

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)	22 08 08 N 113 35 52 E
ZAO DVOR (117.2 MHz)*	22 14.7 N 113 36.7 E
ZUH DVOR (116.7 MHz)*	22 13.3 N 113 28.0 E
AOTOU*	22 43 00 N 114 31 55 E
DAPENG	22 27 00 N 114 30 00 E
DELTA	21 31 00 N 113 30 00 E
HENGA*	22 39 00 N 114 12 00 E
HOTEL	22 23 00 N 114 54 30 E
PINGSHAN*	22 41 30 N 114 21 00 E
ROMEO	21 51.8 N 113 26.9 E
SESAN	22 30 50 N 114 50 25 E
UNIFORM	22 09 00 N 113 40 42 E
VICTOR WHISKEY	21 50 00 N 113 55 00 E

* Navaid/Reporting Point outside Hong Kong FIR

2.2 Routes

Name	Route	Controlling Unit Frequency *
Track H (IFR/VFR)	Helicopter base - HENGA – AOTOU – SESAN	Hong Kong Radar 126.5 MHz (primary) 132.8 MHz (secondary)
Track D (Secondary IFR Track)	ZUH DVOR – ROMEO – DELTA	Hong Kong Radar 124.05 MHz (primary) 134.3 MHz (secondary)
Track VW (VFR)	Helicopter base – ZAO DVOR – UNIFORM – VICTOR WHISKEY	Hong Kong Approach 119.1 MHz or Hong Kong Zone 120.6 MHz, as instructed.
Track VH (Secondary VFR Track)	Helicopter base – HENGA – PINGSHAN – along Eastern Coast of DAPENG WAN – DAPENG	

* Helicopters departing from an oil rig shall contact Hong Kong Radar on the last assigned frequency as soon as practicable.

2.3 Vertical Limits

Route		Less Than 50 NM from CH DME	50 NM or Greater from CH DME
VFR	Track H	2 000 ft AMSL or less	Below 8 000 ft AMSL
	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 – UNIFORM)	500 ft AMSL or less (RWY 07 in HKIA); 800 ft AMSL or less (RWY 25 in HKIA)	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 VW (UNIFORM – 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 B and ROUTE C

3.1.1 Reporting Points

Reporting Point	Co-ordinates
Macao Heliport	22 11 48 N 113 33 33 E
Sky Shuttle Heliport	22 17 20 N 114 09 08 E
Cheung Chau Buoy	22 12 24 N 114 00 12 E
Cheung Chau South	22 09 00 N 114 01 48 E
Fan Lau	22 11 24 N 113 51 00 E
Green Island	22 17 20 N 114 06 20 E
Lighthouse	22 04 42 N 113 48 12 E
Soko South	22 09 00 N 113 51 00 E
TANGO	22 11 24 N 113 40 12 E
UNIFORM	22 09 00 N 113 40 42 E
Abeam Uniform	22 08 20 N 113 40 42 E
Waypoint 2	22 05 00 N 113 53 12 E

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 B	Macao Heliport - UNIFORM - Soko South - Cheung Chau South - Green Island - Sky Shuttle Heliport	Specifically approved operators only. VFR only Eastbound route
Route C	Macao Heliport - Abeam UNIFORM - 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 B	RWY 07	VFR	500 ft AMSL
	RWY 25	VFR	1 200 ft AMSL
Route C	RWY 07	VFR	500 ft AMSL
		SVFR	1 000 ft AMSL
	RWY 25	VFR / SVFR	1 200 ft AMSL

