

ENR 2 AIR TRAFFIC SERVICES AIRSPACE

ENR 2.1 FIR, UIR, TMA

Name and Lateral Limits	Vertical Limits	Unit Providing Service	Call Sign Languages	FREQ	Remarks
	Class of Airspace (see ENR 1.4-1)		HR	Purpose	
1		2	3	4	5
KUALA LUMPUR FLIGHT INFORMATION REGION 0645N 10240E - 0450N 10344E - 0340N 10340E - 0236N 10445E - 0120N 10420E - along 0120N to the Peninsular Malaysia/Singapore INTL BDRY - then along the Peninsular Malaysia/Singapore INTL BDRY to 0117N 10336E - 0113N 10330E - 0139N 10210E - 0600N 09730E - 0600N 09425E - 1000N 09425E - 1000N 09630E - 0715N 09800E - 0630N 09930E - then along the border of Peninsular Malaysia/Thailand INTL BDRY 0615N 10215E - 0645N 10240E.	UNL <hr style="width: 50px; margin: 0 auto;"/> GND / SEA	Lumpur ACC	Lumpur Control English H24	123.75 MHz (PRI) 132.6 MHz (SRY) 133.650MHz (PRI) 132.8 MHz (SRY) 133.550MHz (PRI) 133.4 MHz (SRY) 132.550MHz 126.1 MHz HF 3470 KHz 5670 KHz 6556KHz 11285KHz 13318KHz 17907KHz	Routes: B219 G466 R208 G582 G584 M751 M765 Y331 G334 A457 North of VKL R325 North of ANSOM N571 B466 West of VBA G468 A464 North of VKL B579 P628 N571 West of GUNIP B466 West of GUNIP A327

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KUALA LUMPUR TERMINAL AREA Semi circle of 30NM radius centred on Kuala Lumpur (VKL) DVOR/DME (024328N 1014417E) from 025605N 1021130E clockwise to 023051N 1011704E thence a straight line to 025516N 1010545E thence an arc of 30NM radius centred on SAAS Subang ARP (030753N 1013258E) clockwise to 032030N 1020011E thence a straight line to 025605N 1021130E	Within lateral limits of CTR: 4 000 FT ALT - FL245 Elsewhere: R108 VKL clockwise to R190 VKL 2 500 FT ALT - FL245 R190 VKL clockwise to R290 VKL 1 500 FT ALT - FL245 R290 VKL clockwise to R352 VKL 2 000 FT ALT - FL245 R352 VKL clockwise to R108 VKL 3 500 FT ALT - FL245.	Lumpur ACC Lumpur Approach North South Director	FL150 and above - Lumpur Control Below FL150 Lumpur Approach North South Director English H24	123.75 MHz (PRI) 132.6 MHz (SRY) 133.650MHz (PRI) 132.8 MHz (SRY) 133.550MHz 125.1 MHz 124.2 MHz 119.45 MHz 121.25 MHz	
BUTTERWORTH TERMINAL AREA Major arc of a circle of 40 NM radius centred VBT (052836N 1002342E) fm 055800N 1005030E clockwise to 060030N 1000000E thence a straight line to 061000N 1000000E to 061000N 1000400E to 055800N 1001700E to 055800N 1005030E	Within lateral limits of CTR: 5 500 FT ALT - FL245 Elsewhere: 2 500FT ALT-FL245	Butterwoth Approach	Butterworth Approach English H24	125.8 MHz (PRI) 128.5 MHz (SRY)	
KUANTAN TERMINAL AREA Major arc of a circle 30 NM radius centred on VKN (034634.2N 1031236.0E) fm 033824N 1034142E clockwise to 035700N 1034100E thence following the FIR BDRY southward to 033824N 1034142E.	4 500 FT ALT - FL245	Kuantan Approach	Kuantan Approach English H24	119.7 MHz	Restriction: Eastbound flight on G582 to reach FL250 or above by 78 DME VBA.
JOHOR TERMINAL AREA Area bounded by 013022N 1033437E, 014225N 1031728E, thence along the arc 20 NM radius centred on VJR, thence along western bdry of B469, thence along northern bdry W401 to 013022N 1033437E.	Within lateral limits of CTR: 3 000FT Alt - FL245. Elsewhere: 1 500FT Alt - FL245	Johor Approach	Johor Tower English 2230 - 1600	122.5 MHz 124.7 MHz	Also the controlling authority for Airspaces Below SECT 1 and 2 (Ref ENR 3.1) i) Awy W401, ii) South of 50 DME SJ & iii) South of VMR DVOR / DME.

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KOTA BHARU TERMINAL AREA					
Commencing from 062810N 1022700E, clockwise to an arc of 20 NM radius from VKB DVOR/DME (060949N 1021851E) to 061710N 1023732E then to 054500N 1025025E thence along an arc of 40 NM radius centered from VKB DVOR/DME to join Malaysian – Thai FIR boundary at 054501N 1014713E , thence along the FIR boundary to 062810N 1022700E	Within lateral limits of Kota Bharu CTR and Gong Kedak CTR: 4 500FT Alt - FL245. Elsewhere: 3 000FT Alt - FL245	Lumpur ACC Kota Bharu Approach	FL150 and above - Lumpur Control 4 500FT ALT - FL140 English H24	132.6 MHz 120.85 MHz (PRI) 130.3 MHz (SRY)	
KUALA LUMPUR FIR					
AREAS WITHIN THE SINGAPORE FIR FOR WHICH LUMPUR ACC IS RESPONSIBLE FOR PROVIDING ATS.					
SOUTH CHINA SEA CORRIDOR					
Fm 023600N 1044500E to 020000N 1070000E and along 020000N till the Singapore / Kota Kinabalu FIR BDRY - thence along this BDRY to 060000N 1130000E, thence along 060000N till the Singapore/Kuala Lumpur FIR BDRY - thence along this BDRY to 023600N 1044500E.	W of 105E FL 150 ----- GND / SEA E of 105E FL 200 ----- GND / SEA	Lumpur ACC	Lumpur Control Lumpur Radio English H24	132.6 MHz HF 5655 KHz 8942 KHz 11396 KHz	Lumpur ACC shall be responsible for the provision of air traffic services to flights operating within the South China Sea Corridor.

