MARKERS

| | | |
|---|---|---|
| 1 | *Final approach and take-off markings* | Western Helipad and Eastern Helipad:<br><br>Each provisioned with yellow circular TLOF and white 'H' Heliport Identification Marking in centre of TLOF. |
| 2 | *TWY, air TWY air transit route markers* | Nil |
| 3 | *Remarks* | Both Western Helipad and Eastern Helipad are provisioned with the following markings:<br><br>Maximum Allowable Mass Marking - '9.0t' marked in white<br>D-Value Marking - 'D17m' marked in white<br>Touchdown and Lift-Off Area Perimeter Marking - Continuous white line<br>Heliport Name Marking - 'VHSS' marked in white |

## VHSS AD 3.10 HELIPORT OBSTACLES

| In approach/TKOF areas | | | At heliport | | Remarks |
|---|---|---|---|---|---|
| Area affected | Obstacle | Co-ordinates | Obstacle | Co-ordinates | Nil |
| a | b | c | d | e | |
| 130/260 APCH | Nil | Nil | Nil | Nil | |
| 080/310 TKOF | Nil | Nil | Nil | Nil | |

## VHSS AD 3.11 METEOROLOGICAL INFORMATION PROVIDED

| | | |
|---|---|---|
| 1 | *Associated MET office* | Hong Kong Airport MET Office |
| 2 | *Hours of service*<br>*MET office outside hours* | H24<br>Not applicable |
| 3 | *Office responsible for TAF preparation*<br>*Periods of validity* | Nil<br>Not applicable |
| 4 | *Type of landing forecasts*<br>*Interval of issuance* | Nil<br>Not applicable |
| 5 | *Briefing/consultation provided* | Self-briefing using AMIDS and telephone consultation |
| 6 | *Flight documentation*<br>*Language used* | METAR/TAF for HKIA is available from AMIDS<br>English |
| 7 | *Charts and other information available for briefing or consultation* | S, U, P, W, T, satellite and radar pictures available from AMIDS. |
| 8 | *Supplementary equipment available for providing information* | Current temperature, wind direction and speed can be obtained from the meteorological equipment installed at the heliport. |
| 9 | *ATS units provided with information* | Nil |
| 10 | *Additional information (limitations of service etc.)* | Nil |

## VHSS AD 3.12 HELIPORT DATA

| | | |
|---|---|---|
| 1 | *Heliport type* | Elevated Helipad |
| 2 | *Pad dimensions* | 34.4m x 34.4m |
| 3 | *FATO, GEO and MAG bearings* | 090°/270°M<br>120°/300°M |
| 4 | *FATO dimensions and SFC type* | 25.0m x 25.0m<br>Aluminum helideck |
| 5 | *TLOF, SFC and BRG strength* | 34.2m x 34.2m<br>Aluminum helideck<br>Load bearing of 9.0t |
| 6 | *Co-ordinates of geometric centre TLOF or THR of FATO* | 221720.0N 1140907.1E<br>Midpoint of Western Helipad<br>221719.3N 1140909.8E<br>Midpoint of Eastern Helipad |
| 7 | *TLOF/FATO, elevation and slope* | 120 ft AMSL<br>Slope < 2% |
| 8 | *Safety area dimension* | Extended outwards from the periphery of the FATO for a distance of 4.7m i.e. to the edges of the helipad.<br>1.5m safety net extends outward from the edges of the helipad. |
| 9 | *HEL CWY dimensions* | Nil |
| 10 | *Obstacle-free sector* | Nil |
| 11 | *Remarks* | Nil |

## VHSS AD 3.13 DECLARED DISTANCES

Not available

## VHSS AD 3.14 APPROACH AND FATO LIGHTING

| | | |
|---|---|---|
| 1 | *APCH LGT system type, LEN, INTST* | Nil |
| 2 | *Type of visual approach slope indicator system* | Nil |
| 3 | *FATO LGT characteristics and location* | Nil |
| 4 | *Aiming point LGT characteristics and location* | Nil |
| 5 | *TLOF LGT characteristics and location* | Fixed Omni-directional perimeter lights showing green.<br>3m of distance between each perimeter light.<br>Floodlights are arranged so as to avoid glare. |
| 6 | *Remarks* | Nil |

