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REPUBLIC OF SINGAPORE

AERONAUTICAL INFORMATION SERVICES
CIVIL AVIATION AUTHORITY OF SINGAPORE
SINGAPORE CHANGI AIRPORT
P.O. BOX 1, SINGAPORE 918141

AIP

AMENDMENT NR 2/14
3 APRIL 2014

1. SIGNIFICANT INFORMATION AND CHANGES

1.1 Singapore FIR

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| a) Update to the list of legislation (Acts and subsidiary legislation) affecting aviation and air navigation in the Republic of Singapore and the list of International Agreements / Conventions acceded to by the Republic of Singapore | GEN 1.6-1 to GEN 1.6-2 |
| b) Changes to operating altitude and visual reference points for overland Heli-Route Charlie | ENR 3.4-2
ENR 3.4-5 / Chart |

1.2 Singapore Changi Airport (WSSS)

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|---|----------------------|
| a) Updates to the taxiway width, surface and strength | WSSS AD 2-3 |
| b) Update to Singapore Changi Aerodrome Obstacle Chart - ICAO Type A, RWY 20R/02L | WSSS AD 2-37 / Chart |
| c) Update to Singapore Changi Aerodrome Obstacle Chart - ICAO Type A, RWY 20C/02C | WSSS AD 2-39 / Chart |
| d) Update to Singapore Changi Aerodrome Obstacle Chart - ICAO Type B, RWY 02L/20R and RWY 02C/20C | WSSS AD 2-41 / Chart |

1.3 Seletar Airport (WSSL)

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| a) Changes to the VFR flight route between Seletar CTR and Johor CTR | WSSL AD 2-10
WSSL AD 2-33 / Chart |
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2. INSERT THE ATTACHED REPLACEMENT PAGES WHICH ARE MARKED WITH ASTERISKS IN THE CHECKLIST OF PAGES - GEN 0.4-1 TO GEN 0.4-4.

3. NEW OR REVISED INFORMATION IS INDICATED EITHER BY A HORIZONTAL ARROW OR A VERTICAL LINE.

4. RECORD ENTRY OF AMENDMENT ON PAGE GEN 0.2-1.

5. THIS AMENDMENT INCORPORATES INFORMATION CONTAINED IN THE FOLLOWING WHICH ARE HEREBY SUPERSEDED:

NOTAM:

A0211/14 dated 6 FEB 14
A0237/14 dated 11 FEB 14
A0514/14 dated 19 MAR 14
A0623/14 dated 2 APR 14
A0624/14 dated 2 APR 14