3.2 SVFR ROUTE A2 and ROUTE C2

3.2.1 Reporting Points

Reporting Point	Co-ordinates
Macao Heliport	22 11 48.0 N 113 33 33.0 E
Sky Shuttle Heliport	22 17 19.7 N 114 09 08.4 E
CHAKO	22 10 20.5 N 113 56 16.3 E
FATUT	22 11 32.4 N 113 48 03.6 E
FOVOG	22 11 33.2 N 113 40 58.3 E
GOGRE	22 11 33.2 N 113 34 30.4 E
HASAN	22 10 18.6 N 113 53 20.9 E
HOROT	22 16 40.0 N 114 05 56.8 E
HUGOT	22 10 52.0 N 113 36 31.9 E
LEVKE	22 14 58.2 N 114 04 42.7 E
NUBOK	22 05 50.2 N 113 56 16.8 E
SANDO	22 07 16.4 N 113 42 57.5 E
WAVOS	22 12 01.5 N 114 04 02.3 E
ZEXEK	22 10 23.1 N 114 00 34.9 E
ZIRUG	22 05 36.3 N 113 48 14.9 E

3.2.2 Routes

Name	Route	Availability
Route A2	Sky Shuttle Heliport - HOROT - LEVKE - WAVOS - ZEXEK - CHAKO - HASAN - FATUT - FOVOG - GOGRE - Macao Heliport	Specifically approved operators only. Standard Westbound route
Route C2	Macao Heliport - GOGRE - HUGOT - Abeam UNIFORM - SANDO - ZIRUG - NUBOK - ZEXEK - WAVOS - LEVKE - HOROT - Sky Shuttle Heliport	Specifically approved operators only. Standard Eastbound route

3.2.3 Communication

- a) Helicopters operating SVFR shall contact Hong Kong Zone, 120.6 MHz, or Hong Kong Approach, 119.1 MHz, as instructed.

3.2.4 Altitude Restrictions

Route	Hong Kong RWY in Use	Maximum Altitude
Route A2	RWY 07	500 ft AMSL
	RWY 25	900 ft AMSL
Route C2	RWY 07	1 000 ft AMSL
	RWY 25	1 200 ft AMSL

3.3 IFR ROUTE J and ROUTE L

3.3.1 Reporting Points

Reporting point	Co-ordinates (WGS84)	Cross Reference from Navaid
Macao Heliport	22 11 48.0 N 113 33 33.0 E	-
Sky Shuttle Heliport	22 17 19.7 N 114 09 08.4 E	-
PEARL	22 03 04.7 N 113 47 35.7 E	MCU R115/DME 12 NM
QUBEC	22 06 01.7 N 113 40 45.3 E	MCU R115/DME 5 NM
WALIN	22 05 40.1 N 113 58 43.2 E	CH R201/DME 8 NM

3.3.2 Routes

Name	Route	Availability
Route J	Macao Heliport - visual segment to MCU DVOR - MCU R115 - QUBEC - intercept CH R201 - WALIN - MAP (CH R201/DME 3 NM) - visual segment to Sky Shuttle Heliport	Specifically approved operators only.
Route L	Sky Shuttle Heliport - visual segment to CH R150/ DME 2 NM - CH R150 - intercept TD R224 - intercept MCU R115 - PEARL - MAP (MCU R115/DME 1.1 NM) - visual segment to Macao Heliport	Only one flight at a time shall use Routes J and L.

3.3.3 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.