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AREAS WITHIN THE LUMPUR FIR FOR WHICH SINGAPORE ACC IS RESPONSIBLE FOR PROVIDING ATS.					
<p>SECTOR 1: That airspace contained within coordinates 011300N 1033000E, 012203N 1030209E thence along an arc of 50 DME SJ to 014529N 1031305E, 014225N 1031728E, thence along Johor TMA western bdry to 013022N 1033437E, 012600N 1034055E, thence along the Peninsular Malaysia and Singapore international BDRY to 011700N 1033600E, 011300N 1033000E.</p> <p>The Airspace herein is designated as follows:</p> <p>a) AREA 'B' (SJ DVOR / DME - 35 DME SJ).</p> <p>b) AREA 'D' (35 DME SJ - 45 DME SJ).</p> <p>c) AREA 'F' (45 DME SJ - 50 DME SJ)</p>	<p style="text-align: center;">FL 245 ----- 3 000 FT ALT</p> <p style="text-align: center;">FL 245 ----- 5 500 FT ALT</p> <p style="text-align: center;">FL 245 ----- 9 500 FT ALT</p>	*Singapore ACC	<p>Singapore Radar</p> <p>English</p> <p>H24</p>	<p>133.25 MHz (PRI) 135.8 MHz (SRY)</p>	<p>*Controlling Authority Johor APP for airspaces BLW SECT 1 and 2. AWY W401, S of VMR DVOR</p> <p><i>Note: In the event an acft in the areas is forced to make an Emergency descent which will penetrate Malaysian airspace, the pilot shall advise Singapore ATC immediately.</i></p>

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KUALA LUMPUR FIR					
<p>SECTOR 2:</p> <p>That Airspace contained within coordinates 013206N 1035031E, 022205N 1034724E, 025234N 1033340E, 025432N 1034341E, 033822N 1034139E, 023600N 1044500E, 012000N 1042000E, 012000N 1040528E, thence along the Peninsular Malaysia and Singapore INTL BDRY to 012600N 1034055E to 013022N 1033437E, 013130N 1034236E to 013206N 1035031E.</p> <p>The Airspace herein is designated as follows:</p> <p>a) AREA 'A' (PU DVOR/DME - 30 DME PU excluding the northern portion of Changi CTR).</p> <p>b) AREA 'C' (30 DME PU - 61 DME PU).</p> <p>c) AREA 'E' (61 DME PU - 90 DME PU).</p> <p>d) AREA 'H' (from 025432N 1034341E thence along the 90 DME PU arc to the FIR bdry (024712N 1043337E) thence to 033822N 1034139E, 025432N 1034341E).</p>	<p>FL 245 ----- 2 000 FT ALT</p> <p>FL 300 ----- 5 500 FT ALT</p> <p>FL 360 ----- FL 120</p> <p>FL 360 ----- FL 145</p>	*Singapore ACC	<p>Singapore Radar</p> <p>English</p> <p>H24</p>	<p>127.3 MHZ (PRI) 123.7 MHZ (SRY)</p>	<p>*Controlling Authority Johor APP for airspaces BLW SECT 1 and 2. Awy W401, south of VMR DVOR</p> <p><i>Note:</i> <i>In the event an acft in the areas is forced to make an Emergency descent which will penetrate Malaysian airspace, the pilot shall advise Singapore ATC immediately.</i></p>
<p>AIRWAYS</p> <p>a) WHISKEY 401[Airspace between KK and PU radial 324 from 2000 FT to FL 245 and PU radial 324 to PIMOK (excluding WSP 228) from 3000FT to FL245]</p> <p>b) ALFA 576</p> <p>c) GOLF 579</p>	<p>FL 245 ----- 2 000 FT ALT / 3000 FT ALT</p> <p>FL 460 ----- 6 500 FT ALT</p> <p>FL 460 ----- 2 000 FT ALT</p>	*Singapore ACC	<p>Singapore Radar</p> <p>English</p> <p>H24</p>	<p>127.3 MHZ (PRI) 123.7 MHZ (SRY)</p>	<p>*Only within the steps delegated to Singapore ACC by Lumpur ACC for provision ATS.</p>

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KUALA LUMPUR FIR					
NYLON HOLDING AREA (NHA) High level 13 DME VTK R-023 (013656.9N 1040623.8E).	FL 250 ----- FL 150	Singapore ACC	Singapore Approach English H24		Holding Pattern: 1 1/2 min left hand. Holding Axis: 203° Max Holding Speed: 265 kt. <i>Note: max speed of 280 kt. in conditions of turbulence subject to ATC clearance.</i>
NYLON HOLDING AREA (NHA) Low level 13 DME VTK R-023 (013656.9N 1040623.8E).	FL 140 ----- 2 500 FT ALT	Singapore ACC	Singapore Approach English H24		Holding Pattern: 1 1/2 min left hand. Holding Axis: 203° Max Holding Speed: 230 kt. <i>Note: max speed of 280 kt. in conditions of turbulence subject to ATC clearance.</i>

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KUALA LUMPUR FIR					
HOSBA HOLDING AREA (HHA) High level 34 DME SJ R-079 (24 DME VTK R-103) (011947.8N 1042417.5E).	FL 250 ----- FL 150	Singapore ACC	Singapore Radar English H24		Holding Pattern: 1 1/2 min left hand. Holding Axis: 259° Max Holding Speed: 265 kt. <i>Note: max speed of 280 kt. in conditions of turbulence subject to ATC clearance.</i>
HOSBA HOLDING AREA (HHA) Low level 34 DME SJ R-079 (24 DME VTK R-103) (011947.8N 1042417.5E).	FL 140 ----- 7 000 FT ALT	Singapore ACC	Singapore Approach English H24		Holding Pattern: 1 min right hand. Holding Axis: 259° Max Holding Speed: 230 kt. <i>Note: max speed of 280 kt. in conditions of turbulence subject to ATC clearance.</i>

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KUALA LUMPUR FIR					
LAMA HOLDING AREA Low level 7 DME PU R-024 (013149.5N 1035850.3E).	FL 140 ----- 2 500 FT ALT	Singapore ACC	Singapore Approach English H24		Holding Pattern: 1 min right hand. Holding Axis: 204° Max Holding Speed: 230 kt. <i>Note: max speed of 280 kt. in conditions of turbulence subject to ATC clearance.</i>
CHANGI CTR That part of Changi CTR bounded by 013300N 1040149E, 013042N 1040654E, 012542N 1040448E thence along the Peninsular Malaysia / Singapore International Boundary to 012516N 1035812E to 013300N 1040149E.	3 000 FT ALT ----- GND / SEA	Singapore TWR	Singapore Tower English H24	118.6 MHz	
SELETAR CTR 'B' That part of Seletar CTR bounded by 012825N 1035009E, 012900N 1035425E, 012534N 1035454E, thence along the Peninsular Malaysia/Singapore International Boundary to 012808N 1035010E then 012825N 1035009E.	3 000 FT ALT ----- GND / SEA	Seletar Tower	Seletar Tower English H24	118.45 MHz (PRI) 130.2 MHz (SRY) 270.4 MHz	Seletar CTR 'B' will be activated only with prior approval of Johor Bahru ATC.