GEN 0.3 RECORD OF CURRENT AIP SUPPLEMENTS				
<i>NR/ Year</i>	<i>Subject</i>	<i>AIP section affected</i>	<i>Period of validity (from / to)</i>	<i>Cancellation record</i>
90/13	Paya Lebar AP - Hammerhead Cranes	AD	WIE / 1 JAN 16	
91/13	Paya Lebar AP - Hammerhead Cranes	AD	WIE / 1 JAN 16	
92/13	Paya Lebar AP - Tower Cranes	AD	WIE / 25 JAN 16	
93/13	Paya Lebar AP - Topless Cranes	AD	WIE / 31 JAN 16	
94/13	Paya Lebar AP - Luffer Crane	AD	WIE / 31 JAN 16	
108/13	Paya Lebar AP - Luffer Crane	AD	WIE / 20 MAY 14	
109/13	Paya Lebar AP - Hammerhead Crane	AD	WIE / 31 MAY 14	
110/13	Paya Lebar AP - Luffer Cranes	AD	WIE / 31 MAY 14	
111/13	Paya Lebar AP - Luffer Cranes	AD	WIE / 31 MAY 14	
112/13	Paya Lebar AP - Cranes	AD	WIE / 31 MAY 14	
172/13	Paya Lebar AP - Luffer Crane	AD	WIE / 30 DEC 15	
173/13	Paya Lebar AP - Luffer Crane	AD	WIE / 30 DEC 15	
174/13	Paya Lebar AP - Tower Crane	AD	WIE / 31 DEC 15	
175/13	Paya Lebar AP - Hammerhead and Luffer Cranes	AD	WIE / 31 DEC 15	
176/13	Paya Lebar AP - Topless and Luffer Cranes	AD	WIE / 31 DEC 15	
183/13	Paya Lebar AP - Luffer Crane	AD	WIE / 28 JUL 14	
184/13	Paya Lebar AP - Tower Cranes	AD	WIE / 31 JUL 14	
185/13	Paya Lebar AP - Luffer Cranes	AD	WIE / 31 JUL 14	
186/13	Paya Lebar AP - Luffer Cranes	AD	WIE / 31 JUL 14	
187/13	Paya Lebar AP - Tower Crane	AD	WIE / 31 JUL 14	
193/13	Paya Lebar AP - Topless Cranes	AD	WIE / 1 APR 14	
194/13	Paya Lebar AP - Tower Cranes	AD	WIE / 21 APR 14	
195/13	Paya Lebar AP - Cranes	AD	WIE / 30 APR 14	
196/13	Paya Lebar AP - Tower Cranes	AD	WIE / 30 APR 14	
197/13	Paya Lebar AP - Luffer Crane	AD	WIE / 30 APR 14	
