Civil Aviation Department

Aeronautical Information Publication

Hong Kong

Effective Date: 21 March 2024

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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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.

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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GEN 0.2 RECORD OF AIP AMENDMENTS

AIP AMENDMENT				
NR/Year	**Publication date**	**Effective date**	**Date inserted**	**Inserted by**
Up to 13 / 22	Previously Entered			
1 / 23	1 DEC 2022	26 JAN 2023		
2 / 23 (AIRAC)	29 DEC 2022	23 FEB 2023		
3 / 23	26 JAN 2023	23 MAR 2023		
4 / 23	23 FEB 2023	20 APR 2023		
5 / 23	23 MAR 2023	18 MAY 2023		
6 / 23	20 APR 2023	15 JUN 2023		
7 / 23	18 MAY 2023	13 JUL 2023		
8 / 23	15 JUN 2023	10 AUG 2023		
9 / 23	13 JUL 2023	7 SEP 2023		
10 / 23 (AIRAC)	10 AUG 2023	5 OCT 2023		
11 / 23	7 SEP 2023	2 NOV 2023		
12 / 23 (AIRAC)	5 OCT 2023	30 NOV 2023		
13 / 23	2 NOV 2023	28 DEC 2023		
1 / 24	30 NOV 2023	25 JAN 2024		
2 / 24 (AIRAC)	28 DEC 2023	22 FEB 2024		
3 / 24	25 JAN 2024	21 MAR 2024		

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GEN 0.3 RECORD OF AIP SUPPLEMENTS

Record of AIP Supplements as at 25 JAN 24

NR/Year	*Subject*	*AIP Section(s) affected*	*Period of validity*	*Cancellation record*
15/21	Rock Blasting	ENR	UFN	
11/22	Hong Kong International Airport Location of the Runway Under Reconfiguration in Relation to Runway 07R/25L and 07L/25R	AD	UFN	
14/22	Temporary Obstructions at Kwo Lo Wan	ENR	UFN	
16/22	Hong Kong International Airport Runway Closure Programme	AD	UFN	
03/23	Tentative Operational Hours of Sheung Wan/Sky Shuttle Heliport (VHSS)	AD	UFN	
06/23	Hong Kong Offshore Liquefied Natural Gas Terminal	ENR	UFN	
07/23	Hong Kong International Airport Construction of Eastern Airfield Vehicular Tunnel Extension	AD	UFN	
08/23	Construction of the Integrated Waste Management Facilities	ENR	UFN	
01/24	Hong Kong International Airport Closure of Taxiway A East of Taxiway A10	AD	UFN	

NR/Year	*Subject*	*AIP Section(s) affected*	*Period of validity*	*Cancellation record*

GEN 0.4 CHECKLIST OF AIP PAGES

GEN - (General)

GEN 0	
0.1-1	30 JAN 20
0.1-2	30 JAN 20
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0.4-1	21 MAR 24
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0.4-3	22 FEB 24
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1.3-2	28 DEC 23
1.3-3	28 DEC 23
1.3-4	28 DEC 23
1.3-5	28 DEC 23
1.3-6	28 DEC 23
1.4-1	23 MAY 19
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1.7-4	30 NOV 23
1.7-5	30 NOV 23
1.7-6	30 NOV 23
1.7-7	30 NOV 23
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2.1-2	15 JUL 21
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2.2-4	31 DEC 20
2.2-5	31 DEC 20
2.2-6	31 DEC 20
2.2-7	31 DEC 20
2.2-8	31 DEC 20
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3.1-3	10 AUG 23
3.2-1	15 JUL 21

3.2-2	15 JUL 21	1.4-2	30 NOV 23
3.2-3	3 NOV 22	1.5-1	23 MAY 19
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3.3-1	30 DEC 21	1.5-3	3 NOV 22
3.3-2	23 MAY 19	1.5-4	3 NOV 22
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3.4-3	10 AUG 23	1.6-1	12 AUG 21
3.4-4	10 AUG 23	1.6-2	3 DEC 20
3.4-5	10 AUG 23	1.6-3	3 DEC 20
3.5-1	1 DEC 22	1.7-1	1 DEC 22
3.5-2	1 DEC 22	1.7-2	1 DEC 22
3.5-3	3 NOV 22	1.8-1	23 MAY 19
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3.5-6	1 DEC 22	1.8-4	22 FEB 24
3.5-7	3 NOV 22	1.8-5	6 OCT 22
3.5-8	3 NOV 22	1.8-6	22 FEB 24
3.5-9	3 NOV 22	1.8-7	6 OCT 22
3.5-10	3 NOV 22	1.8-8	30 NOV 23
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3.6-1	23 MAY 19	1.8-14	6 OCT 22
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GEN 4		1.9-1	12 AUG 21
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0.6-4	15 JUL 21	1.10-4	13 JUL 23
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1.1-2	3 DEC 20	1.10-7	22 FEB 24
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1.2-1	30 NOV 23	1.10-9	30 NOV 23
1.3-1	23 MAY 19	1.10-10	30 NOV 23
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1.14-1	15 JUL 21	3.1-32	24 MAR 22
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2.1-2	30 NOV 23	3.3-2	24 MAR 22
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2.1-6	30 NOV 23	3.3-6	15 AUG 19
2.1-7	10 SEP 20	3.4-1	23 FEB 23
2.1-8	23 MAY 19	3.4-2	30 NOV 23
2.2-1	23 MAY 19	3.4-3	11 AUG 22
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3.1-1	30 NOV 23	ENR 3.4-Heli-1	30 NOV 23
3.1-2	25 FEB 21	ENR 3.4-Heli-2	3 NOV 22
3.1-3	30 NOV 23	ENR 3.4-Heli-3	25 JAN 24
3.1-4	30 NOV 23	3.5-1	2 DEC 21
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3.1-6	30 NOV 23	3.6-2	3 NOV 22
3.1-7	30 NOV 23	**ENR 4**	
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3.1-11	24 MAR 22	4.4-1	30 NOV 23
3.1-12	15 AUG 19	4.4-2	30 NOV 23
3.1-13	5 NOV 20	4.4-3	30 NOV 23
3.1-14	2 DEC 21	4.4-4	22 FEB 24
3.1-15	2 DEC 21	4.4-5	22 FEB 24
3.1-16	2 DEC 21	4.4-6	22 FEB 24
3.1-17	2 DEC 21	4.4-7	22 FEB 24
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3.1-24	24 MAR 22	5.3-1	23 MAY 19
3.1-25	24 MAR 22	5.3-2	8 OCT 20

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5.5-1	23 MAY 19	VHHH-8	30 NOV 23
5.5-2	23 MAY 19	VHHH-9	30 NOV 23
5.5-3	23 MAY 19	VHHH-10	30 NOV 23
ENR 5.5-ASRA	3 NOV 22	VHHH-11	30 NOV 23
5.6-1	23 MAY 19	VHHH-12	3 NOV 22
ENR 6		VHHH-13	30 NOV 23
ENR 6-1	30 NOV 23	VHHH-14	1 DEC 22
ENR 6-2	30 NOV 23	VHHH-15	3 NOV 22
ENR 6-3	6 OCT 22	VHHH-16	3 NOV 22
ENR 6-4	22 FEB 24	VHHH-17	3 NOV 22
ENR 6-5	6 OCT 22	VHHH-18	3 NOV 22
ENR 6-6	6 OCT 22	VHHH-19	22 FEB 24
ENR 6-7	6 OCT 22	VHHH-20	22 FEB 24
AD - (Aerodromes)		VHHH-21	22 FEB 24
AD 0		VHHH-22	22 FEB 24
0.6-1	19 MAY 22	VHHH-23	22 FEB 24
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0.6-3	22 FEB 24	VHHH-25	22 FEB 24
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0.6-6	30 NOV 23	VHHH-28	22 FEB 24
0.6-7	22 FEB 24	VHHH-29	22 FEB 24
0.6-8	22 FEB 24	VHHH-30	22 FEB 24
AD 1		VHHH-31	22 FEB 24
1.1-1	3 NOV 22	VHHH-32	22 FEB 24
1.1-2	3 NOV 22	VHHH-33	22 FEB 24
1.1-3	30 NOV 23	VHHH-34	22 FEB 24
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1.1-5	3 NOV 22	VHHH-36	22 FEB 24
1.1-6	11 AUG 22	VHHH-37	22 FEB 24
1.1-7	30 NOV 23	VHHH-38	22 FEB 24
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1.3-1	23 MAY 19	VHHH-40	22 FEB 24
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VHHH-2	30 NOV 23	AD 2-VHHH-ADC-1	30 NOV 23
VHHH-3	3 NOV 22	AD 2-VHHH-ADC-2	30 NOV 23
VHHH-4	24 FEB 22	AD 2-VHHH-ADC-3	30 NOV 23
VHHH-5	12 AUG 21	AD 2-VHHH-ADC-4	30 NOV 23
VHHH-6	12 AUG 21	AD 2-VHHH-ADC-5	30 NOV 23

AD 2-VHHH-ADC-6	30 NOV 23	AD 2-VHHH-SID-PECAN-F	3 NOV 22
AD 2-VHHH-AOC-1	13 JUL 23	AD 2-VHHH-SID-PECAN-F-1	3 NOV 22
AD 2-VHHH-AOC-2	13 JUL 23	AD 2-VHHH-SID-PECAN-X	3 NOV 22
AD 2-VHHH-AOC-3	13 JUL 23	AD 2-VHHH-SID-PECAN-X-1	3 NOV 22
AD 2-VHHH-ATOC-1	3 NOV 22	AD 2-VHHH-SID-PECAN-Z	3 NOV 22
AD 2-VHHH-AC-DEP	30 NOV 23	AD 2-VHHH-SID-PECAN-Z-1	3 NOV 22
AD 2-VHHH-SID-ATENA-A	3 NOV 22	AD 2-VHHH-SID-RASSE-A	3 NOV 22
AD 2-VHHH-SID-ATENA-A-1	3 NOV 22	AD 2-VHHH-SID-RASSE-A-1	3 NOV 22
AD 2-VHHH-SID-ATENA-E	3 NOV 22	AD 2-VHHH-SID-RASSE-E	3 NOV 22
AD 2-VHHH-SID-ATENA-E-1	3 NOV 22	AD 2-VHHH-SID-RASSE-E-1	3 NOV 22
AD 2-VHHH-SID-ATENA-X	3 NOV 22	AD 2-VHHH-SID-RASSE-X	3 NOV 22
AD 2-VHHH-SID-ATENA-X-1	3 NOV 22	AD 2-VHHH-SID-RASSE-X-1	3 NOV 22
AD 2-VHHH-SID-ATENA-Z	3 NOV 22	AD 2-VHHH-SID-RASSE-Z	3 NOV 22
AD 2-VHHH-SID-ATENA-Z-1	3 NOV 22	AD 2-VHHH-SID-RASSE-Z-1	3 NOV 22
AD 2-VHHH-SID-BEKOL-A	3 NOV 22	AD 2-VHHH-SID-SKATE-A	3 NOV 22
AD 2-VHHH-SID-BEKOL-A-1	3 NOV 22	AD 2-VHHH-SID-SKATE-A-1	3 NOV 22
AD 2-VHHH-SID-BEKOL-B	3 NOV 22	AD 2-VHHH-SID-SKATE-E	3 NOV 22
AD 2-VHHH-SID-BEKOL-B-1	3 NOV 22	AD 2-VHHH-SID-SKATE-E-1	3 NOV 22
AD 2-VHHH-SID-BEKOL-E	3 NOV 22	AD 2-VHHH-SID-SKATE-X	3 NOV 22
AD 2-VHHH-SID-BEKOL-E-1	3 NOV 22	AD 2-VHHH-SID-SKATE-X-1	3 NOV 22
AD 2-VHHH-SID-BEKOL-F	3 NOV 22	AD 2-VHHH-SID-SKATE-Z	3 NOV 22
AD 2-VHHH-SID-BEKOL-F-1	3 NOV 22	AD 2-VHHH-SID-SKATE-Z-1	3 NOV 22
AD 2-VHHH-SID-LAKES-A	3 NOV 22	AD 2-VHHH-SID-VENGO-A	3 NOV 22
AD 2-VHHH-SID-LAKES-A-1	3 NOV 22	AD 2-VHHH-SID-VENGO-A-1	3 NOV 22
AD 2-VHHH-SID-LAKES-B	3 NOV 22	AD 2-VHHH-SID-VENGO-E	3 NOV 22
AD 2-VHHH-SID-LAKES-B-1	3 NOV 22	AD 2-VHHH-SID-VENGO-E-1	3 NOV 22
AD 2-VHHH-SID-LAKES-E	3 NOV 22	AD 2-VHHH-SID-VENGO-X	3 NOV 22
AD 2-VHHH-SID-LAKES-E-1	3 NOV 22	AD 2-VHHH-SID-VENGO-X-1	3 NOV 22
AD 2-VHHH-SID-LAKES-F	3 NOV 22	AD 2-VHHH-SID-VENGO-Z	3 NOV 22
AD 2-VHHH-SID-LAKES-F-1	3 NOV 22	AD 2-VHHH-SID-VENGO-Z-1	3 NOV 22
AD 2-VHHH-SID-OCEAN-A	3 NOV 22	AD 2-VHHH-SID-RAMEN-A	30 NOV 23
AD 2-VHHH-SID-OCEAN-A-1	3 NOV 22	AD 2-VHHH-SID-RAMEN-A-1	30 NOV 23
AD 2-VHHH-SID-OCEAN-B	3 NOV 22	AD 2-VHHH-SID-RAMEN-E	3 NOV 22
AD 2-VHHH-SID-OCEAN-B-1	3 NOV 22	AD 2-VHHH-SID-RAMEN-E-1	3 NOV 22
AD 2-VHHH-SID-OCEAN-E	3 NOV 22	AD 2-VHHH-SID-RUMSY-B	30 NOV 23
AD 2-VHHH-SID-OCEAN-E-1	3 NOV 22	AD 2-VHHH-SID-RUMSY-B-1	30 NOV 23
AD 2-VHHH-SID-OCEAN-F	3 NOV 22	AD 2-VHHH-SID-RUMSY-F	3 NOV 22
AD 2-VHHH-SID-OCEAN-F-1	3 NOV 22	AD 2-VHHH-SID-RUMSY-F-1	3 NOV 22
AD 2-VHHH-SID-PECAN-A	3 NOV 22	AD 2-VHHH-AC-ARR	30 NOV 23
AD 2-VHHH-SID-PECAN-A-1	3 NOV 22	AD 2-VHHH-STAR-ABBEY	3 NOV 22
AD 2-VHHH-SID-PECAN-B	3 NOV 22	AD 2-VHHH-STAR-ABBEY-1	3 NOV 22
AD 2-VHHH-SID-PECAN-B-1	3 NOV 22	AD 2-VHHH-STAR-BETTY	3 NOV 22
AD 2-VHHH-SID-PECAN-E	3 NOV 22	AD 2-VHHH-STAR-BETTY-1	3 NOV 22
AD 2-VHHH-SID-PECAN-E-1	3 NOV 22	AD 2-VHHH-STAR-CANTO-A	3 NOV 22

AD 2-VHHH-STAR-CANTO-A-1	3 NOV 22
AD 2-VHHH-STAR-CANTO-B	3 NOV 22
AD 2-VHHH-STAR-CANTO-B-1	3 NOV 22
AD 2-VHHH-STAR-SIERA-AC	3 NOV 22
AD 2-VHHH-STAR-SIERA-AC-1	3 NOV 22
AD 2-VHHH-STAR-SIERA-BD	3 NOV 22
AD 2-VHHH-STAR-SIERA-BD-1	3 NOV 22
AD 2-VHHH-STAR-G	3 NOV 22
AD 2-VHHH-STAR-G-1	3 NOV 22
AD 2-VHHH-SMAC-1	22 FEB 24
AD 2-VHHH-IAC-01A	30 NOV 23
AD 2-VHHH-IAC-01A-1	30 NOV 23
AD 2-VHHH-IAC-01C	30 NOV 23
AD 2-VHHH-IAC-01C-1	30 NOV 23
AD 2-VHHH-IAC-01E	3 NOV 22
AD 2-VHHH-IAC-01E-1	15 JUL 21
AD 2-VHHH-IAC-01G	26 JAN 23
AD 2-VHHH-IAC-01G-1	26 JAN 23
AD 2-VHHH-IAC-02A	22 FEB 24
AD 2-VHHH-IAC-02A-1	30 NOV 23
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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 Civil Aviation Department Headquarters 1 Tung Fai Road Hong Kong International Airport Lantau 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 Hong Kong Observatory 134A Nathan Road Kowloon 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 Customs Headquarters Building 222 Java Road North Point 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 Immigration Tower 7 Gloucester Road Wan Chai Hong Kong
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 Wu Chung House 213 Queen's Road East Wan Chai 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 Airport Authority Hong Kong HKIA Tower 1 Sky Plaza Road Hong Kong International Airport Lantau 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 Civil Aviation Department Headquarters 1 Tung Fai Road Hong Kong International Airport Lantau 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 5/F Cheung Sha Wan Government Offices 303 Cheung Sha Wan Road Kowloon 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 Level G, Facility Building 1 Tung Fai Road Hong Kong International Airport Lantau Hong Kong
Telephone Number:	+852 9518 5800 (24 hours)
Telefax Number:	+852 2910 6049 (local) +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:

http://www.legislation.gov.hk/eng/home.htm

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:

http://www.legislation.gov.hk/eng/home.htm

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 http:// 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 Tower, 7 Gloucester Road, Wan Chai, Hong Kong, 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 **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

2.3 **Visas Requirement**

2.3.1 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	Fiji	New Zealand
Anguilla	Finland	Norway
Antigua and Barbuda	France	Papua New Guinea
Argentina	Germany	Pitcairn, Henderson, Ducie & Oeno Islands
Australia	Gibraltar	Poland
Austria	Greece	Portugal
Bahamas	Greenland	Romania
Barbados	Grenada	San Marino
Belgium	Guyana	Seychelles
Belize	Hungary	Singapore
Bermuda	Iceland	Slovak Republic
Botswana	Ireland (Republic of)	Slovenia
Brazil	Israel	Spain
Britain (British Overseas Territories citizens, British Overseas citizens, British subjects and British Protected persons)	Italy	St Helena
British Antarctic Territory	Jamaica	St Helena Dependencies (Ascension, Tristan Da Cunha)
British Indian Ocean Territory	Japan	St Kitts and Nevis
British Virgin Islands	Kenya	St Lucia
Brunei Darussalam	Kiribati	St Vincent and the Grenadines
Bulgaria	Korea (Republic of)	Sweden
Canada	Latvia	Switzerland
Cayman Islands	Liechtenstein	Tanzania
Chile	Lithuania	The South Georgia and the South Sandwich Islands
Colombia	Luxembourg	The Sovereign Base Areas of Akrotiri and Dhekelia
Croatia	Malawi	Tonga *
Cyprus (Republic of)	Malaysia	Trinidad and Tobago
Czech Republic	Maldives	Türkiye
Denmark	Malta	Turks and Caicos Islands
Dominica (Commonwealth of)	Mauritius	Tuvalu #
Ecuador	Mexico	Uruguay
Egypt	Monaco	U.S.A. @
Estonia	Montserrat	Vanuatu
Eswatini	Namibia	Venezuela
Falkland Islands & Dependencies	Nauru	Zambia
Faroe Islands	Netherlands	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	Morocco
Bahrain	Oman
Belarus	Panama
Bolivia	Paraguay
Cape Verde (Republic of)	Peru
Costa Rica *	Qatar
Dominican Republic	Samoa
El Salvador	Saudi Arabia
Guatemala	South Africa
Honduras	Thailand
Indonesia	Tunisia
Jordan	Uganda
Kuwait	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. 2.3.2 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. 2.3.1 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.

2.3.2 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, Ethiopia, Gambia, Georgia, 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.

2.4 **Seamen**

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

2.4.2 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).

2.4.3 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.

2.4.4 Seamen covered in para. 2.4.1 and 2.4.2 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.

2.5 **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. 2.3.2.

2.6 **Transit Passengers**

2.6.1 Passengers holding stateless documents, and nationals of the countries listed at para. 2.3.2 require transit visas to land in Hong Kong in transit.

2.6.2 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, 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, Togo and Yemen (Republic of)). Personnel of airline company must keep the passengers from presenting to immigration authorities.

2.7 **Airlines Responsibility**

2.7.1 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.

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. 7.1.3:

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 not shown to nearest half-metre and are shown to nearest metre.

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

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

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.
9.1	The API system is not yet in place in Hong Kong.
9.1.1*	The API system is not yet in place in Hong Kong.
9.2*	The API system is not yet in place in Hong Kong.
9.3*	The API system is not yet in place in Hong Kong.
9.4*	The API system is not yet in place in Hong Kong.
9.5	PNR is not yet in place in Hong Kong.
9.6	PNR is not yet in place in Hong Kong.
9.7	The API system is not yet in place in Hong Kong.
9.8	The API system is not yet in place in Hong Kong.
9.9*	The API system is not yet in place in Hong Kong.
9.10	The API system is not yet in place in Hong Kong.
9.11	The API system is not yet in place in Hong Kong.
9.12*	The API system is not yet in place in Hong Kong.
9.13	The API system is not yet in place in Hong Kong.
9.14*	The API system is not yet in place in Hong Kong.
9.15	The API system is not yet in place in Hong Kong.
9.16*	The API system is not yet in place in Hong Kong.
9.17*	The API system is not yet in place in Hong Kong.
9.18*	The API system is not yet in place in Hong Kong.
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.

The RWY 25L localizer at the Hong Kong International Airport does not meet standard coverage criteria.

The RWY 25R 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.

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.

** : Recommended Practice*

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

NIL

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 * International nautical miles, for which conversion into metres is given by: 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

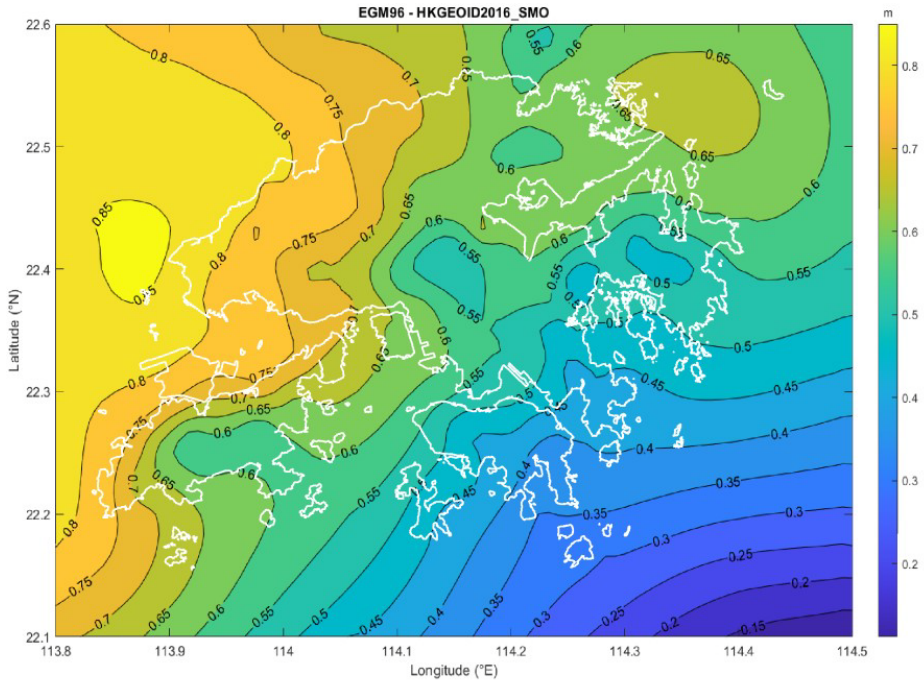
4.1 Hong Kong Principal Datum (HKPD) is the vertical reference system used in Hong Kong, which is about 1.30 metres below Mean Sea Level (MSL) as at 2016.

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	Flight plan
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

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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)
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
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 1 NM = 1.852 KM		KM to NM 1 KM = 0.54 NM		FT to M 1 FT = 0.3048 M		M to FT 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		

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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 2021 to 2023.

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 2022, which is used as an “average year” for the years from 2021 to 2023. 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	6:39	7:04	17:52	18:16	MAR	1	6:23	6:46	18:28	18:50	MAY	1	5:29	5:53	18:51	19:14
	2	6:40	7:04	17:52	18:17		2	6:23	6:45	18:28	18:51		2	5:28	5:52	18:51	19:15
	3	6:40	7:04	17:53	18:17		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	5:51	18:52	19:16
	5	6:41	7:05	17:54	18:19		5	6:20	6:42	18:30	18:52		5	5:26	5:50	18:52	19:16
	6	6:41	7:05	17:55	18:19		6	6:19	6:42	18:30	18:52		6	5:26	5:49	18:53	19:17
	7	6:41	7:05	17:56	18:20		7	6:18	6:41	18:30	18:53		7	5:25	5:49	18:53	19:17
	8	6:41	7:06	17:56	18:21		8	6:17	6:40	18:31	18:53		8	5:25	5:48	18:54	19:18
	9	6:42	7:06	17:57	18:21		9	6:17	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	6:16	6:38	18:32	18:54		10	5:23	5:47	18:55	19:19
	11	6:42	7:06	17:58	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	18:55		14	5:21	5:45	18:56	19:21
	15	6:42	7:06	18:01	18:25		15	6:11	6:34	18:33	18:56		15	5:21	5:45	18:57	19:21
	16	6:42	7:06	18:02	18:26		16	6:10	6:33	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	6:32	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	6:31	18:35	18:57		18	5:19	5:44	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	6:07	6:29	18:35	18:58		20	5:19	5:43	18:59	19:23
	21	6:42	7:06	18:05	18:29		21	6:06	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	6:05	6:27	18:36	18:58		22	5:18	5:42	19:00	19:24
	23	6:42	7:06	18:07	18:30		23	6:04	6:26	18:36	18:59		23	5:17	5:42	19:01	19:25
	24	6:42	7:05	18:07	18:31		24	6:03	6:25	18:37	18:59		24	5:17	5:42	19:01	19:25
	25	6:42	7:05	18:08	18:32		25	6:02	6:24	18:37	18:59		25	5:17	5:41	19:01	19:26
	26	6:41	7:05	18:09	18:32		26	6:01	6:23	18:37	19:00		26	5:17	5:41	19:02	19:26
	27	6:41	7:05	18:09	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	19:00		28	5:16	5:41	19:03	19:27
	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	18:11	18:35		30	5:57	6:19	18:39	19:01		30	5:16	5:40	19:04	19:28
	31	6:40	7:04	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	6:18	18:39	19:02	JUN	1	5:15	5:40	19:04	19:29
	2	6:39	7:03	18:13	18:37		2	5:54	6:17	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	6:16	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	6:15	18:40	19:03		4	5:15	5:40	19:06	19:31
	5	6:38	7:02	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	19:06	19:31
	7	6:37	7:01	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	6:37	7:00	18:18	18:41		9	5:48	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	5:47	6:09	18:43	19:05		10	5:15	5:40	19:08	19:33
	11	6:36	6:58	18:19	18:42		11	5:46	6:08	18:43	19:06		11	5:15	5:40	19:08	19:33
	12	6:35	6:58	18:19	18:42		12	5:45	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	6:07	18:44	19:06		13	5:15	5:40	19:09	19:34
	14	6:34	6:57	18:21	18:43		14	5:43	6:06	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	6:33	6:55	18:22	18:44		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	18:45		18	5:39	6:02	18:46	19:08		18	5:15	5:41	19:10	19:36
	19	6:31	6:53	18:23	18:46		19	5:39	6:02	18:46	19:09		19	5:16	5:41	19:11	19:36
	20	6:30	6:53	18:24	18:46		20	5:38	6:01	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	6:29	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	6:51	18:25	18:48		23	5:35	5:58	18:47	19:11		23	5:16	5:42	19:12	19:37
	24	6:27	6:50	18:26	18:48		24	5:34	5:58	18:48	19:11		24	5:17	5:42	19:12	19:37
	25	6:26	6:49	18:26	18:49		25	5:34	5:57	18:48	19:11		25	5:17	5:42	19:12	19:37
	26	6:26	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	5:17	5:43	19:12	19:37
	28	6:24	6:47	18:27	18:50		28	5:31	5:55	18:49	19:13		28	5:18	5:43	19:12	19:37
							29	5:31	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	5:18	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	18:42	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	18:41	19:03		2	6:06	6:29	17:47	18:10
	3	5:19	5:45	19:13	19:38		3	5:45	6:08	18:40	19:02		3	6:06	6:29	17:46	18:09
	4	5:20	5:45	19:13	19:38		4	5:45	6:08	18:39	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	6:30	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	6:09	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	6:33	17:43	18:06
	11	5:23	5:47	19:12	19:37		11	5:47	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	18:06
	13	5:24	5:48	19:12	19:37		13	5:48	6:10	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	6:36	17:41	18:05
	16	5:25	5:49	19:11	19:36		16	5:49	6:11	18:27	18:49		16	6:13	6:37	17:41	18:04
	17	5:25	5:50	19:11	19:36		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	5:49	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	19:35		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	6:16	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	5:52	19:09	19:33		23	5:51	6:13	18:20	18:42		23	6:18	6:42	17:40	18:03
	24	5:28	5:53	19:09	19:33		24	5:51	6:14	18:19	18:41		24	6:18	6:42	17:39	18:03
	25	5:29	5:53	19:08	19:33		25	5:51	6:14	18:18	18:40		25	6:19	6:43	17:39	18:03
	26	5:29	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	19:08	19:32		27	5:52	6:14	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	18:38		28	6:21	6:45	17:39	18:03
	29	5:31	5:55	19:07	19:31		29	5:53	6:15	18:14	18:37		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	18:36		30	6:22	6:46	17:39	18:03
	31	5:32	5:56	19:06	19:30												
AUG	1	5:32	5:56	19:05	19:29	OCT	1	5:53	6:16	18:12	18:35	DEC	1	6:23	6:47	17:39	18:04
	2	5:33	5:57	19:05	19:28		2	5:54	6:16	18:11	18:34		2	6:23	6:48	17:40	18:04
	3	5:33	5:57	19:04	19:28		3	5:54	6:16	18:10	18:33		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	19:27		5	5:55	6:17	18:08	18:31		5	6:25	6:50	17:40	18:04
	6	5:34	5:58	19:02	19:26		6	5:55	6:17	18:08	18:30		6	6:26	6:50	17:40	18:04
	7	5:35	5:59	19:02	19:25		7	5:55	6:18	18:07	18:29		7	6:27	6:51	17:40	18:05
	8	5:35	5:59	19:01	19:25		8	5:56	6:18	18:06	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	19:00	19:23		10	5:56	6:19	18:04	18:26		10	6:28	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	6:53	17:41	18:06
	12	5:37	6:00	18:58	19:22		12	5:57	6:19	18:02	18:25		12	6:30	6:54	17:42	18:06
	13	5:37	6:01	18:58	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	18:00	18:22		15	6:31	6:56	17:43	18:07
	16	5:39	6:02	18:55	19:19		16	5:58	6:21	17:59	18:21		16	6:32	6:56	17:43	18:08
	17	5:39	6:02	18:54	19:18		17	5:59	6:21	17:58	18:21		17	6:33	6:57	17:44	18:08
	18	5:39	6:03	18:54	19:17		18	5:59	6:22	17:57	18:20		18	6:33	6:58	17:44	18:08
	19	5:40	6:03	18:53	19:16		19	5:59	6:22	17:56	18:19		19	6:34	6:58	17:44	18:09
	20	5:40	6:03	18:52	19:15		20	6:00	6:23	17:56	18:18		20	6:34	6:59	17:45	18:09
	21	5:40	6:04	18:51	19:14		21	6:00	6:23	17:55	18:17		21	6:35	6:59	17:45	18:10
	22	5:41	6:04	18:50	19:13		22	6:01	6:23	17:54	18:17		22	6:35	7:00	17:46	18:10
	23	5:41	6:04	18:50	19:13		23	6:01	6:24	17:53	18:16		23	6:36	7:00	17:46	18:11
	24	5:42	6:05	18:49	19:12		24	6:02	6:24	17:53	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	18:15		25	6:37	7:01	17:47	18:12
	26	5:42	6:05	18:47	19:10		26	6:02	6:25	17:51	18:14		26	6:37	7:01	17:48	18:12
	27	5:43	6:06	18:46	19:09		27	6:03	6:26	17:50	18:13		27	6:37	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	6:06	18:43	19:06		30	6:04	6:27	17:49	18:12		30	6:39	7:03	17:50	18:15
	31	5:44	6:07	18:43	19:05		31	6:05	6:28	17:48	18:11		31	6:39	7:03	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 Air Traffic Management Division Civil Aviation Department Civil Aviation Department Headquarters 1 Tung Fai Road Hong Kong International Airport Lantau 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) 6/F North Point Government Offices 333 Java Road North Point 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) Air Traffic Management Division Civil Aviation Department Civil Aviation Department Headquarters 1 Tung Fai Road Hong Kong International Airport Lantau Hong Kong
Telephone Number	:	2910 6988
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 (Air Traffic Management) Air Traffic Management Division Civil Aviation Department Civil Aviation Department Headquarters 1 Tung Fai Road Hong Kong International Airport Lantau Hong Kong
Telephone Number	:	2910 6988
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.
		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** **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, a department of the Hong Kong Special Administrative Region Government, with its headquarters at Tsim Sha Tsui, Kowloon.

Postal Address	:	Hong Kong Observatory 134A Nathan Road Tsim Sha Tsui Kowloon HONG KONG
Telephone Numbers	:	+852 2910 6300 (Office hours) +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 AMO together with the Ancillary Airport Meteorological Office (AAMO) located at Level T2 of the North Aerodrome Control Tower (N-TWR) forms a resilient pair 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. To support the operation of the north runway, RWY 07L/25R, an Interim-AMO (I-AMO) was set up at T1 Level of the Observation Facilities (OF) for making weather observations in the northern part of the aerodrome.

Note

1) When references are made to the Airport Meteorological Office (AMO) without mentioning the location, it refers to either the office located at Level T3 of the S-TWR or the AAMO located at Level T2 of the N-TWR 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 and I-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 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). Airport ceilometer, temperature screen and barometer adjacent to ATC TWR. 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 LIDAR, 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 the south runway (RWY 07R TDZ, RWY 07R/25L MID RWY and RWY 25L TDZ) and another three sets of anemometers are installed near 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, or 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 07R, RWY 25L 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 Six sets of transmissometers and forward scatterers are installed for observation of RVR and visibility along the runway.

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 through the Information Support System (ISS).

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 above 1,000 ft 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 of the departure end of the runway as well as microburst over the runway or within 3 NM of the departure end of the runway 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 on final approach below 1 600 ft, or departure below 1 000 ft 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/GAPAN 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_4th_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) 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 warnings include the specific runway corridor(s) to which the information is applicable. Turbulence warnings are applicable 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 provide more detailed information about microburst, wind shear and turbulence encounters by completing a Wind Shear and Turbulence Report Form and faxing it to HKO. The form is obtainable 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 six 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 An Aviation Forecaster is on duty H24 at the AMO to prepare weather forecasts, issue warning messages and provide weather briefings. An additional Aviation Forecaster is on duty during daytime to provide weather briefings and enhanced forecasts and warnings of 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 Hong Kong Observatory (HKO) or the AMO in accordance with ICAO Annex 3, para. 2.3.

11.2 Operators requiring meteorological service shall notify the Hong Kong Observatory (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 AMO at Level T3 or at the ground level of S-TWR when deemed necessary, (or AAMO at Level T2 or its ground level when activated), making reference to the measurements of the six forward scatterers along the north 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 Volcanic ash SIGMET valid for up to 6 hours 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 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 Hong Kong Observatory 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 Hong Kong Observatory 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 No. 8 SW No. 8 NE No. 8 SE (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 Hong Kong Observatory 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 Hong Kong Observatory 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 Hong Kong Observatory
Warnings for strong monsoon winds are issued by the Hong Kong Observatory 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 decease 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 25L/25R and along the departure and missed approach corridors from RWY 07L/07R as these approach/departure corridors are closer to the hills to the north as compared with approaches to RWY 07. Larger magnitude wind shear and turbulence over these approach and departure corridors is possible if the wind speed exceeds 30 kt, especially in the vicinity of ‘LOTUS’.

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

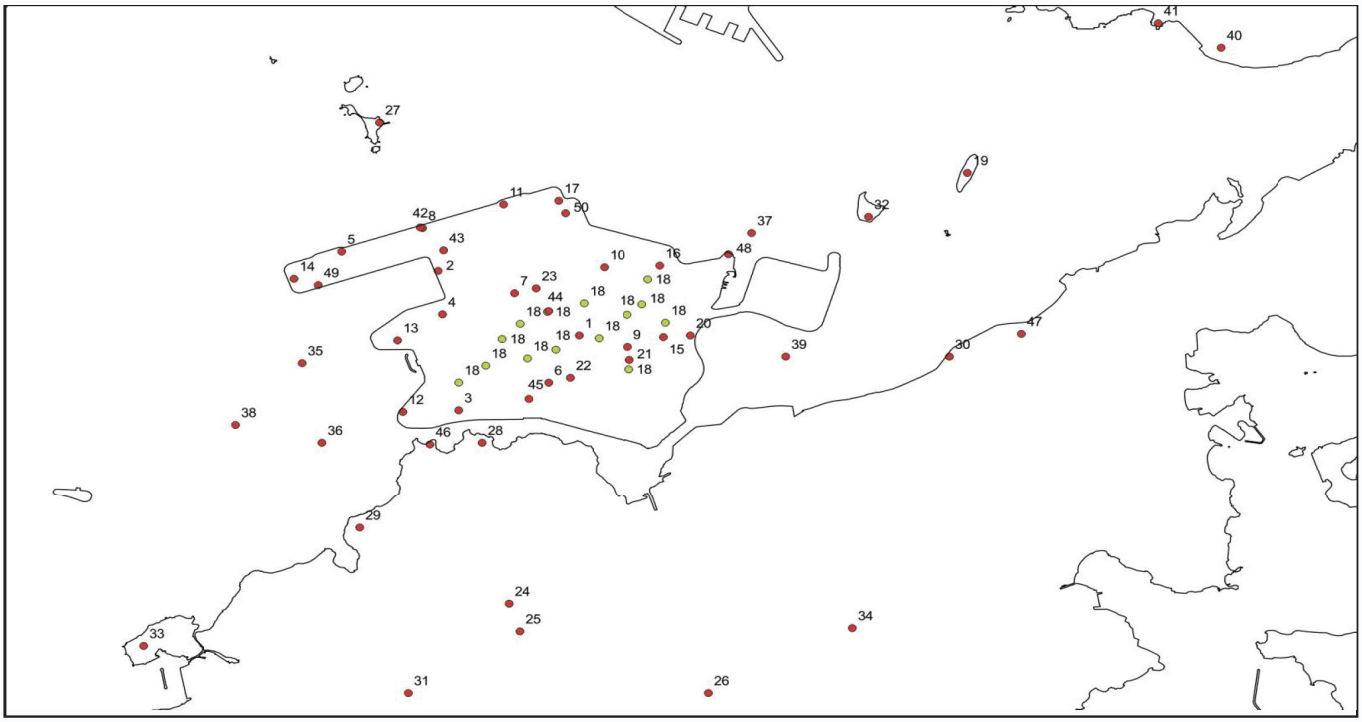
17.5.1 During a surge of the winter monsoon, strong low-level jets of northeasterly wind with speeds up to 50 kt occasionally affect the airport. Under such circumstances significant windshear along the departure corridors of RWY 07 can be expected.

17.6 LOW-LEVEL WIND EFFECTS

17.6.1 Pilots should be aware when landing on Hong Kong International Airport's RWY 25L in strong northwesterly/northerly winds or RWY 25R in strong southwesterly/southerly/southeasterly winds of the possibility of building-induced turbulence and windshear effects.

17.6.2 Pilots should be aware when landing on Hong Kong International Airport’s RWY 07R in northwesterly/northerly winds with a background speed of about 15 knots or more, of the possibility of building-induced turbulence and windshear effects over the touch down zone.

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 Western 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 transmissometer 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. Siu Ho Wan anemometer
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
49. Short-range LIDAR near western end of North Runway
50. Short-range LIDAR near eastern end of North Runway

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 Civil Aviation Department Headquarters 1 Tung Fai Road Hong Kong International Airport Lantau 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 Air Traffic Management Division Civil Aviation Department Civil Aviation Department Headquarters 1 Tung Fai Road Hong Kong International Airport Lantau 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 (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.

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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 Published on 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 Treasury No. 1 Collection Account (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) 132.525 (SRY)	At least **10 NM** before ELATO
A202/R339	SIKOU	127.1 (PRI) 123.7 (SRY)	At least **10 NM** before SIKOU
A461/M501	NOMAN	132.15 (PRI) 128.75 (SRY)	At least **10 NM** before NOMAN
A470	DOTMI	121.3 (PRI) 132.525 (SRY)	At least **10 NM** before DOTMI
A583	SABNO	128.125 (PRI) 128.75 (SRY)	At least **10 NM** before SABNO
B330	TAMOT	127.1 (PRI) 123.7 (SRY)	At least **10 NM** before TAMOT
G86	KAPLI	132.15 (PRI) 128.75 (SRY)	At least **10 NM** before KAPLI
M503	LELIM	121.3 (PRI) 132.525 (SRY)	At least **10 NM** before LELIM
M771	DOSUT	122.95 (PRI) 135.6 (SRY)	At least **10 NM** before DOSUT
	DUMOL	128.125 (PRI) 128.75 (SRY)	At DUMOL
M772	ASOBA	122.95 (PRI) 135.6 (SRY)	At least **10 NM** before ASOBA
A1(W)	IKELA	125.325 (PRI) 132.775 (SRY)	At least **10 NM** before IKELA
R473	SIERA	127.55 (PRI) 134.3 (SRY)	At least **3** minutes prior to SIERA
ATS	MCU DVOR/DME	123.95 (PRI) 134.3 (SRY)	At least **3** minutes prior to MCU
ATS	ROMEO	123.95 (PRI) 134.3 (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 IDOSI 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 V13 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 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; 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 TRANSTITIN 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 For aircraft climbing or descending, a minimum rate of change of 500 feet per minute is assumed. 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 using FMS/RNAV equipment should note that in order to ensure terrain clearance, Hong Kong SID Significant Points waypoints PORPA, PRAWN, ROVER, VEPIK and POVEG are '**flyover**' waypoints. All other SID Significant Points are '**flyby**' waypoints and turn anticipation by the FMS/RNAV is permitted, however 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 07R or TD DVOR for RWY 25L/RWY 25R), descend in accordance with the published descent planning profile of the relevant STAR procedure, thence:

a) For RWY 07L/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 25R
Enter the TD DVOR holding pattern, then descend to 4 500 ft and carry out the appropriate ILS 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 *b)* Traffic diverting from Hong Kong	3301 - 3377 3501 - 3577 5101 - 5177 5301 - 5377 5701 - 5777
a) Arriving traffic if not already assigned a SSR code by previous ATC units; *b)* Local/domestic traffic	5201 - 5277
Overflying traffic if not already assigned a SSR code by previous ATC units	3301 - 3377 3501 - 3577 5101 - 5177 5301 - 5377 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 In the application of vertical separation to climbing or descending aircraft, a minimum rate of change of 500 feet per minute is assumed. Pilots shall inform ATC if a lower rate of level change is intended.

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, i) Halim Perdanakusuma, ii) Soekarno-Hatta and landing at Hong Kong/ airports in the People's Republic of China	F300 and F380
	Departing Borneo, 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 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 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 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. Vertical Limits of A1 between BIGEX and IKELA in Hong Kong FIR - SFC to FL285. 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 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 Note 4: No pre-coordination level between 2301 and 1600 UTC.
A202	Sanya Control Area to Hong Kong FIR: Departing Sanya Points beyond ASSAD	 S0810, S0890 S1010, S1070, S1130, S1190, S1250[5] Note 5: S1250 for traffic overflying HK FIR without prior coordination.
	Hong Kong FIR to Sanya Control Area: Landing Sanya Points beyond ASSAD	 S0840 S1040, S1160, S1220
R339	Hong Kong FIR to Sanya Control Area: Points beyond Nanning	 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: Landing Boao Landing Beihai/Nanning	 S0660, S0720 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] 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. 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. 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: Xiamen, Jinjiang or Meixian Fuzhou, Wuyishan or Wenzhou	 S0510, S0630, S0750* 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: Hangzhou, Yiwu or Ningbo Aerodromes other than those listed above	 S0810*, F330 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: Shanghai Pudong Qingdao, Yantai or Dalian	 F330 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: Departing Zhanjiang/Haikou	 S0570
	Hong Kong FIR to Zhanjiang Control Area: Landing Zhanjiang/Haikou	 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: i. On the initial call on any frequency within the RVSM airspace (controllers shall provide a readback with this same phrase), and ii. In all requests for flight level changes pertaining to flight levels within the RVSM airspace; and iii. In all read-backs to flight level clearances pertaining to flight levels within the RVSM airspace. Additionally, except for State aircraft, pilots shall include this phrase to read back flight level clearances involving the vertical transit through F290 or F410. *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. *(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) as follows:

N892	**L625**	**N884** (South of LBG)	**N884** (North of CAB)	**M767**	**A582/B462**		**A590**		**L642**	**M771**
SW	NE	NE	NE	SW	E	W	E	W	SW	NE
			FL410							
FL400				FL400				FL400	FL400	
	FL390	FL390			FL390		FL390			FL390
						FL380				
			FL370							
FL360				FL360				FL360	FL360	
	FL350	FL350			FL350		FL350			FL350
						FL340				
			FL330							
FL320				FL320				FL320	FL320	
	FL310	FL310			FL310		FL310			FL310
						FL300				
			FL290							

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 1) making maximum use of exterior lights; 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: 1) Maintaining the cleared flight level and route provided that ATC can provide lateral, longitudinal or conventional vertical separation. 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. 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. 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) If the pilot requests clearance to exit RVSM airspace, accommodate expeditiously, if possible. 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. 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 Maintain cleared flight level and evaluate the aircraft's capability to maintain altitude through manual control.	
Subsequently Watch for conflicting traffic both visually and by reference to ACAS, if equipped.	
If considered necessary, alert nearby aircraft by 1) Making maximum use of exterior lights; 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 1) Making maximum use of exterior lights; 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: 1) Maintaining cleared flight level and route provided that ATC can provide lateral, longitudinal or conventional vertical separation. 2) Requesting ATC clearance to climb above or descend below RVSM airspace if ATC cannot establish adequate separation from other aircraft. 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. 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) If the pilot requests clearance to exit RVSM airspace, accommodate expeditiously, if possible. 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. 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: 1) making maximum use of exterior lights; 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: 1) Maintaining cleared flight level and route provided ATC can provide lateral, longitudinal or conventional vertical separation. 2) Requesting flight level change, if necessary. 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. 2) If unable to provide adequate separation, advise the pilot of essential traffic information and request pilot's intentions. 3) Notify other aircraft in the vicinity and monitor the situation. 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: +852 2910 6859 Duty Flow Manager Secondary point of contact: +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 all westbound flights intending to transit Kabul FIR between 2000 UTC and 2359 UTC daily so as to reduce ground and en-route delays, maximize capacity and optimize air traffic flow. The service provided includes calculation, promulgation, and management of mandatory 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 subjected to unlawful interference;

b) Flights on search and rescue or fire-fighting missions;

c) Urgent medical evacuation flights or humanitarian flights specifically declared by State medical authorities that flight delays would put the life of patients aboard at risk; and

d) Flights with “Head of State” status.

Note: After medical flights have completed their mission, they should be subject to ATFM measures. Scheduled passenger transfer flights are, by their 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 0001 UTC and 1200 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 fax 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 aircraft operator 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 waypoint.

ANSPs

3.2.5.3 In accordance with ICAO PANS ATM provisions, flights with an ATFM slot allocation should be given priority for takeoff to facilitate compliance with CTOT.

3.2.5.4 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 ATS messages (e.g. FPL, DEP, DLA, CHG, CNL) relating to flights subject to ATFM procedures.

3.2.6.2 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.

3.2.6.3 The PIC shall include the CTOT in the initial ATC clearance request.

3.2.6.4 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 3.2.6.2. If it becomes essential, the ATC Clearance may be cancelled.

3.2.6.5 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.

3.2.6.6 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 is staffed 24 hours and may be contacted via the following:

Unit Name	:	Bangkok ATFMU
Telephone	:	+66 2287 8024, +66 2287 8025
Fax	:	+66 2287 8027
Telephone / Fax	:	+66 2287 8026
Mobile	:	+66 81 829 5256
E-Mail	:	atfmu@bobcat.aero
AFTN	:	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 V532 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)	LAKES V1 DOTMI	A470
(3)	LAKES V13 LELIM	M503 [9 and 10]
(4)	OCEAN V2 ELATO	A1/G581
(5)	OCEAN V3 ENVAR	M750
(6)	OCEAN V4 NOMAN	A461/M501
(7)	OCEAN V4 SKATE DCT KAPLI	G86
(8)	OCEAN V5 SABNO	A583
(9)	PECAN V10 SIKOU	R339/A202

(10)	PECAN V11 IDOSI A1 IKELA [7] ***or*** 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 Flights departing from HKIA for destinations Shanghai Pudong, Qingdao, Yantai or Dalian shall route via M503.
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*** 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)	SOUSA V1 DOTMI	A470
(2)	CONGA V2 ELATO	A1/G581
(3)	CONGA V3 ENVAR	M750
(4)	GRUPA V4 NOMAN	A461/M501
(5)	GRUPA V5 SABNO	A583

(6)	SOUSA V13 LELIM [6]	M503
(7)	ALLEY V32 EPDOS L642	L642
(8)	ALLEY V31 IDOSI P901 IKELA [4] ***or*** ALLEY V31 IDOSI A1 IKELA [4]	A1
(9)	ALLEY V10 SIKOU	R339/A202
(10)	GRUPA 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 Flights departing from Macao International Airport transiting Hong Kong FIR for destinations Shanghai Pudong, Qingdao, Yantai or Dalian shall route via V13.

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 V2 ELATO [1]	A1/G581
(2)		SIERA DCT MULET DCT SKATE DCT CONGA V3 ENVAR [2]	M750
(3)		SIERA DCT MULET DCT SKATE V4 NOMAN	A461/M501
(4)		SIERA DCT MULET DCT SKATE V5 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 TD DCT OCEAN V4 NOMAN [4]	A461/M501
(9)		LUKBU DCT TD DCT OCEAN V5 SABNO [4]	A583
(10)		LUKBU DCT BREAM DCT TITAN DCT PECAN V10 ALLEY V32 EPDOS L642 [4]	L642
(11)		LUKBU DCT BREAM DCT TITAN DCT PECAN V10 ALLEY V31 IDOSI P901 IKELA [3 and 4] *or* LUKBU DCT BREAM DCT TITAN DCT PECAN V10 ALLEY V31 IDOSI A1 IKELA [3 and 4]	A1
(12)		SIERA DCT ROCCA DCT SKATE DCT CONGA V2 ELATO [1]	A1/G581
(13)		SIERA DCT ROCCA DCT SKATE DCT CONGA V3 ENVAR [2]	M750
(14)		SIERA DCT ROCCA DCT SKATE V4 NOMAN	A461/M501
(15)		SIERA DCT ROCCA DCT SKATE V5 SABNO	A583
(16)		SIERA DCT ROCCA DCT ALLEY V32 EPDOS L642	L642
(17)		SIERA DCT ROCCA DCT ALLEY V31 IDOSI P901 IKELA [3] *or* 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 V2 ELATO [1]	A1/G581
(2)		DOTMI DCT SOUSA DCT CONGA V3 ENVAR [2]	M750
(3)		DOTMI DCT ENROM DCT NOMAN	A461/M501
(4)		DOTMI DCT ENROM DCT SABNO	A583
(5)		DOTMI DCT ENROM DCT SULUX DCT EPKAL	L642
(6)		DOTMI DCT ENROM 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 SOUSA V1 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 SOUSA V1 DOTMI	A470
(17)		ASOBA M772 DULOP M771 DUMOL J103 BEKOL	A461
(18)	M771	DOSUT M771 DULOP Q1 CARSO DCT NOBAD DCT SANKU DCT SOUSA V1 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 SOUSA V1 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 RASSE DCT CONGA V2 ELATO [1]	A1
(28)		TAMOT B330 BIGEX DCT RASSE DCT CONGA V2 ELATO [1]	G581
(29)		TAMOT B330 BIGEX DCT RASSE DCT CONGA V3 ENVAR [2]	M750
(30)		TAMOT B330 BIGEX DCT RASSE DCT CONGA V3 ENVAR [2] M750 DADON	G581
(31)		TAMOT B330 BIGEX DCT GRUPA V4 NOMAN	A461/M501
(32)		TAMOT B330 BIGEX DCT GRUPA V5 SABNO	A583
(33)		TAMOT DCT ALLEY V32 EPDOS L642	L642
(34)		TAMOT DCT ALLEY V31 IDOSI P901 IKELA [4] **or** 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* 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 LENBU DCT GRUPA V4 NOMAN [6]	A461/M501
(39)		SIKOU J104 CHALI DCT LENBU DCT GRUPA V5 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. *Note 1. - Meteorological conditions or terrain may require the intercepting aircraft to reverse the positions and direction of turn given above in Series 1.* *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. If it is decided to release the intercepted aircraft, the intercepting aircraft uses the Series 2 signals prescribed for intercepting aircraft.	Understood, follow me. Understood, you may proceed.
5	DAY or NIGHT - Regular switching on and off of all available lights but in such a manner as to be distinct from flashing lights.	Cannot comply.	DAY or NIGHT - Use Series 2 signals prescribed for intercepting aircraft.	Understood.
6	DAY or NIGHT - Irregular flashing of all available lights.	In distress.	DAY or NIGHT - Use Series 2 signals prescribed for intercepting aircraft.	Understood.

ENR 1.13 UNLAWFUL INTERFERENCE

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 (suitable for most incidents)
DCA 232	AIRPROX Report - PILOTS (exclusively for loss of separation incidents)
DCA 235	Runway Incursion Reporting (exclusively for runway incursion incidents)
DCA 237	Wake Turbulence Reporting Form for Pilots (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	2	3	4	5
Name Lateral Limits Vertical Limits Class of Airspace	**Unit Providing Service**	**Call Sign Language(s) Area and Conditions of Use Hours of Service**	**Frequency/ Purpose**	**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	
Classes A, C and G as defined in			132.15 MHZ	
paras 2, 3, 4, 5 and 6 below			132.525 MHZ	
			132.6 MHZ	
			132.775 MHZ	
			132.8 MHZ	
			134.3 MHZ	
			135.6 MHZ	
			121.5 MHZ/ Emergency FREQ	
			5655 KHZ	
			8942 KHZ	
			13309 KHZ	
	HONG KONG RCC	SEARCH AND RESCUE English HR as required	123.1 MHZ/SAR 3023 KHZ/SAR	

1	2	3	4	5
Name Lateral Limits Vertical Limits Class of Airspace	**Unit Providing Service**	**Call Sign Language(s) Area and Conditions of Use Hours of Service**	**Frequency/ Purpose**	**Remarks**
2. HONG KONG TMA				
23 40 00N 117 30 00E 21 00 00N 117 30 00E 18 56 00N 115 49 00E 19 00 00N 112 30 00E 19 30 00N 111 30 00E then along the Hong Kong / Guangzhou FIR BDRY to 23 40 00N 117 30 00E (a) within 50 NM from BIGEX, but excluding the airspace within and above: (i) Hong Kong Control Zone (CTR), as listed in para 3 and (ii) Uncontrolled Airspace Reporting Areas (UCARAs), as listed in para 6. UNL 2 000 ft Class A : UNL 8 000 ft Class C : 8 000 ft 2 000 ft (b) the airspace above the Hong Kong Control Zone (CTR), as listed in para 3, UNL 9 000 ft Class A	HONG KONG ACC/ APP	HONG KONG RADAR English H24	118.925 MHZ 119.1 MHZ 119.35 MHZ 119.5 MHZ 121.3 MHZ 122.0 MHZ 123.475 MHZ 123.7 MHZ 123.8 MHZ 123.95 MHZ 124.05 MHZ 125.175 MHZ 125.325 MHZ 125.8 MHZ 126.3 MHZ 126.5 MHZ 127.1 MHZ 127.55 MHZ 128.125 MHZ 128.75 MHZ 132.15 MHZ 132.525 MHZ 132.6 MHZ 132.775 MHZ 132.8 MHZ 133.7 MHZ 134.3 MHZ 121.5 MHZ/ Emergency FREQ	ATS will advise frequency in use

1 **Name** **Lateral Limits** **Vertical Limits** **Class of Airspace**	2 **Unit Providing Service**	3 **Call Sign** **Language(s)** **Area and Conditions of Use** **Hours of Service**	4 **Frequency/ Purpose**	5 **Remarks**
2. HONG KONG TMA				
(c) the airspace above the Uncontrolled Airspace Reporting Areas (UCARAs), as listed in para 6, UNL / 9 000 ft Class A 9 000 ft / Upper limit of UCARA Class C (d) exceeding 50 NM from BIGEX UNL / 8 000 ft Class A				

1	2	3	4	5
Name Lateral Limits Vertical Limits Class of Airspace	**Unit Providing Service**	**Call Sign Language(s) Area and Conditions of Use Hours of Service**	**Frequency/ 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		English	119.1 MHZ	
22 25 15N 114 07 08E		H24	119.35 MHZ	
22 24 40N 114 10 40E			119.5 MHZ	
22 22 40N 114 13 20E			120.6 MHZ	
22 20 30N 114 13 25E			122.075 MHZ	
22 15 15N 114 21 00E			123.8 MHZ	
22 08 50N 114 21 00E			124.05 MHZ	
22 08 50N 114 17 05E			124.65 MHZ	
22 08 20N 114 15 20E				
22 08 50N 114 14 10E				
22 08 50N 114 11 45E				
22 06 40N 114 11 45E				
21 56 25N 113 48 00E			121.5 MHZ/	
22 13 44N 113 39 57E			Emergency FREQ	
22 24 34N 113 49 44E				
9 000 ft SFC				
Class C				

1 **Name** **Lateral Limits** **Vertical Limits** **Class of Airspace**	2 **Unit** **Providing** **Service**	3 **Call Sign** **Language(s)** **Area and Conditions of Use** **Hours of Service**	4 **Frequency/** **Purpose**	5 **Remarks**
4. HONG KONG AIRSPACE TO THE SOUTH OF THE HONG KONG TMA				
19 30 00N 111 30 00E 19 00 00N 112 30 00E 18 56 00N 115 49 00E 16 40 00N 114 00 00E UNL SFC				
Class A : UNL 8 000 ft	HONG KONG ACC	HONG KONG RADAR English H24	122.95 MHZ 123.7 MHZ 125.325 MHZ 125.8 MHZ 127.1 MHZ 128.125 MHZ 128.75 MHZ 132.15 MHZ 132.525 MHZ 132.775 MHZ 135.6 MHZ	ATS will advise frequency in use
Class G : 8 000 ft SFC	HONG KONG FIS	HONG KONG INFORMATION English H24	122.4 MHZ 122.075 MHZ 121.5 MHZ/ Emergency FREQ	ATS will advise frequency in use Flight Information Service and alerting service provided

1 **Name** **Lateral Limits** **Vertical Limits** **Class of Airspace**	2 **Unit Providing Service**	3 **Call Sign** **Language(s)** **Area and Conditions of Use** **Hours of Service**	4 **Frequency/ Purpose**	5 **Remarks**
5. AIRSPACE BENEATH HONG KONG TMA				
23 40 00N 117 30 00E 21 00 00N 117 30 00E 18 56 00N 115 49 00E 19 00 00N 112 30 00E 19 30 00N 111 30 00E then along the Hong Kong / Guangzhou FIR BDRY to 23 40 00N 117 30 00E (a) 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. 2 000 ft SFC Class G * (b) exceeding 50 NM from BIGEX 8 000 ft SFC Class G *	HONG KONG FIS	HONG KONG INFORMATION English H24	122.4 MHZ 122.075 MHZ 121.5 MHZ/ Emergency FREQ	ATS will advise frequency in use 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 Name Lateral Limits Vertical Limits Class of Airspace	2 Unit Providing Service	3 Call Sign Language(s) Area and Conditions of Use Hours of Service	4 Frequency/ Purpose	5 Remarks
6. UNCONTROLLED AIRSPACE REPORTING AREAS (UCARAS)				
(i) 22 24 45N 114 28 50E 22 21 55N 114 30 09E 22 08 50N 114 30 09E 22 08 50N 114 21 00E 22 15 15N 114 21 00E 22 20 30N 114 13 25E 22 22 40N 114 13 20E 22 24 40N 114 10 40E 22 25 15N 114 07 15E 22 27 50N 114 04 00E 22 30 20N 114 07 30E 22 29 50N 114 08 20E 22 32 20N 114 12 30E then along the coast line to 22 31 30N 114 13 00E 22 30 00N 114 14 25E 22 29 00N 114 14 30E 22 28 00N 114 14 00E then along the coast line to 22 24 20N 114 16 40E 22 24 55N 114 17 30E 22 24 50N 114 18 20E 22 25 40N 114 18 30E 22 24 15N 114 20 30E 22 25 50N 114 22 30E 22 24 45N 114 24 20E 22 24 45N 114 28 50E 2 000 ft SFC Class G *	HONG KONG FIS	HONG KONG INFORMATION English 01:00 - SS	121.0 MHZ 122.075 MHZ 121.5 MHZ/ Emergency FREQ	ATS will advise frequency in use
(ii) 22 32 20N 114 12 30E then along the coast line to 22 32 22N 114 12 59E				
* 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 Lateral Limits Vertical Limits Class of Airspace	**Unit Providing Service**	**Call Sign Language(s) Area and Conditions of Use Hours of Service**	**Frequency/ Purpose**	**Remarks**
6. UNCONTROLLED AIRSPACE REPORTING AREAS (UCARAS)				
22 33 56N 114 16 34E 22 34 06N 114 19 59E 22 33 43N 114 26 02E 22 32 42N 114 27 19E 22 28 07N 114 27 18E 22 24 45N 114 28 50E 22 24 45N 114 24 20E 22 25 50N 114 22 30E 22 24 15N 114 20 30E 22 25 40N 114 18 30E 22 24 50N 114 18 20E 22 24 55N 114 17 30E 22 24 20N 114 16 40E then along the coast line to 22 28 00N 114 14 00E 22 29 00N 114 14 30E 22 30 00N 114 14 25E 22 31 30N 114 13 00E then along the coast line to 22 32 20N 114 12 30E 3 000 ft SFC 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 Lateral Limits Vertical Limits Class of Airspace	**Unit Providing Service**	**Call Sign Language(s) Area and Conditions of Use Hours of Service**	**Frequency/ Purpose**	**Remarks**
7. UIR				
Nil				

ENR 2.2 OTHER REGULATED AIRSPACE

Nil.

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ENR 3 ATS ROUTES

ENR 3.1 ATS ROUTES

(1) ATS ROUTES

Route designator Name of significant points Coordinates	MAG Track	DIST (NM)	Upper limit Lower limit Airspace Classification	Lateral limits (NM)	FL Series ↓	FL Series ↑	Remarks Controlling unit Frequency
1	2	3	4	5	6		7
A1							
▲IKELA 183942.00N 1121442.00E (Hong Kong/Sanya FIR BDRY)							
	039 219	24.9	FL 285 8000 ft AMSL Class A	50	Odd	Even	PBN Route P901 above FL285 Hong Kong Radar 125.325 MHZ (PRI) 132.775 MHZ (SRY)
△IDOSI 190000.00N 1123000.00E							
	027 207	210.8	FL 285 8000 ft AMSL Class A	50	Odd	Even	PBN Route P901 above FL285. For airspace classification of route segment within or above Hong Kong CTR/UCARAs, refer to ENR 1.4 and ENR 2.1. Hong Kong Radar 127.1 MHZ (PRI) 123.7 MHZ (SRY)
△BIGEX 221310.35N 1140148.20E							
	090 271	100.0	UNL 8000 ft AMSL 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. Hong Kong Radar 118.925 MHZ (PRI) 121.3 MHZ (When instructed)
△MAGOG 221746.00N 1154930.00E							
	091 272	93.2	UNL 8000 ft AMSL Class A	50	Odd	Even	Hong Kong Radar 118.925 MHZ (PRI) 121.3 MHZ (When instructed)

Route designator Name of significant points Coordinates	MAG Track	DIST (NM)	Upper limit Lower limit Airspace Classification	Lateral limits (NM)	FL Series ↓	FL Series ↑	Remarks Controlling unit Frequency
1	2	3	4	5	6		7
▲ELATO 222000.00N 1173000.00E (Hong Kong/Taipei FIR BDRY)							
Route Remarks: For flights within the RVSM airspace, FL290 - 410, refer to FLAS in ENR 1.8 para 8. IKELA and ELATO: Compulsory ATS Reporting Points for all aircraft. Other waypoints: Compulsory Reporting Points for non-jet aircraft only.							

Route designator Name of significant points Coordinates	MAG Track	DIST (NM)	Upper limit Lower limit Airspace Classification	Lateral limits (NM)	FL Series ↓	FL Series ↑	Remarks Controlling unit Frequency
1	2	3	4	5	6		7
A202							
▲SIKOU 205036.00N 1113000.00E (Hong Kong/ Guangzhou FIR BDRY)							
	062 243	163.7	UNL 8000 ft AMSL 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. Hong Kong Radar 127.1 MHZ (PRI) 123.7 MHZ (SRY)
△BIGEX 221310.35N 1140148.20E							

Route Remarks:
Traffic overflying Bangkok not permitted on this route.
For flights within the RVSM airspace, FL290-410, refer to FLAS in ENR 1.8 para 8.
For direction of cruising levels, refer to FLAS in ENR 1.8 para 8.
SIKOU: Compulsory ATS Reporting Point for all aircraft.
Other waypoints: Compulsory Reporting Points for non-jet aircraft only.

Route designator Name of significant points Coordinates	MAG Track	DIST (NM)	Upper limit Lower limit Airspace Classification	Lateral limits (NM)	FL Series ↓	FL Series ↑	Remarks Controlling unit Frequency
1	2	3	4	5	6		7
A461							
▲NOMAN 200000.00N 1164018.00E (Hong Kong/Manila FIR BDRY)							
	315 134	198.9	UNL 8000 ft AMSL 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. Hong Kong Radar 132.15 MHZ (PRI) 128.75 MHZ (SRY)
△BIGEX 221310.35N 1140148.20E							
	020	20.2	UNL 4500 ft AMSL 9 000 ft AMSL/UNL: Class A 4500 ft/9000 ft AMSL: 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). FL250 and below Hong Kong DEP 123.8 MHZ (PRI) 124.05 MHZ (SRY) Above FL250 Hong Kong Radar 127.1 MHZ (PRI) 123.7 MHZ (SRY)
▲BEKOL 223236.00N 1140800.00E (Hong Kong/ Guangzhou FIR BDRY)							
Route Remarks: For flights within the RVSM airspace, FL290-410, refer to FLAS in ENR 1.8 para 8. BEKOL and NOMAN: Compulsory ATS Reporting Points for all aircraft. Other waypoints: Compulsory Reporting Points for non-jet aircraft only.							

Route designator Name of significant points Coordinates	MAG Track	DIST (NM)	Upper limit Lower limit Airspace Classification	Lateral limits (NM)	FL Series ↓	FL Series ↑	Remarks Controlling unit Frequency
1	2	3	4	5	6		7
A470							
△MAGOG 221746.00N 1154930.00E							
	040 220	31.6	UNL 8000 ft AMSL Class A	12	Odd	Even	Hong Kong Radar 121.3 MHZ (PRI) 118.925 MHZ (When instructed) 132.525 MHZ (SRY)
▲DOTMI 224306.00N 1161006.00E (Hong Kong/ Guangzhou Transfer Point)							

Route Remarks:
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.
DOTMI: Compulsory ATS Reporting Point for all aircraft.
Other waypoints: Compulsory Reporting Points for non-jet aircraft only.

Route designator Name of significant points Coordinates	MAG Track	DIST (NM)	Upper limit Lower limit Airspace Classification	Lateral limits (NM)	FL Series ↓	FL Series ↑	Remarks Controlling unit Frequency
1	2	3	4	5	6		7
A583							
▲SABNO 185906.00N 1155042.00E (Hong Kong/Manila FIR BDRY)							
	335 155	218.7	UNL 8000 ft AMSL 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. Hong Kong Radar 128.125 MHZ (PRI) 128.75 MHZ (SRY)
△BIGEX 221310.35N 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 Name of significant points Coordinates	MAG Track	DIST (NM)	Upper limit Lower limit Airspace Classification	Lateral limits (NM)	FL Series ↓	FL Series ↑	Remarks Controlling unit Frequency
1	2	3	4	5	6		7
B330							
△BIGEX 221310.35N 1140148.20E							
	315 135	12.3	UNL 6000 ft AMSL 9 000 ft AMSL/UNL: Class A 6000 ft/9000 ft AMSL: Class C	12			Hong Kong Radar 127.1 MHZ (PRI) 123.7 MHZ (SRY)
▲TAMOT 222130.00N 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 Name of significant points Coordinates	MAG Track	DIST (NM)	Upper limit Lower limit Airspace Classification	Lateral limits (NM)	FL Series ↓	FL Series ↑	Remarks Controlling unit Frequency
1	2	3	4	5	6		7
G581							
△BIGEX 221310.35N 1140148.20E							
	090 271	100.0	UNL 8000 ft AMSL 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. Hong Kong Radar 121.3 MHZ (PRI) 132.525 MHZ (SRY) 118.925 MHZ (When instructed)
△MAGOG 221746.00N 1154930.00E							
	091 272	93.2	UNL 8000 ft AMSL Class A	50	Odd	Even	Hong Kong Radar 121.3 MHZ (PRI) 132.525 MHZ (SRY) 118.925 MHZ (When instructed)
▲ELATO 222000.00N 1173000.00E (Hong Kong/Taipei FIR BDRY)							
Route Remarks: For flights within the RVSM airspace, FL290-410, refer to FLAS in ENR 1.8 para 8. ELATO: Compulsory ATS Reporting Point for all aircraft. Other waypoints: Compulsory Reporting Points for non-jet aircraft only.							

Route designator Name of significant points Coordinates	MAG Track	DIST (NM)	Upper limit Lower limit Airspace Classification	Lateral limits (NM)	FL Series ↓	FL Series ↑	Remarks Controlling unit Frequency
1	2	3	4	5	6		7
G86							
▲KAPLI 211000.00N 1173000.00E (Hong Kong/Taipei FIR BDRY)							
	110	203.8	UNL 8000 ft AMSL 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. Hong Kong Radar 118.925 MHZ (PRI) 132.525 MHZ (SRY)
△BIGEX 221310.35N 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 **Name of significant points** **Coordinates**	**Track °M**	**Distance** **NM**	**Remarks** **Controlling unit** **Frequency**
1	2	3	4
J101			
▲ELATO 222000.00N 1173000.00E			
	286	47.1	Hong Kong Radar 121.3 MHZ (PRI) 132.525 MHZ (SRY)
△TUBBY 223025.41N 1164024.45E			
	270	39.6	Hong Kong Radar 121.3 MHZ (PRI) 132.525 MHZ (SRY)
△SAMMI 222800.00N 1155742.00E			
	269	70.3	Hong Kong Radar 121.3 MHZ (PRI) 132.525 MHZ (SRY)
△NEDLE 222313.95N 1144157.47E			
	269	13.2	Hong Kong Radar 121.3 MHZ (PRI) 132.525 MHZ (SRY)
△PONTI 222216.35N 1142745.83E			
	269	8.3	Hong Kong Radar 121.3 MHZ (PRI) 132.525 MHZ (SRY)
△BUMDI 222139.62N 1141852.61E			
	269	18.5	Hong Kong Radar 121.3 MHZ (PRI) 132.525 MHZ (SRY)
△SIU MO TO (SMT) DVOR/DME 222015.43N 1135855.46E			
Route Remark: ELATO: Compulsory ATS Reporting Point for all aircraft. Other waypoints: Compulsory ATS Reporting Points for non-jet aircraft only.			

Route designator **Name of significant points** **Coordinates**	**Track °M**	**Distance** **NM**	**Remarks** **Controlling unit** **Frequency**
1	2	3	4
J103			
△DUMOL 190000.00N 1142648.00E			
	358	50.1	Hong Kong Radar 128.125 MHZ (PRI) 128.75 MHZ (SRY)
△ALDOM 195009.33N 1142226.42E			
	358	59.4	Hong Kong Radar 128.125 MHZ (PRI) 128.75 MHZ (SRY)
△ISBAN 204934.33N 1141713.11E			
	358	13.2	Hong Kong Radar 127.1 MHZ (PRI) 123.7 MHZ (SRY)
△ROBIN 210245.00N 1141606.00E			
	358	16.6	Hong Kong Radar 127.1 MHZ (PRI) 123.7 MHZ (SRY)
△TAPPO 211920.61N 1141434.62E			
	358	20.0	Hong Kong Radar 127.1 MHZ (PRI) 123.7 MHZ (SRY)
△SAPAX 213919.84N 1141247.62E			
	358	53.3	Hong Kong Radar 127.1 MHZ (PRI) 123.7 MHZ (SRY)
▲BEKOL 223236.00N 1140800.00E			
Route Remark: BEKOL: Compulsory ATS Reporting Point for all aircraft. Other waypoints: Compulsory ATS Reporting Points for non-jet aircraft only.			

Route designator Name of significant points Coordinates	Track °M	Distance NM	Remarks Controlling unit Frequency
1	2	3	4
J104			
▲SIKOU 205036.00N 1113000.00E			
	103	27.6	Hong Kong Radar 127.1 MHZ (PRI) 123.7 MHZ (SRY)
△RAGSO 204532.33N 1115856.71E			
	073	53.4	Hong Kong Radar 127.1 MHZ (PRI) 123.7 MHZ (SRY)
△DASON 210323.27N 1125240.39E			
	074	18.2	Hong Kong Radar 127.1 MHZ (PRI) 123.7 MHZ (SRY)
△COTON 210924.17N 1131101.04E			
	074	25.4	Hong Kong Radar 127.1 MHZ (PRI) 123.7 MHZ (SRY)
△CHALI 211745.00N 1133641.00E			
Route Remark: SIKOU: Compulsory ATS Reporting Point for all aircraft. Other waypoints: Compulsory ATS Reporting Points for non-jet aircraft only.			

Route designator **Name of significant points** **Coordinates**	**Track °M**	**Distance** **NM**	**Remarks** **Controlling unit** **Frequency**
1	2	3	4
V1			
△LAKES 215841.30N 1145438.60E			
	091	20.0	Hong Kong Radar 118.925 MHZ (PRI) 132.525 MHZ (SRY)
△VENGO 215916.17N 1151608.46E			
	091	51.4	Hong Kong Radar 118.925 MHZ (PRI) 132.525 MHZ (SRY)
△SOUSA 220110.40N 1161127.80E			
	001	41.8	Hong Kong Radar 118.925 MHZ (PRI) 132.525 MHZ (SRY)
▲DOTMI 224306.00N 1161006.00E			
Route Remark: DOTMI: Compulsory ATS Reporting Point for all aircraft. Other waypoints: Compulsory ATS Reporting Points for non-jet aircraft only.			

Route designator **Name of significant points** **Coordinates**	**Track °M**	**Distance** **NM**	**Remarks** **Controlling unit** **Frequency**
1	2	3	4
V10			
▲SIKOU 205036.00N 1113000.00E			
	299	40.7	Hong Kong Radar 127.1 MHZ (PRI) 123.7 MHZ (SRY)
△DAGBU 203257.99N 1120910.07E			
	254	97.2	Hong Kong Radar 127.1 MHZ (PRI) 123.7 MHZ (SRY)
△ALLEY 210511.15N 1134709.50E			
	217	25.3	Hong Kong Radar 123.475 MHZ (PRI) 132.6 MHZ (SRY)
△PECAN 212620.19N 1140205.64E			
Route Remark: SIKOU: Compulsory ATS Reporting Point for all aircraft. Other waypoints: Compulsory ATS Reporting Points for non-jet aircraft only.			

Route designator **Name of significant points** **Coordinates**	**Track °M**	**Distance** **NM**	**Remarks** **Controlling unit** **Frequency**
1	2	3	4
V11			
△IDOSI 190000.00N 1123000.00E			
	219	23.1	Hong Kong Radar 125.325 MHZ (PRI) 132.775 MHZ (SRY)
△SURFA 191850.98N 1124411.17E			
	220	120.5	Hong Kong Radar 125.325 MHZ (PRI) 132.775 MHZ (SRY)
△LAXET 205616.57N 1140005.12E			
	187	30.0	Hong Kong Radar 123.475 MHZ (PRI) 132.6 MHZ (SRY)
△PECAN 212620.19N 1140205.64E			
Route Remark: All waypoints: Compulsory ATS Reporting Points for non-jet aircraft only.			

Route designator **Name of significant points** **Coordinates**	**Track °M**	**Distance** **NM**	**Remarks** **Controlling unit** **Frequency**
1	2	3	4
V12			
△EPDOS 190000.00N 1133318.00E			
	195	118.6	Hong Kong Radar 125.325 MHZ (PRI) 132.775 MHZ (SRY)
△LAXET 205616.57N 1140005.12E			
	187	30.0	Hong Kong Radar 123.475 MHZ (PRI) 132.6 MHZ (SRY)
△PECAN 212620.19N 1140205.64E			
Route Remark: All waypoints: Compulsory ATS Reporting Points for non-jet aircraft only.			

Route designator **Name of significant points** **Coordinates**	**Track °M**	**Distance** **NM**	**Remarks** **Controlling unit** **Frequency**
1	2	3	4
V13			
△LAKES 215841.30N 1145438.60E			
	091	20.0	Hong Kong Radar 118.925 MHZ (PRI) 132.525 MHZ (SRY)
△VENGO 215916.17N 1151608.46E			
	091	51.4	Hong Kong Radar 118.925 MHZ (PRI) 132.525 MHZ (SRY)
△SOUSA 220110.40N 1161127.80E			
	091	32.8	Hong Kong Radar 118.925 MHZ (PRI) 132.525 MHZ (SRY)
△BESDA 220203.11N 1164645.01E			
	032	48.1	Hong Kong Radar 118.925 MHZ (PRI) 132.525 MHZ (SRY)
△LIMSU 224427.09N 1171137.82E			
	032	13.6	Hong Kong Radar 118.925 MHZ (PRI) 132.525 MHZ (SRY)
▲LELIM 225624.00N 1171842.00E			
Route Remark: LELIM: Compulsory ATS Reporting Point for all aircraft. Other waypoints: Compulsory ATS Reporting Points for non-jet aircraft only.			

Route designator Name of significant points Coordinates	Track °M	Distance NM	Remarks Controlling unit Frequency
1	2	3	4
V2			
△OCEAN 214843.00N 1144848.00E			
	095	28.9	Hong Kong Radar 118.925 MHZ (PRI) 132.525 MHZ (SRY)
△RASSE 214734.50N 1151949.10E			
	095	81.3	Hong Kong Radar 118.925 MHZ (PRI) 132.525 MHZ (SRY)
△CONGA 214402.50N 1164705.90E			
	051	53.6	Hong Kong Radar 118.925 MHZ (PRI) 132.525 MHZ (SRY)
▲ELATO 222000.00N 1173000.00E			
Route Remark: ELATO: Compulsory ATS Reporting Point for all aircraft. Other waypoints: Compulsory ATS Reporting Points for non-jet aircraft only.			

Route designator **Name of significant points** **Coordinates**	**Track °M**	**Distance** **NM**	**Remarks** **Controlling unit** **Frequency**
1	2	3	4
V3			
△OCEAN 214843.00N 1144848.00E			
	095	28.9	Hong Kong Radar 118.925 MHZ (PRI) 132.525 MHZ (SRY)
△RASSE 214734.50N 1151949.10E			
	095	81.3	Hong Kong Radar 118.925 MHZ (PRI) 132.525 MHZ (SRY)
△CONGA 214402.50N 1164705.90E			
	072	42.8	Hong Kong Radar 118.925 MHZ (PRI) 132.525 MHZ (SRY)
▲ENVAR 215930.00N 1173000.00E			
Route Remark: ENVAR: Compulsory ATS Reporting Point for all aircraft. Other waypoints: Compulsory ATS Reporting Points for non-jet aircraft only.			

Route designator **Name of significant points** **Coordinates**	**Track °M**	**Distance** **NM**	**Remarks** **Controlling unit** **Frequency**
1	2	3	4
V31			
△IDOSI 190000.00N 1123000.00E			
	219	23.1	Hong Kong Radar 125.325 MHZ (PRI) 132.775 MHZ (SRY)
△SURFA 191850.98N 1124411.17E			
	212	121.4	Hong Kong Radar 125.325 MHZ (PRI) 132.775 MHZ (SRY)
△ALLEY 210511.15N 1134709.50E			
Route Remark: All waypoints: Compulsory ATS Reporting Points for non-jet aircraft only.			

Route designator **Name of significant points** **Coordinates**	**Track °M**	**Distance** **NM**	**Remarks** **Controlling unit** **Frequency**
1	2	3	4
V32			
△EPDOS 190000.00N 1133318.00E			
	189	125.4	Hong Kong Radar 125.325 MHZ (PRI) 132.775 MHZ (SRY)
△ALLEY 210511.15N 1134709.50E			
Route Remark: All waypoints: Compulsory ATS Reporting Points for non-jet aircraft only.			

Route designator Name of significant points Coordinates	Track °M	Distance NM	Remarks Controlling unit Frequency
1	2	3	4
V4			
▲NOMAN 200000.00N 1164018.00E			
	144	64.9	Hong Kong Radar 132.15 MHZ (PRI) 128.75 MHZ (SRY)
△GRUPA 205044.00N 1155659.00E			
	135	61.0	Hong Kong Radar 132.15 MHZ (PRI) 128.75 MHZ (SRY)
△SKATE 213154.99N 1150839.94E			
	135	25.0	Hong Kong Radar 132.15 MHZ (PRI) 128.75 MHZ (SRY)
△OCEAN 214843.00N 1144848.00E			
Route Remark: NOMAN: Compulsory ATS Reporting Point for all aircraft. Other waypoints: Compulsory ATS Reporting Points for non-jet aircraft only.			

Route designator **Name of significant points** **Coordinates**	**Track °M**	**Distance** **NM**	**Remarks** **Controlling unit** **Frequency**
1	2	3	4
V5			
▲SABNO 185906.00N 1155042.00E			
	186	111.4	Hong Kong Radar 132.15 MHZ (PRI) 128.75 MHZ (SRY)
△GRUPA 205044.00N 1155659.00E			
	135	61.0	Hong Kong Radar 132.15 MHZ (PRI) 128.75 MHZ (SRY)
△SKATE 213154.99N 1150839.94E			
	135	25.0	Hong Kong Radar 132.15 MHZ (PRI) 128.75 MHZ (SRY)
△OCEAN 214843.00N 1144848.00E			
Route Remark: SABNO: Compulsory ATS Reporting Point for all aircraft. Other waypoints: Compulsory ATS Reporting Points for non-jet aircraft only.			

Route designator Name of significant points Coordinates	Track °M	Distance NM	Remarks Controlling unit Frequency
1	2	3	4
V512			
△ABBEY 221611.00N 1145525.92E			
	271	23.0	Hong Kong Radar 126.5 MHZ (PRI) 132.8 MHZ (SRY)
△FISHA 221657.64N 1152011.61E			
	271	19.7	Hong Kong Radar 126.5 MHZ (PRI) 132.8 MHZ (SRY)
△ENPET 221733.16N 1154124.36E			
	271	7.5	Hong Kong Radar 121.3 MHZ (PRI) 132.525 MHZ (SRY)
△MAGOG 221746.00N 1154930.00E			
	220	31.6	Hong Kong Radar 121.3 MHZ (PRI) 132.525 MHZ (SRY)
▲DOTMI 224306.00N 1161006.00E			
Route Remark: DOTMI: Compulsory ATS Reporting Point for all aircraft. Other waypoints: Compulsory ATS Reporting Points for non-jet aircraft only.			

Route designator **Name of significant points** **Coordinates**	**Track °M**	**Distance** **NM**	**Remarks** **Controlling unit** **Frequency**
1	2	3	4
V522			
△ABBEY 221611.00N 1145525.92E			
	271	23.0	Hong Kong Radar 126.5 MHZ (PRI) 132.8 MHZ (SRY)
△FISHA 221657.64N 1152011.61E			
	271	19.7	Hong Kong Radar 126.5 MHZ (PRI) 132.8 MHZ (SRY)
△ENPET 221733.16N 1154124.36E			
	271	7.5	Hong Kong Radar 121.3 MHZ (PRI) 132.525 MHZ (SRY)
△MAGOG 221746.00N 1154930.00E			
	272	93.2	Hong Kong Radar 121.3 MHZ (PRI) 132.525 MHZ (SRY)
▲ELATO 222000.00N 1173000.00E			
Route Remark: ELATO: Compulsory ATS Reporting Point for all aircraft. Other waypoints: Compulsory ATS Reporting Points for non-jet aircraft only.			

Route designator Name of significant points Coordinates	Track °M	Distance NM	Remarks Controlling unit Frequency
1	2	3	4
V525			
△BETTY 212910.82N 1143331.92E			
	318	39.5	Hong Kong Radar 126.3 MHZ (PRI) 132.6 MHZ (SRY)
△SONNY 210103.66N 1150318.81E			
	318	10.6	Hong Kong Radar 132.15 MHZ (PRI) 128.75 MHZ (SRY)
△DAKTO 205330.89N 1151115.58E			
	248	32.8	Hong Kong Radar 132.15 MHZ (PRI) 128.75 MHZ (SRY)
△EATON 210724.40N 1154301.10E			
	254	79.5	Hong Kong Radar 132.15 MHZ (PRI) 128.75 MHZ (SRY)
△AKEKU 213418.33N 1170309.60E			
	212	51.9	Hong Kong Radar 121.3 MHZ (PRI) 132.525 MHZ (SRY)
▲ELATO 222000.00N 1173000.00E			
Route Remark: V525 is for ATC tactical use only and shall not be used for flight planning purposes ELATO: Compulsory ATS Reporting Point for all aircraft. Other waypoints: Compulsory ATS Reporting Points for non-jet aircraft only.			

Route designator **Name of significant points** **Coordinates**	**Track °M**	**Distance** **NM**	**Remarks** **Controlling unit** **Frequency**
1	2	3	4
V532			
▲NOMAN 200000.00N 1164018.00E			
	301	71.8	Hong Kong Radar 132.15 MHZ (PRI) 128.75 MHZ (SRY)
△OSUMO 203313.23N 1153232.05E			
	318	28.4	Hong Kong Radar 132.15 MHZ (PRI) 128.75 MHZ (SRY)
△DAKTO 205330.89N 1151115.58E			
	318	10.6	Hong Kong Radar 132.15 MHZ (PRI) 128.75 MHZ (SRY)
△SONNY 210103.66N 1150318.81E			
	318	39.5	Hong Kong Radar 126.3 MHZ (PRI) 132.6 MHZ (SRY)
△BETTY 212910.82N 1143331.92E			
Route Remark: NOMAN: Compulsory ATS Reporting Points for all aircraft. Other waypoints: Compulsory ATS Reporting Points for non-jet aircraft only.			

Route designator Name of significant points Coordinates	Track °M	Distance NM	Remarks Controlling unit Frequency
1	2	3	4
V542			
▲SABNO 185906.00N 1155042.00E			
	305	36.7	Hong Kong Radar 128.125 MHZ (PRI) 128.75 MHZ (SRY)
△TOFEE 191821.99N 1151738.48E			
	304	42.5	Hong Kong Radar 128.125 MHZ (PRI) 128.75 MHZ (SRY)
△SUKER 194033.48N 1143911.87E			
	358	55.2	Hong Kong Radar 128.125 MHZ (PRI) 128.75 MHZ (SRY)
△HOCKY 203549.35N 1143428.48E			
	358	15.0	Hong Kong Radar 128.125 MHZ (PRI) 128.75 MHZ (SRY)
△CYBER 205049.64N 1143310.56E			
	003	38.2	Hong Kong Radar 126.3 MHZ (PRI) 132.6 MHZ (SRY)
△BETTY 212910.82N 1143331.92E			
Route Remark: SABNO: Compulsory ATS Reporting Point for all aircraft. Other waypoints: Compulsory ATS Reporting Points for non-jet aircraft only.			

Route designator **Name of significant points** **Coordinates**	**Track °M**	**Distance** **NM**	**Remarks** **Controlling unit** **Frequency**
1	2	3	4
V551			
△CARSO 190000.00N 1144237.75E			
	358	40.5	Hong Kong Radar 128.125 MHZ (PRI) 128.75 MHZ (SRY)
△SUKER 194033.48N 1143911.87E			
	358	55.2	Hong Kong Radar 128.125 MHZ (PRI) 128.75 MHZ (SRY)
△HOCKY 203549.35N 1143428.48E			
	358	15.0	Hong Kong Radar 128.125 MHZ (PRI) 128.75 MHZ (SRY)
△CYBER 205049.64N 1143310.56E			
	003	38.2	Hong Kong Radar 126.3 MHZ (PRI) 132.6 MHZ (SRY)
△BETTY 212910.82N 1143331.92E			
Route Remark: All waypoints: Compulsory ATS Reporting Points for non-jet aircraft only.			

Route designator Name of significant points Coordinates	Track °M	Distance NM	Remarks Controlling unit Frequency
1	2	3	4
V561			
△IDOSI 190000.00N 1123000.00E			
	013	72.6	Hong Kong Radar 125.325 MHZ (PRI) 132.775 MHZ (SRY)
△MYWAY 201146.30N 1124307.70E			
	013	68.1	Hong Kong Radar 127.1 MHZ (PRI) 123.7 MHZ (SRY)
△GAMBA 211908.12N 1125536.21E			
	074	10.0	Hong Kong Radar 127.1 MHZ (PRI) 123.7 MHZ (SRY)
△MAPLE 212226.82N 1130542.82E			
	074	21.8	Hong Kong Radar 127.55 MHZ (PRI) 134.3 MHZ (SRY)
△COMBI 212937.10N 1132744.30E			
	074	7.0	Hong Kong Radar 127.55 MHZ (PRI) 134.3 MHZ (SRY)
△ROCCA 213155.42N 1133451.44E			
	048	10.0	Hong Kong Radar 127.55 MHZ (PRI) 134.3 MHZ (SRY)
△CANTO 213902.63N 1134225.09E			
Route Remark: All waypoints: Compulsory ATS Reporting Points for non-jet aircraft only.			

Route designator **Name of significant points** **Coordinates**	**Track °M**	**Distance** **NM**	**Remarks** **Controlling unit** **Frequency**
1	2	3	4
V571			
▲SIKOU 205036.00N 1113000.00E			
	074	85.0	Hong Kong Radar 127.1 MHZ (PRI) 123.7 MHZ (SRY)
△GAMBA 211908.12N 1125536.21E			
	074	10.0	Hong Kong Radar 127.1 MHZ (PRI) 123.7 MHZ (SRY)
△MAPLE 212226.82N 1130542.82E			
	074	21.8	Hong Kong Radar 127.55 MHZ (PRI) 134.3 MHZ (SRY)
△COMBI 212937.10N 1132744.30E			
	074	7.0	Hong Kong Radar 127.55 MHZ (PRI) 134.3 MHZ (SRY)
△ROCCA 213155.42N 1133451.44E			
	048	10.0	Hong Kong Radar 127.55 MHZ (PRI) 134.3 MHZ (SRY)
△CANTO 213902.63N 1134225.09E			
Route Remark: SIKOU: Compulsory ATS Reporting Point for all aircraft. Other waypoints: Compulsory ATS Reporting Points for non-jet aircraft only.			

Route designator Name of significant points Coordinates	Track °M	Distance NM	Remarks Controlling unit Frequency
1	2	3	4
V591			
△ABBEY 221611.00N 1145525.92E			
	271	23.0	Hong Kong Radar 126.5 MHZ (PRI) 132.8 MHZ (SRY)
△FISHA 221657.64N 1152011.61E			
	271	19.7	Hong Kong Radar 126.5 MHZ (PRI) 132.8 MHZ (SRY)
△ENPET 221733.16N 1154124.36E			
	271	7.5	Hong Kong Radar 121.3 MHZ (PRI) 132.525 MHZ (SRY)
△MAGOG 221746.00N 1154930.00E			
	251	71.0	Hong Kong Radar 121.3 MHZ (PRI) 132.525 MHZ (SRY)
△MALKA 224413.60N 1170041.71E			
	237	20.6	Hong Kong Radar 121.3 MHZ (PRI) 132.525 MHZ (SRY)
▲LELIM 225624.00N 1171842.00E			
Route Remark: LELIM: Compulsory ATS Reporting Point for all aircraft. Other waypoints: Compulsory ATS Reporting Points for non-jet aircraft only.			

Route designator **Name of significant points** **Coordinates**	**Track °M**	**Distance** **NM**	**Remarks** **Controlling unit** **Frequency**
1	2	3	4
W29			
△BETTY 212910.82N 1143331.92E			
	318	39.5	Hong Kong Radar 126.3 MHZ (PRI) 132.6 MHZ (SRY)
△SONNY 210103.66N 1150318.81E			
	318	10.6	Hong Kong Radar 132.15 MHZ (PRI) 128.75 MHZ (SRY)
△DAKTO 205330.89N 1151115.58E			
	248	32.8	Hong Kong Radar 132.15 MHZ (PRI) 128.75 MHZ (SRY)
△EATON 210724.40N 1154301.10E			
	187	30.5	Hong Kong Radar 132.15 MHZ (PRI) 128.75 MHZ (SRY)
▲MEPUT 213759.00N 1154519.80E			
Route Remark: W29 is for ATC tactical use only and shall not be used for flight planning purposes. All waypoints: Compulsory ATS Reporting Points for non-jet aircraft only.			

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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) 128.75 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. 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) 132.525 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) 128.75 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. Hong Kong Radar 128.125 MHZ (PRI) 128.75 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. 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 For flights within the RVSM airspace, refer to FLAS in ENR 1.8 para 8. IKELA: 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
Q1 (RNP 10)						
▲DULOP 181412.00N 1143236.00E						
	015	46.6	UNL / 8000 ft AMSL Class A	Odd		Hong Kong Radar 125.8 MHZ (PRI) 128.75 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) 134.3 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 At appropriate cruising levels in accordance with ICAO Annex 2, Rules of the Air, Appendix C. Oil rig support helicopters shall not normally be flown at or above 8 000 ft AMSL in controlled airspace.
	Track VH (Base to rig)	2 000 ft AMSL or less	
	Track VH (Rig to base)	2 000 ft AMSL or less	
	Track VW (ZAO - QUBEC)	500 ft AMSL or less (RWY 07 in HKIA); 800 ft AMSL or less (RWY 25 in HKIA)	
	Track VW (QUBEC - VW)	1 000 ft AMSL or less	
	Track VW (VW - rig)	2 000 ft AMSL or less	
IFR	Track H (Base to rig)	5 000 ft AMSL	
	Track H (Rig to base)	4 000 ft AMSL	
	Track D (Base to rig)	4 000 ft AMSL (PRI) 6 000 ft AMSL (SRY subject to coordination)	
	Track D (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, 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	900 ft AMSL
Route A2	RWY 07	SVFR	500 ft AMSL
	RWY 25	SVFR	900 ft AMSL
Route B1	RWY 07	VFR	500 ft AMSL
	RWY 25	VFR	1 200 ft AMSL
Route C1	RWY 07	VFR	500 ft AMSL
		SVFR	1 000 ft AMSL
	RWY 25	VFR / SVFR	1 200 ft AMSL

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. 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.

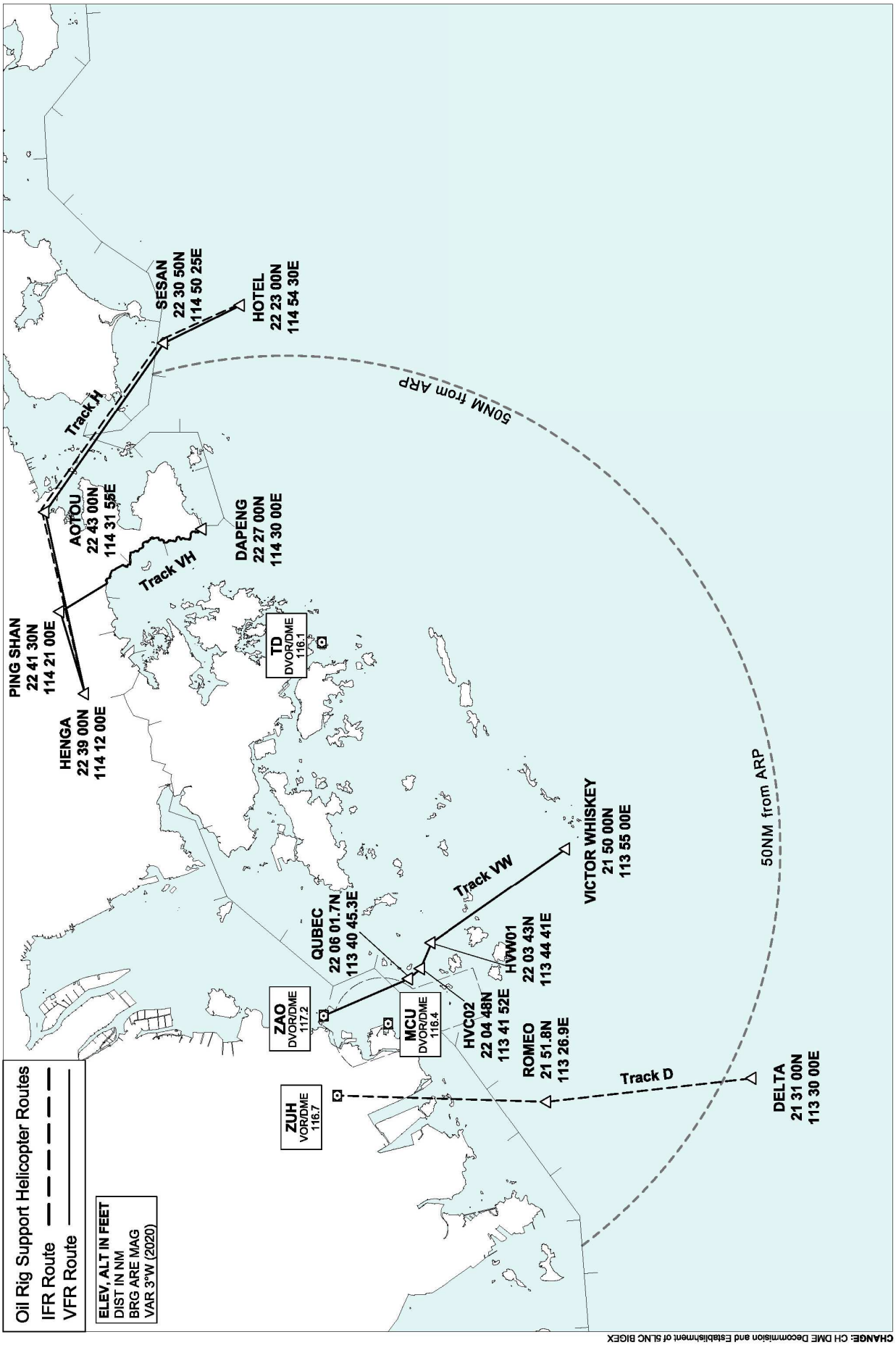
d) Pilots should use published instrument departure or approach procedure to/from Sky Shuttle Heliport.

e) Helicopters shall have a serviceable SSR transponder.