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PAYA LEBAR CTR That part of Paya Lebar CTR bounded by 013300N 1040149E, 013200N 1035344E, 012534N 1035454E, thence along the Peninsular Malaysia/ Singapore International Boundary to 012516N 1035812E to 013300N 1040149E	3 000 FT ALT ----- GND / SEA	Paya Lebar Tower	Paya Lebar Tower English	118.05 MHz 263.1 MHz	Northern Transit Corridor. RSAF military acft (with the exception of trainer acft) using the North transit corridor will enter the airspace over Johor at or above 5 000 ft. RSAF trainer acft using the North transit corridor will enter the airspace over Johor at or above 2000 ft.
KOTA KINABALU FLIGHT INFORMATION REGION 0825N 11630E, 0730N 11730E, 0400N 12000E, 0400N 11800E thence along the INTL BDRY of Sabah / Sarawak and Indonesia to a point 0100N 10854E, 0100N 10830E, 0215N 10830E to 0825N 11630E.	UNL ----- GND / SEA	Kinabalu ACC	Kinabalu Control / Radar English H24	126.1 MHz 128.3 MHz 6825 KHz	
KOTA KINABALU TERMINAL AREA Area contained within an arc of 50 NM radius centred on BRU DVOR/DME (045230N 1145254E) fm 050600N 1140450E to 052940N 1141950E thence a straight line to 063120N 1152850E thence an arc of 50 NM radius centred on VJN DVOR/DME (055357.3N 1160202.3E) clockwise to 051640N 1163510E thence a straight line to 042240N 1153425E thence a straight line to 045220N 1151200E thence an arc of 17 NM radius centred on Brunei ARP (045641N 1145532E) anti-clockwise to 051300N 1045040E thence a straight line to 050600N 1140450E.	FL 245 ----- 3 000 FT ALT	Kinabalu ACC Kinabalu Approach	FL150 and Above - Kinabalu Control / Radar Below FL150 - Kinabalu Approach / Director English H24	126.1 MHz 119.1 MHz	

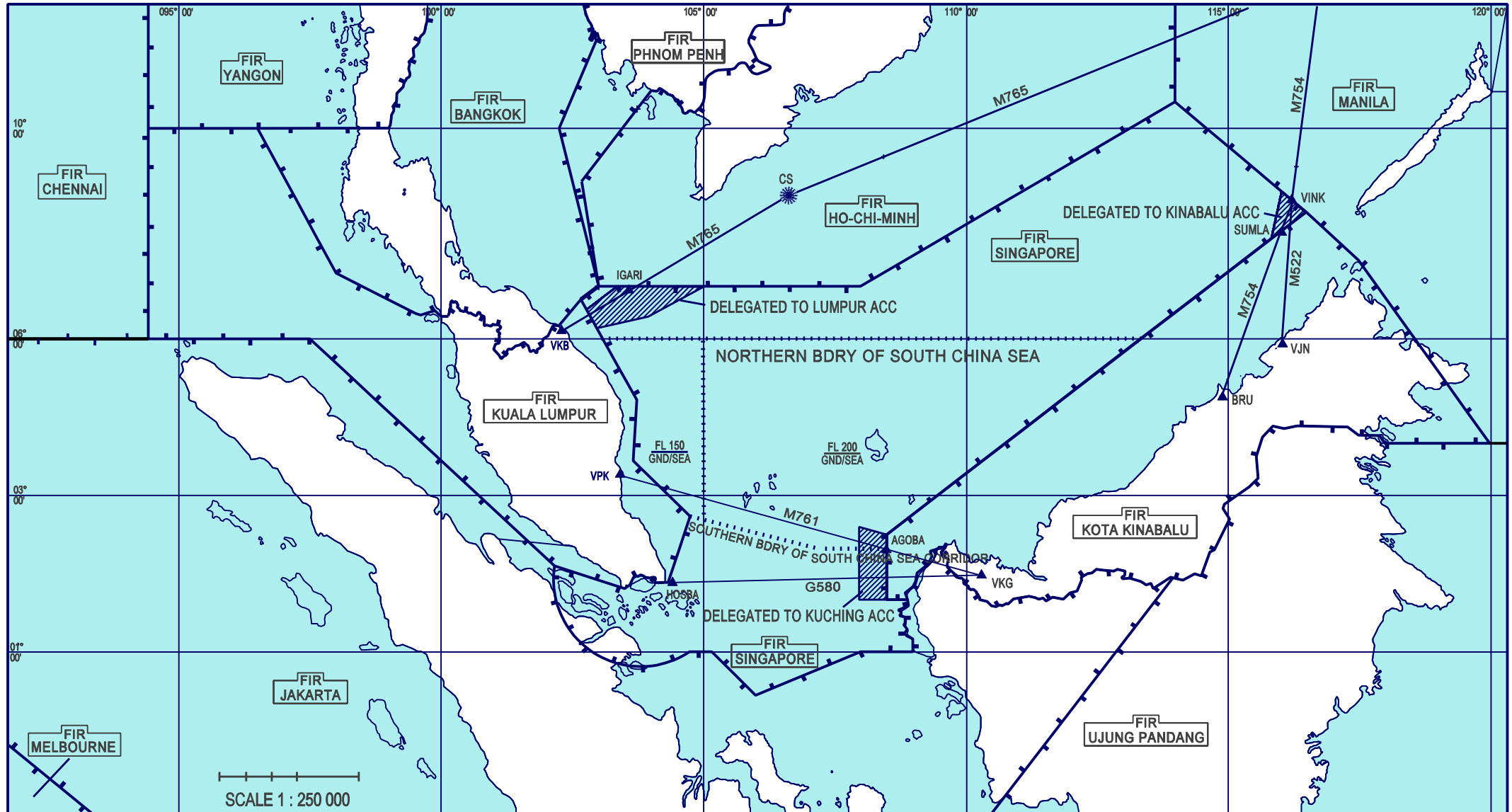
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1		2	3	4	5
KUCHING TERMINAL AREA Area contained within positions commencing clockwise from 015040N 1093330E along the arc of a circle 50 NM centred on VKG DVOR/DME (012824N 1101830E) to 010200N 1110100E, thence along the national boundary of Malaysia/Indonesia to 015040N 1093330E.	FL 245 ----- 2 500 FT ALT	Kuching Control Kuching Approach	Above FL150 Kuching Control / Radar FL150 and below Kuching Approach / Director English H24	134.5 MHz 120.2 MHz	Acft wishing to join or cross Kuching TMA should obtain ATC clearance not later than 10 min on VHF RTF or 20 min on HF RTF before joining or crossing. Designated reporting points: a) CTR BDRY b) TMA BDRY c) Lundu d) Santubong e) Tanjung Dato f) Simunjan g) Bau h) Triso i) Muara Tebas
KOTA KINABALU FIR					
BRUNEI TERMINAL CONTROL AREA Area contained within arc of a circle 50 NM radius centred on BRU DVOR/DME (045230N 1145254E) clockwise fm 041510N 1152605E to 050600N 1140450E thence a straight line to 051300N 1145040E thence an arc of 17 NM radius centred on Brunei ARP (045641N 1145532E) clockwise to 045220N 1151200E thence a straight line to 042240N 1153425E thence a straight line to 041510N 1152605E.	FL 145 ----- 3 000 FT ALT	Brunei Control / Approach	Brunei Approach English H24	121.3 MHz 119.2 MHz	
AMPA TRIANGLE - OFF SHORE HELICOPTERS OPERATION AREA Area contained within arc of 50 NM fm BRU DVOR/DME (045230N 1145254E) anti-clockwise fm 050600N 1140450E to 043300N 1140655E thence a straight line to 044700N 1135235E to 050500N 1135830E to 050600N 1140450E	3 000 FT ALT ----- GND / SEA	Brunei Approach	Brunei Approach English	121.3 MHz 119.2 MHz	