208/13	Paya Lebar AP - Hammerhead Crane	AD	WIE / 1 NOV 15	
209/13	Paya Lebar AP - Hammerhead Cranes	AD	WIE / 1 NOV 15	
210/13	Paya Lebar AP - Luffer Cranes	AD	WIE / 30 NOV 15	
211/13	Paya Lebar AP - Topless and Luffer Cranes	AD	WIE / 30 NOV 15	
212/13	Paya Lebar AP - Topless and Luffer Cranes	AD	WIE / 30 NOV 15	
213/13	Paya Lebar AP - Luffer Cranes	AD	WIE / 31 AUG 16	
214/13	Paya Lebar AP - Saddle and Luffer Cranes	AD	WIE / 31 AUG 16	
215/13	Paya Lebar AP - Saddle Cranes	AD	WIE / 1 SEP 16	
216/13	Paya Lebar AP - Luffer Cranes	AD	WIE / 10 SEP 16	
217/13	Paya Lebar AP - Topless Cranes	AD	WIE / 30 SEP 16	
218/13	Paya Lebar AP - Hammerhead Cranes	AD	WIE / 1 JAN 15	
219/13	Paya Lebar AP - Luffer Crane	AD	WIE / 9 JAN 15	
220/13	Paya Lebar AP - Hammerhead and Luffer Cranes	AD	WIE / 31 JAN 15	
221/13	Paya Lebar AP - Luffer Crane	AD	WIE / 31 JAN 15	
222/13	Paya Lebar AP - Luffer Crane	AD	WIE / 31 JAN 15	
226/13	Paya Lebar AP - Mobile Crane	AD	WIE / 14 MAR 15	
227/13	Paya Lebar AP - Topless Cranes	AD	WIE / 30 APR 15	
228/13	Paya Lebar AP - Luffer Cranes	AD	WIE / 15 MAR 15	
229/13	Paya Lebar AP - Luffer Cranes	AD	WIE / 15 MAR 15	
230/13	Paya Lebar AP - Luffer and Topless Cranes	AD	WIE / 31 MAR 15	
231/13	Paya Lebar AP - Topless Cranes	AD	WIE / 31 MAR 15	
232/13	Paya Lebar AP - Topless Cranes	AD	WIE / 31 MAR 15	
238/13	Paya Lebar AP - Cranes	AD	WIE / 9 JUL 15	
239/13	Paya Lebar AP - Saddle and Luffer Cranes	AD	WIE / 31 JUL 15	
240/13	Paya Lebar AP - Saddle Cranes	AD	WIE / 1 AUG 15	
241/13	Paya Lebar AP - Topless Cranes	AD	WIE / 30 SEP 15	
242/13	Paya Lebar AP - Luffer Crane	AD	WIE / 1 NOV 15	