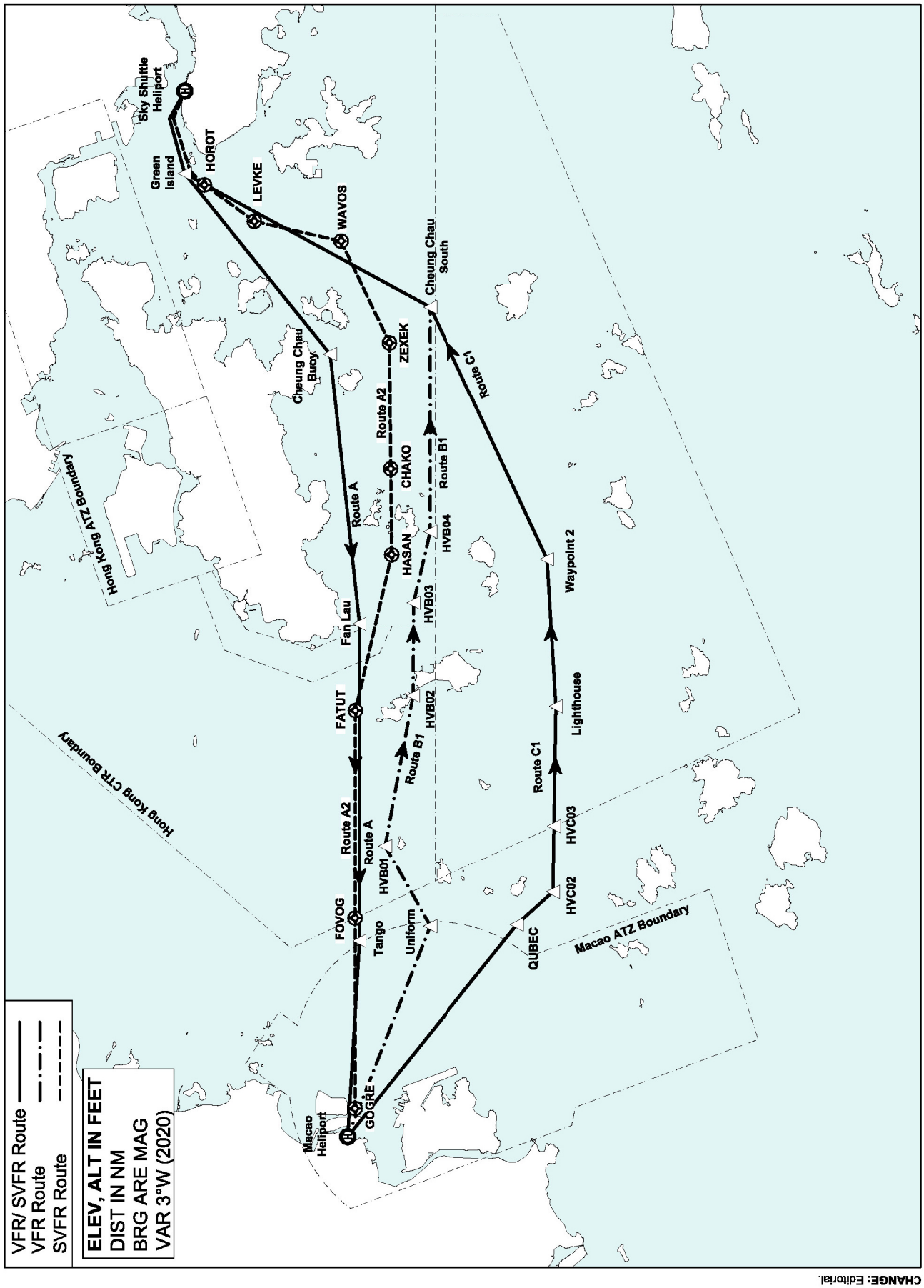
f) The IFR routes shall not normally be used during the peak periods of Macao Airport traffic.

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.

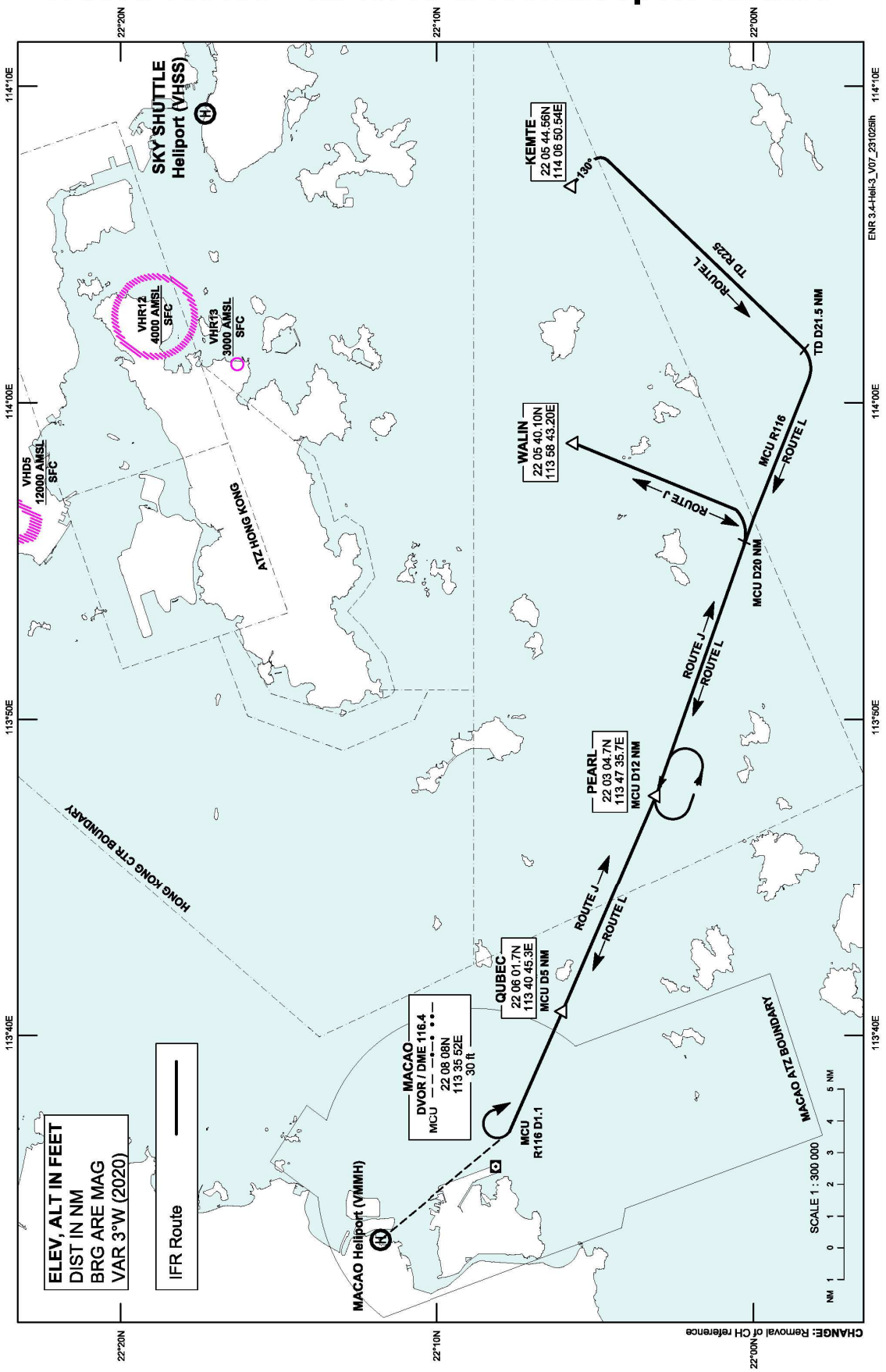
Oil Rig Support Helicopter Routes



Hong Kong - Macao VFR/SVFR Helicopter Routes



HONG KONG - MACAO IFR Helicopter Routes



ENR 3.5 OTHER ROUTES

1 Additional Waypoint

1.1 When extensive holding occurs in the terminal area, Hong Kong ATC may re-route traffic to and from Guangzhou FIR over DOTMI to track via an additional waypoint PEDSU:

Waypoint	Co-ordinates	Cross Reference from Navaid
PEDSU	210647.84N 1164745.00E	TD RDL 118/DME 155.5 NM

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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 TD R091/D35.1NM 221611.00N 1145525.92E	271	Right (Left above FL250)	250*	FL90	10 NM	HONG KONG RADAR 126.5 MHZ 132.8 MHZ(SRY)
ATIKO SMT R221/D40.1NM 214829.56N 1133226.04E	036	Right	210	5000 ft	1 min	HONG KONG RADAR 123.95 MHZ 134.3 MHZ(SRY)
BAKER TD R165/D64.8NM 211302.00N 1143907.00E	345	Right	250*	FL90	10 NM	HONG KONG RADAR 126.3 MHZ 132.6 MHZ(SRY)
BETTY TD R165/D47.9NM 212910.82N 1143331.92E	345	Right	250*	FL90	10 NM	HONG KONG RADAR 126.3 MHZ 132.6 MHZ(SRY)
BUMDI SMT R089/D18.5NM 222139.62N 1141852.61E	269	Left	220	FL190	1 min	HONG KONG DEPARTURE 122.0 MHZ 124.05 MHZ(SRY)
CANTO TD R226/D48.4NM 213902.63N 1134225.09E	048	Right	250*	FL90	10 NM	HONG KONG RADAR 127.55 MHZ 134.3 MHZ(SRY)
CHALI 211745.00N 1133641.00E	074	Left	230	FL90	1 min	HONG KONG RADAR 123.95 MHZ 134.3 MHZ(SRY)
COMBI TD R229/D64.7NM 212937.10N 1132744.30E	074	Right	250*	FL90	10 NM	HONG KONG RADAR 127.55 MHZ 134.3 MHZ(SRY)
DAKTO TD R151/D95.3NM 205330.89N 1151115.58E	318	Right	250*	FL90	10 NM	HONG KONG RADAR 132.15 MHZ 128.75 MHZ(SRY)
EATON TD R133/D104.2NM 210724.40N 1154301.10E	248	Right	250*	FL90	10 NM	HONG KONG RADAR 126.5 MHZ 132.8 MHZ(SRY)
FISHA TD R091/D58.1NM 221657.64N 1152011.61E	271	Right (Left above FL250)	250*	FL90	10 NM	HONG KONG RADAR 126.5 MHZ 132.8 MHZ(SRY)
GAMBA TD R237/D94.4NM 211908.12N 1125536.21E	074	Right	250*	FL90	10 NM	HONG KONG RADAR 127.1 MHZ 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 TD R182/D99.9NM 203435.35N 1141832.48E	358	Right	250*	FL90	1 min	HONG KONG RADAR 128.125 MHZ 128.75 MHZ(SRY)
GUAVA TD R251/D14NM 220936.10N 1140336.30E	014	Right	210*	4500 ft	1 min	HONG KONG APPROACH 119.1 MHZ 119.35 MHZ(SRY)
HOCKY TD R174/D99.9NM 203549.35N 1143428.48E	358	Right	250*	FL90	10 NM	HONG KONG RADAR 128.125 MHZ 128.75 MHZ(SRY)
LIMES 220625.60N 1134632.60E	338	Right	220, or as directed by ATC	4500 ft	1 min	HONG KONG APPROACH 119.5 MHZ 119.1 MHZ(SRY)
MC513 ZUH R147/D14.7NM 220109.95N 1133720.04E	328	Left	185	3000 ft	1 min	HONG KONG RADAR 123.95 MHZ 134.3 MHZ(SRY)
MYWAY TD R219/D151.1NM 201146.30N 1124307.70E	013	Left	See Note #	FL90	10 NM	HONG KONG RADAR 127.1 MHZ 123.7 MHZ(SRY)
OTKUM TD R229/D16.3NM 220334.20N 1140455.85E	346	Left	230	4500 ft	1 min	HONG KONG DEPARTURE 122.0 MHZ 124.05 MHZ(SRY)
PAPA MCU R164/D10NM 215839.00N 1133922.00E	344	Left	190	3000 ft	1 min	HONG KONG RADAR 123.95 MHZ 134.3 MHZ(SRY)
ROCCA TD R226/D58.4NM 213155.42N 1133451.44E	074	Right	250*	FL90	1 min	HONG KONG RADAR 127.55 MHZ 134.3 MHZ(SRY)
TAPPO TD R186/D55.4NM 211920.61N 1141434.62E	358	Left	250*	FL90	1 min	HONG KONG RADAR 123.475 MHZ 132.6 MHZ(SRY)
TD DVOR 221452.42N 1141735.30E	344	Right	230, or as directed by ATC	4500 ft	1 min	HONG KONG APPROACH 119.1 MHZ 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 DVOR/DME (3°W)	TD	116.1MHZ (CH 108X)	H24	221452.42N 1141735.30E	249.87 M	Coverage up to 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
AKEKU	213418.33N 1170309.60E	V525	
ALAPI	220952.88N 1141213.09E		STAR-VHHH
ALDOM	195009.33N 1142226.42E	J103	
ALLEY	210511.15N 1134709.50E	V10 / V31 / V32	SID-VMMC
ARGON	221152.56N 1134347.67E		IAP-VHHH
ASOBA	172222.00N 1143413.00E	M772	
ATENA	222439.85N 1142311.88E		SID-VHHH
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	V13	
BETTY	212910.82N 1143331.92E	V525 / V532 / V542 / V551 / W29	STAR-VHHH / HLDG Fix
BIGEX	221310.35N 1140148.20E	A1 / A202 / A461 / A583 / B330 / G581 / G86 / L642 / M771 / P901	
BISON	222907.41N 1141228.76E		IAP-VHHH
BOKAG	223146.65N 1141327.06E		IAP-VHHH
BORDA	214132.37N 1132429.01E		STAR-VHHH
BREAM	214646.00N 1140328.00E		SID-VHHH / SID-VMMC
BUMDI	222139.62N 1141852.61E	J101	HLDG Fix
CAMRI	220146.24N 1140428.73E		SID-VMMC
CANTO	213902.63N 1134225.09E	V561 / V571	STAR-VHHH / HLDG Fix
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
COLEY	220641.03N 1141837.63E		SID-VHHH
COMBI	212937.10N 1132744.30E	V561 / V571	HLDG Fix
CONGA	214402.50N 1164705.90E	V2 / V3	SID-VMMC
COTON	210924.17N 1131101.04E	J104	
CUSDO	221643.86N 1140543.60E		IAP-VHSS
CYBER	205049.64N 1143310.56E	V542 / V551	
DAGBU	203257.99N 1120910.07E	V10	
DAKTO	205330.89N 1151115.58E	V525 / V532 / W29	HLDG Fix
DASON	210323.27N 1125240.39E	J104	
DELTA*	213100N 1133000E		
DOCTA	215649.45N 1140033.38E		SID-VMMC
DOSUT	170200.00N 1134048.00E	M771	
DOTMI	224306.00N 1161006.00E	A470 / V1 / V512	
DULOP	181412.00N 1143236.00E	M771 / M772 / Q1	
DUMOL	190000.00N 1142648.00E	J103 / M771	
EATON	210724.40N 1154301.10E	V525 / W29	HLDG Fix
ELATO	222000.00N 1173000.00E	A1 / G581 / J101 / V2 / V522 / V525	
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 / V3	
EPDOS	190000.00N 1133318.00E	L642 / V12 / V32	
EPKAL	175130.00N 1125718.00E	L642	
FATUT*	221132.4N 1134803.6E		

Name-code designator	Co-ordinates	ATS Route / PBN Route / TTR	SID / STAR / IAP / HLDG Fix
1	2	3	4
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		
GOODI	220409.88N 1135948.59E		STAR-VHHH / IAP-VHHH
GRUPA	205044.00N 1155659.00E	V4 / V5	SID-VMMC
GUAVA	220936.10N 1140336.30E		STAR-VHHH / HLDG Fix / IAP-VHHH
HASAN*	221018.6N 1135320.9E		
HAZEL	220126.49N 1134056.63E		STAR-VMMC
HOCKY	203549.35N 1143428.48E	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	
LAKES	215841.30N 1145438.60E	V1 / V13	SID-VHHH / SID-VMMC

Name-code designator	Co-ordinates	ATS Route / PBN Route / TTR	SID / STAR / IAP / HLDG Fix
1	2	3	4
LAMMA	221655.61N 1140510.55E		IAP-VHHH
LANDA+	213647.24N 1130242.74E		
LAXET	205616.57N 1140005.12E	V11 / V12	
LEGOD^	205631.76N 1145344.09E		
LELIM	225624.00N 1171842.00E	V13 / V591	
LENBU^	211449.66N 1152342.90E		
LEVKE*	221458.2N 1140442.7E		
LIMES	220625.60N 1134632.60E		STAR-VHHH / IAP-VHHH / HLDG Fix
LIMSU	224427.09N 1171137.82E	V13	
LOTUS	222318.26N 1141105.60E		IAP-VHHH
LUDLA	221340.79N 1140428.75E		IAP-VHHH
LUKBU	222244.12N 1135301.50E		SID-VMMC
LUSVI	221246.47N 1140417.10E		IAP-VHHH
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	
MEPUT	213759.00N 1154519.80E	W29	
MIRRS	222417.10N 1141409.30E		IAP-VHHH
MONTY	221006.26N 1141915.68E		STAR-VHHH / IAP-VHHH
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

Name-code designator	Co-ordinates	ATS Route / PBN Route / TTR	SID / STAR / IAP / HLDG Fix
1	2	3	4
MYWAY	201146.30N 1124307.70E	V561	HLDG Fix
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 / V4 / V532	
OCEAN	214843.00N 1144848.00E	V2 / V3 / V4 / V5	SID-VHHH / SID-VMMC
OSUMO	203313.23N 1153232.05E	V532	
OTKUM	220334.20N 1140455.85E		HLDG Fix
PEARL*	220304.7N 1134735.7E		
PEBEL	222243.93N 1141448.38E		IAP-VHHH
PECAN	212620.19N 1140205.64E	V10 / V11 / V12	SID-VHHH / SID-VMMC
PEDSU^	210647.84N 1164745.00E		
PLOVE	222506.30N 1141357.90E		IAP-VHHH
PONTI	222216.35N 1142745.83E	J101	
PORPA	222009.10N 1140116.30E		SID-VHHH / IAP-VHHH
PORSH	221740.38N 1140503.56E		SID-VHHH
POVEG	221743.28N 1134803.62E		SID-VHHH
PRAWN	221605.40N 1134840.10E		SID-VHHH / IAP-VHHH
QUBEC*	220601.7N 1134045.3E		
RAGSO	204532.33N 1115856.71E	J104	
RAMEN	220939.22N 1140509.89E		SID-VHHH
RASSE	214734.50N 1151949.10E	V2 / V3	SID-VHHH / SID-VMMC
ROBIN	210245.00N 1141606.00E	J103	
ROCCA	213155.42N 1133451.44E	V561 / V571	STAR-VHHH / HLDG Fix

Name-code designator	Co-ordinates	ATS Route / PBN Route / TTR	SID / STAR / IAP / HLDG Fix
1	2	3	4
ROMEO*	215148N 1132654E		
ROVER	222035.58N 1140139.12E		SID-VHHH
RUMSY	220456.94N 1134816.79E		SID-VHHH
RUNLI	212659.72N 1134051.00E		STAR-VMMC
RUNSU	222522.96N 1141153.57E		IAP-VHHH
RUSUG	221729.78N 1140512.16E		SID-VHHH
SABNO	185906.00N 1155042.00E	A583 / V5 / V542	
SABOG	222116.66N 1141523.07E		IAP-VHHH
SAGNI	222346.63N 1140652.68E		IAP-VHHH
SAMMI	222800.00N 1155742.00E	J101	
SAMON	215423.73N 1141232.95E		SID-VHHH
SAMPU	222539.19N 1141540.91E		IAP-VHHH
SANKU^	213121.37N 1162040.33E		
SAPAX	213919.84N 1141247.62E	J103	
SHELY	220526.65N 1143913.94E		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	V4 / V5	SID-VHHH / SID-VMMC
SMT	222015.43N 1135855.46E		STAR-VMMC
SOKOE	220441.20N 1135038.10E		STAR-VHHH / IAP-VHHH
SONNY	210103.66N 1150318.81E	V525 / V532 / W29	
SOUSA	220110.40N 1161127.80E	V1 / V13	SID-VMMC
STELA	221153.29N 1134349.11E		IAP-VHHH
SUKER	194033.48N 1143911.87E	V542 / V551	

Name-code designator	Co-ordinates	ATS Route / PBN Route / TTR	SID / STAR / IAP / HLDG Fix
1	2	3	4
SULUX^	202054.31N 1152433.18E		
SURFA	191850.98N 1124411.17E	V11 / V31	
TAMAR	221521.00N 1143037.00E		STAR-VHHH
TAMOT	222130.00N 1135200.00E	B330	
TANGO*	221124N 1134012E		
TAPPO	211920.61N 1141434.62E	J103	HLDG Fix
TEDAP	222435.93N 1141613.20E		IAP-VHHH
TITAN	214027.40N 1140302.52E		SID-VHHH / SID-VMMC
TOFEE	191821.99N 1151738.48E	V542	
TONIC	221247.88N 1134321.85E		IAP-VHHH
TOPUN	222254.17N 1140409.15E		IAP-VHHH
TORUB	222203.41N 1141506.98E		IAP-VHHH
TROUT	214754.87N 1141612.74E		SID-VHHH
TUBBY	223025.41N 1164024.45E	J101	
TUNNA	214725.00N 1135754.00E		SID-VHHH
TUTBA	221401.82N 1134244.92E		IAP-VHHH
VENGO	215916.17N 1151608.46E	V1 / V13	SID-VHHH
VEPIK	221631.34N 1134820.17E		SID-VHHH
WALIN*	220540.10N 1135843.20E		IAP-VHSS
WAVOS*	221201.5N 1140402.3E		
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 Lower Limit	Remarks (time of activity, type of restriction, nature of hazard)
PROHIBITED AREA			
VHP8	**STANLEY FORT** Sectors 090° - 120° and 230° - 270° at 221154N 1141304E within a radius of 3 000 ft (914.4 m)	ALT 1 000 ft GND	H24 Satellite earth station.
RESTRICTED AREA			
VHR7	**TUNGSHA (PRATAS) ISLAND** Circle of 10 NM (18.5 km) radius centred at 2042N 11643E	ALT 5 000 ft SFC	H24 Military firing Controlling authority is Taipei Civil Aeronautics Administration.
VHR12	**PENNY'S BAY** Circle of 1.35 NM (2.5 km) radius centred at 221855.56N 1140244.0E	ALT 4 000 ft SFC	H24 Entertainment Park
VHR13	**KAU SHAT WAN** Circle of 0.19 NM (350 m) radius centred at 221619.20N 1140113.80E	ALT 3 000 ft SFC	H24 Explosive depot
DANGER AREAS			
VHD5	**TSING SHAN FIRING RANGE** 222653N 1135742E, 222448N 1135609E, 222454N 1135522E, 222337N 1135527E, 222243N 1135539E, 222233N 1135557E, 222228N 1135623E, 222358N 1135732E, 222613N 1135844E, 222653N 1135742E.	ALT 12 000 ft GND	Period of activity to be notified by NOTAM. Artillery firing
VHD11	**NINEPINS RANGE** 222000N 1142600E 222000N 1143000E 221600N 1143000E 221600N 1142600E 222000N 1142600E	ALT 2 000 ft SFC	Period of activity to be notified by NOTAM. Police firing.
ZJ(D) 208	201116N 1110004E 202054N 1114452E 194210N 1115408E 193233N 1110928E 201116N 1110004E	15 000 m 6 000 m	Daily: 0030 - 1200 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.

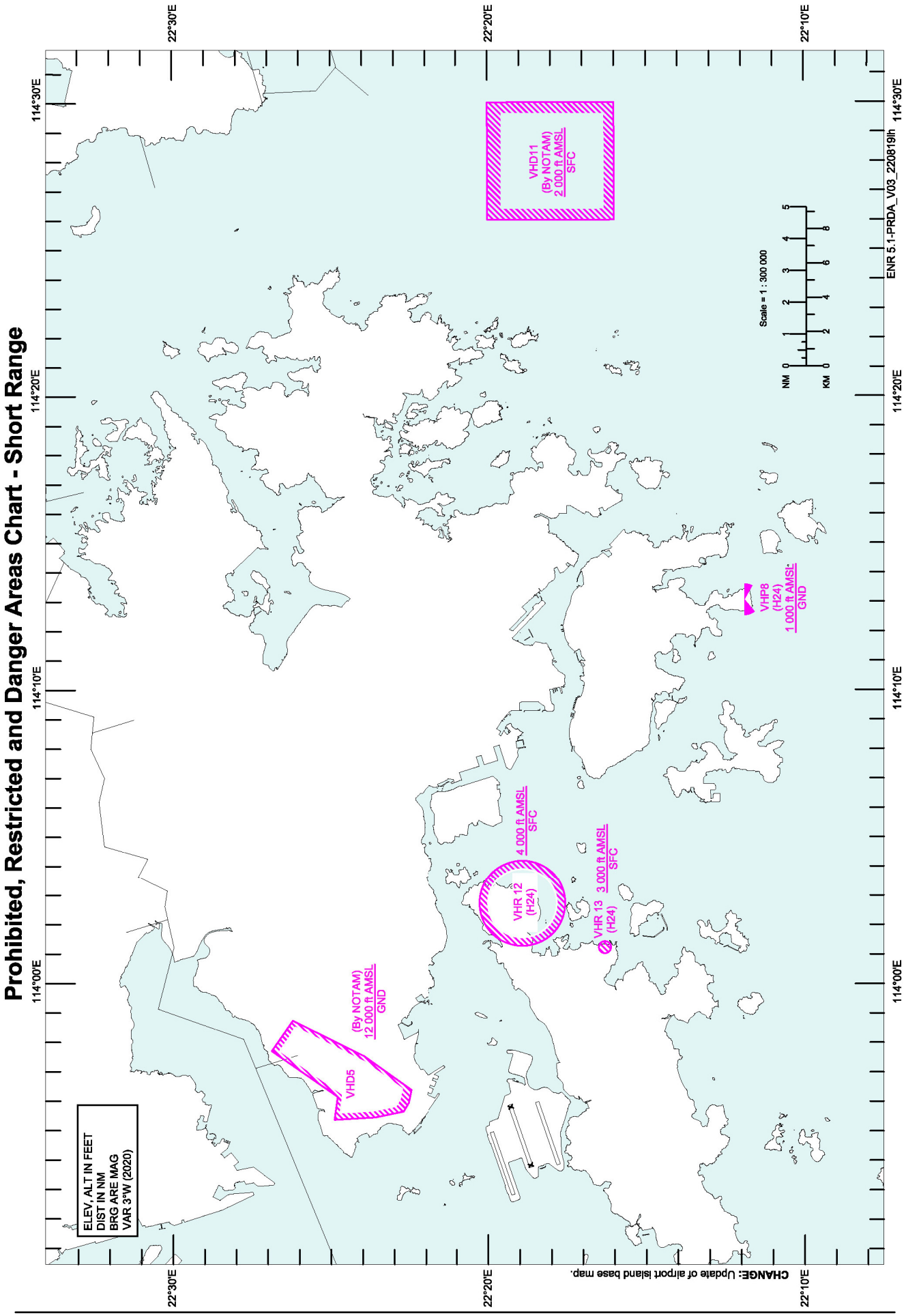
6 Nomenclature of Prohibited, Restricted or Danger Areas

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
22°30'E
22°20'E
22°10'E
114°30'E
114°20'E
114°10'E
114°00'E
VHD11
(By NOTAM)
2 000 ft AMSL
SFC
VHP8
(H24)
1 000 ft AMSL
GND
VHR 12
(H24)
4 000 ft AMSL
SFC
VHR 13
(H24)
3 000 ft AMSL
SFC
VHD5
(By NOTAM)
12 000 ft AMSL
GND
Scale = 1 : 300 000
NM
KM
ELEV, ALT IN FEET
DIST IN NM
BRG ARE MAG
VAR 3°W (2020)
CHANGE: Update of airport island base map.
ENR 5.1-PRDA_V03_220819lh

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.

5.2.3 During the fireworks display period, ATC will temporarily issue the Noise Mitigating SID for RWY 07 departures that route over the Victoria Harbour instead of the normal SID.

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.

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, UCARA Port Shelter	SFC - 2000 ft AMSL	222236N 1142209E 222300N 1142247E 222148N 1142259E 222145N 1142241E
b	Pak Tam Au	Sai Kung East Country Park, UCARA Tolo	SFC - 2000 ft AMSL	222610N 1141821E 222729N 1141851E 222552N 1142233E 222506N 1142220E 222517N 1141957E 222541N 1141836E
c	Pat Sin	Pat Sin Leng Country Park, UCARA New Town	SFC - 2500 ft AMSL	222759N 1140959E 222927N 1141029E 222923N 1141228E 222908N 1141403E 222803N 1141404E 222753N 1141034E
d	Ma On Shan	Ma On Shan Country Park, UCARA New Town	SFC - 2500 ft AMSL	Sai O Raw Water Pumping Station (222539N 1141512E) Ma On Shan Water Treatment Works (222539N 1141532E) Tai Tung Tsuen (222525N 1141550E) Nga Yiu Tau (222516N 1141558E) then along Sai Sha Road to Wong Chuk Wan (222358N 1141658E) Shek Lung Tsai San Tsuen (222331N 1141536E) 222214N 1141453E Tsim Mei Fung (222158N 1141317E)
			SFC - 500 ft AMSL	Tai Tung Tsuen (222525N 1141550E) Tseng Tau Tsuen (222539N 1141603E) Seashore (222528N 1141612E) Nga Yiu Tau (222516N 1141558E)
e	Sai Wan	Sai Kung East Country Park, UCARA Port Shelter	SFC - 1000 ft AMSL	222331N 1142147E 222417N 1142150E 222408N 1142225E 222316N 1142222E

	Name	Location	Operating Altitude	Boundary Coordinates (LAT LONG) or land features
f	Shek O	Hong Kong Island, CTR Island Zone	SFC - 1500 ft AMSL	221221N 1141434E 221442N 1141325E 221459N 1141507E 221347N 1141537E 221228N 1141536E
g	South Lantau East	Lantau South Country Park, CTR Lantau Zone	SFC - 2000 ft AMSL	221356N 1135731E 221417N 1135849E 221542N 1135816E 221530N 1135723E 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, CTR Lantau Zone	SFC - 2000 ft AMSL	221325N 1135543E 221310N 1135432E 221438N 1135434E 221456N 1135541E then along the ridge from Lantau Peak to Tong Fuk.

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.

INTENTIONALLY

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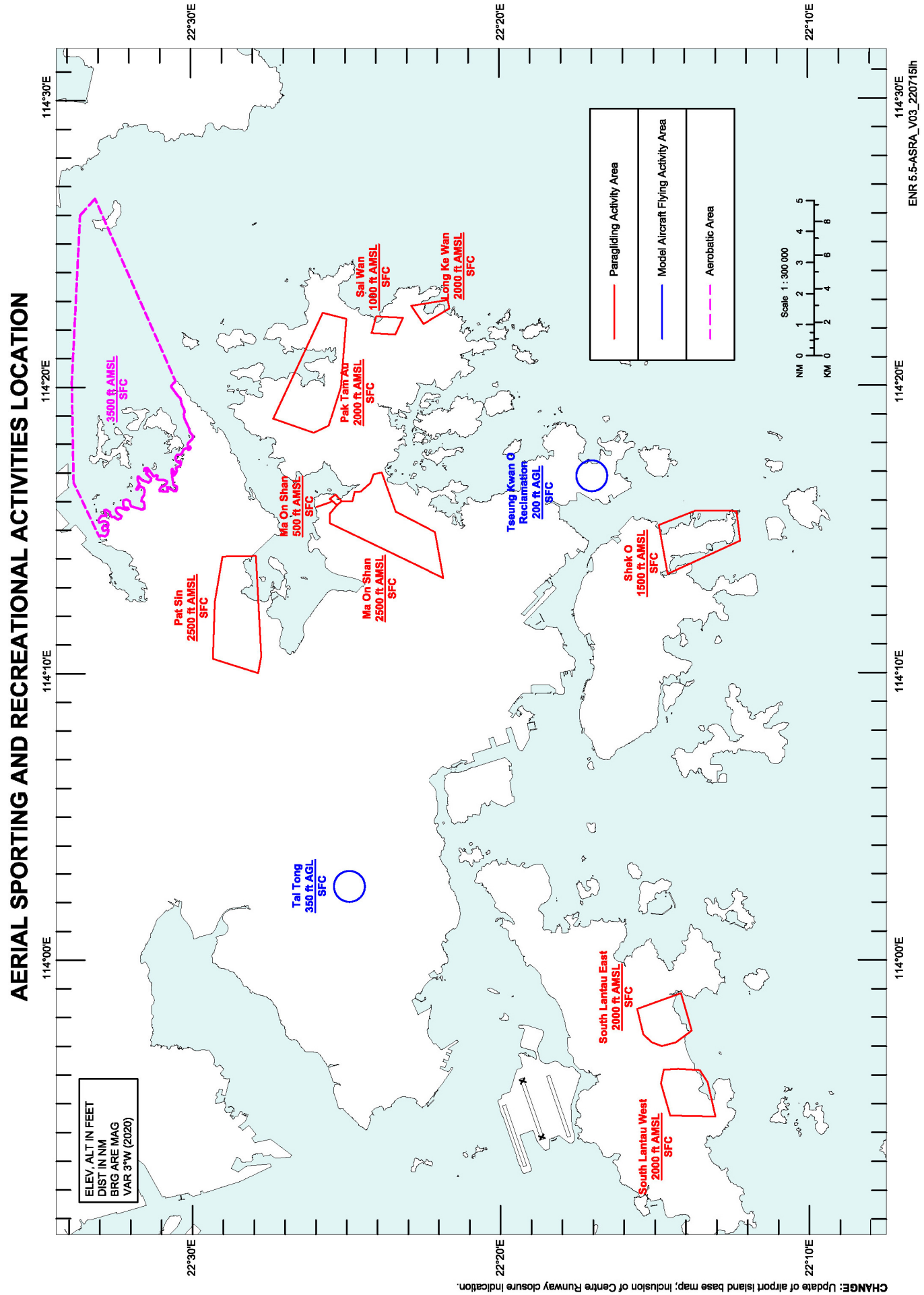
AERIAL SPORTING AND RECREATIONAL ACTIVITIES LOCATION



CHANGE: Update of airport island base map; inclusion of Centre Runway closure indication.

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.

INTENTIONALLY

LEFT

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Prohibited, Restricted and Danger Areas - Long Range

LEGEND

Prohibited, Restricted and Danger Areas Airspace

Identification of area
Vertical limits
P = Prohibited
R = Restricted
D = Danger

ZJ(D)208
15000m / 6000m AMSL

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

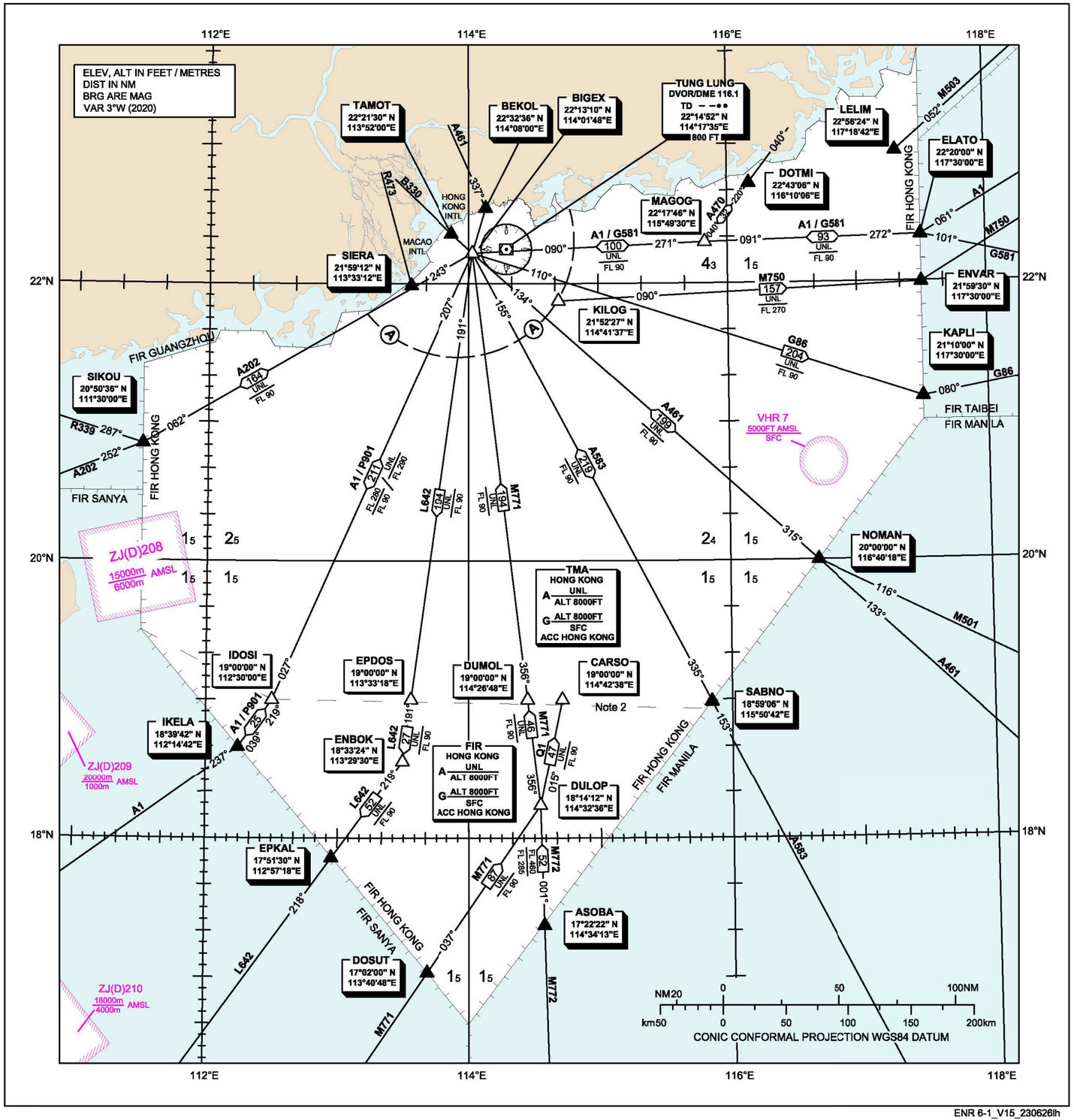
COMMUNICATION FACILITIES
SEE ENR 6-3

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 Upper limit Category of airspace Lower limit Name of airspace	TMA HONG KONG UNL A ALT 8000FT ACC HONG KONG
Route designator Magnetic track Distance in NM Upper limit Minimum cruising level	A461 134° 199 315° UNL FL 90
Reporting point	Complusory ▲ On request △
VHF omnidirectional radio range (VOR) 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) Name NAVAID, frequency, identification or callsign Geographical coordinates Elevation of DME site (to the nearest 100 feet)	TUNG LUNG DVOR/DME 116.1 TD 22°14'52" N 114°17'35"E 800 FT
Identification for reporting point Geographical coordinates	SABNO 22°13'10" N 114°01'48"E

Note 1: Refer to ENR1.10 for flights transiting Hong Kong FIR

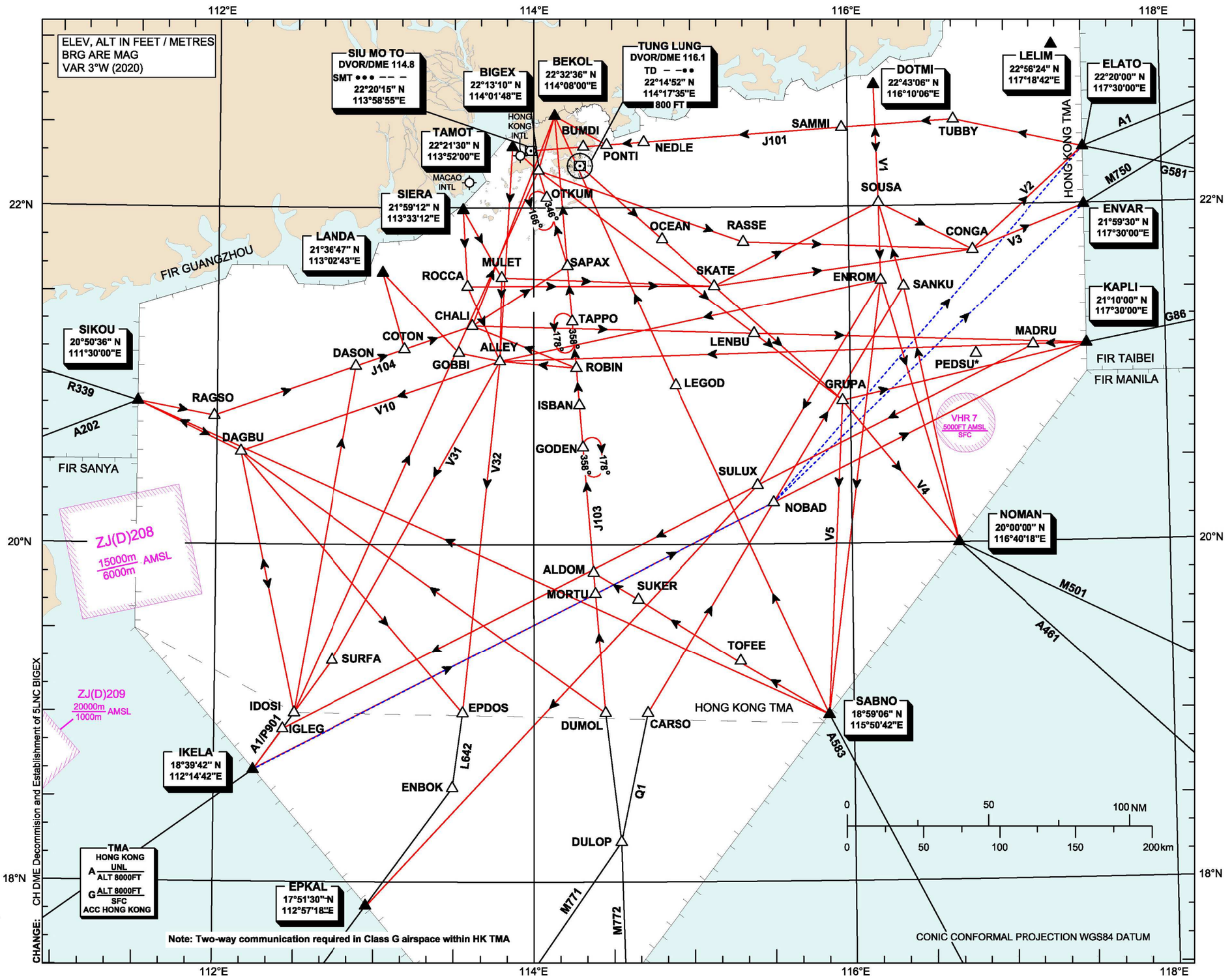
Note 2: PBN Route Q1 joins STAR at CARSO

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.

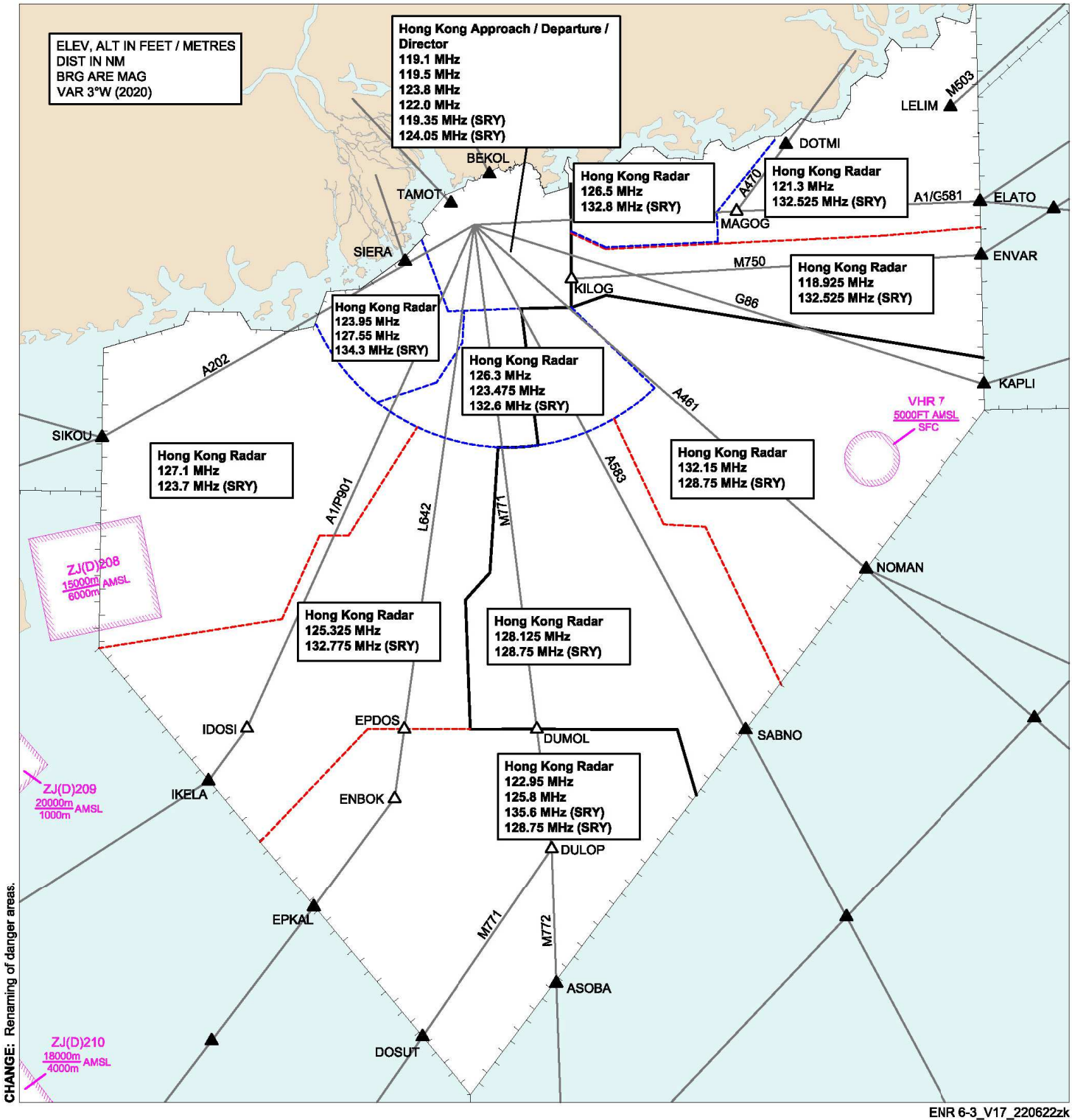
*PEDSU - additional waypoint to/from DOTMI when required

Note1: Refer to ENR 1.10 for flights transiting Hong Kong FIR

Note2: Refer to ENR 3.6 for enroute holding procedures.

ENR 6-2_V22_230626lh

Communication Facilities in Hong Kong FIR



ENR 6-3_V17_220622zk

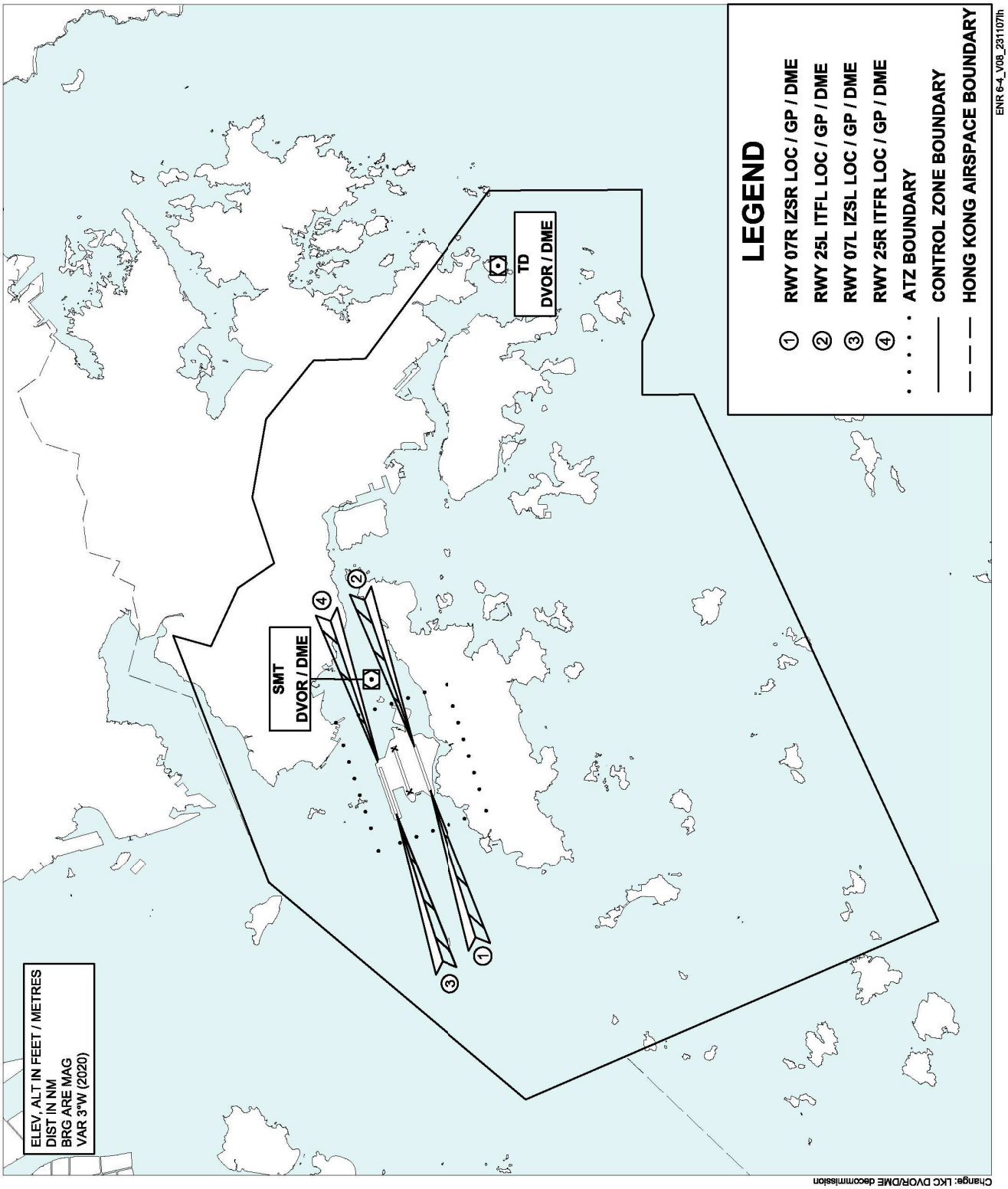
Airspace Sector Boundary

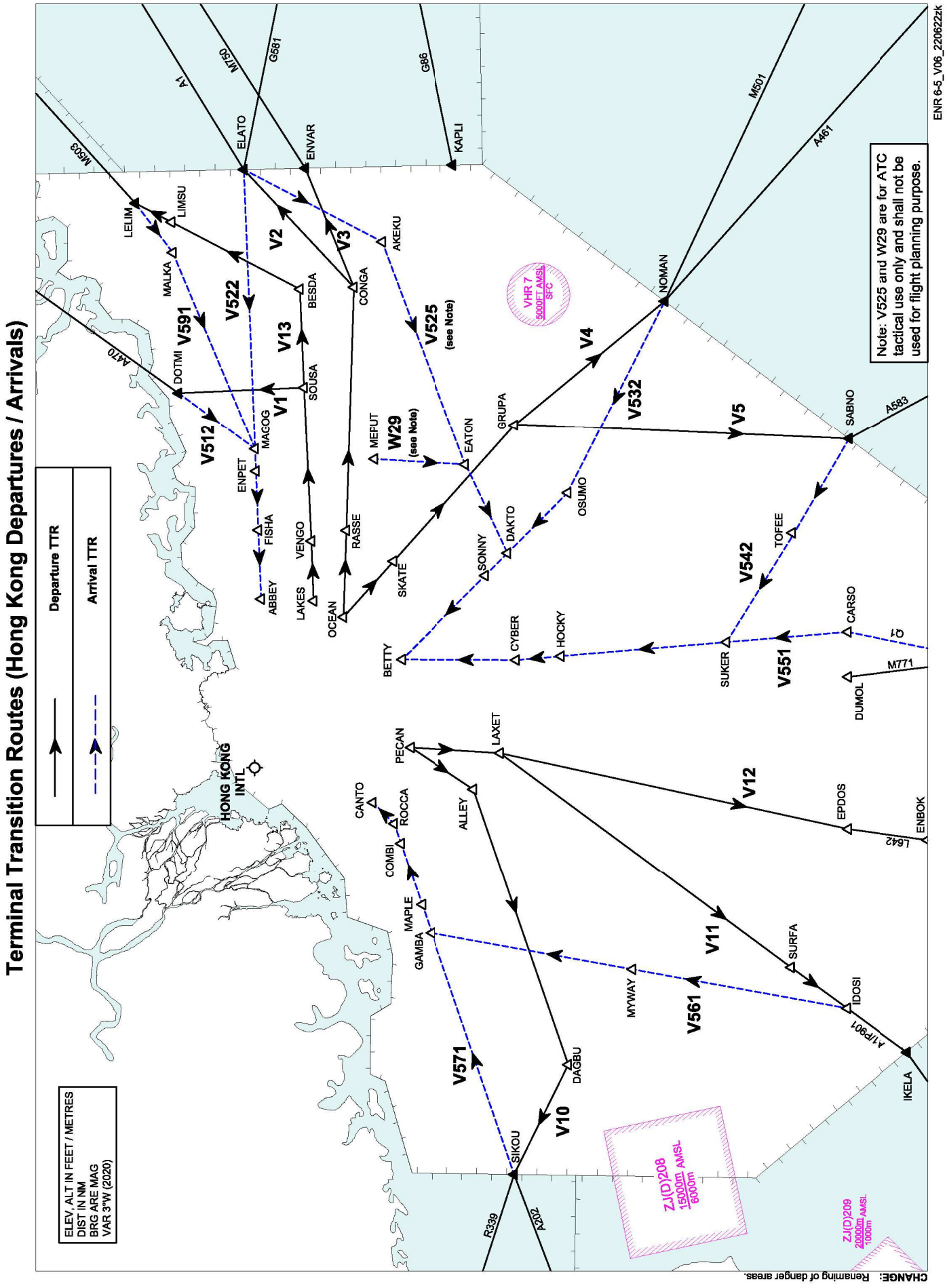
Airspace Sub-Sector Boundary : FL250 and below

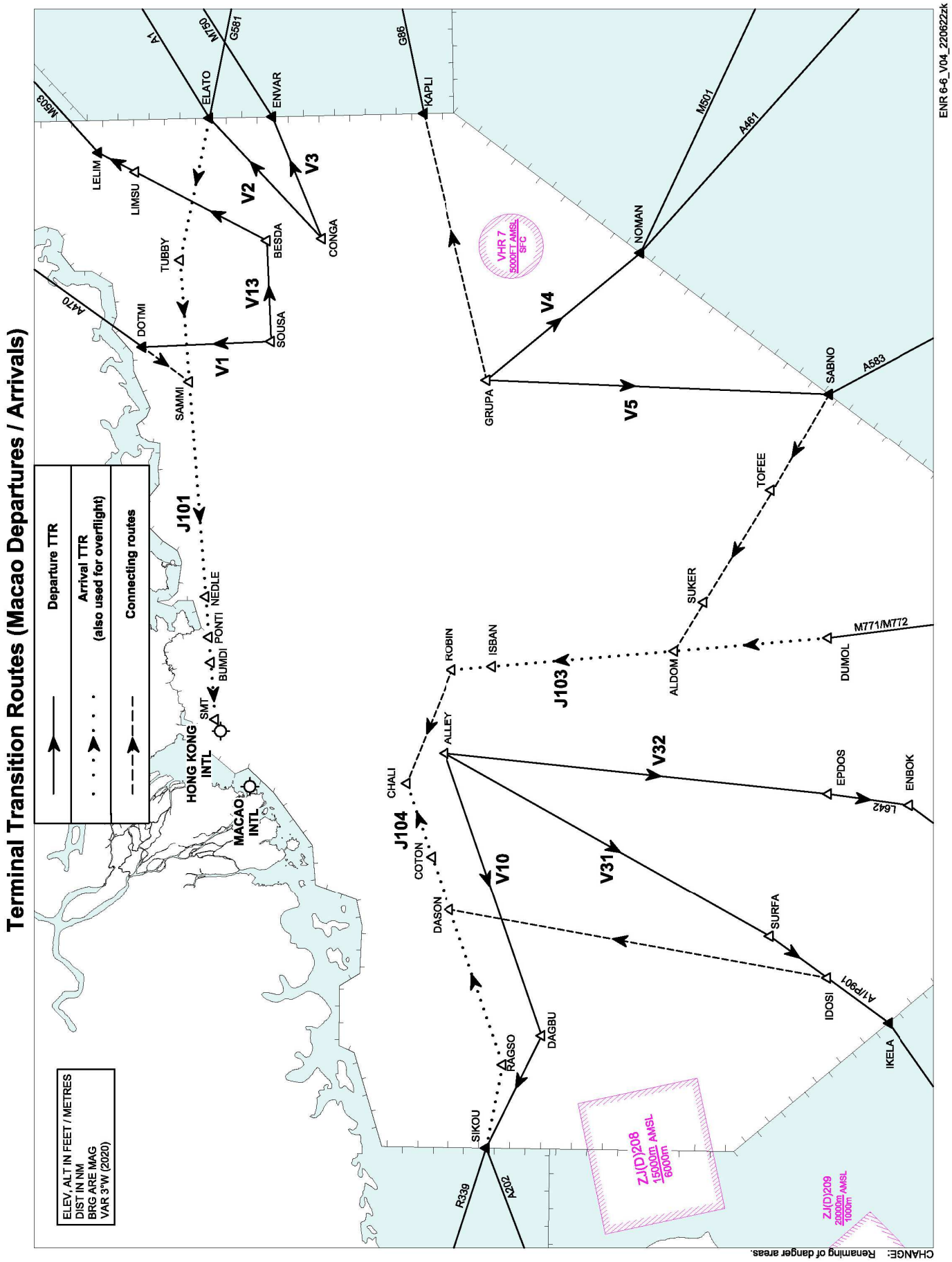
Allocation of Frequencies

SRY - Secondary Frequency

Radio Facilities Chart




Terminal Transition Routes (Hong Kong Departures / Arrivals)
Departure TTR
Arrival TTR
ELEV, ALT IN FEET / METRES
DIST IN NM
BRG ARE MAG
VAR 3°W (2020)
HONG KONG INTL
ELATO
ENVAR
KAPLI
LELIM
LIMSU
MALKA
DOTMI
ENPET
MAGOG
FISHA
ABBEY
LAKES
VENGO
SOUSA
BESDA
CONGA
RASSE
OCEAN
SKATE
MEPUT
AKEKU
EATON
GRUPA
SONNY
DAKTO
OSUMO
NOMAN
SABNO
TOFEE
CARSO
HOCKY
CYBER
BETTY
SUKER
DUMOL
M771
Q1
PECAN
LAXET
ALLEY
CANTO
ROCCA
COMBI
MAPLE
GAMBA
MYWAY
SURFA
IDOSI
EPDOS
ENBOK
IKELA
DAGBU
SIKOU
V1
V2
V3
V4
V5
V10
V11
V12
V13
V512
V522
V525
(see Note)
V532
V542
V551
V561
V571
V591
W29
(see Note)
VHR 7
5000FT AMSL
SFC
ZJ(D)208
15000m AMSL
6000m
ZJ(D)209
20000m AMSL
1000m
Note: V525 and W29 are for ATC tactical use only and shall not be used for flight planning purpose.
CHANGE: Renaming of danger areas.
ENR 6-5_V06_220622zk


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
SAMMI
DOTMI
TUBBY
LELIM
LIMSU
ELATO
ENVAR
BESDA
CONGA
SOUSA
KAPLI
GRUPA
NOMAN
SABNO
TOFEE
SUKER
ALDOM
DUMOL
ROBIN
ISBAN
ALLEY
CHALI
COTON
DASON
SIKOU
RAGSO
DAGBU
SURFA
IDOSI
IKELA
EPDOS
ENBOK
J101
J103
J104
V1
V2
V3
V4
V5
V10
V13
V31
V32
A470
M503
A1
M750
G581
G86
M501
A461
A583
L642
A1/P901
M771/M772
R339
A202
VHR 7
5000FT AMSL
SFC
ZJ(D)208
15000m AMSL
6000m
ZJ(D)209
20000m AMSL
10000m
CHANGE: Renaming of danger areas.
ENR 6-6_V04_220622zk

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.

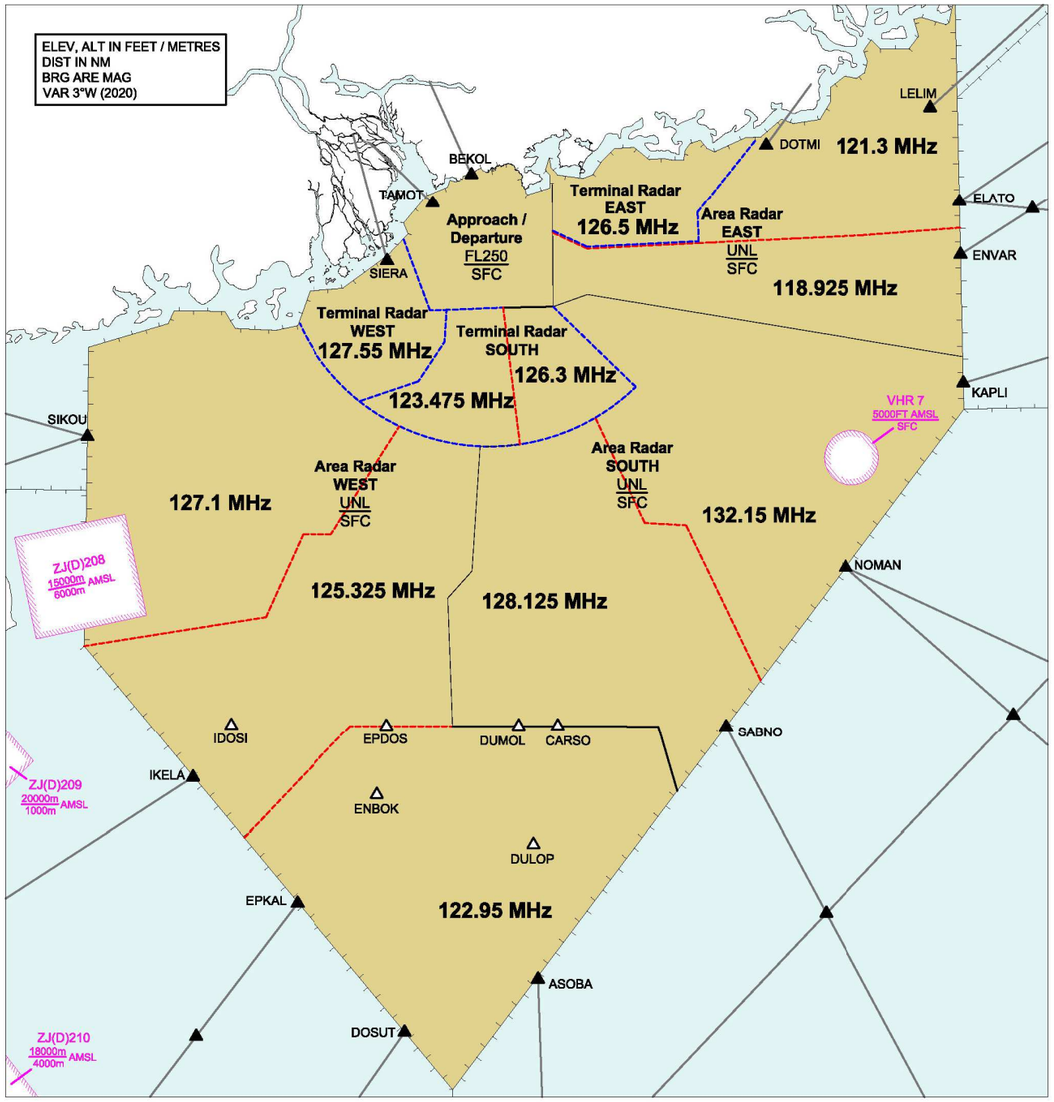
The sector boundaries are shown in the chart.

The vertical limits of each sector are:

Sectors	Vertical Limits
Hong Kong East, South and West Area sectors	Above FL250 - Unlimited All other areas 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 Depature sectors	SFC - FL250 (but excluding Hong Kong ATZ and UCARAs airspace)

CHANGE: Renaming of danger areas.

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 118.925 MHz	132.525 MHz
	South	132.15 MHz 128.125 MHz	128.75 MHz
	West	127.1 MHz 125.325 MHz 122.95 MHz	123.7 MHz 132.775 MHz 135.6 MHz
Terminal Radar Control	East	126.5 MHz	132.8 MHz
	South	126.3 MHz 123.475 MHz	132.6 MHz
	West	127.55 MHz	134.3 MHz
Macao Radar Control	Macao	123.95 MHz	-
Final Approach Director	Approach	119.5 MHz	119.35 MHz
Approach Radar Control	Approach	119.1 MHz	119.35 MHz
Departure Radar Control	Departure	123.8 MHz	124.05 MHz
Departure Radar Control	Departure (High sector as required)	122.0 MHz	124.05 MHz

ENR 6-7_V05_220622zk

AD (AERODROMES)

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SID-CONGA-TU	RNAV(GNSS) CONGA 3T/ RNAV(GNSS) CONGA 4U SID	AD 2-VMMC-SID-CONGA-TU
SID-GRUPA-P	RNAV(GNSS) GRUPA 2P SID	AD 2-VMMC-SID-GRUPA-P
SID-GRUPA-TU	RNAV(GNSS) GRUPA 3T/ RNAV(GNSS) GRUPA 4U SID	AD 2-VMMC-SID-GRUPA-TU
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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 200 m RVR

b) LANDING

	DECISION HEIGHT	RVR
CAT I	200 ft	550 m
CAT II	100 ft	300 m
CAT III	<100 ft	i) For CAT A, B, C aircraft: - less than 300 m but not less than 75 m; ii) For CAT D aircraft: - 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. Therefore the type of approach to be expected will not normally be included in the ATIS Arrival broadcast. In the event of an ILS approach not being available and a LOC or VOR approach is required, this will be included in the ATIS Arrival broadcast.

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 and RWY 25L have ILS CAT II equipment and RWY 07L has ILS CAT III equipment. 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.

8.2.4 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 07R	TWY J1, J2 or K1;
RWY 25L	TWY J10, J11 or K7;
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 07R	TWY J3 or K2;
RWY 25L	TWY J9 or K6;
RWY 25R	TWY C10.

8.4.3 The holding positions on TWY J1, J2, J10 and J11 are combined CAT I/II holding positions, separate CAT I and CAT II holding points are provided on taxiways K1 and K.

8.4.4 The holding positions on taxiways C1 and C2 are combined CAT I/II/III holding positions.

8.4.5 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 When both runways are available the operating mode is normally segregated operations, ie one runway for arrival and one runway for departure. The north runway, RWY 07L/25R, is the normal arrival runway and the south runway, RWY 07R/25L, is the normal departure runway. During peak arrival periods, to minimize overall airborne delay and maximize runway utilization ATC may nominate specific arrivals (cargo and/or passenger) to land on the south runway.

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 lead-on 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
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) A number of RETs (TWYs C4, C5, C6, C7, C8, C9, K3 and K5) have Rapid Exit Taxiway Indicator Lights (RETILs) to assist pilots at night or in low visibility to assess the distance to the exit taxiway. (The RETILs indicate 300 metres, 200 metres and 100 metres to go to the exit taxiway.)

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, etc); braking action not adversely affected by water or other contaminants (ie 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.

	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, eg:

– "(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 period. During the closure period all arrivals and departures will use the other runway.

11.2 The scheduled maintenance periods are published in AIP Supplements and any amendments are promulgated by NOTAM.

11.3 In the event that during a maintenance period the operational runway is not available, or is likely to become unavailable, the maintenance work can be terminated and the closed runway returned to service within approximately one hour. However the timing 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 Both 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.

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AD 1.2 RESCUE AND FIRE FIGHTING SERVICES 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 Snow Plan

Nil.

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AD 1.3 INDEX TO AERODROMES AND HELIPORTS

1	2	3	4	5
Aerodrome/heliport name Location indicator	Type of traffic permitted to use aerodrome/heliport			Reference to AD Section and remarks
	International-National (INTL - NTL)	IFR - VFR	S = Scheduled NS = Non-scheduled P = Private	
Aerodromes				
HONG KONG/ INTERNATIONAL VHHH	INTL	IFR - VFR	S-NS-P	AD 2
SEK KONG VHSK	Military - NTL	VFR	Military	
Heliports				
SHEUNG WAN / SKY SHUTTLE HELIPORT 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	1 June 2023	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 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 Airport Authority Hong Kong HKIA Tower 1 Sky Plaza Road Hong Kong International Airport Lantau Hong Kong Tel: +852 2188 7111 Telefax: +852 2824 0717 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. Additional: (i) 2 rescue launches with rescue and fire fighting (foam with water) facility and life rafts; (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 : West apron : Cargo apron : Refer to pavement diagram on page AD 2-VHHH-ADC-5 Maintenance apron : BAC apron:
2	*Taxiway width* *Taxiway surface* *Taxiway strength*	All TWYs (except C, C1 - C12, D, D1, D4, D5, E, E3, F, J2, Q1, Q2, Y, Z, Z1, Z2, Z3) : Width 29 m, TWY B6 : Width 27 m TWYs C, C1 - C12, D, D1, D4, D5, E, E3, F, J2, Y, Z, Z1, Z2, Z3 : Width 25 m TWYs Q1, Q2: Width 10.5 m TWY T : Width 27 m All TWYs : Asphalt All TWYs : Refer to pavement diagram on page AD 2-VHHH-ADC-5
3	*ACL location and elevation*	Location :Main apron (not marked) Elevation :19 ft
4	*VOR checkpoint* *INS checkpoints*	NIL see COORDINATES OF AIRCRAFT STANDS
5	*Remarks*	Straight sections of taxiway at the ends of bridges on TWYs V, V4, W, S and T are not available at: *a)* junction of TWY H and TWY V; *b)* junction of TWY V and TWY V4; *c)* junction of TWY V4 and TWY W; *d)* junction of TWY W and TWY H; *e)* junction of TWY W and TXL W2; *f)* junction of TWY S and TWY H; *g)* junction of TWY T and TWY H.

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	221853.79N	1135555.60E
N12R	221854.01N	1135555.19E
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

Stand	Coordinates for First Nose Wheel Guideline Stop Location	
N28	221851.48N	1135548.41E
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

Stand	Coordinates for First Nose Wheel Guideline Stop Location	
N62	221852.10N	1135531.59E
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

Stand	Coordinates for First Nose Wheel Guideline Stop Location	
W125R	221845.34N	1135521.28E
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

Stand	Coordinates for First Nose Wheel Guideline Stop Location	
D307	221827.98N	1135450.78E
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
X1R	221757.36N	1135458.22E
X2R	221755.54N	1135458.90E
X3L	221751.87N	1135501.02E
X3R	221753.52N	1135459.94E
X4R	221749.82N	1135502.10E
X5R	221748.00N	1135502.78E
X6L	221744.45N	1135504.47E
X6R	221746.17N	1135503.46E
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

Stand	Coordinates for First Nose Wheel Guideline Stop Location	
X10L	221753.37N	1135512.10E
X10R	221752.73N	1135510.14E
X11	221753.76N	1135514.40E
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

Stand	Coordinates for First Nose Wheel Guideline Stop Location	
L434	221816.21N	1135435.26E
L435	221817.14N	1135438.15E
X451	221834.53N	1135420.42E
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

Stand	Coordinates for First Nose Wheel Guideline Stop Location	
L413	221833.60N	1135433.00E
L414	221831.37N	1135433.83E
L415	221829.15N	1135434.66E
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. Nosewheel guidance lines at apron. 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). 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. RWY LGT - THR, TDZ, centreline, wing bars, RETIL, RWY edge and end lights. TWY markings - TWY Centre-line, edge, TWY intermediate holding positions. TWY LGT - Centre-line, edge lights on some sections and TWY intermediate holding position lights.
3	*Stop bars*	All stop bars lit.
4	*Remarks*	Follow nosewheel guidance lines when taxiing on apron and taxiways, and entering/exiting the runway.

VHHH AD 2.10 AERODROME OBSTACLES

1 **Obstacles in Approach/Take-off Areas**

1.1 RWY 07L Approach, RWY 07R Approach, RWY 25L Approach and RWY 25R Approach - NIL

1.2 RWY 07L Take-off, RWY 07R Take-off, RWY 25L 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	53.4	LGTD	221826.9N 1135545.9E
2	AnemometerA2	47.3	LGTD	221804.7N 1135502.5E
3	AnemometerA3	53.7	LGTD	221748.5N 1135412.2E
4	AnemometerA4	52.7	LGTD	221915.9N 1135533.4E
5	AnemometerA5	48.8	LGTD	221859.6N 1135442.7E
6	AnemometerA6	51.9	LGTD	221846.8N 1135403.2E
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	ATC Control Tower Building	282.9	LGTD	221838.1N 1135516.8E
11	Back-up ATC Control Tower Building	200.6	LGTD	221842.9N 1135515.6E
12	CCTV 20	36.0	LGTD	221847.6N 1135402.3E
13	CCTV 21	35.9	LGTD	221855.2N 1135426.1E
14	CCTV 42	35.9	LGTD	221907.9N 1135505.5E
15	CCTV 48	36.6	LGTD	221916.9N 1135533.4E
16	Forward ScatterR71	31.6	LGTD	221953.2N 1135437.4E
17	Forward ScatterR81	30.3	LGTD	221938.7N 1135352.4E
18	Forward ScatterR93	31.8	LGTD	221924.3N 1135307.5E
19	Radar Rain ReflectorR2	26.8		221832.4N 1135605.8E
20	Radar Rain ReflectorR3	20.1		221803.4N 1135434.6E
21	Radar Rain ReflectorR6	23.1		221845.5N 1135426.4E
22	Radar Rain ReflectorR7	19.2		221809.7N 1135518.5E
23	Radar Rain ReflectorR8	23.9		221853.0N 1135449.8E
24	RVR TransmissometerR11	29.9		221820.5N 1135548.8E
25	RVR TransmissometerR12	30.0		221820.3N 1135548.3E
26	RVR TransmissometerR13	30.0		221819.7N 1135546.4E
27	RVR TransmissometerR21	23.6		221806.6N 1135503.2E
28	RVR TransmissometerR22	23.6		221806.5N 1135502.7E
29	RVR TransmissometerR23	23.7		221805.8N 1135500.7E
30	RVR TransmissometerR31	28.7		221749.7N 1135414.0E
31	RVR TransmissometerR32	28.8		221749.6N 1135413.5E
32	RVR TransmissometerR33	28.8		221749.0N 1135411.5E
33	RVR TransmissometerR41	26.9		221914.5N 1135532.8E
34	RVR TransmissometerR42	27.0		221914.3N 1135532.3E
35	RVR TransmissometerR43	27.0		221913.7N 1135530.3E
36	RVR TransmissometerR51	25.2		221858.6N 1135443.8E

No	Type of Obstacle	Elevation (FT AMSL)	Lit	Co-ordinates
37	RVR TransmissometerR52	25.3		221858.5N 1135443.3E
38	RVR TransmissometerR53	25.1		221857.8N 1135441.3E
39	RVR TransmissometerR61	26.6		221847.5N 1135409.1E
40	RVR TransmissometerR62	26.6		221847.4N 1135408.6E
41	RVR TransmissometerR63	26.2		221846.7N 1135406.6E
42	RVR TransmissometerR72	31.6	LGTD	221953.1N 1135437.0E
43	RVR TransmissometerR73	31.6	LGTD	221952.8N 1135436.1E
44	RVR TransmissometerR82	30.3	LGTD	221938.6N 1135352.1E
45	RVR TransmissometerR83	30.3	LGTD	221938.3N 1135351.1E
46	RVR TransmissometerR91	31.7	LGTD	221924.7N 1135308.8E
47	RVR TransmissometerR92	31.7	LGTD	221924.4N 1135307.8E
48	RWY 07L GP Aerial	67.3	LGTD	221925.1N 1135305.4E
49	RWY 07R GP Aerial	77.5	LGTD	221747.8N 1135409.5E
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 IndicatorIWDI2E	25.7	LGTD	221947.9N 1135441.6E
54	Wind Direction IndicatorIWDI2W	25.4	LGTD	221917.5N 1135307.4E

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* *MET office outside hours*	H24 Not applicable
3	*Office responsible for TAF preparation* *Periods of validity* *Interval of issuance*	Hong Kong Airport MET Office 30 hr Normally every 3 hr
4	*Type of landing forecasts* *Interval of issuance*	TREND Normally every 30 minutes
5	*Briefing/consultation provided*	Self-briefing using AMIDS and telephone consultation
6	*Flight documentation* *Language used*	Charts, METARs, TAFs, SIGMETs, VA and TC advisory information 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 (PCN) and surface of RWY - SWY*	*THR Co-ordinates*	*THR ELEV and highest point of TDZ of Precision APP RWY*
07L	070.90°T 073.90°M	3800 x 60	72/F/B/W/T Asphalt	221917.72N 1135256.26E	23.3FT 23.2FT
25R	250.90°T 253.90°M	3800 x 60	72/F/B/W/T Asphalt	221954.45N 1135450.24E	23.1FT 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 (PCN) and surface of RWY - SWY*	*THR Co-ordinates*	*THR ELEV and highest point of TDZ of Precision APP RWY*
07R	070.90°T 073.90°M	3800 x 60	72/F/B/W/T Asphalt	221748.03N 1135357.99E	27.0FT 26.6FT
25L	250.90°T 253.90°M	3800 x 60	72/F/B/W/T Asphalt	221826.75N 1135558.15E	26.9FT 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, 2, 3, 4, 5 & 6)*	*TODA (m) (Note 1, 2, 3, 4, 5 & 6)*	*ASDA (m) (Note 1, 2, 3, 4, 5 & 6)*	*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.
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 C3, C10, J3, J9, K2 and K6 is measured from the intersection of the lead-on taxiway centreline and runway centreline.

VHHH AD 2.14 APPROACH AND RUNWAY LIGHTING

1	2	3	4	5	6	7	8	9	10
RWY Designator	APCH LGT Type LEN	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 900M LIH Sequenced strobe lights (2 flashes/sec) on centreline from 900M to 300M from THR	Green Green	PAPI 65.3FT BOTH SIDES 3°	900m	3800M, 15M FM 0 M-2891M White; FM 2891-3491M Red/ White; FM 3491M Red LIH	3800M, 58M-60M FM 0 M-176M Red; FM 176M-3146M White; FM 3146M-3800M Yellow-	Red -	NIL	RETIL for TWY C7, C8 and C9
25R	CAT I 900M LIH Sequenced strobe lights (2 flashes/sec) on centreline from 900M to 300M from THR	Green Green	PAPI 65.3FT BOTH SIDES 3.1°	900m	3800M, 15M FM 0 M-2891M White; FM 2891-3491M Red/ White; FM 3491M Red LIH	3800M, 58M-60M FM 0M-176M Red; FM 176M-3146M White; FM 3146M-3800M Yellow-	Red -	NIL	RETIL for TWY C4, C5 and C6
07R	CAT II 900M LIH Sequenced strobe lights (2 flashes/sec) on centreline from 900M to 300M from THR	Green Green	PAPI 71.2FT BOTH SIDES 3°	900m	3800M, 30M FM 0 M - 2900M White; FM 2900-3500M Red/ White; FM 3500M Red LIH	3800M, 60M FM 0 M-160M Red; FM 160M-3200M White; FM 3200M-3800M Yellow-	Red -	NIL	RETIL for TWY K5
25L	CAT II 900M LIH Sequenced strobe lights (2 flashes/sec) on centreline from 900M to 300M from THR	Green Green	PAPI 77.4FT BOTH SIDES 3°	900m	3800M, 30M FM 0 M - 2900M White; FM 2900-3500M Red/ White; FM 3500M Red LIH	3800M, 60M FM 0 M-3200M White; FM 3200M-3800M Yellow-	Red -	NIL	RETIL for TWY K3

VHHH AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	*ABN/IBN location, characteristics and hours of operation*	Nil
2	*LDI location and LGT* *Anemometer location and LGT*	LDI: Nil RWY 07L/25R Anemometers: 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 RWY 07R/25L Anemometers: 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 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 Straight lines joining the following points: 22 19 58N 113 51 11E 22 21 45N 113 56 58E 22 17 05N 113 58 41E 22 15 24N 113 53 00E 22 19 58N 113 51 11E
2	*Vertical limits*	SFC to 2 000 ft AAL
3	*Airspace classification*	C
4	*ATS unit call sign* *Language*	Hong Kong Tower 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) Straight lines joining the following points: 22 28 34N 114 00 54E 22 26 59N 114 00 25E 22 25 51N 114 03 03E 22 24 20N 114 04 10E 22 25 15N 114 07 08E 22 24 40N 114 10 40E 22 22 40N 114 13 20E 22 20 30N 114 13 25E 22 15 15N 114 21 00E 22 08 50N 114 21 00E 22 08 50N 114 17 05E 22 08 20N 114 15 20E 22 08 50N 114 14 10E 22 08 50N 114 11 45E 22 06 40N 114 11 45E 21 56 25N 113 48 00E 22 13 44N 113 39 57E 22 24 34N 113 49 44E
2	*Vertical limits*	SFC to 9 000 ft AMSL
3	*Airspace classification*	C
4	*ATS Unit call sign* *Language*	Hong Kong Tower/Zone/Approach 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	As advised	
	HONG KONG DEPARTURE	124.05 MHZ		Secondary
	HONG KONG DIRECTOR	119.5 MHZ	As advised	
	HONG KONG DIRECTOR	119.35 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
GMC	HONG KONG GROUND NORTH	121.6 MHZ	H24	
	HONG KONG GROUND SOUTH	122.55 MHZ	H24	
	HONG KONG GROUND MIDFIELD	121.875 MHZ	H24	
	HONG KONG GROUND WEST	122.125 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 Tel +852 3141 2820 http://www.hkatc.gov.hk
	HONG KONG INTERNATIONAL AIRPORT DEPARTURE INFORMATION	127.05 MHZ	H24	Data-link D-ATIS available at VHHHD Tel. +852 3141 2705 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*
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 GP 3° (Nominal)
LOC25L CAT II	ITFL	110.9 MHZ	H24	221742.98N 1135342.30E		Unusable beyond 28° left 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 22º 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		GP 3º (Nominal)
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
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 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 116 and 161 beyond 20 NM below 9 000 ft,
   (d) unusable between radials 161 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 operated for Hire or Reward	Includes domestic and international non-scheduled flights	Hong Kong Business Aviation Apron, Stand X1R and Stand X2R
International Flights operated NOT for Hire or Reward	Hong Kong registered helicopter	Maintenance Apron
	Non-Hong Kong registered helicopter	Hong Kong Business Aviation Apron
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 procedures are implemented daily to reduce aircraft noise levels when operating conditions permit. These measures include:

a) Continuous Descent Approach (CDA) procedure for RWY 25L/25R;

b) Preferential use of RWY 07L/07R;

c) Noise mitigating SIDs RWY 07L/07R;

d) Special ATC handling procedures.

2.1.2 Noise mitigating procedures are not applicable to flights necessary for the calibration of procedures, navigation aids and landing aids.

2.2 CONTINUOUS DESCENT APPROACH (CDA) PROCEDURE FOR RWY 25L/25R

2.2.1 As a noise mitigating measure, between 1500 and 2300 UTC, arrivals to RWY 25L/25R via STAR ending at TD may expect instrument approach with a continuous descent approach (CDA) procedure subject to the prevailing traffic situation.

2.2.2 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.

2.3 PREFERENTIAL USE OF RWY 07L/07R

2.3.1 As a noise mitigating measure, between 1500 and 2300 UTC, RWY 07L/07R will be selected as the runway-in-use whenever the tailwind component is not greater than 5 knots. During this period RWY 25L/25R may be used if operationally required, e.g. unserviceability of navigation aids, adverse weather conditions, aircraft performance, traffic situations, etc.

2.4 NOISE MITIGATING SIDS RWY 07L/07R

2.4.1 As a noise mitigating measure between 1500 and 2300 UTC, all departures from RWY 07L/07R east-bound (e.g. via ELATO), north-bound (e.g. via BEKOL), or southeast-bound (e.g. via NOMAN), may expect the appropriate ATENA, RASSE, SKATE or VENGO SID via RAMEN (see list of Hong Kong International Airport SIDs in AD 2.22 para. 6.2). These noise mitigating SIDs route over the West Lamma Channel and avoid overflight of densely populated areas.

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 paragraph 2 and on relevant SID charts published in AD 2.24.

2.5 SPECIAL ATC HANDLING PROCEDURES FOR RWY 25L/25R DEPARTURES

2.5.1 As a noise mitigating measure between 1500 and 2300 UTC, departures from RWY 25L/25R 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 (eg request for another departure runway or inability to comply with SID climb profile).

Additionally, departures for destinations in China routeing via BEKOL (A461) shall contact Hong Kong Delivery 15 minutes before estimated off-block time (EOBT) to obtain advance notification of any flow control restriction that may affect the flight.

Radius-to-Fix SID procedures (ATENA1X/Z, PECAN1X/Z, RASSE1X/Z, SKATE1X/Z or VENGO1X/Z) are issued as the default procedures to all aircraft departing during noise mitigating period (between 1500 and 2300 UTC) from RWY 07L/07R.

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 20 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 Pilots shall contact Hong Kong Ground on frequency 122.55 MHZ except when notified it is sectorised in which case pilots shall contact:

a) Hong Kong Ground (North) for North and West Aprons on frequency 121.6 MHZ;

b) Hong Kong Ground (South) for South, Cargo and Business Aviation Aprons on frequency 122.55 MHZ.

1.7 Aircraft should not commence start-up, push-back, or any other manoeuvre on the apron, unless they have obtained approval from Hong Kong Ground.

1.8 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.

1.9 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.)

1.10 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.

1.11 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.

1.12 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.

1.13 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.

1.14 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.

1.15 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.

1.16 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 25L or RWY 25R are advised to maintain a careful cross-check of aircraft position after passing PRAWN, VEPIK or POVEG. 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 RAMEN 2A, RAMEN 1E, RUMSY 2B and RUMSY 1F SIDs are contingency procedures for RWY 07R, RWY 07L, RWY 25L and RWY 25R respectively. It is important that pilots 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 SMT RDL 086/DME 2.6 NM
RWY 07R	PORPA	IZSR ILS DME 7.0 NM
RWY 25L	PRAWN	ITFL ILS DME 7.0 NM SMT RDL 249/DME 10.4 NM
RWY 25R	POVEG	ITFR ILS DME 6.5 NM 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 1E (RWY 07L)	See AD 2-VHHH-SID-RAMEN-E for details. Expect vectors to join flight plan route.
RAMEN 2A (RWY 07R)	See AD 2-VHHH-SID-RAMEN-A for details. Expect vectors to join flight plan route.
RUMSY 1F (RWY 25R)	See AD 2-VHHH-SID-RUMSY-F for details. Expect vectors to join flight plan route.
RUMSY 2B (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 procedures must be adhered to, except for the radius-to-fix SID or when directed by ATC.

Runway	Flyover Point	Rate of Climb (under normal operating conditions)
RWY 07L	**Do not** turn right before passing ROVER	3.4% or 207 ft/NM until passing 1 400 ft
RWY 07R	**Do not** turn right before passing PORPA	4.9% or 298 ft/NM until passing 1 400 ft
RWY 25L	**Do not** turn left before passing PRAWN	3.3% or 201 ft/NM
RWY 25R	**Do not** turn left before passing VEPIK or POVEG (contingency SIDs)	3.3% or 201 ft/NM

2.4 DEPARTURE SPEED REQUIREMENT

2.4.1 To comply with the speed requirement, crossing PORPA, ROVER, PRAWN or VEPIK/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 To ensure separation of SID routes from STAR routes, aircraft on LAKES B/F or OCEAN B/F SIDs must cross TROUT at or above FL140. Pilots unable to comply with this requirement must inform ATC as soon as possible so that alternative action can be taken.

2.5.2 To avoid confliction with traffic in the Guangzhou FIR, aircraft on BEKOL SIDs must cross BEKOL at 4 800 m or above. Track distance from take-off to BEKOL is approximately 48 NM. Pilots unable to comply with this requirement must inform Hong Kong ATC prior to departure.

2.6 LOSS OF COMMUNICATION

2.6.1 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	Co-ordinates
SMT DVOR/DME	114.8 MHZ (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 - ATENA1X/Z, PECAN1X/Z, RASSE1X/Z, SKATE1X/Z and VENGO1X/Z.)

Flyover Waypoint	Co-ordinates	Cross Reference from Navaid
RW07L (RWY 07L DER)	221956.94N 1135457.97E	IZSL ILS DME 1.8 NM SMT RDL 268/DME 3.7 NM
RW25R (RWY 25R DER)	221917.08N 1135254.28E	ITFR ILS DME 1.7 NM SMT RDL 263/DME 5.7 NM
PORPA	222009.10N 1140116.30E	IZSR ILS DME 7.0NM SMT RDL 096/DME 2.2 NM
POVEG	221743.28N 1134803.62E	ITFR ILS DME 6.5 NM SMT RDL 259/DME 10.4 NM
PRAWN	221605.40N 1134840.10E	ITFL ILS DME 7.0NM SMT RDL 249/DME 10.4 NM
ROVER	222035.58N 1140139.12E	IZSL ILS DME 8.0 NM SMT RDL 086/DME 2.6 NM
VEPIK	221631.34N 1134820.17E	PBN Waypoint

5.2 SID REPORTING POINTS / FLYBY WAYPOINTS

Reporting Point/ Flyby Waypoint	Co-ordinates	Cross Reference from Navaid
ATENA	222439.85N 1142311.88E	TD RDL 031/DME 11.1 NM
BEKOL	223236.00N 1140800.00E	TD RDL 336/DME 19.8 NM
BREAM	214646.00N 1140328.00E	TD RDL 208/DME 30.9 NM
COLEY	220641.03N 1141837.63E	TD RDL 176/DME 8.2 NM
LAKES	215841.30N 1145438.60E	TD RDL 118/DME 38 NM
OCEAN	214843.00N 1144848.00E	TD RDL 135/DME 39 NM
PECAN	212620.19N 1140205.64E	TD RDL 200/DME 50.5 NM
PORPA	222009.10N 1140116.30E	PBN Waypoint
PORSH	221740.38N 1140503.56E	PBN Waypoint
POVEG	221743.28N 1134803.62E	ITFR ILS DME 6.5 NM SMT RDL 259/DME 10.4 NM
RAMEN	220939.22N 1140509.89E	TD RDL 249/DME 12.6 NM
RASSE	214734.50N 1151949.10E	TD RDL 118/DME 63.9 NM
ROVER	222035.58N 1140139.12E	PBN Waypoint
RUMSY	220456.94N 1134816.79E	TD RDL 253/DME 28.9 NM
RUSUG	221729.78N 1140512.16E	PBN Waypoint
SAMON	215423.73N 1141232.95E	TD RDL 196/DME 20.9 NM
SHELY	220526.65N 1143913.94E	TD RDL 118/DME 22.2 NM
SKATE	213154.99N 1150839.94E	TD RDL 135/DME 64 NM
TD	221452.42N 1141735.30E	Co-located with TD DVOR/DME
TITAN	214027.40N 1140302.52E	TD RDL 205/DME 36.9 NM

Reporting Point/ Flyby Waypoint	Co-ordinates	Cross Reference from Navaid
TROUT	214754.87N 1141612.74E	TD RDL 186/DME 26.9 NM
TUNNA	214725.00N 1135754.00E	TD RDL 217/DME 32.9 NM
VENGO	215916.17N 1151608.46E	TD RDL 109/DME 56.6 NM

6 Hong Kong International Airport SIDs

6.1 RUNWAY 07 SIDS

SID	Runway	Remarks
BEKOL3A	RWY 07R	Between 1500-2300 UTC expect ATENA2A
BEKOL1E	RWY 07L	Between 1500-2300 UTC expect ATENA2E
LAKES3A	RWY 07R	Between 1500-2300 UTC expect VENGO1A
LAKES1E	RWY 07L	Between 1500-2300 UTC expect VENGO2E
OCEAN2A	RWY 07R	Between 1500-2300 UTC expect RASSE3A or SKATE3A
OCEAN1E	RWY 07L	Between 1500-2300 UTC expect RASSE2E or SKATE2E
PECAN1A	RWY 07R	May be used H24
PECAN1E	RWY 07L	May be used H24

6.2 RUNWAY 07 NOISE MITIGATING SIDS

SID	Runway	Remarks
ATENA2A	RWY 07R	Normally for use between 1500-2300 UTC
ATENA2E	RWY 07L	Normally for use between 1500-2300 UTC
RASSE3A	RWY 07R	Normally for use between 1500-2300 UTC
RASSE2E	RWY 07L	Normally for use between 1500-2300 UTC
SKATE3A	RWY 07R	Normally for use between 1500-2300 UTC
SKATE2E	RWY 07L	Normally for use between 1500-2300 UTC
VENGO1A	RWY 07R	Normally for use between 1500-2300 UTC
VENGO2E	RWY 07L	Normally for use between 1500-2300 UTC
ATENA1X	RWY 07R	Normally for use between 1500-2300 UTC Radius-to-fix (RF) leg is required
ATENA1Z	RWY 07L	Normally for use between 1500-2300 UTC Radius-to-fix (RF) leg is required
PECAN1X	RWY 07R	Normally for use between 1500-2300 UTC Radius-to-fix (RF) leg is required
PECAN1Z	RWY 07L	Normally for use between 1500-2300 UTC Radius-to-fix (RF) leg is required
RASSE1X	RWY 07R	Normally for use between 1500-2300 UTC Radius-to-fix (RF) leg is required
RASSE1Z	RWY 07L	Normally for use between 1500-2300 UTC Radius-to-fix (RF) leg is required
SKATE1X	RWY 07R	Normally for use between 1500-2300 UTC Radius-to-fix (RF) leg is required
SKATE1Z	RWY 07L	Normally for use between 1500-2300 UTC Radius-to-fix (RF) leg is required

SID	Runway	Remarks
VENGO1X	RWY 07R	Normally for use between 1500-2300 UTC Radius-to-fix (RF) leg is required
VENGO1Z	RWY 07L	Normally for use between 1500-2300 UTC Radius-to-fix (RF) leg is required

6.3 RUNWAY 25 SIDS

SID	Runway	Remarks
BEKOL2B	RWY 25L	May be used H24
BEKOL1F	RWY 25R	May be used H24
LAKES2B	RWY 25L	May be used H24
LAKES1F	RWY 25R	May be used H24
OCEAN2B	RWY 25L	May be used H24
OCEAN1F	RWY 25R	May be used H24
PECAN1B	RWY 25L	May be used H24
PECAN1F	RWY 25R	May be used H24

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 *Contingency Procedures.*

7.1.3.1 The Contingency Procedures are only available for flights exempted from RNP 1 requirement as specified in GEN 1.5 para 3.5.3.5.

7.1.3.2 *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 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.

7.1.3.3 All contingency procedures are direct overlays of the tracks of the RNP 1 procedure with the same STAR designator. Pilots conducting the contingency procedures shall refer to and observe all other instructions and requirements (i.e. level and speed restrictions, terrain clearance, etc.) specified in the corresponding RNP 1 procedure charts. ATC assistance may also be provided when necessary.

7.1.3.4 Hong Kong STAR Contingency Procedures for aircraft with exemption from RNP 1 requirement:

Hong Kong STAR	Contingency Procedures
ABBEY 2B (RWY 25L/R)	From ABBEY proceed direct to MUSEL then TAMAR. From TAMAR proceed direct to TD DVOR. Expect ILS approach for RWY 25L or LOC approach for RWY 25R. Descend as directed by ATC. If TD DVOR is not available. From MUSEL proceed direct to TAMAR then reporting point TD. Descend as directed by ATC.