## VHSS AD 3.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

| | | |
|---|---|---|
| 1 | *Heliport BCN location, characteristics and hours of operation* | Nil |
| 2 | *WDI location and LGT*<br>*Anemometer location and LGT* | Top of the Marine Control Tower at the outer pier, LGT<br>Top of the Marine Control Tower at the outer pier, LGT |

| | | |
|---|---|---|
| 3 | *TWY edge and centre line lighting* | Nil |
| 4 | *Secondary power supply/switch-over time* | Available |
| 5 | *Remarks* | Nil |

## VHSS AD 3.16 ATS AIRSPACE

Heliport within Hong Kong International Airport Control Zone

## VHSS AD 3.17 ATS COMMUNICATION FACILITIES

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Service Designator | Call sign | Frequency | Hours of Operation | Remarks |
| FOCC | STAR | 131.0 MHZ | 00:00 -15:30 | Sky Shuttle Heliport Radio |
| ZNC | Zone Control | 120.6 MHZ | H24 | Located at Hong Kong International Airport |
| | | 122.075 MHZ | | Secondary |

## VHSS AD 3.18 RADIO NAVIGATION AND LANDING AIDS

Nil

## VHSS AD 3.19 LOCAL TRAFFIC REGULATIONS

1 Airline operators shall obtain prior approval from DGCA for each specific type of helicopter to be operated.

2 Single-engine helicopters are not permitted to operate from the helipad and all operators are required to comply with Category A vertical takeoff and landing profile requirements.

3 Helicopters are limited to an overall length, including rotor disk, of 17 m and a maximum all up weight not exceeding 9 000 kg.

## VHSS AD 3.20 NOISE ABATEMENT PROCEDURES

1 The following are Noise Abatement Operating Restrictions on helicopter movements at Sky Shuttle Heliport during the evening period of 1900 to 2259 LT due to environmental reasons:

a) Total number of movements operating on both helipads in one evening shall not exceed 34;

b) Total number of movements operating from the Eastern pad in one evening shall not exceed 22;

c) When the total number of movements operating from both helipads for the same evening is 22 or less, all these movements shall only be allowed on the Eastern pad so as to maximize its better noise shielding effect;

d) When the total number of movements operating from both helipads for the same evening exceeds 22, 22 numbers of these movements shall be on the Eastern pad.

## VHSS AD 3.21 FLIGHT PROCEDURES

1 Traffic Circuit

1.1 The traffic circuit shall always be over water to the north of the heliport with the downwind leg a minimum of 800 m off-shore.

2 Final Approach Routeing

2.1 The final approach tracks to the heliport are 130°M or 260°M.

2.2 In the event of a missed approach from the 130°M approach the helicopter shall turn left to track 080°M and climb to 500 ft. Turn left to downwind track 285°M and then turn left to reposition on final approach.

2.3 In the event of a missed approach from the 260°M approach the helicopter shall turn right to track 310°M and climb to 500 ft. Turn right to downwind track 105°M and then turn right to reposition on final approach.

3 Departure Routeing

3.1 The departure tracks from the heliport are 080°M or 310°M.

4 Communications

4.1 The heliport is located within the Hong Kong International Airport Control Zone and all helicopters must maintain two-way contact with Hong Kong Zone Control on frequency 120.6 MHZ primary and 122.075 MHZ secondary whilst operating at the heliport.

4.2 Helicopters inbound to the heliport shall contact Sky Shuttle Heliport Radio (STAR) on frequency 131.0 MHZ prior to arrival.