GEN 0.3 RECORD OF CURRENT AIP SUPPLEMENTS				
<i>NR/ Year</i>	<i>Subject</i>	<i>AIP section affected</i>	<i>Period of validity (from / to)</i>	<i>Cancellation record</i>
243/13	Paya Lebar AP - Hammerhead and Luffer Cranes	AD	WIE / 31 MAR 16	
244/13	Paya Lebar AP - Luffer Cranes	AD	WIE / 31 MAR 16	
245/13	Paya Lebar AP - Hammerhead Cranes	AD	WIE / 1 APR 16	
246/13	Paya Lebar AP - Luffer Crane	AD	WIE / 30 MAY 16	
247/13	Paya Lebar AP - Luffer Crane	AD	WIE / 22 JUN 16	
248/13	Paya Lebar AP - Luffer Cranes	AD	WIE / 30 JUN 16	
249/13	Paya Lebar AP - Luffer Cranes	AD	WIE / 30 JUN 16	
250/13	Paya Lebar AP - Topless Cranes	AD	WIE / 31 DEC 16	
251/13	Paya Lebar AP - Topless Cranes	AD	WIE / 31 DEC 16	
252/13	Paya Lebar AP - Luffer Cranes	AD	WIE / 31 DEC 17	
254/13	Singapore FIR - Implementation of Automatic Dependent Surveillance Broadcast (ADS-B) Out Exclusive Airspace within parts of the Singapore FIR	ENR	WEF 12 DEC 13 / PERM	
255/13	Paya Lebar AP - Hammerhead and Topless Cranes	AD	WIE / 31 DEC 16	
256/13	Paya Lebar AP - Topless Cranes / A Frames	AD	WIE / 31 DEC 16	
257/13	Paya Lebar AP - Topless Cranes	AD	WIE / 31 DEC 16	
258/13	Paya Lebar AP - Luffer and Hammerhead Canes	AD	WIE / 31 DEC 16	
259/13	Paya Lebar AP - Topless and Hammerhead Cranes	AD	WIE / 31 DEC 16	
260/13	Paya Lebar AP - Luffer Cranes	AD	WIE / 1 DEC 15	
261/13	Paya Lebar AP - Hammerhead Cranes	AD	WIE / 20 DEC 15	
262/13	Paya Lebar AP - Luffer Crane	AD	WIE / 31 DEC 15	
263/13	Paya Lebar AP - Luffer Cranes	AD	WIE / 31 DEC 15	
264/13	Paya Lebar AP - Luffer Crane	AD	WIE / 31 DEC 15	
265/13	Paya Lebar AP - Luffer Crane	AD	WIE / 30 SEP 15	
266/13	Paya Lebar AP - Topless Cranes	AD	WIE / 31 OCT 15	
267/13	Paya Lebar AP - Luffer Cranes	AD	WIE / 30 NOV 15	
271/13	Paya Lebar AP - Tower Crane	AD	WIE / 15 JAN 15	
273/13	Paya Lebar AP - Crawler Crane	AD	WIE / 15 MAR 15	
274/13	Paya Lebar AP - Mobile Crane	AD	WIE / 6 JUN15	
278/13	Paya Lebar AP - Topless Cranes	AD	WIE / 30 APR 14	
1/14	Paya Lebar AP - Luffer Cranes	AD	WIE / 31 DEC 16	
2/14	Paya Lebar AP - Luffer Cranes	AD	WIE / 31 DEC 16	
3/14	Paya Lebar AP - Luffer Crane	AD	WIE / 31 DEC 16	
4/14	Paya Lebar AP - Topless Cranes	AD	WIE / 31 DEC 16	
5/14	Paya Lebar AP - Topless Cranes	AD	WIE / 31 DEC 16	
6/14	Paya Lebar AP - Luffer Cranes	AD	WIE / 30 JUN 14	
7/14	Paya Lebar AP - Hammerhead Cranes	AD	WIE / 30 JUN 14	
8/14	Paya Lebar AP - Hammerhead Cranes	AD	WIE / 30 JUN 14	
9/14	Paya Lebar AP - Tower Cranes	AD	WIE / 30 JUN 14	
10/14	Paya Lebar AP - Cranes	AD	WIE / 30 JUN 14	
11/14	Paya Lebar AP - Hammerhead Crane	AD	WIE / 1 DEC 15	
12/14	Paya Lebar AP - Luffer Crane	AD	WIE / 15 DEC 15	
13/14	Paya Lebar AP - Luffer Crane	AD	WIE / 27 DEC 15	
14/14	Paya Lebar AP - Luffer Cranes	AD	WIE / 31 DEC 15	
15/14	Paya Lebar AP - Topless Cranes	AD	WIE / 31 DEC 15	
16/14	Paya Lebar AP - Tower Cranes	AD	WIE / 25 JUN 15	
17/14	Paya Lebar AP - Hammerhead Cranes	AD	WIE / 30 JUN 15	
18/14	Paya Lebar AP - Hammerhead Cranes	AD	WIE / 30 JUN 15	
19/14	Paya Lebar AP- Cranes	AD	WIE / 30 JUN 15	
20/14	Paya Lebar AP - Luffer Cranes	AD	WIE / 30 JUN 15	
21/14	Paya Lebar AP - Luffer Crane	AD	WIE / 14 FEB 15	