Hong Kong STAR	Contingency Procedures
ABBEY 3A (RWY 07L/R)	From ABBEY proceed direct to MUSEL then TAMAR. From TAMAR proceed direct to TD DVOR then GUAVA (TD R251 / D14 NM). From GUAVA proceed direct to SOKOE (TD R251 / D27 NM) then LIMES. Expect ILS approach. Descend as directed by ATC. If TD DVOR is not available. From MUSEL proceed direct to TAMAR then reporting point TD. From reporting point TD proceed direct to GUAVA then SOKOE. From SOKOE proceed direct to LIMES. Descend as directed by ATC.
BETTY 2A (RWY 07L/R)	From BETTY proceed direct to MANGO then GUAVA (TD R251 / D14 NM). From GUAVA proceed direct to SOKOE (TD R251 / D27 NM) then LIMES. Expect ILS approach. Descend as directed by ATC. If TD DVOR is not available. From MANGO proceed direct to GUAVA then SOKOE. From SOKOE proceed direct to LIMES. Descend as directed by ATC.
BETTY 2B (RWY 25L/R)	From BETTY proceed direct to MANGO then TD DVOR. Expect ILS approach for RWY 25L or LOC approach for RWY 25R. Descend as directed by ATC. If TD DVOR is not available. From MANGO proceed direct to reporting point TD. Descend as directed by ATC.
CANTO 2B (RWY 25L/R)	From CANTO proceed direct to MURRY then GOODI. From GOODI proceed direct to MONTY then turn left to TD DVOR. Expect ILS approach for RWY 25L or LOC approach for RWY 25R. Descend as directed by ATC. If TD DVOR is not available. From MONTY turn left direct to reporting point TD. Descend as directed by ATC.
CANTO 3A (RWY 07L/R)	From CANTO proceed direct to MURRY then SILVA. From SILVA turn left to LIMES. Expect ILS approach. Descend as directed by ATC.
SIERA 6B (RWY 25L/R)	From SIERA proceed direct to CANTO. From CANTO turn left to MURRY then GOODI. From GOODI proceed direct to MONTY then turn left to TD DVOR. Expect ILS approach for RWY 25L or LOC approach for RWY 25R. Descend as directed by ATC. If TD DVOR is not available. From MONTY turn left direct to reporting point TD. Descend as directed by ATC.
SIERA 6D (RWY 25L/R)	From SIERA proceed direct to BORDA and then turn left to ROCCA. From ROCCA proceed to CANTO, then MURRY then GOODI. From GOODI proceed direct to MONTY then turn left to TD DVOR. Expect ILS approach for RWY 25L or LOC approach for RWY 25R. Descend as directed by ATC. If TD DVOR is not available. From MONTY turn left direct to reporting point TD. Descend as directed by ATC.
SIERA 7A (RWY 07L/R)	From SIERA proceed direct to CANTO. From CANTO turn left to MURRY then SILVA. From SILVA turn left to LIMES. Expect ILS approach. Descend as directed by ATC.
SIERA 7C (RWY 07L/R)	From SIERA proceed direct to BORDA and then turn left to ROCCA. From ROCCA proceed to CANTO, then MURRY then SILVA. From SILVA turn left to LIMES. Expect ILS approach. Descend as directed by ATC.

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 TD/LIMES as appropriate, join the relevant holding pattern and descend to 4 500 ft, then carry out the ILS approach;

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 TD/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. TD DVOR (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

Navaid	Frequency	Co-ordinates
TD DVOR	116.1 MHZ	221452.42N 1141735.30E
TD DME	CH 108X	221452.42N 1141735.30E

9 STAR Significant Points

Significant Point	Co-ordinates	Cross Reference from Navaid
*** ABBEY**	221611.00N 1145525.92E	TD RDL 091/DME 35.1 NM
ALAPI	220952.88N 1141213.09E	PBN Waypoint
*** 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
GOODI	220409.88N 1135948.59E	TD RDL 240/DME 19.7 NM
# GUAVA	220936.10N 1140336.30E	TD RDL 251/DME 14 NM
# LIMES	220625.60N 1134632.60E	PBN Waypoint
MANGO	213649.00N 1143053.00E	TD RDL 165/DME 39.9 NM
MONTY	221006.26N 1141915.68E	TD RDL 165/DME 5 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
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
SOKOE	220441.20N 1135038.10E	TD RDL 251/DME 27 NM
TAMAR	221521.00N 1143037.00E	TD RDL 091/DME 12.1 NM
# TD	221452.42N 1141735.30E	Co-located with TD DVOR/DME
VH530	215705.86N 1135536.22E	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 and RWY 25L ILS are equipped for CAT II landings. RWY 07L ILS is 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. Therefore the Arrival ATIS will not include the type of approach to be expected when the ILS approach procedure is in use. (When the ILS is not available, the type of approach to be expected will be specified in the Arrival ATIS.)

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 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, (RWY 07L/07R IAF LIMES, RWY 25L/25R IAF TD DVOR). 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 are not available, ATC will provide an alternative clearance or give radar assistance.

11 RWY 07L ILS and LOC Approach

11.1 Requests to proceed direct from a point within the TMA to LIMES for an ILS approach RWY 07L may be approved subject to traffic.

11.2 See AD 2-VHHH-IAC-05A for procedure details.

12 RWY 07L RNP Approach

12.1 See AD 2-VHHH-IAC-05E for procedure details.

13 RWY 07R ILS and LOC Approach

13.1 Requests to proceed direct from a point within the TMA to LIMES for an ILS approach RWY 07R may be approved subject to traffic.

13.2 Pilots are warned that RWY 07R 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.

13.3 See AD 2-VHHH-IAC-01A and AD 2-VHHH-IAC-01C for procedure details.

14 RWY 25L ILS and LOC Approach

14.1 Requests to proceed direct from a point within the TMA to MIRRS for an ILS approach RWY 25L may be approved subject to traffic.

14.2 Pilots are warned that 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.

14.3 See AD 2-VHHH-IAC-02A and AD 2-VHHH-IAC-02C for procedure details.

15 RWY 25R ILS Approach

15.1 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.

15.2 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”.

15.3 See AD 2-VHHH-IAC-06A and AD 2-VHHH-IAC-06B for procedure details.

16 RWY 25R LOC Approach

16.1 Requests to proceed direct from a point within the TMA to RUNSU for a LOC approach RWY 25R may be approved subject to traffic.

16.2 See AD 2-VHHH-IAC-06C for procedure details.

17 RNP AR APCH

17.1 RNP AR APCH RWY 07 via north of HKIA

17.1.1 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).

17.1.2 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.

17.1.3 Should the weather situation mentioned in para. 17.1.2 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.

17.1.4 Special Authorization from Hong Kong CAD is required to conduct RNP AR APCH in Hong Kong.

17.2 RNP AR APCH Operational Approval

17.2.1 Refer to the relevant AIC regarding application to conduct RNP AR APCH procedures at HKIA by foreign aircraft operators.

17.3 Speed Control

17.3.1 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.

18 RWY 25R RNP Z Approach

18.1 See AD 2-VHHH-IAC-06E for procedure details.

19 Procedures for Local Flights in Hong Kong Aerodrome Traffic Zone (ATZ) and Control Zone (CTR) Zones

19.1 GENERAL

19.1.1 Local flights operating in the Aerodrome Traffic Zone (ATZ) are under the control of Hong Kong Aerodrome Control. During parallel runway operations 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 and the north runway (RWY 07L/25R) is under the control of AMC North, operating on frequency 118.7 MHZ, call sign ‘Hong Kong Tower’; ATZ South and the south runway (RWY 07R/25L) is under the control of AMC South, operating on frequency 118.4 MHZ, call sign ‘Hong Kong Tower’.

19.1.2 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’.

19.1.3 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.

19.1.4 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.

19.2 VERTICAL LIMITS AND ALTITUDE RESTRICTIONS

19.2.1 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. 19.2.2 and 19.2.3 below).

19.2.2 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: Green Island - Ma Wan Corridor Green Island - Silvermine Green Island - Cheung Chau Green Island - Lamma Green Island - west of Star Ferry East of Star Ferry		 1 000 ft 800 ft 1 000 ft 1 000 ft 1 000 ft 1 500 ft
South Outer Zone	RWY 25	1 200 ft
Delta Zone		As instructed by ATC

19.2.3 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.

19.3 ATZ AND CTR ZONES ENTRY AND EXIT ROUTES

19.3.1 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 Single engine aircraft not permitted
Fan Lau (See Note 1)	North/South East/West	Transiting to/from West Lantau Corridor and Island Zone and Transiting to/from Island Zone and Delta Zone
Gold Coast Corridor (See Note 2 and 7)	East/West (one direction at a time)	Transiting Ma Wan Zone between Pearl Island and Brothers Point Upper limit 500 ft AMSL Width 0.5 NM. Helicopters only
Lei Yue Mun	In/Out	Entering/Leaving Island Zone from/to Waglan Zone Inbound to CTR 1 500 ft AMSL Outbound from CTR not above 1 000 ft AMSL (If weather precludes use of 1 500 ft AMSL inbound, operations shall be restricted to one direction at a time)
Ma Wan Corridor (See Note 2 and 3)	In/Out	Transiting from/to Ma Wan Zone and Island Zone 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 (one direction at a time)	Entering/Leaving ATZ for West Lantau Corridor
Sha Tin Pass	In/Out	Entering/Leaving Island Zone from/to UCARA New Town Single engine aircraft not permitted
Silvermine	In/Out	Entering/Leaving ATZ and Ma Wan Zone for Lantau Zone Helicopters only

Radio Call Sign	Route Direction	Routeing
South Pass	In/Out	Transiting Island Zone between Hong Kong South and Victoria Harbour Fixed wing aircraft and single engine helicopters not permitted
Toll Plaza Route (see Note 2, 4 and 5)	East/West (one direction at a time)	Transiting from/to North Lantau Expressway and Kap Shui Mun. Upper limit 800 ft AMSL for twin engine aircraft, 1 000 ft AMSL for single engine aircraft
Toll Plaza Crossing (See Note 2)	North/South	Between Yam O and Brothers Point Upper limit 500 ft AMSL
Tung Chung Pass	In/Out	Entering/Leaving ATZ for Lantau Zone Helicopters only Inbound to ATZ 2 000 ft AMSL Outbound from ATZ not above 1 500 ft AMSL (If weather precludes use of 2 000 ft AMSL inbound, operations shall be restricted to one direction at a time)
West Lantau Corridor (See Note 6)	North/South	Transiting from/to Tai O and Fan Lau Width 1 NM between Fan Lau and Tai O, 0.5 NM at Sham Shek Upper Limit 500 ft AMSL north of Peaked Hill (Kai Yet Kok), 1 000 ft AMSL south of Peaked Hill (Kai Yet Kok)

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 25R arrivals or RWY 07L departures. The use of this route is subject to specific approval from Hong Kong Zone.

20 Helicopter Departure and Arrival Procedures

20.1 DEPARTURE FROM GFS/BAC TO PAK MONG OR SILVERMINE

20.1.1 **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).

20.1.2 **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.

20.1.3 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).

20.1.4 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.

20.1.5 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.

20.2 ARRIVALS FROM PAK MONG OR SILVERMINE TO GFS/BAC

20.2.1 Follow the reciprocal of paras. 20.1.3 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.

20.2.2 Helicopters operating to sites on the airport that require to cross the south runway, e.g. Temporary Parking Apron, shall initially comply with para 20.2.1 above then the final approach route will be as directed by ATC.

20.2.3 If holding is required, follow ATC instructions and comply with para 20.4 below.

20.3 HELICOPTER LANDING LOCATIONS

20.3.1 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).

20.3.2 JUNCTION OF TWY H AND TWY H2

20.3.2.1 For use by helicopters parking at Maintenance Apron. The final approach and initial departure tracks are over TWY H in the direction of the runway-in-use. Hover taxi to or from the parking apron as directed by ATC.

20.3.3 JUNCTION OF TWY K AND TXL Q3

20.3.3.1 For use by helicopters parking at the Business Aviation Centre (BAC) Apron. The final approach and initial departure tracks are over TWY K in the direction of the runway-in-use. Hover taxi via TXL Q3 to or from the BAC Apron.

20.3.4 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.

20.3.5 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.

20.3.6 During landing and lift off pilots shall maintain a good lookout for vehicles operating on the taxiways.

20.4 HELICOPTER HOLDING PROCEDURES

20.4.1 The following holding procedures shall be used by helicopters awaiting clearance for landing at the airport.

Location	VFR/SVFR	Altitude AMSL	Remarks
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.

21 Helicopter Runway Crossing Procedures

21.1 ROUTES

21.1.1 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. During parallel runway operations helicopters are not permitted to hold between the runways.

21.1.2 Runway 25 Crossing Corridor is a direct track between Holding Point ECHO and Abeam Cathay City, passing over RWY 25L/25R approach lights and east of Sky City.

21.1.3 Runway 07 Crossing Corridor is a corridor between Holding Point WHISKEY and Sha Lo Wan, passing over RWY 07L approach lights, west of HAECO hangar and immediately west of RWY 07R threshold. Helicopters overflying the airport should use the eastern part of the corridor and helicopters approaching or departing the airport should use the western part of the corridor.

21.1.4 The recommended altitude for the Runway Crossing Corridors is 800 ft - 1 000 ft AMSL for wake turbulence avoidance. Runway 07 Crossing Corridor is wide enough to permit helicopters approaching or departing the airport to manoeuvre and cross above the glidepath profile of landing traffic.

21.1.5 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. Holding between the two runways is not permitted.

21.1.6 Because of the extra distance involved when crossing the north runway from the southern holding points, or crossing the south runway from the northern holding points, once a pilot has received a conditional crossing clearance and the relevant landing traffic has been positively identified, the helicopter may depart the holding point and position to cross behind the landing aircraft, but under no circumstances shall it proceed beyond the centreline of the airport until the landing aircraft has passed the applicable Crossing Corridor. (The centreline of the airport is taken as the centreline of the centre runway.)

21.1.7 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.

21.2 HELICOPTER HOLDING PROCEDURES FOR RUNWAY CROSSING

21.2.1 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
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	

21.2.2 Helicopter holding patterns are right hand orbits with a speed restriction of not more than 70 KIAS.

21.2.3 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.)

22 Rejoining Procedures for Fixed Wing Aircraft

22.1 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 Left hand hold	Maximum 2 000 ft	RWY 25	For flights from the south
Soko Island Left hand hold	Maximum 2 000 ft	RWY 07	For flights from the south
Lung Kwu Chau/ Sha Chau Left hand hold	Maximum 1 500 ft	RWY 07	For flights from the north
	Maximum 1 000 ft	RWY 25	

23 Procedures for Local Flights in Uncontrolled Airspace Reporting Areas (UCARAs)

23.1 GENERAL

23.1.1 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.

23.1.2 UCARA airspace is classified as Category G with an additional requirement for two-way radio communication.

23.2 LATERAL LIMITS

23.2.1 The lateral boundaries of the UCARAs are indicated on AD 2-VHHH-CTR-1.

23.3 VERTICAL LIMITS

23.3.1 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.

23.4 FLIGHT NOTIFICATION

23.4.1 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).

23.4.2 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.

23.4.3 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.

23.5 COMMUNICATIONS

23.5.1 Pilots shall establish and maintain two-way communication with 'Hong Kong Information' on entering and when operating within UCARAs.

23.5.2 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.

23.5.3 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.

23.5.4 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.

23.5.5 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.

23.6 RADIO COMMUNICATION FAILURE PROCEDURES

23.6.1 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.

23.6.2 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.

24 Aerobatic Area

24.1 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.

24.2 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.

25 Flight Information Service

25.1 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.

25.2 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.

25.3 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.

26 Procedures for Entry and Exit to/from Shek Kong Aerodrome Reporting Area (SKARA)

26.1 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.)

26.2 Aircraft shall enter or exit the Shek Kong Aerodrome Reporting Area (SKARA) via the following routes

Radio Call Sign	Route	Co-ordinates (WGS 84)	Co-ordinates (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
Kam Tin Gap	SKARA to/from CTR Tuen Mun Zone	22 26 00N 114 02 57E	JK 963838

26.3 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, N12R, 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 D309 on Midfield apron are configured to accommodate up to 9 wide-bodied or up to 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 and AD 2-VHHH-AOC-3 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. 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
	Above 49 m and up to 55 m	**RNP: Suspended** ILS: Available LOC: Available	(No Change)

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
	Above 55 m and up to 63 m	**RNP: Suspended** ILS: Available LOC: Available	Increase minimum climb gradient to 3.8% (231 ft/NM) until passing 700 ft
	Above 63 m and up to 66 m	**RNP: Suspended** **ILS: Suspended** LOC: Available	Increase minimum climb gradient to 4.3% (262 ft/NM) until passing 700 ft
Above 110 m and up to 170 m		**RNP: Suspended** **ILS: Suspended** LOC: Available	Increase minimum climb gradient to 4.8% (292 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 07L/25R)	AD 2-VHHH-AOC-2
Aerodrome Obstacle Chart - ICAO Type B	AD 2-VHHH-AOC-3
Aerodrome Terrain and Obstacle Chart - ICAO (Electronic)	AD 2-VHHH-ATOC-1
Area Chart - Departure Routes	AD 2-VHHH-AC-DEP
RNAV(GNSS) ATENA SID RWY 07R	AD 2-VHHH-SID-ATENA-A
RNAV(GNSS) ATENA SID RWY 07L	AD 2-VHHH-SID-ATENA-E
RNAV(GNSS) ATENA SID RWY 07R (RF capability required)	AD 2-VHHH-SID-ATENA-X
RNAV(GNSS) ATENA SID RWY 07L (RF capability required)	AD 2-VHHH-SID-ATENA-Z
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 07L	AD 2-VHHH-SID-BEKOL-E
RNAV(GNSS) BEKOL SID RWY 25R	AD 2-VHHH-SID-BEKOL-F
RNAV(GNSS) LAKES SID RWY 07R	AD 2-VHHH-SID-LAKES-A
RNAV(GNSS) LAKES SID RWY 25L	AD 2-VHHH-SID-LAKES-B
RNAV(GNSS) LAKES SID RWY 07L	AD 2-VHHH-SID-LAKES-E
RNAV(GNSS) LAKES SID RWY 25R	AD 2-VHHH-SID-LAKES-F
RNAV(GNSS) OCEAN SID RWY 07R	AD 2-VHHH-SID-OCEAN-A
RNAV(GNSS) OCEAN SID RWY 25L	AD 2-VHHH-SID-OCEAN-B
RNAV(GNSS) OCEAN SID RWY 07L	AD 2-VHHH-SID-OCEAN-E
RNAV(GNSS) OCEAN SID RWY 25R	AD 2-VHHH-SID-OCEAN-F
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 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 07L (RF capability required)	AD 2-VHHH-SID-PECAN-Z
RNAV(GNSS) RASSE SID RWY 07R	AD 2-VHHH-SID-RASSE-A
RNAV(GNSS) RASSE SID RWY 07L	AD 2-VHHH-SID-RASSE-E
RNAV(GNSS) RASSE SID RWY 07R (RF capability required)	AD 2-VHHH-SID-RASSE-X
RNAV(GNSS) RASSE SID RWY 07L (RF capability required)	AD 2-VHHH-SID-RASSE-Z
RNAV(GNSS) SKATE SID RWY 07R	AD 2-VHHH-SID-SKATE-A
RNAV(GNSS) SKATE SID RWY 07L	AD 2-VHHH-SID-SKATE-E
RNAV(GNSS) SKATE SID RWY 07R (RF capability required)	AD 2-VHHH-SID-SKATE-X
RNAV(GNSS) SKATE SID RWY 07L (RF capability required)	AD 2-VHHH-SID-SKATE-Z

RNAV(GNSS) VENGO SID RWY 07R	AD 2-VHHH-SID-VENGO-A
RNAV(GNSS) VENGO SID RWY 07L	AD 2-VHHH-SID-VENGO-E
RNAV(GNSS) VENGO SID RWY 07R (RF capability required)	AD 2-VHHH-SID-VENGO-X
RNAV(GNSS) VENGO SID RWY 07L (RF capability required)	AD 2-VHHH-SID-VENGO-Z
RAMEN SID RWY 07R	AD 2-VHHH-SID-RAMEN-A
RAMEN SID RWY 07L	AD 2-VHHH-SID-RAMEN-E
RUMSY SID RWY 25L	AD 2-VHHH-SID-RUMSY-B
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 3A / 2B STAR	AD 2-VHHH-STAR-ABBEY
RNAV(GNSS) BETTY 2A / 2B STAR	AD 2-VHHH-STAR-BETTY
RNAV(GNSS) CANTO 3A STAR RWY 07L/R	AD 2-VHHH-STAR-CANTO-A
RNAV(GNSS) CANTO 2B STAR RWY 25L/R	AD 2-VHHH-STAR-CANTO-B
RNAV(GNSS) SIERA 7A / 7C STAR RWY 07L/R	AD 2-VHHH-STAR-SIERA-AC
RNAV(GNSS) SIERA 6B / 6D STAR RWY 25L/R	AD 2-VHHH-STAR-SIERA-BD
RNAV(GNSS) ABBEY 1G / BETTY 1G / CANTO 1G / SIERA 1G STAR RWY 25L/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 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 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

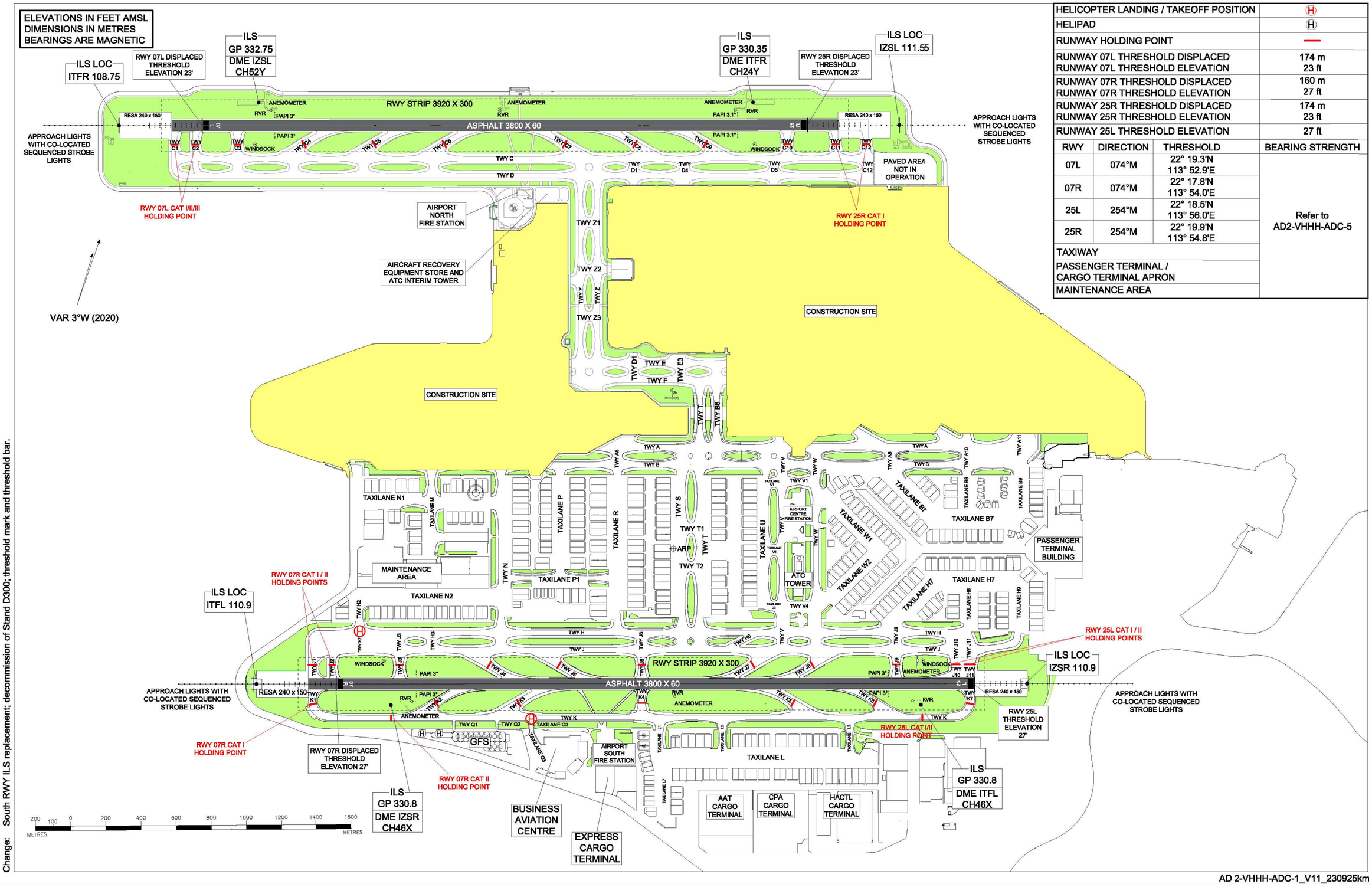
LEFT

BLANK

AERODROME CHART (AERODROME LAYOUT) | ARP 22° 18' 32.11"N 113° 54' 52.57"E | ELEVATION 28 FT AMSL | TWR 118.7 (North Runway) 118.4 (South Runway) | GMC 121.6 (North) 122.125 (West) | 121.875 (Midfield) 122.55 (South)

VHHH / HONG KONG INTERNATIONAL AIRPORT

Change: South RWY ILS replacement; decommission of Stand D300; threshold mark and threshold bar.



HELICOPTER LANDING / TAKEOFF POSITION	Ⓗ
HELIPAD	Ⓗ
RUNWAY HOLDING POINT	—
RUNWAY 07L THRESHOLD DISPLACED RUNWAY 07L THRESHOLD ELEVATION	174 m 23 ft
RUNWAY 07R THRESHOLD DISPLACED RUNWAY 07R THRESHOLD ELEVATION	160 m 27 ft
RUNWAY 25R THRESHOLD DISPLACED RUNWAY 25R THRESHOLD ELEVATION	174 m 23 ft
RUNWAY 25L THRESHOLD ELEVATION	27 ft

RWY	DIRECTION	THRESHOLD	BEARING STRENGTH
07L	074°M	22° 19.3'N 113° 52.9'E	Refer to AD2-VHHH-ADC-5
07R	074°M	22° 17.8'N 113° 54.0'E	
25L	254°M	22° 18.5'N 113° 56.0'E	
25R	254°M	22° 19.9'N 113° 54.8'E	
TAXIWAY			
PASSENGER TERMINAL / CARGO TERMINAL APRON			
MAINTENANCE AREA			

AERODROME CHART (VISUAL MARKINGS)

ARP 22° 18' 32.11"N 113° 54' 52.57"E

ELEVATION 28 FT AMSL

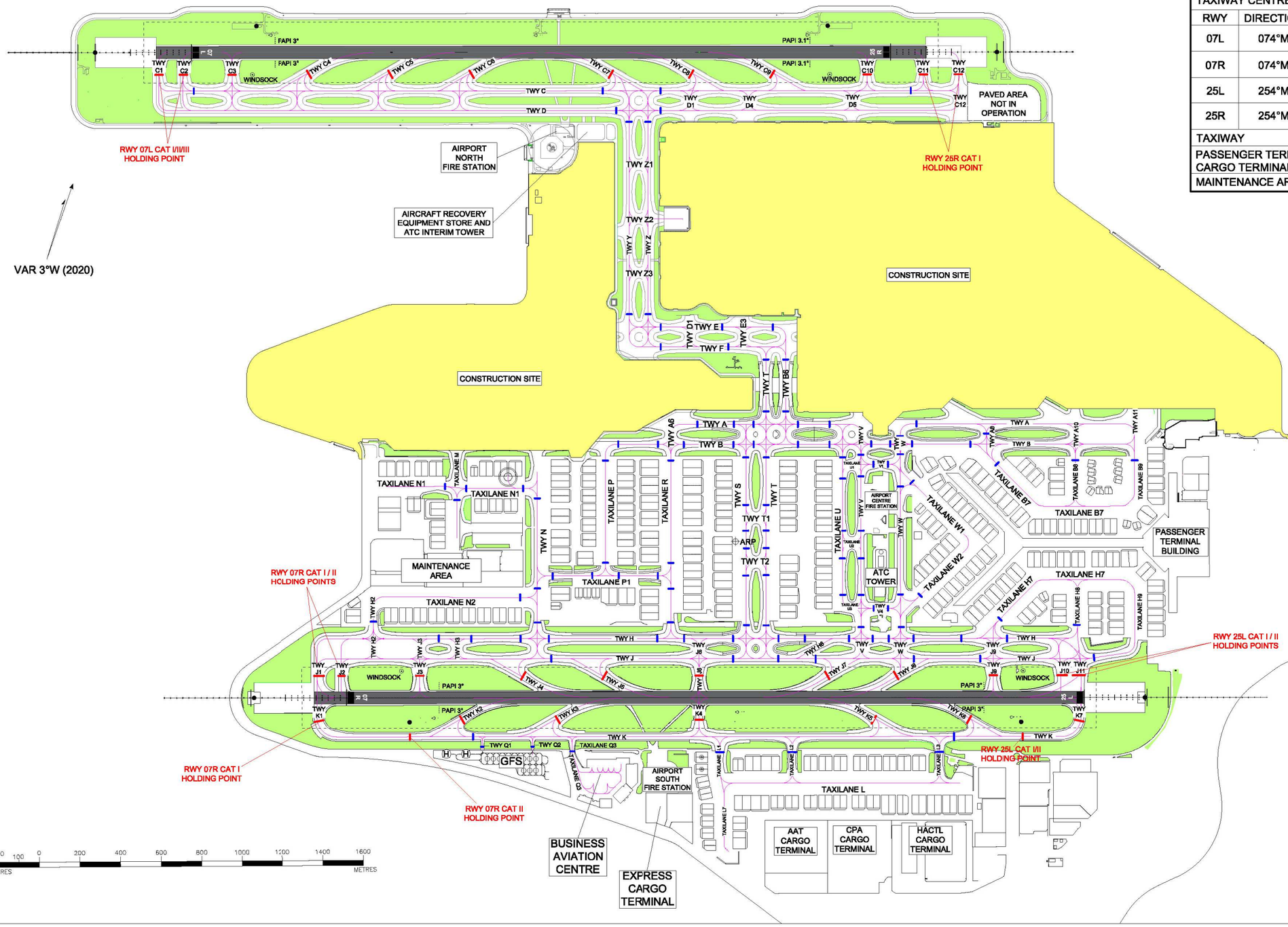
TWR 118.7 (North Runway) 118.4 (South Runway)

GMC 121.6 (North) 122.125 (West)

121.875 (Midfield) 122.55 (South)

VHHH / HONG KONG INTERNATIONAL AIRPORT

ELEVATIONS IN FEET AMSL
DIMENSIONS IN METRES
BEARINGS ARE MAGNETIC



HELIPAD	Ⓗ
RUNWAY HOLDING POINT	—
INTERMEDIATE HOLDING POSITION	—
TAXIWAY CENTRELINE	— TWY A —

RWY	DIRECTION	THRESHOLD	BEARING STRENGTH
07L	074°M	22° 19.3'N 113° 52.9'E	Refer to AD2-VHHH-ADC-5
07R	074°M	22° 17.8'N 113° 54.0'E	
25L	254°M	22° 18.5'N 113° 56.0'E	
25R	254°M	22° 19.9'N 113° 54.8'E	

TAXIWAY	
PASSENGER TERMINAL / CARGO TERMINAL APRON	
MAINTENANCE AREA	

Change: South RWY ILS replacement; decommission of Stand D300; threshold mark.

AERODROME CHART (LIGHTING PLAN)

ARP 22° 18' 32.11"N 113° 54' 52.57"E

ELEVATION 28 FT AMSL

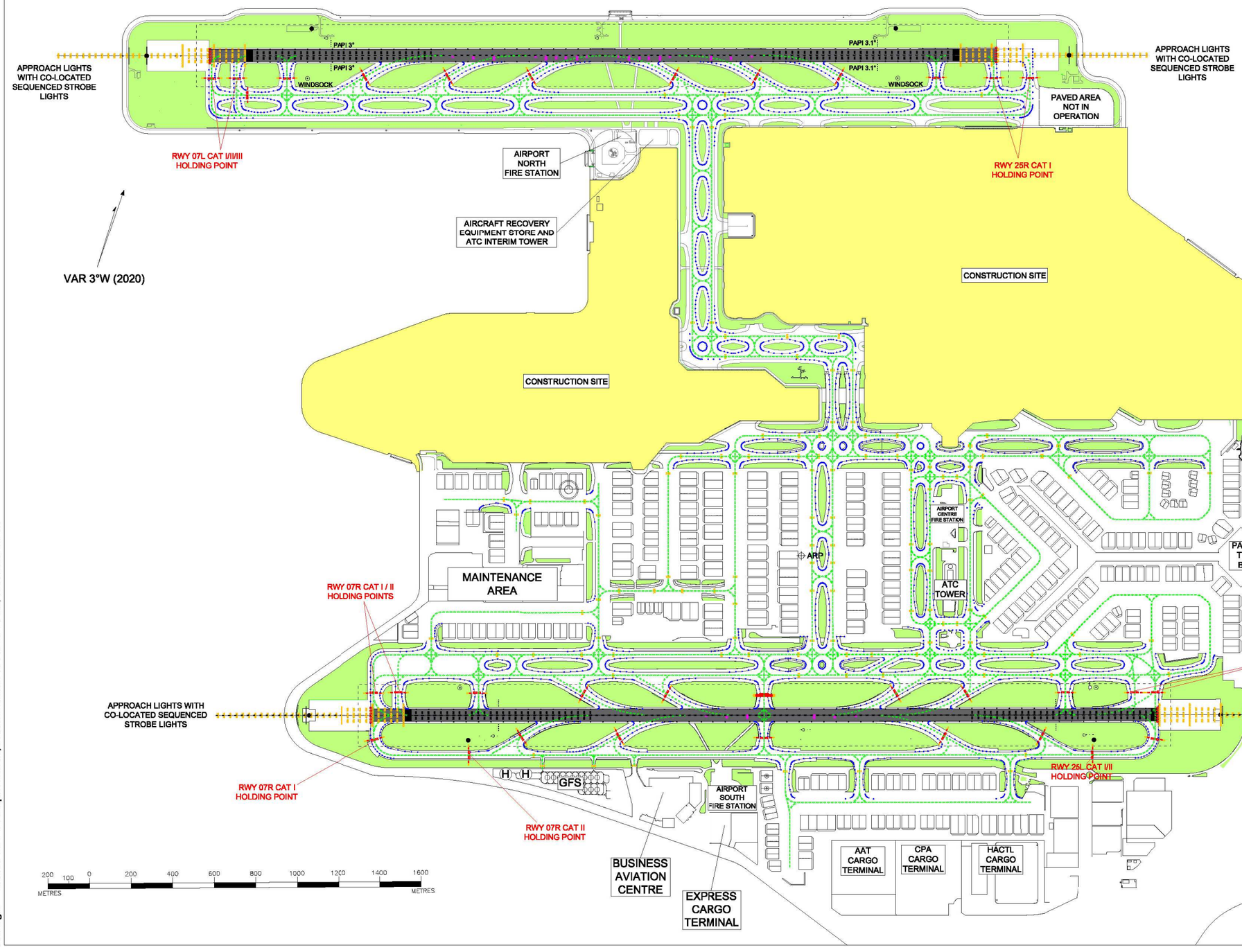
TWR 118.7 (North Runway) 118.4 (South Runway)

GMC 121.6 (North) 122.125 (West)

121.875 (Midfield) 122.55 (South)

VHHH / HONG KONG INTERNATIONAL AIRPORT

ELEVATIONS IN FEET AMSL
DIMENSIONS IN METRES
BEARINGS ARE MAGNETIC



HELIPAD	Ⓗ
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: South RWY ILS replacement; decommission of Stand D300; threshold mark

AIRCRAFT PARKING / DOCKING CHART

TWR 118.7 (North Runway)
118.4 (South Runway)

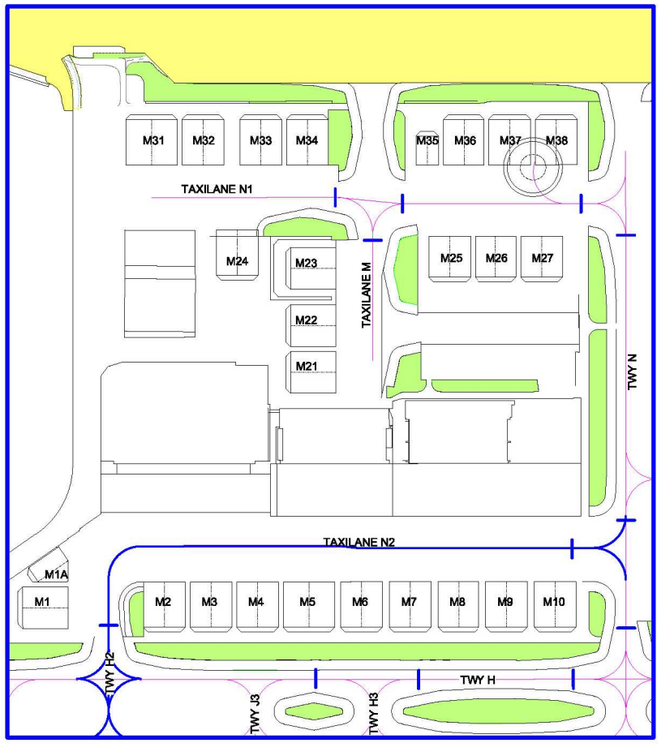
GMC 121.6 (North)
122.125 (West)

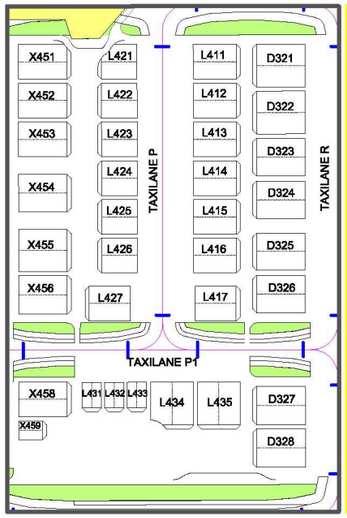
121.875 (Midfield)
122.55 (South)

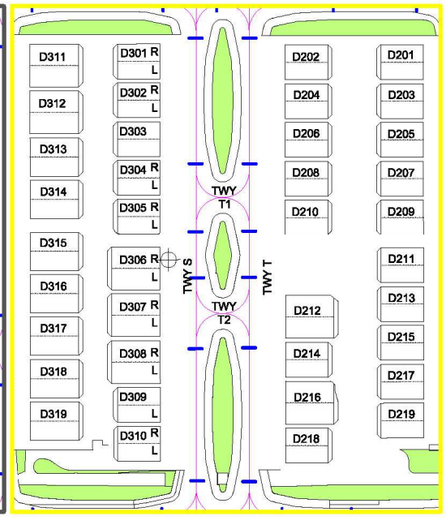
VHHH / HONG KONG INTERNATIONAL AIRPORT

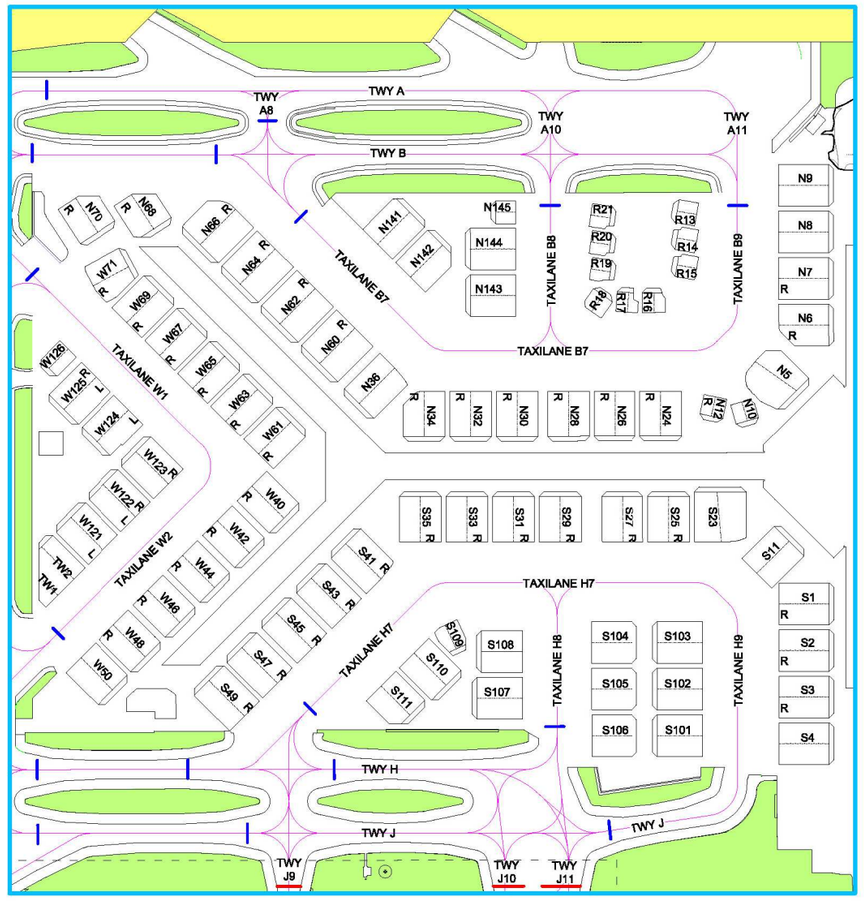
ELEVATIONS IN FEET AMSL
DIMENSIONS IN METRES
BEARINGS ARE MAGNETIC

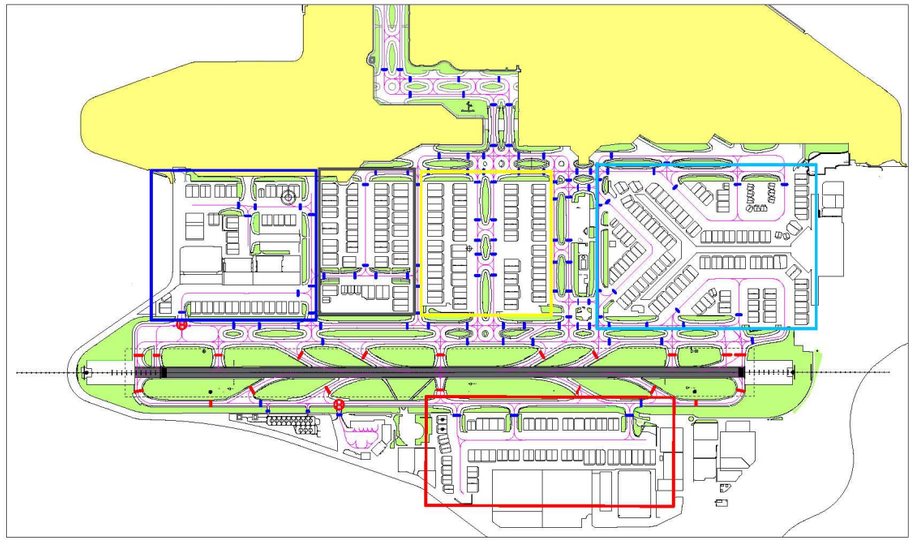
VAR 3°W (2020)

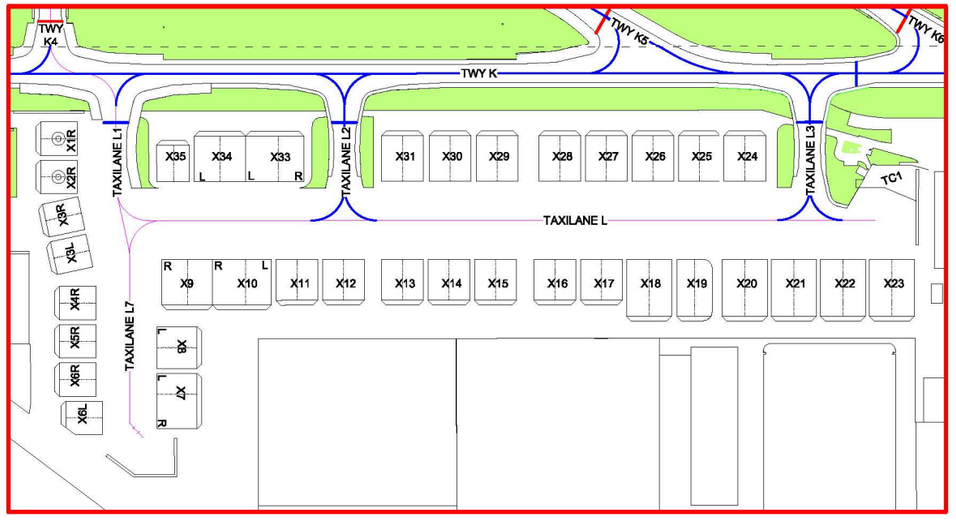








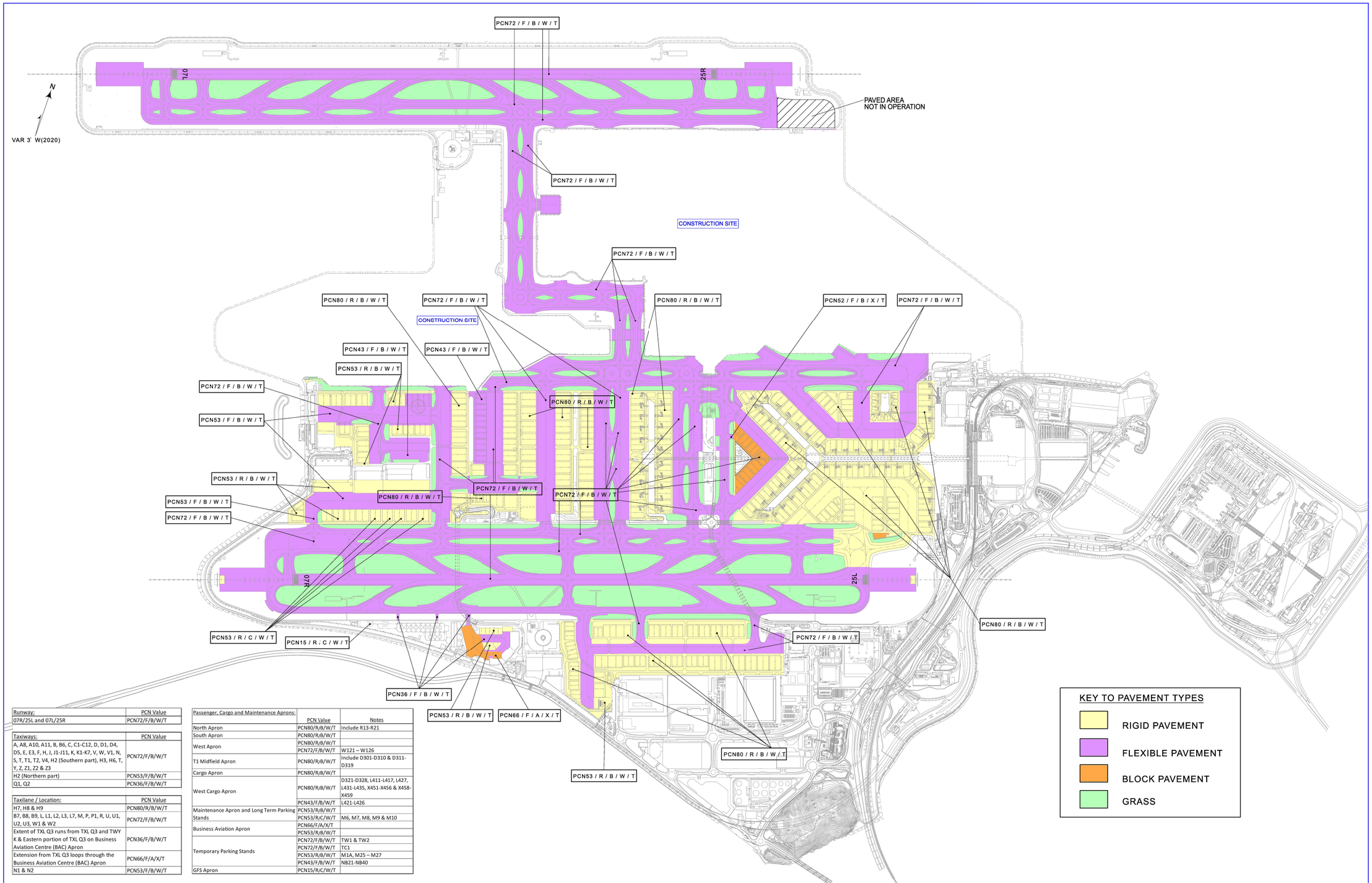




RUNWAY HOLDING POINT	
INTERMEDIATE HOLDING POSITION	
TAXIWAY CENTRELINE	TWY A

NOT TO SCALE

Change: South RWY ILS replacement; decommission of Stand D300



Runway:	PCN Value
07R/25L and 07L/25R	PCN72/F/B/W/T

Taxiways:	PCN Value
A, A8, A10, A11, B, B6, C, C1-C12, D, D1, D4, D5, E, E3, F, H, J, J1-J11, K, K1-K7, V, W, V1, N, S, T, T1, T2, V4, H2 (Southern part), H3, H6, T, Y, Z, Z1, Z2 & Z3	PCN72/F/B/W/T
H2 (Northern part)	PCN53/F/B/W/T
Q1, Q2	PCN36/F/B/W/T

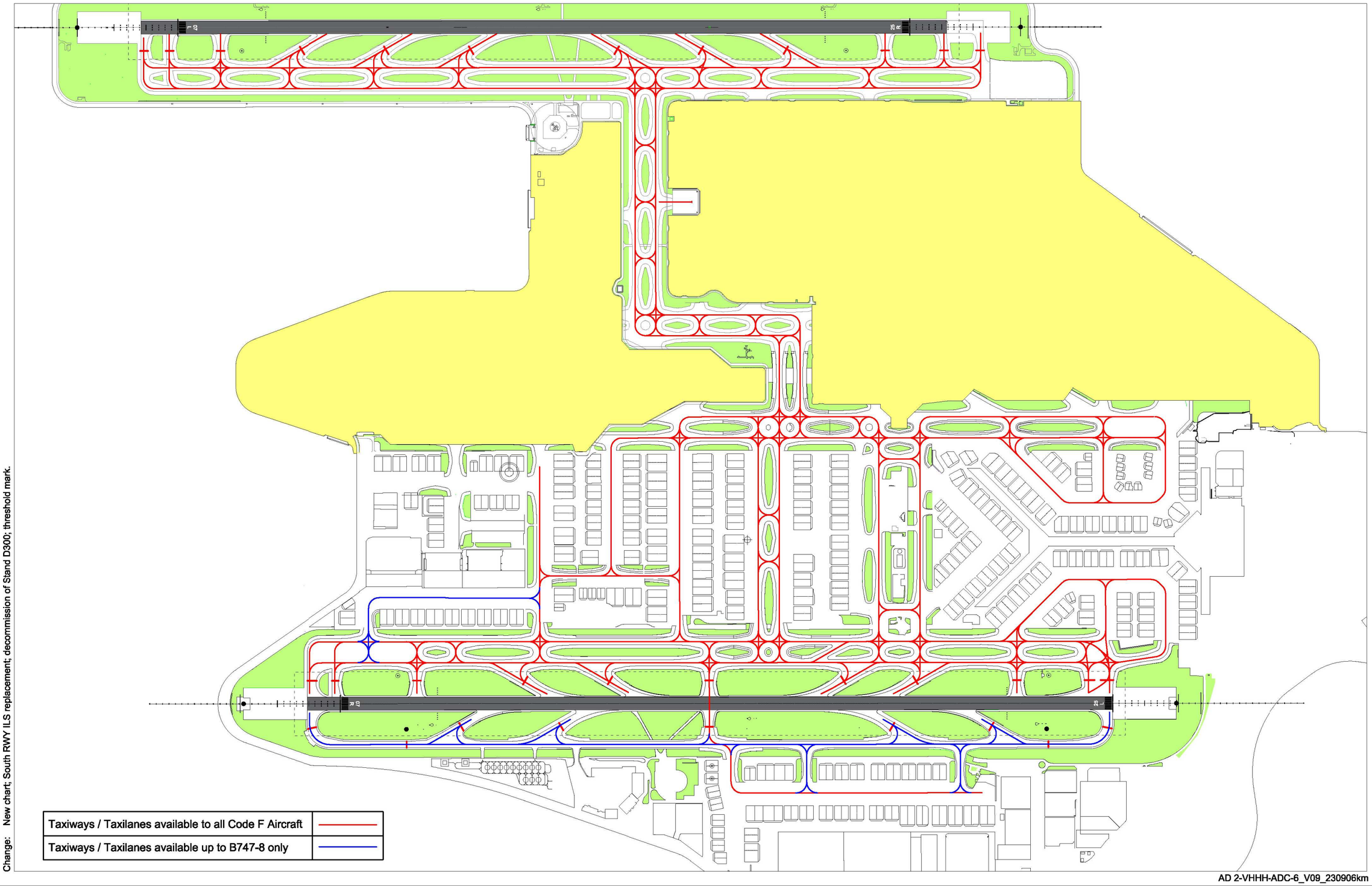
Taxilane / Location:	PCN Value
H7, H8 & H9	PCN80/R/B/W/T
B7, B8, B9, L, L1, L2, L3, L7, M, P, P1, R, U, U1, U2, U3, W1 & W2	PCN72/F/B/W/T
Extent of TXL Q3 runs from TXL Q3 and TWY K & Eastern portion of TXL Q3 on Business Aviation Centre (BAC) Apron	PCN36/F/B/W/T
Extension from TXL Q3 loops through the Business Aviation Centre (BAC) Apron	PCN66/F/A/X/T
N1 & N2	PCN53/F/B/W/T

Passenger, Cargo and Maintenance Aprons:	PCN Value	Notes
North Apron	PCN80/R/B/W/T	Include R13-R21
South Apron	PCN80/R/B/W/T	
West Apron	PCN80/R/B/W/T	
	PCN72/F/B/W/T	W121 – W126
T1 Midfield Apron	PCN80/R/B/W/T	Include D301-D310 & D311-D319
Cargo Apron	PCN80/R/B/W/T	
West Cargo Apron	PCN80/R/B/W/T	D321-D328, L411-L417, L427, L431-L435, X451-X456 & X458-X459
	PCN43/F/B/W/T	L421-L426
Maintenance Apron and Long Term Parking Stands	PCN53/R/B/W/T	
	PCN53/R/C/W/T	M6, M7, M8, M9 & M10
Business Aviation Apron	PCN66/F/A/X/T	
	PCN53/R/B/W/T	
Temporary Parking Stands	PCN72/F/B/W/T	TW1 & TW2
	PCN72/F/B/W/T	TC1
	PCN53/R/B/W/T	M1A, M25 – M27
	PCN43/F/B/W/T	NB21-NB40
GFS Apron	PCN15/R/C/W/T	

PLAN 13 - PAVEMENT TYPES & PCN NUMBERS

Effective Date :

Taxiways / Taxilanes for Code F Aircraft



Change: New chart; South RWY ILS replacement; decommission of Stand D300; threshold mark.

AD 2-VHHH-ADC-6_V09_230906km

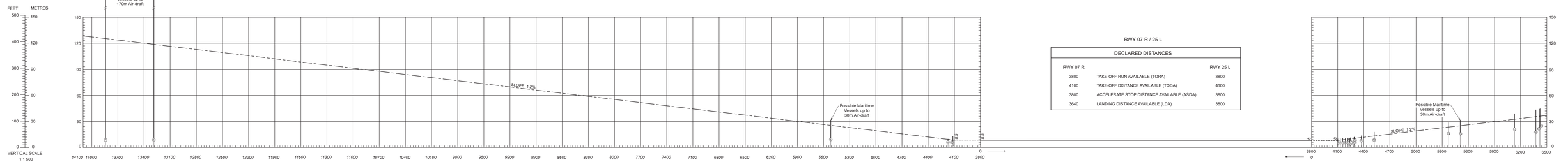
DIMENSIONS, ELEVATIONS AND HEIGHTS IN METRES
VERTICAL DATUM USED - MEAN SEA LEVEL

AERODROME OBSTACLE CHART - ICAO

TYPE A (OPERATING LIMITATIONS)

AD 2-VHHH-AOC-1
13 JUL 23
HONG KONG INTERNATIONAL AIRPORT
RWY 07 R / 25 L

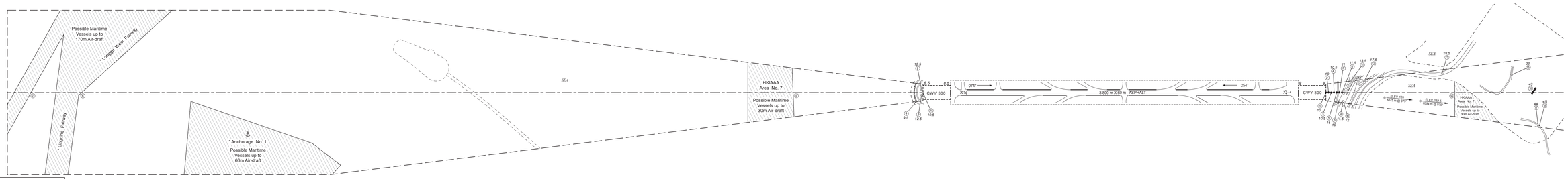
MAGNETIC VARIATION 3° W (2020)



RWY 07 R / 25 L

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, LOCALIZER EQUIPMENT, CCTV, POLE & MAST	⊕
ANCHORAGE AREA	⚓
BUILDING	▬
MAIN ROAD	
MARINE FACILITIES	
MOBILE OBSTACLES	
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

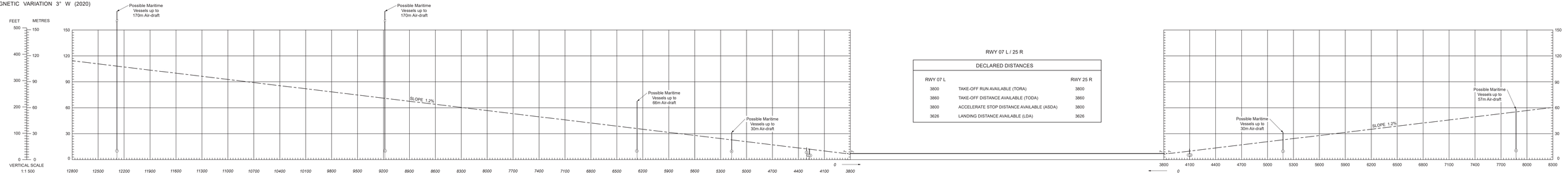
DIMENSIONS, ELEVATIONS AND HEIGHTS IN METRES
VERTICAL DATUM USED - MEAN SEA LEVEL

AERODROME OBSTACLE CHART - ICAO

TYPE A (OPERATING LIMITATIONS)

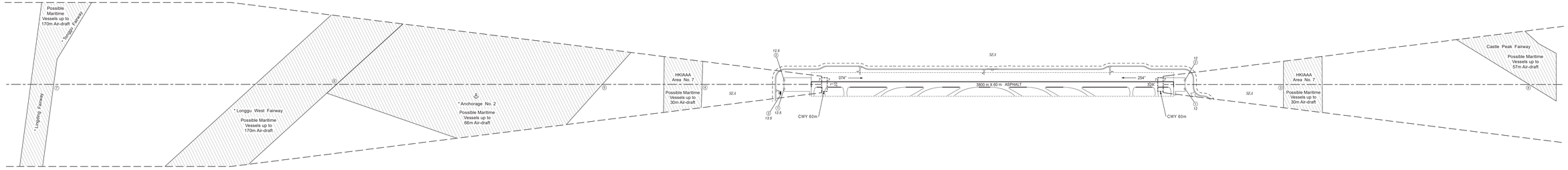
AD 2-VHHH-AOC-2
13 JUL 23
HONG KONG INTERNATIONAL AIRPORT
RWY 07 L / 25 R

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



LEGEND	
OBSTACLE IDENTIFICATION NUMBER	①
POLE	◦
ANCHORAGE AREA	⚓
BUILDING	▬
MAIN ROAD	═══
MARINE FACILITIES	▭▭▭

* 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 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-3
13 JUL 23
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

TAKE-OFF CLIMB SURFACE, SLOPE 1 : 50

TRANSITIONAL SURFACE, SLOPE 1 : 7

WARNING

VISUAL CIRCLING IS PROHIBITED

Urmston Road Fairway

Castle Peak Fairway

Tongqui Fairway

Longpo West Fairway

Longpo Fairway

Possible Maritime Vessels up to 170m Air-draft

Possible Maritime Vessels up to 67m Air-draft

Possible Maritime Vessels up to 30m Air-draft

Possible Maritime Vessels up to 66m Air-draft

Possible Maritime Vessels up to 66m Air-draft

HKIAAA Area No.7

Possible Maritime Vessels up to 30m Air-draft

* Anchorage No.1

* Anchorage No.2

Possible Maritime Vessels up to 66m Air-draft

CONSTRUCTION SITE

CONSTRUCTION SITE

NOTE
ANNEX 14 OBSTACLE LIMITATION SURFACES ARE PENETRATED BY EXTENSIVE HIGH GROUNDS AND MAN-MADE OBSTACLES IN THE AREA SOUTH OF THIS LINE

* Refer to AIP Hong Kong VHHH AD 2.23 ADDITIONAL INFORMATION for further details

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	

AMENDMENT RECORD		
No.	DATE	ENTERED BY

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

CIVIL AVIATION DEPARTMENT, HONG KONG
Cartography by Survey and Mapping Office, Lands Department

Aerodrome Terrain and Obstacle Chart - ICAO (Electronic)

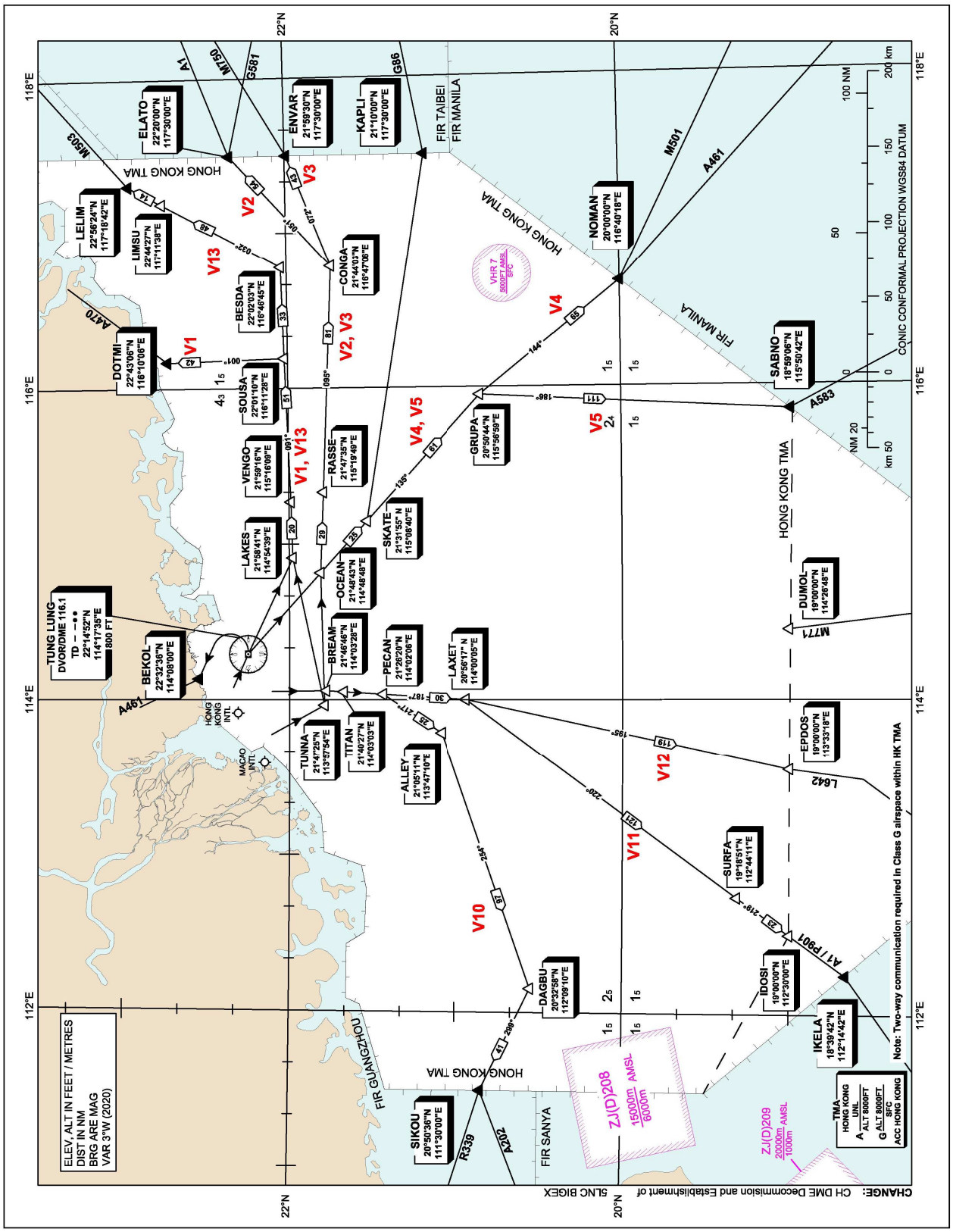
Electronic terrain data for Area 4 for all four runways (07L, 07R, 25L and 25R) at HKIA are available from the airport operator as follows:

Airfield Department
Hong Kong Airport Authority,
HKIA Tower, 1 Sky Plaza Rd,
Hong Kong International Airport.

Tel : +852 21836102
FAX : +852 29499199

VHHH / HONG KONG TMA

AREA CHART — DEPARTURE ROUTES

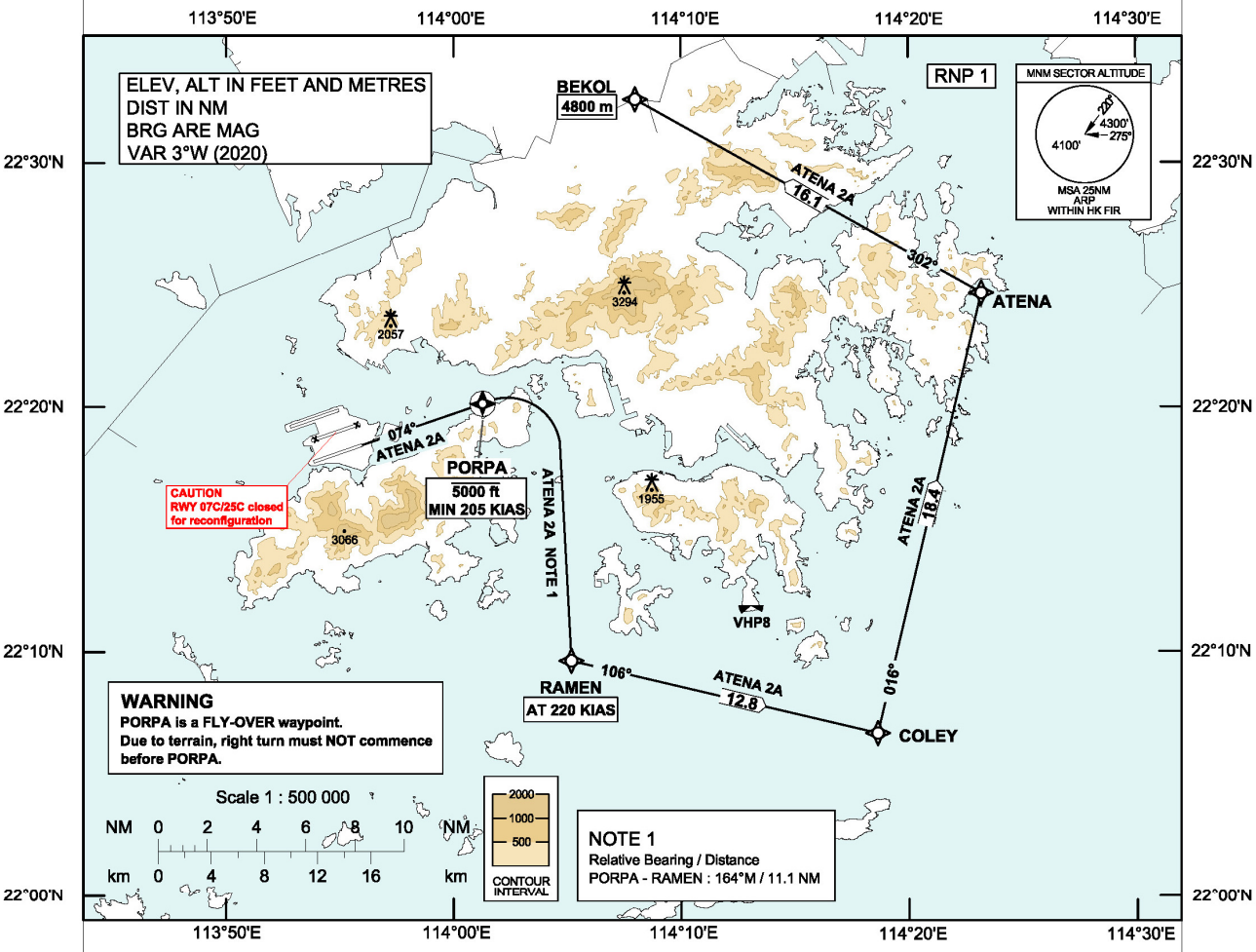


STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

Transition Altitude 9 000 ft	
Hong Kong Tower	118.4
Hong Kong Departure	123.8

HONG KONG / Intl (VHHH)
RNAV (GNSS) ATENA 2A SID RWY 07R

1. For RNAV (GNSS) SID, 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 after departure, 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. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.
4. PORPA is a **FLY-OVER** waypoint. All other waypoints are fly-by.
5. **Noise Mitigating SID for use between 1500 - 2300 UTC (see VHHH AD 2.21 para 2.4).**



ATENA 2A SID RWY 07R

CLIMB REQUIREMENT

Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Cross PORPA at 5 000 ft or below. Cross BEKOL at 4 800 m or above.

TERRAIN CLEARANCE

Minimum climb gradient of 4.9% (298 ft/NM) until leaving 1 400 ft is required.

SPEED RESTRICTION

Speed restriction of 205 KIAS or greater at PORPA and 220 KIAS until RAMEN.

CHANGE: Base map update, Runway 07C/25C closed, Tai Mo Shan elevation.

AD 2-VHHH-SID-ATENA-A_V01_220628zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

TABULAR DESCRIPTION: ATENA 2A RWY 07R (Noise Mitigating Procedure)

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	PORPA	Y	074 (071)	+3.0	5.0	-	-5000	+205	RNP 1
02	DF	RAMEN	-	-	+3.0	11.1	R	-	@220	RNP 1
03	TF	COLEY	-	106 (103)	+3.0	12.8	L	-	-	RNP 1
04	TF	ATENA	-	016 (013)	+3.0	18.4	L	-	-	RNP 1
05	TF	BEKOL	-	302 (299)	+3.0	16.1	L	+4800m	-	RNP 1

WAYPOINT LIST

ATENA 2A RWY 07R

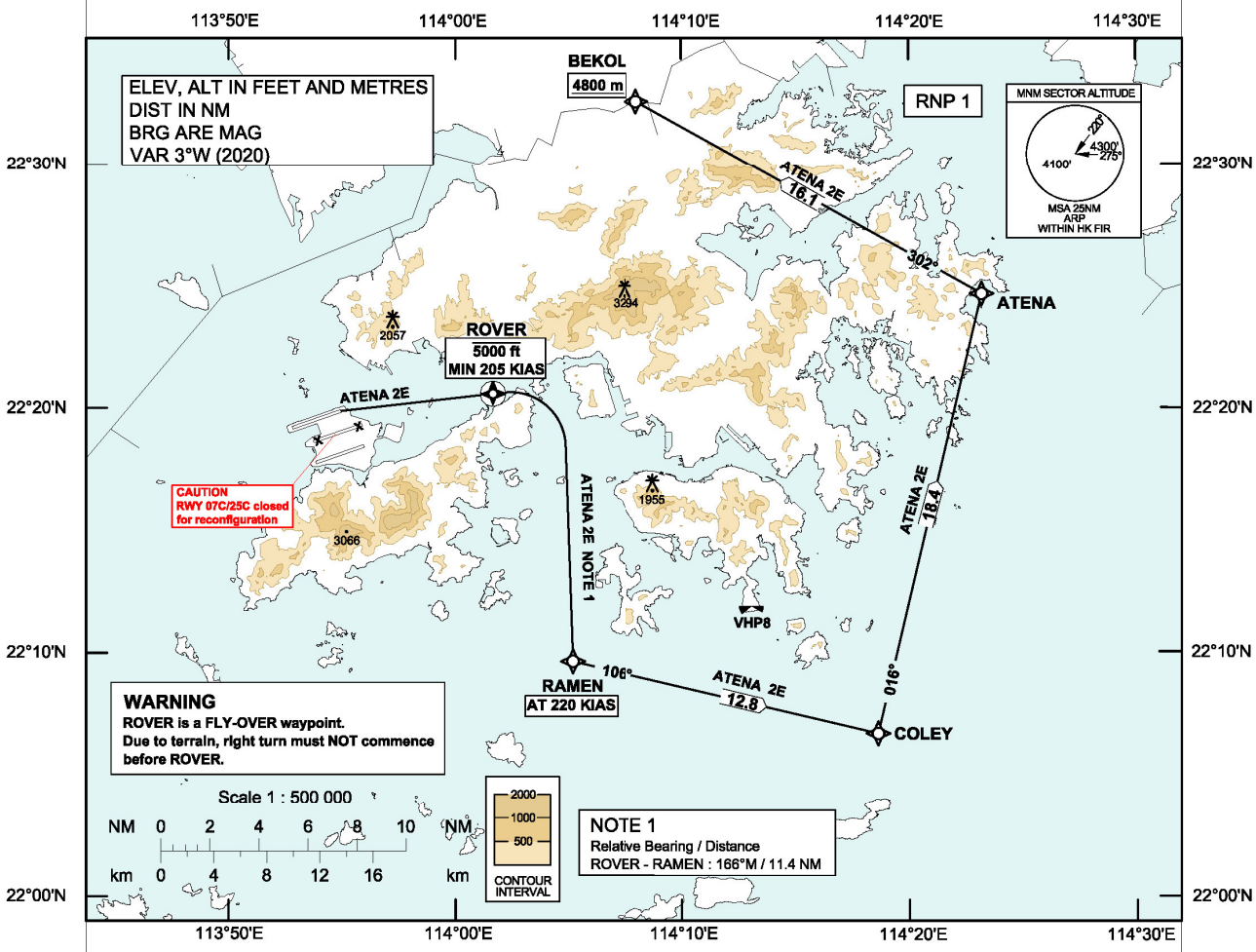
Waypoint Identifier	Coordinates (WGS-84)	
PORPA	22 20 09.10N	114 01 16.30E
RAMEN	22 09 39.22N	114 05 09.89E
COLEY	22 06 41.03N	114 18 37.63E
ATENA	22 24 39.85N	114 23 11.88E
BEKOL	22 32 36.00N	114 08 00.00E

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) ATENA 2E SID RWY 07L

1. For RNAV (GNSS) SID, 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 after departure, 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. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.
4. ROVER is a **FLY-OVER** waypoint. All other waypoints are fly-by.
5. (DER) - Departure End of Runway.
6. **Noise Mitigating SID for use between 1500 - 2300 UTC (see VHHH AD 2.21 para 2.4).**



ATENA 2E SID RWY 07L

CLIMB REQUIREMENT
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Cross ROVER at 5 000 ft or below. Cross BEKOL at 4 800 m or above.

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 closed.

AD 2-VHHH-SID-ATENA-E_V03_220628zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

TABULAR DESCRIPTION: ATENA 2E RWY 07L (Noise Mitigating Procedure)

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	RW07L (DER)	Y	074 (071)	+3.0	-	-	-	-	RNP 1
02	FA	RW07L (DER)	-	074 (071)	+3.0	-	-	+430	-	RNP 1
03	DF	ROVER	Y	-	+3.0	-	R	-5000	+205	RNP 1
04	DF	RAMEN	-	-	+3.0	-	R	-	@220	RNP 1
05	TF	COLEY	-	106 (103)	+3.0	12.8	L	-	-	RNP 1
06	TF	ATENA	-	016 (013)	+3.0	18.4	L	-	-	RNP 1
07	TF	BEKOL	-	302 (299)	+3.0	16.1	L	+4800m	-	RNP 1

WAYPOINT LIST

ATENA 2E RWY 07L

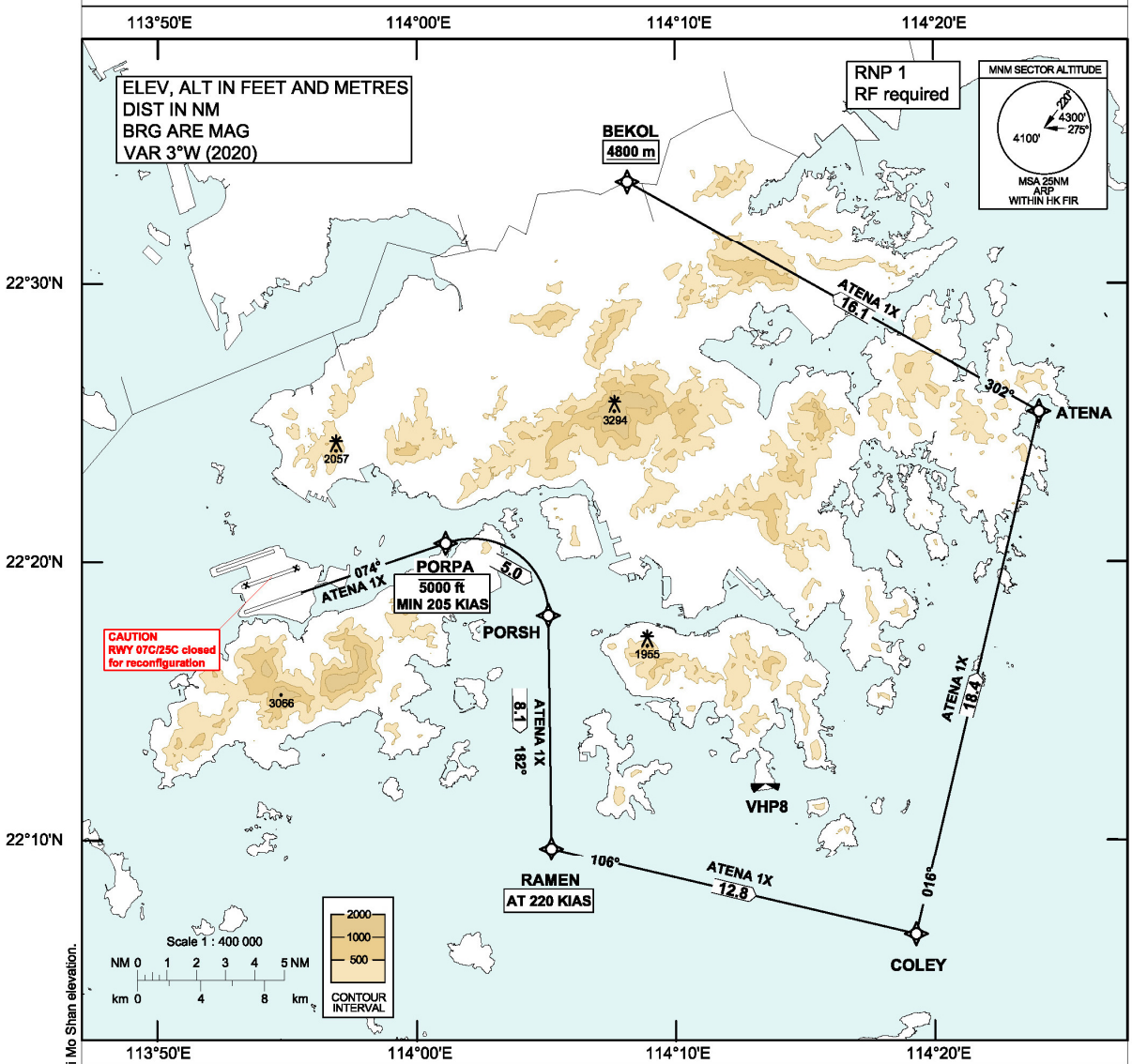
Waypoint Identifier	Coordinates (WGS-84)	
RW07L (DER)	22 19 56.94N	113 54 57.97E
ROVER	22 20 35.58N	114 01 39.12E
RAMEN	22 09 39.22N	114 05 09.89E
COLEY	22 06 41.03N	114 18 37.63E
ATENA	22 24 39.85N	114 23 11.88E
BEKOL	22 32 36.00N	114 08 00.00E

STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

Transition Altitude 9 000 ft	
Hong Kong Tower	118.4
Hong Kong Departure	123.8

HONG KONG / Intl (VHHH)
RNAV (GNSS) ATENA 1X SID RWY 07R

1. For RNAV (GNSS) SID, 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 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.
3. **Radius-to-fix (RF) leg is required.** Aircraft shall have RF capability as stipulated in the Aircraft Flight Manual or its FMS manual. Aircraft that do not have RF capability shall use RNAV (GNSS) ATENA 2A as detailed in AD-2-VHHH-SID-ATENA-A.
4. **Noise Mitigating SID for use between 1500 - 2300 UTC (see VHHH AD 2.21 para 2.4).**
5. Aircraft with RF capability are encouraged to fly the procedure.



ATENA 1X SID RWY 07R

CLIMB REQUIREMENT

Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Cross PORPA at 5 000 ft or below. Cross BEKOL at 4 800 m or above.

TERRAIN CLEARANCE

Minimum climb gradient of 4.9% (298 ft/NM) until leaving 1 400 ft is required.

SPEED RESTRICTION

Speed restriction 205 KIAS or greater at PORPA and 220 KIAS until RAMEN.

CHANGE: Base map update, Runway 07C/25C closed, Tai Mo Shan elevation.

AD 2-VHHH-SID-ATENA-X_V01_220628zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

TABULAR DESCRIPTION: ATENA 1X RWY 07R (Noise Mitigating Procedure)

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	PORPA	-	074 (071)	+3.0	5.0	-	-5000	+205	RNP 1
02	RF Centre: VH991 r=2.6485 NM	PORSH	-	-	+3.0	5.0	R	-	-	RNP 1
03	TF	RAMEN	-	182 (179)	+3.0	8.1	-	-	@220	RNP 1
04	TF	COLEY	-	106 (103)	+3.0	12.8	L	-	-	RNP 1
05	TF	ATENA	-	016 (013)	+3.0	18.4	L	-	-	RNP 1
06	TF	BEKOL	-	302 (299)	+3.0	16.1	L	+4800m	-	RNP 1

WAYPOINT LIST

ATENZ 1X RWY 07R

Waypoint Identifier	Coordinates (WGS-84)	
PORPA	22 20 09.10N	114 01 16.30E
PORSH	22 17 40.38N	114 05 03.56E
RAMEN	22 09 39.22N	114 05 09.89E
COLEY	22 06 41.03N	114 18 37.63E
ATENA	22 24 39.85N	114 23 11.88E
BEKOL	22 32 36.00N	114 08 00.00E
RF Arc Centre Identifier	**Coordinates (WGS-84)**	
VH991	22 17 38.37N	114 02 12.21E

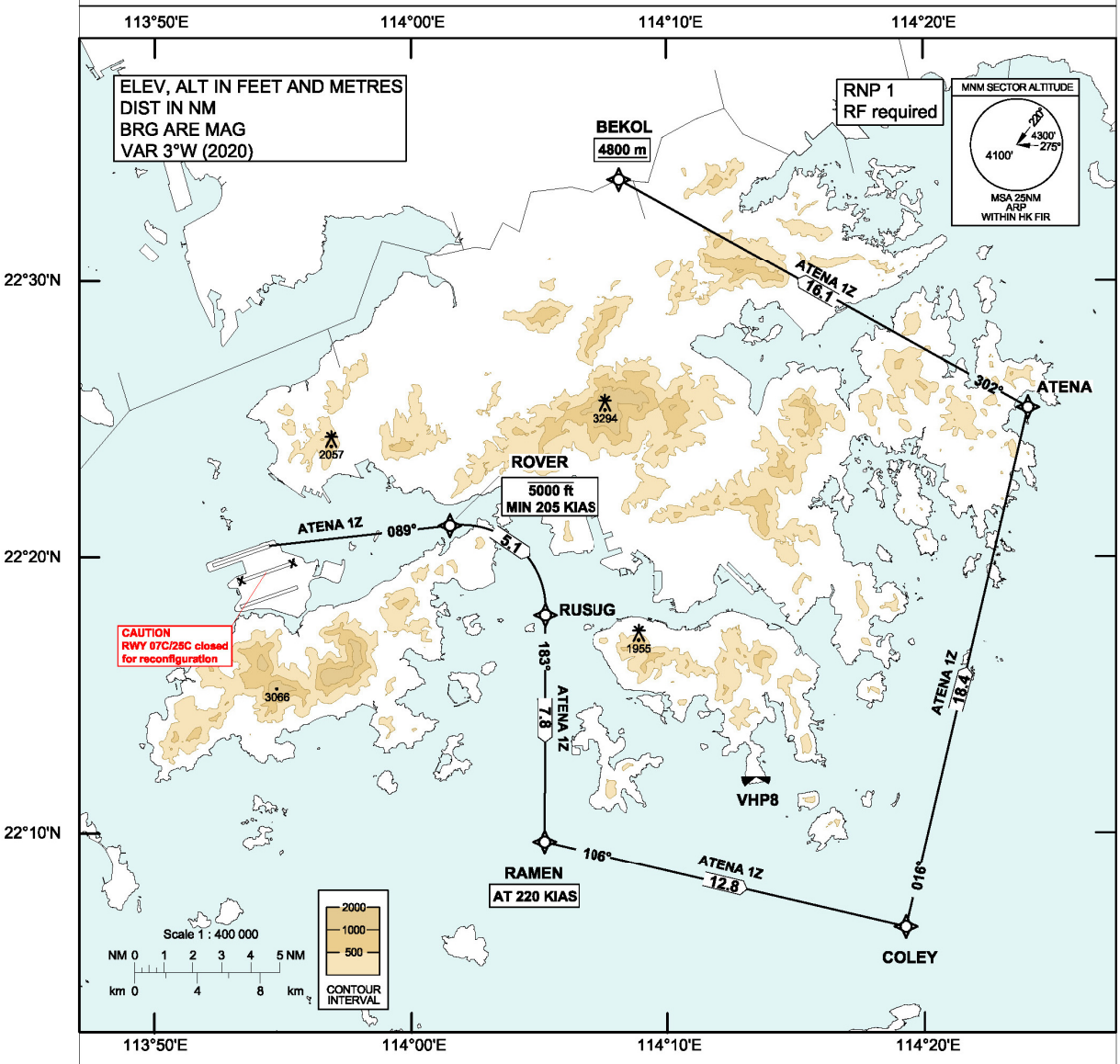
STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

Transition Altitude 9 000 ft

Hong Kong Tower	118.7
Hong Kong Departure	123.8

HONG KONG / Intl (VHHH)
RNAV (GNSS) ATENA 1Z SID RWY 07L

1. For RNAV (GNSS) SID, 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 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.
3. **Radius-to-fix (RF) leg is required.** Aircraft shall have RF capability as stipulated in the Aircraft Flight Manual or its FMS manual. Aircraft that do not have RF capability shall use RNAV (GNSS) ATENA 2E.
4. (DER) - Departure End of Runway.
5. **Noise Mitigating SID for use between 1500 - 2300 UTC (see VHHH AD 2.21 para 2.4).**
6. Aircraft with RF capability are encouraged to fly the procedure.



ATENA 1Z SID RWY 07L

CLIMB REQUIREMENT
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Cross ROVER at 5 000 ft or below. Cross BEKOL at 4 800 m or above.

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 RAMEN.

CHANGE: Runway 07C/25C closed.

AD 2-VHHH-SID-ATENA-Z_V03_220628zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

TABULAR DESCRIPTION: ATENA 1Z RWY 07L (Noise Mitigating Procedure)

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	RW07L (DER)	Y	074 (071)	+3.0	-	-	-	-	RNP 1
02	FA	RW07L (DER)	-	074 (071)	+3.0	-	-	+430	-	RNP 1
03	CF	ROVER	-	089 (086)	+3.0	-	R	-5000	+205	RNP 1
04	RF Centre: VH993 r=3.0800 NM	RUSUG	-	-	+3.0	5.1	R	-	-	RNP 1
05	TF	RAMEN	-	183 (180)	+3.0	7.8	-	-	@220	RNP 1
06	TF	COLEY	-	106 (103)	+3.0	12.8	L	-	-	RNP 1
07	TF	ATENA	-	016 (013)	+3.0	18.4	L	-	-	RNP 1
08	TF	BEKOL	-	302 (299)	+3.0	16.1	L	+4800m	-	RNP 1

WAYPOINT LIST

ATENZ 1Z RWY 07L

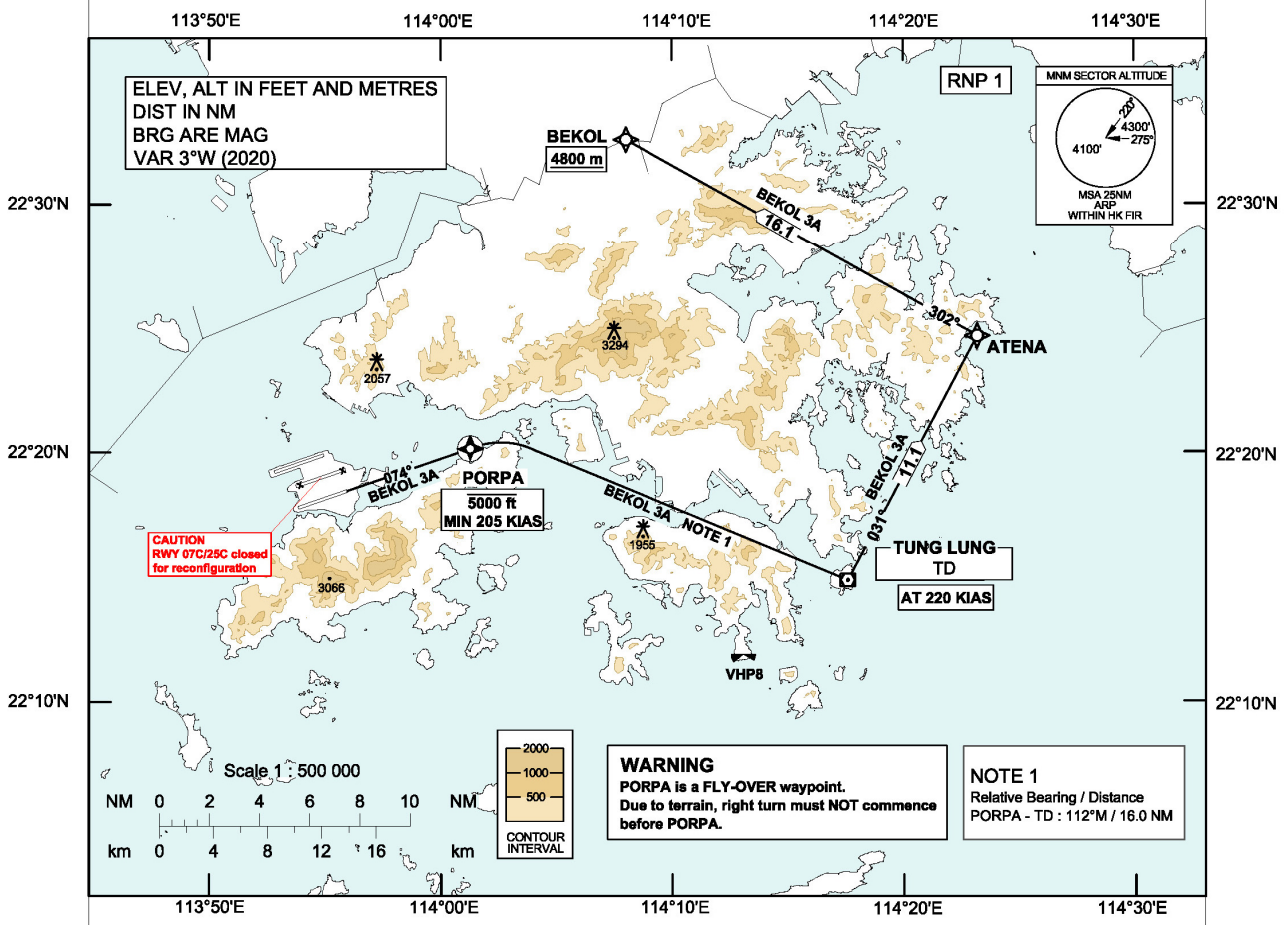
Waypoint Identifier	Coordinates (WGS-84)	
RW07L (DER)	22 19 56.94N	113 54 57.97E
ROVER	22 20 35.58N	114 01 39.12E
RUSUG	22 17 29.78N	114 05 12.16E
RAMEN	22 09 39.22N	114 05 09.89E
COLEY	22 06 41.03N	114 18 37.63E
ATENA	22 24 39.85N	114 23 11.88E
BEKOL	22 32 36.00N	114 08 00.00E
RF Arc Centre Identifier	**Coordinates (WGS-84)**	
VH993	22 17 30.58N	114 01 52.89E

STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

Transition Altitude 9 000 ft	
Hong Kong Tower	118.4
Hong Kong Departure	123.8

HONG KONG / Intl (VHHH)
RNAV (GNSS) BEKOL 3A SID RWY 07R

1. For RNAV (GNSS) SID, 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 after departure, 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. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.
4. PORPA is a **FLY-OVER** waypoint. All other waypoints are fly-by.



BEKOL 3A SID RWY 07R

CLIMB REQUIREMENT

Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Cross PORPA at 5 000 ft or below. Cross BEKOL at 4 800 m or above.

TERRAIN CLEARANCE

Minimum climb gradient of 4.9% (298 ft/NM) until leaving 1 400 ft is required.

SPEED RESTRICTION

Speed restriction of 205 KIAS or greater at PORPA and 220 KIAS until TD DVOR.

CHANGE: Base map update, Runway 07C/25C closed, Tai Mo Shan elevation.

AD 2-VHHH-SID-BEKOL-A_V01_220628zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

TABULAR DESCRIPTION: BEKOL 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	PORPA	Y	074 (071)	+3.0	5.0	-	-5000	+205	RNP 1
02	DF	TD	-	-	+3.0	16.0	R	-	@220	RNP 1
03	TF	ATENA	-	031 (028)	+3.0	11.1	L	-	-	RNP 1
04	TF	BEKOL	-	302 (299)	+3.0	16.1	L	+4800m	-	RNP 1

WAYPOINT LIST

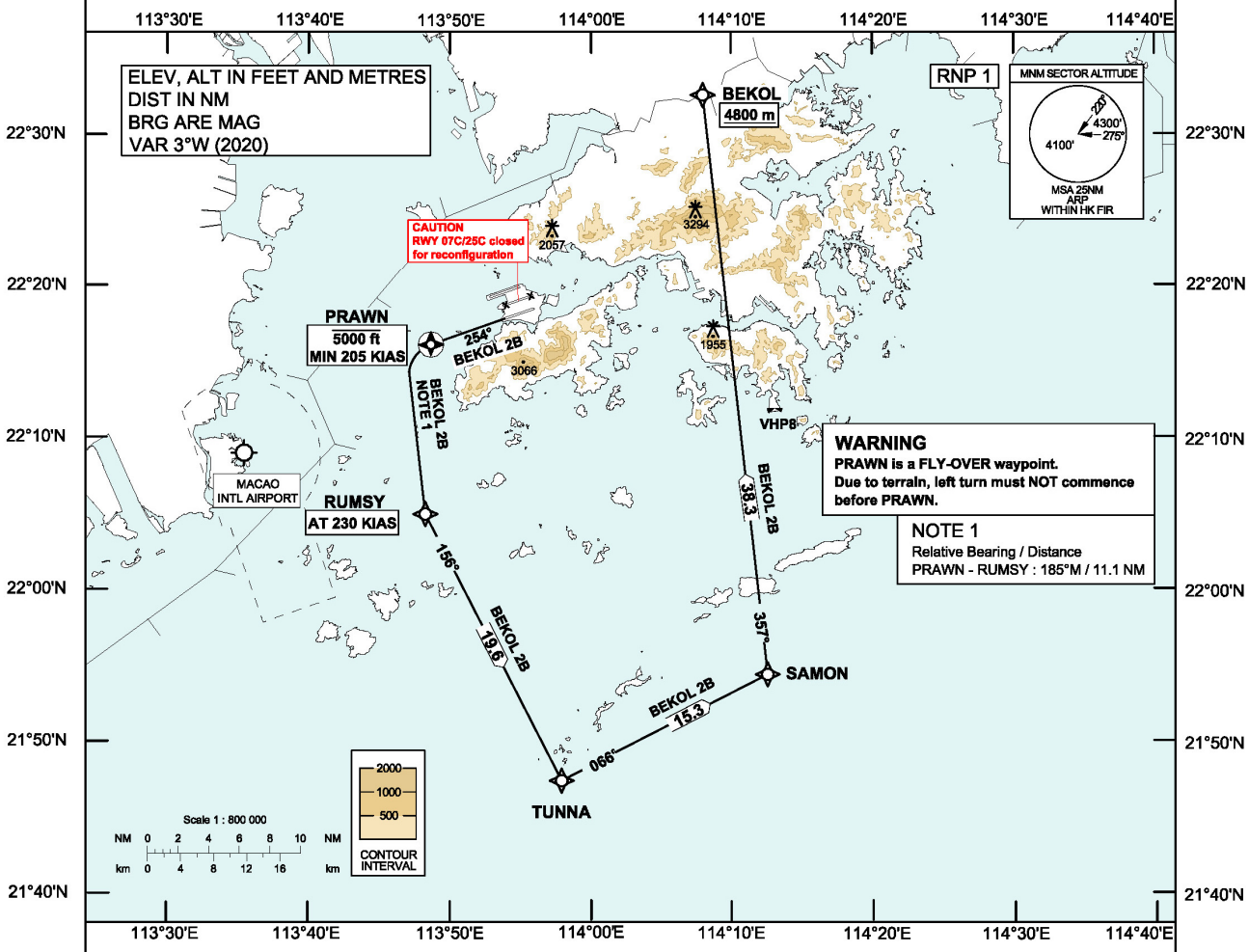
BEKOL 3A RWY 07R		
Waypoint Identifier	**Coordinates (WGS-84)**	
PORPA	22 20 09.10N	114 01 16.30E
TD	22 14 52.42N	114 17 35.30E
ATENA	22 24 39.85N	114 23 11.88E
BEKOL	22 32 36.00N	114 08 00.00E

STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

Transition Altitude 9 000 ft	
Hong Kong Tower	118.4
Hong Kong Departure	123.8

HONG KONG / Intl (VHHH)
RNAV (GNSS) BEKOL 2B SID RWY 25L

1. For RNAV (GNSS) SID, 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 after departure, 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. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.
4. PRAWN is a **FLY-OVER** waypoint. All other waypoints are fly-by.