## VHSS AD 3.22 ADDITIONAL INFORMATION

Nil

## VHSS AD 3.23 CHARTS RELATED TO A HELIPORT

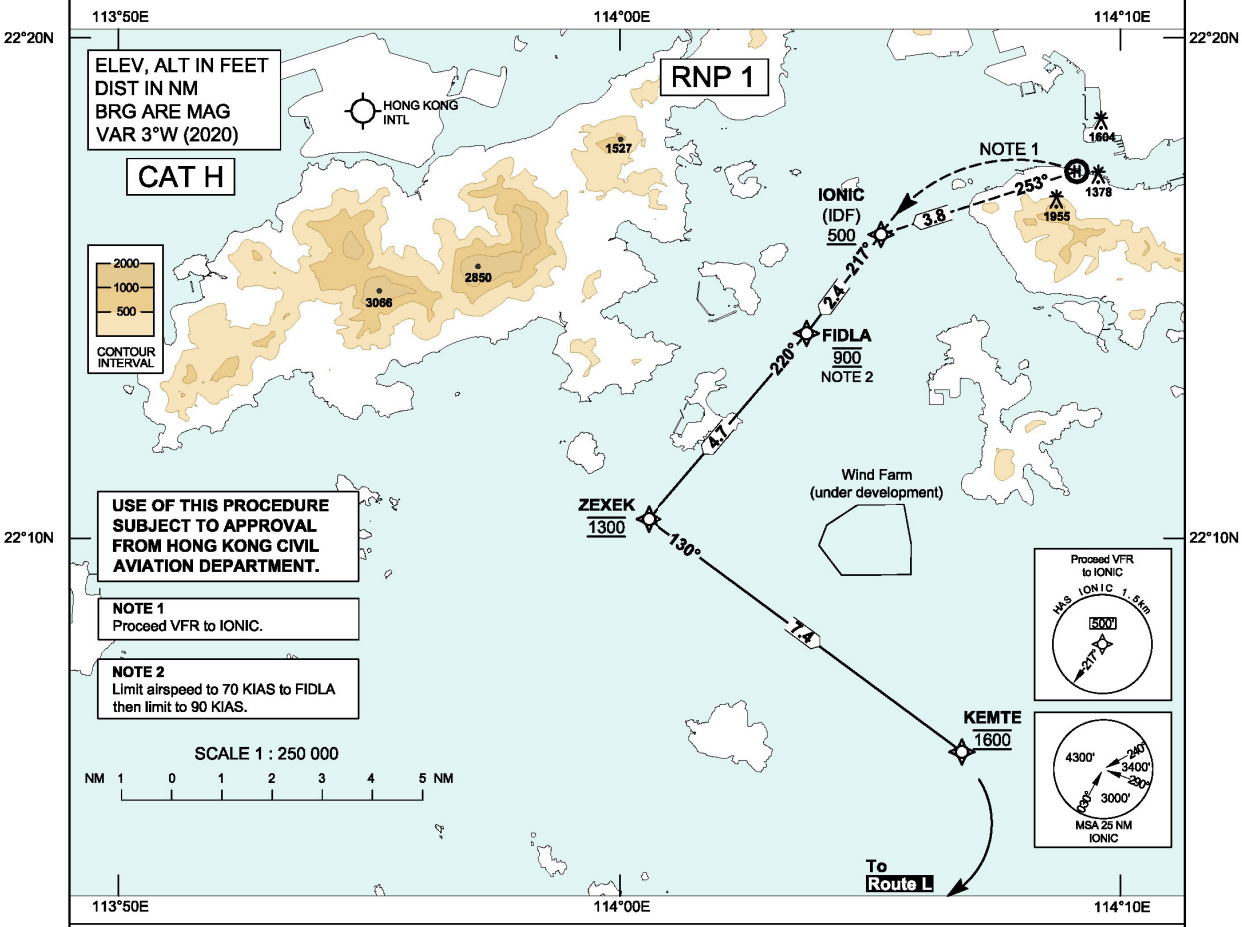
| | |
|---|---|
| SKY SHUTTLE HELIPORT (VHSS)<br>RNAV KEMTE DEPARTURE | AD 3-VHSS-SID |
| SKY SHUTTLE HELIPORT (VHSS)<br>RNP 037 | AD 3-VHSS-IAC |

**STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO**

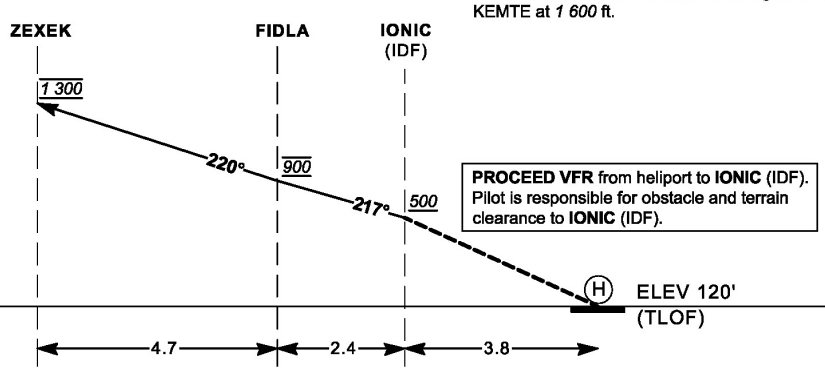
**HELIPORT ELEV 120 FT**
HEIGHTS RELATED TO HRP ELEV

HONG KONG ZONE 120.6

**SKY SHUTTLE HELIPORT (VHSS)**
**RNAV KEMTE 1 DEPARTURE**




**AFTER TAKEOFF:**
Climb in VMC and accelerate to Vmini to cross IONIC at or above *500* ft prior to entering Instrument Meteorological Conditions. Continue climbing to cross FIDLA at *900* ft. Continue climbing to cross ZEXEK at *1 300* ft. From ZEXEK continue climbing to cross KEMTE at *1 600* ft.




**PROCEED VFR** from heliport to **IONIC** (IDF). Pilot is responsible for obstacle and terrain clearance to **IONIC** (IDF).

| Climb required | Climb (ft / NM) | Recommended Climb (ft / min at GS) | | | | |
|---|---|---|---|---|---|---|
| | | 50 | 60 | 70 | 80 | 90 |
| VFR -> IONIC | 99 | 82 | 99 | 115 | NOTE 2 | |
| IONIC -> FIDLA | 167 | 139 | 167 | 194 | | |
| FIDLA -> ZEXEK | 85 | 71 | 85 | 99 | 113 | 128 |

**CHANGE:** Update of coastline.

AD 3-VHSS-SID_V05_220608li

# SKY SHUTTLE HELIPORT (VHSS)
# RNAV KEMTE 1 DEPARTURE

## TABULAR DESCRIPTION

### Designator: RNAV KEMTE 1

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course /Track °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | IONIC | - | - | +3.0 | - | - | +500 | - | RNP 1 |
| 02 | TF | FIDLA | - | 217 (214) | +3.0 | 2.4 | - | @900 | -70 | RNP 1 |
| 03 | TF | ZEXEK | - | 220 (217) | +3.0 | 4.7 | L | @1300 | -90 | RNP 1 |
| 04 | TF | KEMTE | - | 130 (127) | +3.0 | 7.4 | - | @1600 | - | RNP 1 |