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AREA WITHIN THE SINGAPORE FIR FOR WHICH KINABALU ACC IS RESPONSIBLE FOR PROVIDING ATS					
RNAV Route M522/RNAV Route M754 Within the lateral BDRYs of M522 / M754 in the Singapore FIR.	FL 460 ----- FL 135	Kinabalu ACC	Kinabalu Control English H24	126.1 MHz	Controlling Authority: Kinabalu ACC
AIRWAY GOLF 580 Within the lateral BDRYs of G580 FM 108E to the Kota Kinabalu FIR boundary. RNAV Route M761 Within the lateral BDRY of M761 FM 108E to the Kota Kinabalu FIR boundary	FL 460 ----- 6 500 FT ALT	Kuching ACC	Kuching Control / Radar Kuching Approach / Director English H24	134.5 MHz (P) 125.35 MHz (S) 120.2 MHz (P) 123.85 MHz (S)	(by Delegation of Airspace)

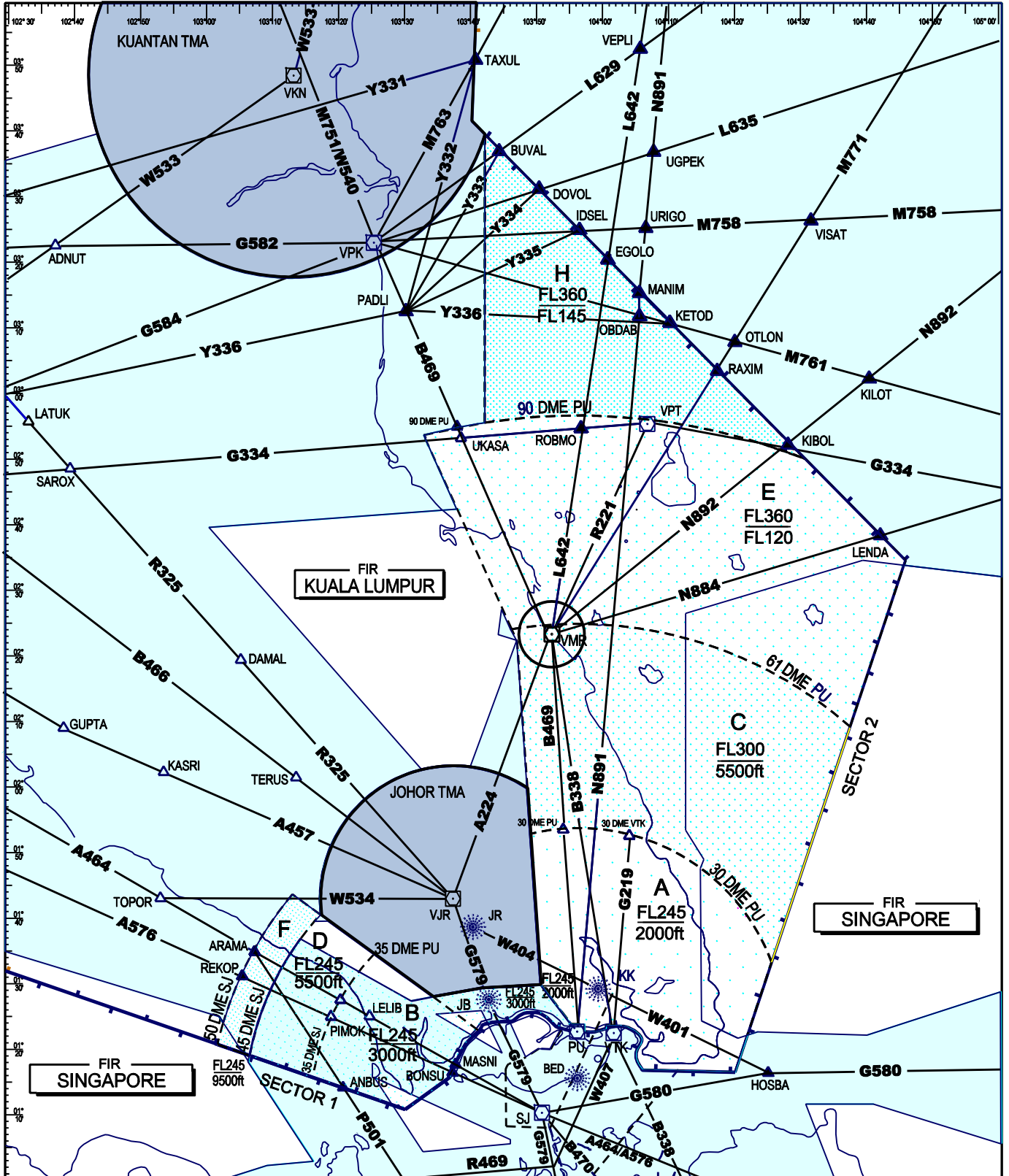
KUALA LUMPUR, KOTA KINABALU AND SINGAPORE FIRs