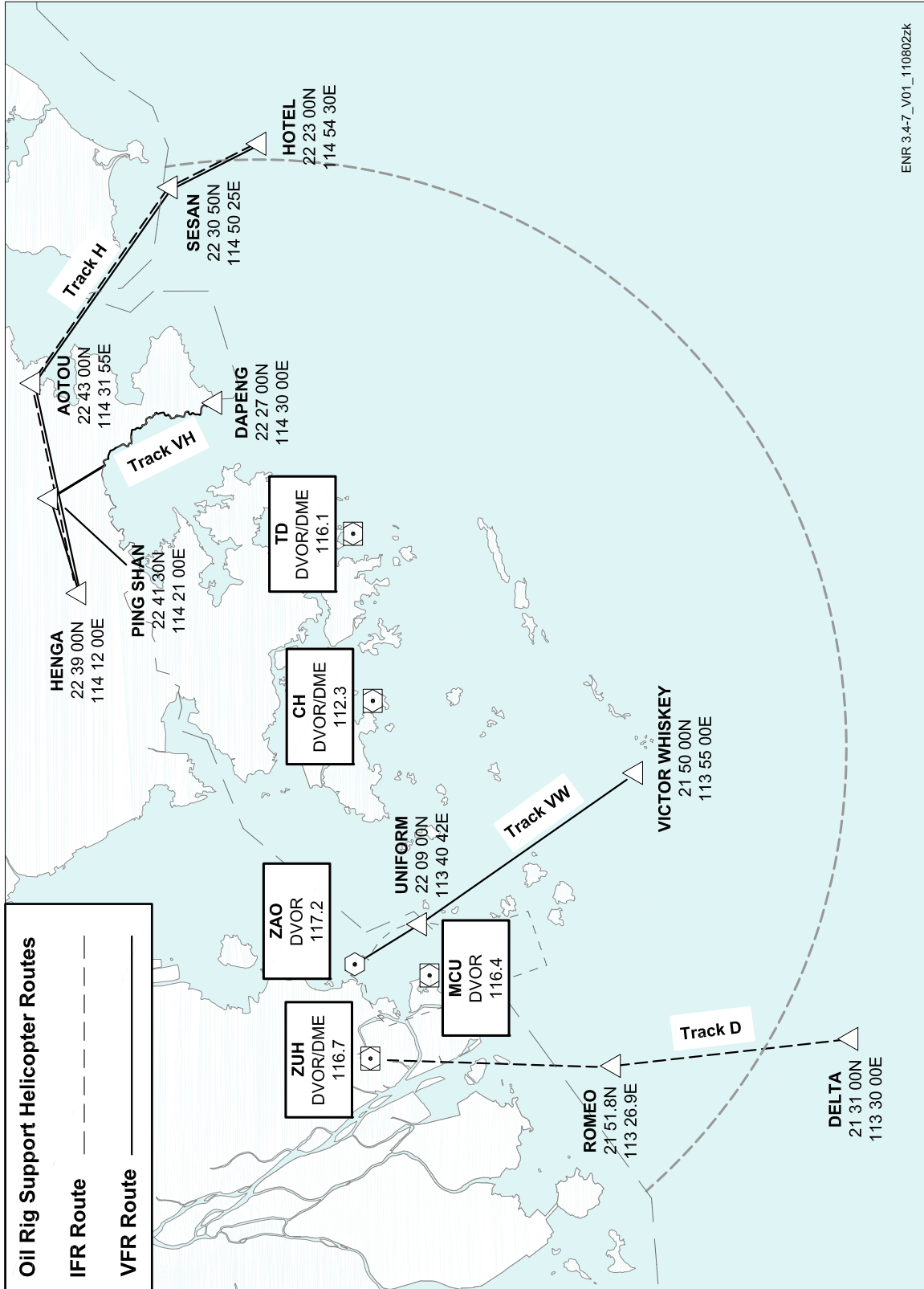
3.3.4 Altitude Restrictions

Route	Segment	Maximum Altitude
Route J	Macao Heliport - MCU R115/DME 1 NM	Visual not above 500 ft
	MCU R115 - WALIN	1 800 ft
	WALIN – CH R201/DME 3 NM	1 800 ft
	CH R201/DME 3 NM - Sky Shuttle Heliport	Visual not above 500 ft
Route L	Sky Shuttle Heliport - CH R150/DME 2 NM	Visual not above 500 ft
	CH R150 - TD R224	1 600 ft
	TD R224 - MCU R115/DME 1.1 NM	2 000 ft
	MCU R115/DME 1.1 NM - Macao Heliport	Visual not above 500 ft