## WAYPOINT LIST

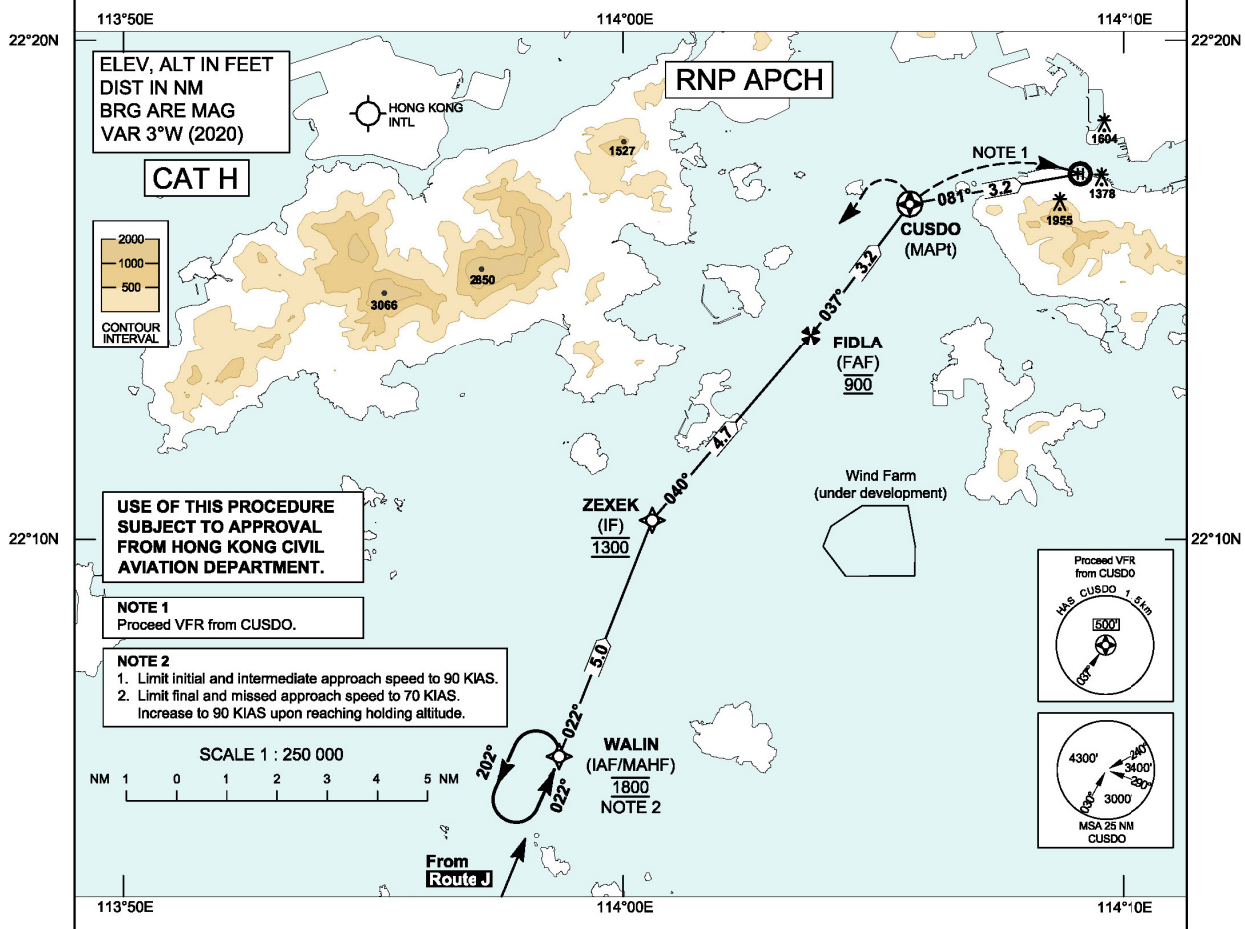
| RNAV KEMTE | | |
|---|---|---|
| **Waypoint Identifier** | **Coordinates (WGS-84)** | |
| Sky Shuttle Heliport – VHSS | 22 17 19.70 N | 114 09 08.40 E |
| IONIC (IDF) | 22 16 04.50 N | 114 05 13.93 E |
| FIDLA | 22 14 06.03 N | 114 03 44.89 E |
| ZEXEK | 22 10 23.10 N | 114 00 34.90 E |
| KEMTE | 22 05 44.56 N | 114 06 50.54 E |