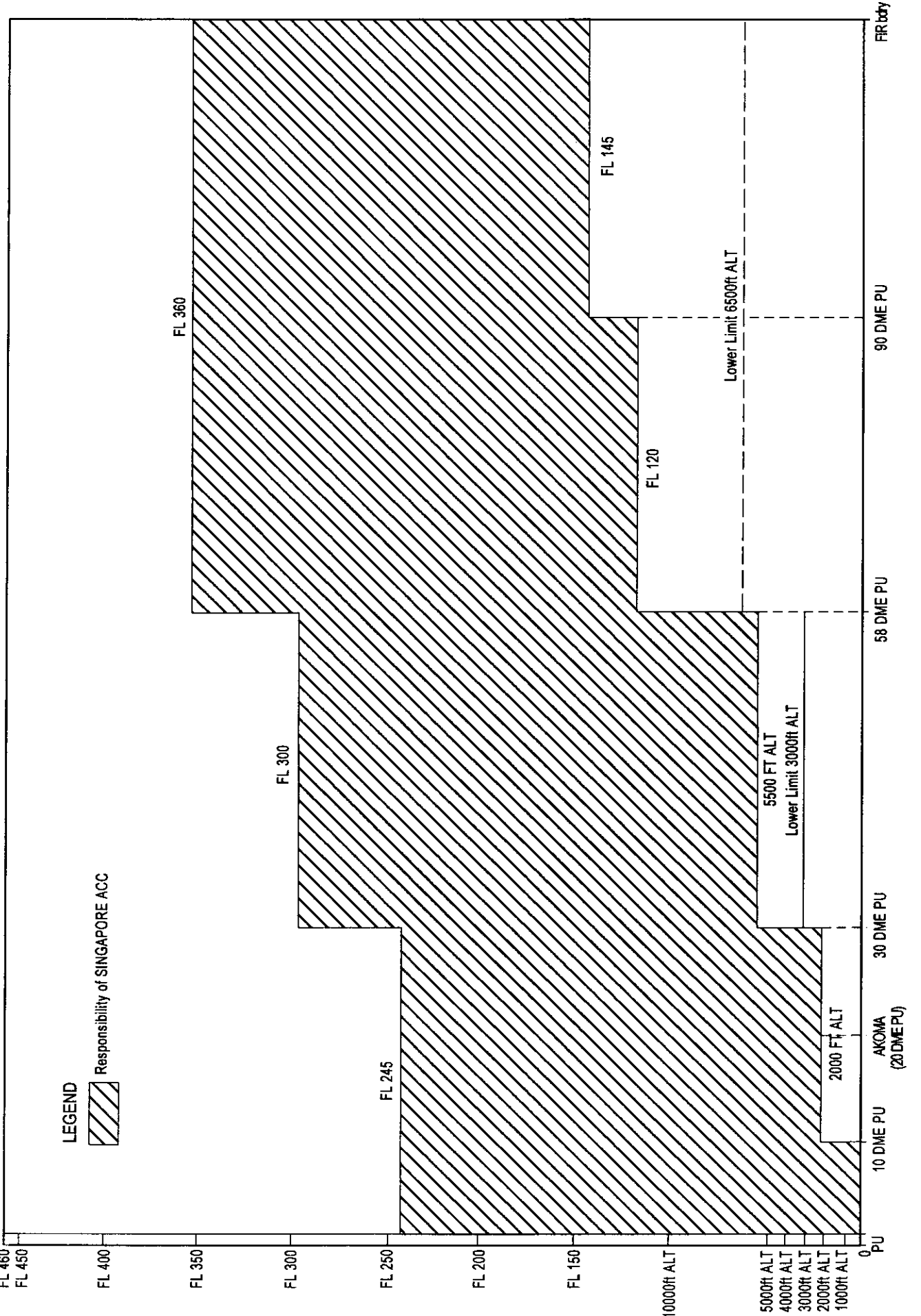
AIRSPACE DELEGATED TO MALAYSIA



AIRSPACE DIVISION KUALA LUMPUR/SINGAPORE AREAS CONTROL CENTRES



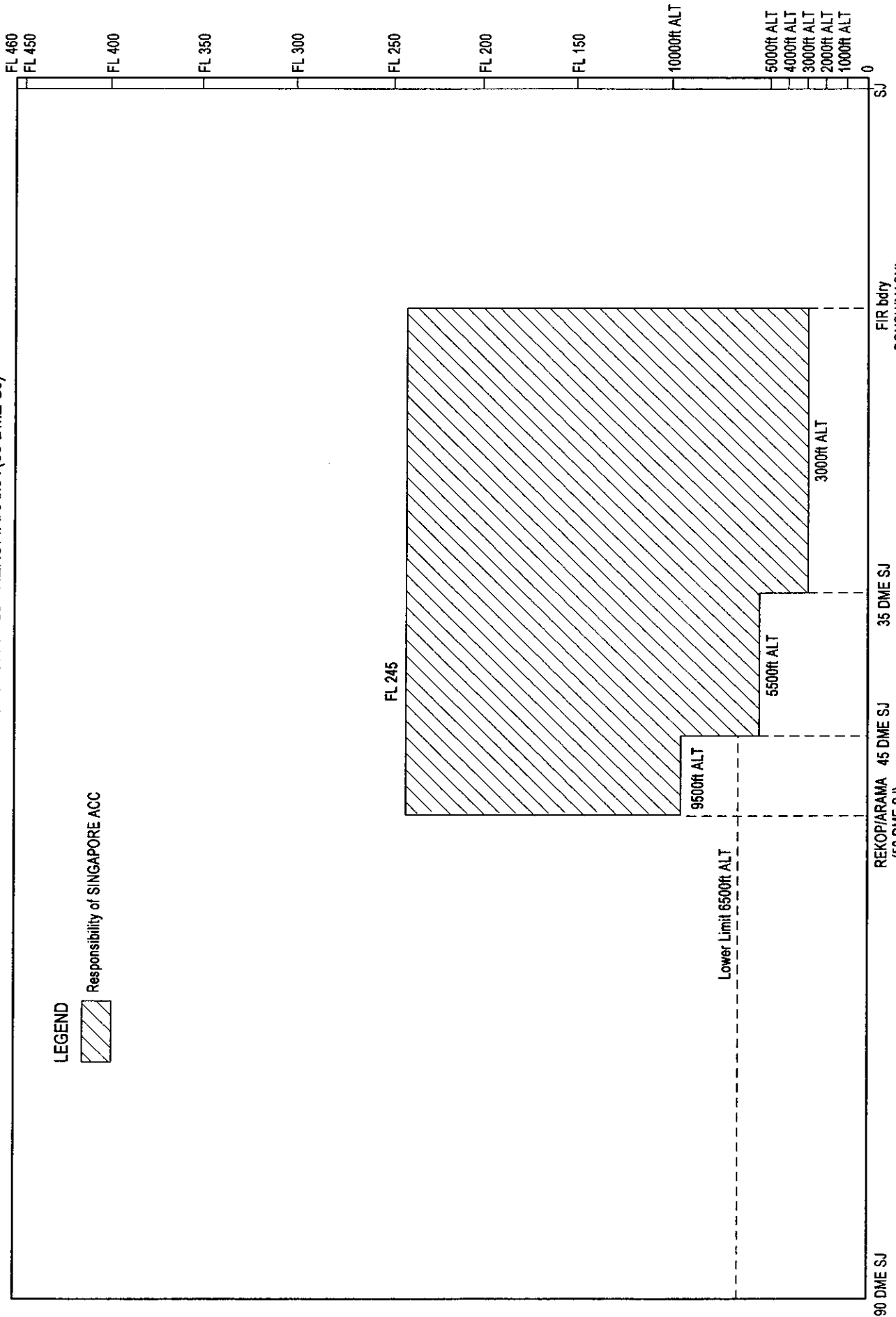
LONGITUDINAL CROSS-SECTION OF SECTOR 2 - PU - SINGAPORE/LUMPUR FIR BOUNDARY



LONGITUDINAL CROSS-SECTION OF SECTOR 1 - SJ - REKOP/ARAMA (50 DME SJ)