BEKOL 2B SID RWY 25L

CLIMB REQUIREMENT
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Cross PRAWN at 5 000 ft or below. Cross BEKOL at 4 800 m or above.

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: Base map update, Runway 07C/25C closed, Tai Mo Shan elevation.

AD 2-VHHH-SID-BEKOL-B_V01_220628zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

TABULAR DESCRIPTION: BEKOL 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	PRAWN	Y	254 (251)	+3.0	5.0	-	-5000	+205	RNP 1
02	DF	RUMSY	-	-	+3.0	11.1	L	-	@230	RNP 1
03	TF	TUNNA	-	156 (153)	+3.0	19.6	L	-	-	RNP 1
04	TF	SAMON	-	066 (063)	+3.0	15.3	L	-	-	RNP 1
05	TF	BEKOL	-	357 (354)	+3.0	38.3	L	+4800m	-	RNP 1

WAYPOINT LIST

BEKOL 2B RWY 25L

Waypoint Identifier	Coordinates (WGS-84)	
PRAWN	22 16 05.40N	113 48 40.10E
RUMSY	22 04 56.94N	113 48 16.79E
TUNNA	21 47 25.00N	113 57 54.00E
SAMON	21 54 23.73N	114 12 32.95E
BEKOL	22 32 36.00N	114 08 00.00E

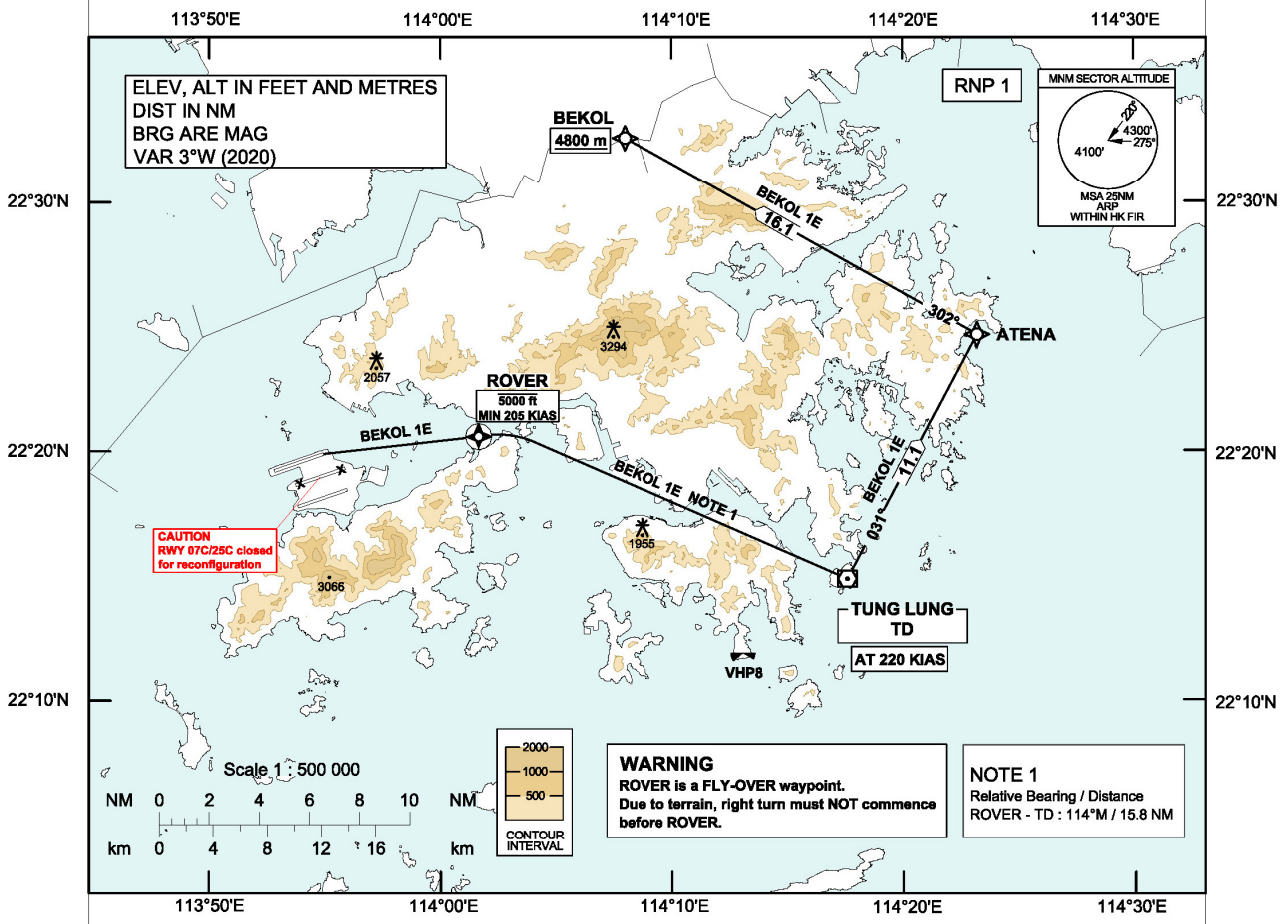
STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

Transition Altitude 9 000 ft

Hong Kong Tower	118.7
Hong Kong Departure	123.8

HONG KONG / Intl (VHHH)
RNAV (GNSS) BEKOL 1E SID RWY 07L

1. For RNAV (GNSS) SID, 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 after departure, 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. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.
4. ROVER is a **FLY-OVER** waypoint. All other waypoints are fly-by.
5. (DER) - Departure End of Runway.



BEKOL 1E SID RWY 07L

CLIMB REQUIREMENT
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Cross ROVER at 5 000 ft or below. Cross BEKOL at 4 800 m or above.

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 TD DVOR.

CHANGE: Runway 07C/25C closed.

AD 2-VHHH-SID-BEKOL-E_V03_220628zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

TABULAR DESCRIPTION: BEKOL 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	RW07L (DER)	Y	074 (071)	+3.0	-	-	-	-	RNP 1
02	FA	RW07L (DER)	-	074 (071)	+3.0	-	-	+430	-	RNP 1
03	DF	ROVER	Y	-	+3.0	-	R	-5000	+205	RNP 1
04	DF	TD	-	-	+3.0	-	R	-	@220	RNP 1
05	TF	ATENA	-	031 (028)	+3.0	11.1	L	-	-	RNP 1
06	TF	BEKOL	-	302 (299)	+3.0	16.1	L	+4800m	-	RNP 1

WAYPOINT LIST

BEKOL 1E RWY 07L		
Waypoint Identifier	**Coordinates (WGS-84)**	
RW07L (DER)	22 19 56.94N	113 54 57.97E
ROVER	22 20 35.58N	114 01 39.12E
TD	22 14 52.42N	114 17 35.30E
ATENA	22 24 39.85N	114 23 11.88E
BEKOL	22 32 36.00N	114 08 00.00E

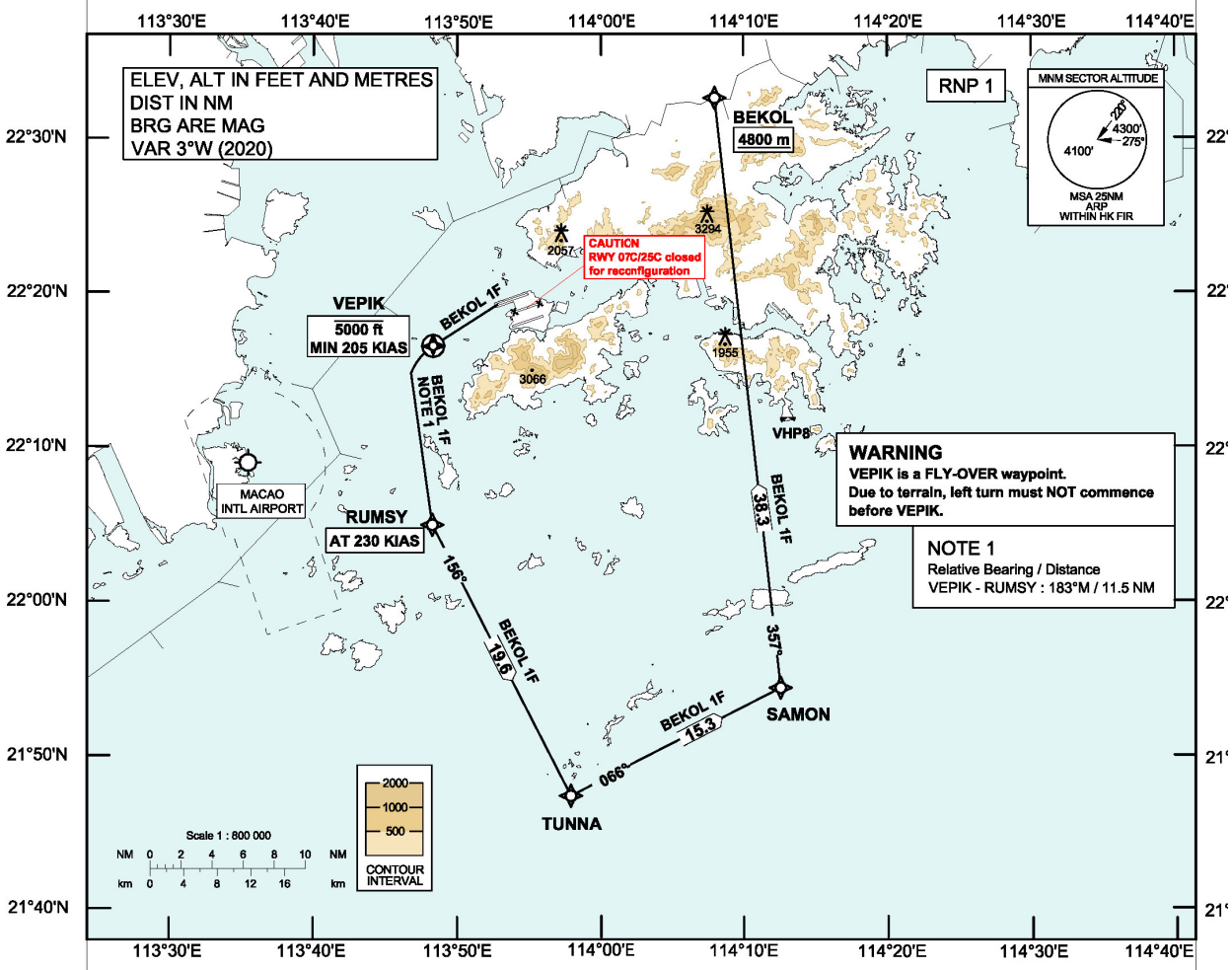
STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

Transition Altitude 9 000 ft

Hong Kong Tower	118.7
Hong Kong Departure	123.8

HONG KONG / Intl (VHHH)
RNAV (GNSS) BEKOL 1F SID RWY 25R

1. For RNAV (GNSS) SID, 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 after departure, 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. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.
4. VEPIK is a **FLY-OVER** waypoint. All other waypoints are fly-by.
5. (DER) - Departure End of Runway.



BEKOL 1F SID RWY 25R

CLIMB REQUIREMENT
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Cross VEPIK at 5 000 ft or below. Cross BEKOL at 4 800 m or above.

TERRAIN CLEARANCE
Minimum climb gradient of 3.3% (201 ft/NM).

SPEED RESTRICTION
Speed restriction of 205 KIAS or greater at VEPIK and 230 KIAS until RUMSY.

CHANGE: Runway 07C/25C closed.

AD 2-VHHH-SID-BEKOL-F_V03_220628zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

TABULAR DESCRIPTION: BEKOL 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	RW25R (DER)	Y	254 (251)	+3.0	-	-	-	-	RNP 1
02	FA	RW25R (DER)	-	254 (251)	+3.0	-	-	+430	-	RNP 1
03	DF	VEPIK	Y	-	+3.0	-	L	-5000	+205	RNP 1
04	DF	RUMSY	-	-	+3.0	-	L	-	@230	RNP 1
05	TF	TUNNA	-	156 (153)	+3.0	19.6	L	-	-	RNP 1
06	TF	SAMON	-	066 (063)	+3.0	15.3	L	-	-	RNP 1
07	TF	BEKOL	-	357 (354)	+3.0	38.3	L	+4800m	-	RNP 1

WAYPOINT LIST

BEKOL 1F RWY 25R

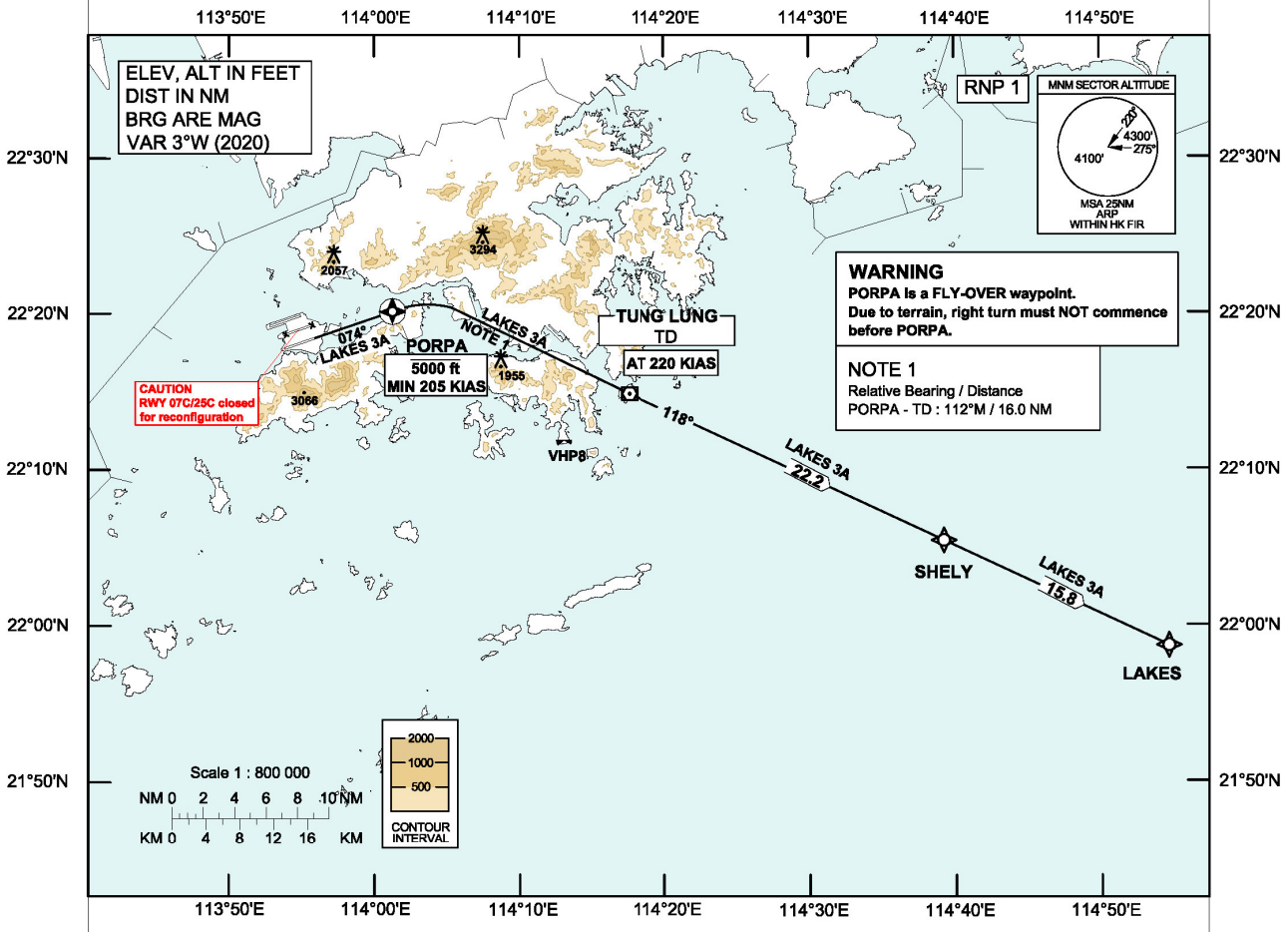
Waypoint Identifier	Coordinates (WGS-84)	
RW25R (DER)	22 19 17.08N	113 52 54.28E
VEPIK	22 16 31.34N	113 48 20.17E
RUMSY	22 04 56.94N	113 48 16.79E
TUNNA	21 47 25.00N	113 57 54.00E
SAMON	21 54 23.73N	114 12 32.95E
BEKOL	22 32 36.00N	114 08 00.00E

STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

Transition Altitude 9 000 ft	
Hong Kong Tower	118.4
Hong Kong Departure	123.8

HONG KONG / Intl (VHHH)
RNAV (GNSS) LAKES 3A SID RWY 07R

1. For RNAV (GNSS) SID, 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 after departure, 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. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.
4. PORPA is a **FLY-OVER** waypoint. All other waypoints are fly-by.



LAKES 3A SID RWY 07R

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 1 400 ft is required.

SPEED RESTRICTION
Speed restriction of 205 KIAS or greater at PORPA and 220 KIAS until TD DVOR.

CHANGE: Base map update, Runway 07C/25C closed, Tai Mo Shan elevation.

AD 2-VHHH-SID-LAKES-A_V01_220629zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

TABULAR DESCRIPTION: LAKES 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	PORPA	Y	074 (071)	+3.0	5.0	-	-5000	+205	RNP 1
02	DF	TD	-	-	+3.0	16.0	R	-	@220	RNP 1
03	TF	SHELY	-	118 (115)	+3.0	22.2	R	-	-	RNP 1
04	TF	LAKES	-	118 (115)	+3.0	15.8	-	-	-	RNP 1

WAYPOINT LIST

LAKES 3A RWY 07R

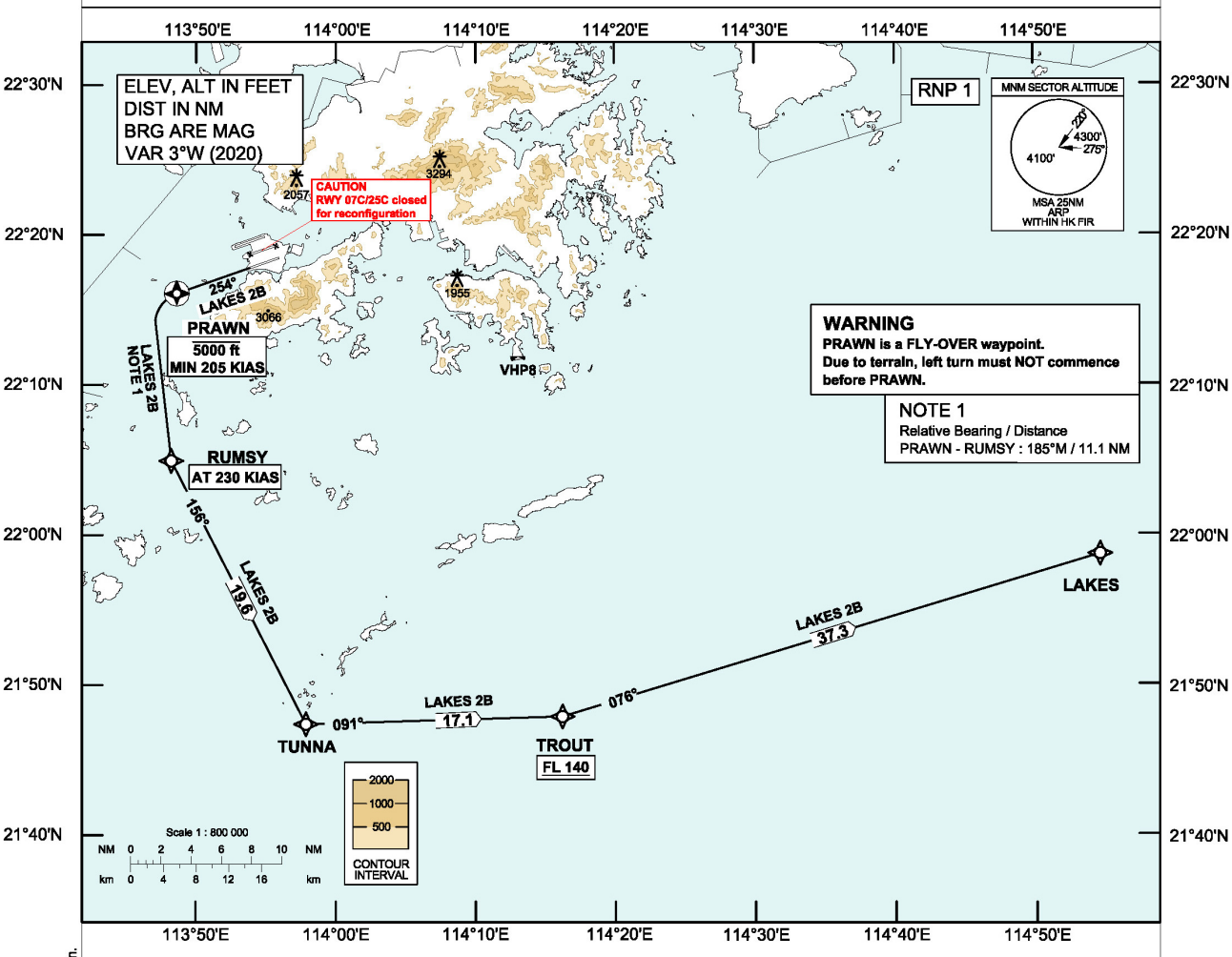
Waypoint Identifier	Coordinates (WGS-84)	
PORPA	22 20 09.10N	114 01 16.30E
TD	22 14 52.42N	114 17 35.30E
SHELY	22 05 26.65N	114 39 13.94E
LAKES	21 58 41.30N	114 54 38.60E

STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

Transition Altitude 9 000 ft	
Hong Kong Tower	118.4
Hong Kong Departure	123.8

HONG KONG / Intl (VHHH)
RNAV (GNSS) LAKES 2B SID RWY 25L

1. For RNAV (GNSS) SID, 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 after departure, 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. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.
4. PRAWN is a **FLY-OVER** waypoint. All other waypoints are fly-by.



LAKES 2B SID RWY 25L

CLIMB REQUIREMENT
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Cross PRAWN at 5 000 ft or below. Cross TROUT at FL140 or above.

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: Base map update, Runway 07C/25C closed, Tai Mo Shan elevation.

AD 2-VHHH-SID-LAKES-B_V01_220629zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

TABULAR DESCRIPTION: LAKES 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	PRAWN	Y	254 (251)	+3.0	5.0	-	-5000	+205	RNP 1
02	DF	RUMSY	-	-	+3.0	11.1	L	-	@230	RNP 1
03	TF	TUNNA	-	156 (153)	+3.0	19.6	L	-	-	RNP 1
04	TF	TROUT	-	091 (088)	+3.0	17.1	L	+FL140	-	RNP 1
05	TF	LAKES	-	076 (073)	+3.0	37.3	L	-	-	RNP 1

WAYPOINT LIST

LAKES 2B RWY 25L

Waypoint Identifier	Coordinates (WGS-84)	
PRAWN	22 16 05.40N	113 48 40.10E
RUMSY	22 04 56.94N	113 48 16.79E
TUNNA	21 47 25.00N	113 57 54.00E
TROUT	21 47 54.87N	114 16 12.74E
LAKES	21 58 41.30N	114 54 38.60E

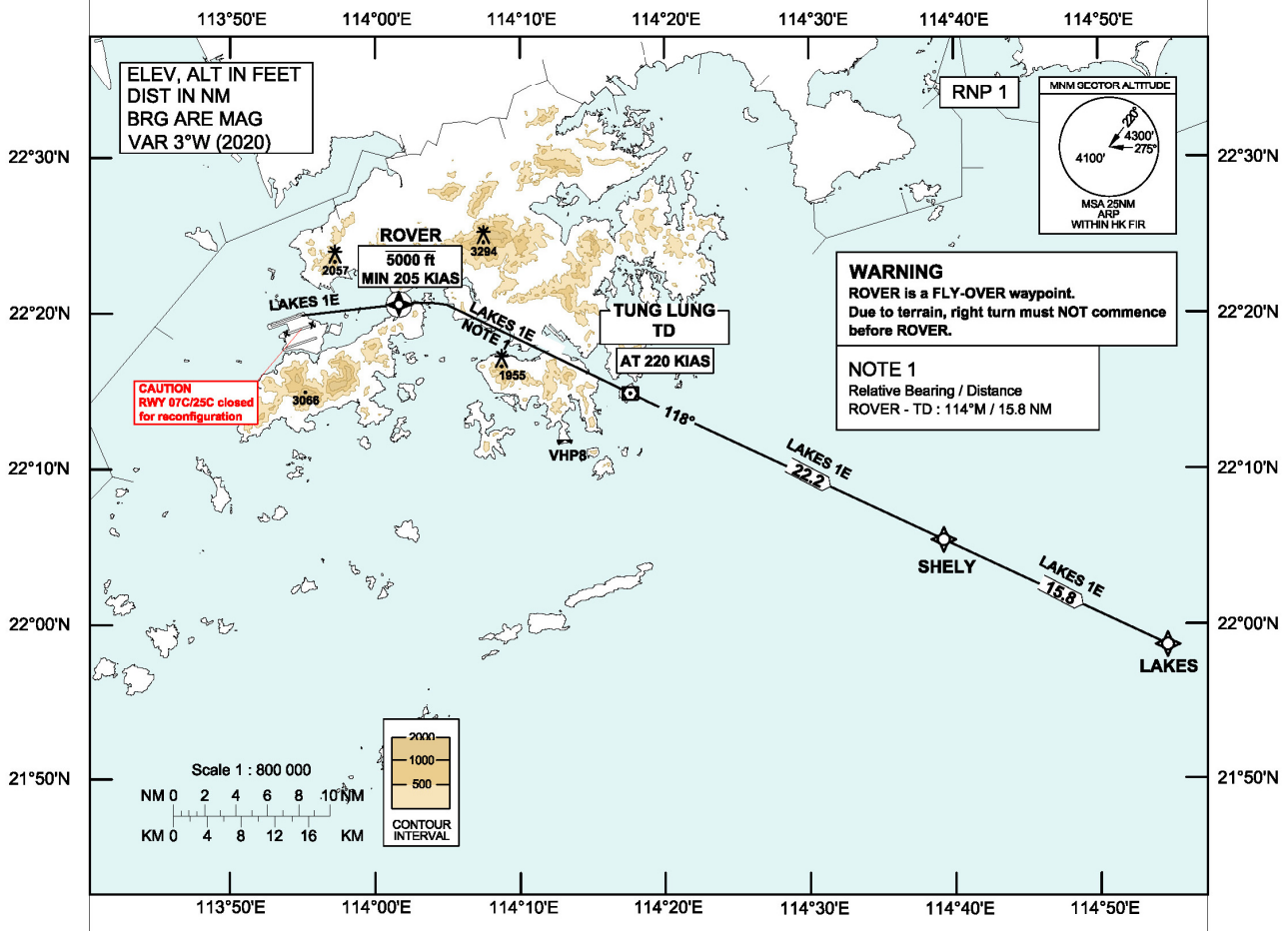
STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

Transition Altitude 9 000 ft

Hong Kong Tower	118.7
Hong Kong Departure	123.8

HONG KONG / Intl (VHHH)
RNAV (GNSS) LAKES 1E SID RWY 07L

1. For RNAV (GNSS) SID, 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 after departure, 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. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.
4. ROVER is a **FLY-OVER** waypoint. All other waypoints are fly-by.
5. (DER) - Departure End of Runway.



LAKES 1E SID RWY 07L

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 TD DVOR.

CHANGE: Runway 07C/25C closed.

AD 2-VHHH-SID-LAKES-E_V03_220628zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

TABULAR DESCRIPTION: LAKES 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	RW07L (DER)	Y	074 (071)	+3.0	-	-	-	-	RNP 1
02	FA	RW07L (DER)	-	074 (071)	+3.0	-	-	+430	-	RNP 1
03	DF	ROVER	Y	-	+3.0	-	R	-5000	+205	RNP 1
04	DF	TD	-	-	+3.0	-	R	-	@220	RNP 1
05	TF	SHELY	-	118 (115)	+3.0	22.2	-	-	-	RNP 1
06	TF	LAKES	-	118 (115)	+3.0	15.8	-	-	-	RNP 1

WAYPOINT LIST

LAKES 1E RWY 07L

Waypoint Identifier	Coordinates (WGS-84)	
RW07L (DER)	22 19 56.94N	113 54 57.97E
ROVER	22 20 35.58N	114 01 39.12E
TD	22 14 52.42N	114 17 35.30E
SHELY	22 05 26.65N	114 39 13.94E
LAKES	21 58 41.30N	114 54 38.60E

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) LAKES 1F SID RWY 25R

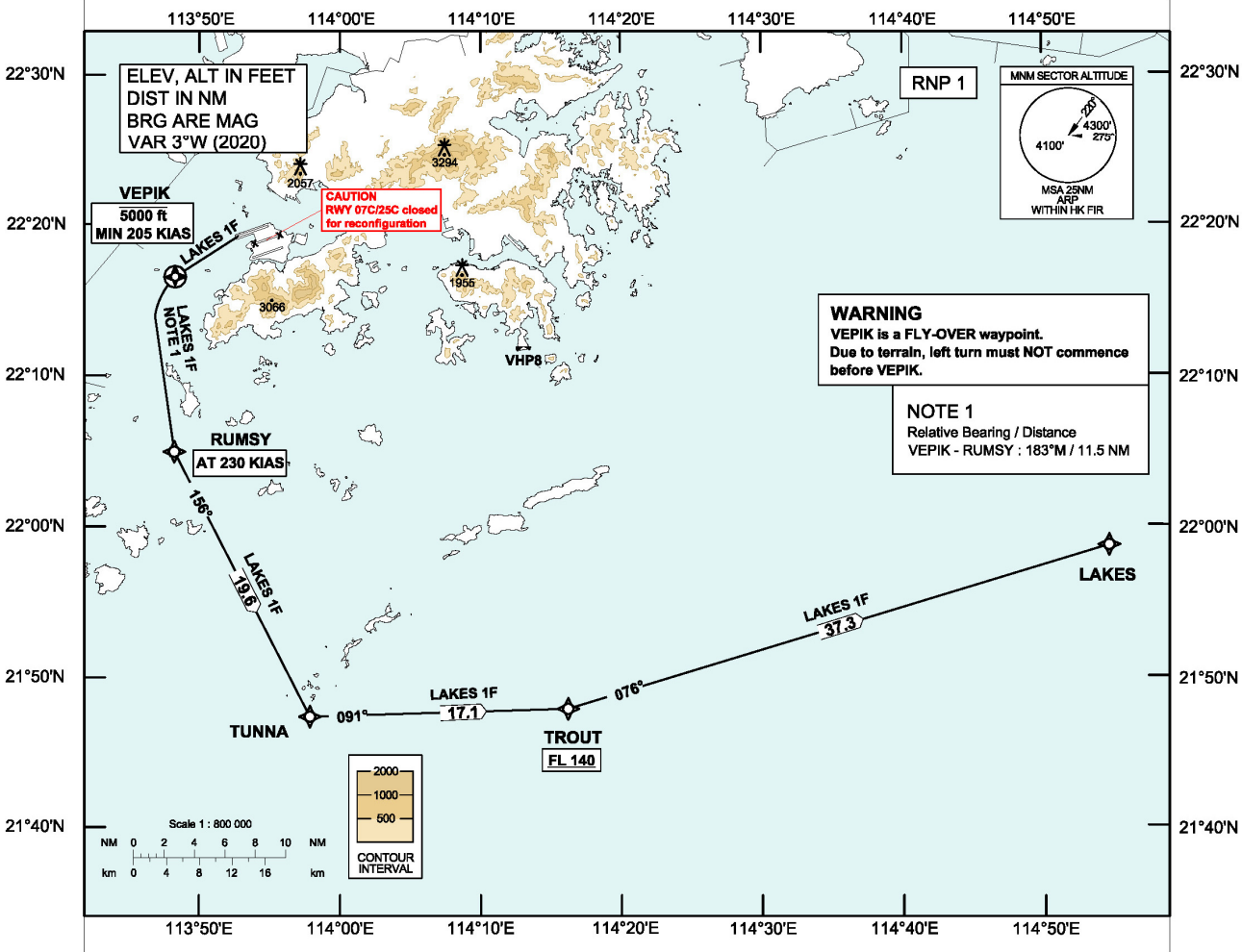
1. For RNAV (GNSS) SID, aircraft must be approved by State of Registry in accordance with ICAO RNP 1 standard or equivalent (see GEN 1.5 para 3.5.3). Carriage of certified GNSS receiver is mandatory.

2. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, 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. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.

4. VEPIK is a **FLY-OVER** waypoint. All other waypoints are fly-by.

5. (DER) - Departure End of Runway.



LAKES 1F SID RWY 25R

CLIMB REQUIREMENT
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Cross VEPIK at 5 000 ft or below. Cross TROUT at FL140 or above.

TERRAIN CLEARANCE
Minimum climb gradient of 3.3% (201 ft/NM).

SPEED RESTRICTION
Speed restriction of 205 KIAS or greater at VEPIK and 230 KIAS until RUMSY.

CHANGE: Runway 07C/25C closed.

AD 2-VHHH-SID-LAKES-F V03 220628zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

TABULAR DESCRIPTION: LAKES 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	RW25R (DER)	Y	254 (251)	+3.0	-	-	-	-	RNP 1
02	FA	RW25R (DER)	-	254 (251)	+3.0	-	-	+430	-	RNP 1
03	DF	VEPIK	Y	-	+3.0	-	L	-5000	+205	RNP 1
04	DF	RUMSY	-	-	+3.0	-	L	-	@230	RNP 1
05	TF	TUNNA	-	156 (153)	+3.0	19.6	L	-	-	RNP 1
06	TF	TROUT	-	091 (088)	+3.0	17.1	L	+FL140	-	RNP 1
07	TF	LAKES	-	076 (073)	+3.0	37.3	L	-	-	RNP 1

WAYPOINT LIST

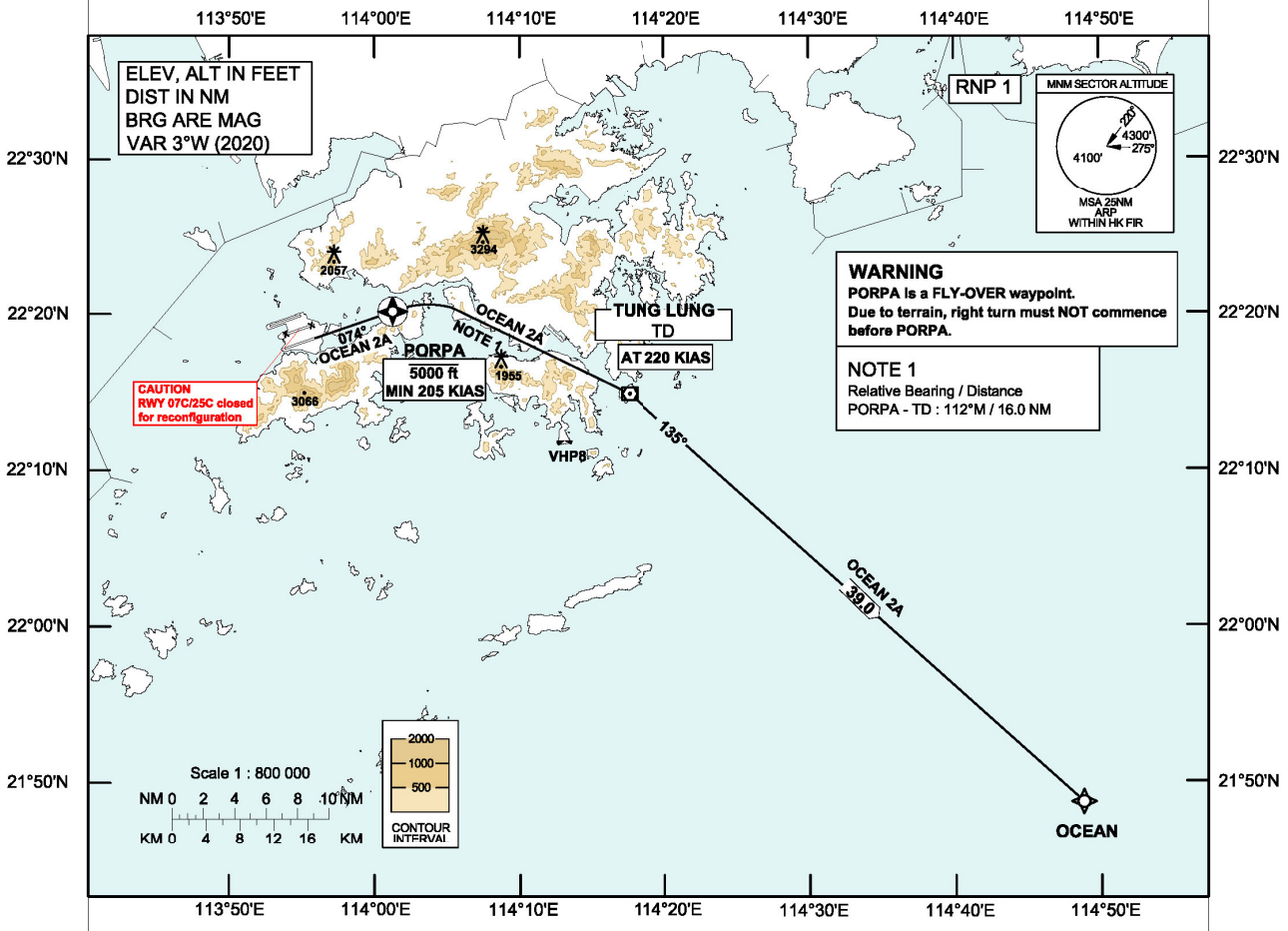
LAKES 1F RWY 25R		
Waypoint Identifier	**Coordinates (WGS-84)**	
RW25R (DER)	22 19 17.08N	113 52 54.28E
VEPIK	22 16 31.34N	113 48 20.17E
RUMSY	22 04 56.94N	113 48 16.79E
TUNNA	21 47 25.00N	113 57 54.00E
TROUT	21 47 54.87N	114 16 12.74E
LAKES	21 58 41.30N	114 54 38.60E

STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

Transition Altitude 9 000 ft	
Hong Kong Tower	118.4
Hong Kong Departure	123.8

HONG KONG / Intl (VHHH)
RNAV (GNSS) OCEAN 2A SID RWY 07R

1. For RNAV (GNSS) SID, 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 after departure, 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. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.
4. PORPA is a **FLY-OVER** waypoint. All other waypoints are fly-by.



OCEAN 2A SID RWY 07R

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 1 400 ft is required.

SPEED RESTRICTION
Speed restriction of 205 KIAS or greater at PORPA and 220 KIAS until TD DVOR.

CHANGE: Base map update, Runway 07C/25C closed, Tai Mo Shan elevation.

AD 2-VHHH-SID-OCEAN-A_V01_220629zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

TABULAR DESCRIPTION: OCEAN 2A 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	PORPA	Y	074 (071)	+3.0	5.0	-	-5000	+205	RNP 1
02	DF	TD	-	-	+3.0	16.0	R	-	@220	RNP 1
03	TF	OCEAN	-	135 (132)	+3.0	39.0	R	-	-	RNP 1

WAYPOINT LIST

OCEAN 2A RWY 07R

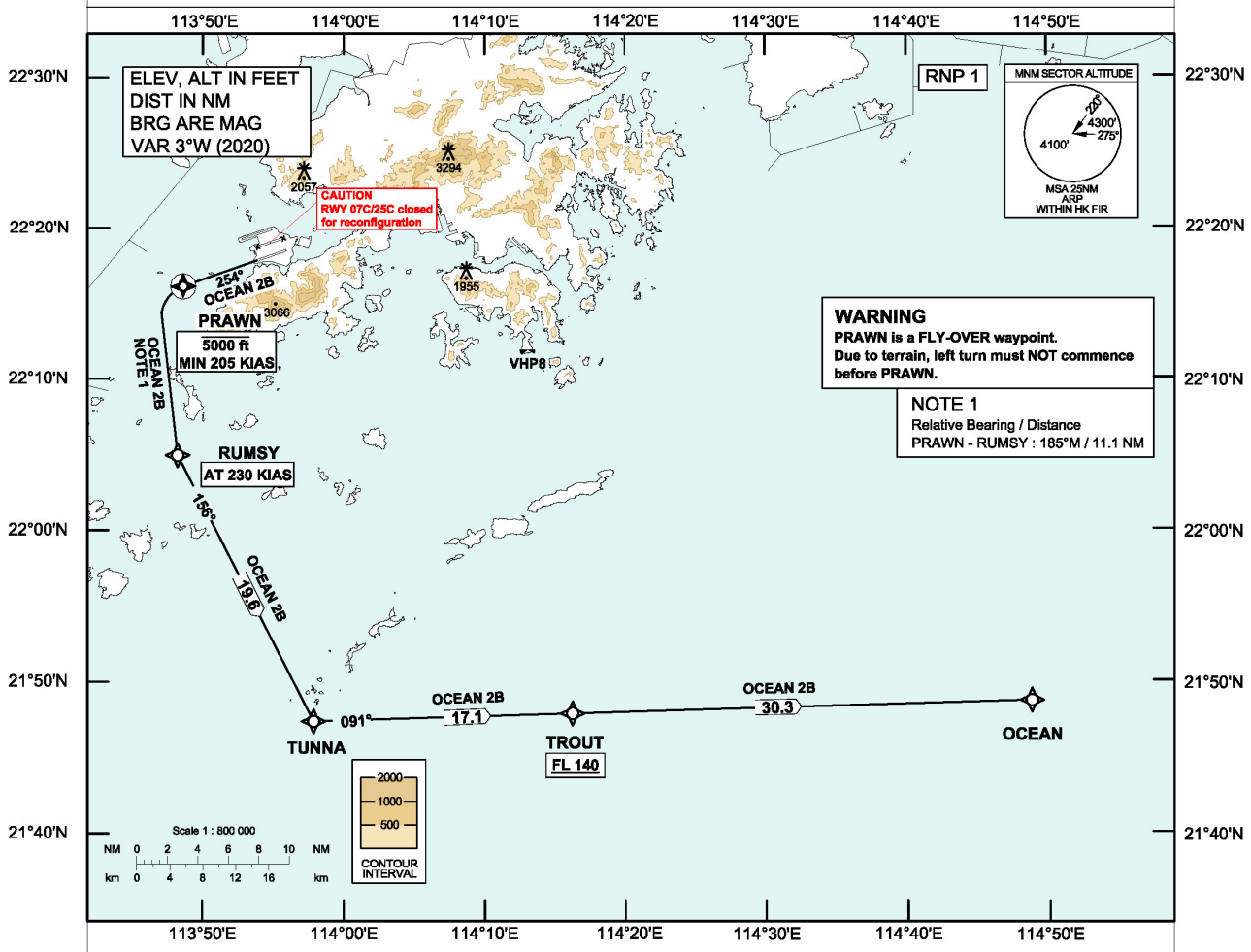
Waypoint Identifier	Coordinates (WGS-84)	
PORPA	22 20 09.10N	114 01 16.30E
TD	22 14 52.42N	114 17 35.30E
OCEAN	21 48 43.00N	114 48 48.00E

STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

Transition Altitude 9 000 ft	
Hong Kong Tower	118.4
Hong Kong Departure	123.8

HONG KONG / Intl (VHHH)
RNAV (GNSS) OCEAN 2B SID RWY 25L

1. For RNAV (GNSS) SID, 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 after departure, 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. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.
4. PRAWN is a **FLY-OVER** waypoint. All other waypoints are fly-by.



OCEAN 2B SID RWY 25L

CLIMB REQUIREMENT
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Cross PRAWN at 5 000 ft or below. Cross TROUT at FL140 or above.

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: Base map update, Runway 07C/25C closed, Tai Mo Shan elevation.

AD 2-VHHH-SID-OCEAN-B_V01_220629zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

TABULAR DESCRIPTION: OCEAN 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	PRAWN	Y	254 (251)	+3.0	5.0	-	-5000	+205	RNP 1
02	DF	RUMSY	-	-	+3.0	11.1	L	-	@230	RNP 1
03	TF	TUNNA	-	156 (153)	+3.0	19.6	L	-	-	RNP 1
04	TF	TROUT	-	091 (088)	+3.0	17.1	L	+FL140	-	RNP 1
05	TF	OCEAN	-	091 (088)	+3.0	30.3	-	-	-	RNP 1

WAYPOINT LIST

OCEAN 2B RWY 25L

Waypoint Identifier	Coordinates (WGS-84)	
PRAWN	22 16 05.40N	113 48 40.10E
RUMSY	22 04 56.94N	113 48 16.79E
TUNNA	21 47 25.00N	113 57 54.00E
TROUT	21 47 54.87N	114 16 12.74E
OCEAN	21 48 43.00N	114 48 48.00E

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) OCEAN 1E SID RWY 07L

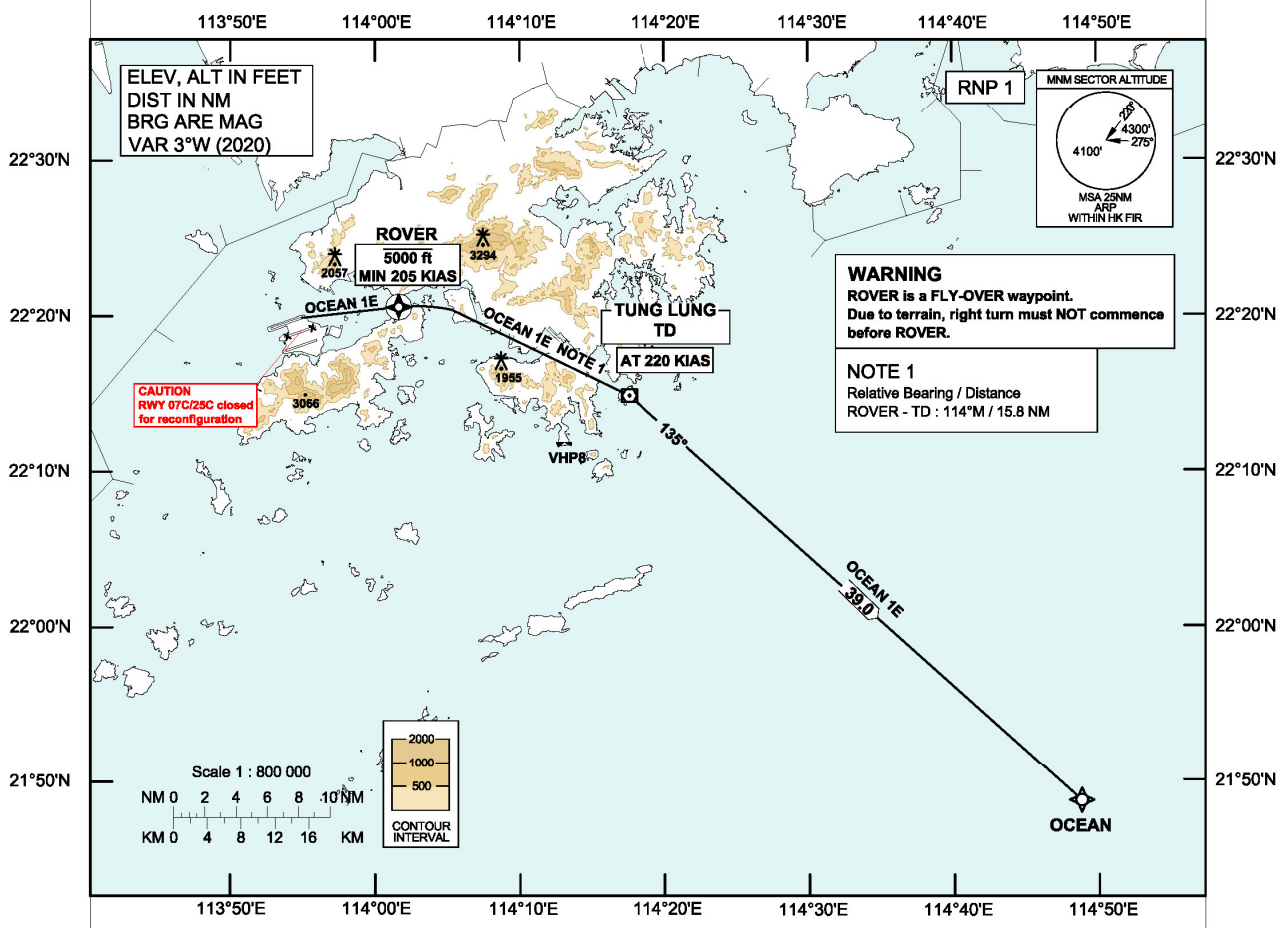
1. For RNAV (GNSS) SID, aircraft must be approved by State of Registry in accordance with ICAO RNP 1 standard or equivalent (see GEN 1.5 para 3.5.3). Carriage of certified GNSS receiver is mandatory.

2. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, 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. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.

4. ROVER is a **FLY-OVER** waypoint. All other waypoints are fly-by.

5. (DER) - Departure End of Runway.



OCEAN 1E SID RWY 07L

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 TD DVOR.

CHANGE: Runway 07C/25C closed.

AD 2-VHHH-SID-OCEAN-E_V03_220628zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

TABULAR DESCRIPTION: OCEAN 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	RW07L (DER)	Y	074 (071)	+3.0	-	-	-	-	RNP 1
02	FA	RW07L (DER)	-	074 (071)	+3.0	-	-	+430	-	RNP 1
03	DF	ROVER	Y	-	+3.0	-	R	-5000	+205	RNP 1
04	DF	TD	-	-	+3.0	-	R	-	@220	RNP 1
05	TF	OCEAN	-	135 (132)	+3.0	39.0	R	-	-	RNP 1

WAYPOINT LIST

OCEAN 1E RWY 07L

Waypoint Identifier	Coordinates (WGS-84)	
RW07L (DER)	22 19 56.94N	113 54 57.97E
ROVER	22 20 35.58N	114 01 39.12E
TD	22 14 52.42N	114 17 35.30E
OCEAN	21 48 43.00N	114 48 48.00E

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) OCEAN 1F SID RWY 25R

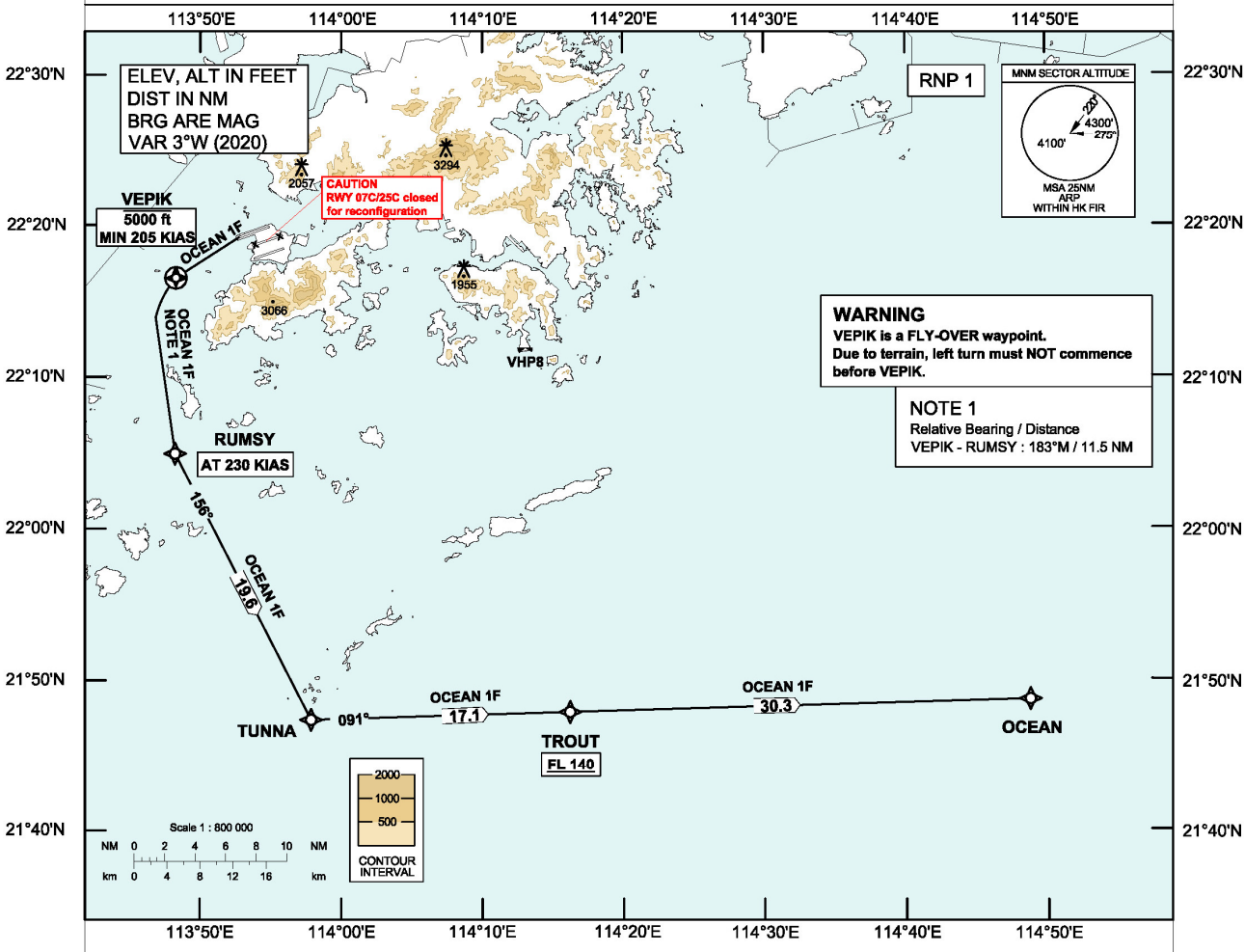
1. For RNAV (GNSS) SID, aircraft must be approved by State of Registry in accordance with ICAO RNP 1 standard or equivalent (see GEN 1.5 para 3.5.3). Carriage of certified GNSS receiver is mandatory.

2. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, 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. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.

4. VEPIK is a **FLY-OVER** waypoint. All other waypoints are fly-by.

5. (DER) - Departure End of Runway.



OCEAN 1F SID RWY 25R

CLIMB REQUIREMENT
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Cross VEPIK at 5 000 ft or below. Cross TROUT at FL140 or above.

TERRAIN CLEARANCE
Minimum climb gradient of 3.3% (201 ft/NM).

SPEED RESTRICTION
Speed restriction of 205 KIAS or greater at VEPIK and 230 KIAS until RUMSY.

CHANGE: Runway 07C/25C closed.

AD 2-VHHH-SID-OCEAN-F_V03_220628zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

TABULAR DESCRIPTION: OCEAN 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	RW25R (DER)	Y	254 (251)	+3.0	-	-	-	-	RNP 1
02	FA	RW25R (DER)	-	254 (251)	+3.0	-	-	+430	-	RNP 1
03	DF	VEPIK	Y	-	+3.0	-	L	-5000	+205	RNP 1
04	DF	RUMSY	-	-	+3.0	-	L	-	@230	RNP 1
05	TF	TUNNA	-	156 (153)	+3.0	19.6	L	-	-	RNP 1
06	TF	TROUT	-	091 (088)	+3.0	17.1	L	+FL140	-	RNP 1
07	TF	OCEAN	-	091 (088)	+3.0	30.3	-	-	-	RNP 1

WAYPOINT LIST

OCEAN 1F RWY 25R

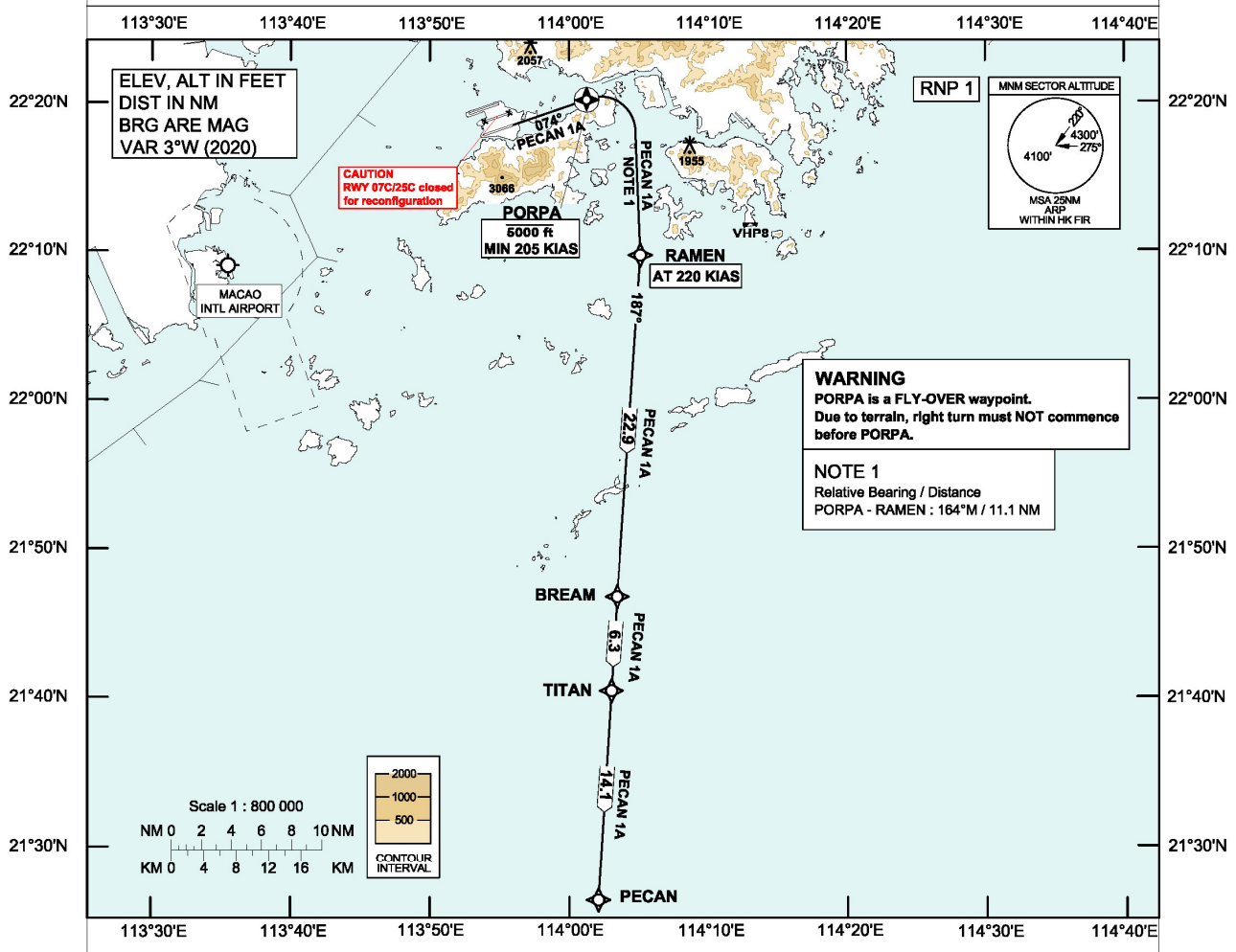
Waypoint Identifier	Coordinates (WGS-84)	
RW25R (DER)	22 19 17.08N	113 52 54.28E
VEPIK	22 16 31.34N	113 48 20.17E
RUMSY	22 04 56.94N	113 48 16.79E
TUNNA	21 47 25.00N	113 57 54.00E
TROUT	21 47 54.87N	114 16 12.74E
OCEAN	21 48 43.00N	114 48 48.00E

STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

Transition Altitude 9 000 ft	
Hong Kong Tower	118.4
Hong Kong Departure	123.8

HONG KONG / Intl (VHHH)
RNAV (GNSS) PECAN 1A SID RWY 07R

1. For RNAV (GNSS) SID, 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 after departure, 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. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.
4. PORPA is a **FLY-OVER** waypoint. All other waypoints are fly-by.



PECAN 1A SID RWY 07R

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 1 400 ft is required.

SPEED RESTRICTION
Speed restriction of 205 KIAS or greater at PORPA and 220 KIAS until RAMEN.

CHANGE: Base map update, Runway 07C/25C closed.

AD 2-VHHH-SID-PECAN-A_V01_220629zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

TABULAR DESCRIPTION: PECAN 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	PORPA	Y	074 (071)	+3.0	5.0	-	-5000	+205	RNP 1
02	DF	RAMEN	-	-	+3.0	11.1	R	-	@220	RNP 1
03	TF	BREAM	-	187 (184)	+3.0	22.9	R	-	-	RNP 1
04	TF	TITAN	-	187 (184)	+3.0	6.3	-	-	-	RNP 1
05	TF	PECAN	-	187 (184)	+3.0	14.1	-	-	-	RNP 1

WAYPOINT LIST

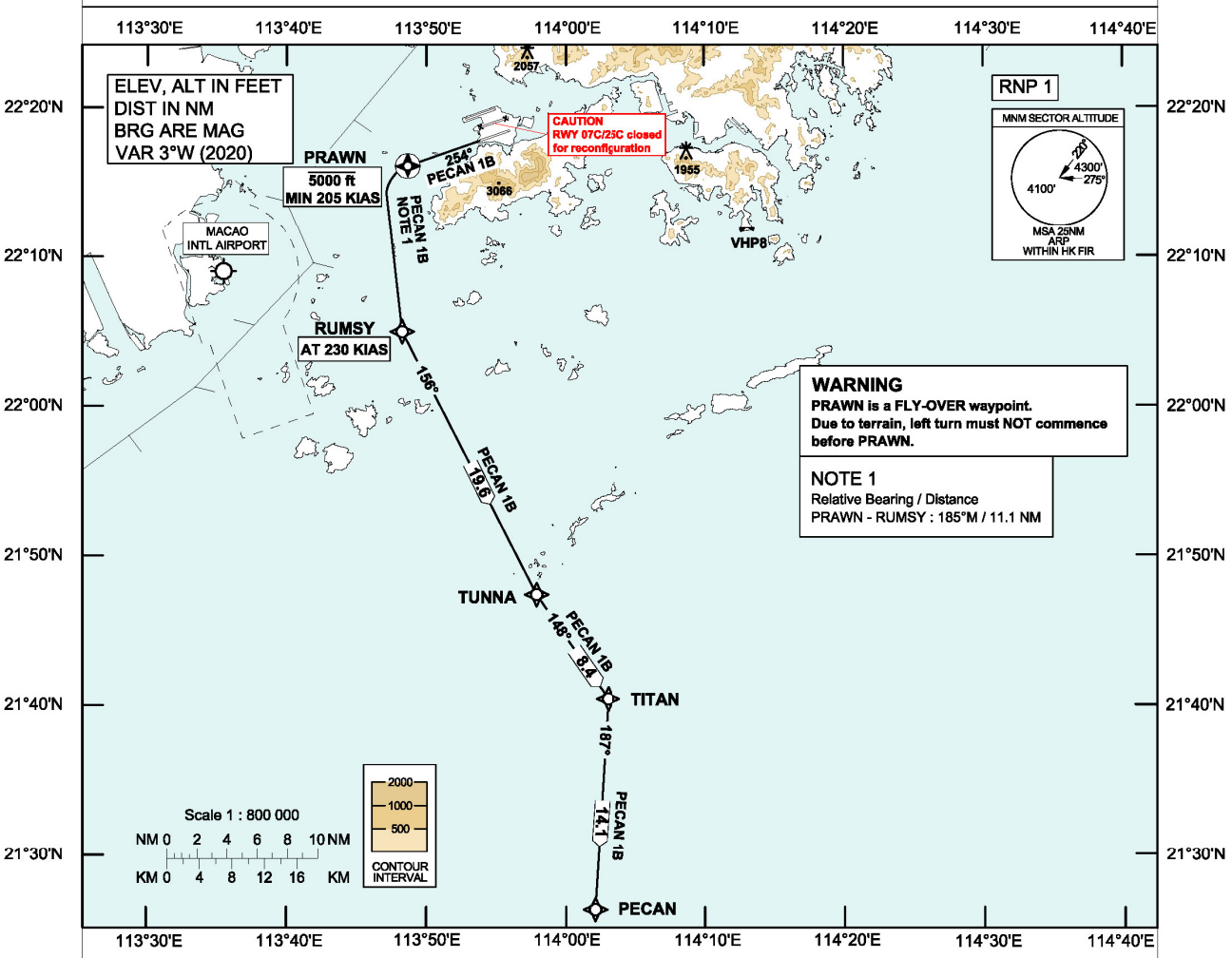
PECAN 1A RWY 07R		
Waypoint Identifier	**Coordinates (WGS-84)**	
PORPA	22 20 09.10N	114 01 16.30E
RAMEN	22 09 39.22N	114 05 09.89E
BREAM	21 46 46.00N	114 03 28.00E
TITAN	21 40 27.40N	114 03 02.52E
PECAN	21 26 20.19N	114 02 05.64E

STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

Transition Altitude 9 000 ft	
Hong Kong Tower	118.4
Hong Kong Departure	123.8

HONG KONG / Intl (VHHH)
RNAV (GNSS) PECAN 1B SID RWY 25L

1. For RNAV (GNSS) SID, 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 after departure, 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. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.
4. PRAWN is a **FLY-OVER** waypoint. All other waypoints are fly-by.



PECAN 1B SID RWY 25L

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: Base map update, Runway 07C/25C closed.

AD 2-VHHH-SID-PECAN-B_V01_220629zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

TABULAR DESCRIPTION: PECAN 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	PRAWN	Y	254 (251)	+3.0	5.0	-	-5000	+205	RNP 1
02	DF	RUMSY	-	-	+3.0	11.1	L	-	@230	RNP 1
03	TF	TUNNA	-	156 (153)	+3.0	19.6	L	-	-	RNP 1
04	TF	TITAN	-	148 (145)	+3.0	8.4	L	-	-	RNP 1
05	TF	PECAN	-	187 (184)	+3.0	14.1	R	-	-	RNP 1

WAYPOINT LIST

PECAN 1B RWY 25L

Waypoint Identifier	Coordinates (WGS-84)	
PRAWN	22 16 05.40N	113 48 40.10E
RUMSY	22 04 56.94N	113 48 16.79E
TUNNA	21 47 25.00N	113 57 54.00E
TITAN	21 40 27.40N	114 03 02.52E
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 1E SID RWY 07L

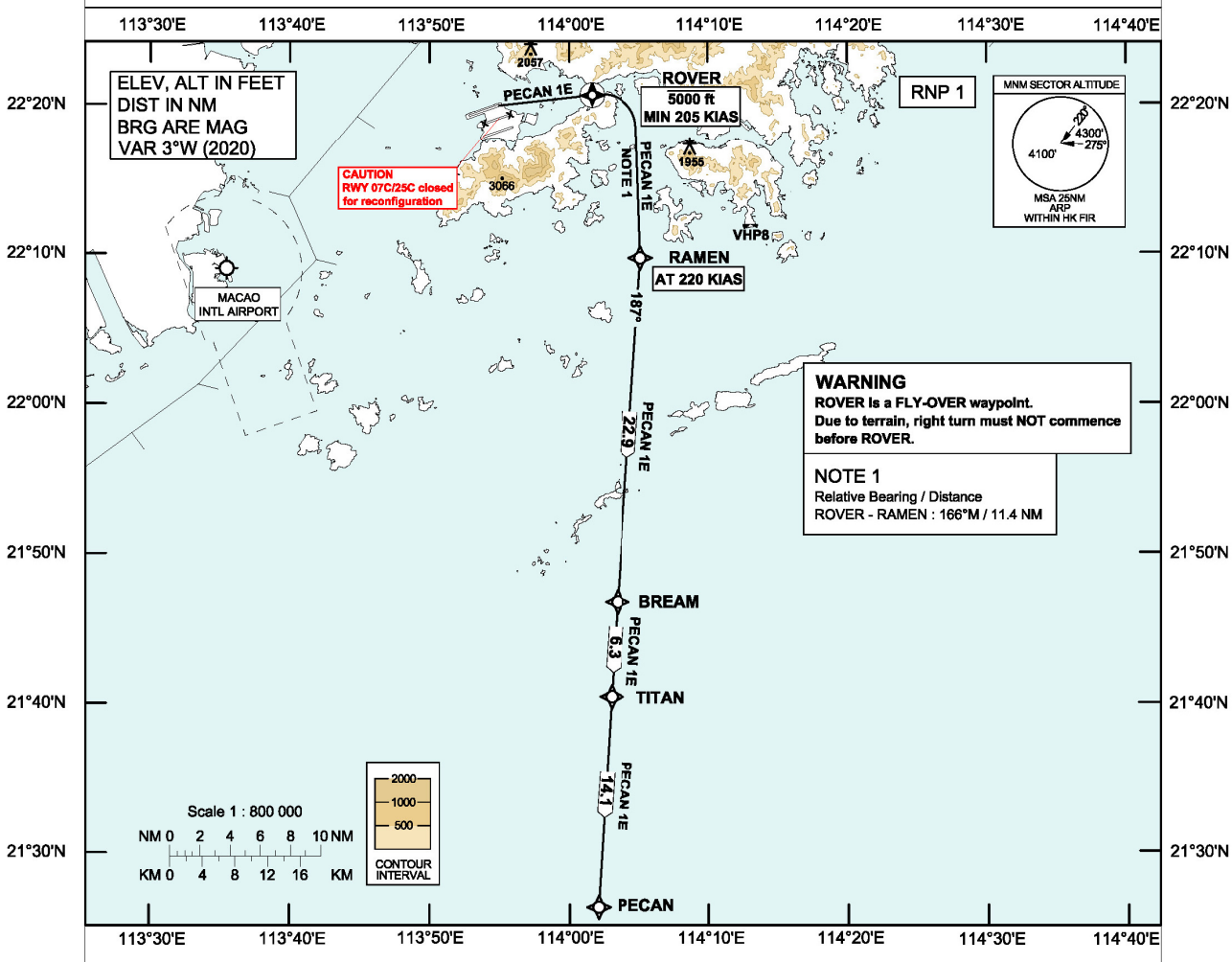
1. For RNAV (GNSS) SID, aircraft must be approved by State of Registry in accordance with ICAO RNP 1 standard or equivalent (see GEN 1.5 para 3.5.3). Carriage of certified GNSS receiver is mandatory.

2. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, 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. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.

4. ROVER is a **FLY-OVER** waypoint. All other waypoints are fly-by.

5. (DER) - Departure End of Runway.



PECAN 1E SID RWY 07L

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 closed.

AD 2-VHHH-SID-PECAN-E_V02_220628zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

TABULAR DESCRIPTION: PECAN 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	RW07L (DER)	Y	074 (071)	+3.0	-	-	-	-	RNP 1
02	FA	RW07L (DER)	-	074 (071)	+3.0	-	-	+430	-	RNP 1
03	DF	ROVER	Y	-	+3.0	-	R	-5000	+205	RNP 1
04	DF	RAMEN	-	-	+3.0	-	R	-	@220	RNP 1
05	TF	BREAM	-	187 (184)	+3.0	22.9	-	-	-	RNP 1
06	TF	TITAN	-	187 (184)	+3.0	6.3	-	-	-	RNP 1
07	TF	PECAN	-	187 (184)	+3.0	14.1	-	-	-	RNP 1

WAYPOINT LIST

PECAN 1E RWY 07L		
Waypoint Identifier	**Coordinates (WGS-84)**	
RW07L (DER)	22 19 56.94N	113 54 57.97E
ROVER	22 20 35.58N	114 01 39.12E
RAMEN	22 09 39.22N	114 05 09.89E
BREAM	21 46 46.00N	114 03 28.00E
TITAN	21 40 27.40N	114 03 02.52E
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 1F SID RWY 25R

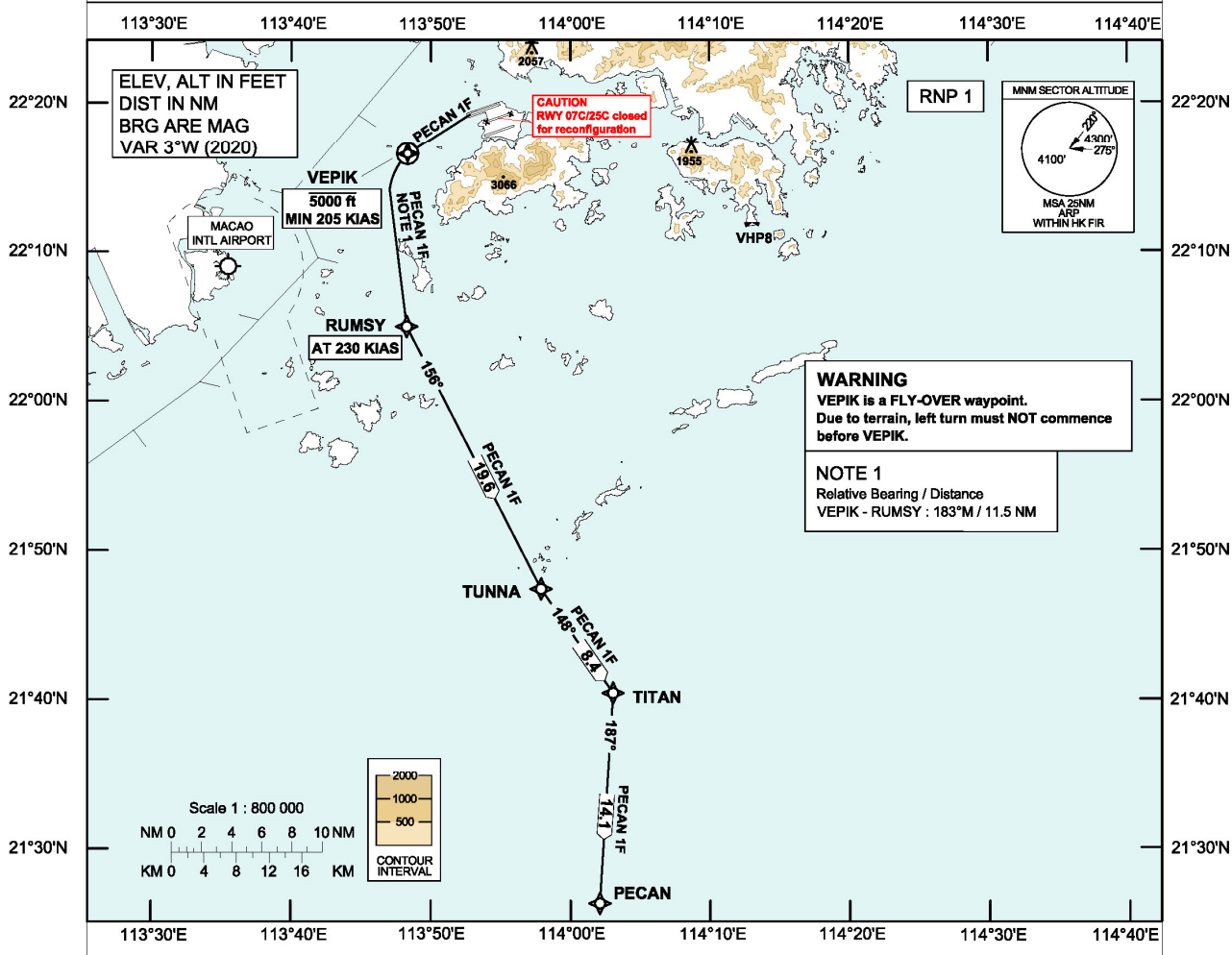
1. For RNAV (GNSS) SID, aircraft must be approved by State of Registry in accordance with ICAO RNP 1 standard or equivalent (see GEN 1.5 para 3.5.3). Carriage of certified GNSS receiver is mandatory.

2. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, 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. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.

4. VEPIK is a **FLY-OVER** waypoint. All other waypoints are fly-by.

5. (DER) - Departure End of Runway.



PECAN 1F SID RWY 25R

CLIMB REQUIREMENT
Initial climb to 5 000 ft. Expect further climb when instructed by ATC. Cross VEPIK 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 VEPIK and 230 KIAS until RUMSY.

CHANGE: Runway 07C/25C closed.

AD 2-VHHH-SID-PECAN-F_V02_220628zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

TABULAR DESCRIPTION: PECAN 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	RW25R (DER)	Y	254 (251)	+3.0	-	-	-	-	RNP 1
02	FA	RW25R (DER)	-	254 (251)	+3.0	-	-	+430	-	RNP 1
03	DF	VEPIK	Y	-	+3.0	-	L	-5000	+205	RNP 1
04	DF	RUMSY	-	-	+3.0	-	L	-	@230	RNP 1
05	TF	TUNNA	-	156 (153)	+3.0	19.6	L	-	-	RNP 1
06	TF	TITAN	-	148 (145)	+3.0	8.4	L	-	-	RNP 1
07	TF	PECAN	-	187 (184)	+3.0	14.1	R	-	-	RNP 1

WAYPOINT LIST

PECAN 1F RWY 25R

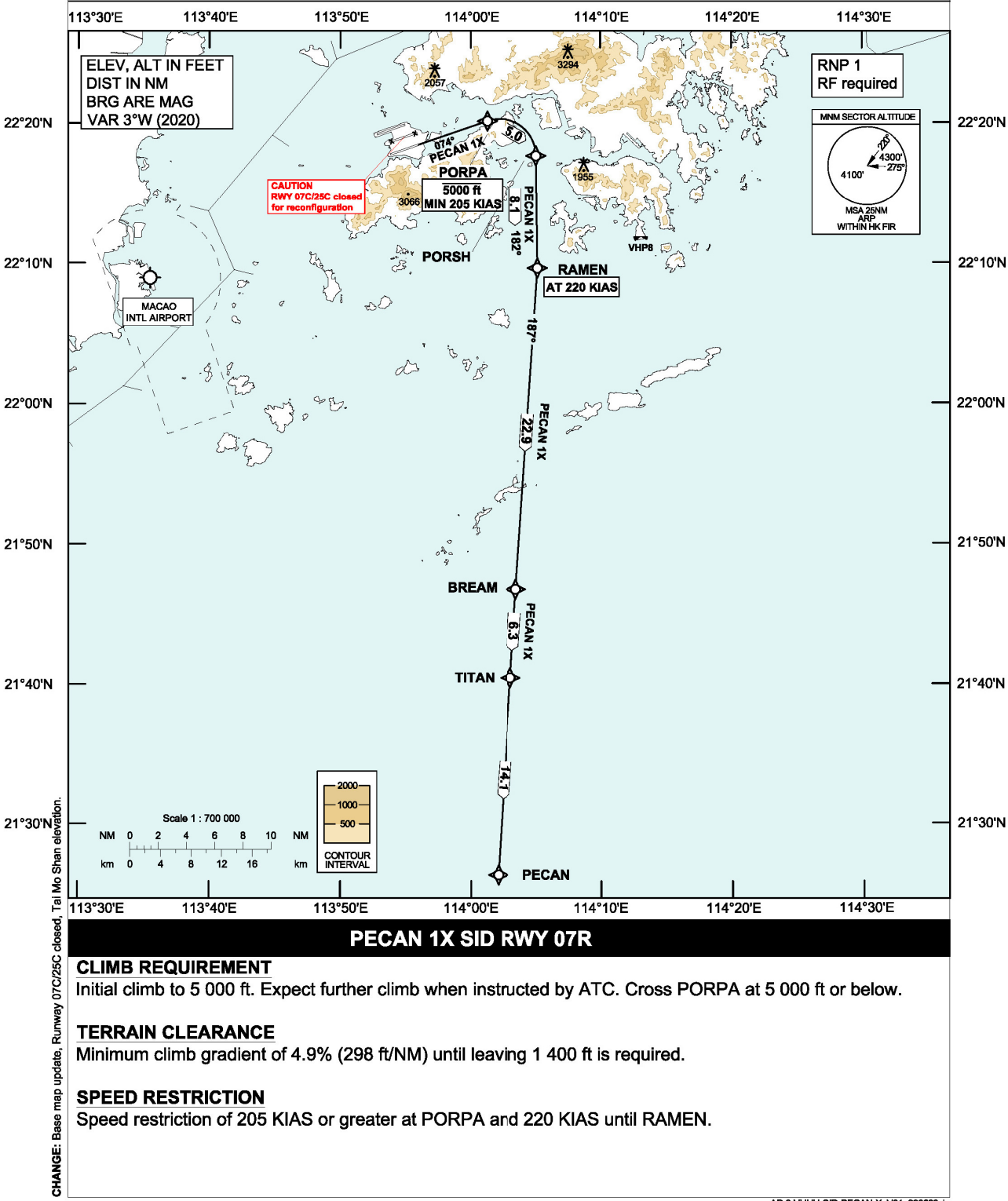
Waypoint Identifier	Coordinates (WGS-84)	
RW25R (DER)	22 19 17.08N	113 52 54.28E
VEPIK	22 16 31.34N	113 48 20.17E
RUMSY	22 04 56.94N	113 48 16.79E
TUNNA	21 47 25.00N	113 57 54.00E
TITAN	21 40 27.40N	114 03 02.52E
PECAN	21 26 20.19N	114 02 05.64E

STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

Transition Altitude 9 000 ft	
Hong Kong Tower	118.4
Hong Kong Departure	123.8

HONG KONG / Intl (VHHH)
RNAV (GNSS) PECAN 1X SID RWY 07R

1. For RNAV (GNSS) SID, 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 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.
3. **Radius-to-fix (RF) leg is required.** Aircraft shall have RF capability as stipulated in the Aircraft Flight Manual or its FMS manual. Aircraft that do not have RF capability shall use RNAV (GNSS) PECAN 1A as detailed in AD-2-VHHH-SID-PECAN-A.
4. **Noise Mitigating SID for use between 1500 - 2300 UTC (see VHHH AD 2.21 para 2.4).**
5. Aircraft with RF capability are encouraged to fly the procedure.



PECAN 1X SID RWY 07R

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 1 400 ft is required.

SPEED RESTRICTION
Speed restriction of 205 KIAS or greater at PORPA and 220 KIAS until RAMEN.

CHANGE: Base map update, Runway 07C/25C closed, Tai Mo Shan elevation.

AD 2-VHHH-SID-PECAN-X_V01_220629zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

TABULAR DESCRIPTION: PECAN 1X RWY 07R (Noise Mitigating Procedure)

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	PORPA	-	074 (071)	+3.0	5.0	-	-5000	+205	RNP 1
02	RF Centre: VH991 r=2.6485 NM	PORSH	-	-	+3.0	5.0	R	-	-	RNP 1
03	TF	RAMEN	-	182 (179)	+3.0	8.1	-	-	@220	RNP 1
04	TF	BREAM	-	187 (184)	+3.0	22.9	R	-	-	RNP 1
05	TF	TITAN	-	187 (184)	+3.0	6.3	-	-	-	RNP 1
06	TF	PECAN	-	187 (184)	+3.0	14.1	-	-	-	RNP 1

WAYPOINT LIST

PECAN 1X RWY 07R		
Waypoint Identifier	**Coordinates (WGS-84)**	
PORPA	22 20 09.10N	114 01 16.30E
PORSH	22 17 40.38N	114 05 03.56E
RAMEN	22 09 39.22N	114 05 09.89E
BREAM	21 46 46.00N	114 03 28.00E
TITAN	21 40 27.40N	114 03 02.52E
PECAN	21 26 20.19N	114 02 05.64E
RF Arc Centre Identifier	**Coordinates (WGS-84)**	
VH991	22 17 38.37N	114 02 12.21E

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 1Z SID RWY 07L

1. For RNAV (GNSS) SID, 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.

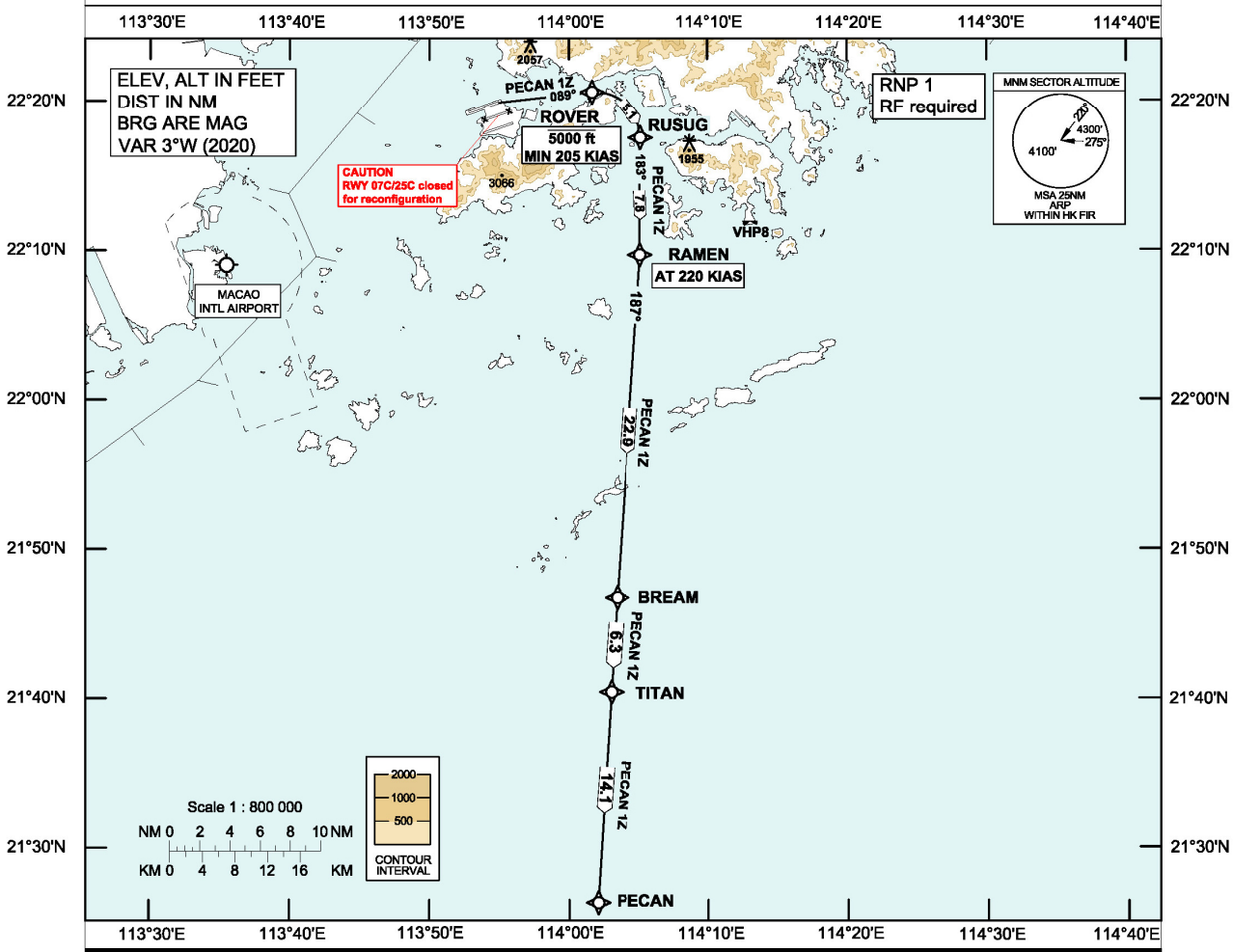
2. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

3. **Radius-to-fix (RF) leg is required.** Aircraft shall have RF capability as stipulated in the Aircraft Flight Manual or its FMS manual. Aircraft that do not have RF capability shall use RNAV (GNSS) PECAN 1E.

4. (DER) - Departure End of Runway.

5. **Noise Mitigating SID for use between 1500 - 2300 UTC (see VHHH AD 2.21 para 2.4).**

6. Aircraft with RF capability are encouraged to fly the procedure.



PECAN 1Z SID RWY 07L

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 3.3% (201 ft/NM).

SPEED RESTRICTION
Speed restriction of 205 KIAS or greater at ROVER and 220 KIAS until RAMEN.

CHANGE: Runway 07C/25C closed.

AD 2-VHHH-SID-PECAN-Z_V02_220628zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

TABULAR DESCRIPTION: PECAN 1Z RWY 07L (Noise Mitigating Procedure)

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	RW07L (DER)	Y	074 (071)	+3.0	-	-	-	-	RNP 1
02	FA	RW07L (DER)	-	074 (071)	+3.0	-	-	+430	-	RNP 1
03	CF	ROVER	-	089 (086)	+3.0	-	R	-5000	+205	RNP 1
04	RF Centre: VH993 r=3.0800 NM	RUSUG	-	-	+3.0	5.1	R	-	-	RNP 1
05	TF	RAMEN	-	183 (180)	+3.0	7.8	-	-	@220	RNP 1
06	TF	BREAM	-	187 (184)	+3.0	22.9	R	-	-	RNP 1
07	TF	TITAN	-	187 (184)	+3.0	6.3	-	-	-	RNP 1
08	TF	PECAN	-	187 (184)	+3.0	14.1	-	-	-	RNP 1

WAYPOINT LIST

PECAN 1Z RWY 07L

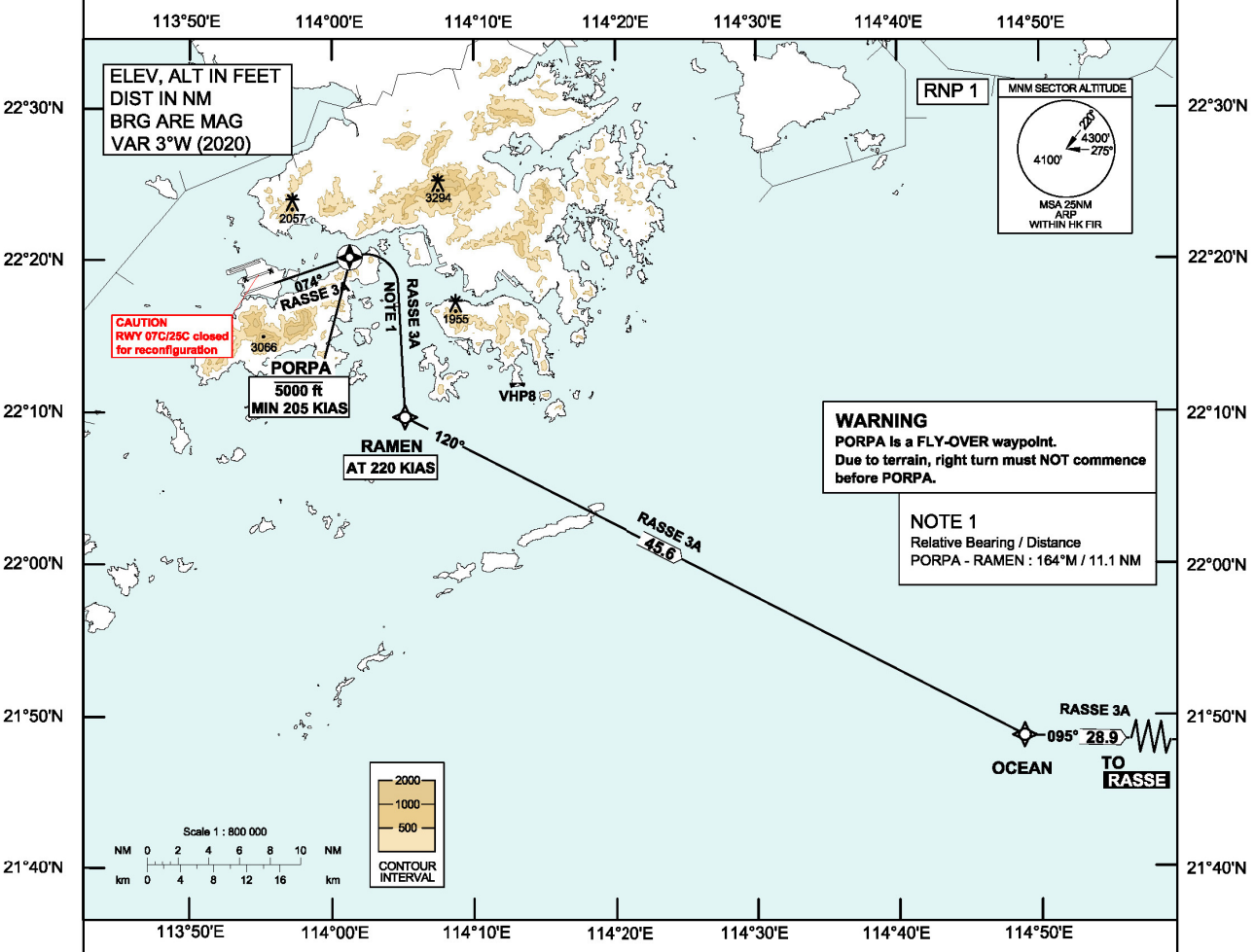
Waypoint Identifier	Coordinates (WGS-84)	
RW07L (DER)	22 19 56.94N	113 54 57.97E
ROVER	22 20 35.58N	114 01 39.12E
RUSUG	22 17 29.78N	114 05 12.16E
RAMEN	22 09 39.22N	114 05 09.89E
BREAM	21 46 46.00N	114 03 28.00E
TITAN	21 40 27.40N	114 03 02.52E
PECAN	21 26 20.19N	114 02 05.64E
RF Arc Centre Identifier	**Coordinates (WGS-84)**	
VH993	22 17 30.58N	114 01 52.89E

STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

Transition Altitude 9 000 ft	
Hong Kong Tower	118.4
Hong Kong Departure	123.8

HONG KONG / Intl (VHHH)
RNAV (GNSS) RASSE 3A SID RWY 07R

1. For RNAV (GNSS) SID, 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 after departure, 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. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.
4. PORPA is a **FLY-OVER** waypoint. All other waypoints are fly-by.
5. **Noise Mitigating SID for use between 1500 - 2300 UTC (see VHHH AD 2.21 para 2.4).**



RASSE 3A SID RWY 07R

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 1 400 ft is required.

SPEED RESTRICTION
Speed restriction of 205 KIAS or greater at PORPA and 220 KIAS until RAMEN.

CHANGE: Base map update, Runway 07C/25C closed, Tai Mo Shan elevation.

AD 2-VHHH-SID-RASSE-A_V01_220629zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

TABULAR DESCRIPTION: RASSE 3A RWY 07R (Noise Mitigating Procedure)

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	PORPA	Y	074 (071)	+3.0	5.0	-	-5000	+205	RNP 1
02	DF	RAMEN	-	-	+3.0	11.1	R	-	@220	RNP 1
03	TF	OCEAN	-	120 (117)	+3.0	45.6	L	-	-	RNP 1
04	TF	RASSE	-	095 (092)	+3.0	28.9	L	-	-	RNP 1

WAYPOINT LIST

RASSE 3A RWY 07R		
Waypoint Identifier	**Coordinates (WGS-84)**	
PORPA	22 20 09.10N	114 01 16.30E
RAMEN	22 09 39.22N	114 05 09.89E
OCEAN	21 48 43.00N	114 48 48.00E
RASSE	21 47 34.50N	115 19 49.10E

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) RASSE 2E SID RWY 07L

1. For RNAV (GNSS) SID, 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.

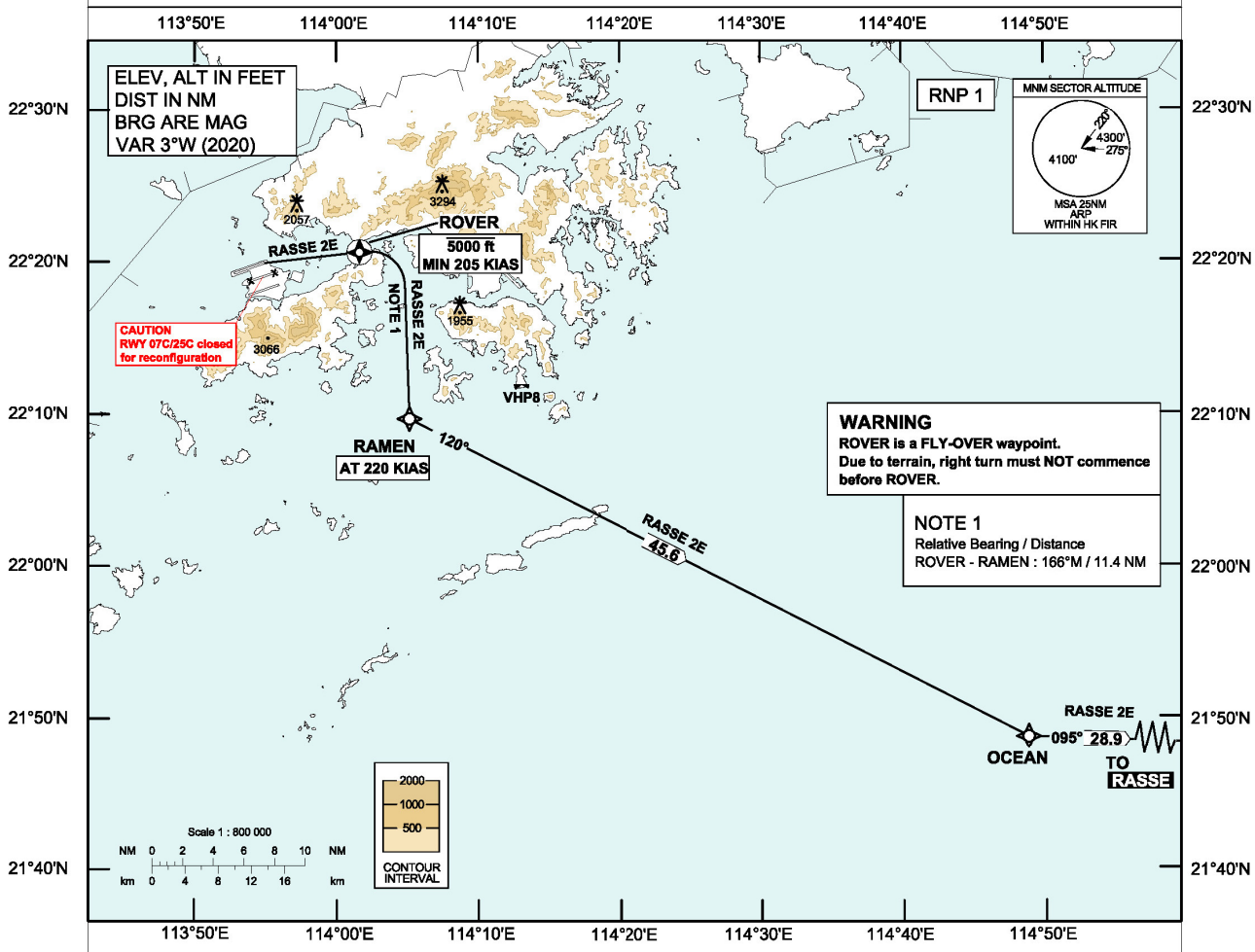
2. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

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. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.