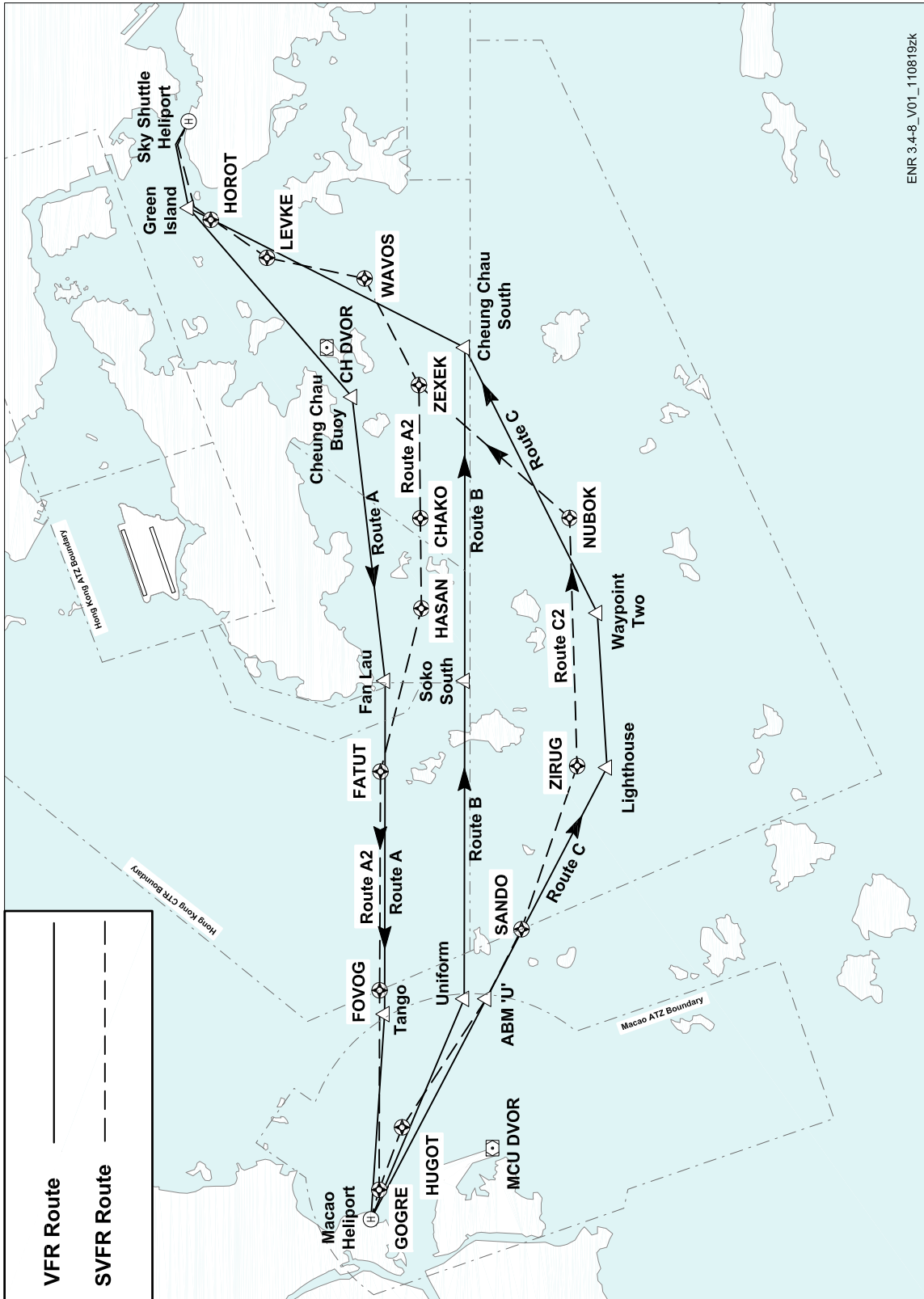
3.3.5 Operating Procedures

- 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) Helicopters shall have a serviceable SSR transponder.
- e) The IFR routes shall not normally be used during the peak periods of Macao Airport traffic.
- f) The operating altitudes of the IFR routes are generally below the Minimum Safe Altitude (MSA) and Minimum Vectoring Altitude, therefore no deviation from the published procedures is permitted.