LEGEND

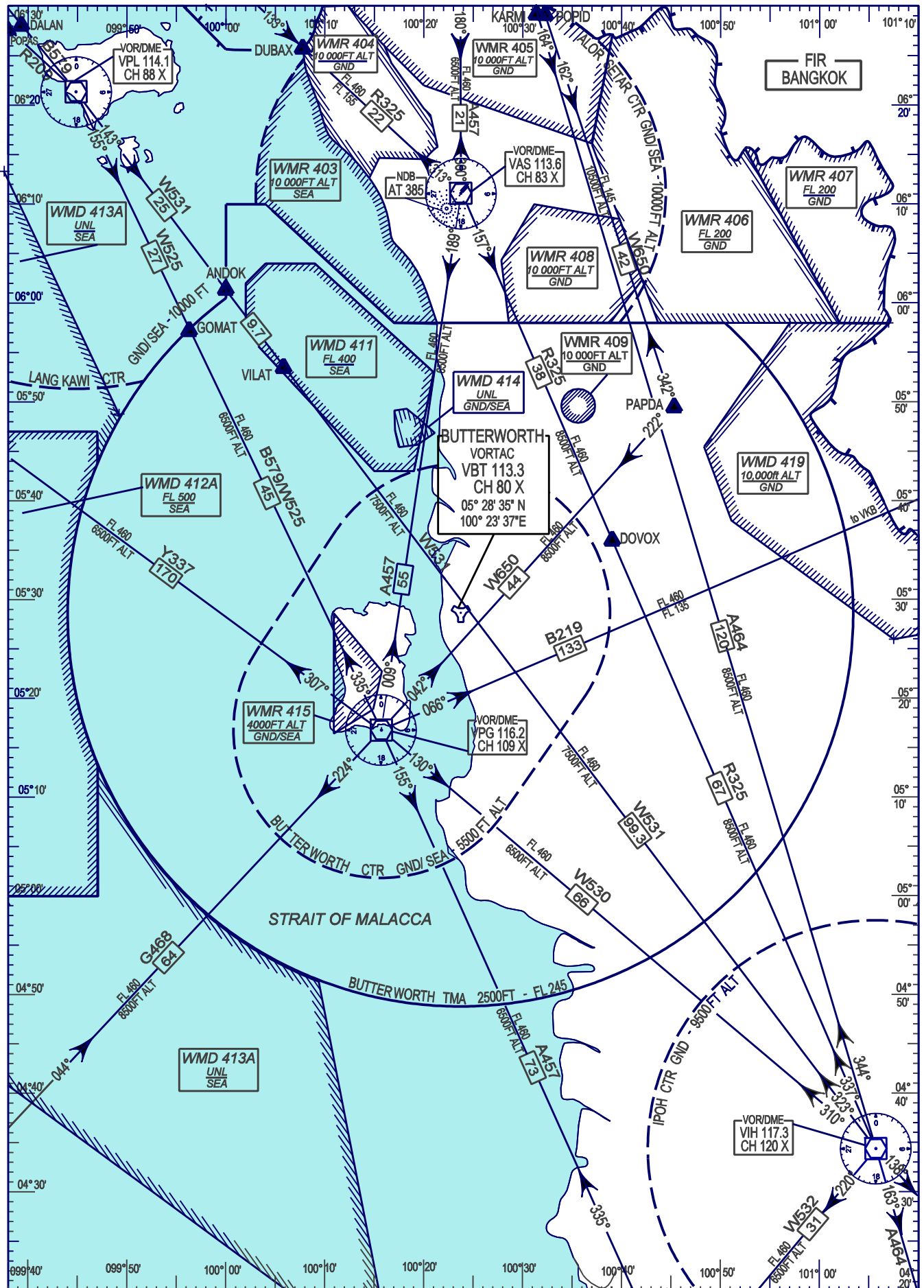
 Responsibility of SINGAPORE ACC



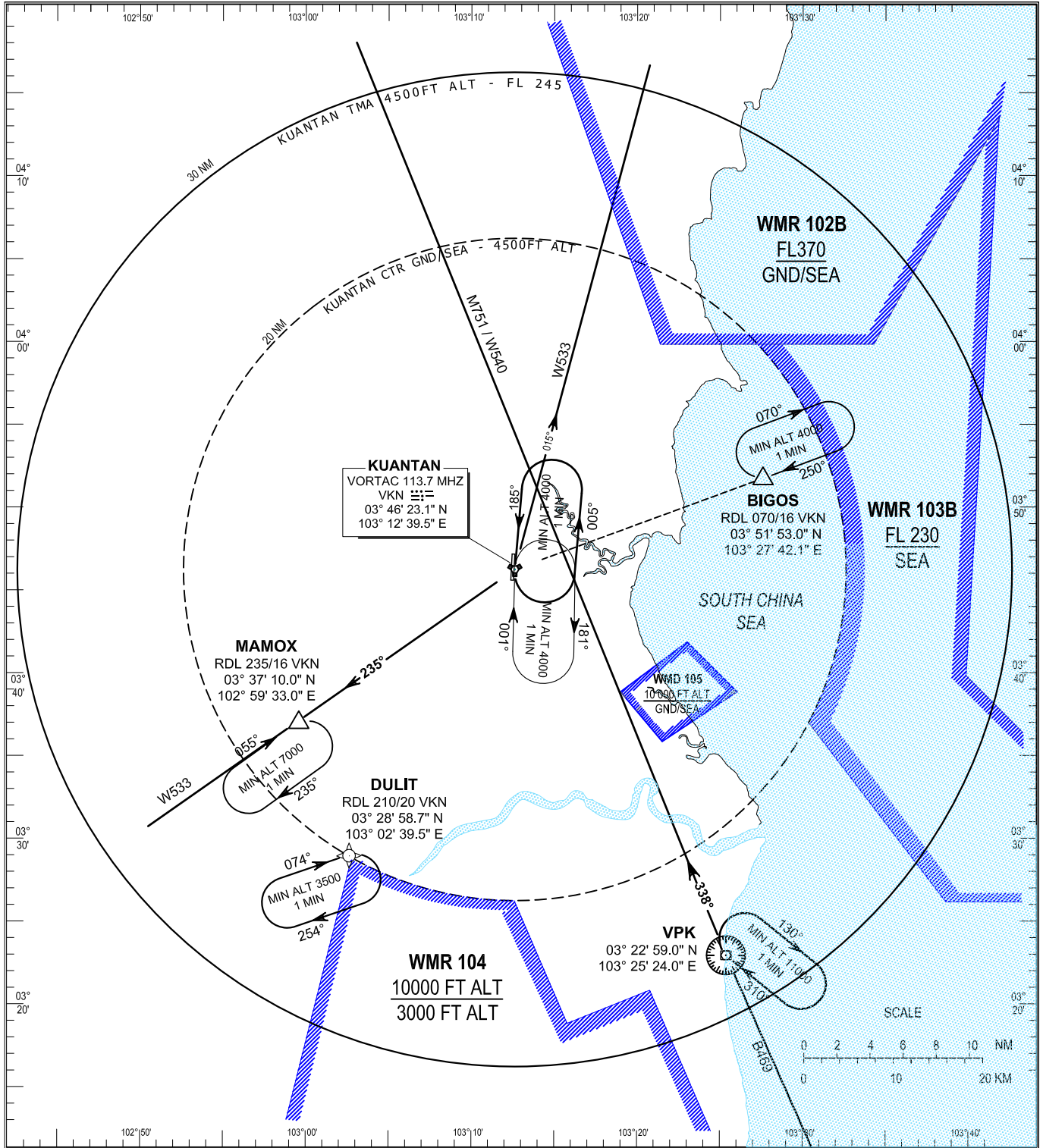