4. ROVER is a **FLY-OVER** waypoint. All other waypoints are fly-by.

5. (DER) - Departure End of Runway.

6. **Noise Mitigating SID for use between 1500 - 2300 UTC (see VHHH AD 2.21 para 2.4).**



RASSE 2E SID RWY 07L

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 closed.

AD 2-VHHH-SID-RASSE-E_V03_220628zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

TABULAR DESCRIPTION: RASSE 2E RWY 07L (Noise Mitigating Procedure)

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	RW07L (DER)	Y	074 (071)	+3.0	-	-	-	-	RNP 1
02	FA	RW07L (DER)	-	074 (071)	+3.0	-	-	+430	-	RNP 1
03	DF	ROVER	Y	-	+3.0	-	R	-5000	+205	RNP 1
04	DF	RAMEN	-	-	+3.0	-	R	-	@220	RNP 1
05	TF	OCEAN	-	120 (117)	+3.0	45.6	L	-	-	RNP 1
06	TF	RASSE	-	095 (092)	+3.0	28.9	L	-	-	RNP 1

WAYPOINT LIST

RASSE 2E RWY 07L

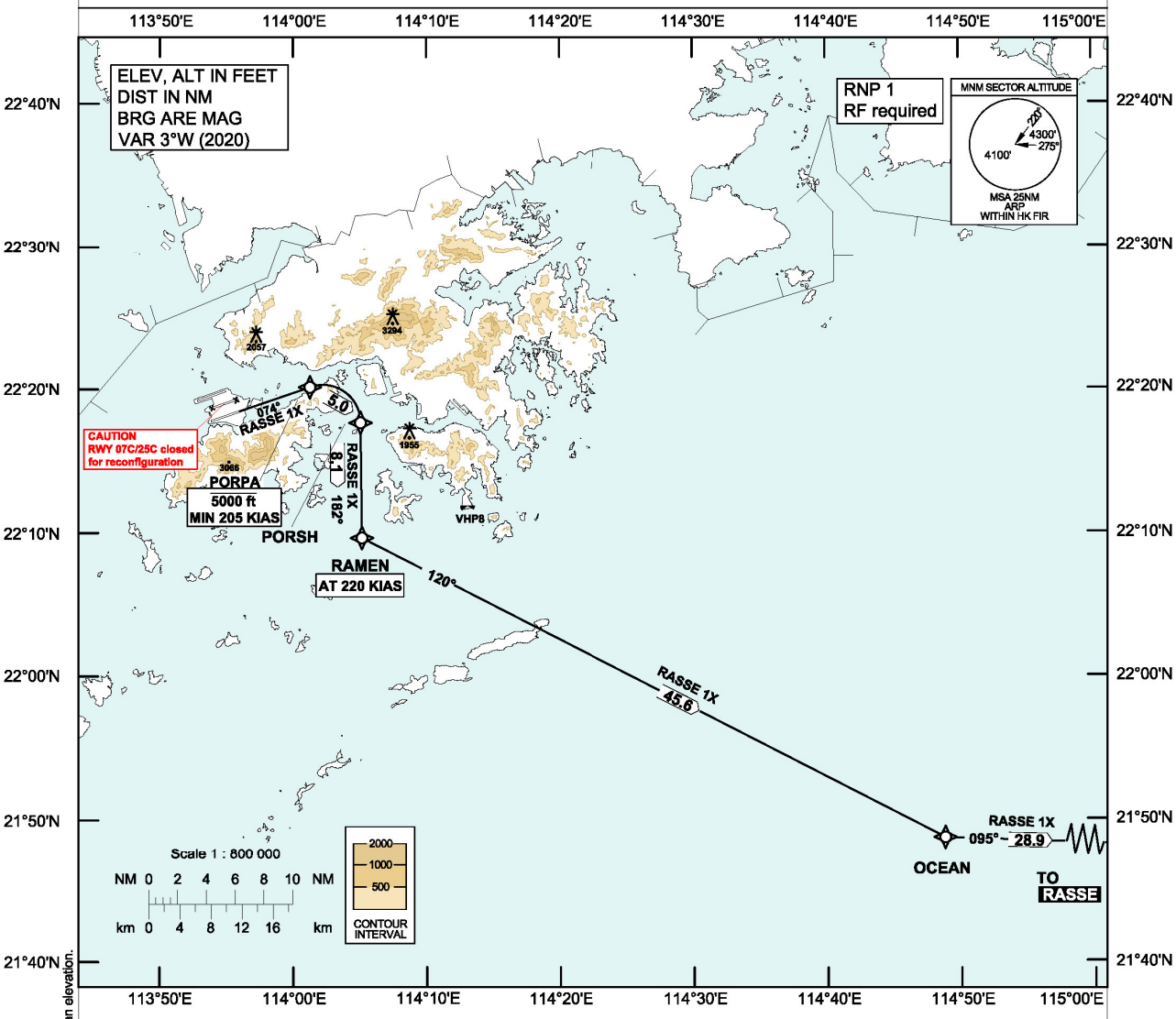
Waypoint Identifier	Coordinates (WGS-84)	
RW07L (DER)	22 19 56.94N	113 54 57.97E
ROVER	22 20 35.58N	114 01 39.12E
RAMEN	22 09 39.22N	114 05 09.89E
OCEAN	21 48 43.00N	114 48 48.00E
RASSE	21 47 34.50N	115 19 49.10E

STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

Transition Altitude 9 000 ft	
Hong Kong Tower	118.4
Hong Kong Departure	123.8

HONG KONG / Intl (VHHH)
RNAV (GNSS) RASSE 1X SID RWY 07R

1. For RNAV (GNSS) SID, 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 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.
3. **Radius-to-fix (RF) leg is required.** Aircraft shall have RF capability as stipulated in the Aircraft Flight Manual or its FMS manual. Aircraft that do not have RF capability shall use RNAV (GNSS) RASSE 3A as detailed in AD-2-VHHH-SID-RASSE-A.
4. **Noise Mitigating SID for use between 1500 - 2300 UTC (see VHHH AD 2.21 para 2.4).**
5. Aircraft with RF capability are encouraged to fly the procedure.



RASSE 1X SID RWY 07R

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 1 400 ft is required.

SPEED RESTRICTION
Speed restriction of 205 KIAS or greater at PORPA and 220 KIAS until RAMEN.

CHANGE: Base map update, Runway 07C/25C closed, Tai Mo Shan elevation.

AD 2-VHHH-SID-RASSE-X_V01_220629zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

TABULAR DESCRIPTION: RASSE 1X RWY 07R (Noise Mitigating Procedure)

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	PORPA	-	074 (071)	+3.0	5.0	-	-5000	+205	RNP 1
02	RF Centre: VH991 r=2.6485 NM	PORSH	-	-	+3.0	5.0	R	-	-	RNP 1
03	TF	RAMEN	-	182 (179)	+3.0	8.1	-	-	@220	RNP 1
04	TF	OCEAN	-	120 (117)	+3.0	45.6	L	-	-	RNP 1
05	TF	RASSE	-	095 (092)	+3.0	28.9	L	-	-	RNP 1

WAYPOINT LIST

RASSE 1X RWY 07R

Waypoint Identifier	Coordinates (WGS-84)	
PORPA	22 20 09.10N	114 01 16.30E
PORSH	22 17 40.38N	114 05 03.56E
RAMEN	22 09 39.22N	114 05 09.89E
OCEAN	21 48 43.00N	114 48 48.00E
RASSE	21 47 34.50N	115 19 49.10E
RF Arc Centre Identifier	**Coordinates (WGS-84)**	
VH991	22 17 38.37N	114 02 12.21E

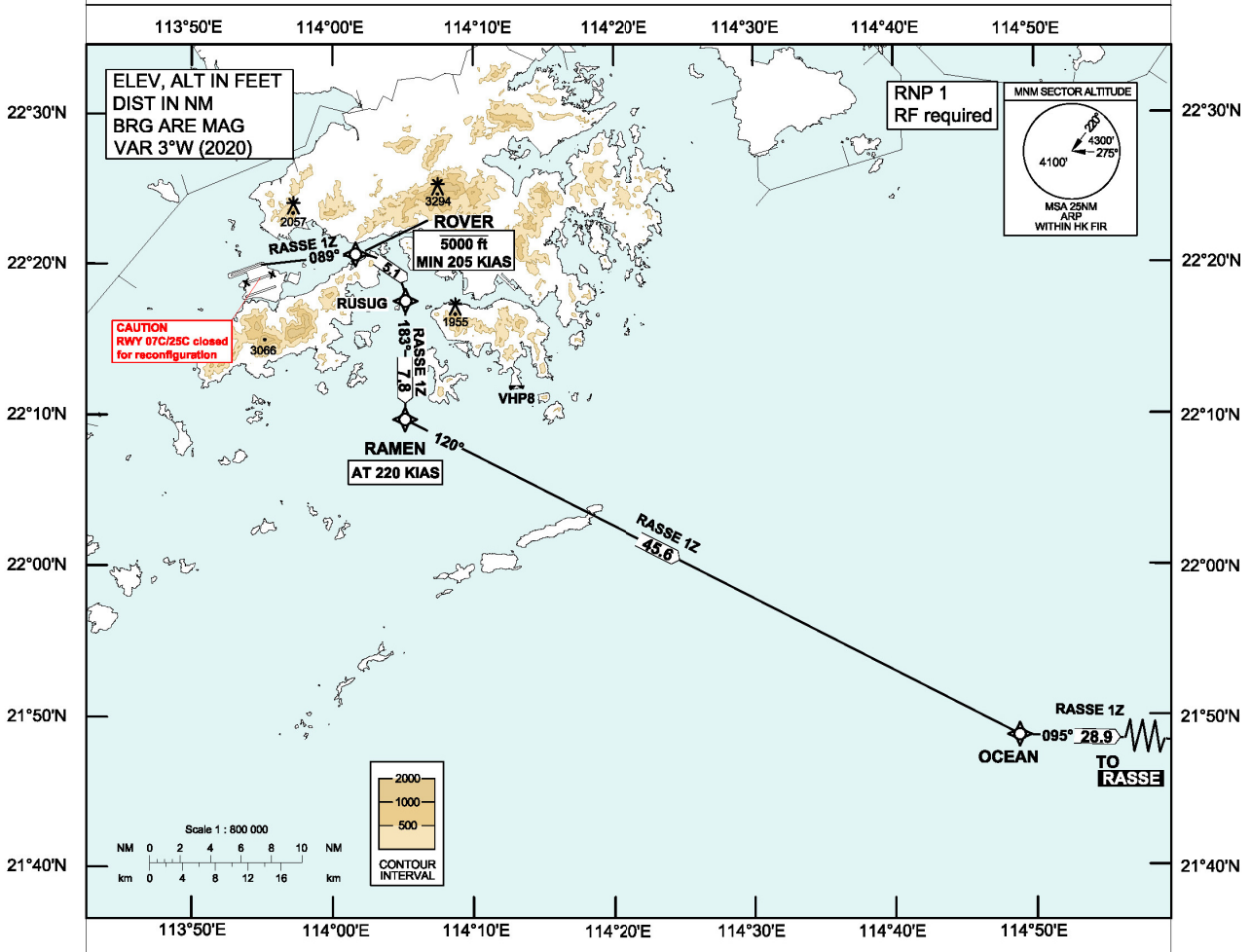
STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

Transition Altitude 9 000 ft

Hong Kong Tower	118.7
Hong Kong Departure	123.8

HONG KONG / Intl (VHHH)
RNAV (GNSS) RASSE 1Z SID RWY 07L

1. For RNAV (GNSS) SID, 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 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.
3. **Radius-to-fix (RF) leg is required.** Aircraft shall have RF capability as stipulated in the Aircraft Flight Manual or its FMS manual. Aircraft that do not have RF capability shall use RNAV (GNSS) RASSE 2E.
4. (DER) - Departure End of Runway.
5. **Noise Mitigating SID for use between 1500 - 2300 UTC (see VHHH AD 2.21 para 2.4).**
6. Aircraft with RF capability are encouraged to fly the procedure.



RASSE 1Z SID RWY 07L

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 3.3% (201 ft/NM).

SPEED RESTRICTION
Speed restriction of 205 KIAS or greater at ROVER and 220 KIAS until RAMEN.

CHANGE: Runway 07C/25C closed.

AD 2-VHHH-SID-RASSE-Z_V03_220628zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

TABULAR DESCRIPTION: RASSE 1Z RWY 07L (Noise Mitigating Procedure)

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	RW07L (DER)	Y	074 (071)	+3.0	-	-	-	-	RNP 1
02	FA	RW07L (DER)	-	074 (071)	+3.0	-	-	+430	-	RNP 1
03	CF	ROVER	-	089 (086)	+3.0	-	R	-5000	+205	RNP 1
04	RF Centre: VH993 r=3.0800 NM	RUSUG	-	-	+3.0	5.1	R	-	-	RNP 1
05	TF	RAMEN	-	183 (180)	+3.0	7.8	-	-	@220	RNP 1
06	TF	OCEAN	-	120 (117)	+3.0	45.6	L	-	-	RNP 1
07	TF	RASSE	-	095 (092)	+3.0	28.9	L	-	-	RNP 1

WAYPOINT LIST

RASSE 1Z RWY 07L

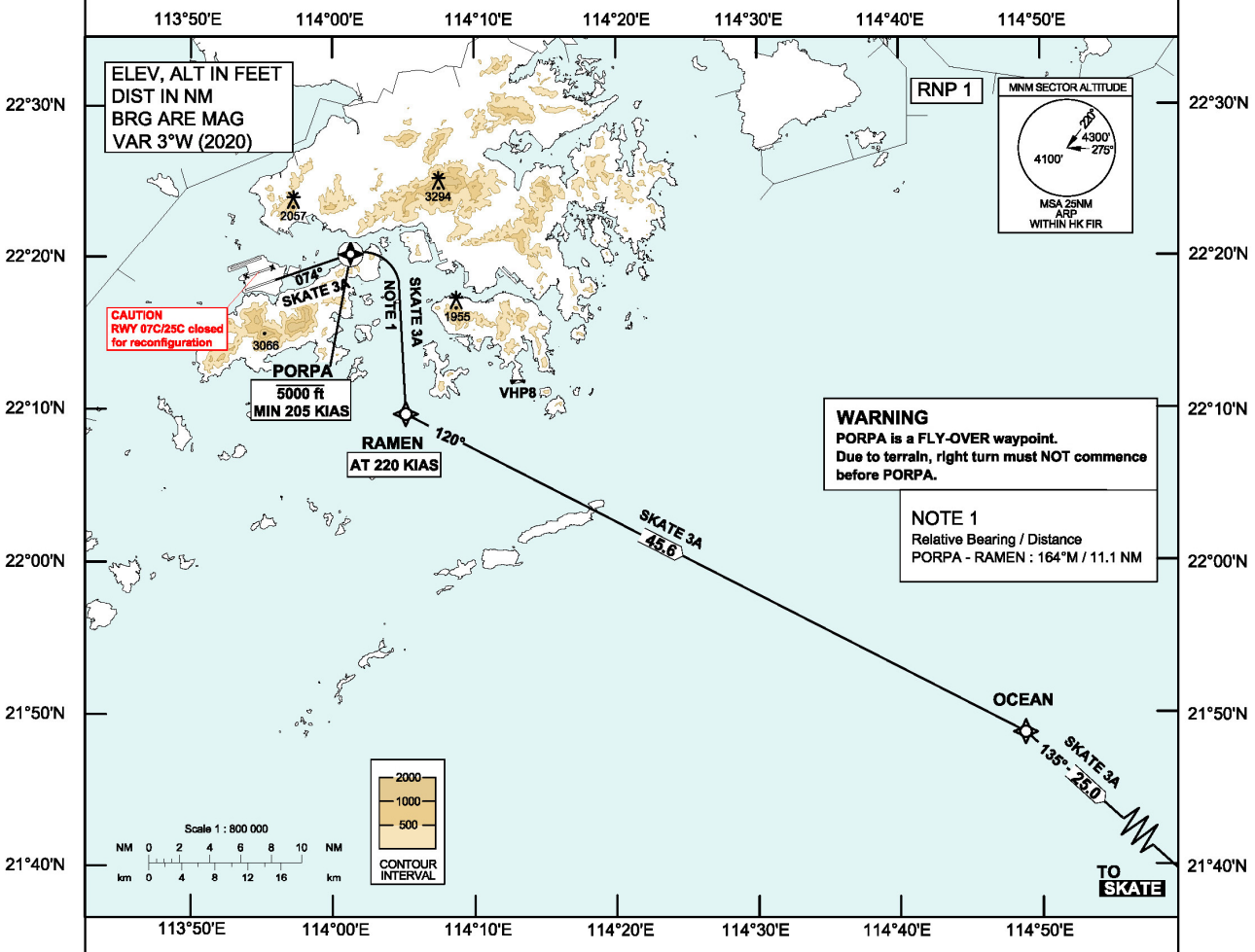
Waypoint Identifier	Coordinates (WGS-84)	
RW07L (DER)	22 19 56.94N	113 54 57.97E
ROVER	22 20 35.58N	114 01 39.12E
RUSUG	22 17 29.78N	114 05 12.16E
RAMEN	22 09 39.22N	114 05 09.89E
OCEAN	21 48 43.00N	114 48 48.00E
RASSE	21 47 34.50N	115 19 49.10E
RF Arc Centre Identifier	**Coordinates (WGS-84)**	
VH993	22 17 30.58N	114 01 52.89E

STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

Transition Altitude 9 000 ft	
Hong Kong Tower	118.4
Hong Kong Departure	123.8

HONG KONG / Intl (VHHH)
RNAV (GNSS) SKATE 3A SID RWY 07R

1. For RNAV (GNSS) SID, 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 after departure, 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. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.
4. PORPA is a **FLY-OVER** waypoint. All other waypoints are fly-by.
5. **Noise Mitigating SID for use between 1500 - 2300 UTC (see VHHH AD 2.21 para 2.4).**



SKATE 3A SID RWY 07R

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 1 400 ft is required.

SPEED RESTRICTION
Speed restriction of 205 KIAS or greater at PORPA and 220 KIAS until RAMEN.

CHANGE: Base map update, Runway 07C/25C closed, Tai Mo Shan elevation.

AD 2-VHHH-SID-SKATE-A_V01_220629zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

TABULAR DESCRIPTION: SKATE 3A RWY 07R (Noise Mitigating Procedure)

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	PORPA	Y	074 (071)	+3.0	5.0	-	-5000	+205	RNP 1
02	DF	RAMEN	-	-	+3.0	11.1	R	-	@220	RNP 1
03	TF	OCEAN	-	120 (117)	+3.0	45.6	L	-	-	RNP 1
04	TF	SKATE	-	135 (132)	+3.0	25.0	R	-	-	RNP 1

WAYPOINT LIST

SKATE 3A RWY 07R

Waypoint Identifier	Coordinates (WGS-84)	
PORPA	22 20 09.10N	114 01 16.30E
RAMEN	22 09 39.22N	114 05 09.89E
OCEAN	21 48 43.00N	114 48 48.00E
SKATE	21 31 54.99N	115 08 39.94E

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) SKATE 2E SID RWY 07L

1. For RNAV (GNSS) SID, 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.

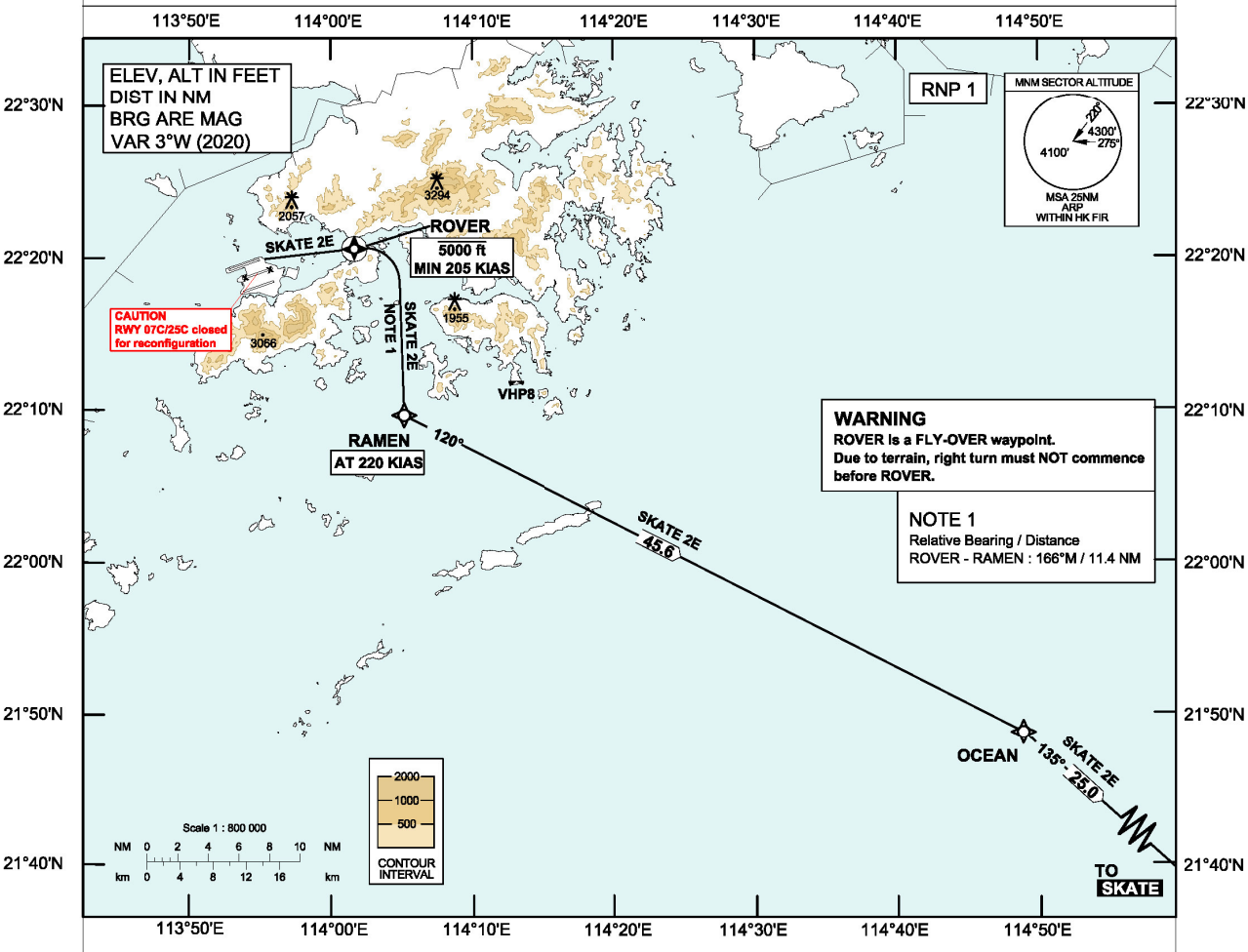
2. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

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. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.

4. ROVER is a **FLY-OVER** waypoint. All other waypoints are fly-by.

5. (DER) - Departure End of Runway.

6. **Noise Mitigating SID for use between 1500 - 2300 UTC (see VHHH AD 2.21 para 2.4).**



SKATE 2E SID RWY 07L

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 closed.

AD 2-VHHH-SID-SKATE-E_V03_220628zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

TABULAR DESCRIPTION: SKATE 2E RWY 07L (Noise Mitigating Procedure)

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	RW07L (DER)	Y	074 (071)	+3.0	-	-	-	-	RNP 1
02	FA	RW07L (DER)	-	074 (071)	+3.0	-	-	+430	-	RNP 1
03	DF	ROVER	Y	-	+3.0	-	R	-5000	+205	RNP 1
04	DF	RAMEN	-	-	+3.0	-	R	-	@220	RNP 1
05	TF	OCEAN	-	120 (117)	+3.0	45.6	L	-	-	RNP 1
06	TF	SKATE	-	135 (132)	+3.0	25.0	R	-	-	RNP 1

WAYPOINT LIST

SKATE 2E RWY 07L

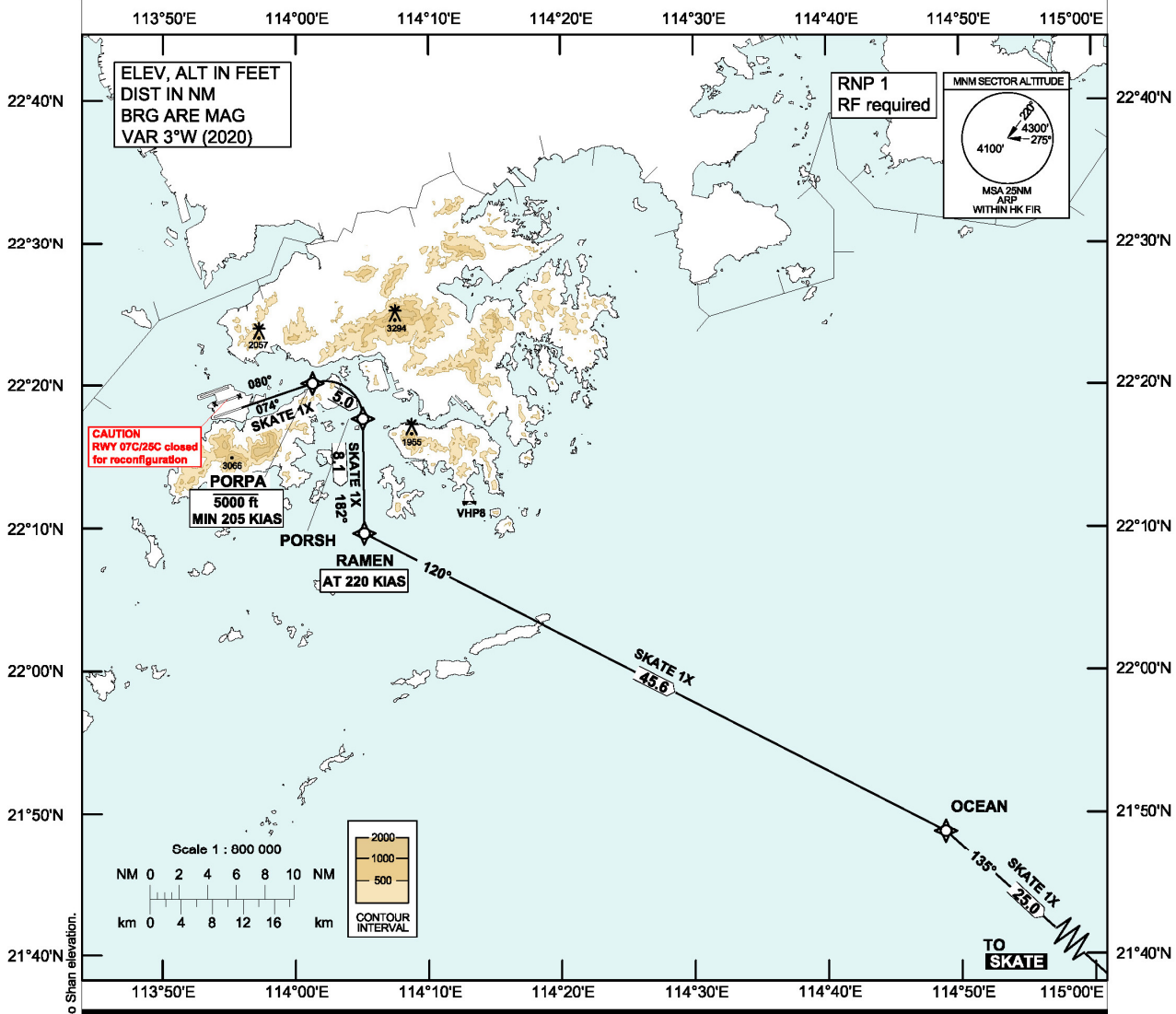
Waypoint Identifier	Coordinates (WGS-84)	
RW07L (DER)	22 19 56.94N	113 54 57.97E
ROVER	22 20 35.58N	114 01 39.12E
RAMEN	22 09 39.22N	114 05 09.89E
OCEAN	21 48 43.00N	114 48 48.00E
SKATE	21 31 54.99N	115 08 39.94E

STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

Transition Altitude 9 000 ft	
Hong Kong Tower	118.4
Hong Kong Departure	123.8

HONG KONG / Intl (VHHH)
RNAV (GNSS) SKATE 1X SID RWY 07R

1. For RNAV (GNSS) SID, 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 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.
3. **Radius-to-fix (RF) leg is required.** Aircraft shall have RF capability as stipulated in the Aircraft Flight Manual or its FMS manual. Aircraft that do not have RF capability shall use RNAV (GNSS) SKATE 3A as detailed in AD-2-VHHH-SID-SKATE-A.
4. **Noise Mitigating SID for use between 1500 - 2300 UTC (see VHHH AD 2.21 para 2.4).**
5. Aircraft with RF capability are encouraged to fly the procedure.



SKATE 1X SID RWY 07R

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 1 400 ft is required.

SPEED RESTRICTION
Speed restriction of 205 KIAS or greater at PORPA and 220 KIAS until RAMEN.

CHANGE: Base map update, Runway 07C/25C closed, Tai Mo Shan elevation.

AD 2-VHHH-SID-SKATE-X_V01_220629zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

TABULAR DESCRIPTION: SKATE 1X RWY 07R (Noise Mitigating Procedure)

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	PORPA	-	074 (071)	+3.0	5.0	-	-5000	+205	RNP 1
02	RF Centre: VH991 r=2.6485 NM	PORSH	-	-	+3.0	5.0	R	-	-	RNP 1
03	TF	RAMEN	-	182 (179)	+3.0	8.1	-	-	@220	RNP 1
04	TF	OCEAN	-	120 (117)	+3.0	45.6	L	-	-	RNP 1
05	TF	SKATE	-	135 (132)	+3.0	25.0	R	-	-	RNP 1

WAYPOINT LIST

SKATE 1X RWY 07R

Waypoint Identifier	Coordinates (WGS-84)	
PORPA	22 20 09.10N	114 01 16.30E
PORSH	22 17 40.38N	114 05 03.56E
RAMEN	22 09 39.22N	114 05 09.89E
OCEAN	21 48 43.00N	114 48 48.00E
SKATE	21 31 54.99N	115 08 39.94E
RF Arc Centre Identifier	**Coordinates (WGS-84)**	
VH991	22 17 38.37N	114 02 12.21E

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) SKATE 1Z SID RWY 07L

1. For RNAV (GNSS) SID, 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.

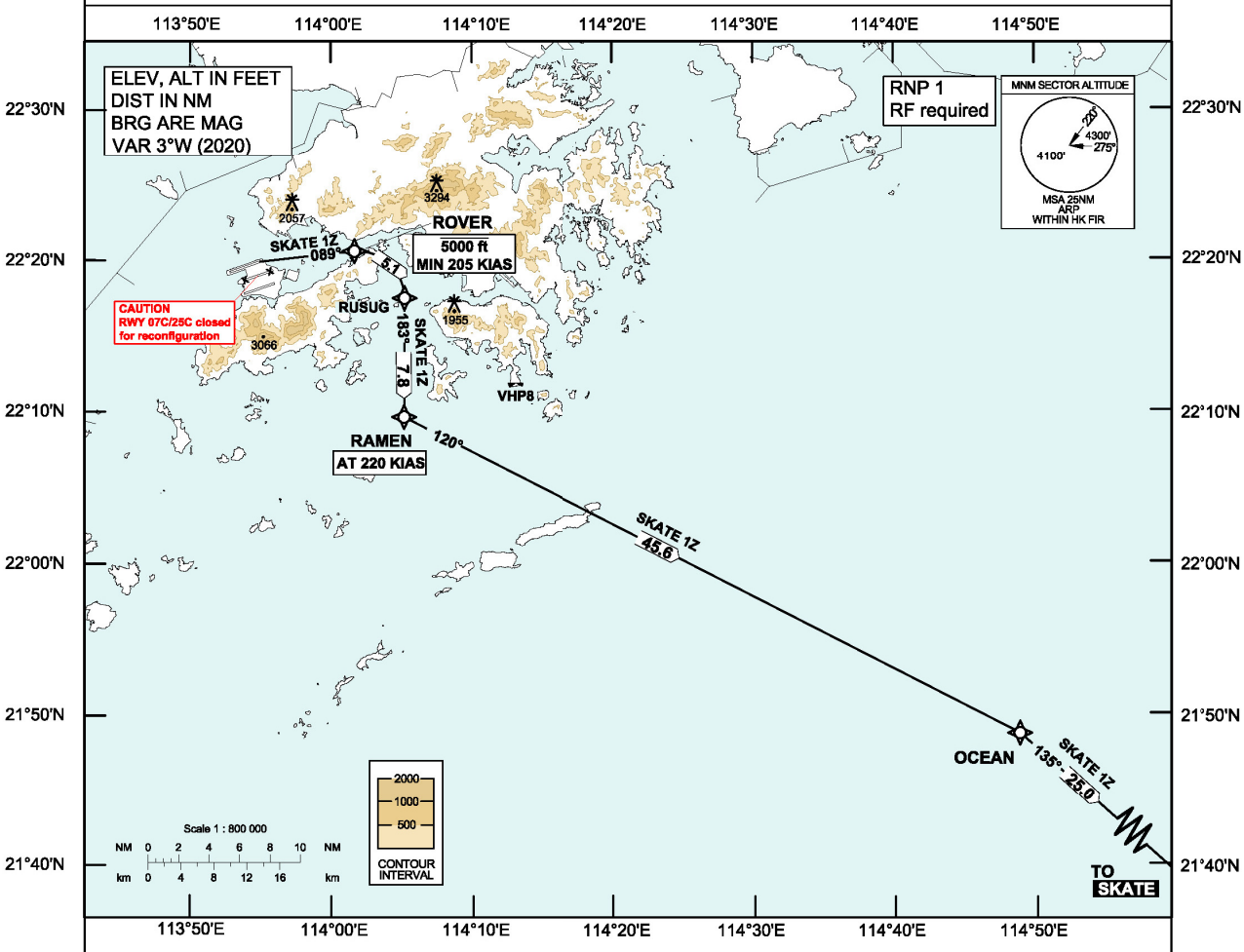
2. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

3. **Radius-to-fix (RF) leg is required.** Aircraft shall have RF capability as stipulated in the Aircraft Flight Manual or its FMS manual. Aircraft that do not have RF capability shall use RNAV (GNSS) SKATE 2E.

4. (DER) - Departure End of Runway.

5. **Noise Mitigating SID for use between 1500 - 2300 UTC (see VHHH AD 2.21 para 2.4).**

6. Aircraft with RF capability are encouraged to fly the procedure.



SKATE 1Z SID RWY 07L

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 3.3% (201 ft/NM).

SPEED RESTRICTION
Speed restriction of 205 KIAS or greater at ROVER and 220 KIAS until RAMEN.

CHANGE: Runway 07C/25C closed.

AD 2-VHHH-SID-SKATE-Z_V03_220628zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

TABULAR DESCRIPTION: SKATE 1Z RWY 07L (Noise Mitigating Procedure)

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	RW07L (DER)	Y	074 (071)	+3.0	-	-	-	-	RNP 1
02	FA	RW07L (DER)	-	074 (071)	+3.0	-	-	+430	-	RNP 1
03	CF	ROVER	-	089 (086)	+3.0	-	R	-5000	+205	RNP 1
04	RF Centre: VH993 r=3.0800 NM	RUSUG	-	-	+3.0	5.1	R	-	-	RNP 1
05	TF	RAMEN	-	183 (180)	+3.0	7.8	-	-	@220	RNP 1
06	TF	OCEAN	-	120 (117)	+3.0	45.6	L	-	-	RNP 1
07	TF	SKATE	-	135 (132)	+3.0	25.0	R	-	-	RNP 1

WAYPOINT LIST

SKATE 1Z RWY 07L

Waypoint Identifier	Coordinates (WGS-84)	
RW07L (DER)	22 19 56.94N	113 54 57.97E
ROVER	22 20 35.58N	114 01 39.12E
RUSUG	22 17 29.78N	114 05 12.16E
RAMEN	22 09 39.22N	114 05 09.89E
OCEAN	21 48 43.00N	114 48 48.00E
SKATE	21 31 54.99N	115 08 39.94E
RF Arc Centre Identifier	**Coordinates (WGS-84)**	
VH993	22 17 30.58N	114 01 52.89E

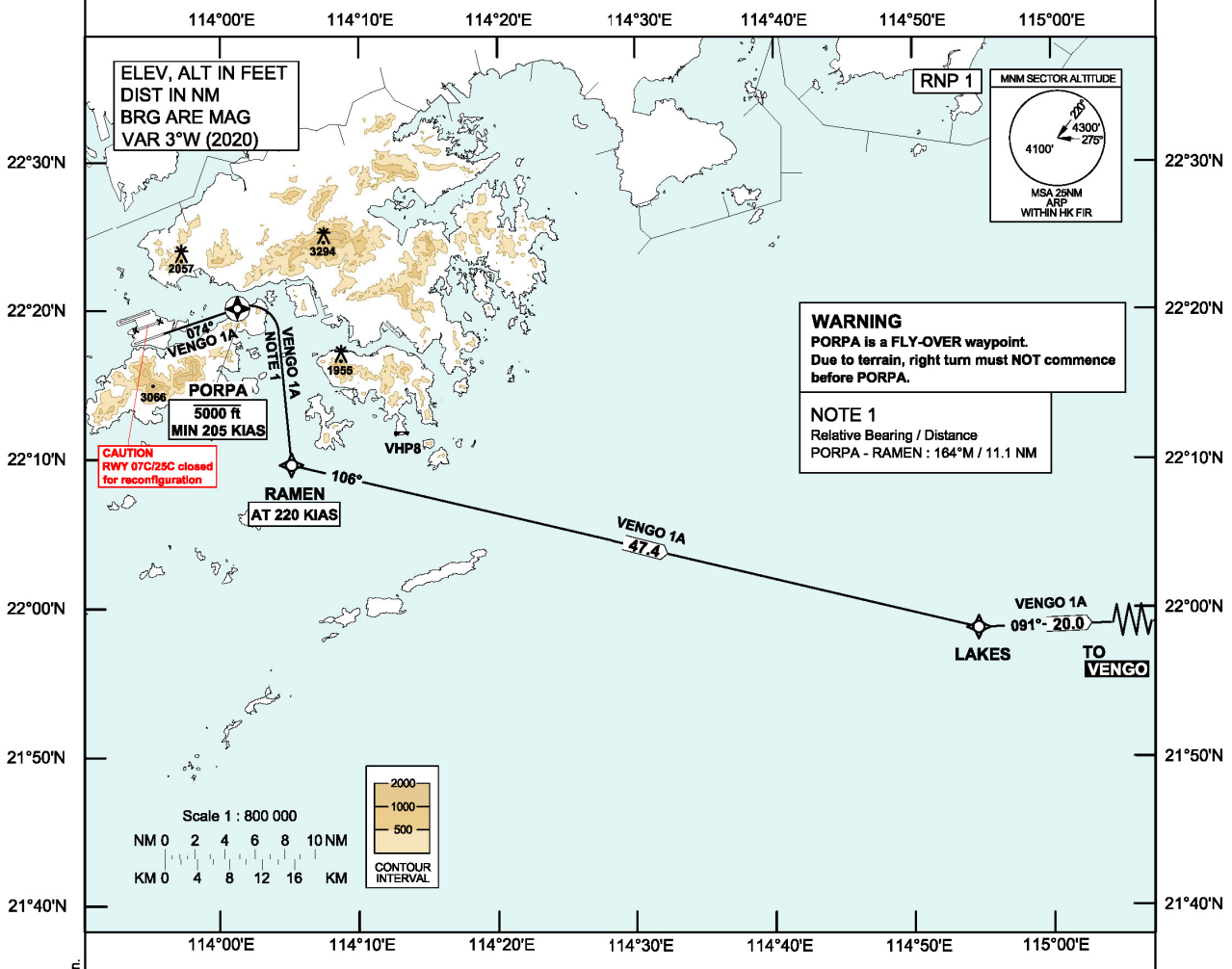
STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

Transition Altitude 9 000 ft

Hong Kong Tower	118.4
Hong Kong Departure	123.8

HONG KONG / Intl (VHHH)
RNAV (GNSS) VENGO 1A SID RWY 07R

1. For RNAV (GNSS) SID, 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 after departure, 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. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.
4. PORPA is a **FLY-OVER** waypoint. All other waypoints are fly-by.
5. **Noise Mitigating SID for use between 1500 - 2300 UTC (see VHHH AD 2.21 para 2.4).**



VENGO 1A SID RWY 07R

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 1 400 ft is required.

SPEED RESTRICTION
Speed restriction of 205 KIAS or greater at PORPA and 220 KIAS until RAMEN.

CHANGE: Base map update, Runway 07C/25C closed, Tai Mo Shan elevation.

AD 2-VHHH-SID-VENGO-A_V01_220629zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

TABULAR DESCRIPTION: VENGO 1A RWY 07R (Noise Mitigating Procedure)

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	PORPA	Y	074 (071)	+3.0	5.0	-	-5000	+205	RNP 1
02	DF	RAMEN	-	-	+3.0	11.1	R	-	@220	RNP 1
03	TF	LAKES	-	106 (103)	+3.0	47.4	L	-	-	RNP 1
04	TF	VENGO	-	091 (088)	+3.0	20.0	L	-	-	RNP 1

WAYPOINT LIST

VENGO 1A RWY 07R

Waypoint Identifier	Coordinates (WGS-84)	
PORPA	22 20 09.10N	114 01 16.30E
RAMEN	22 09 39.22N	114 05 09.89E
LAKES	21 58 41.30N	114 54 38.60E
VENGO	21 59 16.17N	115 16 08.46E

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) VENGO 2E SID RWY 07L

1. For RNAV (GNSS) SID, 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.

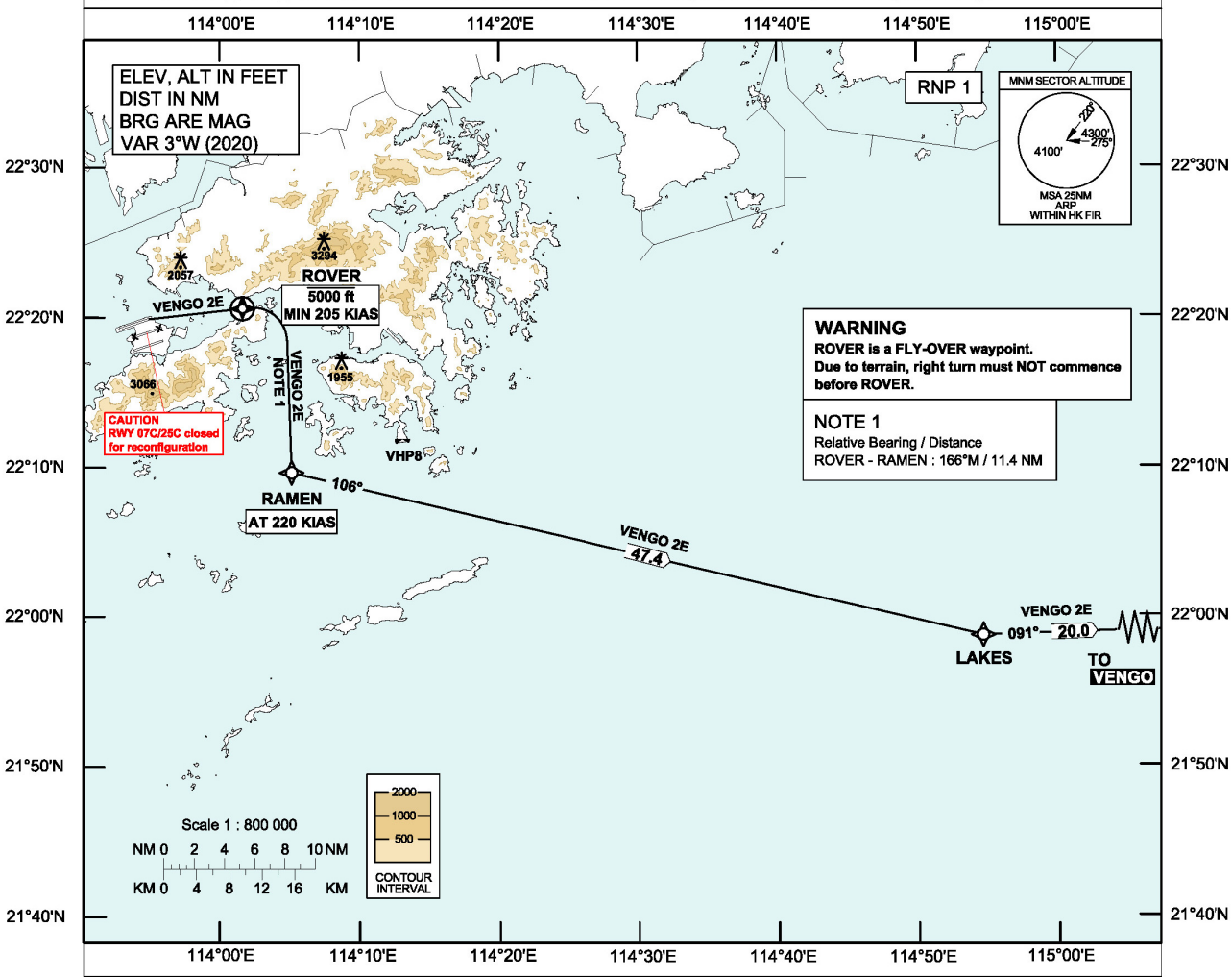
2. In the event that PBN performance ceases to comply with the requirements for RNP 1 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.

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. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 2.2.3.5.

4. ROVER is a **FLY-OVER** waypoint. All other waypoints are fly-by.

5. (DER) - Departure End of Runway.

6. **Noise Mitigating SID for use between 1500 - 2300 UTC (see VHHH AD 2.21 para 2.4).**



VENGO 2E SID RWY 07L

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 closed.

AD 2-VHHH-SID-VENGO-E_V03_220628zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

TABULAR DESCRIPTION: VENGO 2E RWY 07L (Noise Mitigating Procedure)

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	RW07L (DER)	Y	074 (071)	+3.0	-	-	-	-	RNP 1
02	FA	RW07L (DER)	-	074 (071)	+3.0	-	-	+430	-	RNP 1
03	DF	ROVER	Y	-	+3.0	-	R	-5000	+205	RNP 1
04	DF	RAMEN	-	-	+3.0	-	R	-	@220	RNP 1
05	TF	LAKES	-	106 (103)	+3.0	47.4	L	-	-	RNP 1
06	TF	VENGO	-	091 (088)	+3.0	20.0	L	-	-	RNP 1

WAYPOINT LIST

VENGO 2E RWY 07L

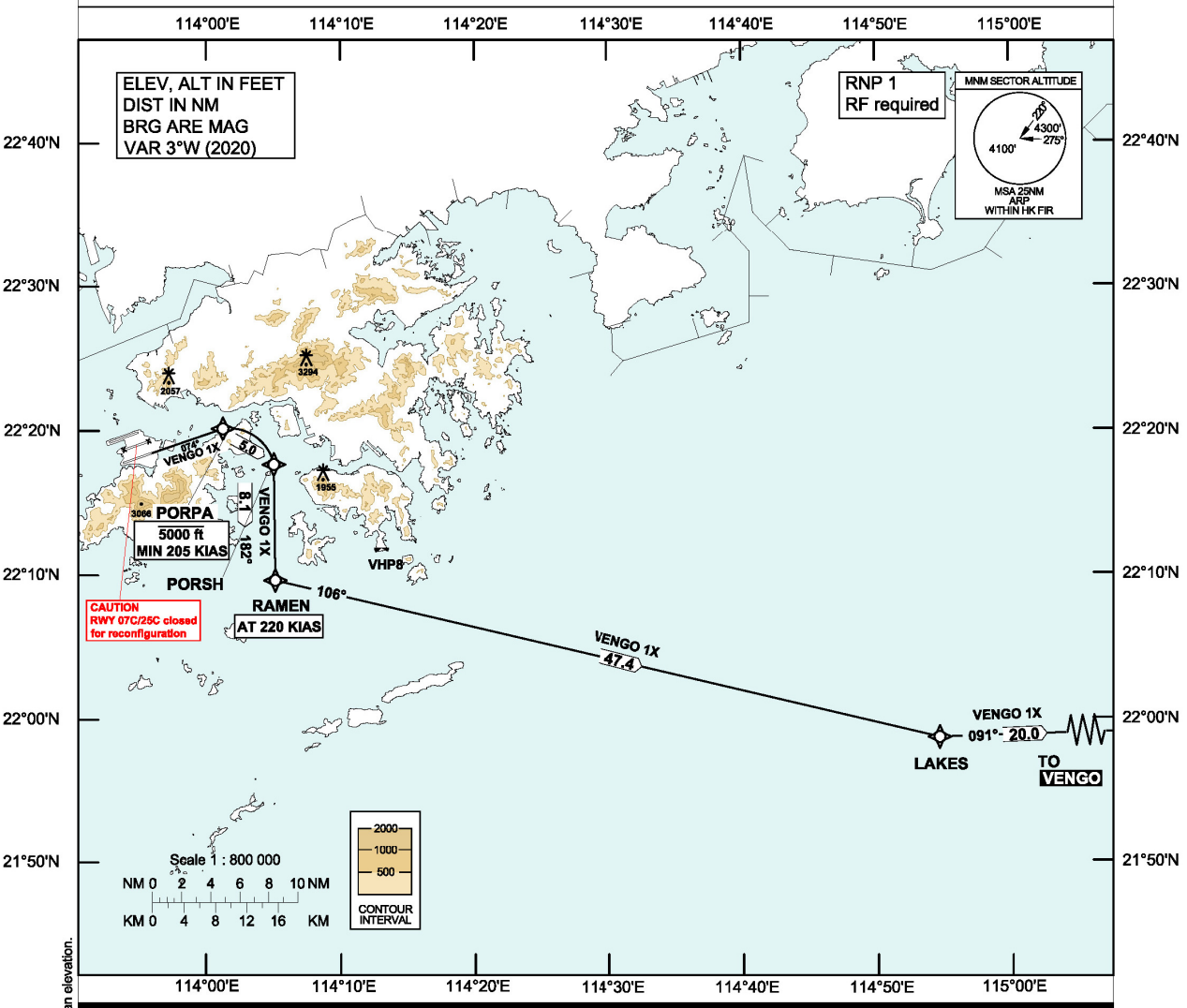
Waypoint Identifier	Coordinates (WGS-84)	
RW07L (DER)	22 19 56.94N	113 54 57.97E
ROVER	22 20 35.58N	114 01 39.12E
RAMEN	22 09 39.22N	114 05 09.89E
LAKES	21 58 41.30N	114 54 38.60E
VENGO	21 59 16.17N	115 16 08.46E

STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

Transition Altitude 9 000 ft	
Hong Kong Tower	118.4
Hong Kong Departure	123.8

HONG KONG / Intl (VHHH)
RNAV (GNSS) VENGO 1X SID RWY 07R

1. For RNAV (GNSS) SID, 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 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.
3. **Radius-to-fix (RF) leg is required.** Aircraft shall have RF capability as stipulated in the Aircraft Flight Manual or its FMS manual. Aircraft that do not have RF capability shall use RNAV (GNSS) VENGO 1A as detailed in AD-2-VHHH-SID-VENGO-A.
4. **Noise Mitigating SID for use between 1500 - 2300 UTC (see VHHH AD 2.21 para 2.4).**
5. Aircraft with RF capability are encouraged to fly the procedure.



VENGO 1X SID RWY 07R

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 1 400 ft is required.

SPEED RESTRICTION
Speed restriction of 205 KIAS or greater at PORPA and 220 KIAS until RAMEN.

CHANGE: Base map update, Runway 07C/25C closed, Tai Mo Shan elevation.

AD 2-VHHH-SID-VENGO-X_V01_220629zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

TABULAR DESCRIPTION: VENGO 1X RWY 07R (Noise Mitigating Procedure)

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	PORPA	-	074 (071)	+3.0	5.0	-	-5000	+205	RNP 1
02	RF Centre: VH991 r=2.6485 NM	PORSH	-	-	+3.0	5.0	R	-	-	RNP 1
03	TF	RAMEN	-	182 (179)	+3.0	8.1	-	-	@220	RNP 1
04	TF	LAKES	-	106 (103)	+3.0	47.4	L	-	-	RNP 1
05	TF	VENGO	-	091 (088)	+3.0	20.0	L	-	-	RNP 1

WAYPOINT LIST

VENGO 1X RWY 07R		
Waypoint Identifier	**Coordinates (WGS-84)**	
PORPA	22 20 09.10N	114 01 16.30E
PORSH	22 17 40.38N	114 05 03.56E
RAMEN	22 09 39.22N	114 05 09.89E
LAKES	21 58 41.30N	114 54 38.60E
VENGO	21 59 16.17N	115 16 08.46E
RF Arc Centre Identifier	**Coordinates (WGS-84)**	
VH991	22 17 38.37N	114 02 12.21E

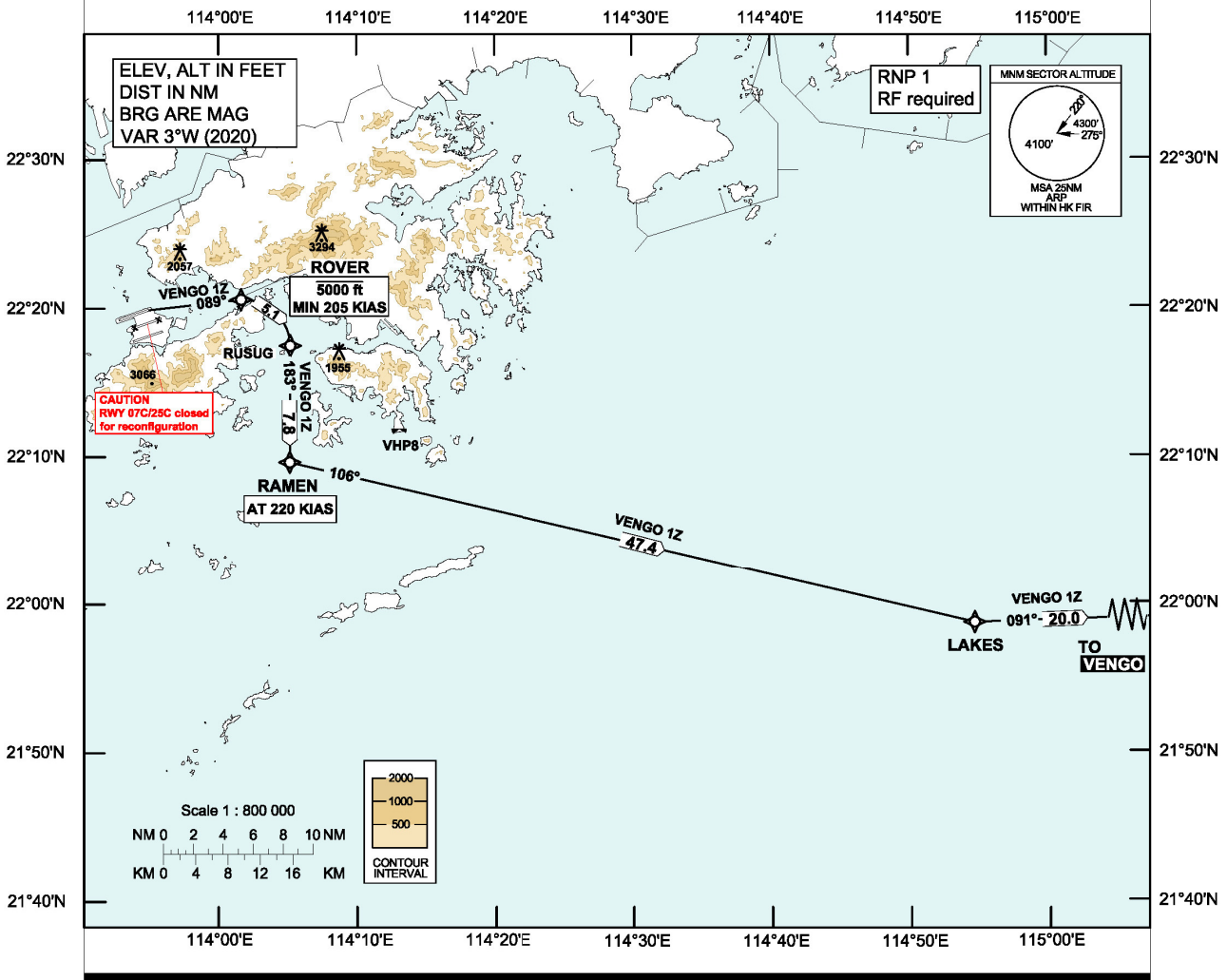
STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

Transition Altitude 9 000 ft

Hong Kong Tower	118.7
Hong Kong Departure	123.8

HONG KONG / Intl (VHHH)
RNAV (GNSS) VENGO 1Z SID RWY 07L

1. For RNAV (GNSS) SID, 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 after departure, pilots must notify ATC as soon as possible. ATC assistance would be provided as necessary.
3. **Radius-to-fix (RF) leg is required.** Aircraft shall have RF capability as stipulated in the Aircraft Flight Manual or its FMS manual. Aircraft that do not have RF capability shall use RNAV (GNSS) VENGO 2E.
4. (DER) - Departure End of Runway.
5. **Noise Mitigating SID for use between 1500 - 2300 UTC (see VHHH AD 2.21 para 2.4).**
6. Aircraft with RF capability are encouraged to fly the procedure.



VENGO 1Z SID RWY 07L

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 3.3% (201 ft/NM).

SPEED RESTRICTION
Speed restriction of 205 KIAS or greater at ROVER and 220 KIAS until RAMEN.

CHANGE: Runway 07C/25C closed.

AD 2-VHHH-SID-VENGO-Z_V03_220628zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) SID

TABULAR DESCRIPTION: VENGO 1Z RWY 07L (Noise Mitigating Procedure)

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	RW07L (DER)	Y	074 (071)	+3.0	-	-	-	-	RNP 1
02	FA	RW07L (DER)	-	074 (071)	+3.0	-	-	+430	-	RNP 1
03	CF	ROVER	-	089 (086)	+3.0	-	R	-5000	+205	RNP 1
04	RF Centre: VH993 r=3.0800 NM	RUSUG	-	-	+3.0	5.1	R	-	-	RNP 1
05	TF	RAMEN	-	183 (180)	+3.0	7.8	-	-	@220	RNP 1
06	TF	LAKES	-	106 (103)	+3.0	47.4	L	-	-	RNP 1
07	TF	VENGO	-	091 (088)	+3.0	20.0	L	-	-	RNP 1

WAYPOINT LIST

VENGO 1Z RWY 07L		
Waypoint Identifier	**Coordinates (WGS-84)**	
RW07L (DER)	22 19 56.94N	113 54 57.97E
ROVER	22 20 35.58N	114 01 39.12E
RUSUG	22 17 29.78N	114 05 12.16E
RAMEN	22 09 39.22N	114 05 09.89E
LAKES	21 58 41.30N	114 54 38.60E
VENGO	21 59 16.17N	115 16 08.46E
RF Arc Centre Identifier	**Coordinates (WGS-84)**	
VH993	22 17 30.58N	114 01 52.89E

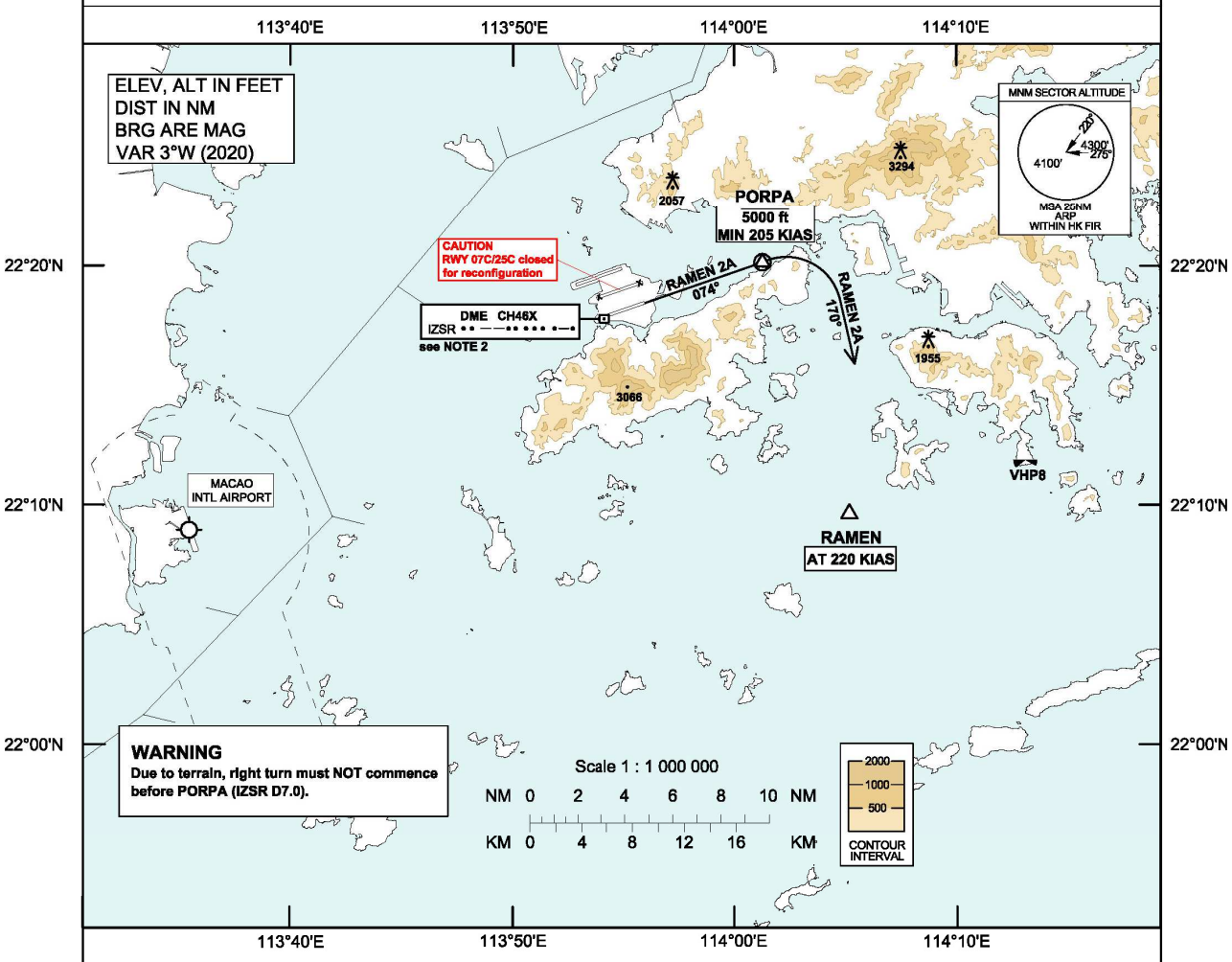
STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

Transition Altitude 9 000 ft

Hong Kong Tower	118.4
Hong Kong Departure	123.8

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: DME channel and ident, revised procedure.

AD 2-VHHH-SID-RAMEN-A_V05_230719lh

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	-

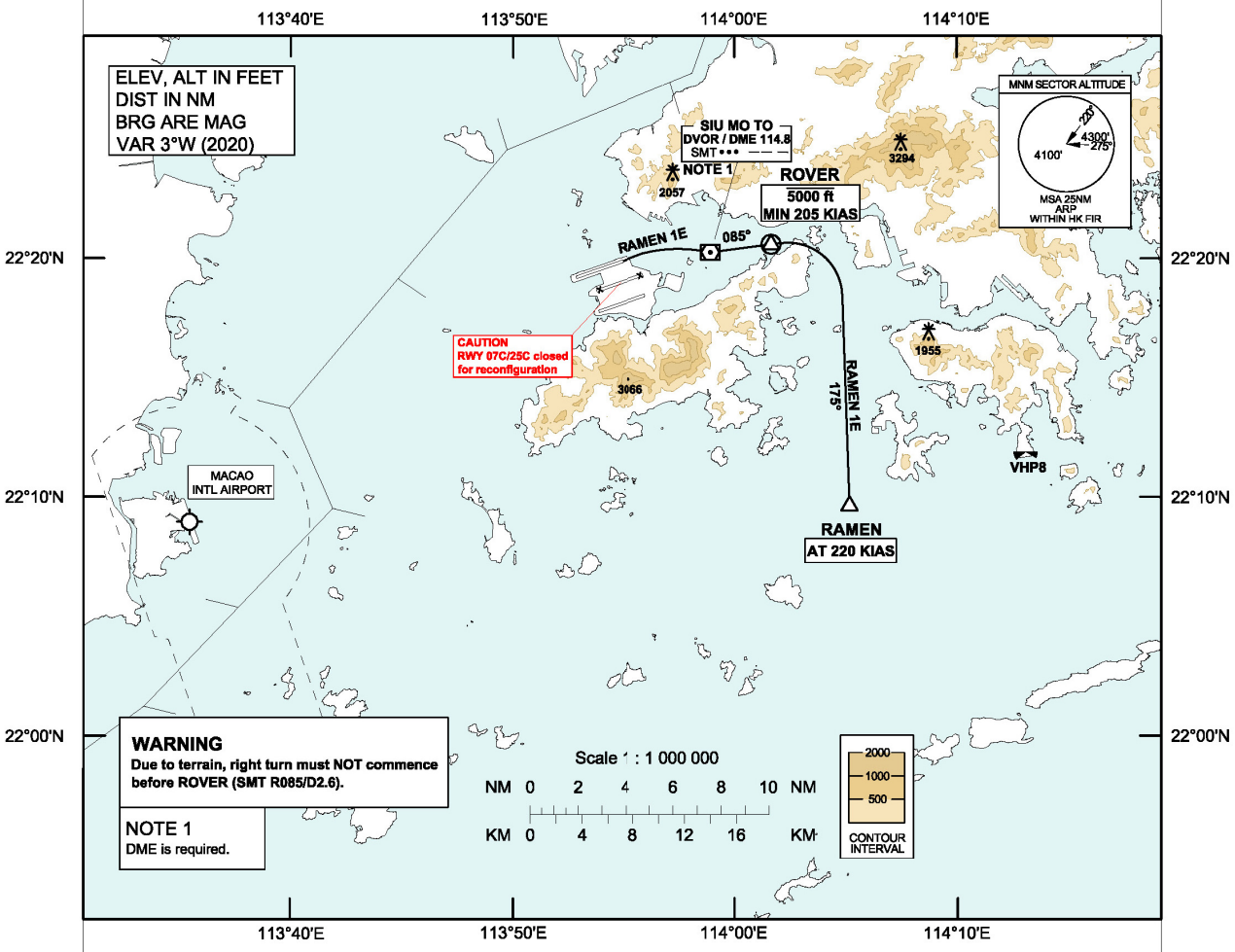
STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

Transition Altitude 9 000 ft

Hong Kong Tower	118.7
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 closed.

AD 2-VHHH-SID-RAMEN-E_V03_220628zk

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 1E 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

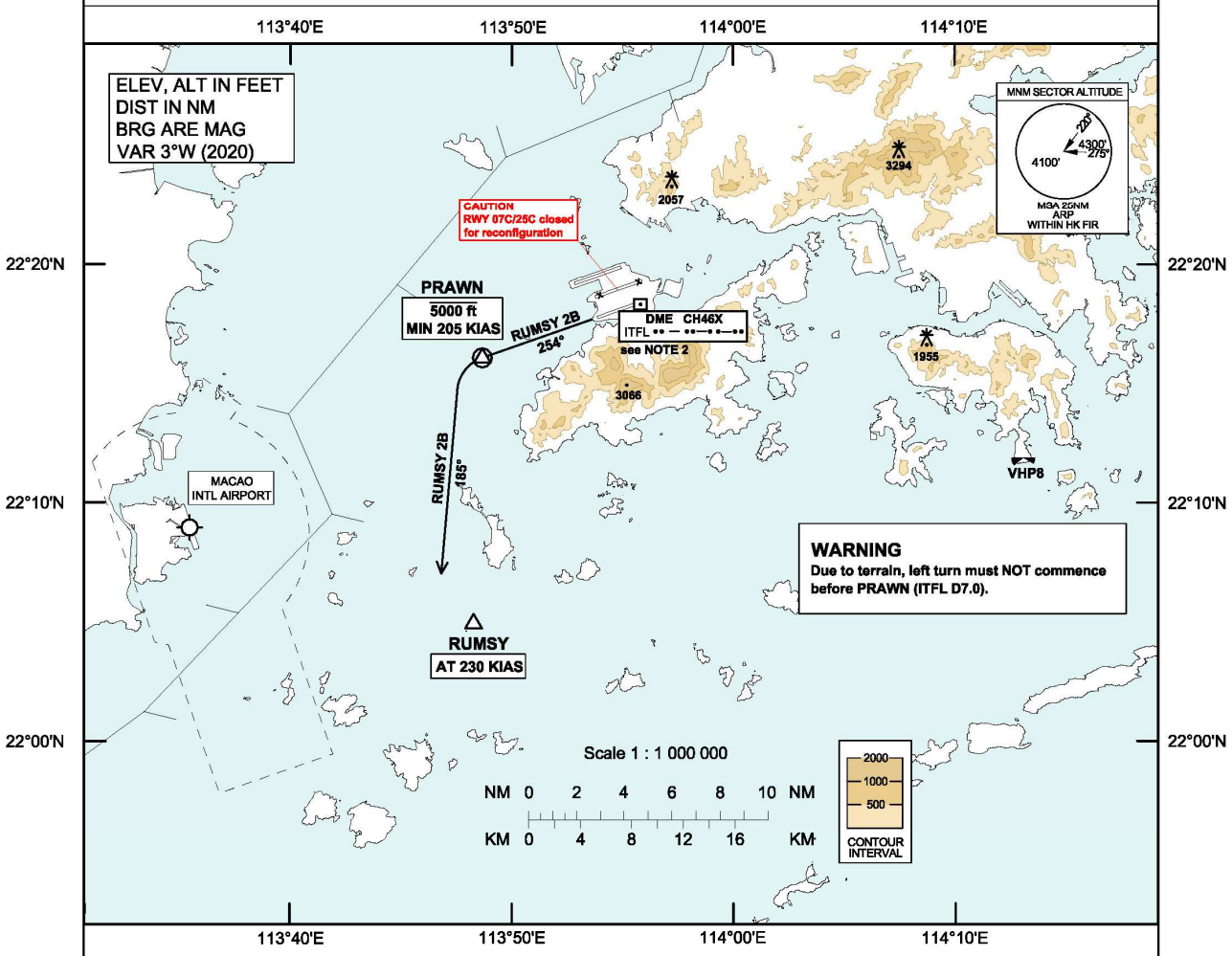
STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

Transition Altitude 9 000 ft

Hong Kong Tower	118.4
Hong Kong Departure	123.8

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: DME channel and ident.

AD 2-VHHH-SID-RUMSY-B_V04_230711lh

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	-

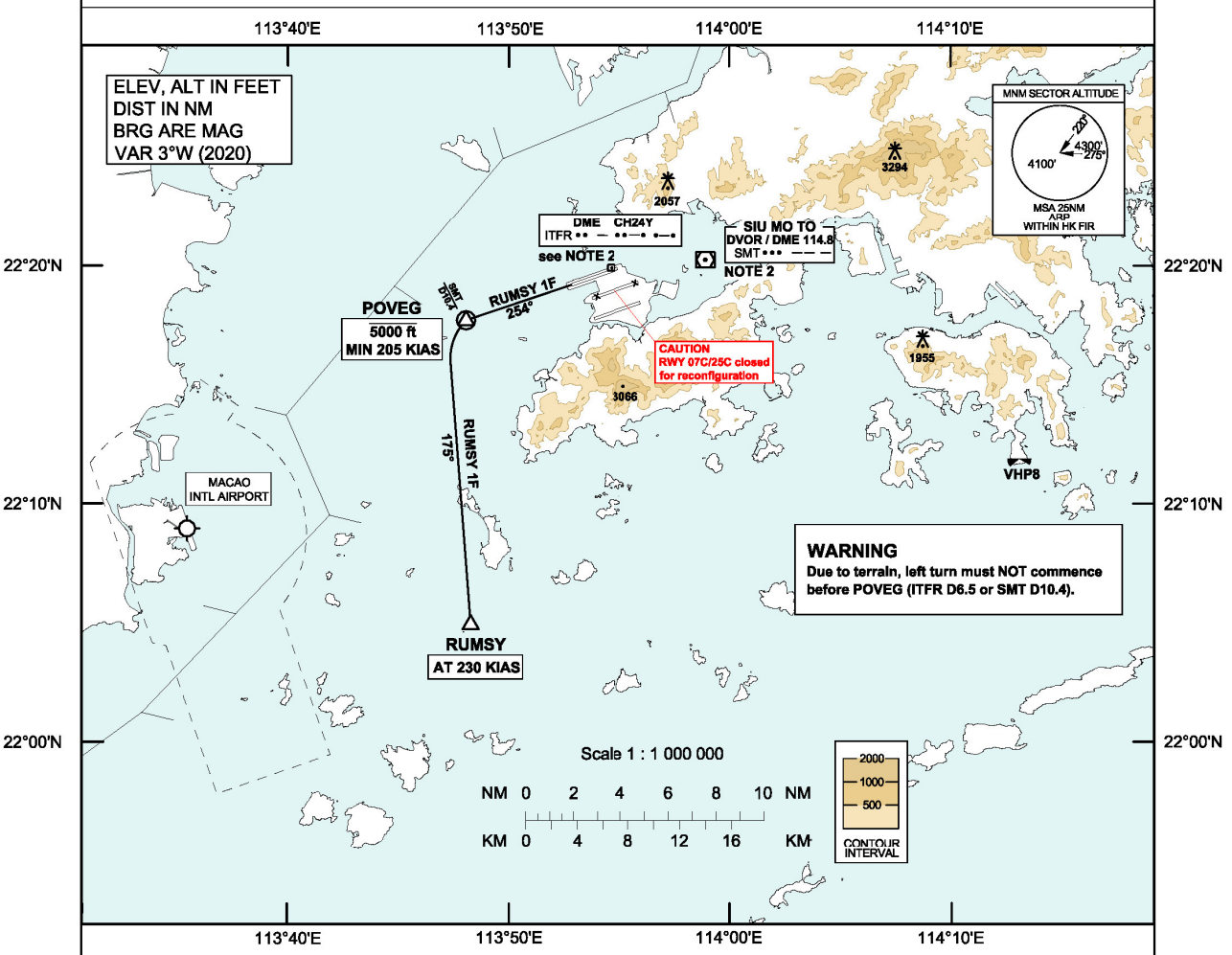
STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

Transition Altitude 9 000 ft

Hong Kong Tower	118.7
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 closed.

AD 2-VHHH-SID-RUMSY-F_V03_220628zk

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

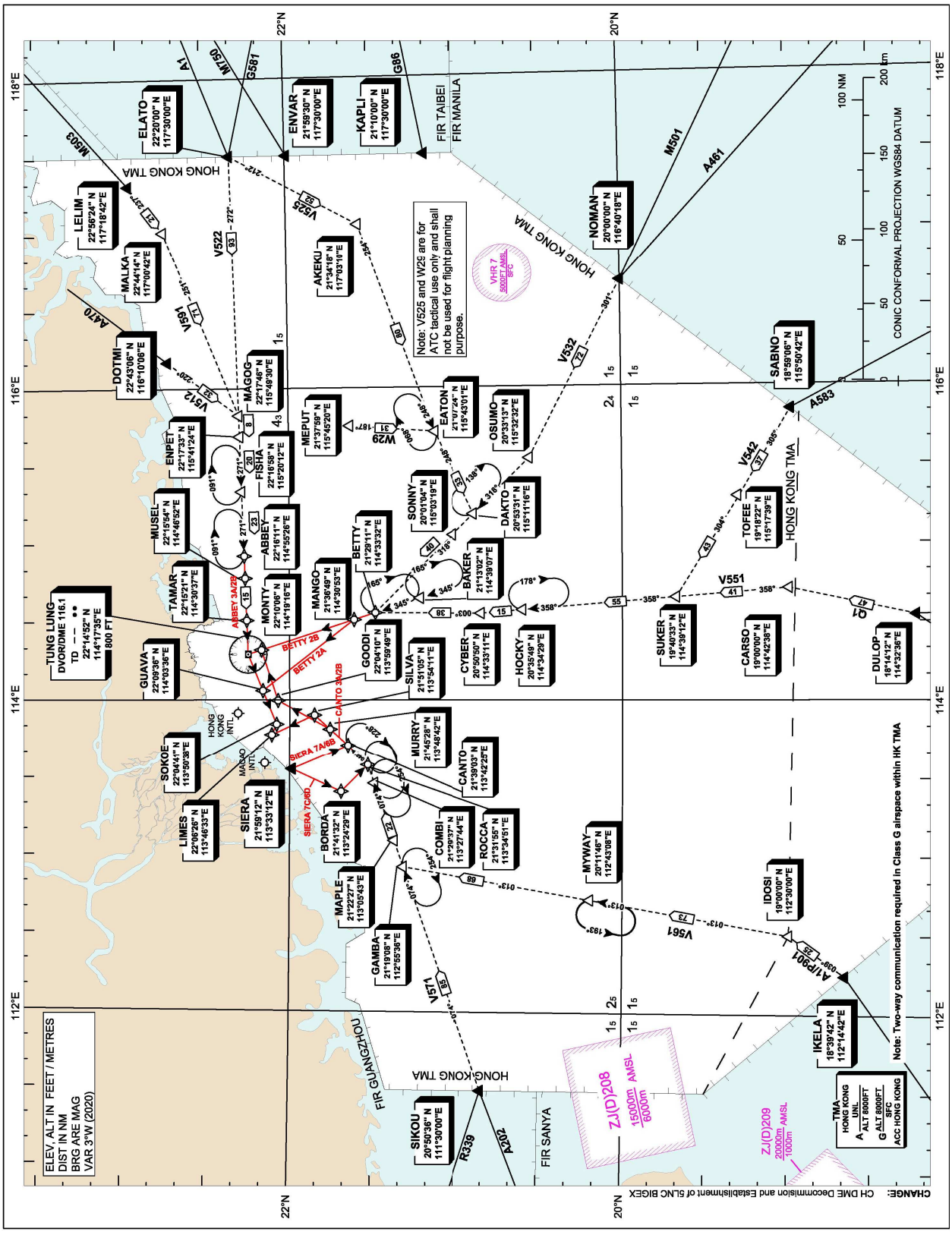
RUMSY 1F RWY 25R

Waypoint Identifier	Coordinates (WGS-84)		Cross Reference from Navaid
POVEG	22 17 43.28N	113 48 03.62E	SMT DME 10.4NM 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



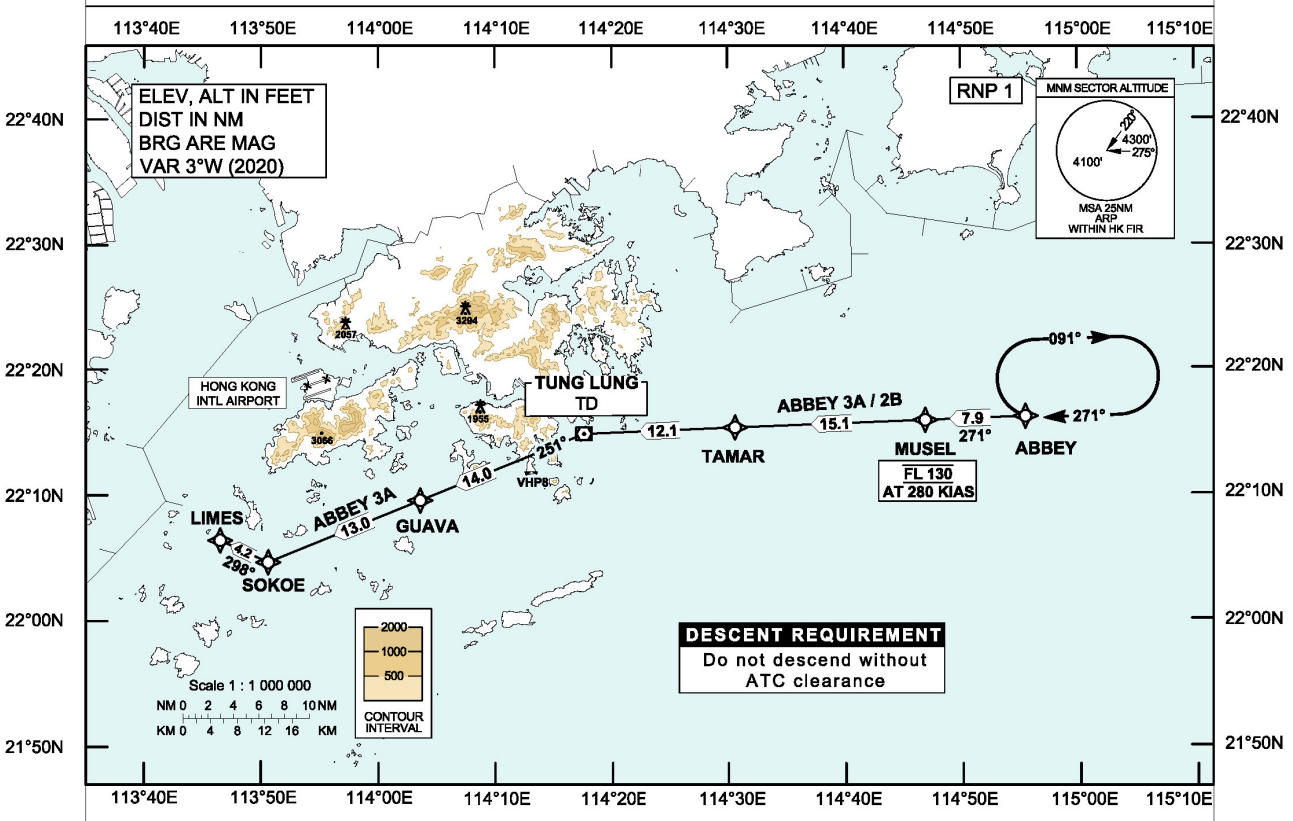
STANDARD ARRIVAL CHART- INSTRUMENT (STAR) - ICAO | Transition Altitude 9 000 ft | HONG KONG RADAR 126.5

HONG KONG / Intl (VHHH)
RNAV (GNSS) ABBEY 3A STAR RWY 07L/07R
RNAV (GNSS) ABBEY 2B STAR RWY 25L/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. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 7.1.3.4.



ABBEY 3A STAR RWY 07L/07R	ABBEY 2B STAR RWY 25L/25R
Expect ILS approach. Descend as directed by ATC.	Expect ILS approach. Descend as directed by ATC.

DESCENT REQUIREMENT
Cross MUSEL at FL130. **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/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/25R, maintain FL130 to TD DVOR. Join TD DVOR holding pattern and descend to 4 500 ft in the hold, then carry out the appropriate ILS approach procedure.

CHANGE: Runway 07C/25C closed.

AD 2-VHHH-STAR-ABBEY_V06_220627zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) STARs

Designator: ABBEY 3A Runway 07L / 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	-	@FL130	@280	RNP 1
03	TF	TAMAR	-	271	+3.0	15.1	-	-	-	RNP 1
04	TF	TD	-	271	+3.0	12.1	-	-	-	RNP 1
05	TF	GUAVA	-	251	+3.0	14.0	L	-	-	RNP 1
06	TF	SOKOE	-	251	+3.0	13.0	-	-	-	RNP 1
07	TF	LIMES	-	298	+3.0	4.2	R	-	-	RNP 1

Designator: ABBEY 2B Runway 25L / 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	-	@FL130	@280	RNP 1
03	TF	TAMAR	-	271	+3.0	15.1	-	-	-	RNP 1
04	TF	TD	-	271	+3.0	12.1	-	-	-	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
TAMAR	22 15 21.00N 114 30 37.00E
TD	22 14 52.42N 114 17 35.30E
GUAVA	22 09 36.10N 114 03 36.30E
SOKOE	22 04 41.20N 113 50 38.10E
LIMES	22 06 25.60N 113 46 32.60E

STANDARD ARRIVAL CHART- INSTRUMENT (STAR) - ICAO

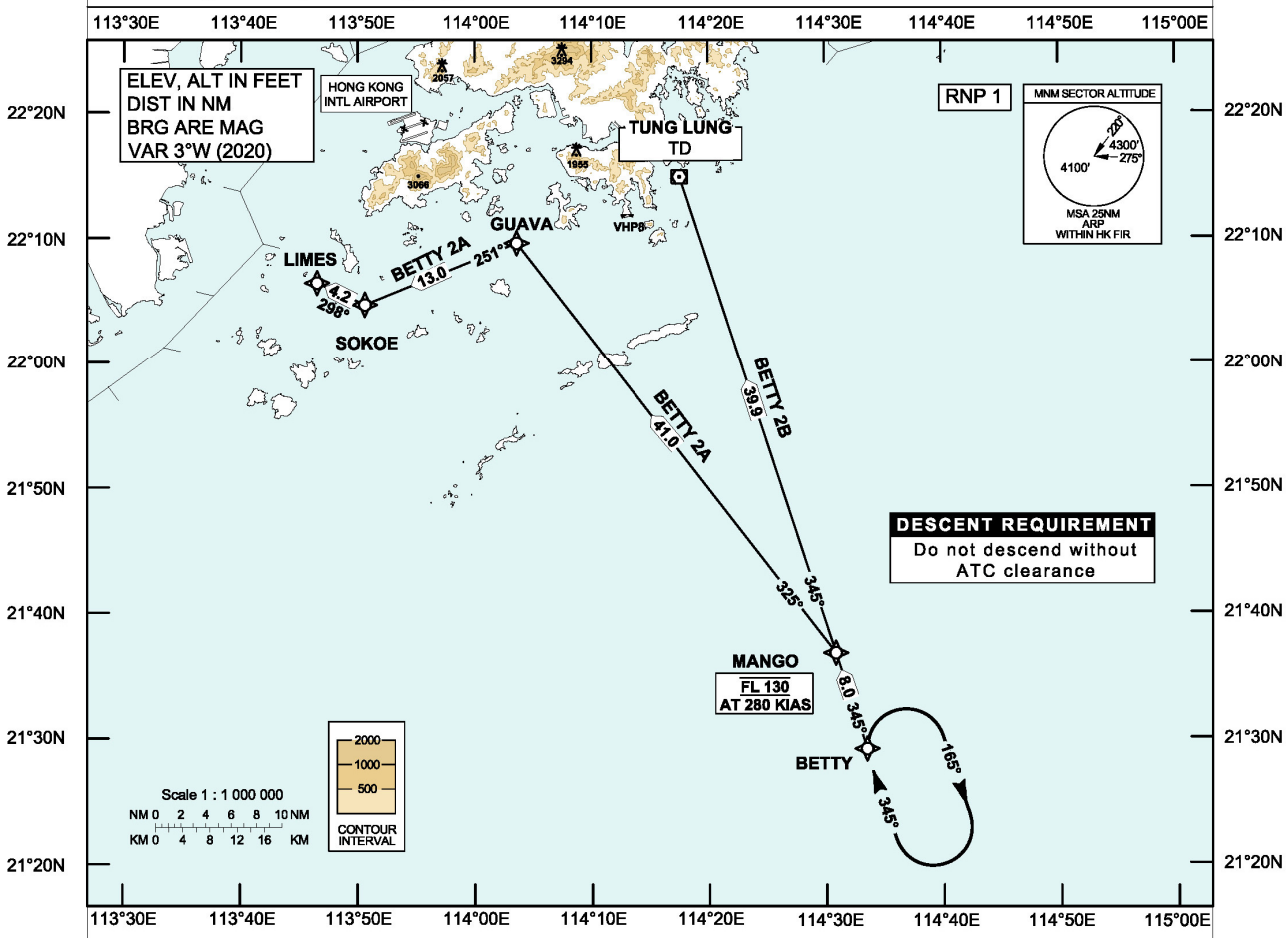
Transition Altitude 9 000 ft
HONG KONG RADAR 126.3

HONG KONG / Intl (VHHH)
RNAV (GNSS) BETTY 2A STAR RWY 07L/07R
RNAV (GNSS) BETTY 2B STAR RWY 25L/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. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 7.1.3.4.



BETTY 2A STAR RWY 07L/07R	BETTY 2B STAR RWY 25L/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/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/25R, maintain FL130 to TD DVOR. Join TD DVOR holding pattern and descend to 4 500 ft in the hold, then carry out the appropriate ILS approach procedure.

CHANGE: Runway 07C/25C closed.

AD 2-VHHH-STAR-BETTY_V06_220627zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) STARs

Designator: BETTY 2A Runway 07L / 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	GUAVA	-	325	+3.0	41.0	L	-	-	RNP 1
04	TF	SOKOE	-	251	+3.0	13.0	L	-	-	RNP 1
05	TF	LIMES	-	298	+3.0	4.2	R	-	-	RNP 1

Designator: BETTY 2B Runway 25L / 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	TD	-	345	+3.0	39.9	-	-	-	RNP 1

Waypoint and Coordinates

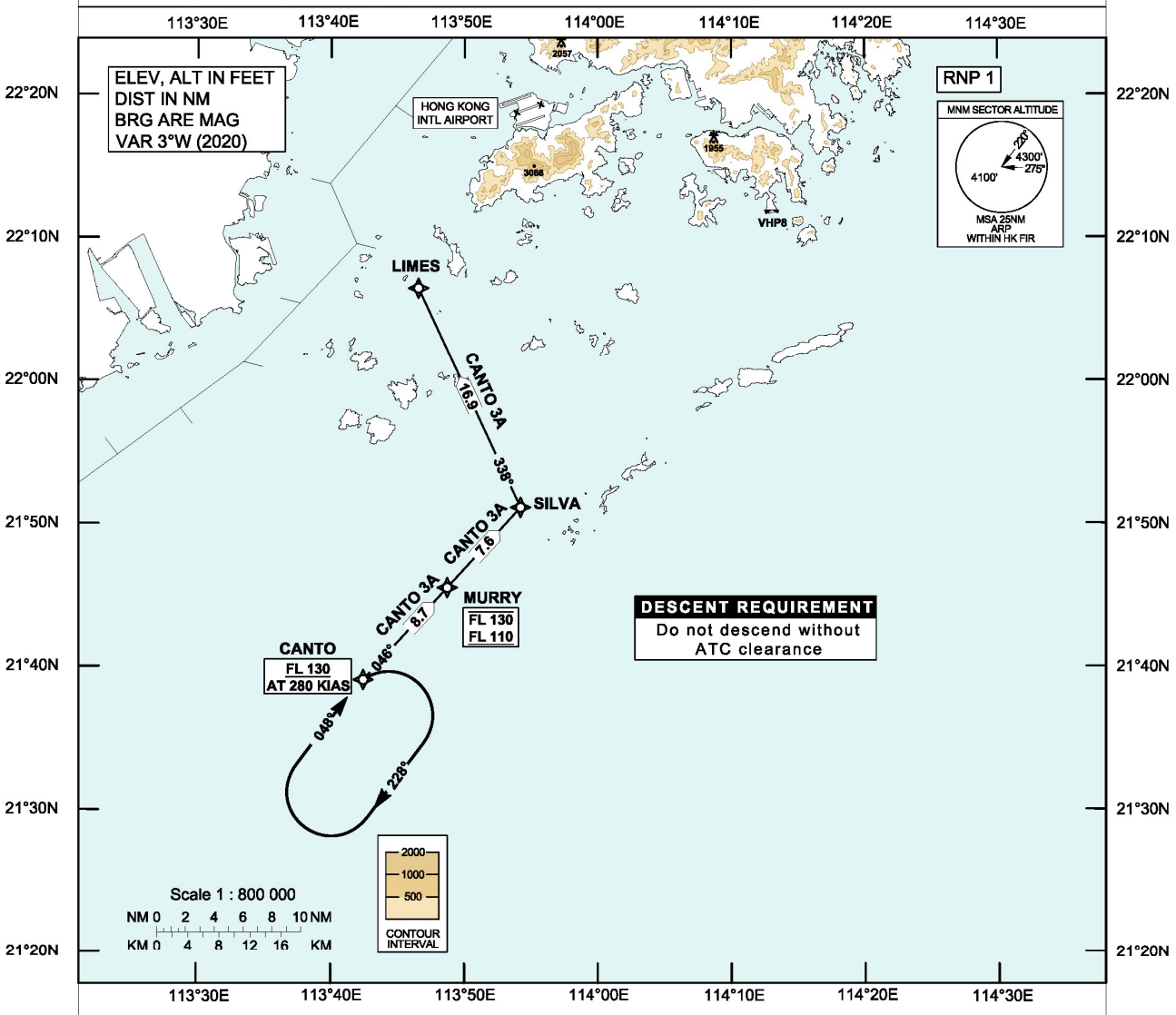
Waypoint Identifier	Coordinates (WGS-84)
BETTY	21 29 10.82N 114 33 31.92E
MANGO	21 36 49.00N 114 30 53.00E
GUAVA	22 09 36.10N 114 03 36.30E
SOKOE	22 04 41.20N 113 50 38.10E
LIMES	22 06 25.60N 113 46 32.60E
TD	22 14 52.42N 114 17 35.30E

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/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. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 7.1.3.4.



CANTO 3A STAR RWY 07L/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: Runway 07C/25C closed.

AD 2-VHHH-STAR-CANTO-A_V06_220627zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) STAR

Designator: CANTO 3A Runway 07L / 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 +FL110	-	RNP 1
03	TF	SILVA	-	046	+3.0	7.6	-	-	-	RNP 1
05	TF	LIMES	-	338	+3.0	16.9	L	-	-	RNP 1

Waypoint and Coordinates

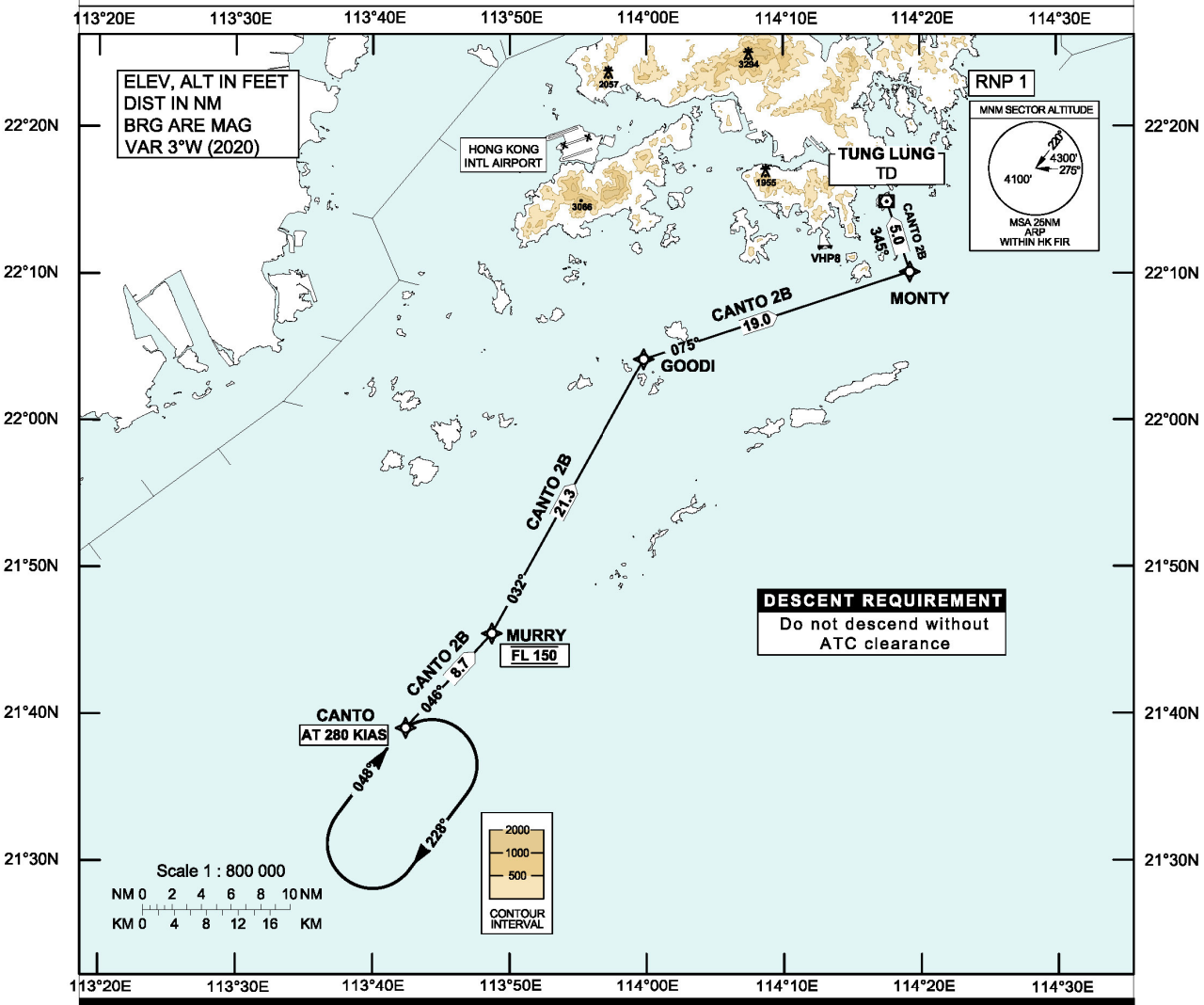
Waypoint Identifier	*Coordinates (WGS-84)*
CANTO	21 39 02.63N 113 42 25.09E
MURRY	21 45 28.37N 113 48 41.97E
SILVA	21 51 04.50N 113 54 10.88E
LIMES	22 06 25.60N 113 46 32.60E

STANDARD ARRIVAL CHART-INSTRUMENT (STAR) - ICAO

Transition Altitude 9 000 ft
HONG KONG RADAR 127.55

HONG KONG / Intl (VHHH)
RNAV (GNSS) CANTO 2B STAR
RWY 25L/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. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 7.1.3.4.