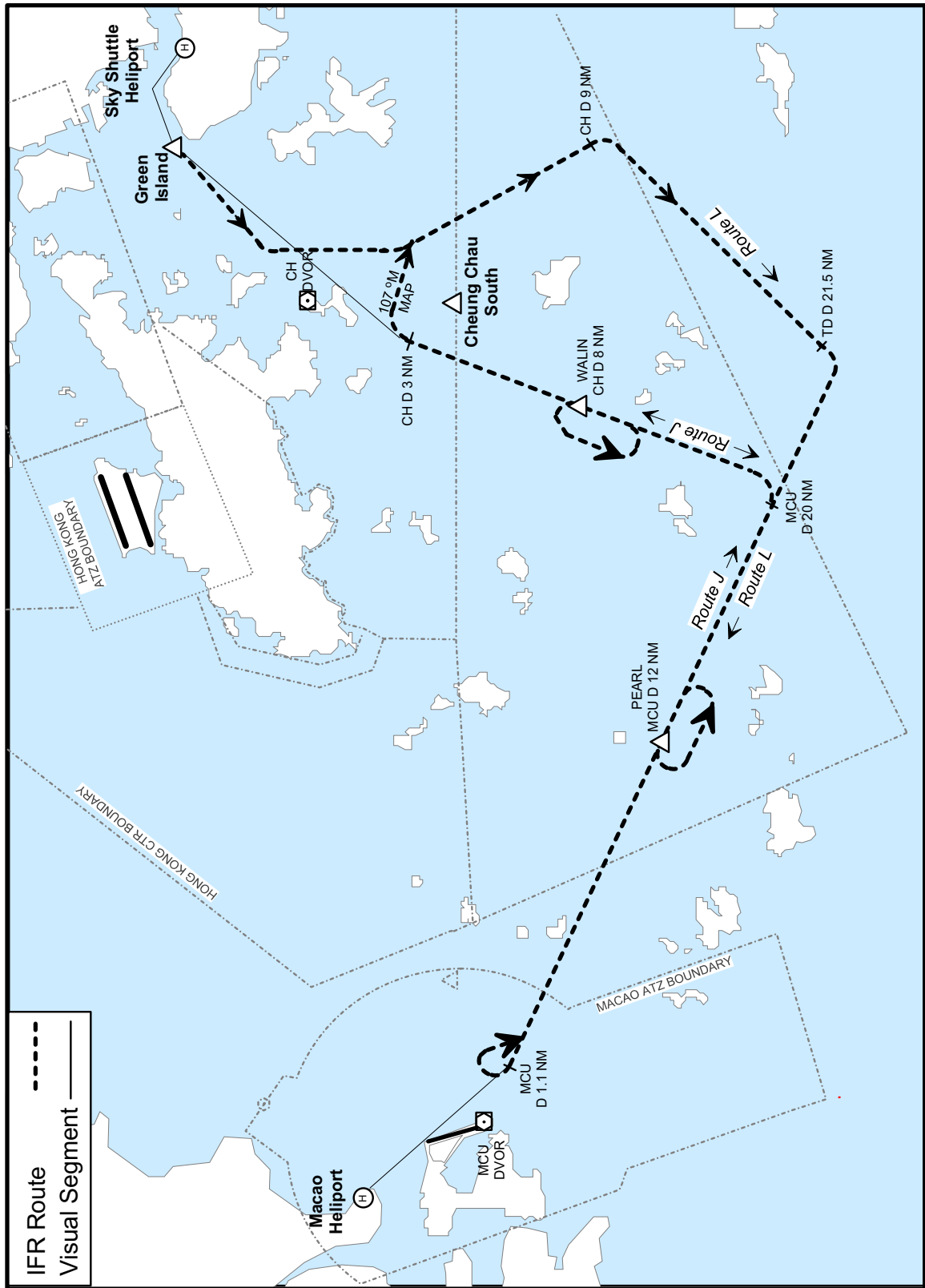
Oil Rig Support Helicopter Routes



Hong Kong - Macao VFR/SVFR Helicopter Routes



Hong Kong - Macao IFR Helicopter Routes



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