GEN 0.3 RECORD OF CURRENT AIP SUPPLEMENTS				
<i>NR/ Year</i>	<i>Subject</i>	<i>AIP section affected</i>	<i>Period of validity (from / to)</i>	<i>Cancellation record</i>
22/14	Paya Lebar AP - Luffer Crane	AD	WIE / 30 APR 15	
23/14	Paya Lebar AP - Mobile Crane	AD	WIE / 11 MAY 15	
24/14	Paya Lebar AP - Tower and Topless Cranes	AD	WIE / 14 MAY 15	
25/14	Paya Lebar AP - Luffer Crane	AD	WIE / 20 MAY 15	
26/14	Paya Lebar AP - Luffer Cranes	AD	WIE / 31 MAY 15	
27/14	Paya Lebar AP - Hammerhead Cranes	AD	WIE / 1 JUN 15	
28/14	Paya Lebar AP - Luffer Cranes	AD	WIE / 4 JUL 15	
29/14	Paya Lebar AP - Luffer and Tower Cranes	AD	WIE / 29 JUL 15	
30/14	Paya Lebar AP - Mobile Cranes	AD	WIE / 1 JAN 17	
31/14	Paya Lebar AP - Cranes	AD	WIE / 31 DEC 14	
32/14	Paya Lebar AP - Tower Crane	AD	WIE / 31 DEC 14	
33/14	Paya Lebar AP - Topless Cranes	AD	WIE / 31 DEC 14	
34/14	Paya Lebar AP - Hammerhead Cranes	AD	WIE / 31 DEC 14	
35/14	Paya Lebar AP - Luffer Cranes	AD	WIE / 31 DEC 14	
36/14	Paya Lebar AP - Hammerhead Cranes	AD	WIE / 30 DEC 14	
37/14	Paya Lebar AP - Topless Cranes	AD	WIE / 31 DEC 14	
38/14	Paya Lebar AP - Luffer Crane	AD	WIE / 31 DEC 14	
39/14	Paya Lebar AP - Hammerhead Cranes	AD	WIE / 31 DEC 14	
40/14	Paya Lebar AP - Cranes	AD	WIE / 31 DEC 14	
41/14	Paya Lebar AP - Hammerhead Cranes	AD	WIE / 31 DEC 14	
42/14	Paya Lebar AP - Luffer Crane	AD	WIE / 31 DEC 14	
43/14	Paya Lebar AP - Topless Cranes	AD	WIE / 31 DEC 14	
44/14	Paya Lebar AP - Saddle Tower Cranes	AD	WIE / 31 DEC 14	
45/14	Paya Lebar AP - Hammerhead Cranes	AD	WIE / 31 DEC 14	
46/14	Paya Lebar AP - Hammerhead Cranes	AD	WIE / 31 DEC 14	
47/14	Paya Lebar AP - Luffer Crane	AD	WIE / 31 DEC 14	
48/14	Paya Lebar AP - Luffer Cranes	AD	WIE / 31 DEC 14	
49/14	Paya Lebar AP - Luffer Cranes	AD	WIE / 31 DEC 14	
50/14	Paya Lebar AP - Luffer Cranes	AD	WIE / 31 DEC 14	
51/14	Paya Lebar AP - Cranes	AD	WIE / 31 DEC 15	
52/14	Paya Lebar AP - Luffer Crane	AD	WIE / 31 DEC 15	
53/14	Paya Lebar AP - Topless Cranes	AD	WIE / 31 DEC 15	
54/14	Paya Lebar AP - Topless Cranes	AD	WIE / 31 DEC 15	
55/14	Paya Lebar AP - Luffer Cranes	AD	WIE / 31 DEC 15	
56/14	Paya Lebar AP - Luffer Crane	AD	WIE / 30 JUN 14	
57/14	Paya Lebar AP - Tower and Topless Cranes	AD	WIE / 30 JUN 14	
58/14	Paya Lebar AP - Luffer Crane	AD	WIE / 30 JUN 14	
59/14	Paya Lebar AP - Crawler Crane	AD	WIE / 30 JUN 14	
60/14	Paya Lebar AP - Hammerhead Cranes	AD	WIE / 30 JUN 14	
61/14	Paya Lebar AP - Topless Cranes	AD	WIE / 31 DEC 15	
62/14	Paya Lebar AP - Topless Cranes	AD	WIE / 31 DEC 15	
63/14	Paya Lebar AP - Cranes	AD	WIE / 31 DEC 15	
64/14	Paya Lebar AP - Topless Cranes	AD	WIE / 31 DEC 15	
65/14	Paya Lebar AP - Luffer Cranes	AD	WIE / 31 DEC 15	
66/14	Paya Lebar AP - Saddle Cranes	AD	WIE / 30 DEC 15	
67/14	Paya Lebar AP - Luffer Crane	AD	WIE / 31 DEC 15	
68/14	Paya Lebar AP - Luffer Crane	AD	WIE / 31 DEC 15	
69/14	Paya Lebar AP - Luffer Cranes	AD	WIE / 31 DEC 15	
70/14	Paya Lebar AP - Hammerhead Cranes	AD	WIE / 31 DEC 15	
71/14	Paya Lebar AP - Luffer Crane	AD	WIE / 30 APR 14	
72/14	Paya Lebar AP - Luffer Crane	AD	WIE / 31 JUL 14	
73/14	Paya Lebar AP - Hammerhead Cranes	AD	WIE / 31 OCT 14	