CANTO 2B STAR RWY 25L/25R

Expect ILS approach. Descend as directed by ATC.

DESCENT REQUIREMENT
Cross MURRY at FL150.
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 FL150 to TD DVOR. Join TD DVOR holding pattern and descend to 4 500 ft in the hold, then carry out the appropriate ILS approach procedure.

CHANGE: Runway 07C/25C closed.

AD 2-VHHH-STAR-CANTO-B_V06_220627zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) STAR

Designator: CANTO 2B Runway 25L / 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	-	-	-	@280	RNP 1
02	TF	MURRY	-	046	+3.0	8.7	-	@FL150	-	RNP 1
03	TF	GOODI	-	032	+3.0	21.3	L	-	-	RNP 1
04	TF	MONTY	-	075	+3.0	19.0	R	-	-	RNP 1
05	TF	TD	-	345	+3.0	5.0	L	-	-	RNP 1

Waypoint and Coordinates

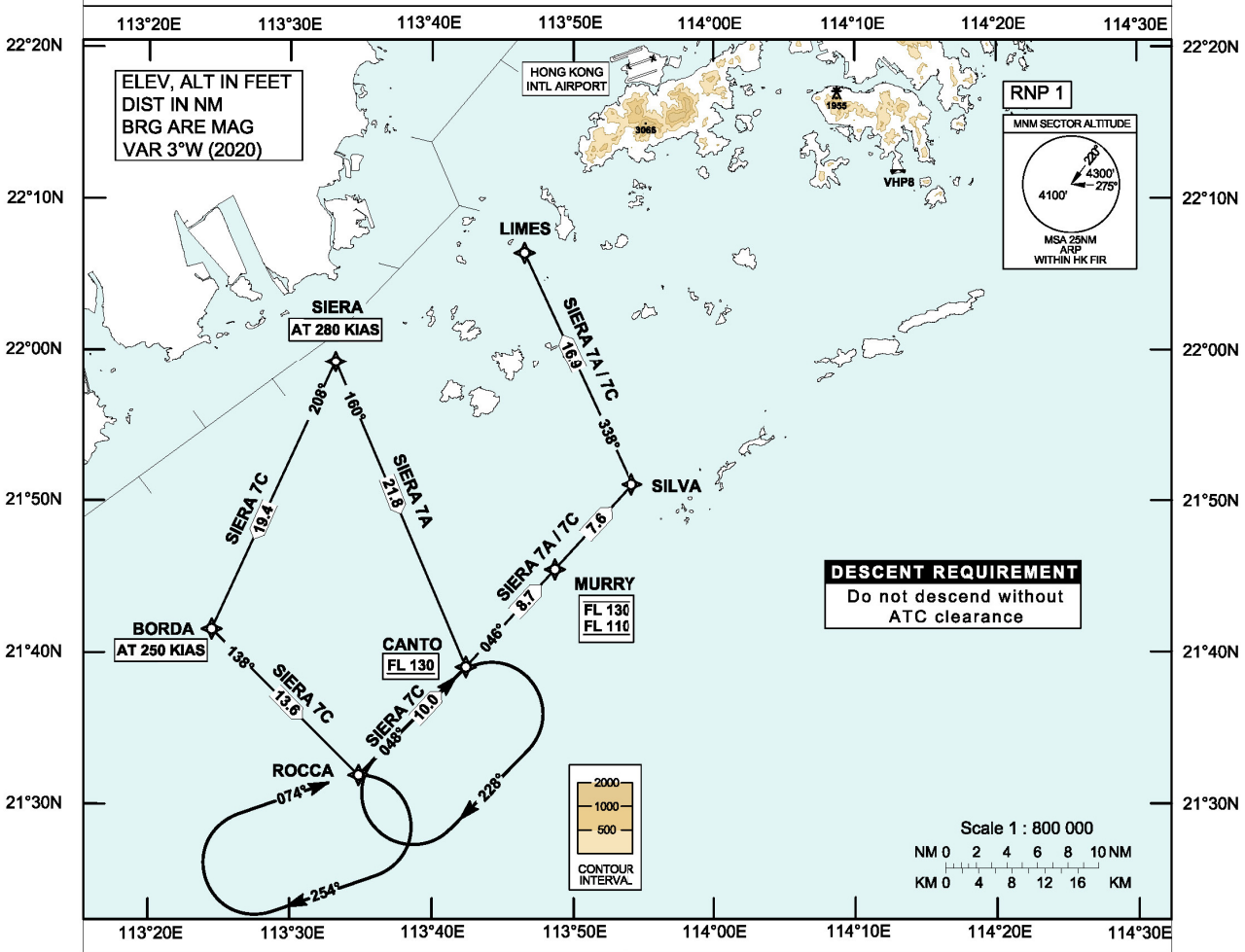
Waypoint Identifier	*Coordinates (WGS-84)*
CANTO	21 39 02.63N 113 42 25.09E
MURRY	21 45 28.37N 113 48 41.97E
GOODI	22 04 09.88N 113 59 48.59E
MONTY	22 10 06.26N 114 19 15.68E
TD	22 14 52.42N 114 17 35.30E

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/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. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 7.1.3.4.



SIERA 7A STAR RWY 07L/07R	SIERA 7C STAR RWY 07L/07R
Expect ILS approach. Descend as directed by ATC. **SPEED CONTROL** Aircraft shall fly at 280 KIAS by SIERA.	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: Runway 07C/25C closed.

AD 2-VHHH-STAR-SIERA-AC_V06_220627zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) STARs

Designator: SIERA 7A Runway 07L / 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 +FL110	-	RNP 1
04	TF	SILVA	-	046	+3.0	7.6	-	-	-	RNP 1
05	TF	LIMES	-	338	+3.0	16.9	L	-	-	RNP 1

Designator: SIERA 7C Runway 07L / 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	L	-	-	RNP 1
04	TF	CANTO	-	048	+3.0	10.0	L	+FL130	-	RNP 1
05	TF	MURRY	-	046	+3.0	8.7	-	-FL130 +FL110	-	RNP 1
06	TF	SILVA	-	046	+3.0	7.6	-	-	-	RNP 1
07	TF	LIMES	-	338	+3.0	16.9	L	-	-	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

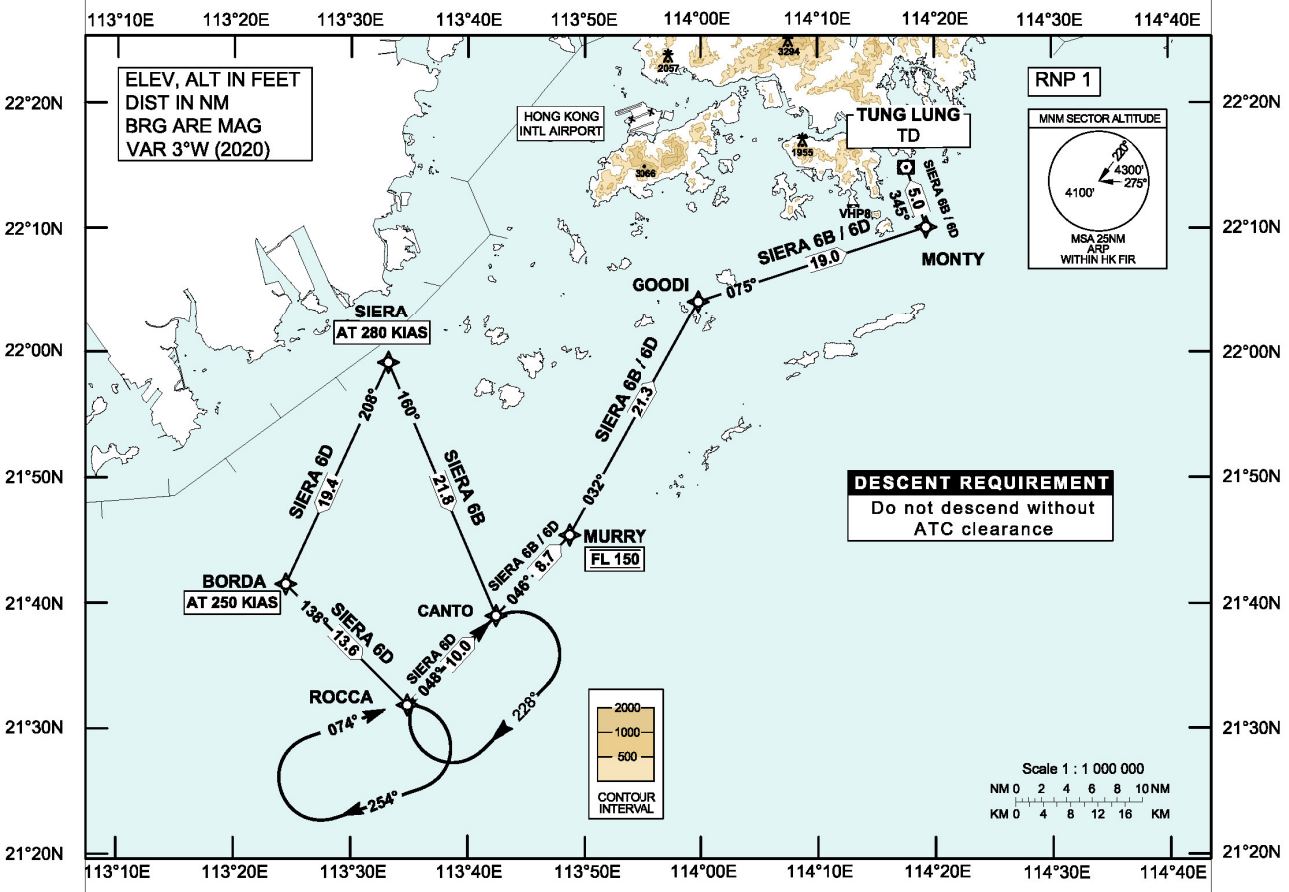
Transition Altitude 9 000 ft
HONG KONG RADAR 127.55

HONG KONG / Intl (VHHH)
RNAV (GNSS) SIERA 6B / 6D STAR
RWY 25L/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. These flights shall fly the contingency procedures as detailed in VHHH AD 2.22 para 7.1.3.4.



SIERA 6B STAR RWY 25L/25R	SIERA 6D STAR RWY 25L/25R
Expect ILS approach. Descend as directed by ATC. **SPEED CONTROL** Aircraft shall fly at 280 KIAS by SIERA.	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 MURRY at FL150.
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 FL150 to TD DVOR. Join TD DVOR holding pattern and descend to 4 500 ft in the hold, then carry out the appropriate ILS approach procedure.

CHANGE: Runway 07C/25C closed.

AD 2-VHHH-STAR-SIERA-BD_V06_220627zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) STARs

Designator: SIERA 6B Runway 25L / 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	-	-	-	RNP 1
03	TF	MURRY	-	046	+3.0	8.7	L	@FL150	-	RNP 1
04	TF	GOODI	-	032	+3.0	21.3	L	-	-	RNP 1
05	TF	MONTY	-	075	+3.0	19.0	R	-	-	RNP 1
06	TF	TD	-	345	+3.0	5.0	L	-	-	RNP 1

Designator: SIERA 6D Runway 25L / 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	L	-	-	RNP 1
04	TF	CANTO	-	048	+3.0	10.0	L	-	-	RNP 1
05	TF	MURRY	-	046	+3.0	8.7	-	@FL150	-	RNP 1
06	TF	GOODI	-	032	+3.0	21.3	L	-	-	RNP 1
07	TF	MONTY	-	075	+3.0	19.0	R	-	-	RNP 1
08	TF	TD	-	345	+3.0	5.0	L	-	-	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
GOODI	22 04 09.88N 113 59 48.59E
MONTY	22 10 06.26N 114 19 15.68E
TD	22 14 52.42N 114 17 35.30E

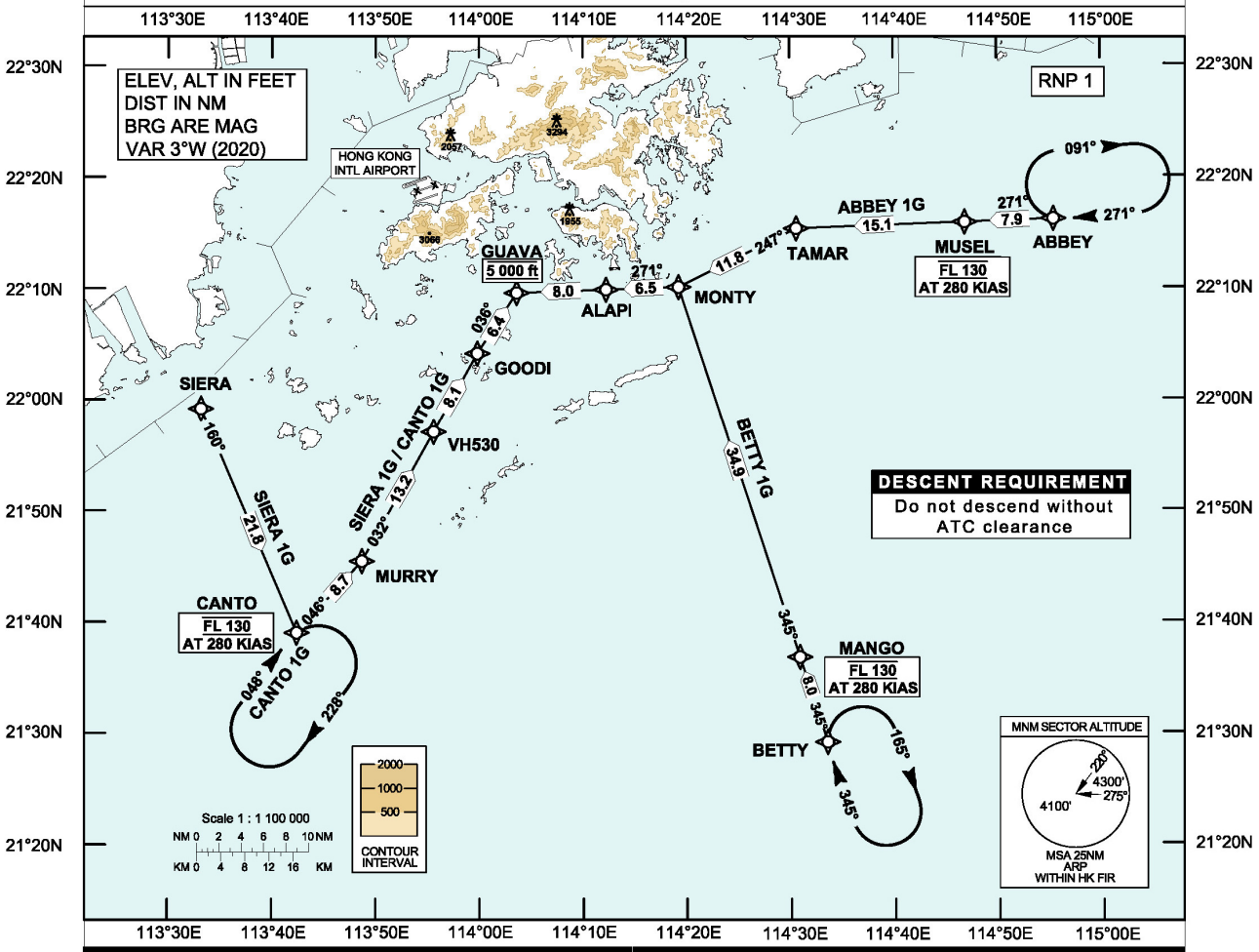
STANDARD ARRIVAL CHART-INSTRUMENT (STAR) - ICAO

Transition Altitude 9 000 ft

HONG KONG RADAR 126.3 (BETTY 1G)
HONG KONG RADAR 126.5 (ABBEY 1G)
HONG KONG RADAR 127.55 (CANTO 1G / SIERA 1G)

HONG KONG / Intl (VHHH)
RNAV (GNSS) ABBEY 1G / BETTY 1G STAR
RNAV (GNSS) CANTO 1G / SIERA 1G STAR
RWY 25L/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 1G STAR RWY 25L/25R	BETTY 1G STAR RWY 25L/25R
Expect RNP AR APCH. Descend as directed by ATC.	Expect RNP AR APCH. Descend as directed by ATC.
CANTO 1G STAR RWY 25L/25R	**SIERA 1G STAR RWY 25L/25R**
Expect RNP AR APCH. Descend as directed by ATC.	Expect RNP AR APCH. Descend as directed by ATC.

DESCENT REQUIREMENT
Cross GUAVA at 5 000 ft.
ABBEY 1G cross MUSEL at FL130.
BETTY 1G cross MANGO at FL130.
CANTO 1G / SIERA 1G cross CANTO at FL130.
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 FL130 to GUAVA. Join GUAVA holding pattern and descend to 5 000 ft in the hold, then carry out the appropriate RNP AR APCH.

CHANGE: Runway 07C/25C closed.

AD 2-VHHH-STAR-G_V06_220627zk

FMC Database Coding Reference for Hong Kong RNAV(GNSS) STARs

Designator: ABBEY 1G Runway 25L / 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	-	@FL130	@280	RNP 1
03	TF	TAMAR	-	271	+3.0	15.1	-	-	-	RNP 1
04	TF	MONTY	-	247	+3.0	11.8	L	-	-	RNP 1
05	TF	ALAPI	-	271	+3.0	6.5	R	-	-	RNP 1
06	TF	GUAVA	-	271	+3.0	8.0	-	@5000	-	RNP 1

Designator: BETTY 1G Runway 25L / 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	MONTY	-	345	+3.0	34.9	-	-	-	RNP 1
04	TF	ALAPI	-	271	+3.0	6.5	L	-	-	RNP 1
05	TF	GUAVA	-	271	+3.0	8.0	-	@5000	-	RNP 1

Designator: CANTO 1G Runway 25L / 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	-	-	-	RNP 1
03	TF	VH530	-	032	+3.0	13.2	L	-	-	RNP 1
04	TF	GOODI	-	032	+3.0	8.1	-	-	-	RNP 1
05	TF	GUAVA	-	036	+3.0	6.4	R	@5000	-	RNP 1

Designator: SIERA 1G Runway 25L / 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	-	-	RNP 1
04	TF	VH530	-	032	+3.0	13.2	L	-	-	RNP 1
05	TF	GOODI	-	032	+3.0	8.1	-	-	-	RNP 1
06	TF	GUAVA	-	036	+3.0	6.4	R	@5000	-	RNP 1

Waypoint Coordinates

Waypoint Identifier	Coordinates (WGS-84)
ABBEY	22 16 11.00N 114 55 25.92E
ALAPI	22 09 52.88N 114 12 13.09E
BETTY	21 29 10.82N 114 33 31.92E
CANTO	21 39 02.63N 113 42 25.09E
GOODI	22 04 09.88N 113 59 48.59E
GUAVA	22 09 36.10N 114 03 36.30E
MANGO	21 36 49.00N 114 30 53.00E

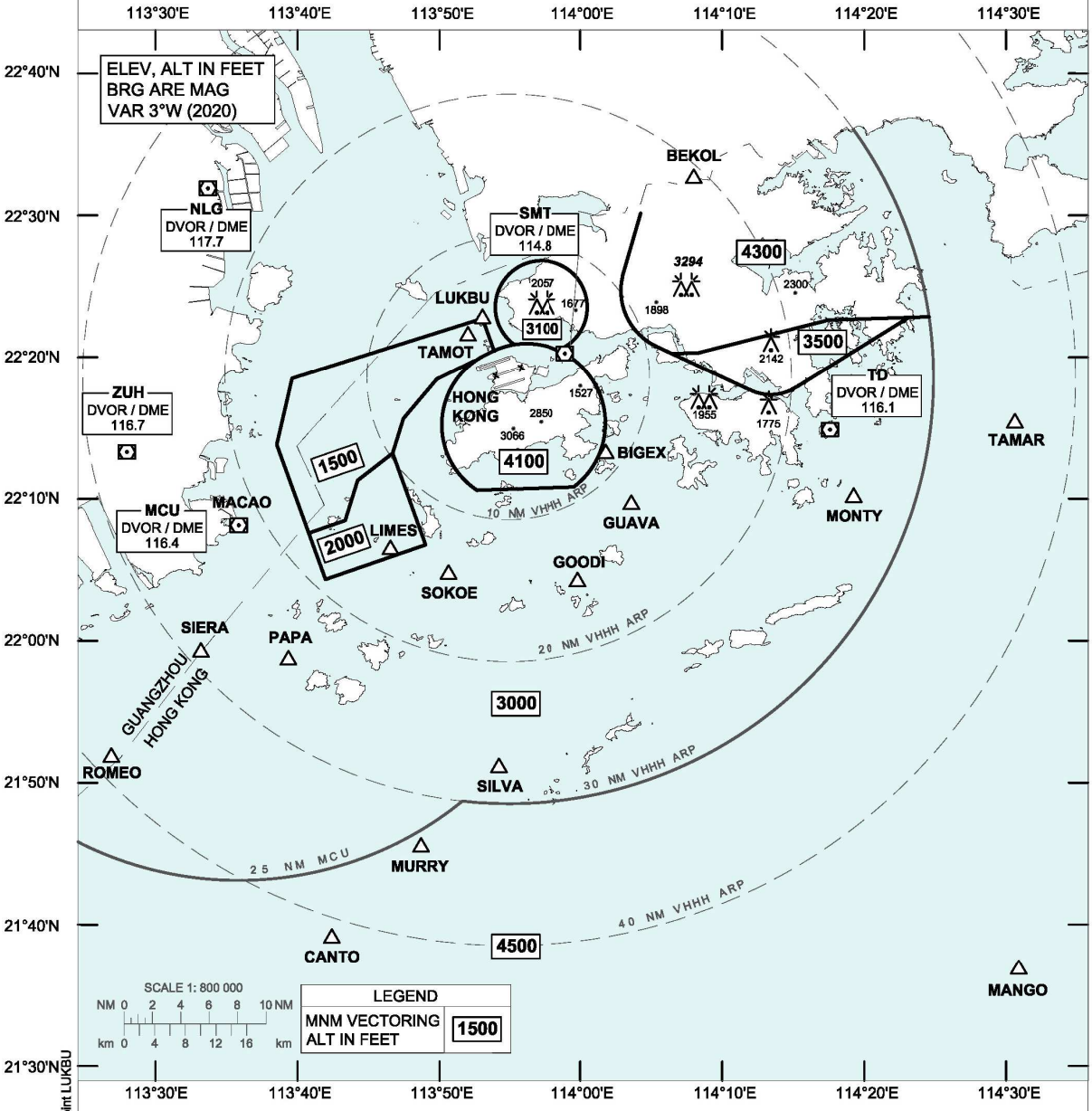
Waypoint Identifier	Coordinates (WGS-84)
MONTY	22 10 06.26N 114 19 15.68E
MURRY	21 45 28.37N 113 48 41.97E
MUSEL	22 15 53.99N 114 46 52.13E
SIERA	21 59 12.00N 113 33 12.00E
TAMAR	22 15 21.00N 114 30 37.00E
VH530	21 57 05.86N 113 55 36.22E
-	-

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/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: LKC DVOR/DME decommissioned and establishment of waypoint LUKBU

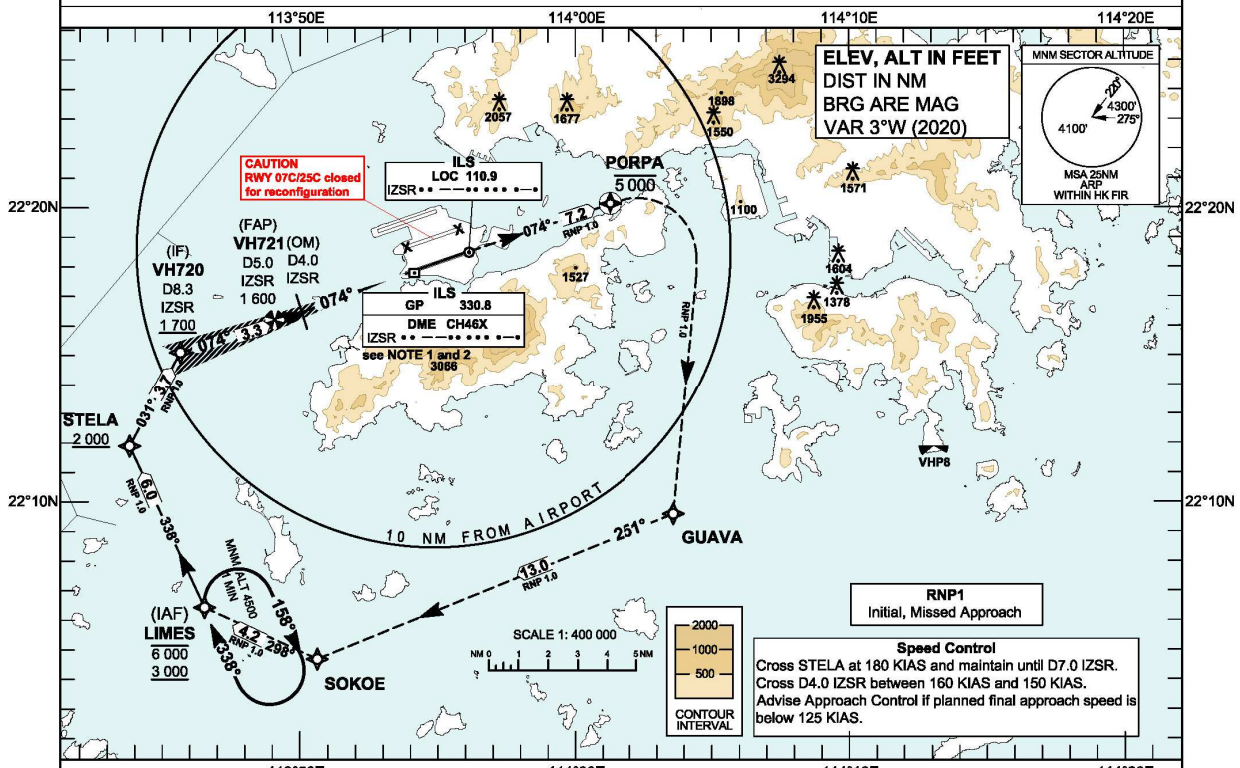
AD 2-VHHH-SMAC-1_V07_231017lh

INSTRUMENT APPROACH CHART - ICAO	AERODROME ELEV 28 FT HEIGHTS RELATED TO THR RWY 07R - ELEV 27 FT	HONG KONG TOWER 118.4 HONG KONG APPROACH 119.1 HONG KONG 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

NOTE 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).

NOTE 2 Simultaneous dependent operation is authorized with RWY 07L.



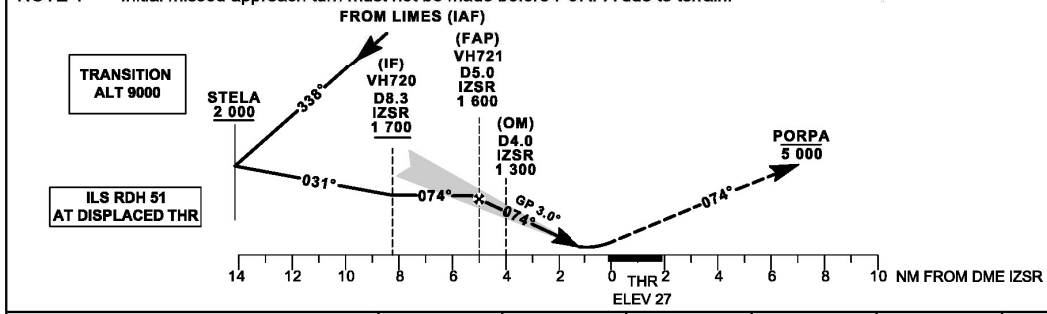
DME IZSR	5	4	3	2	1
DIST THR (NM)	4.8	3.8	2.8	1.8	0.8
ALTITUDE	1620	1300	980	660	340

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.

NOTE 3 Speed restriction: 210 KIAS maximum until established on track to GUAVA, cross GUAVA at 210 KIAS, then maintain 230 KIAS until LIMES.

NOTE 4 Initial missed approach turn must not be made before PORPA due to terrain.



Ground Speed	kt	80	100	120	140	160
VH721 - THR (4.8 NM)	min:sec	3:36	2:53	2:24	2:04	1:48
Rate of Descent (5.2%)	ft / min	420	530	630	740	840

Missed Approach Climb Gradient		Obstacle Clearance Altitude (Height)			
		A	B	C	D
ILS/DME CAT I	2.5%	594 (567)	606 (579)	615 (588)	625 (598)
	3.6% to 1400	227 (200)	227 (200)	227 (200)	227 (200)
ILS/DME CAT II	3.6% to 1400	127 (100)	127 (100)	127 (100)	127 (100)
VISUAL CIRCLING NOT AVAILABLE		N / A			

If unable RNP, inform ATC accordingly. If unable RNP 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.

CHANGE: ILS frequencies and ident, ILS RDH, LOC service volume restriction.

AD 2-VHHH-IAC-01A_V07_230703lh

RWY 07R ILS APPROACH

Navigation Aids

Navaid/Ident	Frequency	Co-ordinates	Remarks
Localizer/IZSR	110.9 MHz	22 18 30.05 N 113 56 08.39 E	Course 074°M
Glide Path	330.8 MHz	22 17 47.78 N 113 54 09.48 E	3° glide slope
DME/IZSR	CH 46X		Co-located

Waypoint List

ILS RWY 07R	
Waypoint Identifier	**Coordinates**
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
VH721 (FAP)	22 16 12.68N 113 49 04.87E
RW07R (THR)	22 17 48.03N 113 53 58.00E
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

Tabular Description

Serial Number	Path Terminator	Waypoint Identifier	Fly-over	Course °M (°T)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (KIAS)	VPA	Navigation Specification
01	IF	LIMES	-	-	-	-	-6000 +3000	-	-	RNP 1
02	TF	STELA	-	338 (335)	6.0	-	+2000	@180	-	RNP 1
03	TF	VH720	-	031 (028)	3.7	R	+1700	@180	-	RNP 1
04	-	VH721	-	074 (071)	3.3	-	-	-	-	N/A
05	-	**RW07R**	**Y**	074 (071)	4.8	-	-	-	-	N/A
06	TF	**PORPA**	**Y**	074 (071)	7.2	-	-5000	-210	-	RNP 1
07	DF	GUAVA	-	-	-	R	-	@210	-	RNP 1
08	TF	SOKOE	-	251 (248)	13.0	R	-	@230	-	RNP 1
09	TF	LIMES	-	298 (295)	4.2	R	-	@230	-	RNP 1

INSTRUMENT APPROACH CHART - ICAO

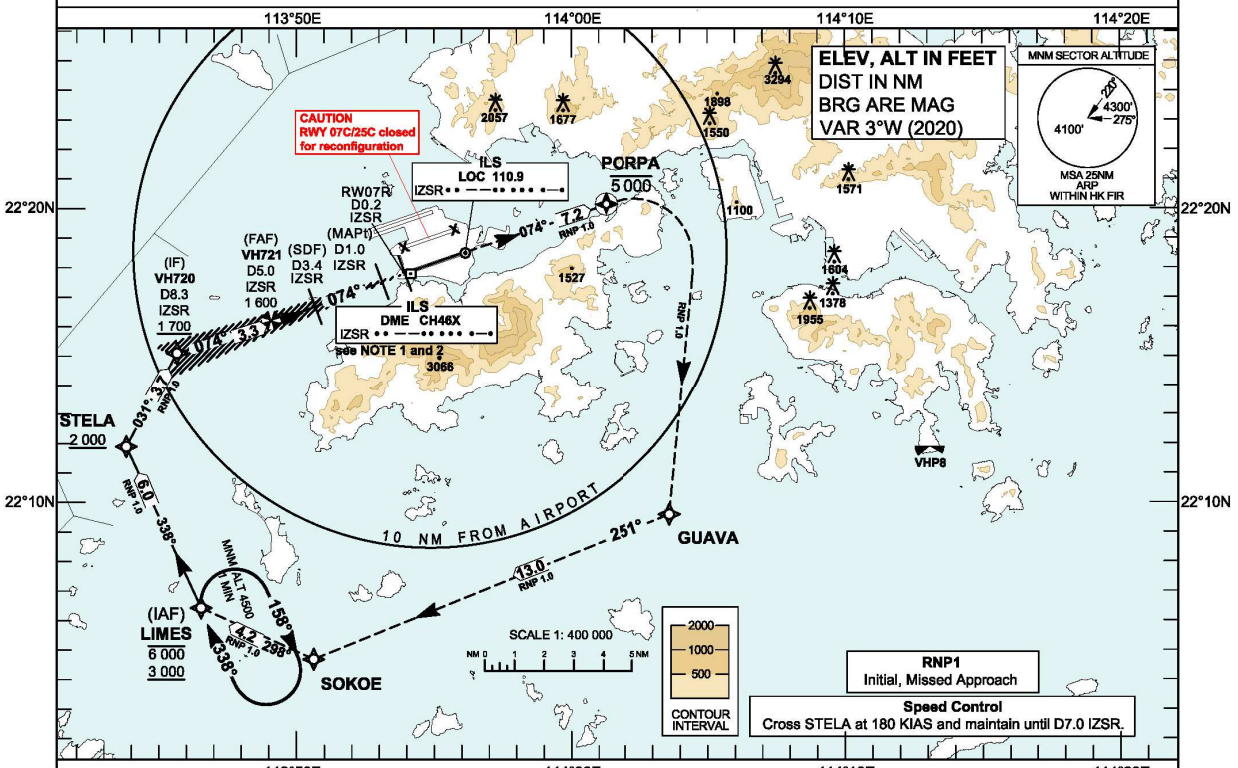
AERODROME ELEV 28 FT
THR ELEV 27 FT
HEIGHTS RELATED TO AD ELEV

HONG KONG TOWER	118.4
HONG KONG APPROACH	119.1
HONG KONG DIRECTOR	119.5

HONG KONG / Intl (VHHH)
LOC RWY 07R

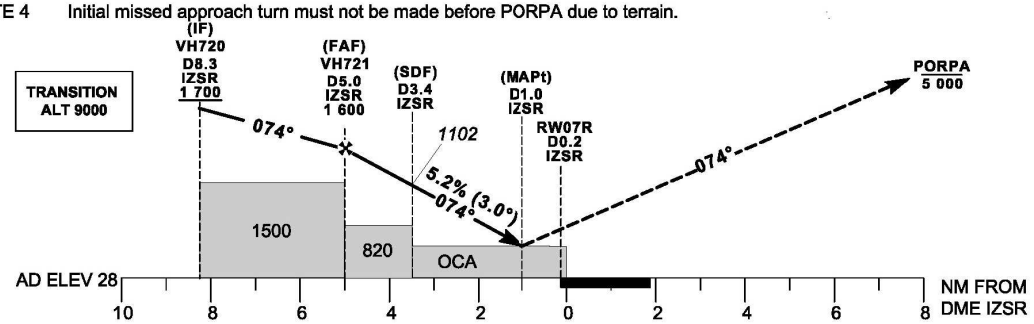
WARNINGS **LOC IZSR SIGNAL UNUSABLE BEYOND 19° RIGHT OF COURSE**

NOTE 1 DME is required.
NOTE 2 Simultaneous dependent operation is authorized with RWY 07L.



DME IZSR	5	4	3	2
DIST THR (NM)	4.8	3.8	2.8	1.8
ALTITUDE	1620	1300	980	660

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.
NOTE 3 Speed restriction: 210 KIAS maximum until established on track to GUAVA, cross GUAVA at 210 KIAS, then maintain 230 KIAS until LIMES.
NOTE 4 Initial missed approach turn must not be made before PORPA due to terrain.



Ground Speed	kt	80	100	120	140	160
VH721 - THR (4.8 NM)	min:sec	3:36	2:53	2:24	2:04	1:48
Rate of Descent (5.2%)	ft / min	420	530	630	740	840

Missed Approach Climb Gradient		Obstacle Clearance Altitude (Height)			
		A	B	C	D
GP INOP	2.5%	880 (850)			
	4.1%	460 (440)			
VISUAL CIRCLING NOT AVAILABLE		N / A			

CHANGE: LOC frequency and ident, DME channel and ident, LOC service volume restriction.

If unable RNP, inform ATC accordingly. If unable RNP 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.

AD 2-VHHH-IAC-01C_V03_230703lh

RWY 07R LOC APPROACH

Navigation Aids

Navaid/Ident	Frequency	Co-ordinates	Remarks
Localizer/IZSR	110.9 MHz	22 18 30.05 N 113 56 08.39 E	Course 074°M
DME/IZSR	CH 46X	22 17 47.78 N 113 54 09.48 E	

Waypoint List

LOC RWY 07R	
Waypoint Identifier	**Coordinates**
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
VH721 (FAF)	22 16 12.68N 113 49 04.87E
(MAPT)	22 17 31.65N 113 53 07.18E
RW07R (THR)	22 17 48.03N 113 53 58.00E
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

Tabular Description

Serial Number	Path Terminator	Waypoint Identifier	Fly-over	Course °M (°T)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (KIAS)	VPA	Navigation Specification
01	IF	LIMES	-	-	-	-	-6000 +3000	-	-	RNP 1
02	TF	STELA	-	338 (335)	6.0	-	+2000	@180	-	RNP 1
03	TF	VH720	-	031 (028)	3.7	R	+1700	@180	-	RNP 1
04	-	VH721	-	074 (071)	3.3	-	-	-	-	N/A
05	-	**RW07R**	**Y**	074 (071)	4.8	-	-	-	-	N/A
06	TF	**PORPA**	**Y**	074 (071)	7.2	-	-5000	-210	-	RNP 1
07	DF	GUAVA	-	-	-	R	-	@210	-	RNP 1
08	TF	SOKOE	-	251 (248)	13.0	R	-	@230	-	RNP 1
09	TF	LIMES	-	298 (295)	4.2	R	-	@230	-	RNP 1

INSTRUMENT APPROACH CHART - ICAO

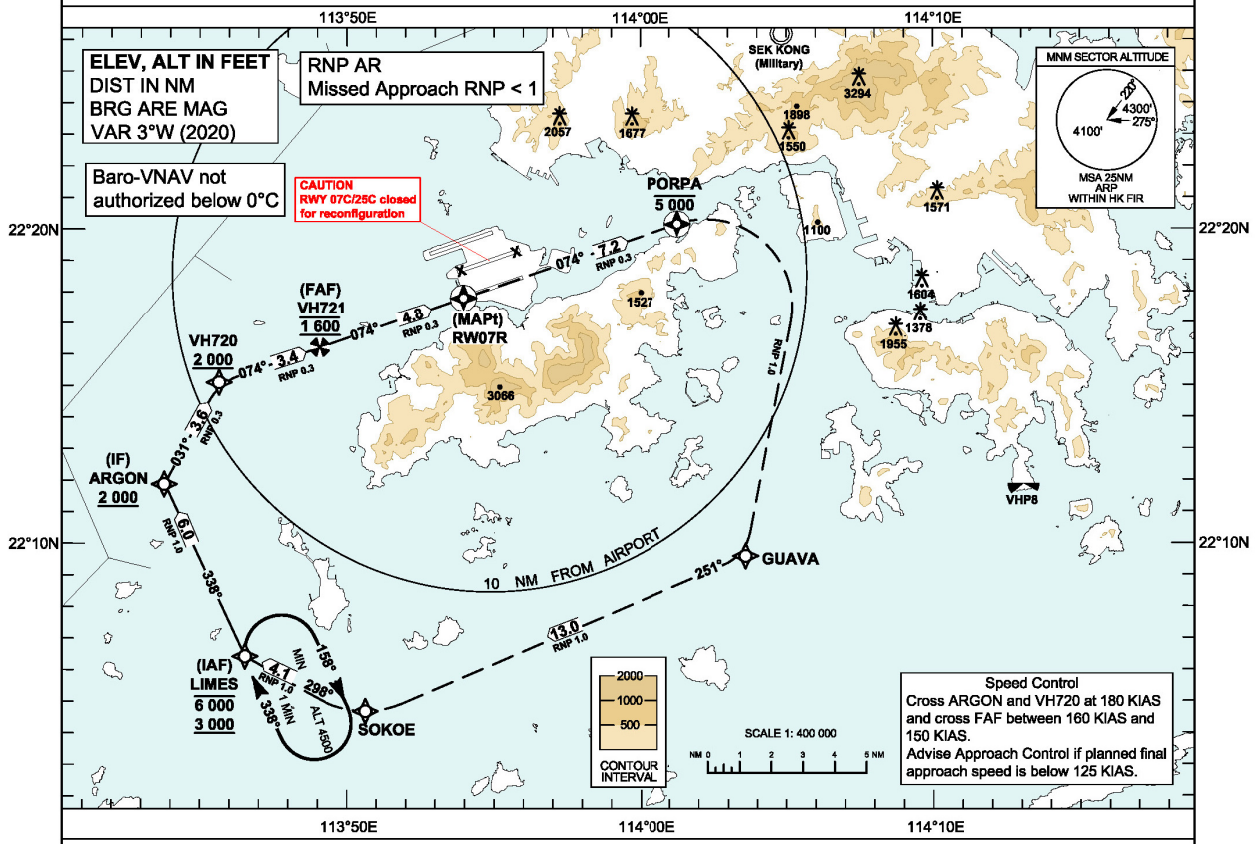
AERODROME ELEV 28 FT
HEIGHTS RELATED TO
THR RWY 07R - ELEV 27 FT

HONG KONG APPROACH	119.1
HONG KONG DIRECTOR	119.5
HONG KONG TOWER	118.4

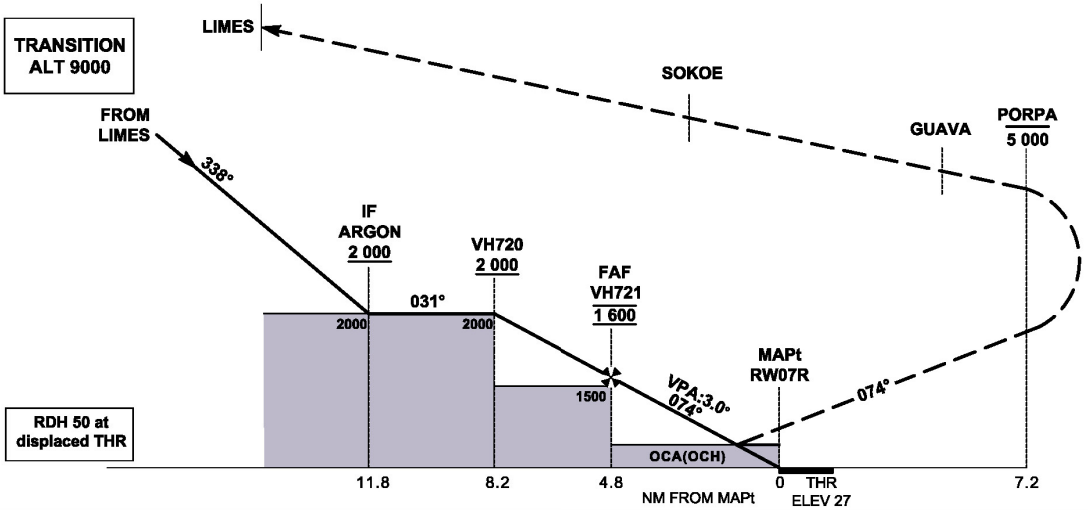
HONG KONG / Intl (VHHH)
RNP Z RWY 07R (AR)

Authorization from HONG KONG CAD is Required
(Refer to VHHH AD 2.22 para. 17.2.1 for the relevant AIC)

NOTE 1 RNP AR APCH: RNP 0.3 in Intermediate, Final and Missed Approach Segment, RNP 1.0 in Initial Segment. RNP values are depicted on Plan View for each applicable leg.
NOTE 2 Aircraft must obtain approval from Hong Kong Civil Aviation Department for RNP AR APCH. Carriage of certified GNSS receiver is mandatory.
NOTE 3 Simultaneous dependent operation is authorized with RWY 07L.
NOTE 4 Do not accept radar vectors inside VH720.



MISSED APPROACH
Climb to 5 000 ft, track to **PORPA**, then right turn direct to GUAVA, then SOKOE, then LIMES, or as directed by ATC.
NOTE 5 Climb gradient of 2.5% is required. (152 ft / NM)
NOTE 6 Speed restriction: 210 KIAS maximum until established on track to GUAVA, cross GUAVA at 210 KIAS, then maintain 230 KIAS until LIMES.



OCA (OCH)	System	A	B	C	D
RNP 0.3	GNSS	430 (410)	430 (410)	430 (410)	430 (410)

DIST THR (NM)	4	3	2
ALT (HGT) (FT)	1350 (1323)	1030 (1003)	710 (683)

CHANGE: Base map update, Runway 07C/25C closed, Tai Mo Shan elevation.

AD 2-VHHH-IAC-01E_V07_220627zk

RNP Z RWY 07R (AR) APPROACH

Tabular Description

Serial Number	*Path Descriptor*	*Waypoint Identifier*	*Fly-over*	*Course/Track °M(°T)*	*Magnetic Variation*	*Distance (NM)*	*Turn Direction*	*Altitude (ft)*	*Speed (KIAS)*	*VPA*	*Navigation Specification*
01	IF	LIMES	-	-	+3.0	-	-	-6000 +3000	-	-	RNP AR APCH
02	TF	ARGON	-	338 (335)	+3.0	6.0	-	+2000	@180	-	RNP AR APCH
03	TF	VH720	-	031 (028)	+3.0	3.6	R	+2000	@180	-	RNP AR APCH
04	TF	VH721	-	074 (071)	+3.0	3.4	R	@1600	-160 +150	-	RNP AR APCH
05	TF	**RW07R**	**Y**	074 (071)	+3.0	4.8	-	@77	-	-3.0	RNP AR APCH
06	TF	**PORPA**	**Y**	074 (071)	+3.0	7.2	-	- 5000	-210	-	RNP AR APCH
07	DF	GUAVA	-	-	+3.0	-	R	-	@210	-	RNP AR APCH
08	TF	SOKOE	-	251 (248)	+3.0	13.0	R	-	@230	-	RNP AR APCH
09	TF	LIMES	-	-	+3.0	4.1	R	-	@230	-	RNP AR APCH

Waypoint List

Waypoint Identifier	Coordinates (WGS84)
LIMES (IAF)	22 06 25.60 N 113 46 32.60 E
ARGON (IF)	22 11 52.56 N 113 43 47.67 E
VH720	22 15 05.94 N 113 45 39.56 E
VH721 (FAF)	22 16 12.68 N 113 49 04.87 E
RW07R (MAPT)	22 17 48.03 N 113 53 58.00 E
PORPA	22 20 09.10 N 114 01 16.30 E
GUAVA	22 09 36.10 N 114 03 36.30 E
SOKOE	22 04 41.20 N 113 50 38.10 E

INSTRUMENT APPROACH CHART - ICAO

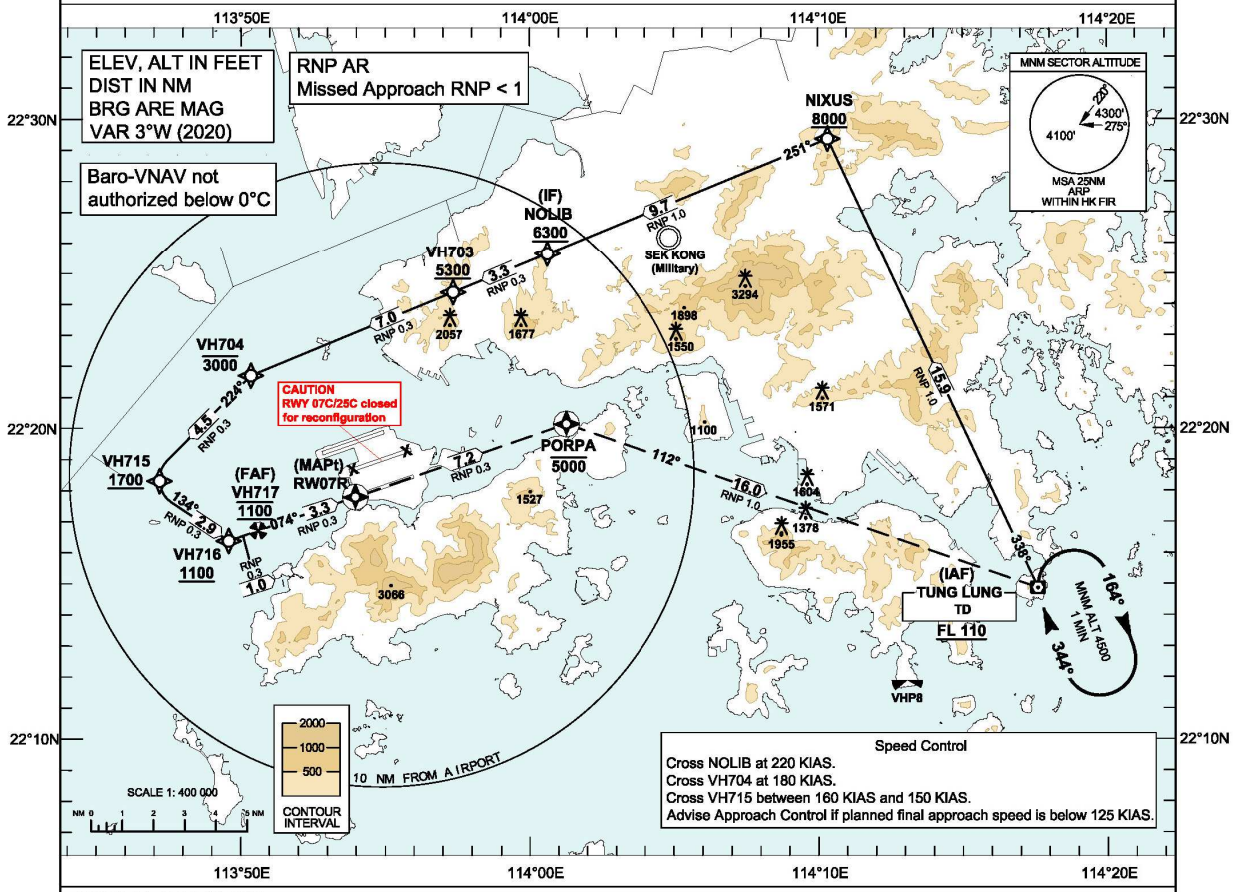
AERODROME ELEV 28 FT (HEIGHTS RELATED TO THR RWY 07R - ELEV 27 FT)

HONG KONG TOWER	118.4
HONG KONG APPROACH	119.1
HONG KONG DIRECTOR	119.5

HONG KONG / Intl (VHHH)
RNP Y RWY 07R (AR)

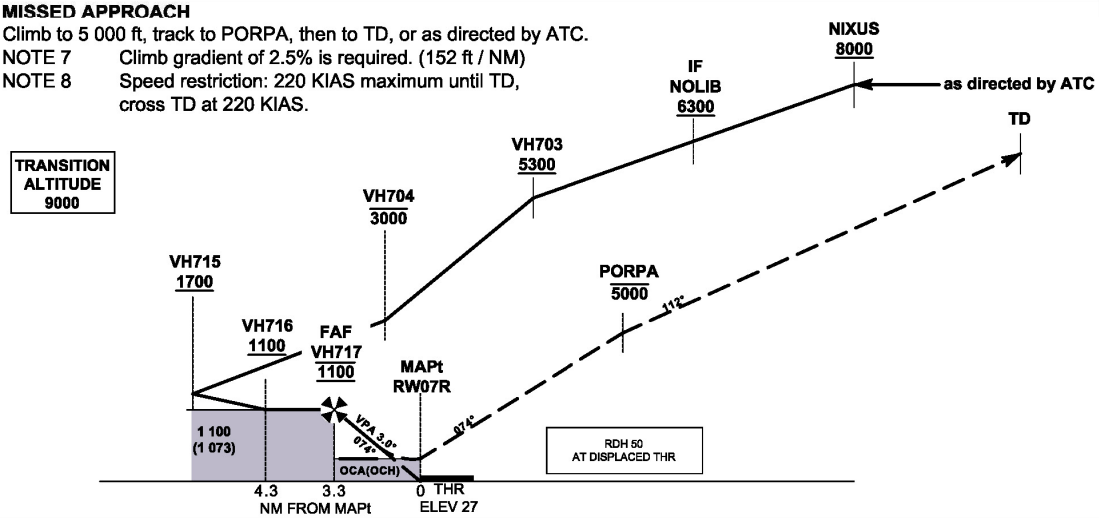
Authorization from HONG KONG CAD is Required
(Refer to VHHH AD 2.22 para. 17.2.1 for the relevant AIC)

NOTE 1 RNP AR APCH: RNP 0.3 in Intermediate, Final and Missed Approach Segment, RNP 1.0 in Initial Segment. RNP values are depicted on Plan View for each applicable leg.
NOTE 2 Aircraft must obtain approval from Hong Kong Civil Aviation Department for RNP AR APCH. Carriage of certified GNSS receiver is mandatory.
NOTE 3 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.
NOTE 4 This is the contingency procedure for RWY07R when bad weather or other unforeseen circumstances block the flight path to the South West of the airport.
NOTE 5 Simultaneous dependent operation is authorized with RWY 07L.
NOTE 6 Do not accept radar vectors inside NOLIB.



MISSED APPROACH

Climb to 5 000 ft, track to PORPA, then to TD, or as directed by ATC.
NOTE 7 Climb gradient of 2.5% is required. (152 ft / NM)
NOTE 8 Speed restriction: 220 KIAS maximum until TD, cross TD at 220 KIAS.



OCA (OCH)	System	A	B	C	D
RNP 0.3	GNSS	430 (410)	430 (410)	430 (410)	430 (410)

DIST THR (NM)	4	3	2
ALT (HGT) (FT)	1350 (1323)	1030 (1003)	710 (683)

CHANGE: Track bearing and distances.

AD 2-VHHH-IAC-01G_V08_221018lh

RNP Y RWY 07R (AR) APPROACH

Tabular Description

Serial Number	*Path Descriptor*	*Waypoint Identifier*	*Fly-over*	*Course/Track °M(°T)*	*Magnetic Variation*	*Distance (NM)*	*Turn Direction*	*Altitude (ft)*	*Speed (KIAS)*	*VPA*	*Navigation Specification*
01	IF	TD	-	-	+3.0	-	-	+FL110	-	-	RNP AR APCH
02	TF	NIXUS	-	338 (335)	+3.0	15.9	-	+8000	-	-	RNP AR APCH
03	TF	NOLIB	-	251 (248)	+3.0	9.7	-	+6300	@220	-	RNP AR APCH
04	TF	VH703	-	251 (248)	+3.0	3.3	-	+5300	-	-	RNP AR APCH
05	TF	VH704	-	251 (248)	+3.0	7.0	-	-3000	@180	-	RNP AR APCH
06	TF	VH715	-	224 (221)	+3.0	4.5	-	+1700	-160 +150	-	RNP AR APCH
07	TF	VH716	-	134 (131)	+3.0	2.9	-	+1100	-	-	RNP AR APCH
08	TF	VH717	-	074 (071)	+3.0	1.0	-	@1100	-	-	RNP AR APCH
09	TF	**RW07R**	**Y**	074 (071)	+3.0	3.3	-	@77	-	-3.0	RNP AR APCH
10	TF	**PORPA**	**Y**	074 (071)	+3.0	7.2	-	- 5000	-220	-	RNP AR APCH
11	TF	TD	-	112 (109)	+3.0	16.0	-	-	@220	-	RNP AR APCH

Waypoint List

Waypoint Identifier	Coordinates (WGS84)	
TD (IAF)	22 14 52.42 N	114 17 35.30 E
NIXUS	22 29 22.05 N	114 10 19.70 E
NOLIB (IF)	22 25 38.95 N	114 00 36.84 E
VH703	22 24 23.82 N	113 57 20.92 E
VH704	22 21 42.46 N	113 50 21.18 E
VH715	22 18 18.69 N	113 47 11.73 E
VH716	22 16 23.23 N	113 49 35.17 E
VH717 (FAF)	22 16 42.96 N	113 50 36.28 E
RW07R (MAPT)	**22 17 48.03 N**	**113 53 58.00 E**
PORPA	**22 20 09.10 N**	**114 01 16.30 E**

INSTRUMENT APPROACH CHART - ICAO

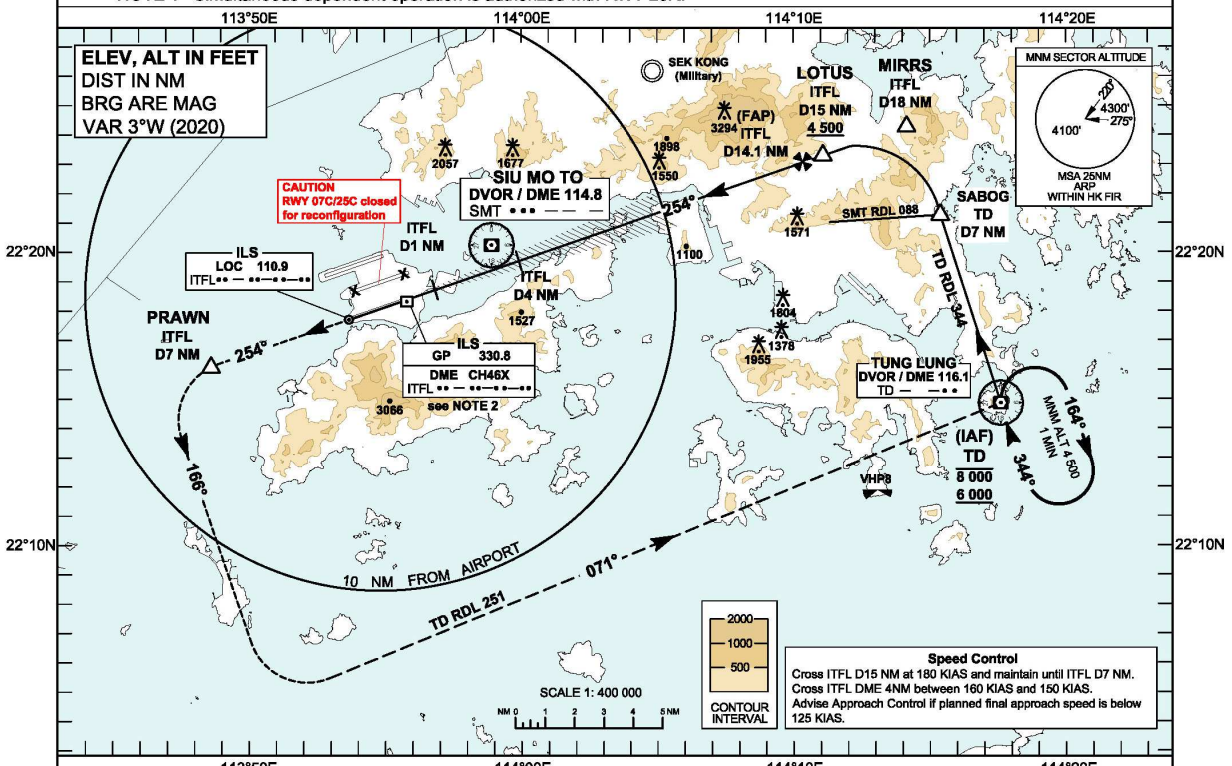
AERODROME ELEV 28 FT
HEIGHTS RELATED TO
THR RWY 25L - ELEV 27 FT

HONG KONG TOWER	118.4
HONG KONG APPROACH	119.1
HONG KONG DIRECTOR	119.5

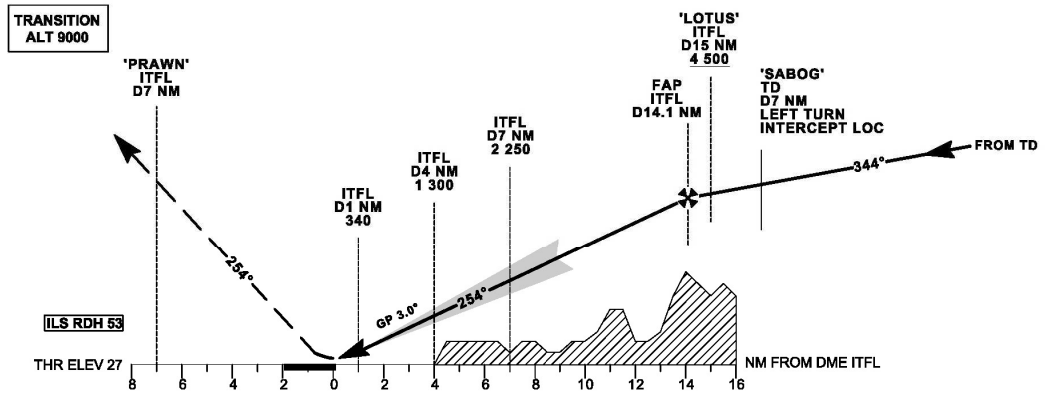
HONG KONG / Intl (VHHH)
ILS RWY 25L
CAT II

WARNINGS 1. LOC ITFL SIGNAL UNUSABLE BEYOND 28° LEFT OF COURSE AND GP SIGNAL UNUSABLE BEYOND 7° LEFT OF CL
2. GP SIGNAL MAY BE LIABLE TO INTERFERENCE FROM GROUND TRAFFIC DURING CAT I OPERATIONS

NOTE 1 Simultaneous dependent operation is authorized with RWY 25R.



DME ITFL	10	9	8	7	6	5	4	3	2	1
ALT 3° APCH (HGT)	3210 (3183)	2890 (2863)	2570 (2543)	2250 (2223)	1940 (1913)	1620 (1593)	1300 (1273)	980 (953)	660 (633)	340 (313)



NOTE 2 DME is required. If unable to receive ITFL DME pilot shall advise ATC and will receive equivalent radar ranges for FAP (ITFL DME 14.1 NM) and OM fix (ITFL DME 4NM).

GS KT	160	140	120	100	80
FT Per Minute	840	740	630	530	420

AIRCRAFT CATEGORIES	CAT I * OCA (OCH)	CAT II * OCA (OCH)	VISUAL CIRCLING
A, B, C, D	227 ft (200 ft)	127 ft (100 ft)	NOT AVAILABLE

*** These procedures require a missed approach climb gradient of 4% (243 ft/NM) until passing 1 800 ft.**
For aircraft which can only achieve a 2.5% (152 ft/NM) climb gradient, the CAT I OCA (OCH) is 437 ft (410 ft).

MISSED APPROACH
Climb to 5 000 ft. Remain on the extended runway centreline tracking 254°M. At PRAWN (ITFL DME 7 NM), turn left to track 166°M to establish inbound on TD DVOR RDL 251. Join TD holding pattern or as directed by ATC.
NOTE 3 Speed restriction: 185 KIAS maximum until established on track 166°M, then maintain 230 KIAS until TD.

If TD DVOR IS NOT AVAILABLE
Leave reporting point 'TD' on track 344°M descending from 8 000 ft to 4 500 ft. When crossing SMT RDL 088, turn left to track 299°M to intercept RWY 25L LOC ITFL.

MISSED APPROACH
Climb to 5 000 ft. Remain on the extended runway centreline tracking 254°M. At PRAWN (ITFL DME 7 NM), turn left to track 166°M. Expect radar vectors to final approach track.

CHANGE: GP service volume restriction.

AD 2-VHHH-IAC-02A_V08_231116lh

RWY 25L ILS APPROACH

Navigation Aids

Navaid/Ident	Frequency	Co-ordinates	Remarks
Localizer/ITFL	110.9 MHz	22 17 42.98 N 113 53 42.30 E	Course 254°M
Glide Path	330.8 MHz	22 18 19.93 N 113 55 49.28 E	3° glide slope Co-located
DME/ITFL	CH 46X		
SMT DVOR	114.8 MHz	22 20 15.43 N 113 58 55.46 E	Co-located
SMT DME	CH 95X		
TD DVOR	116.1 MHz	22 1 4 52.42 N 114 17 35.30 E	Co-located
TD DME	CH 108X		

Significant Points

Significant Point	Co-ordinates	Cross Reference from Navaid
TD (IAF)	22 14 52.42 N 114 17 35.30 E	
SABOG	22 21 16.66 N 114 15 23.07 E	SMT RDL 088 TD RDL 344/DME 7 NM
MIRRS	22 24 17.10 N 114 14 09.30 E	ITFL DME 18.0 NM
LOTUS	22 23 18.26 N 114 11 05.60 E	ITFL DME 15.0 NM
FAP	22 23 05.39 N 114 10 20.18 E	ITFL DME 14.1 NM
PRAWN	22 16 05.40 N 113 48 40.10 E	ITFL DME 7.0 NM SMT RDL 249/DME 10.4 NM

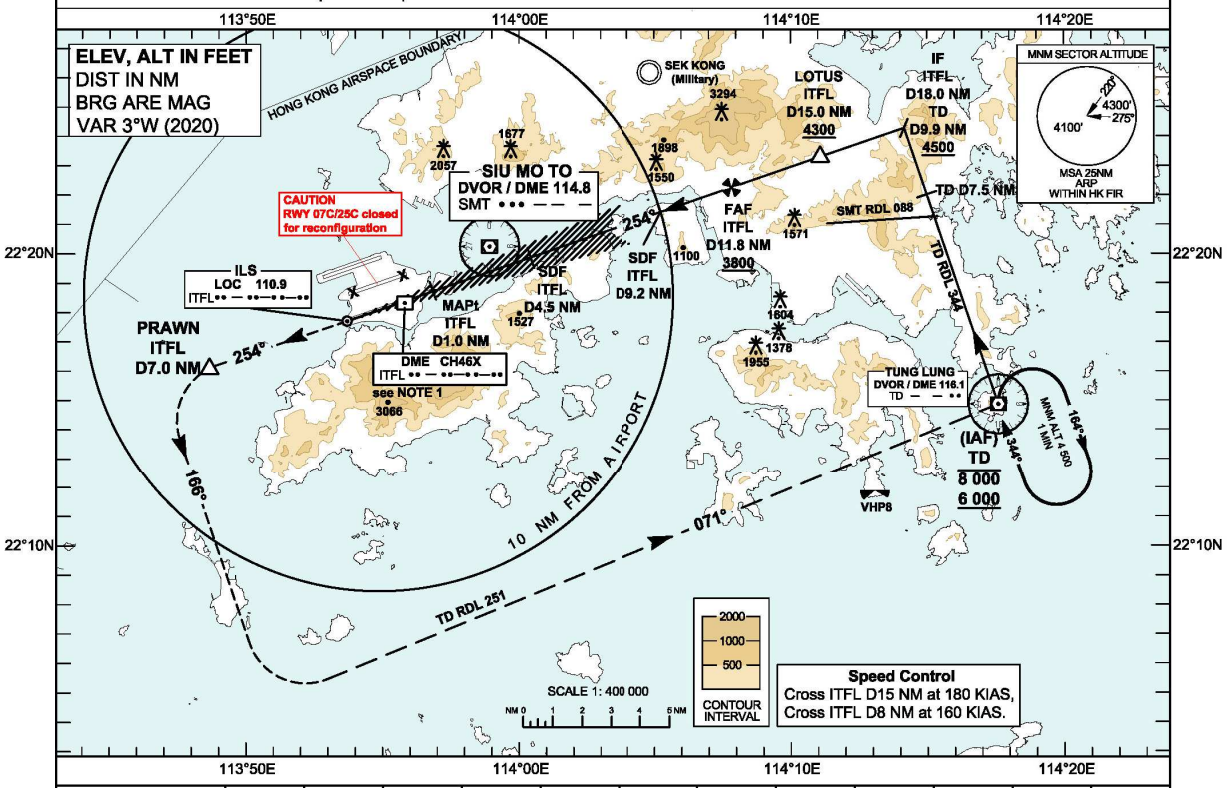
INSTRUMENT APPROACH CHART - ICAO

AERODROME ELEV 28 FT
THR ELEV 27 FT
HEIGHTS RELATED TO AD ELEV

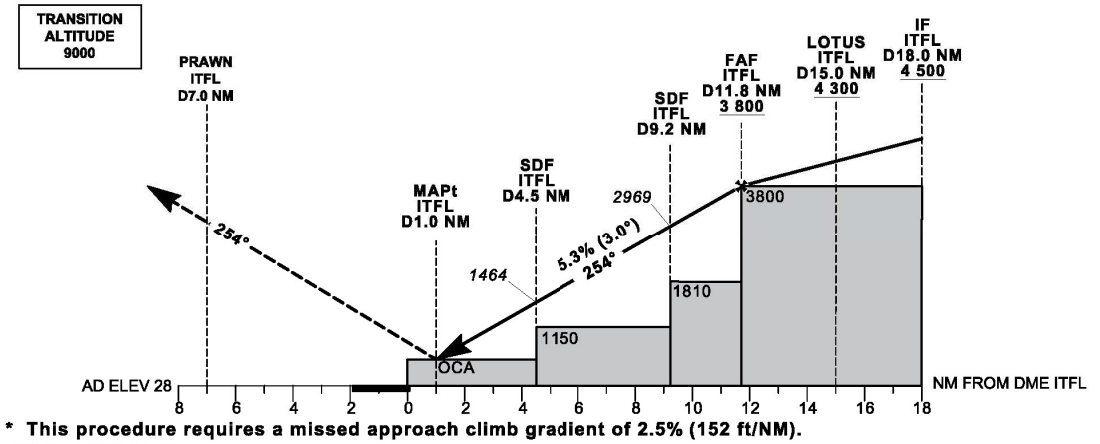
HONG KONG TOWER	118.4
HONG KONG APPROACH	119.1
HONG KONG DIRECTOR	119.5

VHHH / HONG KONG INTL
LOC RWY 25L

WARNING **LOC ITFL UNUSABLE BEYOND 28° LEFT OF COURSE**
NOTE 1 DME is required.
NOTE 2 Simultaneous dependent operation is authorized with RWY 25R.



Recommended Profile	DME ITFL	11.8	11	10	9	8	7	6	5	4	3	2
Average Gradient 5.3% (3.0°) Decent Rate 322ft/NM	ALT	3800	3570	3250	2930	2610	2280	1960	1640	1320	1000	670



*** This procedure requires a missed approach climb gradient of 2.5% (152 ft/NM).**

MISSED APPROACH
The Missed Approach Point is at the MM Fix (ITFL DME 1.0 NM). Climb to 5 000 ft. Remain on the extended runway centreline tracking 254°M. At PRAWN (ITFL DME 7.0 NM), turn left to track 166°M to establish inbound on TD DVOR RDL 251. Join TD holding pattern or as directed by ATC.
NOTE 3 Speed restriction: 185 KIAS maximum until established on track 166°M, then maintain 230 KIAS until TD.

GS KT	160	140	120	100	80
FAF-MAPt 11.8 NM	04:26	05:04	05:54	07:05	08:51
FT per Minute	860	750	640	540	430

AIRCRAFT CATEGORIES	G/P INOP * OCA (OCH)	VISUAL CIRCLING
A, B, C, D	420 ft (390 ft)	NOT AVAILABLE

If TD DVOR IS NOT AVAILABLE
Leave reporting point 'TD' on track 344°M descending from 8 000 ft to 4 500 ft. When crossing SMT RDL 088, turn left to track 299°M to intercept RWY 25L LOC ITFL.

MISSED APPROACH
The Missed Approach Point is at the MM Fix (ITFL DME 1.0 NM before the landing threshold). Climb to 5 000 ft. Remain on the extended runway centreline tracking 254°M. At PRAWN (ITFL DME 7.0 NM), turn left to track 166°M. Expect radar vectors to final approach track.

CHANGE: LOC frequency and ident, DME channel and ident, LOC service volume restriction.

AD 2-VHHH-IAC-02C_V03_230703lh

RWY 25L LOC APPROACH

Navigation Aids

Navaid/Ident	Frequency	Coordinates	Remarks
Localizer/ITFL	110.9 MHz	22 17 42.98 N 113 53 42.30 E	Course 254°M
DME/ITFL	CH 46X	22 18 19.93 N 113 55 49.28 E	
SMT DVOR	114.8 MHz	22 20 15.43 N 113 58 55.46 E	Co-located
SMT DME	CH 95X		
TD DVOR	116.1 MHz	22 14 52.42 N 114 17 35.30 E	Co-located
TD DME	CH 108X		

Significant Points

Significant Point	Coordinates	Cross Reference from Navaid
TD (IAF)	22 14 52.42 N 114 17 35.30 E	TD DVOR/DME
Turn Leading Fix	22 21 59.82 N 114 14 58.06 E	TD RDL 344/DME 7.5 NM
IF	22 24 16.44 N 114 14 07.74 E	TD RDL 344/DME 9.9 NM ITFL DME 18.0 NM
LOTUS	22 23 18.26 N 114 11 05.60 E	ITFL DME 15.0 NM
FAF	22 22 15.51 N 114 07 50.05 E	ITFL DME 11.8 NM
SDF9.2	22 21 24.45 N 114 05 10.87 E	ITFL DME 9.2 NM
SDF4.5	22 19 52.05 N 114 00 23.21 E	ITFL DME 4.5 NM
MAPt	22 18 43.11 N 113 56 48.97 E	ITFL DME 1.0 NM
PRAWN	22 16 05.40 N 113 48 40.10 E	ITFL DME 7.0 NM

INSTRUMENT APPROACH CHART - ICAO

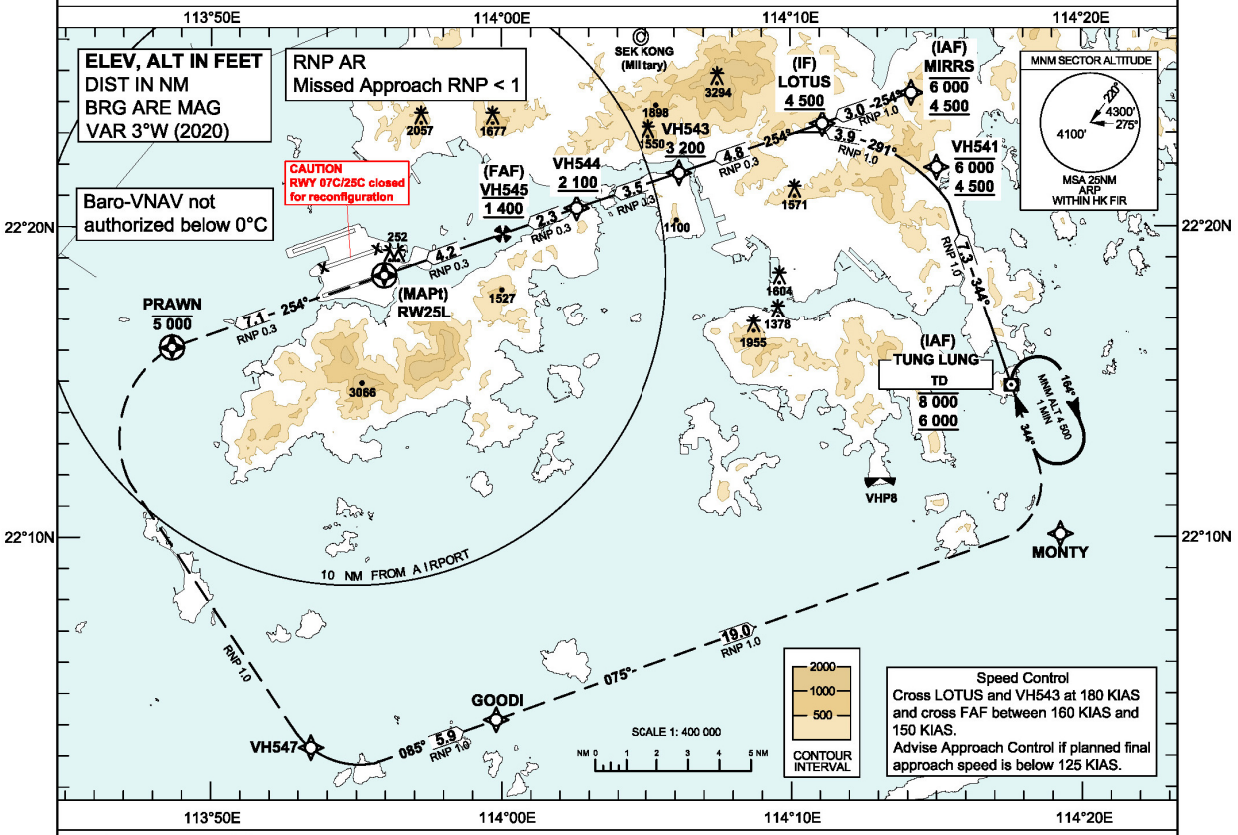
AERODROME ELEV 28 FT
HEIGHTS RELATED TO
THR RWY 25L - ELEV 27 FT

HONG KONG APPROACH	119.1
HONG KONG DIRECTOR	119.5
HONG KONG TOWER	118.4

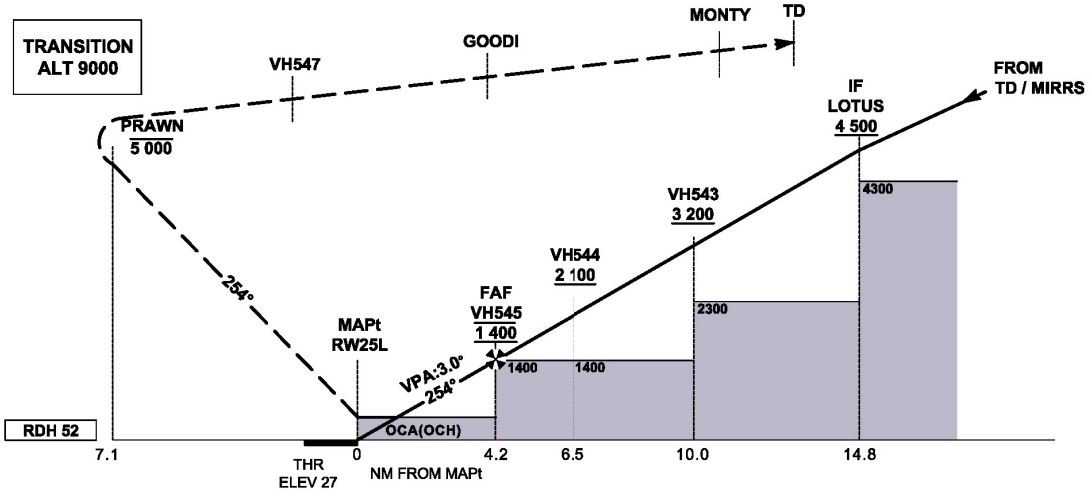
HONG KONG / Intl (VHHH)
RNP Z RWY 25L (AR)

Authorization from HONG KONG CAD is Required
(Refer to VHHH AD 2.22 para. 17.2.1 for the relevant AIC)

NOTE 1 RNP AR APCH: RNP 0.3 in Intermediate, Final and Missed Approach Segment, RNP 1.0 in Initial Segment. RNP values are depicted on Plan View for each applicable leg.
NOTE 2 Aircraft must obtain approval from Hong Kong Civil Aviation Department for RNP AR APCH. Carriage of certified GNSS receiver is mandatory.
NOTE 3 Simultaneous dependent operation is authorized with RWY 25R.
NOTE 4 Do not accept radar vectors inside LOTUS.



MISSED APPROACH
Climb to 5 000 ft, track to **PRAWN**, then turn left track direct to VH547, then turn left to GOODI, then turn left to MONTY, then TD or as directed by ATC.
NOTE 5 Climb gradient of 2.5% is required. (152 ft / NM)
NOTE 6 Speed restriction: 185 KIAS maximum until established on track to VH547, then maintain 230 KIAS until TD.



OCA (OCH)	System	A	B	C	D
RNP 0.3	GNSS	500 (480)	500 (480)	500 (480)	500 (480)

DIST THR (NM)	2	3	4	5
ALT (HGT) (FT)	710 (683)	1030 (1003)	1350 (1323)	1670 (1643)

CHANGE: Base map update, Runway 07C/25C closed, Tai Mo Shan elevation.

AD 2-VHHH-IAC-02E_V08_220627zk

RNP Z RWY 25L (AR) APPROACH via TD

Tabular Description

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course/Track °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (ft)	Speed (KIAS)	VPA	Navigation Specification
01	IF	TD	-	-	+3.0	-	-	-8000 +6000	-	-	RNP AR APCH
02	TF	VH541	-	344 (341)	+3.0	7.3	-	-6000 +4500	-	-	RNP AR APCH
03	TF	LOTUS	-	-	+3.0	3.9	L	+4500	@180	-	RNP AR APCH
04	TF	VH543	-	254 (251)	+3.0	4.8	L	+3200	@180	-	RNP AR APCH
05	TF	VH544	-	254 (251)	+3.0	3.5	-	+2100	-	-	RNP AR APCH
06	TF	VH545	-	254 (251)	+3.0	2.3	-	@1400	-160 +150	-	RNP AR APCH
07	TF	**RW25L**	**Y**	254 (251)	+3.0	4.2	-	@79	-	-3.0	RNP AR APCH
08	TF	**PRAWN**	**Y**	254 (251)	+3.0	7.1	-	-5000	-185	-	RNP AR APCH
09	DF	VH547	-	-	+3.0	-	L	-	@185	-	RNP AR APCH
10	TF	GOODI	-	085 (082)	+3.0	5.9	L	-	@230	-	RNP AR APCH
11	TF	MONTY	-	075 (072)	+3.0	19.0	L	-	@230	-	RNP AR APCH
12	TF	TD	-	-	+3.0	-	L	-	@230	-	RNP AR APCH

RNP Z RWY 25L (AR) APPROACH via MIRRS

Tabular Description

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course/Track °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (ft)	Speed (KIAS)	VPA	Navigation Specification
01	IF	MIRRS	-	-	+3.0	-	-	-6000 +4500	-	-	RNP AR APCH
02	TF	LOTUS	-	254 (251)	+3.0	3.0	-	+4500	@180	-	RNP AR APCH
03	TF	VH543	-	254 (251)	+3.0	4.8	-	+3200	@180	-	RNP AR APCH
04	TF	VH544	-	254 (251)	+3.0	3.5	-	+2100	-	-	RNP AR APCH
05	TF	VH545	-	254 (251)	+3.0	2.3	-	@1400	-160 +150	-	RNP AR APCH
06	TF	**RW25L**	**Y**	254 (251)	+3.0	4.2	-	@79	-	-3.0	RNP AR APCH
07	TF	**PRAWN**	**Y**	254 (251)	+3.0	7.1	-	-5000	-185	-	RNP AR APCH
08	DF	VH547	-	-	+3.0	-	L	-	@185	-	RNP AR APCH
09	TF	GOODI	-	085 (082)	+3.0	5.9	L	-	@230	-	RNP AR APCH
10	TF	MONTY	-	075 (072)	+3.0	19.0	L	-	@230	-	RNP AR APCH
11	TF	TD	-	-	+3.0	-	L	-	@230	-	RNP AR APCH

Waypoint List

Waypoint Identifier	Coordinates (WGS84)	
MIRRS (IAF)	22 24 17.10 N	114 14 09.30 E
TD (IAF)	22 14 52.42 N	114 17 35.30 E
VH541	22 21 53.98 N	114 15 01.56 E
LOTUS (IF)	22 23 18.26 N	114 11 05.60 E
VH543	22 21 43.43 N	114 06 09.82 E
VH544	22 20 34.67 N	114 02 35.68 E
VH545 (FAF)	22 19 49.44 N	114 00 15.00 E
RW25L (MAPT)	22 18 26.75 N	113 55 58.16 E
PRAWN	22 16 05.40 N	113 48 40.10 E
VH547	22 03 16.39 N	113 53 26.74 E
GOODI	22 04 09.88 N	113 59 48.59 E
MONTY	22 10 06.26 N	114 19 15.68 E

INSTRUMENT APPROACH CHART - ICAO

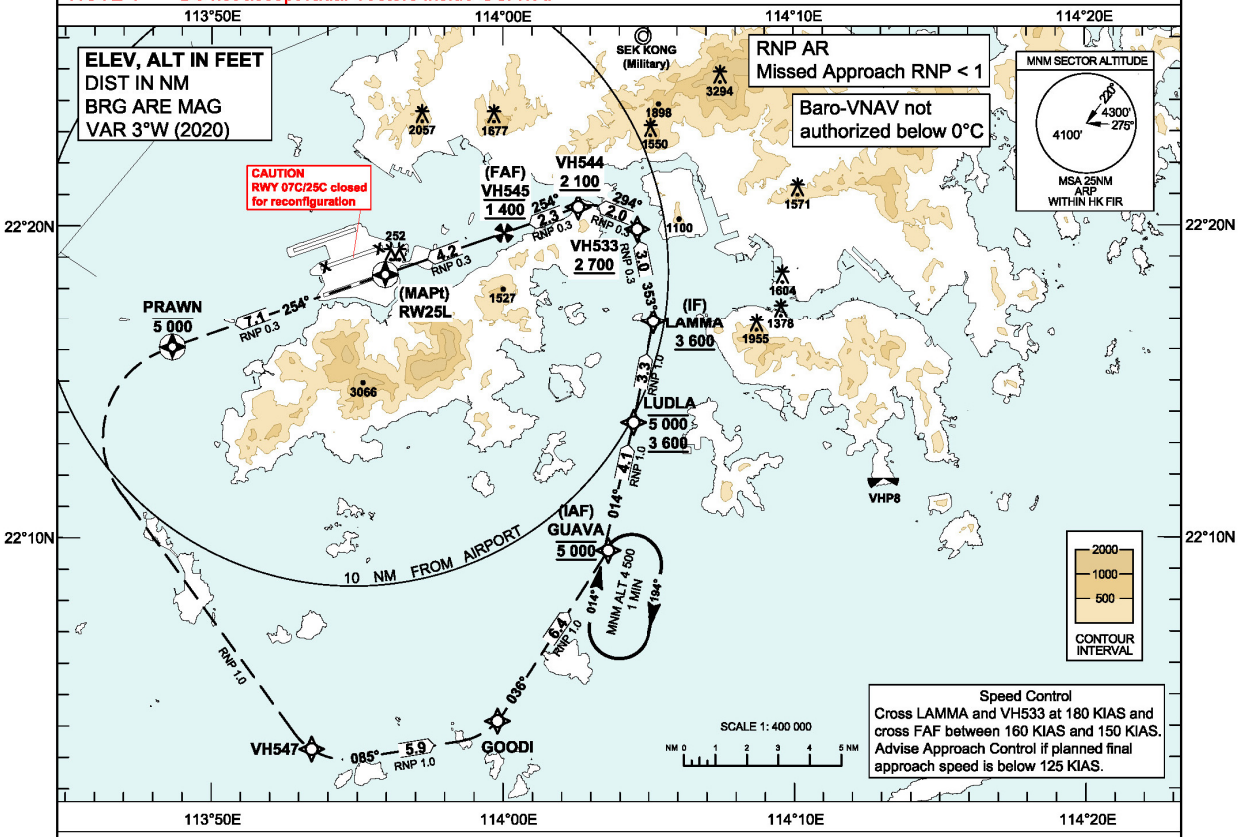
AERODROME ELEV 28 FT
HEIGHTS RELATED TO
THR RWY 25L - ELEV 27 FT

HONG KONG APPROACH	119.1
HONG KONG DIRECTOR	119.5
HONG KONG TOWER	118.4

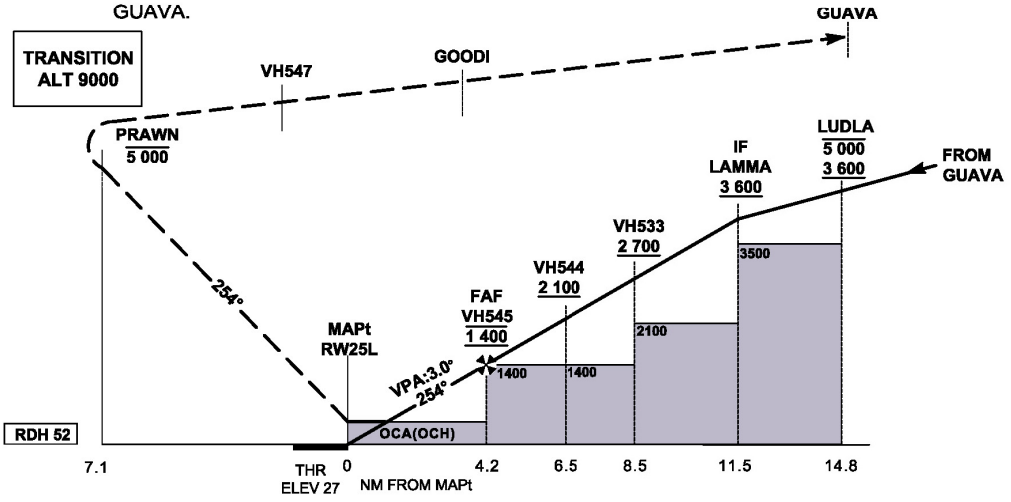
HONG KONG / Intl (VHHH)
RNP Y RWY 25L (AR)

Authorization from HONG KONG CAD is Required
(Refer to VHHH AD 2.22 para. 17.2.1 for the relevant AIC)

NOTE 1 RNP AR APCH: RNP 0.3 in Intermediate, Final and Missed Approach Segment, RNP 1.0 in Initial Segment. RNP values are depicted on Plan View for each applicable leg.
NOTE 2 Aircraft must obtain approval from Hong Kong Civil Aviation Department for RNP AR APCH. Carriage of certified GNSS receiver is mandatory.
NOTE 3 Simultaneous dependent operation is authorized with RWY 25R.
NOTE 4 Do not accept radar vectors inside GUAVA.



MISSED APPROACH
Climb to 5 000 ft, track to **PRAWN**, then turn left track direct to VH547, then left to GOODI, then left to GUAVA or as directed by ATC.
NOTE 5 Climb gradient of 2.5% is required. (152 ft / NM)
NOTE 6 Speed restriction: 185 KIAS maximum until established on track to VH547, then maintain 230 KIAS until GUAVA.



OCA (OCH)	System	A	B	C	D
RNP 0.3	GNSS	500 (480)	500 (480)	500 (480)	500 (480)

DIST THR (NM)	2	3	4
ALT (HGT) (FT)	710 (683)	1030 (1003)	1350 (1323)

CHANGE: Base map update, Runway 07C/25C closed, Tai Mo Shan elevation.

AD 2-VHHH-IAC-02G_V08_220627zk

RNP Y RWY 25L (AR) APPROACH

Tabular Description

Serial Number	*Path Descriptor*	*Waypoint Identifier*	*Fly-over*	*Course/Track °M(°T)*	*Magnetic Variation*	*Distance (NM)*	*Turn Direction*	*Altitude (ft)*	*Speed (KIAS)*	*VPA*	*Navigation Specification*
01	IF	GUAVA	-	-	+3.0	-	-	@5000	-	-	RNP AR APCH
02	TF	LUDLA	-	014 (011)	+3.0	4.1	-	-5000 +3600	-	-	RNP AR APCH
03	TF	LAMMA	-	014 (011)	+3.0	3.3	-	+3600	@180	-	RNP AR APCH
04	TF	VH533	-	353 (350)	+3.0	3.0	L	+2700	@180	-	RNP AR APCH
05	TF	VH544	-	294 (291)	+3.0	2.0	L	+2100	-	-	RNP AR APCH
06	TF	VH545	-	254 (251)	+3.0	2.3	L	@1400	-160 +150	-	RNP AR APCH
07	TF	**RW25L**	**Y**	254 (251)	+3.0	4.2	-	@79	-	-3.0	RNP AR APCH
08	TF	**PRAWN**	**Y**	254 (251)	+3.0	7.1	-	-5000	-185	-	RNP AR APCH
09	DF	VH547	-	-	+3.0	-	L	-	@185	-	RNP AR APCH
10	TF	GOODI	-	085 (082)	+3.0	5.9	L	-	@230	-	RNP AR APCH
11	TF	GUAVA	-	-	+3.0	6.4	L	-	@230	-	RNP AR APCH

Waypoint List

Waypoint Identifier	Coordinates (WGS84)	
GUAVA (IAF)	22 09 36.10 N	114 03 36.30 E
LUDLA	22 13 40.79 N	114 04 28.75 E
LAMMA (IF)	22 16 55.61 N	114 05 10.55 E
VH533	22 19 53.47 N	114 04 36.72 E
VH544	22 20 34.67 N	114 02 35.68 E
VH545 (FAF)	22 19 49.44 N	114 00 15.00 E
RW25L (MAPT)	22 18 26.75 N	113 55 58.16 E
PRAWN	22 16 05.40 N	113 48 40.10 E
VH547	22 03 16.39 N	113 53 26.74 E
GOODI	22 04 09.88 N	113 59 48.59 E

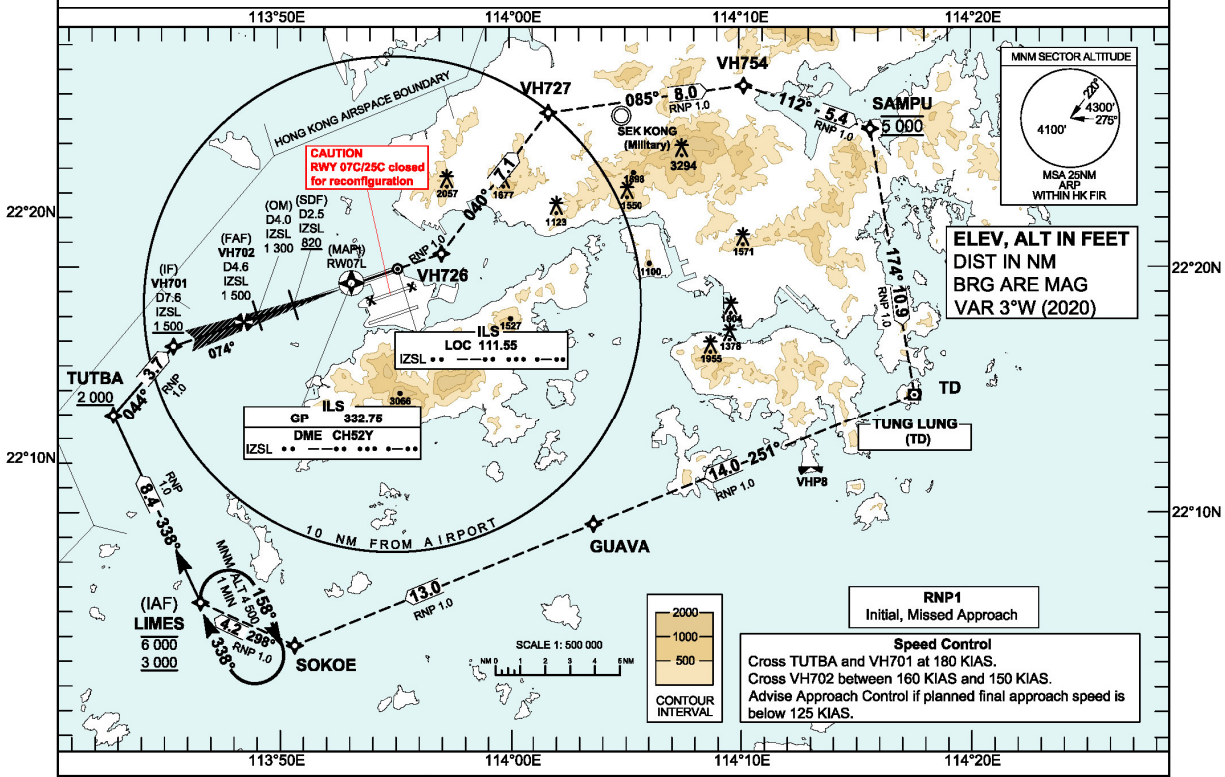
INSTRUMENT APPROACH CHART - ICAO

AERODROME ELEV 28 FT
HEIGHTS RELATED TO
THR RWY 07L - ELEV 23 FT

HONG KONG TOWER	118.7
HONG KONG APPROACH	119.1
HONG KONG DIRECTOR	119.5

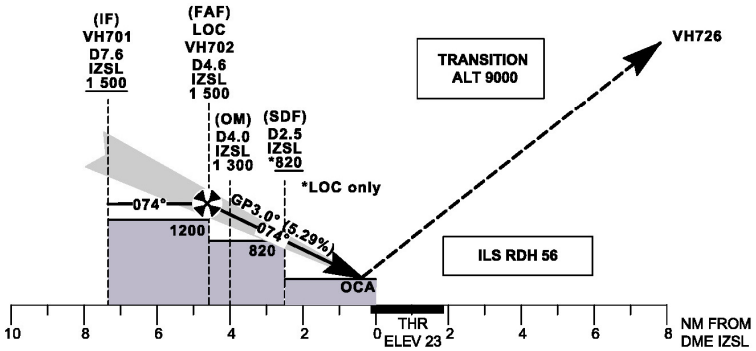
HONG KONG / Intl (VHHH)
ILS CAT II & III or LOC
RWY 07L

NOTE 1 DME is required.
NOTE 2 If unable RNP1, inform ATC accordingly.
If unable RNP1 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.
NOTE 3 Simultaneous dependent operation is authorized with RWY 07R.



DME IZSL	4	3	2
DIST THR (NM)	3.8	2.8	1.8
ALTITUDE	1300	970	650

MISSED APPROACH
Climb to 5 000 ft. Track 074°M to VH726. Then proceed to VH727, VH754, SAMPU, TD, GUAVA, SOKOE and LIMES.
Speed restriction: Maximum 200 KIAS until VH727, then maintain 230 KIAS until LIMES.