**INSTRUMENT APPROACH CHART - ICAO**

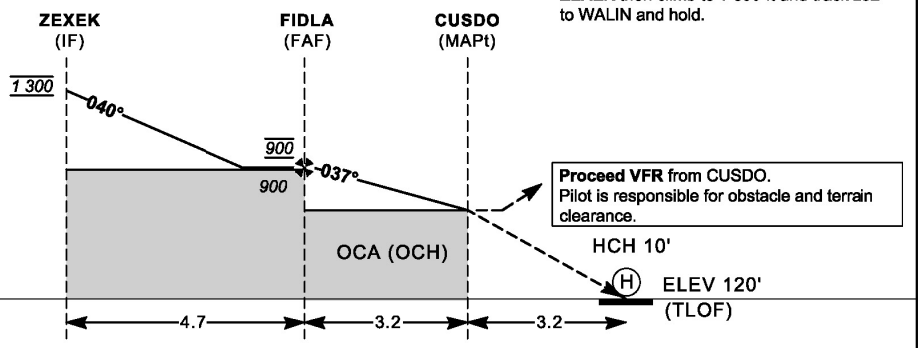
**HELIPORT ELEV 120 FT**
HEIGHTS RELATED TO HRP ELEV

HONG KONG ZONE 120.6

**SKY SHUTTLE HELIPORT (VHSS)**
**RNP 037**




**MISSED APPROACH:**
Climb to *900* ft turning LEFT direct to FIDLA then climb to *1 300* ft and track 220° to ZEXEK then climb to *1 800* ft and track 202° to WALIN and hold.




**Proceed VFR** from CUSDO.
Pilot is responsible for obstacle and terrain clearance.

| OCA / OCH | CAT H |
|---|---|
| LNAV | *520* (400) |

| ADVISORY INFORMATION ONLY | | | | |
|---|---|---|---|---|
| Ground speed | kt | 60 | 70 | 80 |
| Rate of desent FAF - MAPt | ft/min | 119 | 139 | 158 |

NOTE:
Local Altimeter setting not available, use Hong Kong International Airport Altimeter setting.

**CHANGE:** Update of coastline.

AD 3-VHSS-IAC_V07_220608i

# SKY SHUTTLE HELIPORT (VHSS)
# RNP 037

## TABULAR DESCRIPTION
## Designator: RNP 037

| Serial Number | Path Descriptor | Waypoint Identifier | Fly-over | Course /Track °M (°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (ft) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | IF | WALIN | - | - | +3.0 | - | - | @1800 | -90 | RNP APCH |
| 02 | TF | ZEXEK | - | 022 (019) | +3.0 | 5.0 | - | @1300 | -90 | RNP APCH |
| 03 | TF | FIDLA | - | 040 (037) | +3.0 | 4.7 | R | @900 | -70 | RNP APCH |
| 04 | TF | CUSDO | Y | 037 (034) | +3.0 | 3.2 | - | - | - | RNP APCH |
| 05 | CA | - | - | 037 (034) | +3.0 | 1.0 | - | +520 | - | RNP APCH |
| 06 | DF | FIDLA | - | - | +3.0 | - | L | @900 | - | RNP APCH |
| 07 | TF | ZEXEK | - | 220 (217) | +3.0 | 4.7 | - | @1300 | - | RNP APCH |
| 08 | TF | WALIN | Y | 202 (199) | +3.0 | 5.0 | - | @1800 | -70 | RNP APCH |
| 09 | HM | WALIN | - | 022 (019) | +3.0 | - | L | - | -90 | RNP APCH |

## WAYPOINT LIST

| RNP 037 | | |
|---|---|---|
| **Waypoint Identifier** | **Coordinates (WGS-84)** | |
| WALIN (IAF/MAHF) | 22 05 40.10 N | 113 58 43.20 E |
| ZEXEK (IF) | 22 10 23.10 N | 114 00 34.90 E |
| FIDLA (FAF) | 22 14 06.03 N | 114 03 44.89 E |
| CUSDO (MAPt) | 22 16 43.86 N | 114 05 43.60 E |
| Sky Shuttle Heliport – VHSS | 22 17 19.70 N | 114 09 08.40 E |