GEN 0.3 RECORD OF CURRENT AIP SUPPLEMENTS				
<i>NR/ Year</i>	<i>Subject</i>	<i>AIP section affected</i>	<i>Period of validity (from / to)</i>	<i>Cancellation record</i>
74/14	Paya Lebar AP - Luffer Crane	AD	WIE / 1 NOV 14	
76/14	Paya Lebar AP - Luffer Crane	AD	WIE / 30 DEC 14	
77/14	Paya Lebar AP - Luffer Cranes	AD	WIE / 31 DEC 14	
78/14	Paya Lebar AP - Luffer Cranes	AD	WIE / 31 DEC 14	
79/14	Paya Lebar AP - Luffer Crane	AD	WIE / 31 DEC 14	
80/14	Paya Lebar AP - Luffer Cranes	AD	WIE / 31 DEC 14	
81/14	Paya Lebar AP - Cranes	AD	WIE / 31 MAY 14	
82/14	Paya Lebar AP - Topless Cranes	AD	WIE / 12 JUN 14	
83/14	Paya Lebar AP - Luffer Cranes	AD	WIE / 31 MAY 15	
84/14	Paya Lebar AP - Luffer Crane	AD	WIE / 30 JUN 16	
85/14	Paya Lebar AP - Crane	AD	WIE / 30 NOV 16	
86/14	Singapore Changi AP - Work activities due to construction of new water retention pond at south end reservoir	AD	WIE / 31 DEC 14	
87/14	Singapore FIR - Introduction of Enroute Waypoint SABKA for ATS Route A457	ENR	WEF 29 MAY 14 / PERM	
88/14	Paya Lebar AP - Luffer Crane	AD	WIE / 31 AUG 14	
89/14	Paya Lebar AP - Luffer Cranes	AD	WIE / 31 AUG 14	
90/14	Paya Lebar AP - Tower Cranes	AD	WIE / 31 AUG 14	
91/14	Paya Lebar AP - Topless Cranes	AD	WIE / 31 AUG 14	
92/14	Paya Lebar AP - Tower Crane	AD	WIE / 31 AUG 14	
93/14	Paya Lebar AP - Luffer Crane	AD	WIE / 1 SEP 14	
94/14	Paya Lebar AP - Topless Cranes	AD	WIE / 30 SEP 14	
95/14	Paya Lebar AP - Topless Cranes	AD	WIE / 30 SEP 14	
96/14	Paya Lebar AP - Luffer Crane	AD	WIE / 30 SEP 14	
97/14	Paya Lebar AP - Cranes	AD	WIE / 30 SEP 14	
98/14	Paya Lebar AP - Luffer Crane	AD	WIE / 30 JUN 14	
99/14	Paya Lebar AP - Luffer Cranes	AD	WIE / 30 JUN 14	
100/14	Paya Lebar AP - Hammerhead Crane	AD	WIE / 31 JUL 14	
101/14	Paya Lebar AP - Flat Top Cranes	AD	WIE / 29 AUG 14	
102/14	Paya Lebar AP - Luffer Crane	AD	WIE / 30 SEP 14	
103/14	Paya Lebar AP - Cranes	AD	WIE / 10 OCT 14	
104/14	Paya Lebar AP - Tower Cranes	AD	WIE / 30 NOV 14	
105/14	Paya Lebar AP - Luffer Crane	AD	WIE / 30 NOV 14	
106/14	Paya Lebar AP - Cranes	AD	WIE / 2 DEC 14	
107/14	Paya Lebar AP - Topless Cranes	AD	WIE / 29 DEC 14	
108/14	Paya Lebar AP - Luffer Cranes	AD	WIE / 24 FEB 15	
109/14	Paya Lebar AP - Flat Top Cranes	AD	WIE / 28 FEB 15	
110/14	Paya Lebar AP - Luffer Crane	AD	WIE / 28 FEB 15	
111/14	Paya Lebar AP - Hammerhead and Luffer Cranes	AD	WIE / 28 FEB 15	
112/14	Paya Lebar AP - Topless Cranes	AD	WIE / 28 FEB 15	
113/14	Paya Lebar AP - Cranes	AD	WIE / 1 MAR 15	
114/14	Paya Lebar AP - Cranes	AD	WIE / 15 MAR 15	
115/14	Paya Lebar AP - Luffer Cranes	AD	WIE / 31 MAY 15	
116/14	Paya Lebar AP - Mobile Cranes	AD	WIE / 6 JUN 15	
117/14	Paya Lebar AP - Luffer Crane	AD	WIE / 30 SEP 15	
118/14	Paya Lebar AP - Crane	AD	WIE / 28 FEB 17	
119/14	Paya Lebar AP - Cranes	AD	WIE / 1 MAR 16	
120/14	Paya Lebar AP - Cranes	AD	WIE / 1 MAR 16	