Ground Speed	kt	80	100	120	140	160
VH702 - THR (4.4 NM)	min:sec	3:20	2:40	2:13	1:54	1:40
Rate of Descent (5.3%)	ft / min	430	540	640	750	860

CHANGE: Runway 07C/25C closed.

Missed Approach Climb Gradient		Obstacle Clearance Altitude (Height)			
		A	B	C	D
ILS/DME CAT I	2.5%	1359(1336)	1369(1346)	1379(1356)	1388(1365)
	6.9%	223 (200)	223 (200)	223 (200)	223 (200)
ILS/DME CAT II	7.1%	123 (100)	123 (100)	123 (100)	123 (100)
GP INOP	6.6% (with SDF)	500 (470)			
	5.3% (without SDF)	820 (790)			
VISUAL CIRCLING NOT AVAILABLE		N / A			

AD 2-VHHH-IAC-05A_V03_220627zk

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 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 +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	R	+1500	@180	-	RNP 1
04	-	VH702	-	074 (071)	+3.0	3.0	-	-	-	-	N/A
05	-	**RW07L**	**Y**	074 (071)	+3.0	4.4	-	-	-	-	N/A
06	CF	VH726	-	074 (071)	+3.0	-	-	-	-200	-	RNP 1
07	TF	VH727	-	040 (037)	+3.0	7.1	L	-	@200	-	RNP 1
08	TF	VH754	-	085 (082)	+3.0	8.0	R	-	@230	-	RNP 1
09	TF	SAMPU	-	112 (109)	+3.0	5.4	R	@5000	@230	-	RNP 1
10	TF	TD	-	174 (171)	+3.0	10.9	R	-	@230	-	RNP 1
11	TF	GUAVA	-	251 (248)	+3.0	14.0	R	-	@230	-	RNP 1
12	TF	SOKOE	-	251 (248)	+3.0	13.0	-	-	@230	-	RNP 1
13	TF	LIMES	-	298 (295)	+3.0	4.2	R	-	@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)	
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
VH702 (FAP)	22 17 50.07N	113 48 24.64E
RW07L (THR)	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
VH754	22 27 24.31N	114 10 10.70E
SAMPU	22 25 39.19N	114 15 40.91E
TD	22 14 52.42N	114 17 35.30E
GUAVA	22 09 36.10N	114 03 36.30E
SOKOE	22 04 41.20N	113 50 38.10E

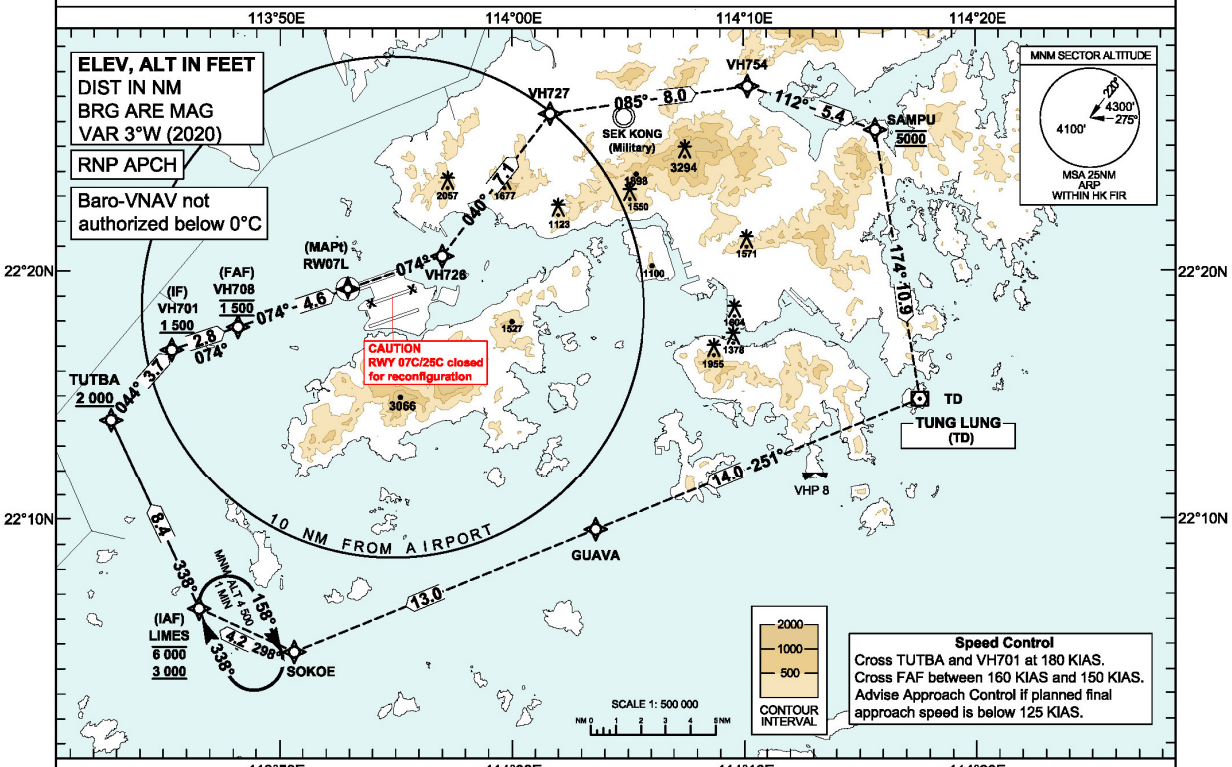
INSTRUMENT APPROACH CHART - ICAO

AERODROME ELEV 28 FT
HEIGHTS RELATED TO
THR RWY 07L - ELEV 23 FT

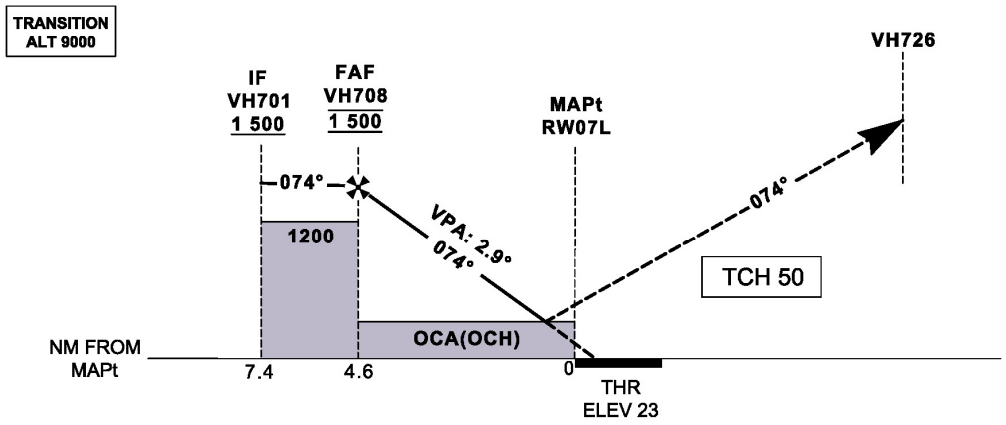
HONG KONG TOWER	118.7
HONG KONG APPROACH	119.1
HONG KONG DIRECTOR	119.5

HONG KONG / Intl (VHHH)
RNP RWY 07L
(LNAV/VNAV only)

NOTE 1 Simultaneous dependent operation is authorized with RWY 07R.



DIST THR / RW07L (NM)	4	3	2	1
ALT	1300	1000	690	380



MISSED APPROACH
Climb to 5 000 ft. From **RW07L** track 074°M to VH726. Proceed to VH727, then to VH754, SAMPU, TD, GUAVA, SOKOE and LIMES.
NOTE 2 Climb gradient of 6.6% (401 ft / NM) until above 4 300 ft is required.
NOTE 3 Speed restriction: 200 KIAS maximum until VH727, then maintain 230 KIAS until LIMES.

Ground Speed	kt	80	100	120	140	160	180
VH708 - RW07L (4.6NM)	min:sec	3:29	2:47	2:19	1:59	1:44	1:33
Rate of Descent (5.1%)	ft / min	410	510	620	720	820	920

Missed Approach Climb Gradient		Obstacle Clearance Altitude (Height)			
		A	B	C	D
LNAV/VNAV	6.6%	302 (279)	312 (289)	322 (299)	332 (309)
VISUAL CIRCLING NOT AVAILABLE		N / A			

CHANGE: Runway 07C/25C closed.

AD 2-VHHH-IAC-05E_V03_220627zk

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 +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	R	+1500	@180	-	RNP APCH
04	TF	VH708	-	074 (071)	+3.0	2.8	R	@1500	-160 +150	-	RNP APCH
05	TF	**RW07L**	**Y**	074 (071)	+3.0	4.6	-	@72	-	-2.9	RNP APCH
06	CF	VH726	-	074 (071)	+3.0	-	-	-	-200	-	RNP APCH
07	TF	VH727	-	040 (037)	+3.0	7.1	L	-	@200	-	RNP APCH
08	TF	VH754	-	085 (082)	+3.0	8.0	R	-	@230	-	RNP APCH
09	TF	SAMPU	-	112 (109)	+3.0	5.4	R	@5000	@230	-	RNP APCH
10	TF	TD	-	174 (171)	+3.0	10.9	R	-	@230	-	RNP APCH
11	TF	GUAVA	-	251 (248)	+3.0	14.0	R	-	@230	-	RNP APCH
12	TF	SOKOE	-	251 (248)	+3.0	13.0	-	-	@230	-	RNP APCH
13	TF	LIMES	-	298 (295)	+3.0	4.2	R	-	@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
VH754	22 27 24.31N	114 10 10.70E
SAMPU	22 25 39.19N	114 15 40.91E
TD	22 14 52.42N	114 17 35.30E
GUAVA	22 09 36.10N	114 03 36.30E
SOKOE	22 04 41.20N	113 50 38.10E

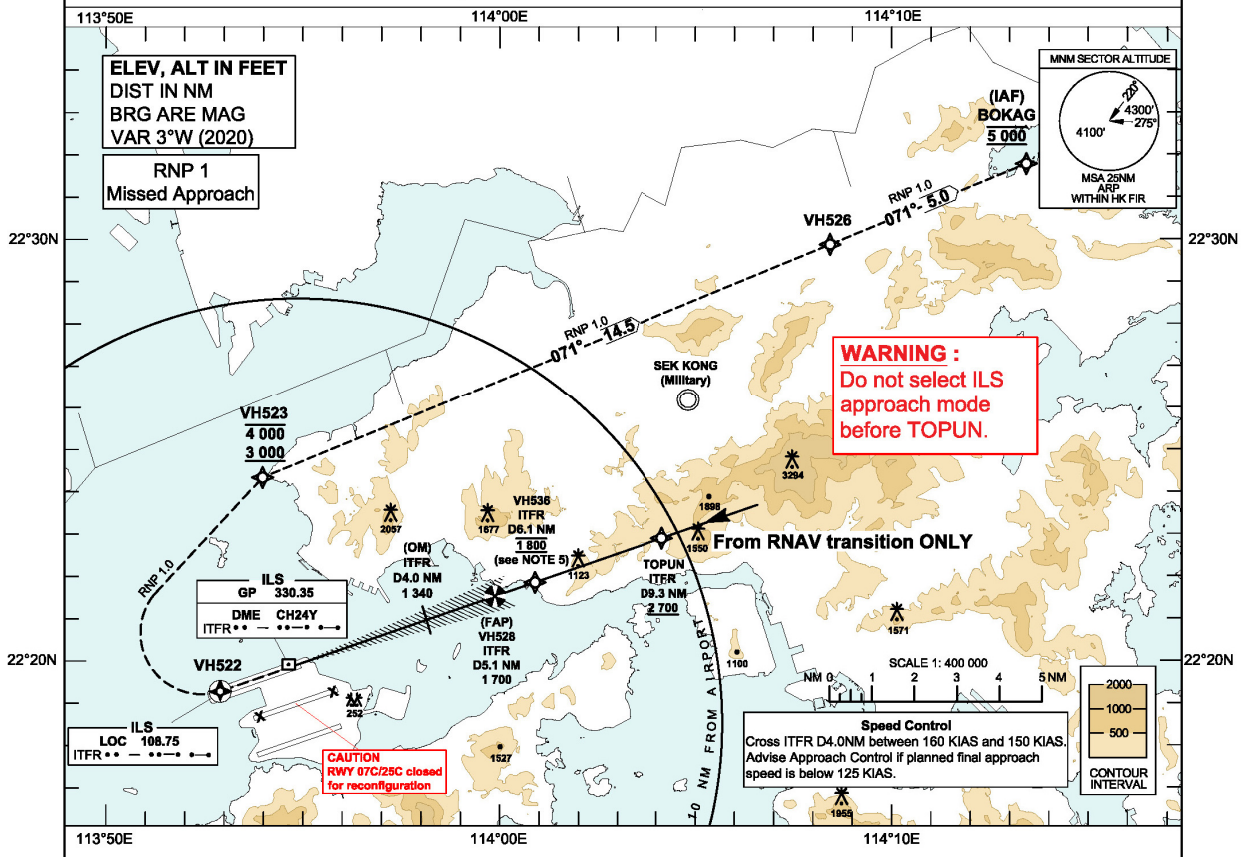
INSTRUMENT APPROACH CHART - ICAO

AERODROME ELEV 28 FT
HEIGHTS RELATED TO
THR RWY 25R - ELEV 23 FT

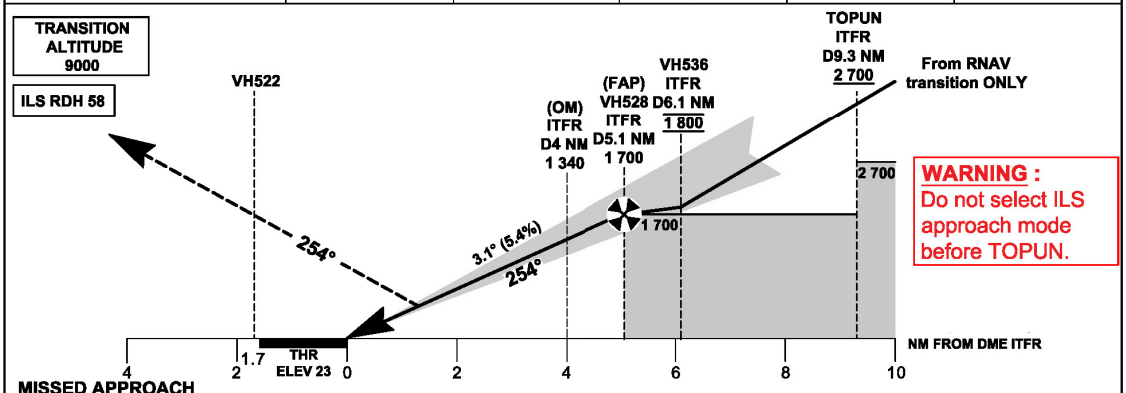
HONG KONG TOWER	118.7
HONG KONG APPROACH	119.1
HONG KONG DIRECTOR	119.5

VHHH / HONG KONG INTL
ILS RWY 25R

WARNING GP SIGNAL UNUSABLE BELOW ELEVATION ANGLE OF 1.8°
NOTE 1 Connect from RNAV transition only. See AD 2-VHHH-IAC-06B for details.
NOTE 2 If unable RNP1 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.
NOTE 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).
NOTE 4 Simultaneous dependent operation is authorized with RWY 25L.
NOTE 5 Cross VH536 at 1800ft unless established on glide slope.



DME ITFR	5	4	3	2	1
DIST THR (NM)	4.8	3.8	2.8	1.8	0.8
ALTITUDE	1670	1340	1000	670	340



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 BOKAG.
NOTE 6 Speed restriction: 185 KIAS maximum until VH523, then maintain 230 KIAS until VH526, then maintain 210 KIAS until BOKAG.

Ground Speed	kt	80	100	120	140	160	180
VH528 - RW25R (4.9NM)	min:sec	3:43	2:58	2:29	2:07	1:51	1:39
Rate of Descent (5.4%)	ft / min	440	550	660	770	880	990

Missed Approach Climb Gradient		Obstacle Clearance Altitude (Height)			
		A	B	C	D
ILS/DME CAT I	2.5%	1425 (1402)	1435 (1412)	1445 (1422)	1455 (1432)
	6.5%	223 (200)	223 (200)	223 (200)	223 (200)
VISUAL CIRCLING NOT AVAILABLE		N / A			

CHANGE: Editorial.

AD 2-VHHH-IAC-06A_V04_220826lh

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 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 +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

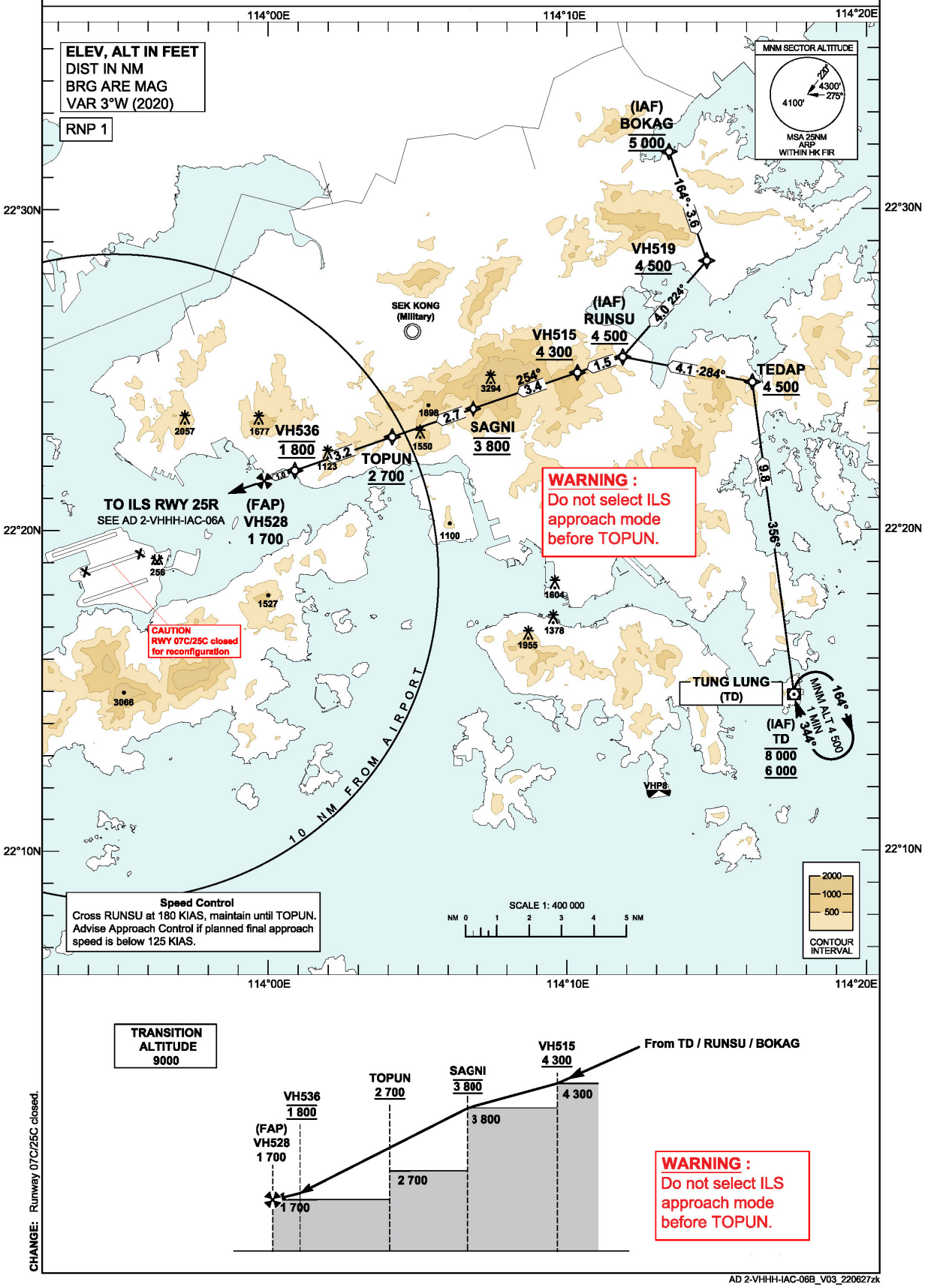
Waypoint Identifier	Coordinates (WGS-84)	
TOPUN	22 22 54.17N	114 04 09.15E
VH536	22 21 51.55N	114 00 54.18E
VH528 (FAP)	22 21 31.88N	113 59 52.97E
RW25R (THR)	22 19 54.45N	113 54 50.24E
VH522	22 19 17.08N	113 52 54.28E
VH523	22 24 20.51N	113 53 58.89E
VH526	22 29 52.41N	114 08 27.15E
BOKAG	22 31 46.65N	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.



TRANSITION ALTITUDE 9000

WARNING :
Do not select ILS approach mode before TOPUN.

CHANGE: Runway 07C/25C closed.

AD 2-VHHH-IAC-06B_V03_220627zk

RNAV Transition to ILS RWY 25R

TABULAR DESCRIPTION: RNAV Transition from TD

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	TD	-	-	+3.0	-	-	-8000 +6000	-	-	RNP 1
02	TF	TEDAP	-	356 (353)	+3.0	9.8	-	+4500	-	-	RNP 1
03	TF	RUNSU	-	284 (281)	+3.0	4.1	L	+4500	@180	-	RNP 1
04	TF	VH515	-	254 (251)	+3.0	1.5	L	+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

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	VH519	-	164 (161)	+3.0	3.6	-	+4500	-	-	RNP 1
03	TF	RUNSU	-	224 (221)	+3.0	4.0	R	+4500	@180	-	RNP 1
04	TF	VH515	-	254 (251)	+3.0	1.5	R	+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)	
TD (IAF)	22 14 52.42N	114 17 35.30E
TEDAP	22 24 35.93N	114 16 13.20E
BOKAG (IAF)	22 31 46.65N	114 13 27.06E
VH519	22 28 23.05N	114 14 42.35E
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

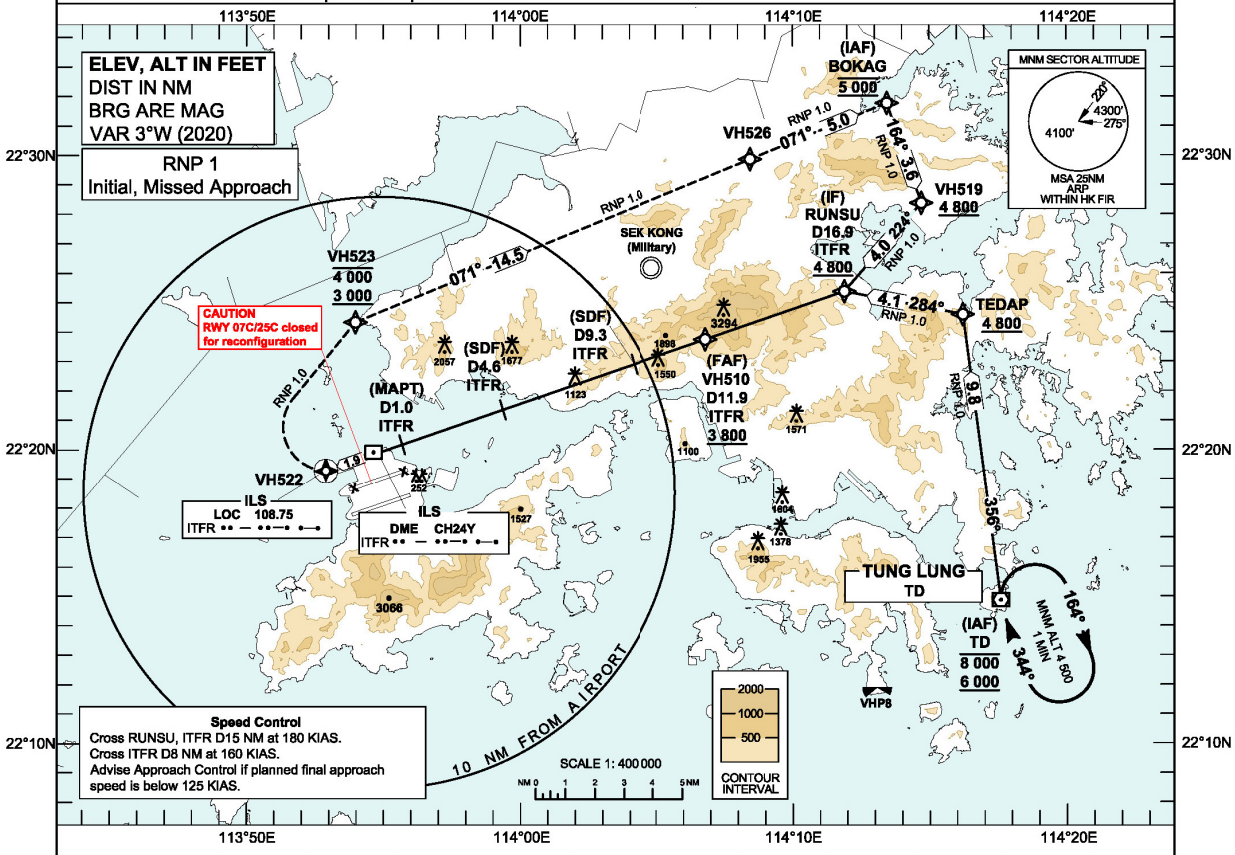
INSTRUMENT APPROACH CHART - ICAO

AERODROME ELEV 28 FT
THR ELEV 23 FT
HEIGHTS RELATED TO AD ELEV

HONG KONG TOWER	118.7
HONG KONG APPROACH	119.1
HONG KONG DIRECTOR	119.5

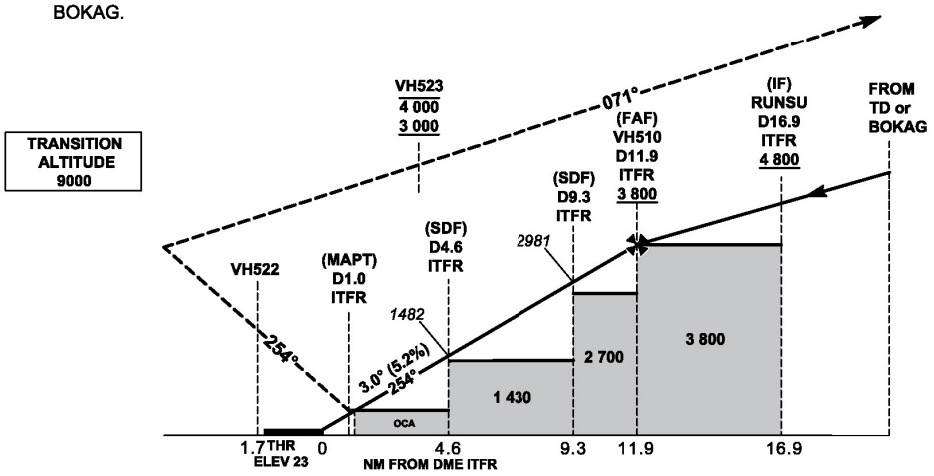
VHHH / HONG KONG INTL
LOC RWY 25R

WARNING LOC ITFR UNUSABLE BEYOND 22° RIGHT OF COURSE
NOTE 1 DME is required.
NOTE 2 Simultaneous dependent operation is authorized with RWY 25L.



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	3800	3520	3200	2880	2560	2240	1920	1600	1280	970	650

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 3000 ft and 4000 ft. From VH523, climb to 5 000 ft and track to BOKAG.
NOTE 3 Climb gradient of 5.1% (310 ft / NM) is required until reaching 4 000 ft.
NOTE 4 Speed restriction: 185 KIAS maximum until VH523, then maintain 230 KIAS until VH526, then maintain 210 KIAS until BOKAG.



OCA (OCH)	A	B	C	D
GP INOP	430 (400)			

GS	kt	80	100	120	140	160	180
VH510 - RW25R (11.7NM)	MIN:SEC	8:46	7:01	5:51	5:01	4:23	3:54
Rate of descent (5.2%)	ft / MIN	430	530	640	740	850	960

CHANGE: Runway 07C/25C closed, editorial.

AD 2-VHHH-IAC-06C_V03_220726lh

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

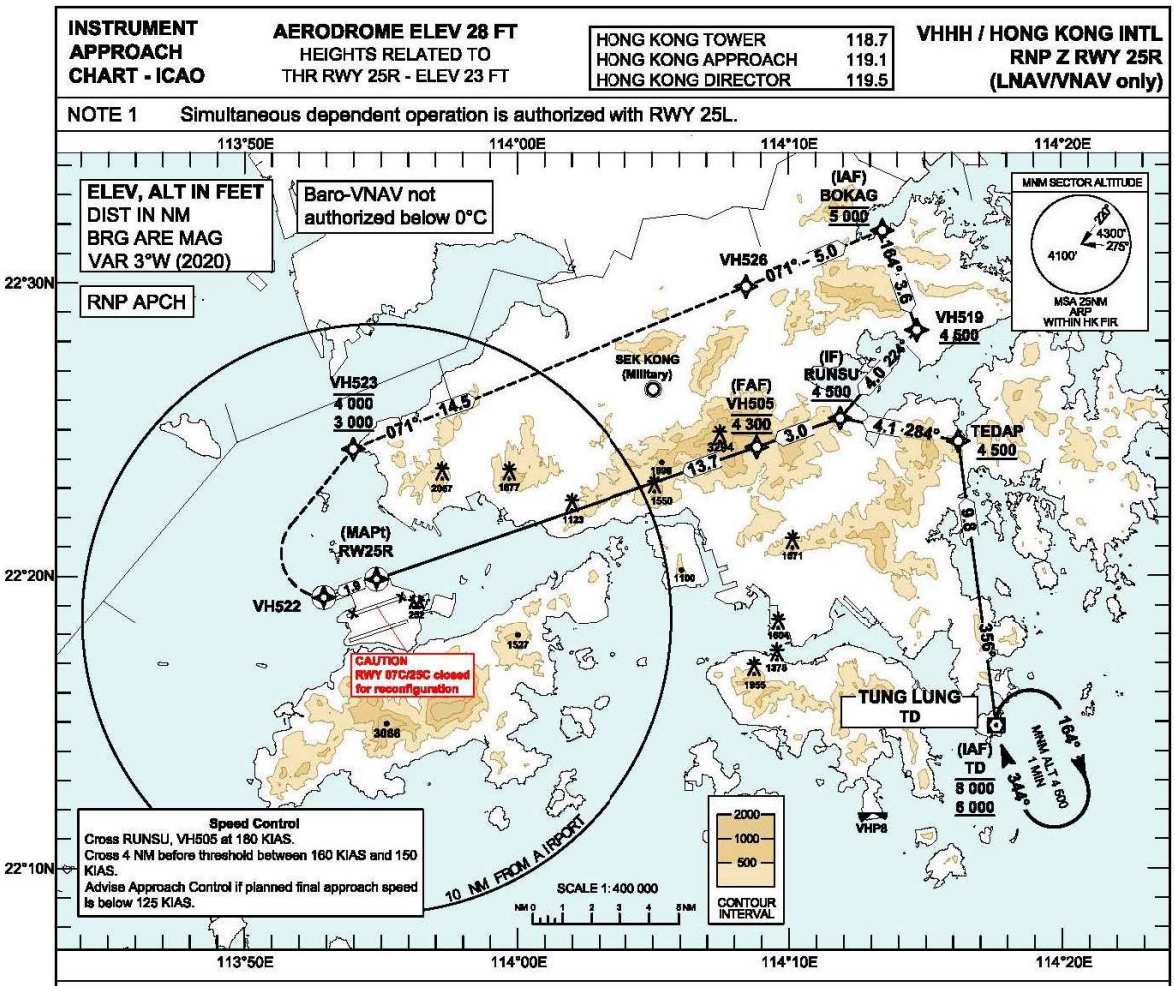
Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course °M (°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (ft)	Speed (KIAS)	VPA	Navigation Specification
01	IF	TD	-	-	+3.0	-	-	-8000 +6000	-	-	RNP 1
02	TF	TEDAP	-	356 (353)	+3.0	9.8	-	+4800	-	-	RNP 1
03	TF	RUNSU	-	284 (281)	+3.0	4.1	L	+4800	@180	-	RNP 1
01	IF	BOKAG	-	-	-	-	-	@5000	@210	-	RNP 1
02	TF	VH519	-	164 (161)	+3.0	3.6	-	+4800	-	-	RNP 1
03	TF	RUNSU	-	224 (221)	+3.0	4.0	R	+4800	@180	-	RNP 1
01	IF	RUNSU	-	254 (251)	+3.0	-	-	+4800	@180	-	N/A
02	-	VH510	-	254 (251)	+3.0	5.0	-	+3800	@180	-	N/A
03	-	**RW25R**	**Y**	254 (251)	+3.0	11.7	-	-	-	-	N/A
04	CF	**VH522**	**Y**	254 (251)	+3.0	1.9	-	-	-	-	RNP 1
05	DF	VH523	-	-	-	-	R	-4000 +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)	
TD (IAF)	22 14 52.42N	114 17 35.30E
TEDAP	22 24 35.93N	114 16 13.20E
BOKAG (IAF)	22 31 46.65N	114 13 27.06E
VH519	22 28 23.05N	114 14 42.35E
RUNSU (IF)	22 25 22.96N	114 11 53.57E
VH510 (FAF)	22 23 44.37N	114 06 45.65E
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

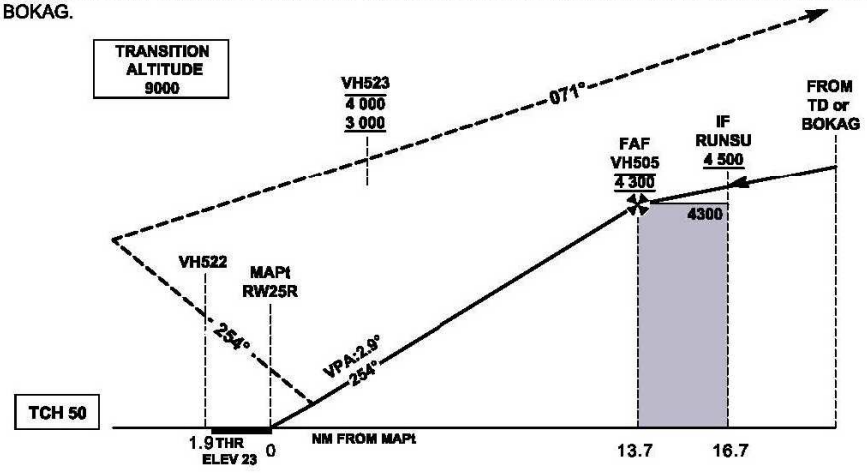


MISSED APPROACH

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 BOKAG.

NOTE 2 Climb gradient of 5.6% (341 ft / NM) is required until reaching 4 000 ft.

NOTE 3 Speed restriction: 185 KIAS maximum until VH523, then maintain 230 KIAS until VH526, then maintain 210 KIAS until BOKAG.



Missed Approach Climb Gradient		Obstacle Clearance Altitude (Height)			
		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			

CHANGE: OCA / OCH

DIST THR / RW25R	13.7	13	12	11	10	9	8	7	6	5	4	3	2
ALT	4300	4070	3770	3460	3150	2840	2530	2230	1920	1610	1300	1000	690

Ground Speed	kt	80	100	120	140	160	180
VH505 - RW25R (13.7NM)	min:sec	10:17	8:14	6:52	5:53	5:09	4:34
Rate of Descent (5.1%)	ft / min	410	510	620	720	820	920

AD 2-VHHH-IAC-06E_V04_221117th

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	TD	-	-	+3.0	-	-	-8000 +6000	-	-	RNP APCH
02	TF	TEDAP	-	356 (353)	+3.0	9.8	-	+4500	-	-	RNP APCH
03	TF	RUNSU	-	284 (281)	+3.0	4.1	L	+4500	@180	-	RNP APCH
01	IF	BOKAG	-	-	+3.0	-	-	@5000	@210	-	RNP APCH
02	TF	VH519	-	164 (161)	+3.0	3.6	-	+4500	-	-	RNP APCH
03	TF	RUNSU	-	224 (221)	+3.0	4.0	R	+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	-	@72	-	-2.9	RNP APCH
04	CF	**VH522**	**Y**	254 (251)	+3.0	1.9	-	-	-	-	RNP APCH
05	DF	VH523	-	-	+3.0	-	R	-4000 +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)	
TD (IAF)	22 14 52.42N	114 17 35.30E
TEDAP	22 24 35.93N	114 16 13.20E
BOKAG (IAF)	22 31 46.65N	114 13 27.06E
VH519	22 28 23.05N	114 14 42.35E
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

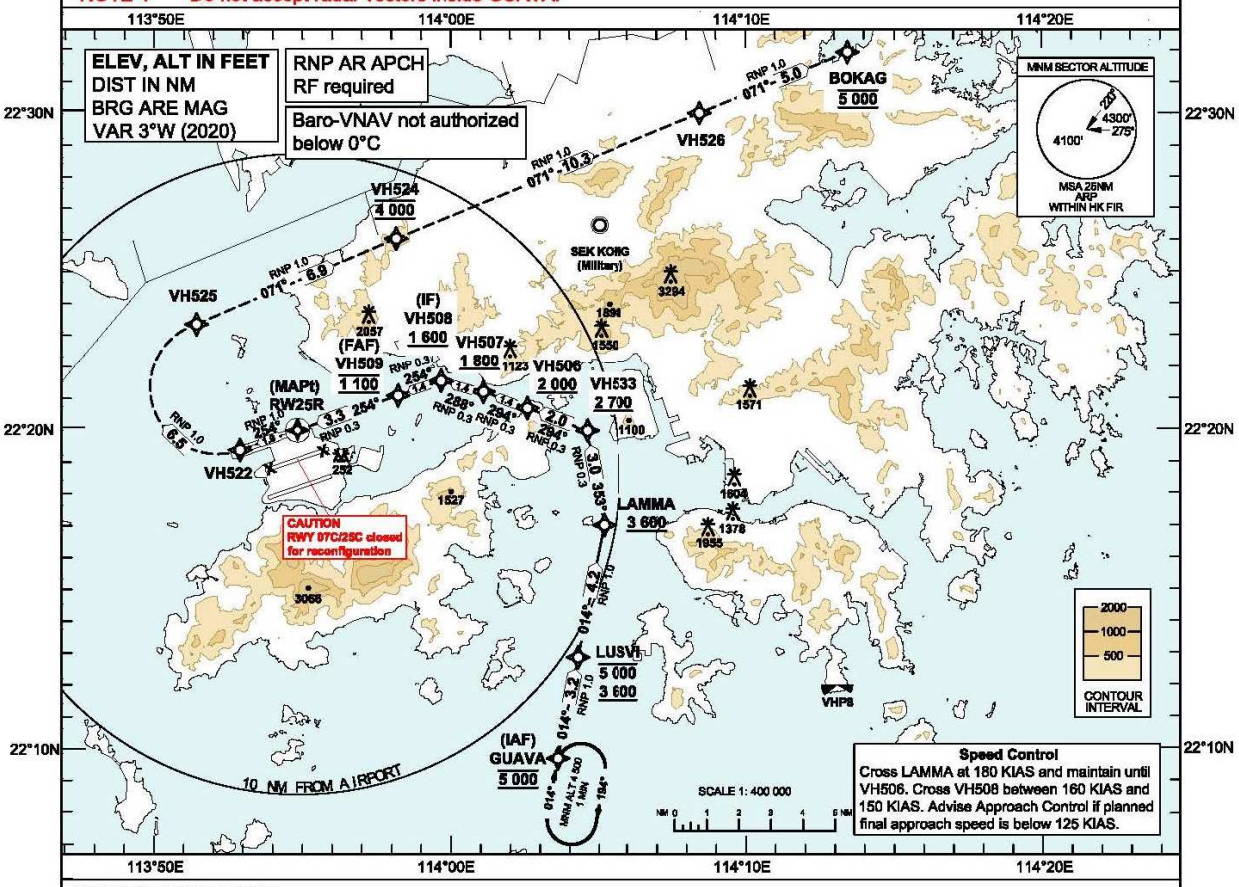
AERODROME ELEV 28 FT
HEIGHTS RELATED TO
THR RWY 25R - ELEV 23 FT

HONG KONG APPROACH	119.1
HONG KONG DIRECTOR	119.5
HONG KONG TOWER	118.7

HONG KONG / Intl (VHHH)
RNP Y RWY 25R (AR)

Authorization from HONG KONG CAD is Required
(Refer to VHHH AD 2.22 para 17.2.1 for the relevant AIC)

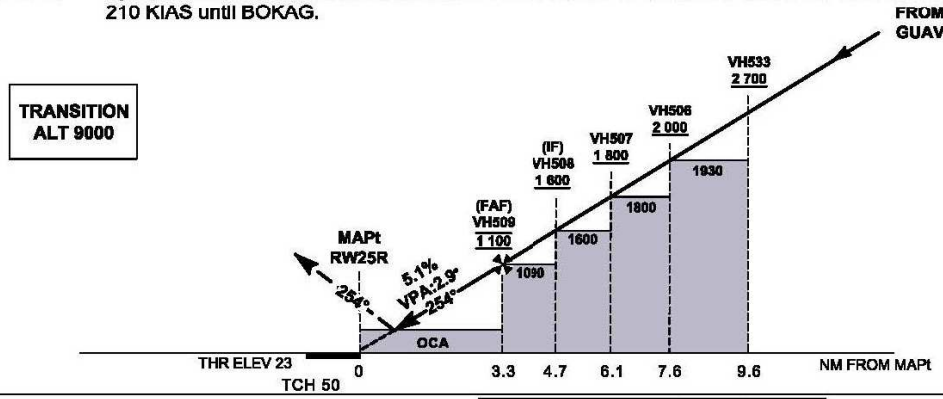
NOTE 1 RNP AR APCH: RNP 0.3 within Initial and Intermediate segments.
RNP values are depicted on Plan View for each applicable leg.
NOTE 2 Aircraft must obtain approval from Hong Kong Civil Aviation Department for RNP AR APCH.
NOTE 3 Simultaneous dependent operation is authorized with RWY 25L.
NOTE 4 Do not accept radar vectors inside GUAVA.



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 BOKAG.

NOTE 5 Climb gradient of 4.0% (243 ft / NM) is required until reaching 4 000 ft.
NOTE 6 Speed restriction: 185 KIAS maximum until VH525, then maintain 230 KIAS until VH526, then maintain 210 KIAS until BOKAG.



OCA (OCH)	A	B	C	D
RNP 0.3	485 (462)	495 (472)	505 (482)	515 (492)

DIST THR/ RWY 25R	3	2
ALTITUDE	1000	690

GS	kt	120	140	160	180
VH509-RWY25R (3.3NM)	MIN:SEC	1:40	1:26	1:15	1:06
Rate of descent	ft/ MIN	620	720	820	920

CHANGE: OCA / OCH

AD 2-VHHH-IAC-06G_V04_221117h

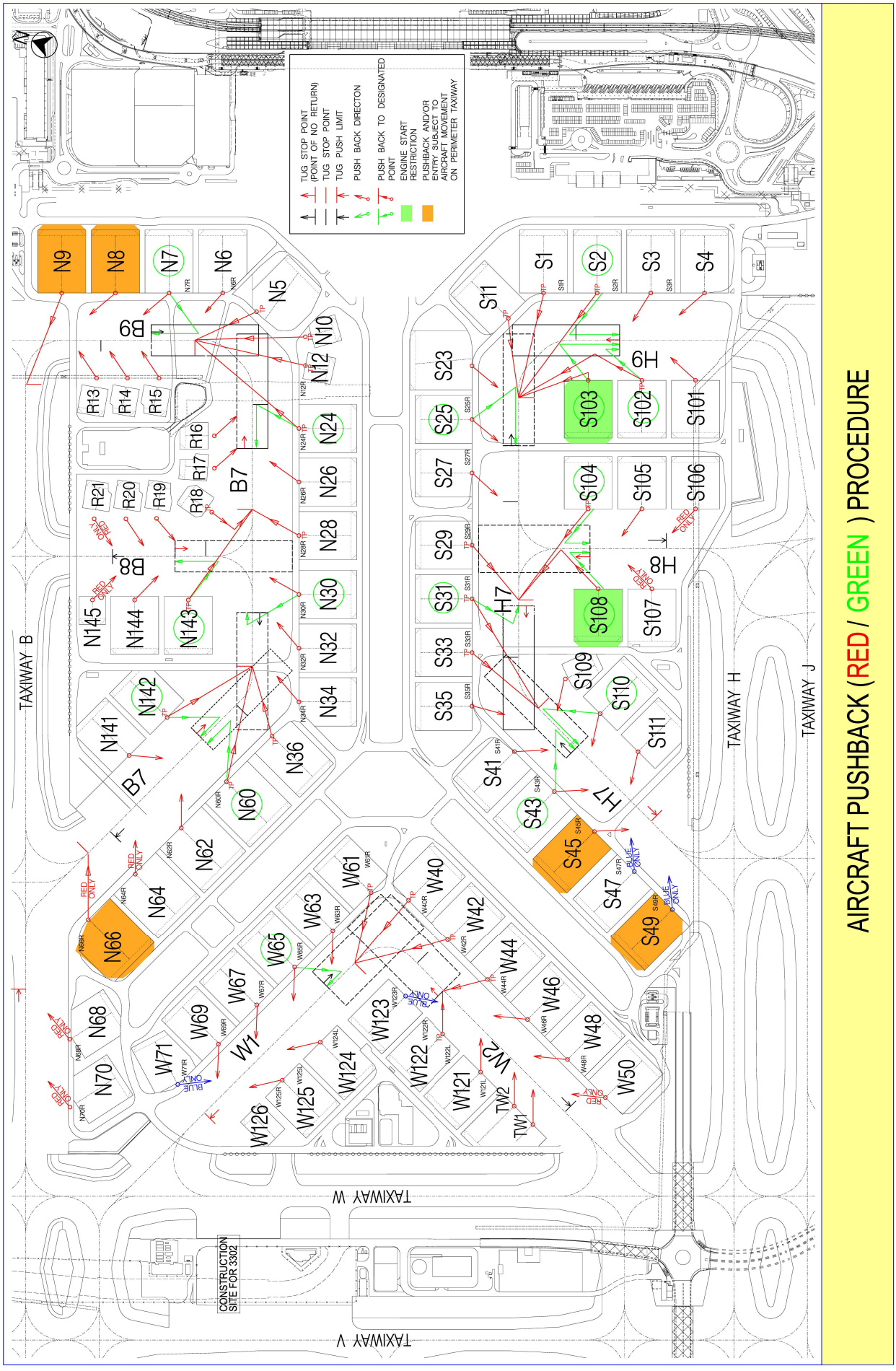
RNP Y RWY 25R (AR) APPROACH

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	GUAVA	-	-	+3.0	-	-	@5000	-	-	RNP AR APCH (RNP 1.0)
02	TF	LUSVI	-	014 (011)	+3.0	3.2	-	-5000 +3600	-	-	RNP AR APCH (RNP 1.0)
03	TF	LAMMA	-	014 (011)	+3.0	4.2	-	+3600	@180	-	RNP AR APCH (RNP 1.0)
04	TF	VH533	-	353 (350)	+3.0	3.0	L	+2700	@180	-	RNP AR APCH (RNP 0.3)
05	TF	VH506	-	294 (291)	+3.0	2.0	L	+2000	@180	-	RNP AR APCH (RNP 0.3)
06	TF	VH507	-	294 (291)	+3.0	1.4	-	+1800	-	-	RNP AR APCH (RNP 0.3)
07	TF	VH508	-	288 (285)	+3.0	1.4	-	+1600	-160 +150	-	RNP AR APCH (RNP 0.3)
08	TF	VH509	-	254 (251)	+3.0	1.4	L	@1100	-	-	RNP AR APCH (RNP 0.3)
09	TF	**RW25R**	**Y**	254 (251)	+3.0	3.3	-	@72	-	-2.9	RNP AR APCH (RNP 0.3)
10	CF	VH522	-	254 (251)	+3.0	1.9	-	-	-	-	RNP AR APCH (RNP 1.0)
11	RF Centre: VH994 r=2.120 NM	VH525	-	-	+3.0	6.5	R	-	@185	-	RNP AR APCH (RNP 1.0)
12	TF	VH524	-	071 (068)	+3.0	6.0	-	@4000	-	-	RNP AR APCH (RNP 1.0)
13	TF	VH526	-	071 (068)	+3.0	10.3	-	-	@230	-	RNP AR APCH (RNP 1.0)
14	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)**	
GUAVA (IAF)	22 09 36.10N	114 03 36.30E
LUSVI	22 12 46.47N	114 04 17.10E
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 DIRECTION
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 V
TAXIWAY W
CONSTRUCTION SITE FOR 3302
B7
B8
B9
H7
H8
H9
N9
N8
N7
N6
N5
N10
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N26
N28
N30
N32
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N36
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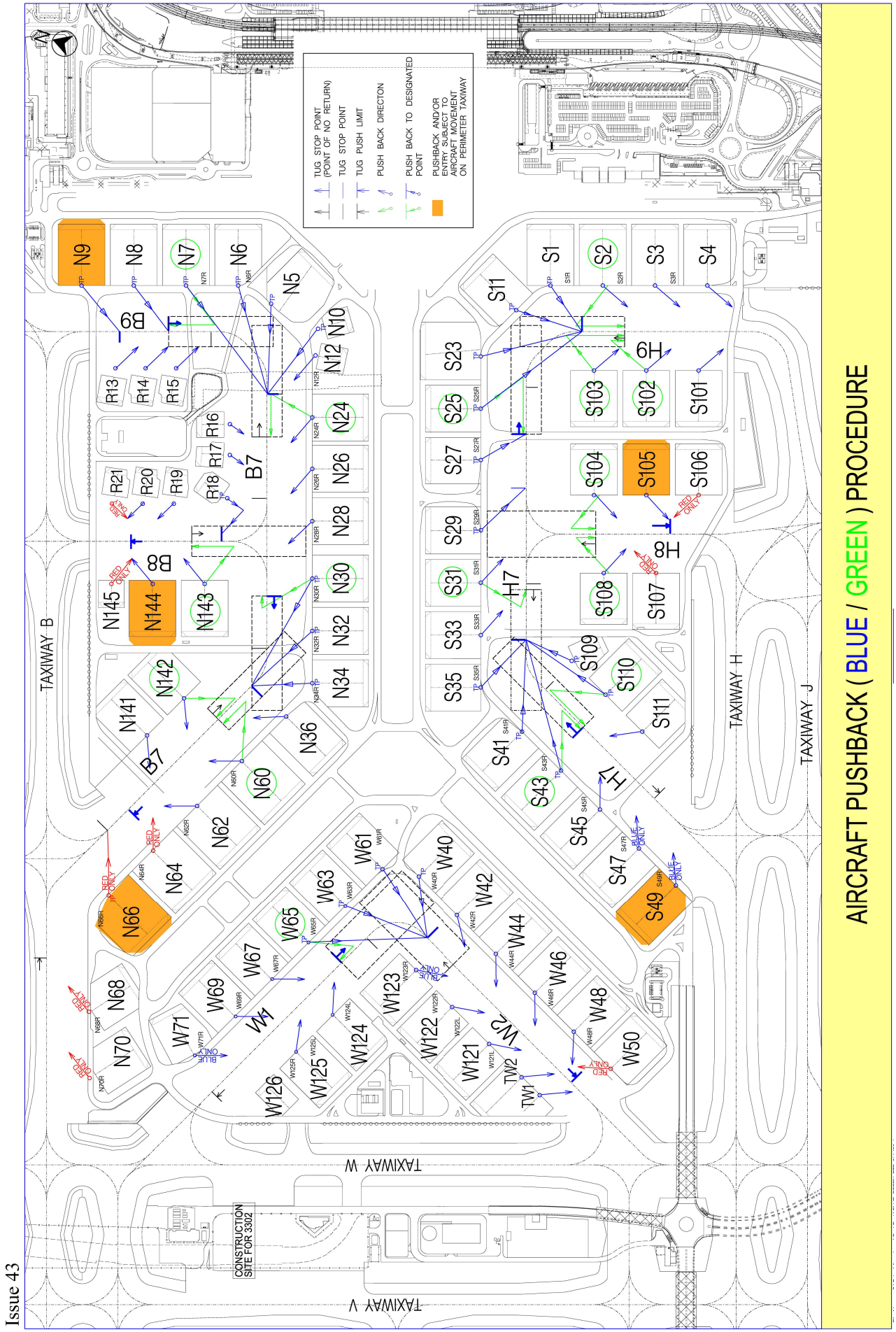
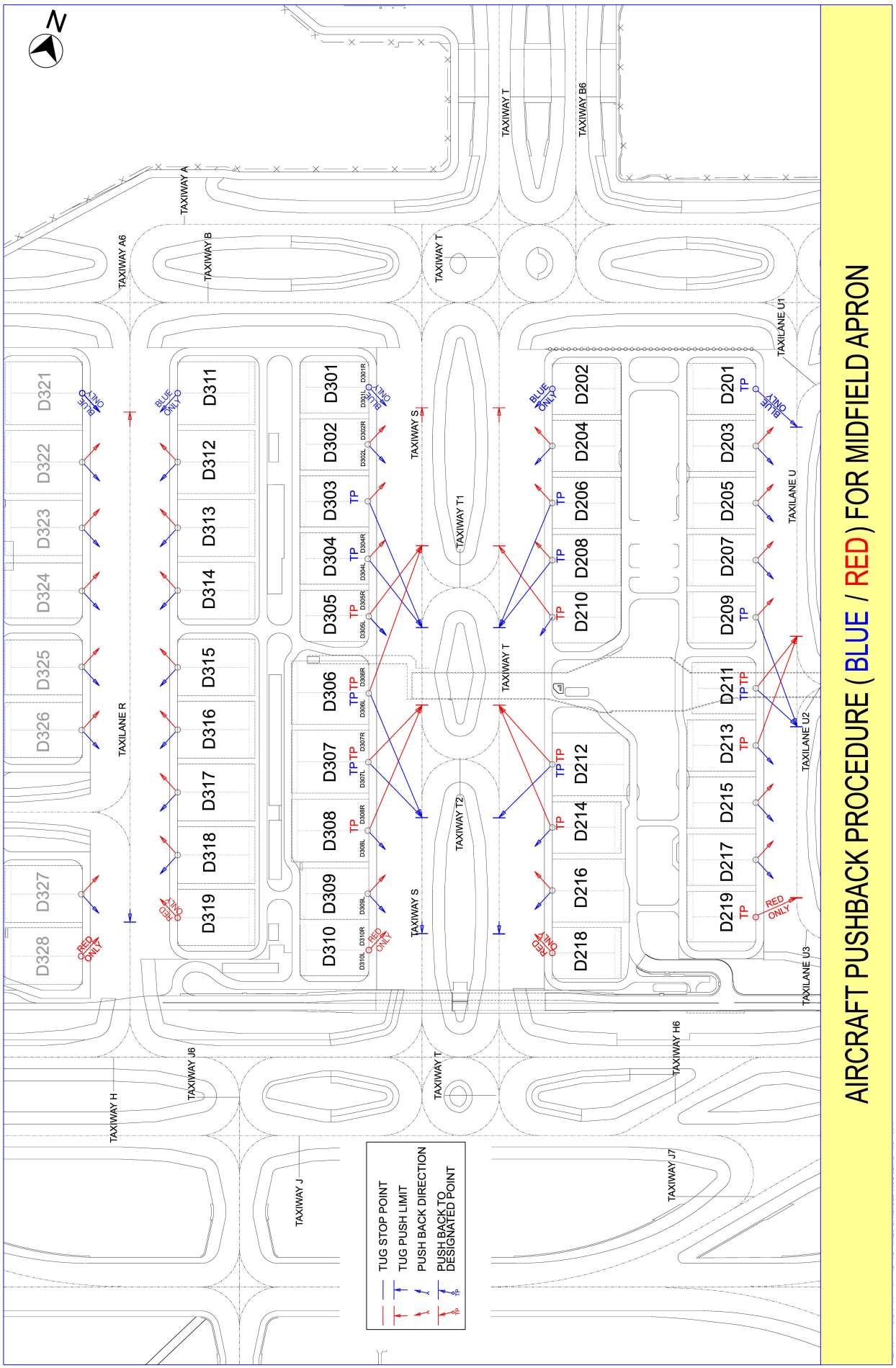
W126
TW1
TW2


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
CONSTRUCTION SITE FOR 3302
AIRCRAFT PUSHBACK (BLUE / GREEN) PROCEDURE

Issue 43


AIRCRAFT PUSHBACK PROCEDURE (BLUE / RED) FOR MIDFIELD APRON
N
TAXIWAY A
TAXIWAY A6
TAXIWAY B
TAXIWAY T
TAXIWAY B6
TAXILANE U1
TAXILANE R
TAXIWAY S
TAXIWAY T1
TAXILANE U
TAXIWAY T2
TAXILANE U2
TAXILANE U3
TAXIWAY H
TAXIWAY J6
TAXIWAY J
TAXIWAY H6
TAXIWAY J7
D321
D322
D323
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D214
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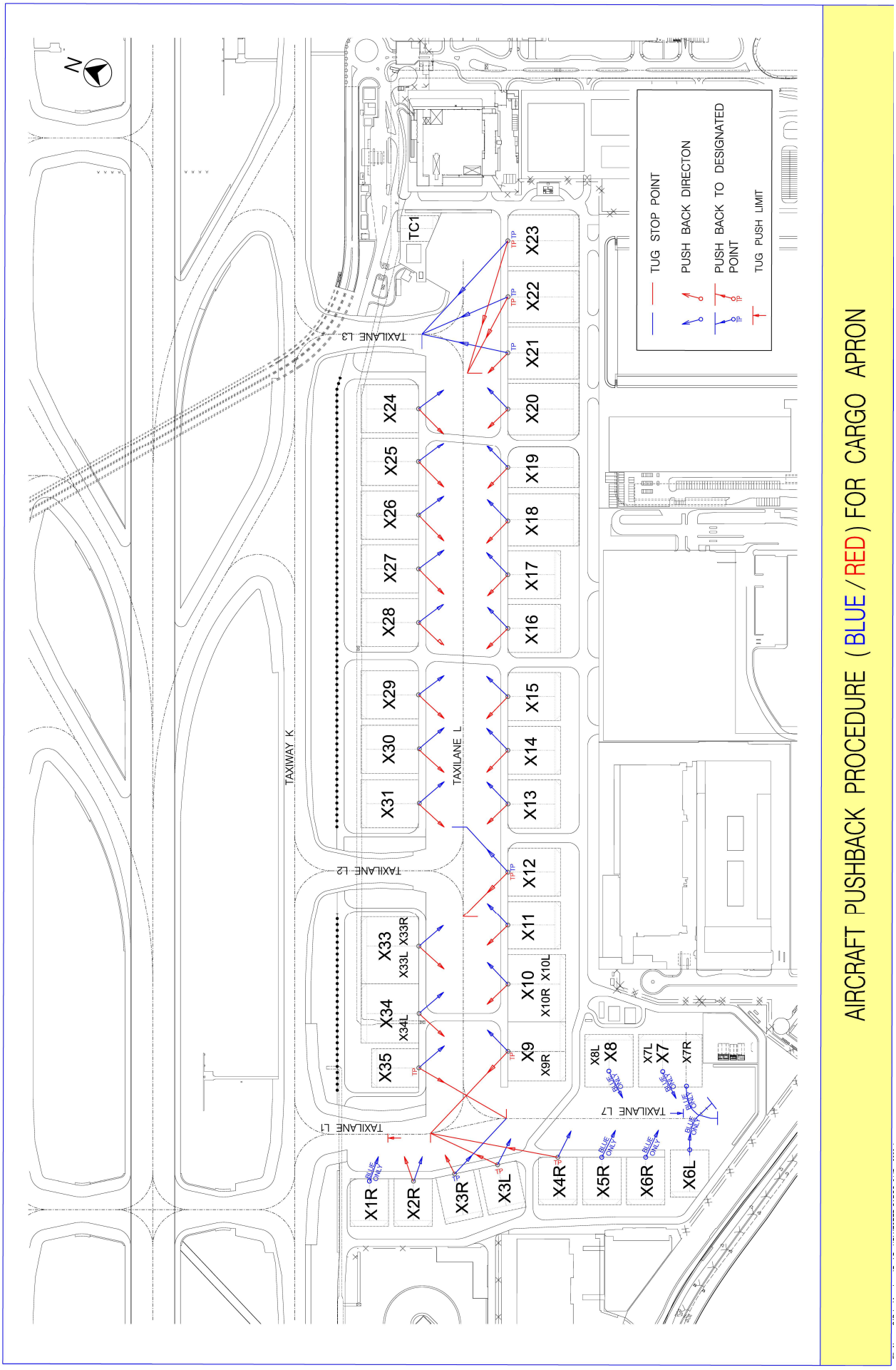
D218
D201
D203
D205
D207
D209
D211
D213
D215
D217
D219
BLUE ONLY
RED ONLY
TP
TUG STOP POINT
TUG PUSH LIMIT
PUSH BACK DIRECTION
PUSH BACK TO DESIGNATED POINT


AIRCRAFT PUSHBACK PROCEDURE (BLUE / RED) FOR CARGO APRON
TUG STOP POINT
PUSH BACK DIRECTON
PUSH BACK TO DESIGNATED POINT
TUG PUSH LIMIT
TC1
TAXILANE L3
TAXILANE L2
TAXILANE L1
TAXILANE L7
TAXIWAY K
TAXILANE L
X1R
X2R
X3R
X3L
X4R
X5R
X6R
X6L
X8L X8
X7L X7 X7R
X9 X9R
X10 X10R X10L
X11
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X14
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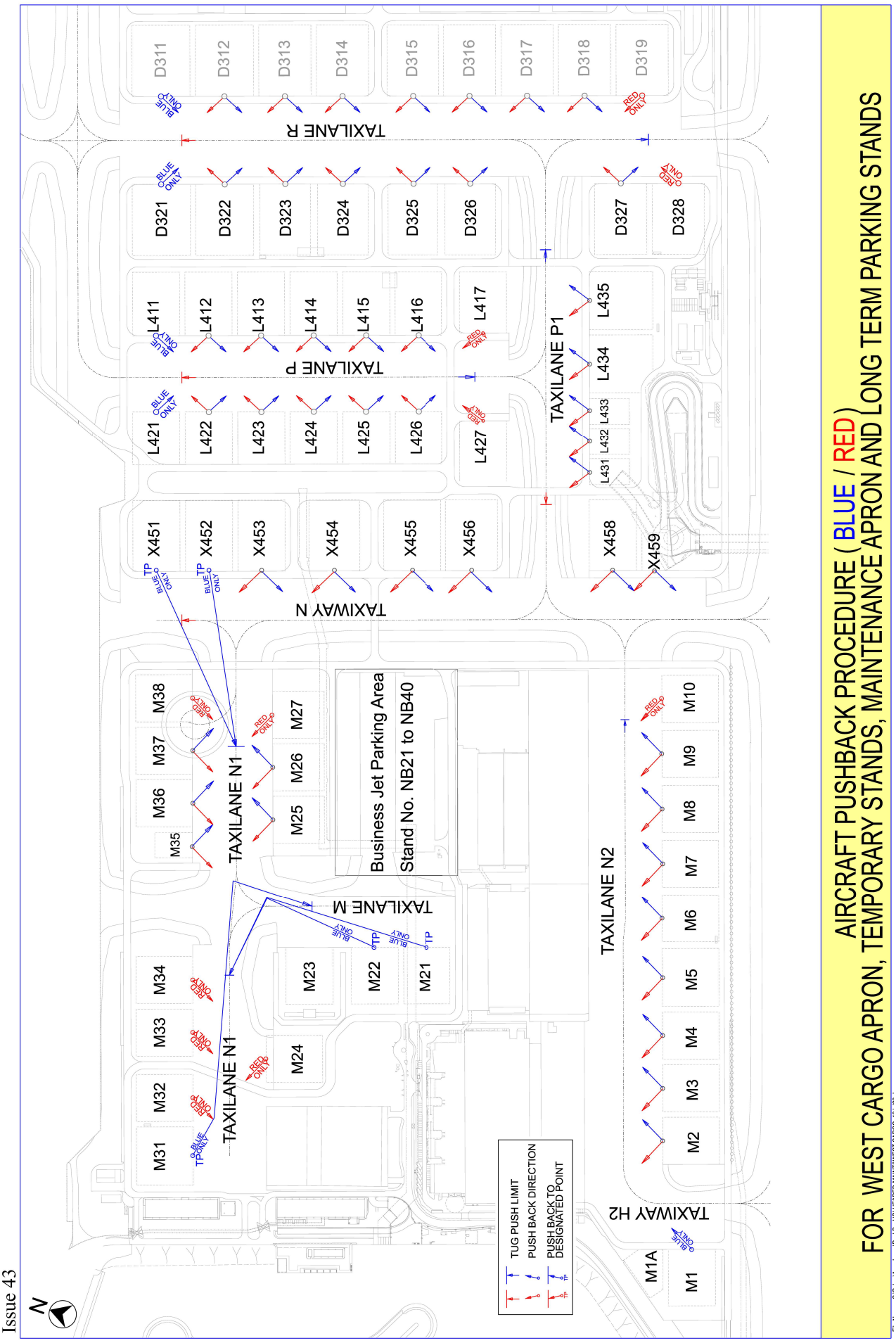
X33 X33L X33R
X34 X34L
X35
BLUE ONLY
TP


AIRCRAFT PUSHBACK PROCEDURE (BLUE / RED)
FOR WEST CARGO APRON, TEMPORARY STANDS, MAINTENANCE APRON AND LONG TERM PARKING STANDS
Issue 43
N
TAXILANE R
TAXILANE P
TAXILANE P1
TAXIWAY N
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
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X451
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M1
M1A
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M4
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M6
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M9
M10
M21
M22
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M24
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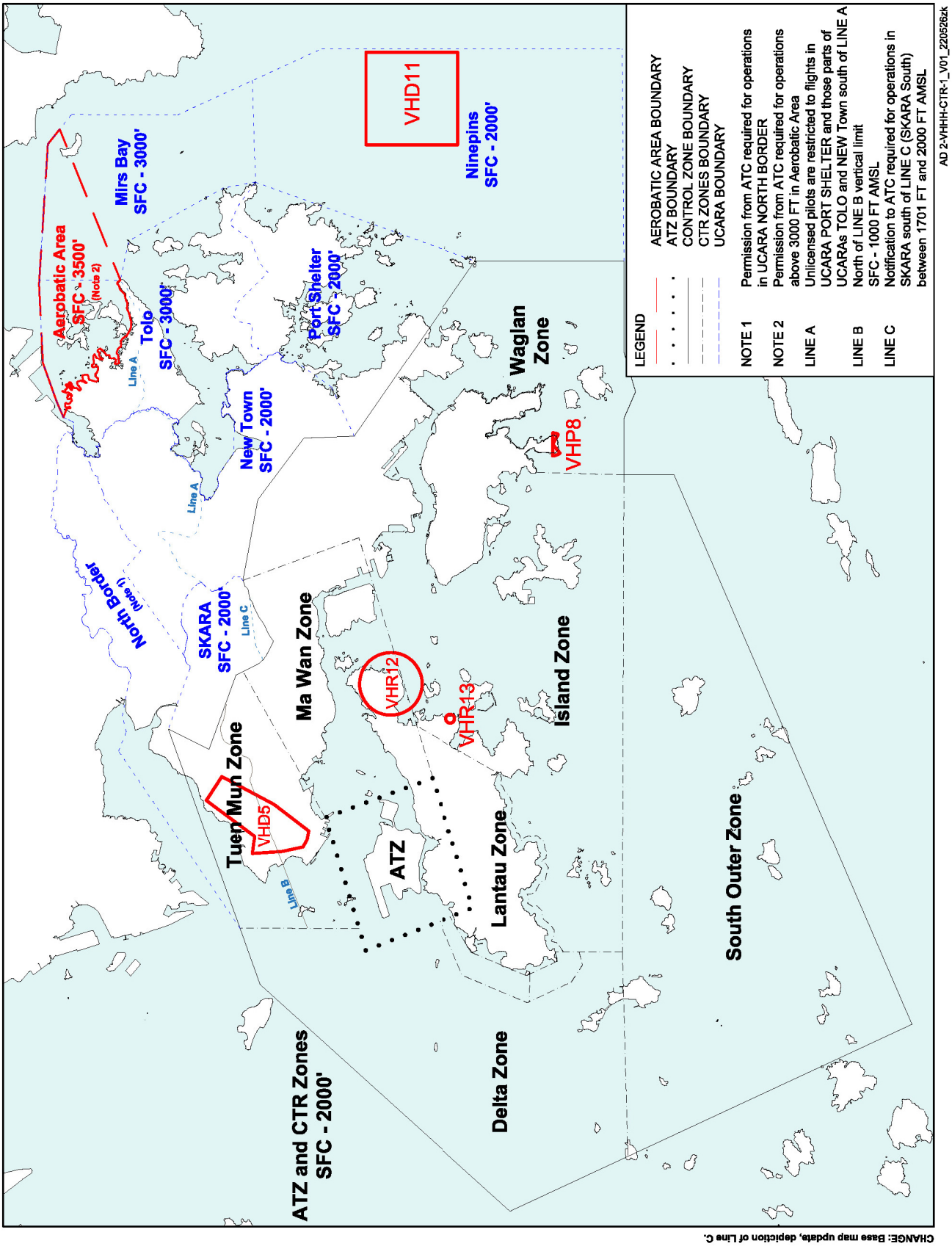
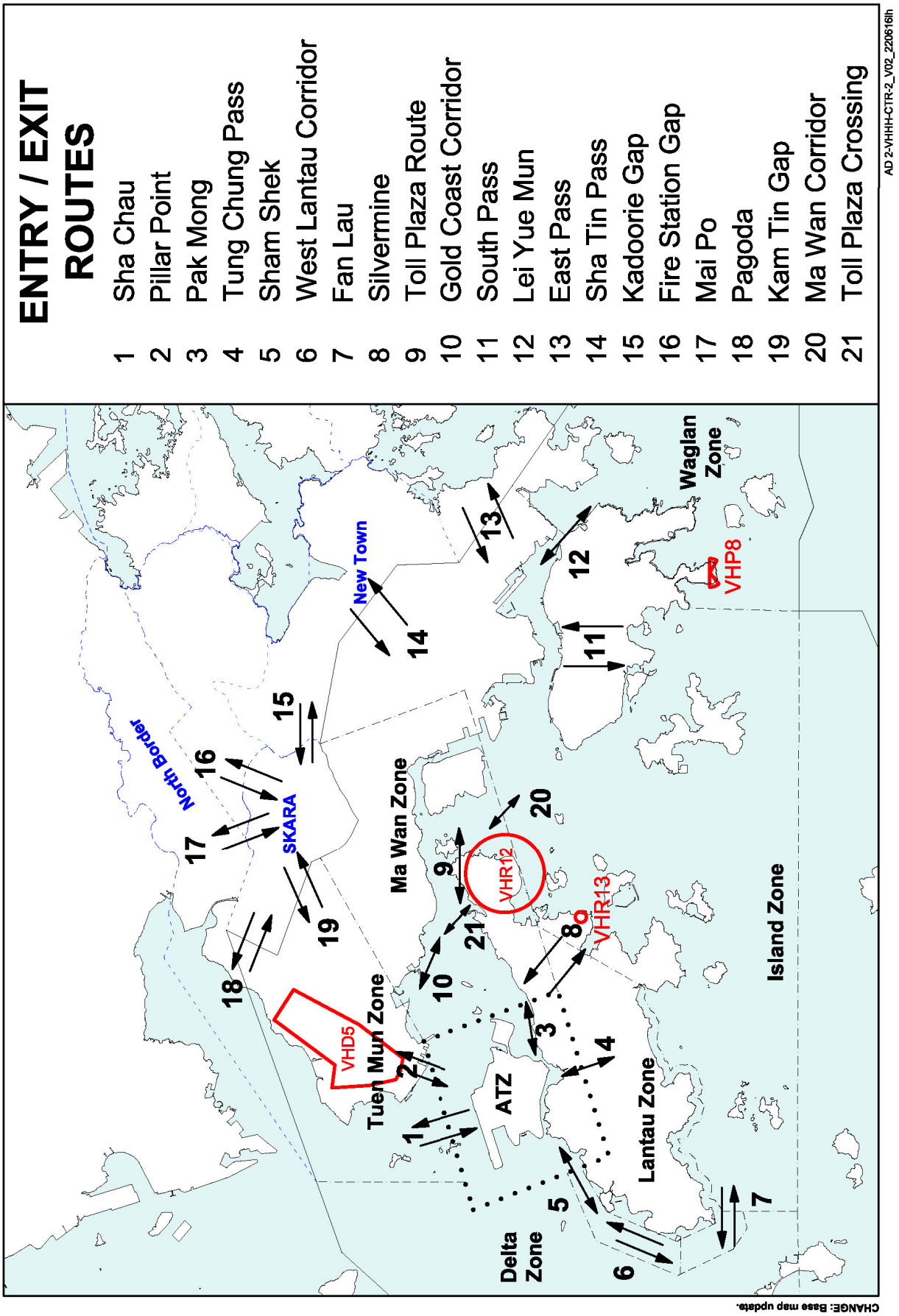
M27
M31
M32
M33
M34
M35
M36
M37
M38
BLUE ONLY
RED ONLY
TP

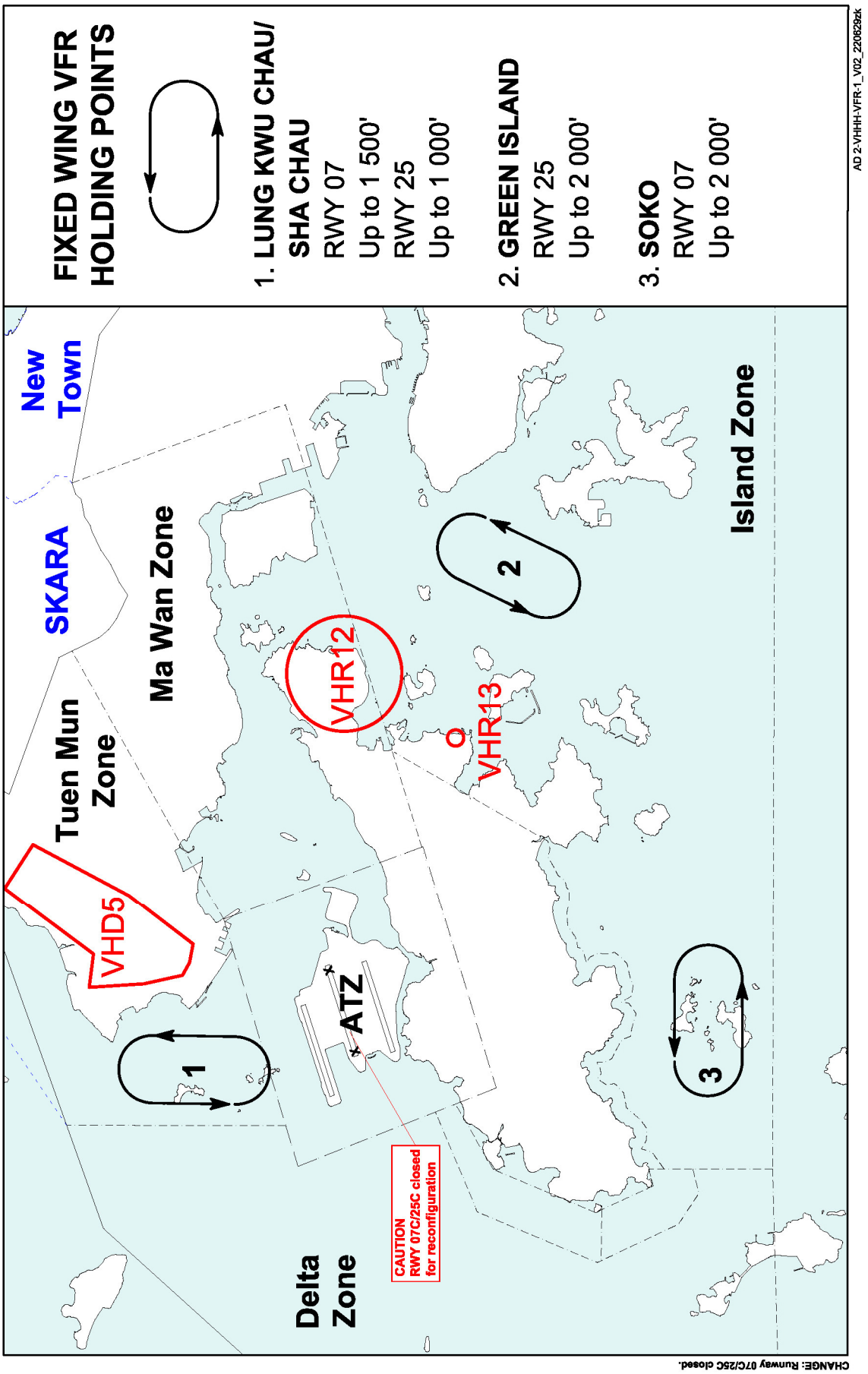
Subdivisions of the Control Zone (CTR Zones) and Uncontrolled Airspace Reporting Areas (UCARAs)



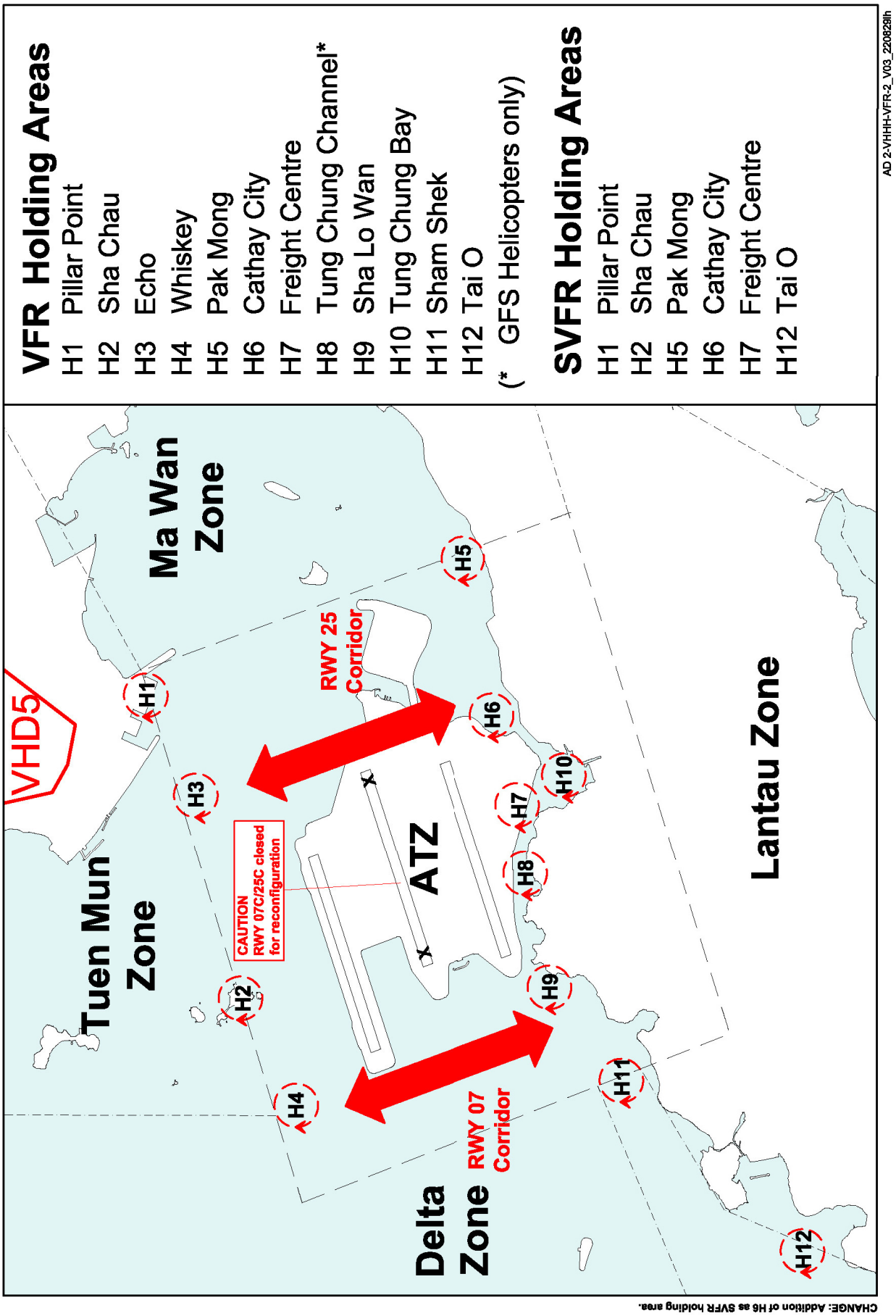
Entry / Exit Routes from ATZ, CTR Zones and SKARA



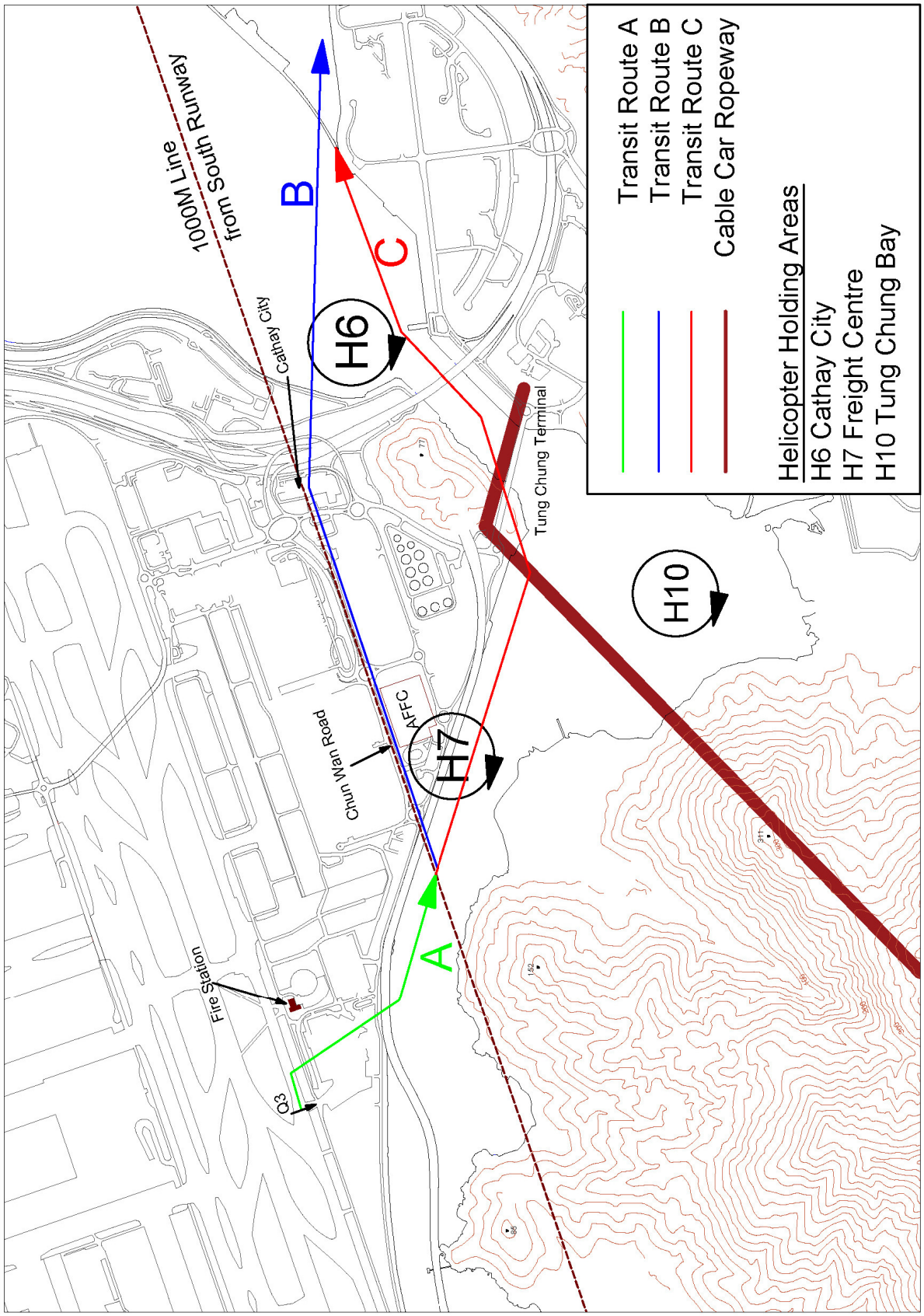
FIXED WING VFR HOLDING POINTS



HELICOPTER VFR HOLDING AREAS



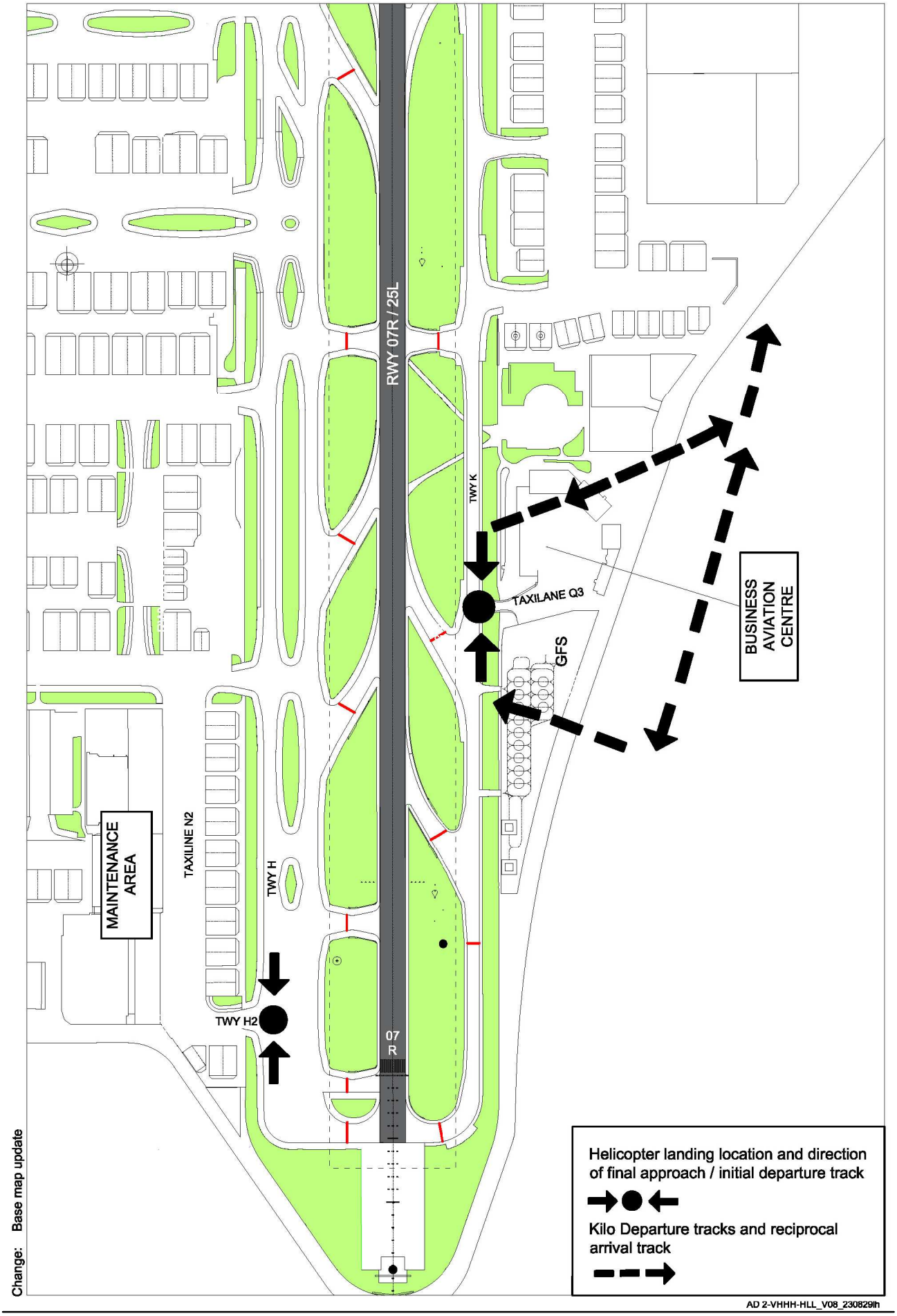
Helicopter Holding Areas and Transit Routes in Tung Chung Area



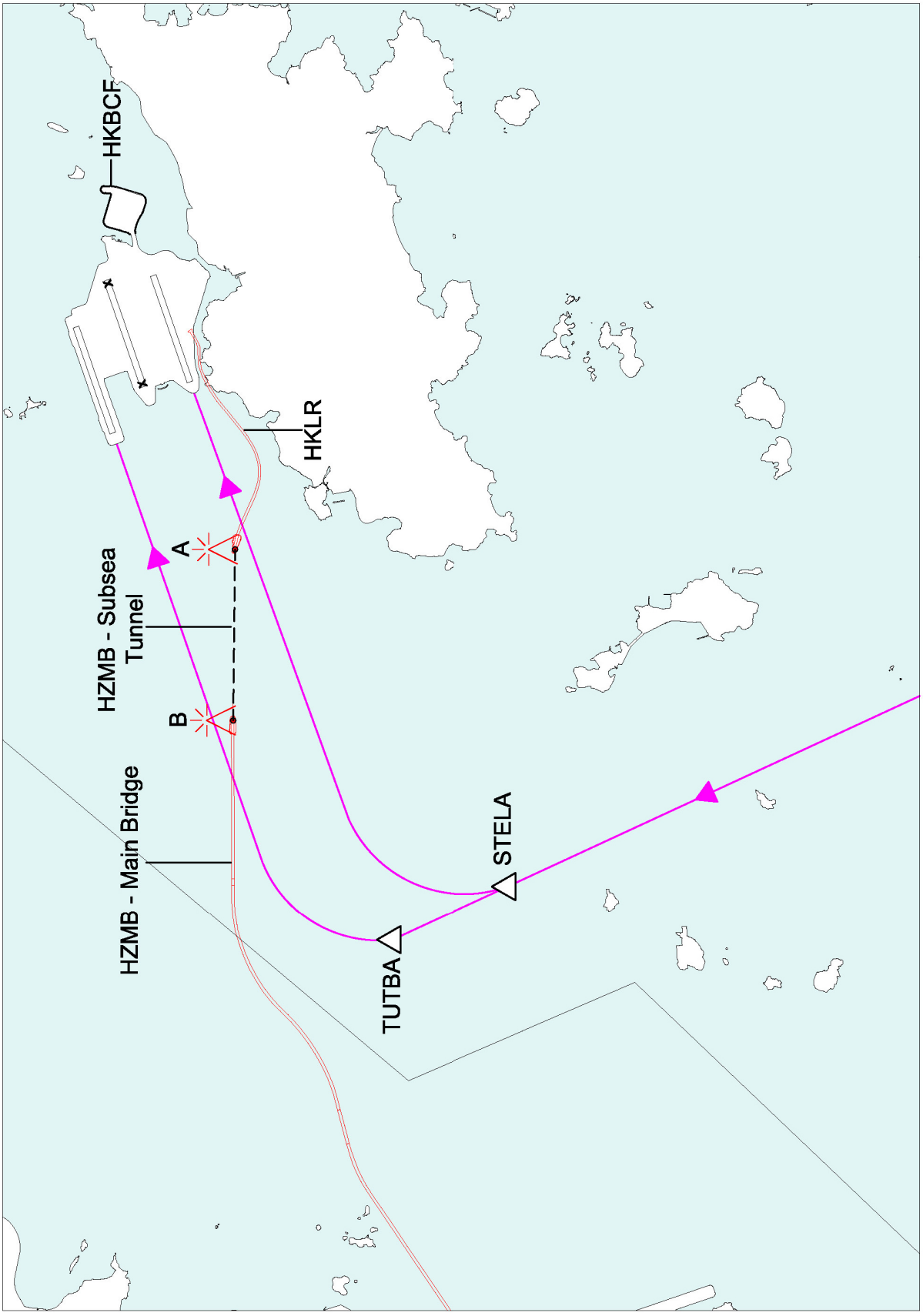
AD 2-VHHH-VFR-3_220228zk

CHANGE: Base map update.

Helicopter Landing Locations in HKIA



The HZMB and Artificial Islands, HKLR and HKBCF



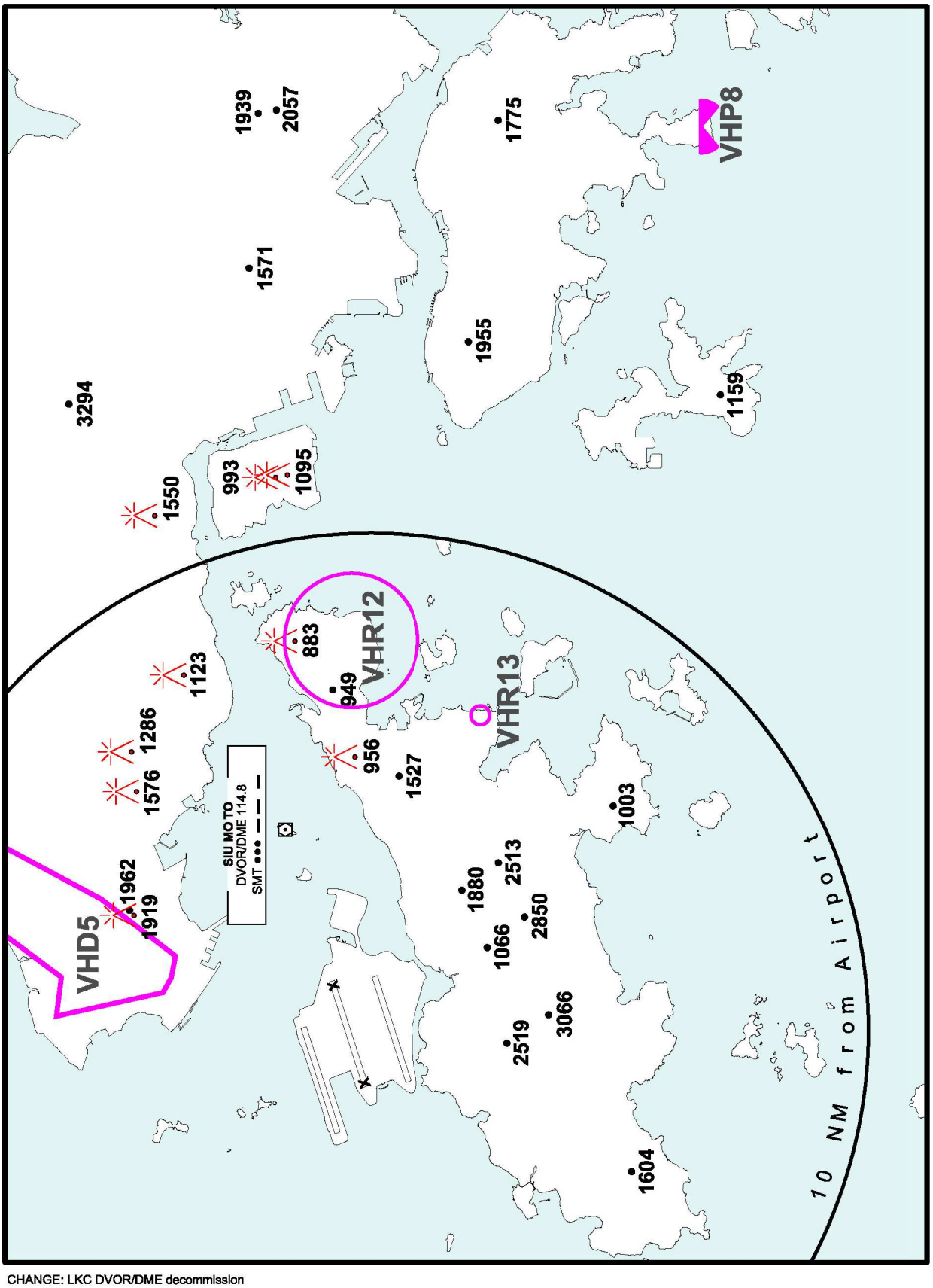
CHANGE: Update of airport base map and associated details.