CONTINGENCY ATS ROUTEs WITHIN KUALA LUMPUR, KOTA KINABALU & ADJOINING FIRs

TO BE DEVELOPED

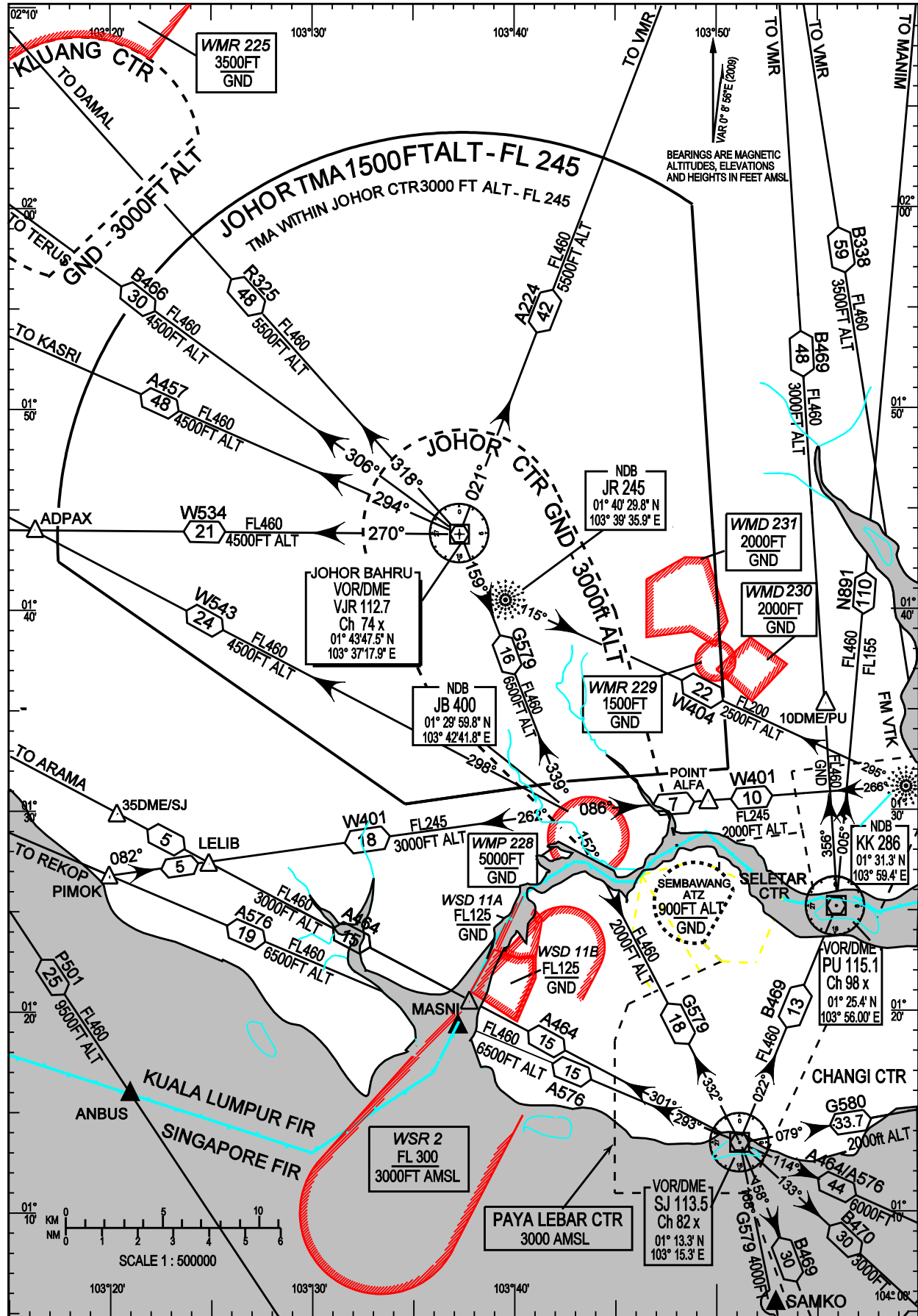
BUTTERWORTH TMA



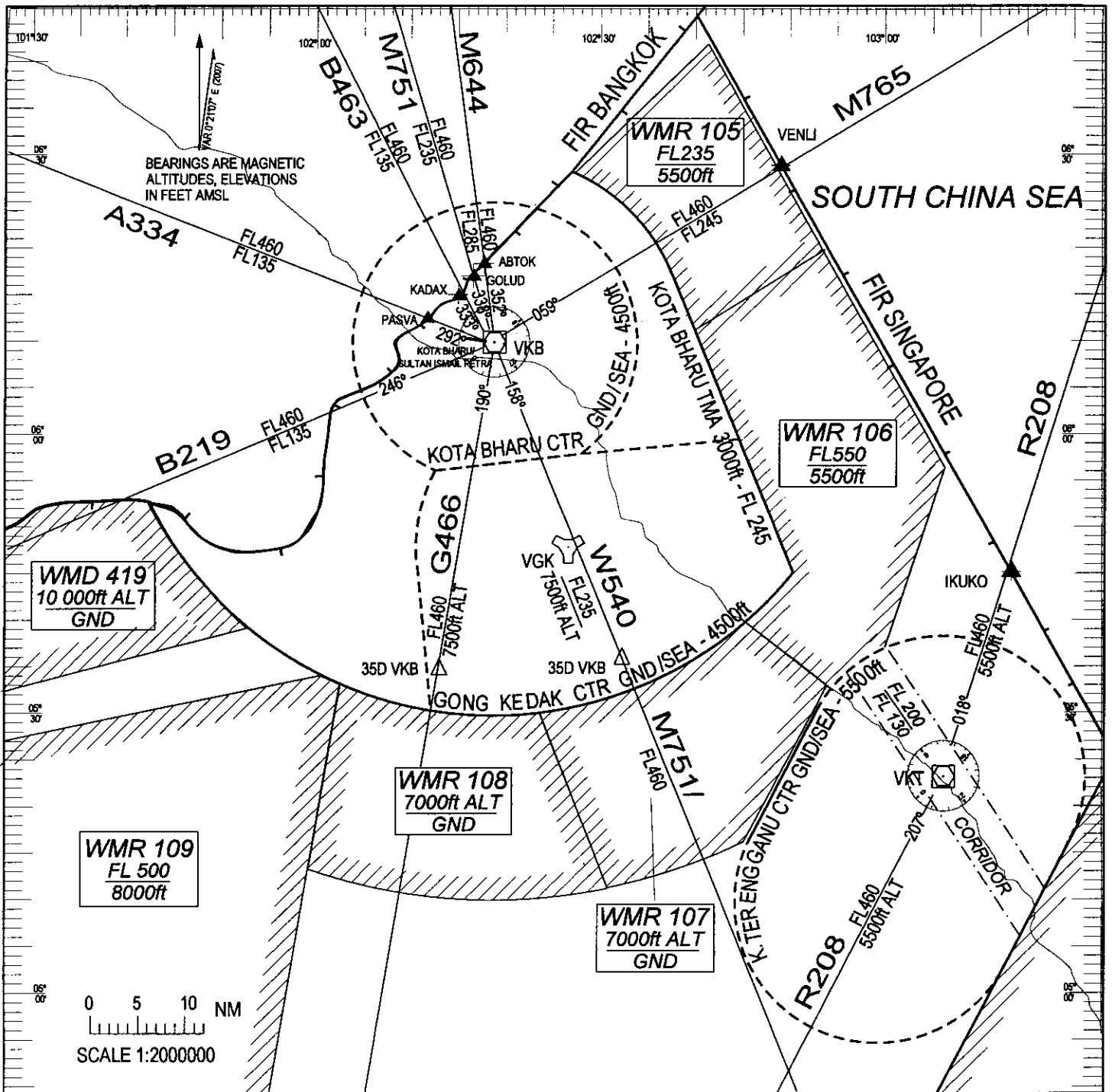
KUANTAN TMA, CONTROL ZONE AND HOLDING AREAS



JOHOR BAHRU TMA



KOTA BHARU TMA



MIRI TMA & CTR