AD 2-VHHH-HZMB-LGT_V01_220812lh

Aeronautical Ground Lights

Hong Kong International Airport

Elevations in Feet



AD 2-VHHH-AERO-GND-LGT_V07_231017lh

CHANGE: LKC DVOR/DME decommission

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 Departure	123.8 MHZ	H24	
	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	Co-ordinates
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	Co-ordinates	Cross Reference from Navaids
ALLEY	210511.15N 1134709.50E	TD RDL 205 / DME 75 NM
BREAM	214646.00N 1140328.00E	TD RDL 208 / DME 30.9 NM
CAMRI	220146.24N 1140428.73E	SMT RDL 167 / DME 19.1 NM
CONGA	214402.50N 1164705.90E	TD RDL 105 / DME 142.3 NM
DOCTA	215649.45N 1140033.38E	SMT RDL 179 / DME 23.4 NM
GRUPA	205044.00N 1155659.00E	TD RDL 135 / DME 125 NM
LAKES	215841.30N 1145438.60E	TD RDL 118 / DME 38 NM
LUKBU	222244.12N 1135301.50E	-
MC411	222141.20N 1134737.58E *	-
MC501	220003.00N 1133845.76E *	-
MULET	213501.95N 1134751.87E	MCU RDL 164 / DME 35 NM
OCEAN	214843.00N 1144848.00E	TD RDL 135 / DME 39 NM
PAPA	215839.00N 1133922.00E	MCU RDL 164 / DME 10 NM
PECAN	212620.19N 1140205.64E	TD RDL 200 / DME 50.5 NM
RASSE	214734.50N 1151949.10E	TD RDL 118 / DME 63.9 NM
SHELY	220526.65N 1143913.94E	TD RDL 118 / DME 22.2 NM
SKATE	213154.99N 1150839.94E	TD RDL 135 / DME 64 NM
SOUSA	220110.40N 1161127.80E	TD RDL 100 / DME 106.6 NM
TD	221452.42N 1141735.30E	Co-located with TD DVOR/DME
TITAN	214027.40N 1140302.52E	TD RDL 205 / DME 36.9 NM

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	Co-ordinates	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**	**Co-ordinates**
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. 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

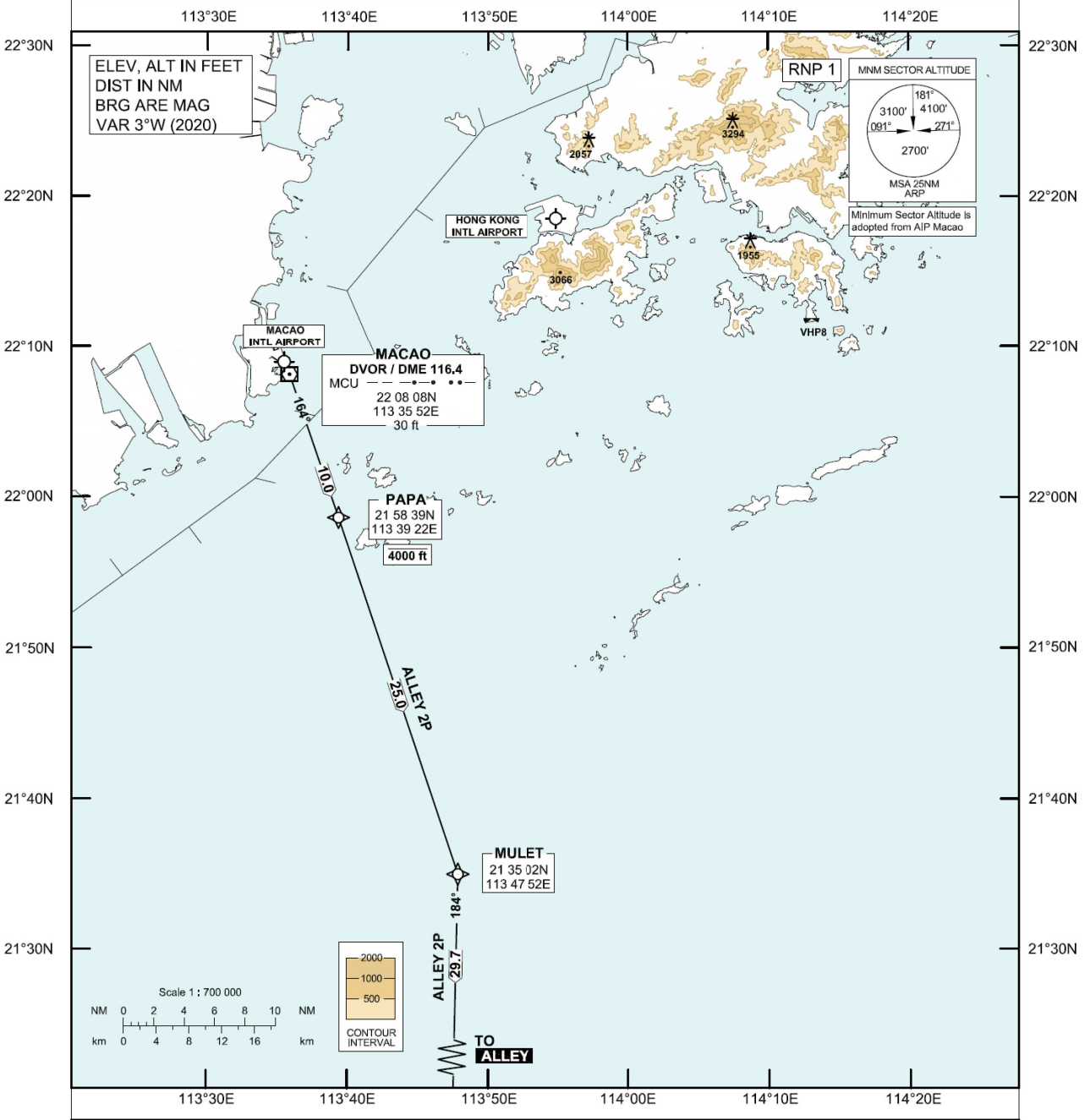
RNAV(GNSS) ALLEY 2P SID	AD 2-VMMC-SID-ALLEY-P
RNAV(GNSS) ALLEY 3T SID	AD 2-VMMC-SID-ALLEY-T
RNAV(GNSS) ALLEY 3U SID	AD 2-VMMC-SID-ALLEY-U
RNAV(GNSS) CONGA 2P SID	AD 2-VMMC-SID-CONGA-P
RNAV(GNSS) CONGA 3T/ RNAV(GNSS) CONGA 4U SID	AD 2-VMMC-SID-CONGA-TU
RNAV(GNSS) GRUPA 2P SID	AD 2-VMMC-SID-GRUPA-P
RNAV(GNSS) GRUPA 3T/ RNAV(GNSS) GRUPA 4U SID	AD 2-VMMC-SID-GRUPA-TU
RNAV(GNSS) SOUSA 2P SID	AD 2-VMMC-SID-SOUSA-P
RNAV(GNSS) SOUSA 4T/ RNAV(GNSS) SOUSA 4U SID	AD 2-VMMC-SID-SOUSA-TU
BIGRO 1F SID	AD 2-VMMC-SID-BIGRO-F
RNAV(GNSS) BIGRO 1H SID	AD 2-VMMC-SID-BIGRO-H
MIPAG 2F/ NLG 1F/ SHL 2F SID	AD 2-VMMC-SID-MIPAG-F
RNAV(GNSS) MIPAG 1H/ RNAV(GNSS) NLG 1H/ RNAV(GNSS) SHL 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

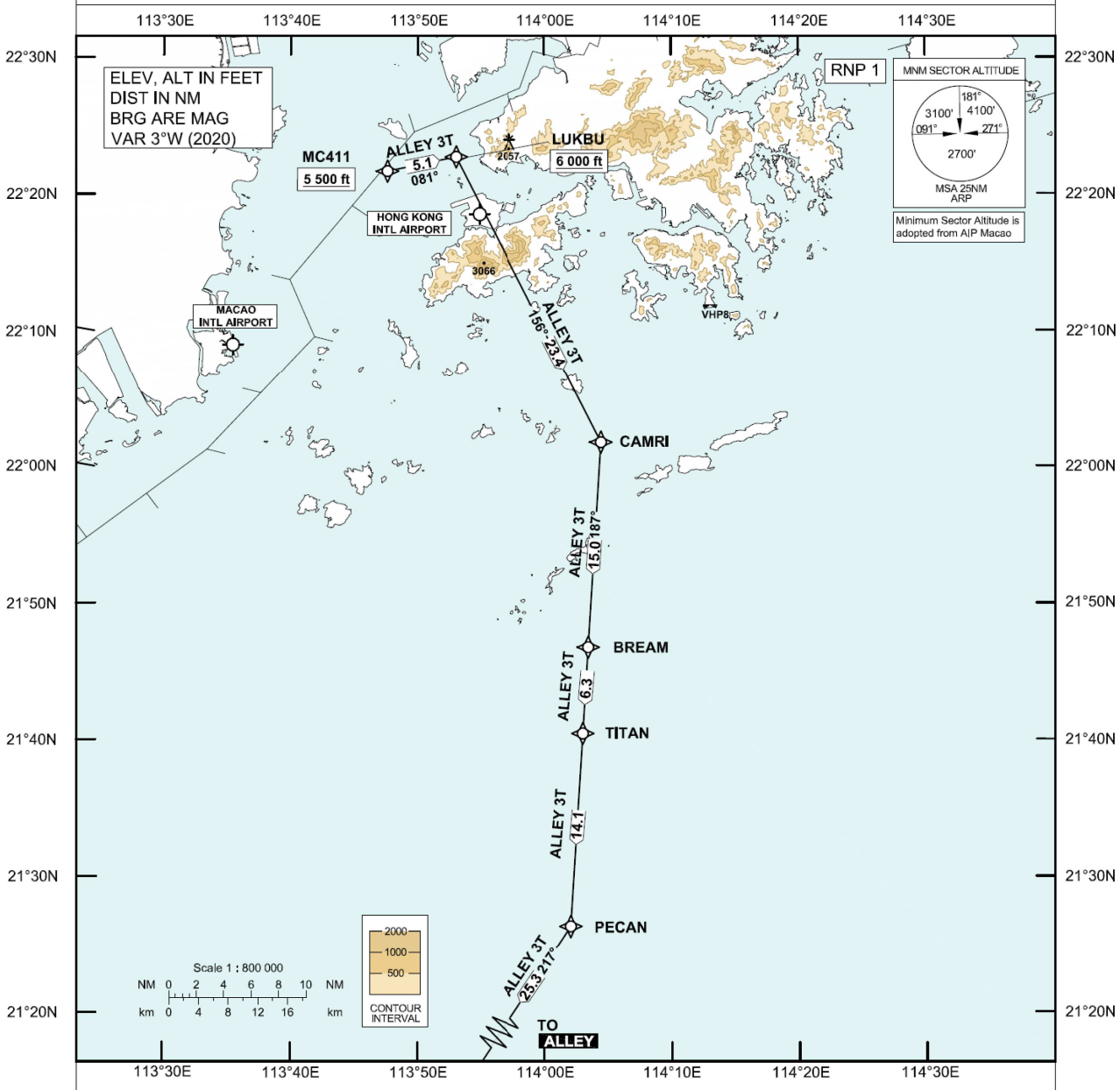
Waypoint Name	Coordinates (WGS84)
PAPA	21 58 39 N 113 39 22 E
MULET	21 35 01.95 N 113 47 51.87 E
ALLEY	21 05 11.15 N 113 47 09.50 E

STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

Transition Altitude 9 000 ft
HONG KONG DEPARTURE 123.8

MACAO / Intl (VMMC)
RWY 34
RNAV (GNSS) ALLEY 3T 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 3T SID RWY 34

RNP 1 Procedure
(Mandate procedure available to aircraft appropriately equipped and approved)

MC411 - LUKBU - CAMRI - BREAM - TITAN - PECAN - ALLEY

Conventional Procedure
Departures shall enter Hong Kong airspace via MC411.

From MC411, direct to LUKBU. At LUKBU turn right to CAMRI. From CAMRI turn right direct to BREAM, then TITAN and then PECAN. From PECAN turn right to ALLEY.

CLIMB REQUIREMENT
Cross MC411 at or above 5 500 ft climbing to 6 000 ft. Cross LUKBU at 6 000 ft. Expect further climb when instructed by ATC.

SPEED RESTRICTION
Aircraft shall fly at 250 KIAS or less below FL 110.

CHANGE: LKC DVOR/DME decommissioned, update of MSA.

AD 2-VMMC-SID-ALLEY-T_V06_231213lh

FMC Database Coding Reference for Macao RNAV(GNSS) SIDs

Designator: ALLEY 3T Runway 34

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 RWY34 SID procedure as published in the AIP Macao										
01	TF	MC411	-	-	+3.0	-	-	+5500	-250	RNP 1
02	TF	LUKBU	-	081	+3.0	5.1	-	@6000	-	RNP 1
03	TF	CAMRI	-	156	+3.0	23.4	R	-	-	RNP 1
04	TF	BREAM	-	187	+3.0	15.0	R	-	-	RNP 1
05	TF	TITAN	-	187	+3.0	6.3	-	-	-	RNP 1
06	TF	PECAN	-	187	+3.0	14.1	-	-	-	RNP 1
07	TF	ALLEY	-	217	+3.0	25.3	R	-	-	RNP 1

Waypoint Coordinates

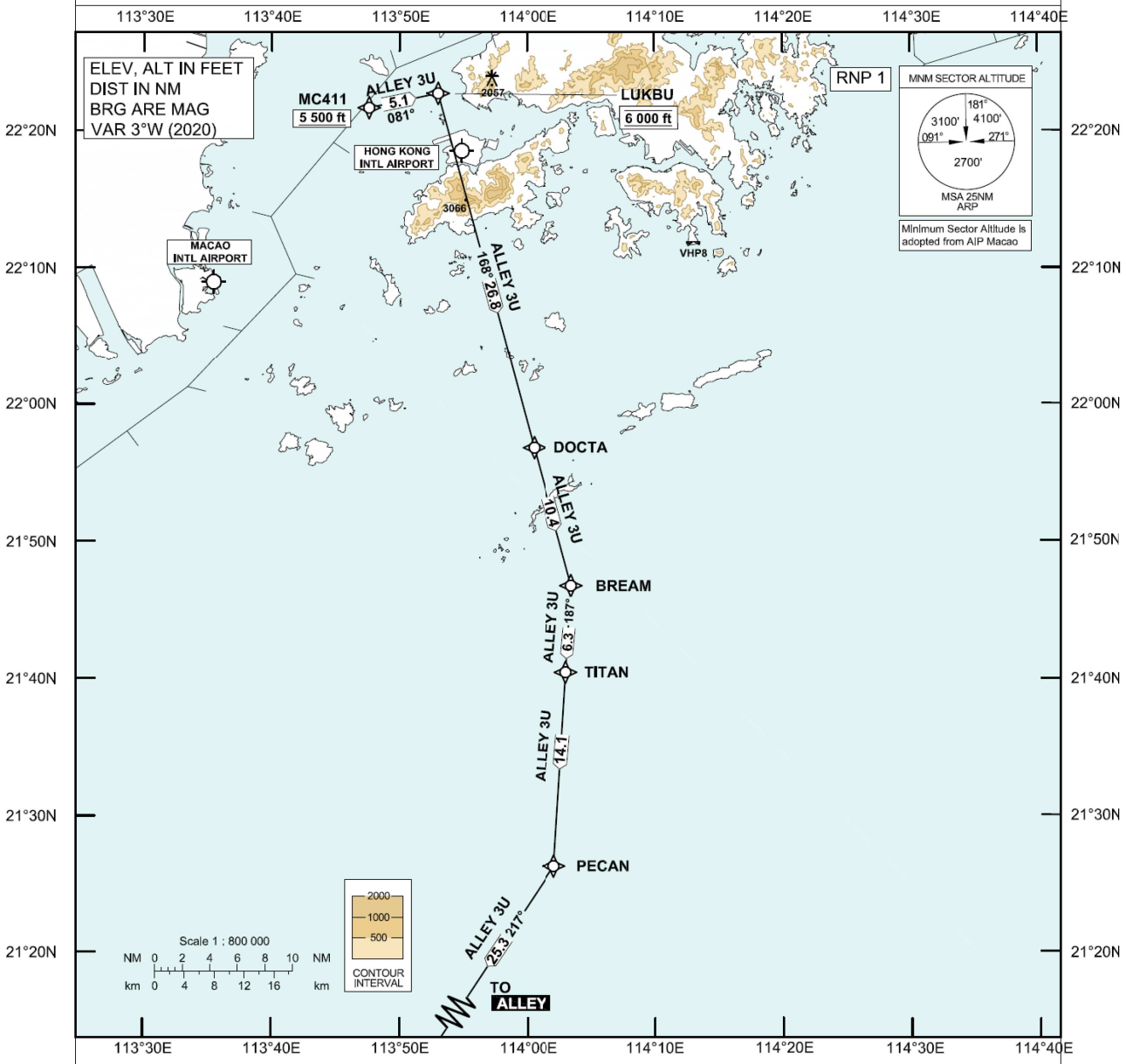
Waypoint Name	Coordinates (WGS84)
MC411	22 21 41.20 N 113 47 37.58 E
LUKBU	22 22 44.12 N 113 53 01.50 E
CAMRI	22 01 46.24 N 114 04 28.73 E
BREAM	21 46 46.00 N 114 03 28.00 E
TITAN	21 40 27.40 N 114 03 02.52 E
PECAN	21 26 20.19 N 114 02 05.64 E
ALLEY	21 05 11.15 N 113 47 09.50 E

STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

Transition Altitude 9 000 ft
HONG KONG DEPARTURE 123.8

MACAO / Intl (VMMC)
RWY 34
RNAV (GNSS) ALLEY 3U 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 3U SID RWY 34

RNP 1 Procedure
(Mandate procedure available to aircraft appropriately equipped and approved)

MC411 - LUKBU - DOCTA - BREAM - TITAN - PECAN - ALLEY

Conventional Procedure
Departures shall enter Hong Kong airspace via MC411.

From MC411, direct to LUKBU. At LUKBU turn right to DOCTA then BREAM. From BREAM turn right direct to TITAN and then PECAN. From PECAN turn right to ALLEY.

CLIMB REQUIREMENT
Cross MC411 at or above 5 500 ft climbing to 6 000 ft. Cross LUKBU at 6 000 ft. Expect further climb when instructed by ATC.

SPEED RESTRICTION
Aircraft shall fly at 250 KIAS or less below FL 110.

CHANGE: LKC DVOR/DME decommissioned, update of MSA.

AD 2-VMMC-SID-ALLEY-U_V06_231213lh

FMC Database Coding Reference for Macao RNAV(GNSS) SIDs

Designator: ALLEY 3U Runway 34

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 RWY34 SID procedure as published in the AIP Macao										
01	TF	MC411	-	-	+3.0	-	-	+5500	-250	RNP 1
02	TF	LUKBU	-	081	+3.0	5.1	-	@6000	-	RNP 1
03	TF	DOCTA	-	168	+3.0	26.8	R	-	-	RNP 1
04	TF	BREAM	-	168	+3.0	10.4	-	-	-	RNP 1
05	TF	TITAN	-	187	+3.0	6.3	R	-	-	RNP 1
06	TF	PECAN	-	187	+3.0	14.1	-	-	-	RNP 1
07	TF	ALLEY	-	217	+3.0	25.3	R	-	-	RNP 1

Waypoint Coordinates

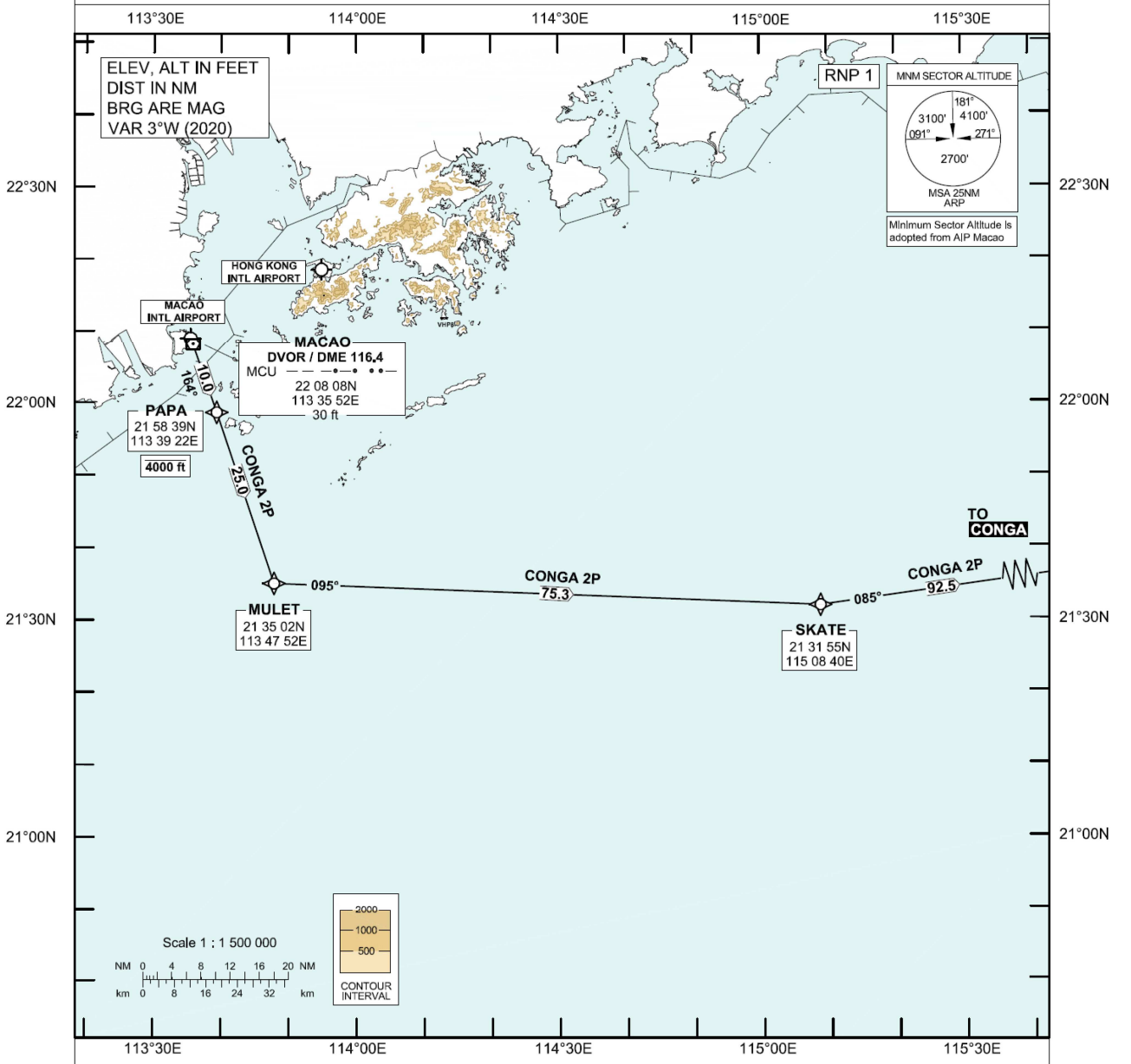
Waypoint Name	Coordinates (WGS84)
MC411	22 21 41.20 N 113 47 37.58 E
LUKBU	22 22 44.12 N 113 53 01.50 E
DOCTA	21 56 49.45 N 114 00 33.38 E
BREAM	21 46 46.00 N 114 03 28.00 E
TITAN	21 40 27.40 N 114 03 02.52 E
PECAN	21 26 20.19 N 114 02 05.64 E
ALLEY	21 05 11.15 N 113 47 09.50 E

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

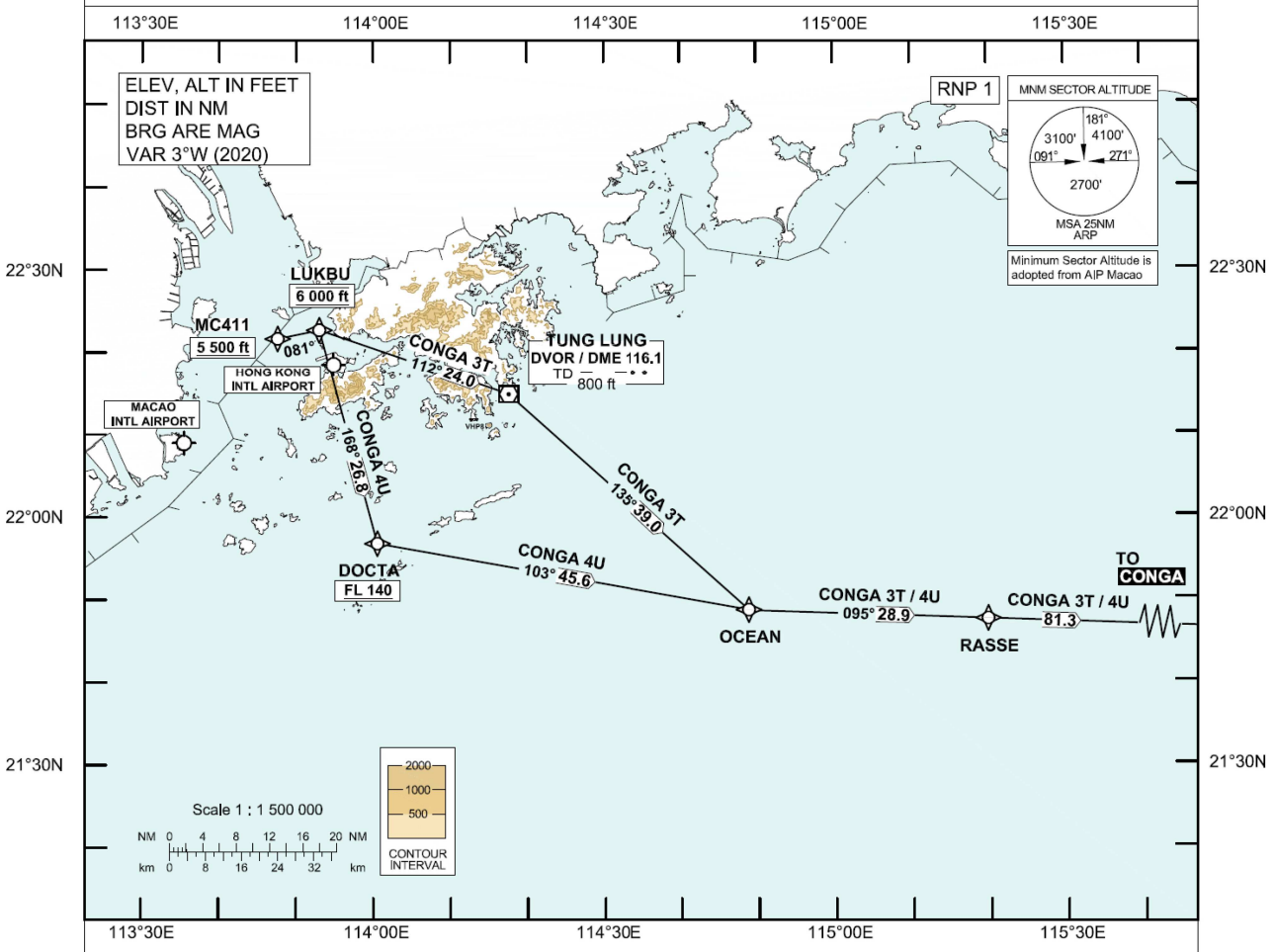
Waypoint Name	Coordinates (WGS84)
PAPA	21 58 39 N 113 39 22 E
MULET	21 35 01.95 N 113 47 51.87 E
SKATE	21 31 54.99 N 115 08 39.94 E
CONGA	21 44 02.50 N 116 47 05.90 E

STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

Transition Altitude 9 000 ft
HONG KONG DEPARTURE 123.8

MACAO / Intl (VMMC)
RWY 34
RNAV (GNSS) CONGA 3T SID
RNAV (GNSS) CONGA 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.



CONGA 3T SID RWY 34

RNP 1 Procedure
(Mandate procedure available to aircraft appropriately equipped and approved)
MC411 - LUKBU - TD - OCEAN - RASSE - CONGA

Conventional Procedure
Departures shall enter Hong Kong airspace via MC411.

From MC411, direct to LUKBU. From LUKBU turn right direct to TD DVOR. From TD DVOR turn right direct to OCEAN then turn left direct to RASSE and CONGA.
If TD DVOR is not available, expect radar vector to CONGA.

CLIMB REQUIREMENT
Cross MC411 at or above 5 500 ft climbing to 6 000 ft. Cross LUKBU at 6 000 ft.
Expect further climb when instructed by ATC.

SPEED RESTRICTION
Aircraft shall fly at 250 KIAS or less below FL 110.

CONGA 4U SID RWY 34

RNP 1 Procedure
(Mandate procedure available to aircraft appropriately equipped and approved)
MC411 - LUKBU - DOCTA - OCEAN - RASSE - CONGA

Conventional Procedure
Departures shall enter Hong Kong airspace via MC411.

From MC411, direct to LUKBU. From LUKBU turn right direct to DOCTA. From DOCTA turn left direct to OCEAN then turn left direct to RASSE and CONGA.

CLIMB REQUIREMENT
Cross MC411 at or above 5 500 ft climbing to 6 000 ft. Cross LUKBU at 6 000 ft.
Expect further climb when instructed by ATC.
Cross DOCTA at or above FL 140.

SPEED RESTRICTION
Aircraft shall fly at 250 KIAS or less below FL 110.

CHANGE: LKC DVOR/DME decommissioned, update of MSA.

AD 2-VMMC-SID-CONGA-TU_V06_231213lh

FMC Database Coding Reference for Macao RNAV(GNSS) SIDs

Designator: CONGA 3T Runway 34

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 RWY34 SID procedure as published in the AIP Macao										
01	TF	MC411	-	-	+3.0	-	-	+5500	-250	RNP 1
02	TF	LUKBU	-	081	+3.0	5.1	-	@6000	-	RNP 1
03	TF	TD	-	112	+3.0	24.0	R	-	-	RNP 1
04	TF	OCEAN	-	135	+3.0	39.0	R	-	-	RNP 1
05	TF	RASSE	-	095	+3.0	28.9	L	-	-	RNP 1
06	TF	CONGA	-	095	+3.0	81.3	-	-	-	RNP 1

Designator: CONGA 4U Runway 34

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 RWY34 SID procedure as published in the AIP Macao										
01	TF	MC411	-	-	+3.0	-	-	+5500	-250	RNP 1
02	TF	LUKBU	-	081	+3.0	5.1	-	@6000	-	RNP 1
03	TF	DOCTA	-	168	+3.0	26.8	R	+FL140	-	RNP 1
04	TF	OCEAN	-	103	+3.0	45.6	L	-	-	RNP 1
05	TF	RASSE	-	095	+3.0	28.9	L	-	-	RNP 1
06	TF	CONGA	-	095	+3.0	81.3	-	-	-	RNP 1

Waypoint Coordinates

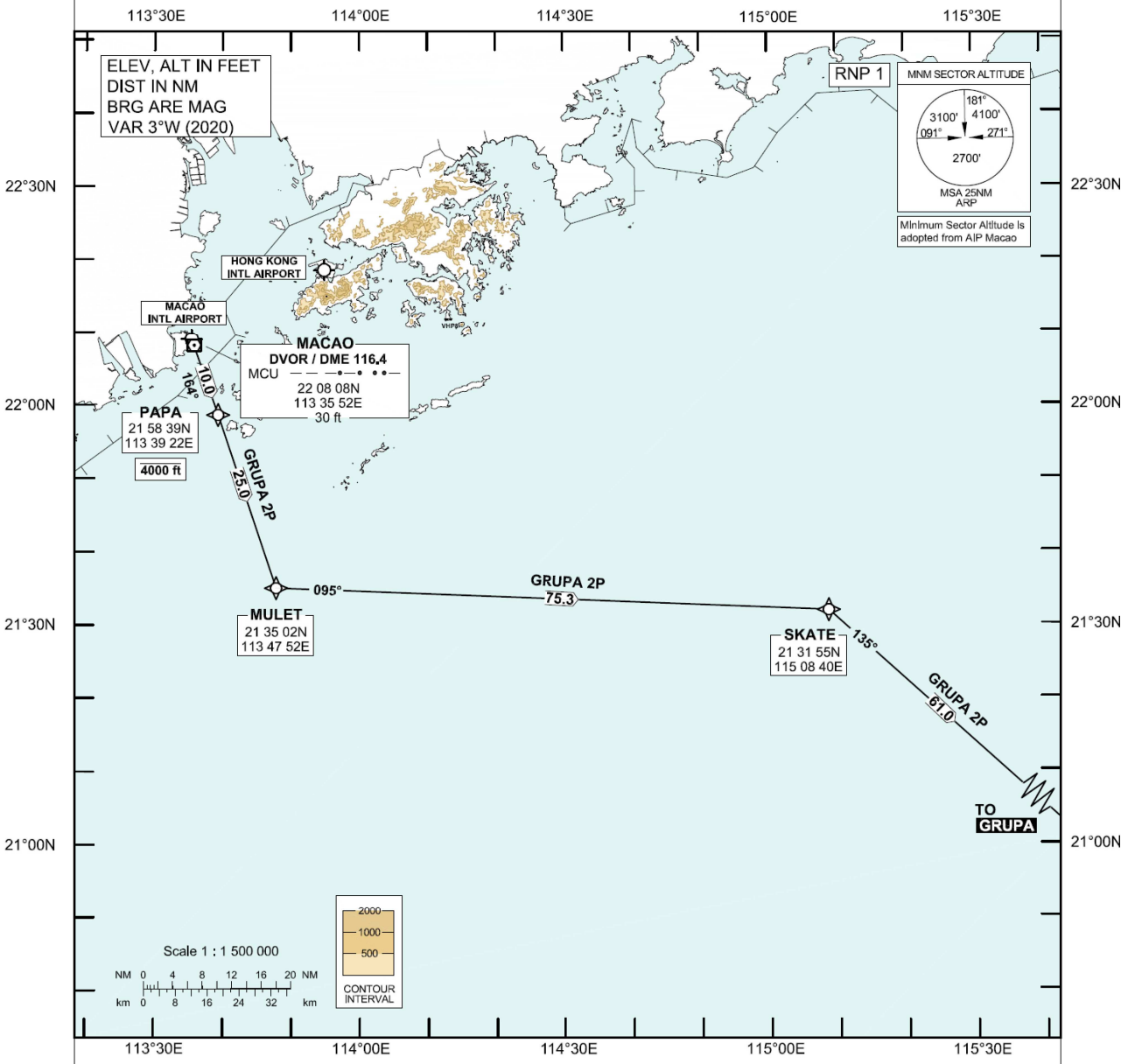
Waypoint Name	Coordinates (WGS84)
MC411	22 21 41.20 N 113 47 37.58 E
LUKBU	22 22 44.12 N 113 53 01.50 E
TD	22 14 52.42 N 114 17 35.30 E
DOCTA	21 56 49.45 N 114 00 33.38 E
OCEAN	21 48 43.00 N 114 48 48.00 E
RASSE	21 47 34.50 N 115 19 49.10 E
CONGA	21 44 02.50 N 116 47 05.90 E

STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

Transition Altitude 9 000 ft
HONG KONG RADAR 123.95

MACAO / Intl (VMMC)
RWY 16
RNAV (GNSS) GRUPA 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.



GRUPA 2P SID RWY 16

RNP 1 Procedure
(Mandate procedure available to aircraft appropriately equipped and approved)

PAPA - MULET - SKATE - GRUPA

Conventional Procedure
Continue outbound on MCU RDL 164 to PAPA then MULET. From MULET turn left direct to SKATE then turn right direct to GRUPA.

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-GRUPA-P_V05_231213lh

FMC Database Coding Reference for Macao RNAV(GNSS) SIDs

Designator: GRUPA 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	GRUPA	-	135	+3.0	61.0	R	-	-	RNP 1

Waypoint Coordinates

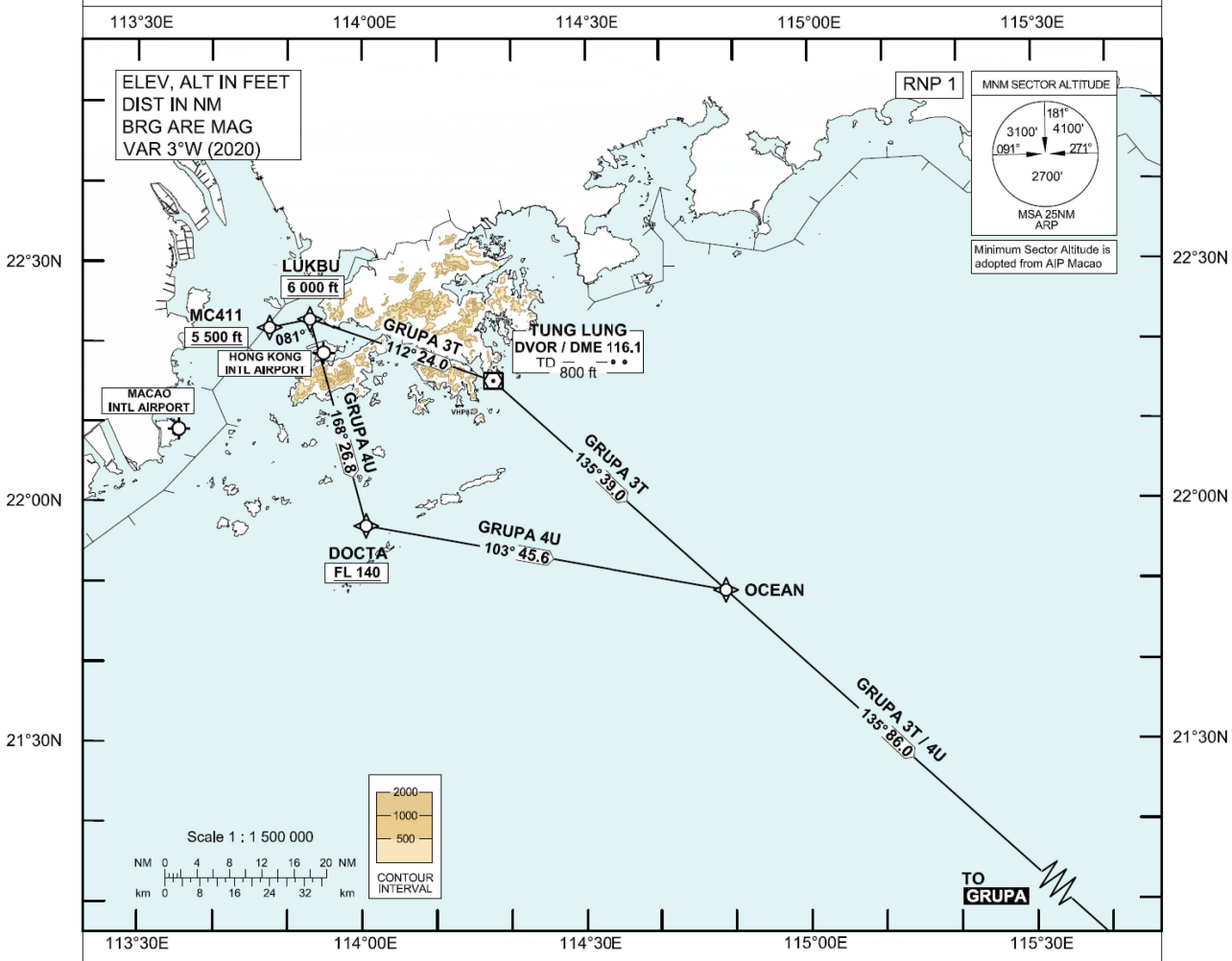
Waypoint Name	Coordinates (WGS84)
PAPA	21 58 39 N 113 39 22 E
MULET	21 35 01.95 N 113 47 51.87 E
SKATE	21 31 54.99 N 115 08 39.94 E
GRUPA	20 50 44.00 N 115 56 59.00 E

STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

Transition Altitude 9 000 ft
HONG KONG DEPARTURE 123.8

MACAO / Intl (VMMC)
RWY 34
RNAV (GNSS) GRUPA 3T SID
RNAV (GNSS) GRUPA 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.



GRUPA 3T SID RWY 34

RNP 1 Procedure
(Mandate procedure available to aircraft appropriately equipped and approved)
MC411 - LUKBU - TD - OCEAN - GRUPA

Conventional Procedure
Departures shall enter Hong Kong airspace via MC411.

From MC411, direct to LUKBU. From LUKBU turn right direct to TD DVOR. From TD DVOR turn right direct to OCEAN then GRUPA.
If TD DVOR Is not available, expect radar vector to GRUPA

CLIMB REQUIREMENT
Cross MC411 at or above 5 500 ft climbing to 6 000 ft. Cross LUKBU at 6 000 ft.
Expect further climb when instructed by ATC.

SPEED RESTRICTION
Aircraft shall fly at 250 KIAS or less below FL 110.

GRUPA 4U SID RWY 34

RNP 1 Procedure
(Mandate procedure available to aircraft appropriately equipped and approved)
MC411 - LUKBU - DOCTA - OCEAN - GRUPA

Conventional Procedure
Departures shall enter Hong Kong airspace via MC411.

From MC411, direct to LUKBU. From LUKBU turn right direct to DOCTA. From DOCTA turn left direct to OCEAN then turn right direct to GRUPA.

CLIMB REQUIREMENT
Cross MC411 at or above 5 500 ft climbing to 6 000 ft. Cross LUKBU at 6 000 ft.
Expect further climb when instructed by ATC.
Cross DOCTA at or above FL 140.

SPEED RESTRICTION
Aircraft shall fly at 250 KIAS or less below FL 110.

CHANGE: LKC DVOR/DME decommissioned, update of MSA.

AD 2-VMMC-SID-GRUPA-TU V06 231213h

FMC Database Coding Reference for Macao RNAV(GNSS) SIDs

Designator: GRUPA 3T Runway 34

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 RWY34 SID procedure as published in the AIP Macao										
01	TF	MC411	-	-	+3.0	-	-	+5500	-250	RNP 1
02	TF	LUKBU	-	081	+3.0	5.1	-	@6000	-	RNP 1
03	TF	TD	-	112	+3.0	24.0	R	-	-	RNP 1
04	TF	OCEAN	-	135	+3.0	39.0	R	-	-	RNP 1
05	TF	GRUPA	-	135	+3.0	86.0	-	-	-	RNP 1

Designator: GRUPA 4U Runway 34

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 RWY34 SID procedure as published in the AIP Macao										
01	TF	MC411	-	-	+3.0	-	-	+5500	-250	RNP 1
02	TF	LUKBU	-	081	+3.0	5.1	-	@6000	-	RNP 1
03	TF	DOCTA	-	168	+3.0	26.8	R	+FL140	-	RNP 1
04	TF	OCEAN	-	103	+3.0	45.6	L	-	-	RNP 1
05	TF	GRUPA	-	135	+3.0	86.0	R	-	-	RNP 1

Waypoint Coordinates

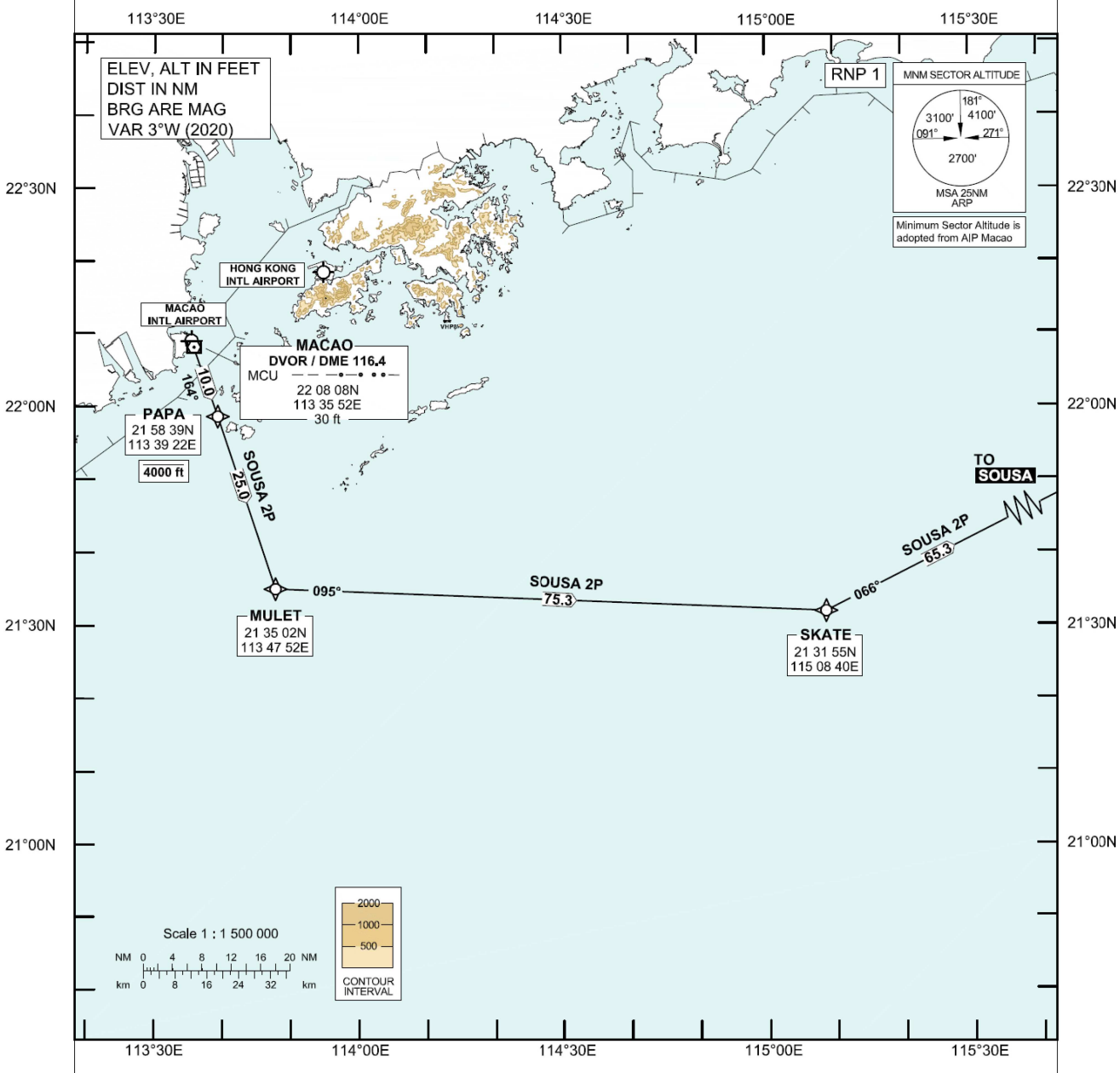
Waypoint Name	Coordinates (WGS84)
MC411	22 21 41.20 N 113 47 37.58 E
LUKBU	22 22 44.12 N 113 53 01.50 E
TD	22 14 52.42 N 114 17 35.30 E
DOCTA	21 56 49.45 N 114 00 33.38 E
OCEAN	21 48 43.00 N 114 48 48.00 E
GRUPA	20 50 44.00 N 115 56 59.00 E

STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

Transition Altitude 9 000 ft
HONG KONG RADAR 123.95

MACAO / Intl (VMMC)
RWY 16
RNAV (GNSS) SOUSA 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.



SOUSA 2P SID RWY 16

RNP 1 Procedure
(Mandate procedure available to aircraft appropriately equipped and approved)

PAPA - MULET - SKATE - SOUSA

Conventional Procedure
Continue outbound on MCU RDL 164 to PAPA then MULET. From MULET turn left direct to SKATE then turn left direct to SOUSA.

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-SOUSA-P_V05_231213lh

FMC Database Coding Reference for Macao RNAV(GNSS) SIDs

Designator: SOUSA 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	TF	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	SOUSA	-	066	+3.0	65.3	L	-	-	RNP 1

Waypoint Coordinates

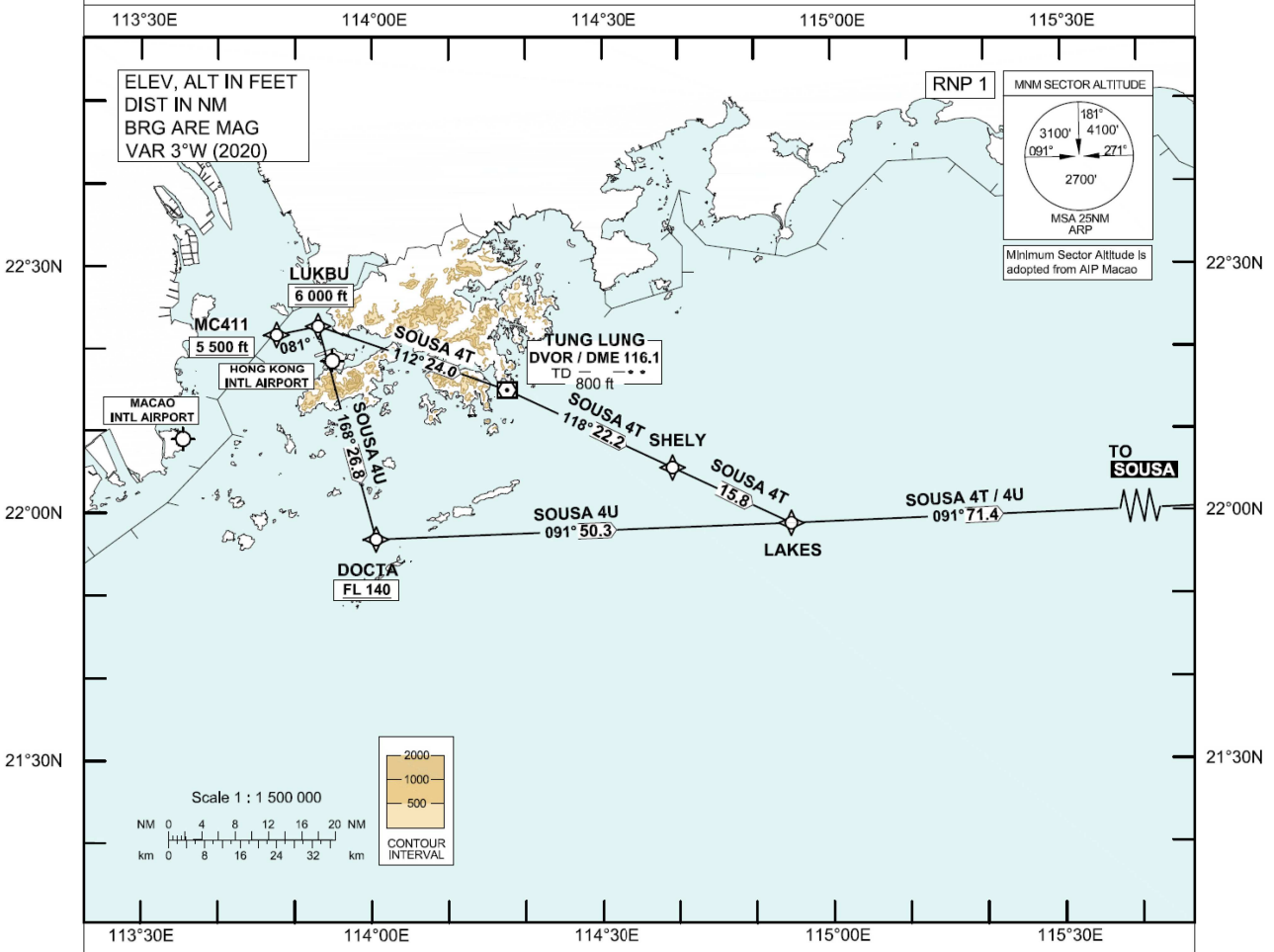
Waypoint Name	Coordinates (WGS84)
PAPA	21 58 39 N 113 39 22 E
MULET	21 35 01.95 N 113 47 51.87 E
SKATE	21 31 54.99 N 115 08 39.94 E
SOUSA	22 01 10.40 N 116 11 27.80 E

STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

Transition Altitude 9 000 ft
HONG KONG DEPARTURE 123.8

MACAO / Intl (VMMC)
RWY 34
RNAV (GNSS) SOUSA 4T SID
RNAV (GNSS) SOUSA 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.



SOUSA 4T SID RWY 34

RNP 1 Procedure
(Mandate procedure available to aircraft appropriately equipped and approved)
MC411 - LUKBU - TD - SHELY - LAKES - SOUSA

Conventional Procedure
Departures shall enter Hong Kong airspace via MC411.

From MC411, direct to LUKBU. From LUKBU turn right direct to TD DVOR. From TD DVOR turn right direct to SHELY then LAKES. From LAKES turn left direct to SOUSA.
If TD DVOR is not available, expect radar vector to SHELY.

CLIMB REQUIREMENT
Cross MC411 at or above 5 500 ft climbing to 6 000 ft. Cross LUKBU at 6 000 ft.
Expect further climb when instructed by ATC.

SPEED RESTRICTION
Aircraft shall fly at 250 KIAS or less below FL 110.

SOUSA 4U SID RWY 34

RNP 1 Procedure
(Mandate procedure available to aircraft appropriately equipped and approved)
MC411 - LUKBU - DOCTA - LAKES - SOUSA

Conventional Procedure
Departures shall enter Hong Kong airspace via MC411.

From MC411, direct to LUKBU. From LUKBU turn right direct to DOCTA. From DOCTA turn left direct to LAKES then SOUSA.

CLIMB REQUIREMENT
Cross MC411 at or above 5 500 ft climbing to 6 000 ft. Cross LUKBU at 6 000 ft. Expect further climb when instructed by ATC.
Cross DOCTA at or above FL 140.

SPEED RESTRICTION
Aircraft shall fly at 250 KIAS or less below FL 110.

CHANGE: LKC DVOR/DME decommissioned, update of MSA.

AD 2-VMMC-SID-SOUSA-TU_V06_231213lh

FMC Database Coding Reference for Macao RNAV(GNSS) SIDs

Designator: SOUSA 4T Runway 34

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Track (°M)	Magnetic Variation	Distance (NM)	Turn Dir	Altitude	Speed (/AS)	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	+3.0	5.1	-	@6000	-	RNP 1
03	TF	TD	-	112	+3.0	24.0	R	-	-	RNP 1
04	TF	SHELY	-	118	+3.0	22.2	R	-	-	RNP 1
05	TF	LAKES	-	118	+3.0	15.8	-	-	-	RNP 1
06	TF	SOUSA	-	091	+3.0	71.4	L	-	-	RNP 1

Designator: SOUSA 4U Runway 34

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Track (°M)	Magnetic Variation	Distance (NM)	Turn Dir	Altitude	Speed (/AS)	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	+3.0	5.1	-	@6000	-	RNP 1
03	TF	DOCTA	-	168	+3.0	26.8	R	+FL140	-	RNP 1
04	TF	LAKES	-	091	+3.0	50.3	L	-	-	RNP 1
05	TF	SOUSA	-	091	+3.0	71.4	-	-	-	RNP 1

Waypoint Coordinates

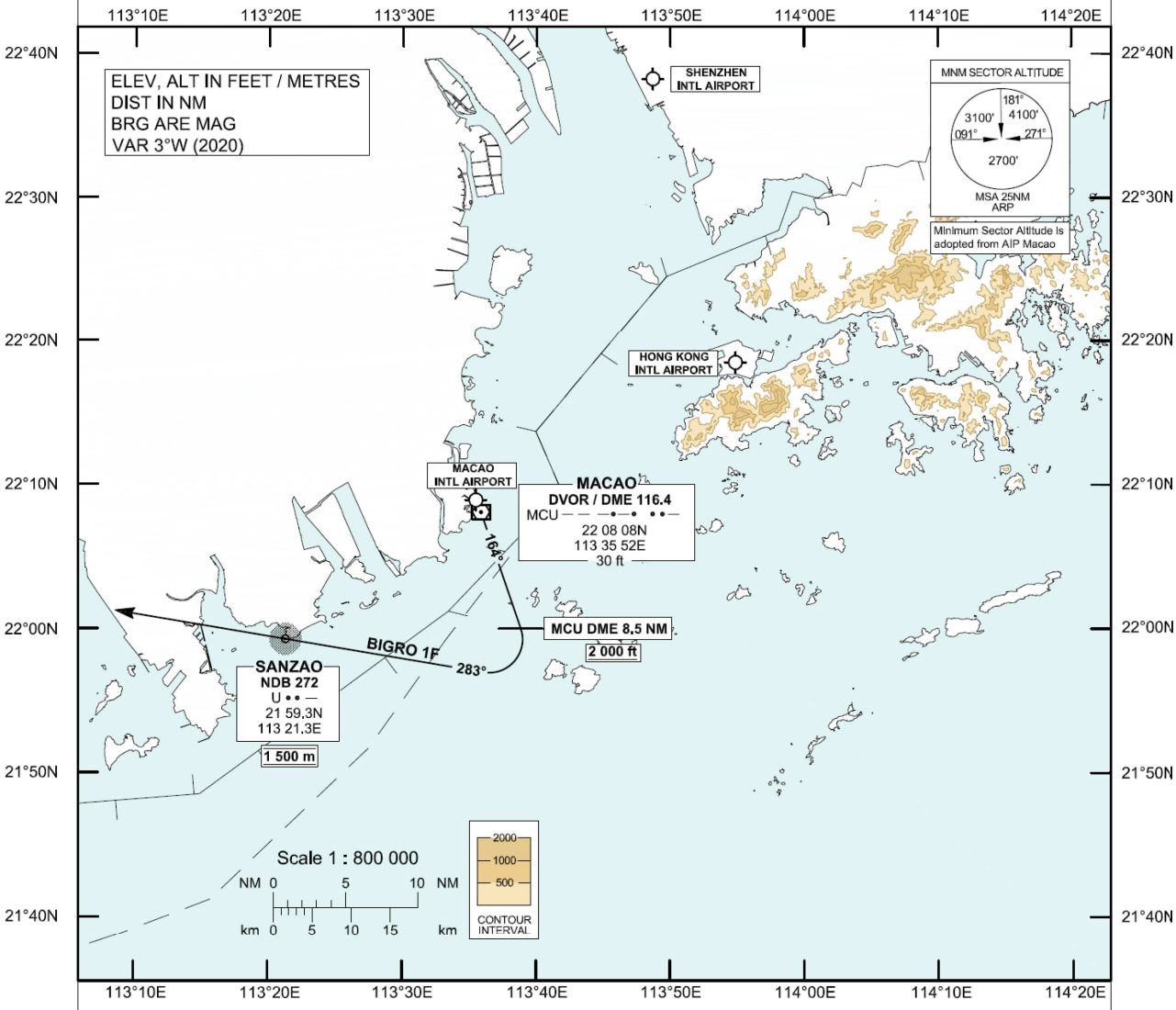
Waypoint Name	Coordinates (WGS84)
MC411	22 21 41.24 N 113 47 37.58 E
LUKBU	22 22 44.12 N 113 53 01.50 E
TD	22 14 52.42 N 114 17 35.30 E
DOCTA	21 56 49.45 N 114 00 33.38 E
SHELY	22 05 26.65 N 114 39 13.94 E
LAKES	21 58 41.30 N 114 54 38.60 E
SOUSA	22 01 10.40 N 116 11 27.80 E

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.

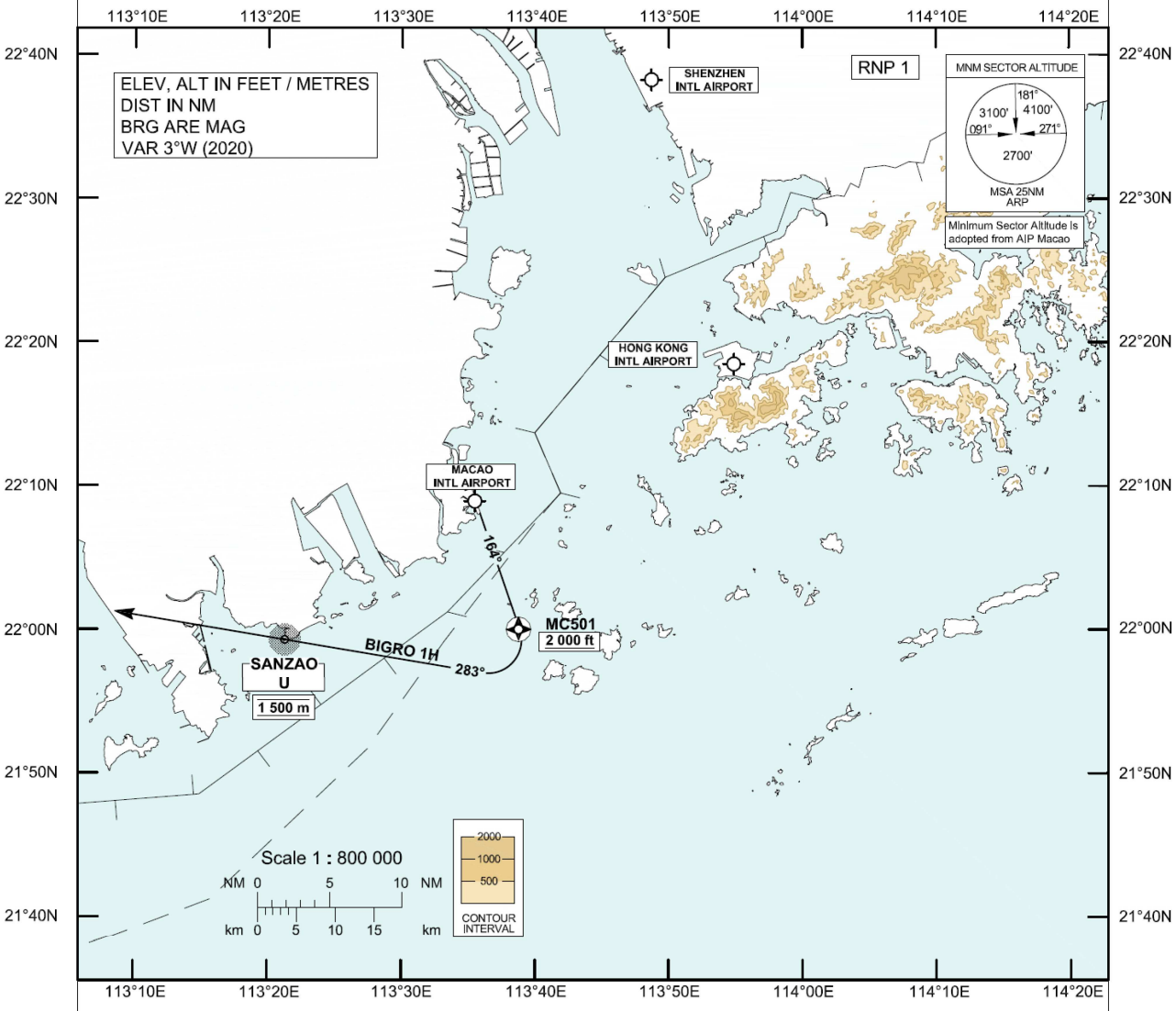
AD 2-VMMC-SID-BIGRO-F_V02_231213lh

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	163 (160)	+3.0	-	-	+2000	-205	RNP 1
	CF	U	-	-	+3.0	-	R	@1500M	-205	RNP 1

WAYPOINT LIST

BIGRO 1H RWY 16

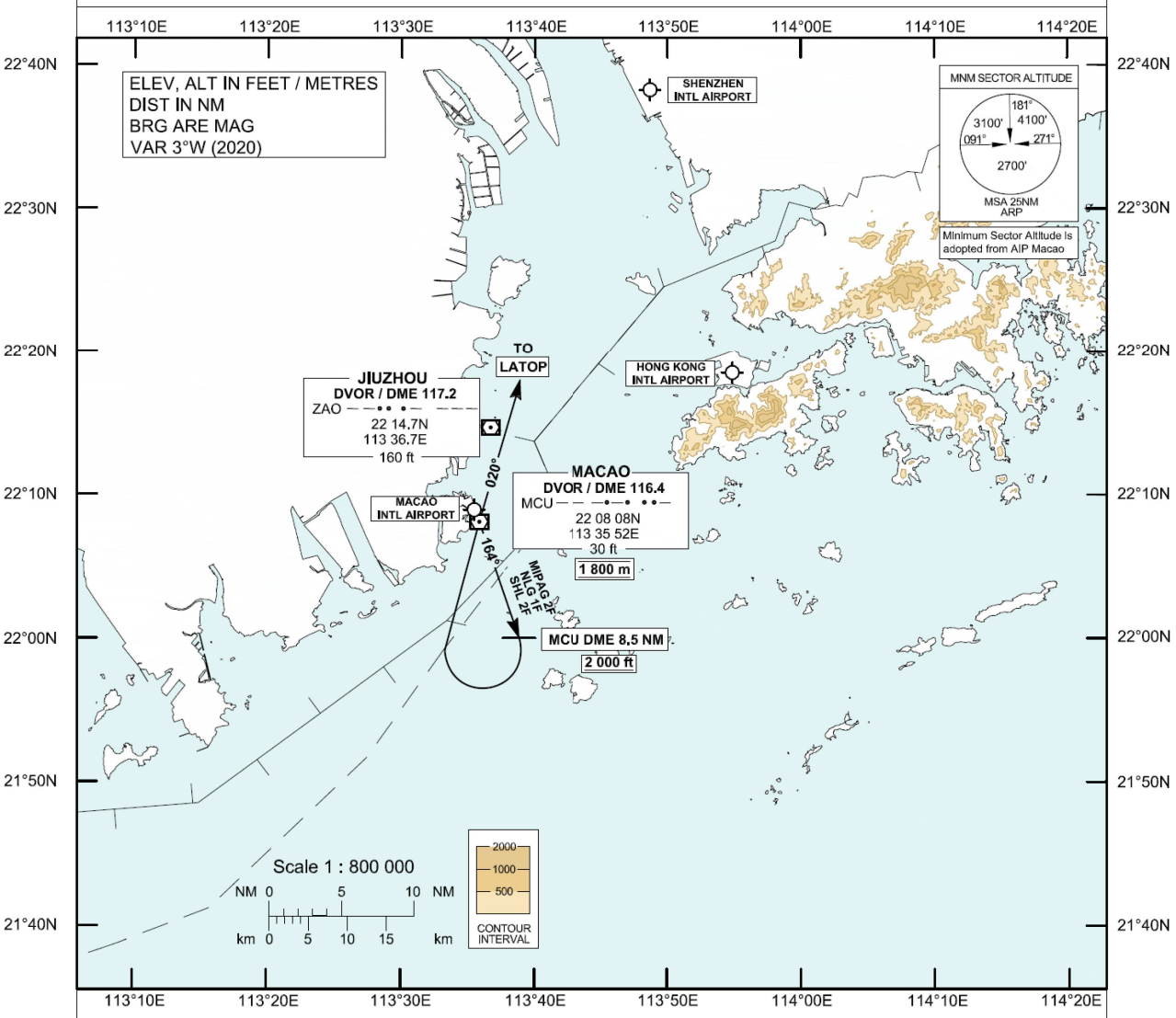
Waypoint Identifier	Coordinates (WGS84)	
MC501	22 00 03.00 N	113 38 45.76 E
U	21 59.3 N	113 21.3 E

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
SHL 2F SID

Aircraft shall comply with the Macao RWY 16 SID procedure as published in the AIP Macao.



MIPAG 2F / NLG 1F / SHL 2F 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 SHL 2F.

SPEED CONTROL

Maximum departure turning speed: 205 KIAS.

CHANGE: Update of MSA.

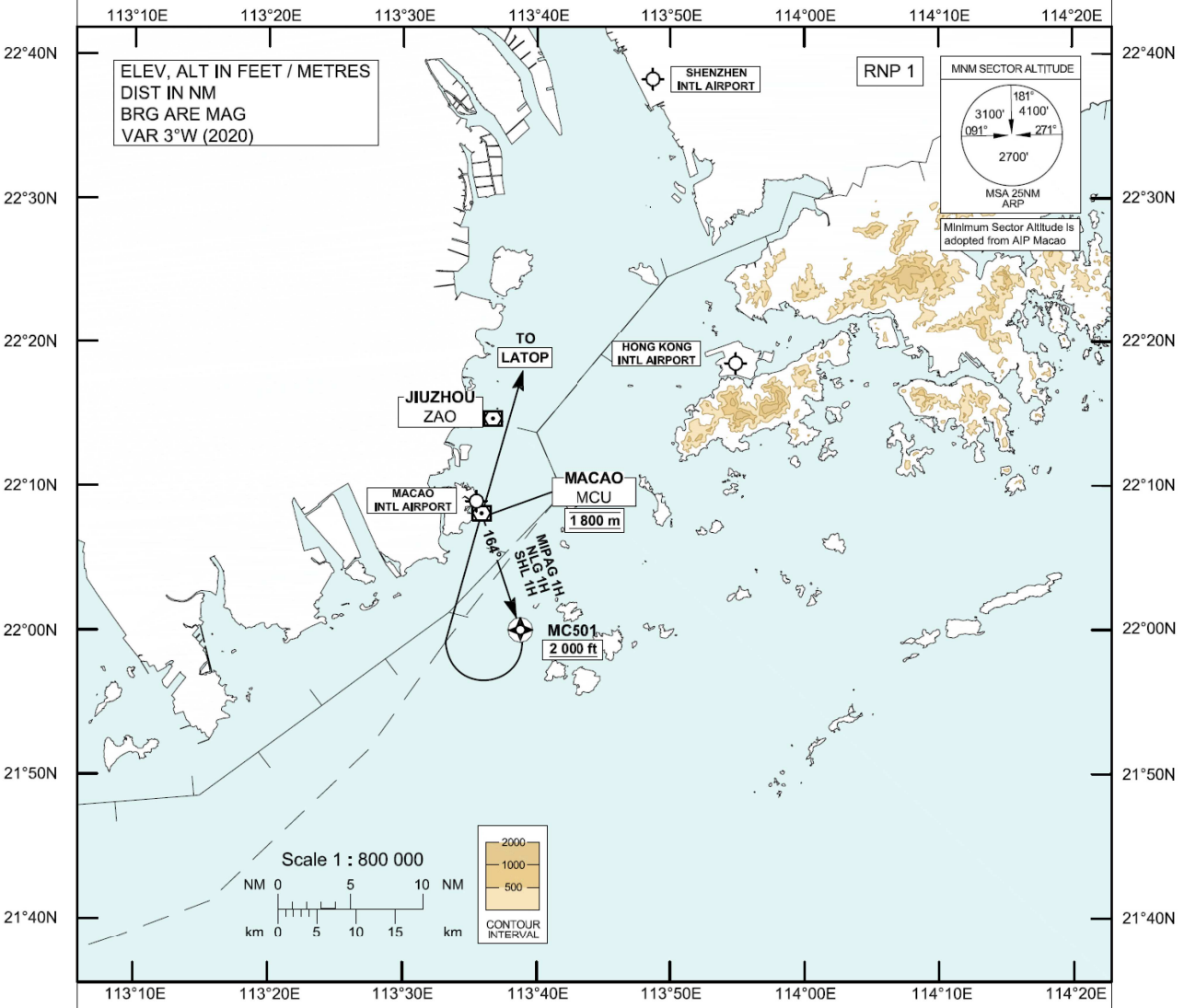
AD 2-VMMC-SID-MIPAG-F_V02_231213lh

STANDARD DEPARTURE CHART-INSTRUMENT (SID) - ICAO

Transition Altitude 9 000 ft
HONG KONG RADAR 123.95

MACAO / Intl (VMMC)
RWY 16
RNAV (GNSS) MIPAG 1H SID
RNAV (GNSS) NLG 1H SID
RNAV (GNSS) SHL 1H SID

Aircraft shall comply with the Macao RWY 16 SID procedure as published in the AIP Macao.



MIPAG 1H / NLG 1H / SHL 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 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 1H and leaving 2 400 m for MIPAG 1H and SHL 1H.

SPEED CONTROL
Maximum departure turning speed: 205 KIAS.

CHANGE: Update of MSA.

AD 2-VMMC-SID-MIPAG-H_V02_231213lh

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	163 (160)	+3.0	-	-	+2000	-205	RNP 1
	DF	MCU	-	-	+3.0	-	R	@1800M	-205	RNP 1

Designator: SHL 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	163 (160)	+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	163 (160)	+3.0	-	-	+2000	-205	RNP 1
	DF	MCU	-	-	+3.0	-	R	@1800M	-205	RNP 1

WAYPOINT LIST

NLG 1H/SHL 1H/MIPAG 1H RWY 16

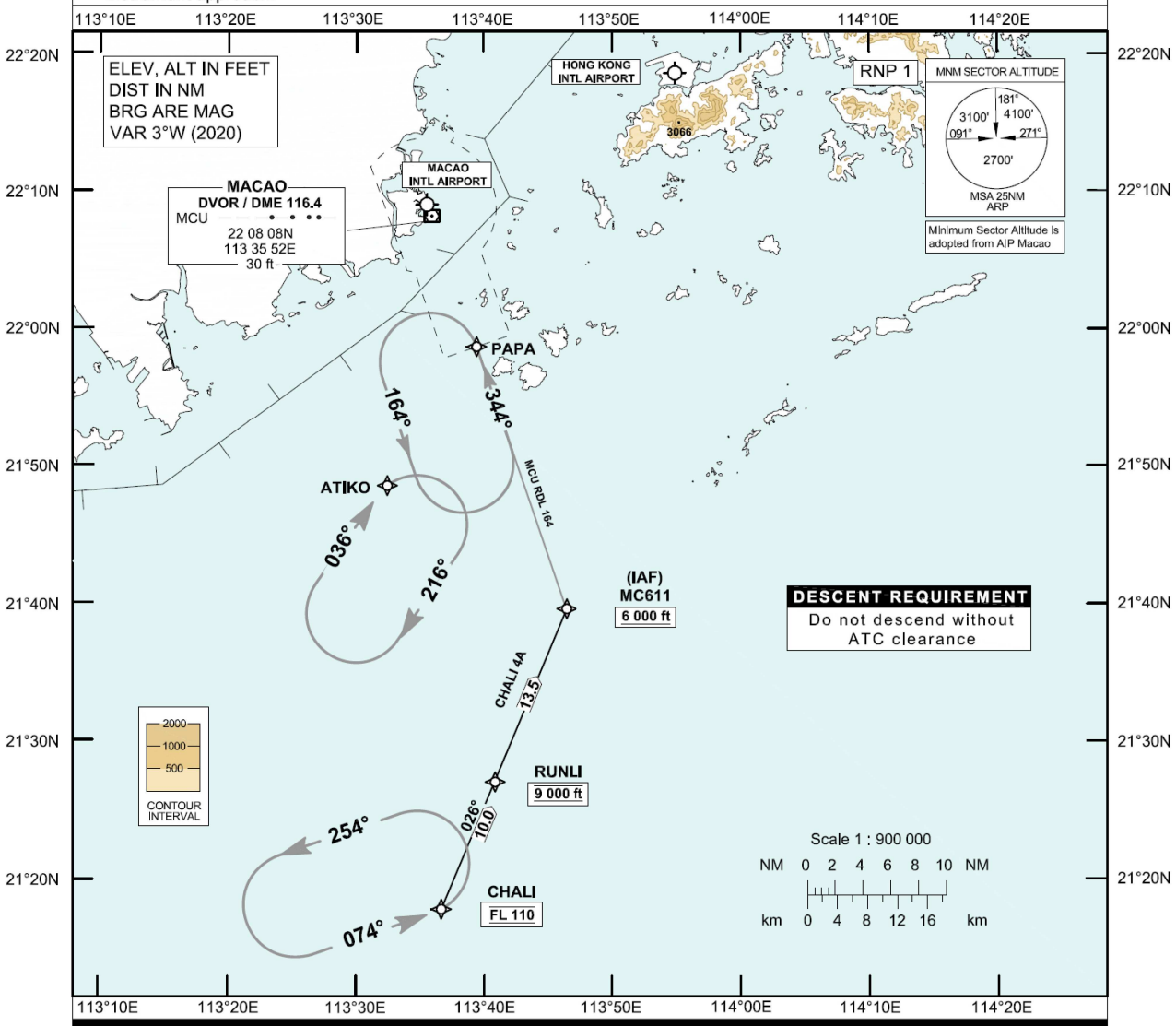
Waypoint Identifier	Coordinates (WGS84)	
MC501	22 00 03.00 N	113 38 45.76 E
MCU	22 08 08 N	113 35 52 E

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

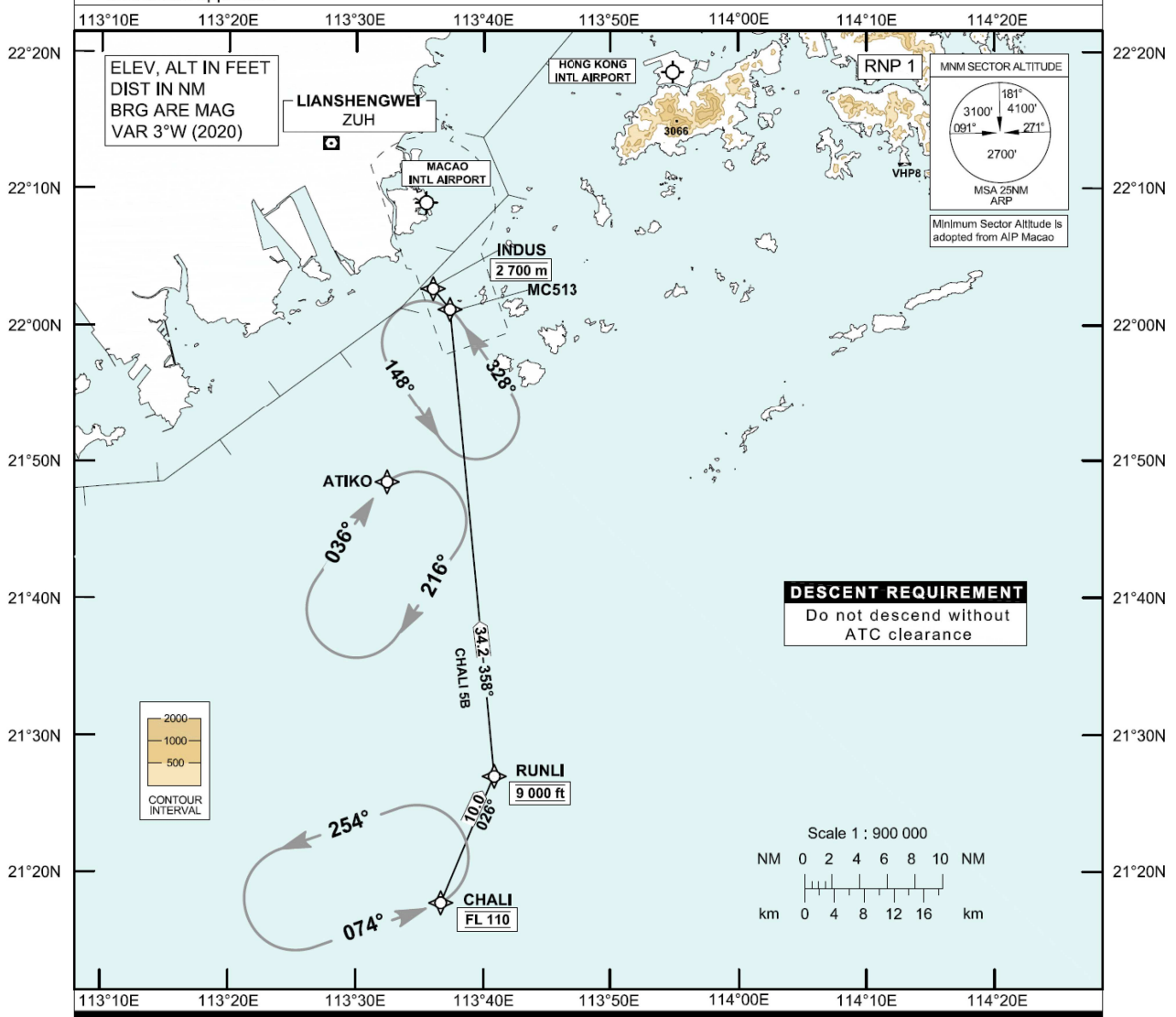
Waypoint Name	Coordinates (WG584)
CHALI	21 17 45.00N 113 36 41.00E
RUNLI	21 26 59.72N 113 40 51.00E
MC611	21 39 36.00N 113 46 30.00E

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

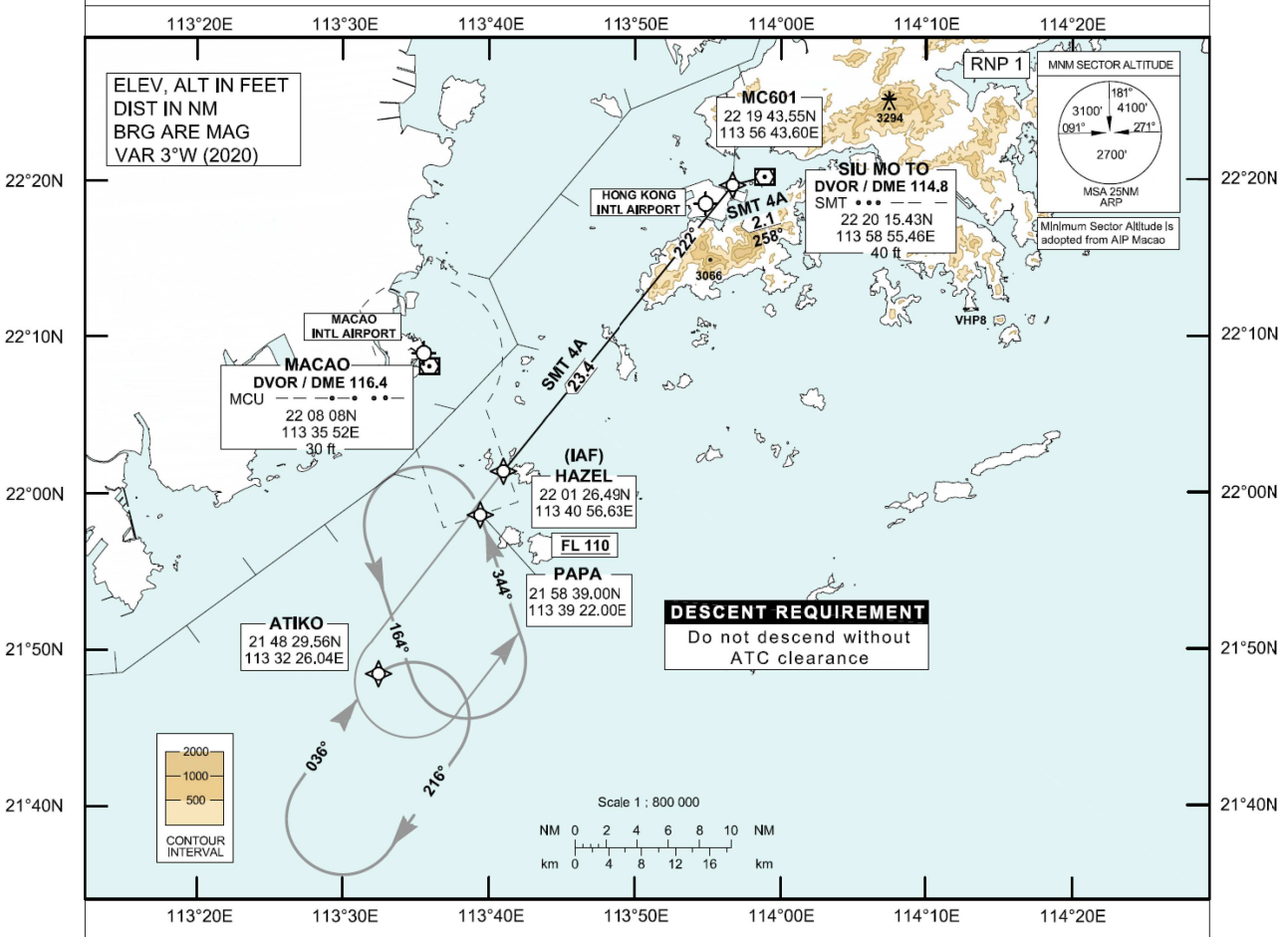
Waypoint Name	*Coordinates (WGS84)*
CHALI	21 17 45.00N 113 36 41.00E
RUNLI	21 26 59.72N 113 40 51.00E
MC513	22 01 09.95N 113 37 20.04E
INDUS	22 02 41.00N 113 36 01.00E

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

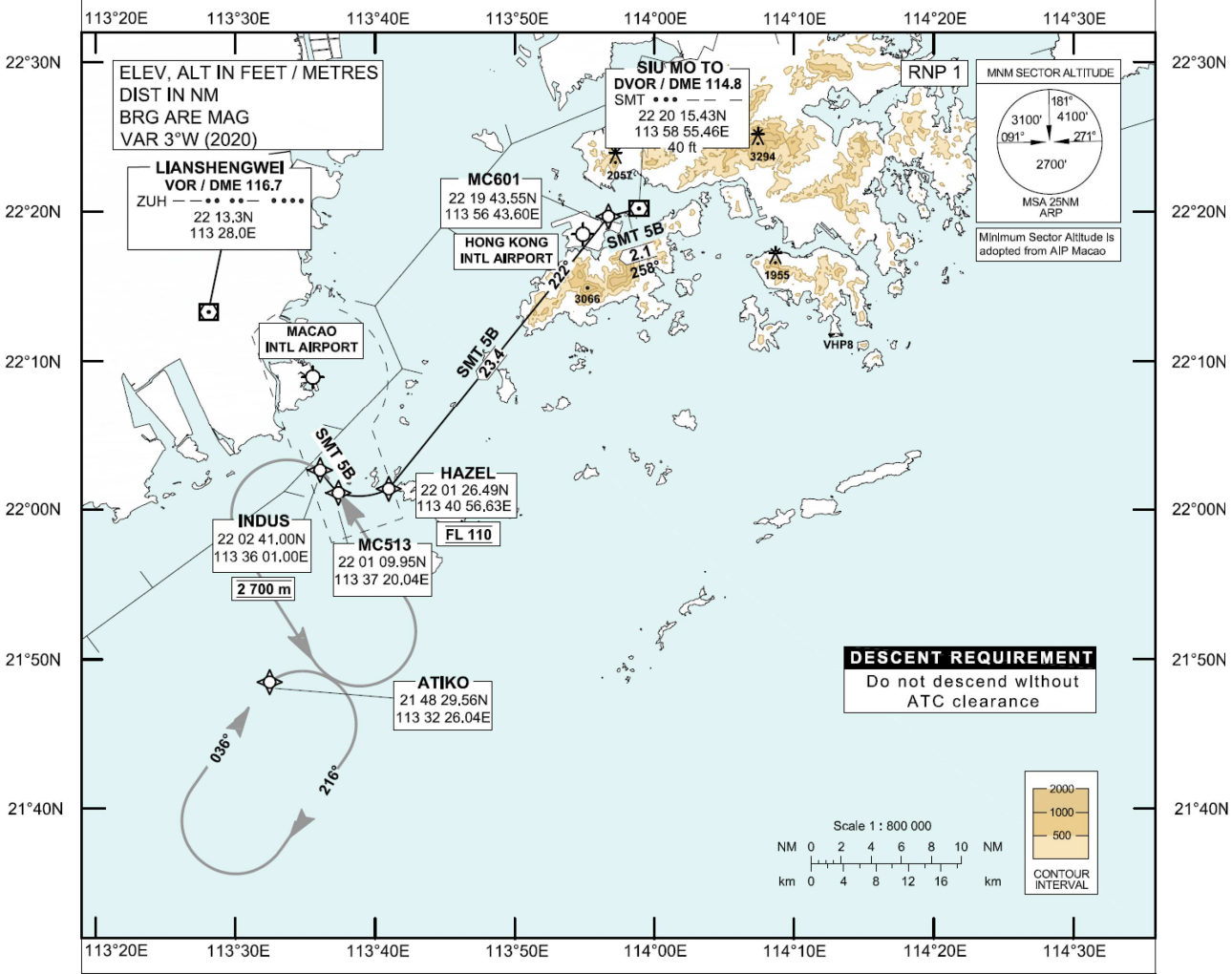
Waypoint Name	Coordinates (WG584)
SMT	22 20 15.43N 113 58 55.46E
MC601	22 19 43.55N 113 56 43.60E
HAZEL	22 01 26.49N 113 40 56.63E

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 113 58 55.46E
MC601	22 19 43.55N 113 56 43.60E
HAZEL	22 01 26.49N 113 40 56.63E
MC513	22 01 09.95N 113 37 20.04E
INDUS	22 02 41.00N 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. Room 1603, China Merchants Tower, Shun Tak Centre, 200 Connaught Road Central Hong Kong Tel : + 852 2108 9873 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* *INS checkpoints*	Nil 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: 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: Maximum Allowable Mass Marking - '9.0t' marked in white D-Value Marking - 'D17m' marked in white Touchdown and Lift-Off Area Perimeter Marking - Continuous white line 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* *MET office outside hours*	H24 Not applicable
3	*Office responsible for TAF preparation* *Periods of validity*	Nil Not applicable
4	*Type of landing forecasts* *Interval of issuance*	Nil Not applicable
5	*Briefing/consultation provided*	Self-briefing using AMIDS and telephone consultation
6	*Flight documentation* *Language used*	METAR/TAF for HKIA is available from AMIDS 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 120°/300°M
4	*FATO dimensions and SFC type*	25.0m x 25.0m Aluminum helideck
5	*TLOF, SFC and BRG strength*	34.2m x 34.2m Aluminum helideck Load bearing of 9.0t
6	*Co-ordinates of geometric centre TLOF or THR of FATO*	221720.0N 1140907.1E Midpoint of Western Helipad 221719.3N 1140909.8E Midpoint of Eastern Helipad
7	*TLOF/FATO, elevation and slope*	120 ft AMSL 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. 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. 3m of distance between each perimeter light. 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* *Anemometer location and LGT*	Top of the Marine Control Tower at the outer pier, LGT 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

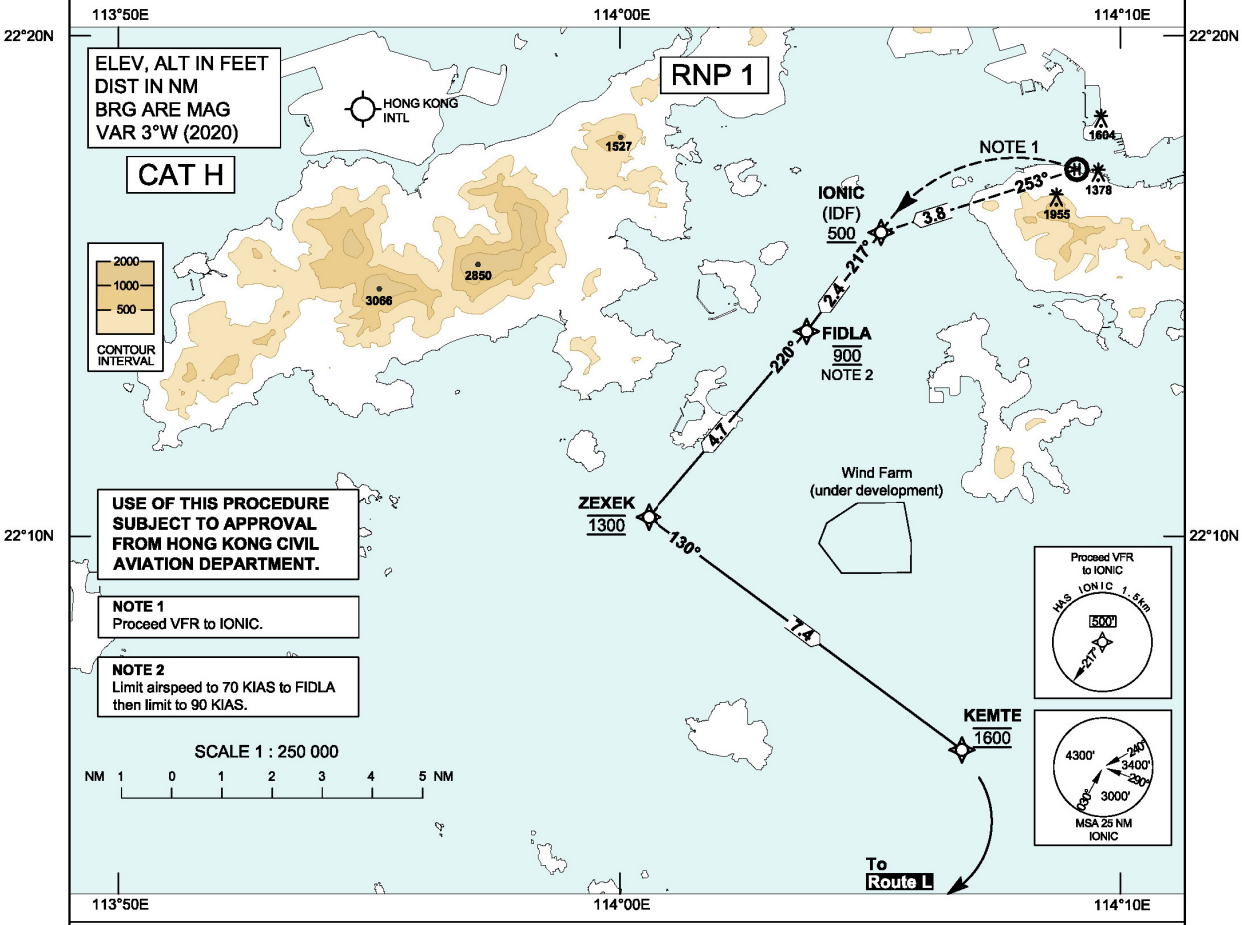
SKY SHUTTLE HELIPORT (VHSS) RNAV KEMTE DEPARTURE	AD 3-VHSS-SID
SKY SHUTTLE HELIPORT (VHSS) RNP 037	AD 3-VHSS-IAC

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

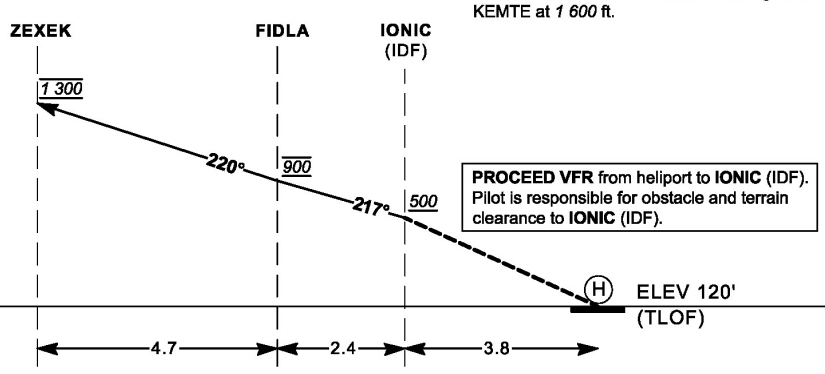
HELIPORT ELEV 120 FT
HEIGHTS RELATED TO HRP ELEV

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

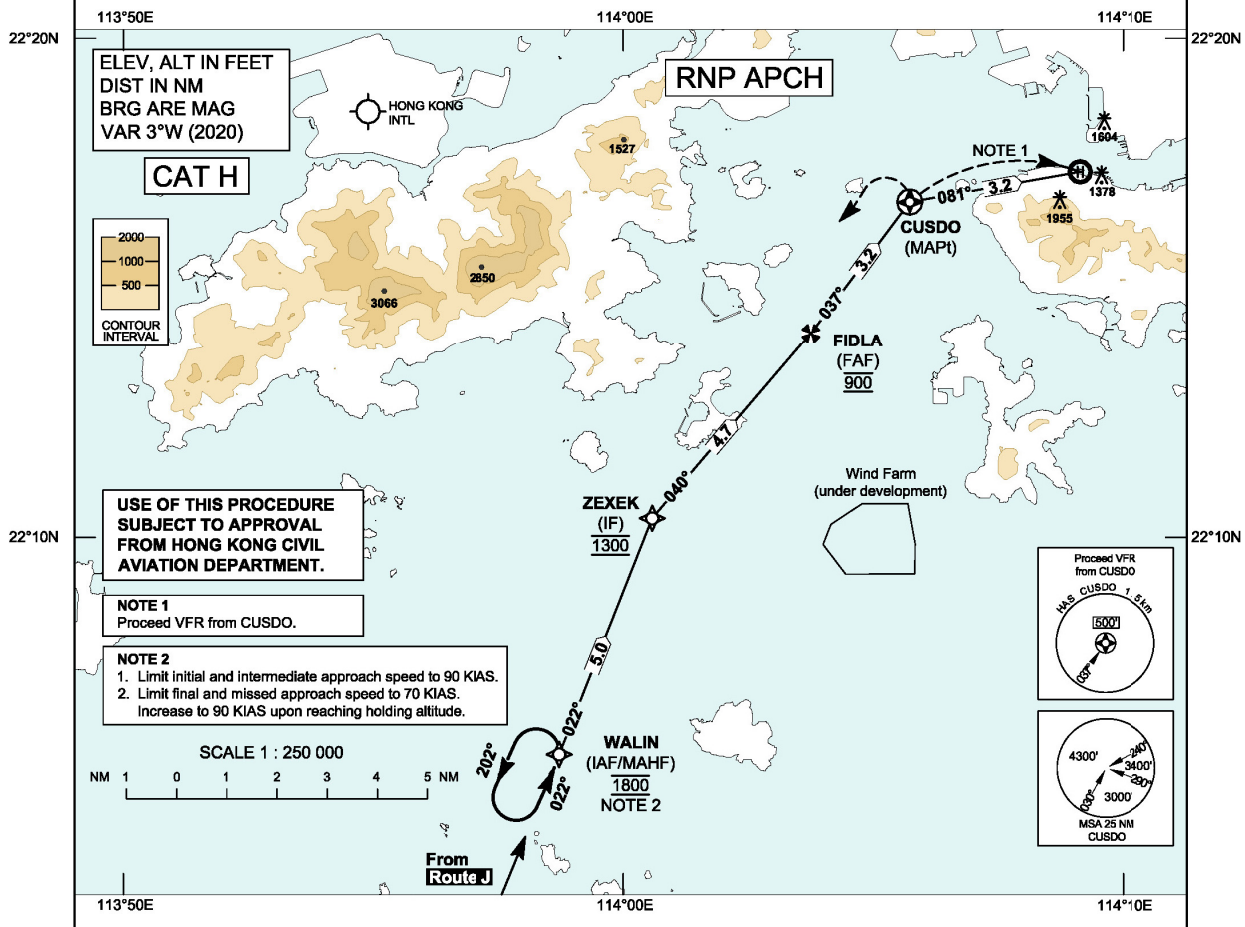
RNAV KEMTE		
Waypoint Identifier	**Coordinates (WGS-84)**	
Sky Shuttle Heliport – VHSS	22 17 19.70 N	114 09 08.40 E
IONIC (IDF)	22 16 04.50 N	114 05 13.93 E
FIDLA	22 14 06.03 N	114 03 44.89 E
ZEXEK	22 10 23.10 N	114 00 34.90 E
KEMTE	22 05 44.56 N	114 06 50.54 E

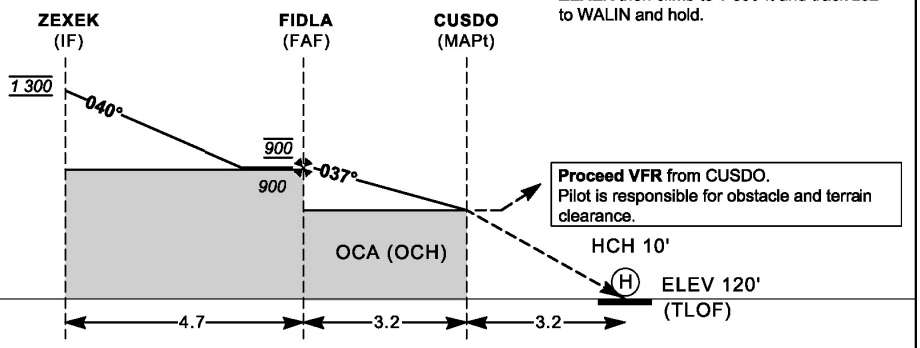
INSTRUMENT APPROACH CHART - ICAO

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