GEN 0.4 CHECKLIST OF AIP PAGES					
PAGE	DATE	PAGE	DATE	PAGE	DATE
<u>PART 1 - GENERAL (GEN)</u>			<u>PART 2 - EN-ROUTE (ENR)</u>		
GEN 0		2.2-6	23 SEP 10	ENR 0	
0.1-1	12 DEC 13	2.2-7	20 DEC 07	0.6-1	10 MAR 11
0.1-2	12 DEC 13	2.2-8	20 DEC 07	0.6-2	10 MAR 11
0.1-3	28 SEP 06	2.3-1	18 JAN 07	0.6-3	27 JUN 13
0.2-1	13 JAN 11	2.3-2	18 JAN 07	0.6-4	27 JUN 13
* 0.3-1	3 APR 14	2.4-1	3 JUN 10		
* 0.3-2	3 APR 14	2.5-1	18 JAN 07	ENR 1	
* 0.3-3	3 APR 14	2.5-3/chart	15 MAR 07	1.1-1	1 SEP 05
* 0.3-4	3 APR 14	2.6-1	28 SEP 06	1.1-2	1 SEP 05
* 0.3-5	3 APR 14	2.6-2	28 SEP 06	1.1-3	1 SEP 05
* 0.4-1	3 APR 14	2.7-1	18 NOV 10	1.1-4	1 SEP 05
* 0.4-2	3 APR 14			1.1-5	8 JUN 06
* 0.4-3	3 APR 14	GEN 3		1.1-6	8 JUN 06
* 0.4-4	3 APR 14	3.1-1	12 DEC 13	1.1-7	28 SEP 06
* 0.5-1	3 APR 14	3.1-2	12 DEC 13	1.1-8	28 SEP 06
0.6-1	5 MAY 11	3.1-3	9 FEB 12	1.1-9	28 SEP 06
0.6-2	5 MAY 11	3.1-4	9 FEB 12	1.1-10	28 SEP 06
0.6-3	20 SEP 12	3.1-5	9 FEB 12	1.1-11	27 AUG 09
		3.2-1	27 AUG 09	1.1-12	27 AUG 09
GEN 1		3.2-2	27 AUG 09	1.1-13	15 NOV 12
1.1-1	15 NOV 12	3.2-3	10 MAY 07	1.1-14	15 NOV 12
1.1-2	15 NOV 12	* 3.2-5	3 APR 14	1.1-15	15 NOV 12
1.2-1	5 JUN 08	* 3.2-6	3 APR 14	1.1-16	15 NOV 12
1.2-2	5 JUN 08	3.2-7	18 JAN 07		
1.2-3	5 APR 12	3.3-1	27 AUG 09	1.2-1	10 MAY 07
1.2-4	5 APR 12	3.3-2	27 AUG 09	1.3-1	29 JUL 10
1.2-5	6 FEB 14	3.4-1	10 MAR 11	1.4-1	18 NOV 10
1.2-6	6 FEB 14	3.4-2	10 MAR 11	1.5-1	20 NOV 08
1.3-1	3 JUN 10	3.4-3	18 JAN 07	1.5-2	20 NOV 08
1.3-2	3 JUN 10	3.4-4	18 JAN 07	1.5-3	23 NOV 06
1.3-3	22 AUG 13	3.4-5	28 SEP 06	1.5-4	23 NOV 06
1.3-4	22 AUG 13	3.4-6	28 SEP 06	1.5-5	23 NOV 06
1.3-5/chart	18 APR 02	3.4-7/diagram	18 NOV 10	1.6-1	10 MAR 11
1.3-7/chart	18 APR 02	3.4-9/diagram	28 SEP 06	1.6-2	10 MAR 11
1.4-1	5 MAY 11	3.5-1	6 FEB 14	1.6-3	17 OCT 13
1.4-2	5 MAY 11	3.5-2	6 FEB 14	1.6-4	17 OCT 13
1.4-3	5 MAY 11	3.5-3	23 SEP 10	1.6-5	6 FEB 14
1.5-1	22 OCT 09	3.5-4	23 SEP 10	1.6-6	6 FEB 14
* 1.6-1	3 APR 14	3.5-5	6 FEB 14	1.6-7	10 MAR 11
* 1.6-2	3 APR 14	3.5-6	6 FEB 14	1.6-8	10 MAR 11
* 1.6-3	3 APR 14	3.5-7	20 NOV 08	1.6-9/chart	18 APR 02
* 1.6-4	3 APR 14	3.5-8	20 NOV 08	1.6-11/chart	18 APR 02
1.7-1	7 MAR 13	3.5-9	6 FEB 14		
1.7-2	7 MAR 13	3.5-10	6 FEB 14	1.7-1	15 MAR 07
1.7-3	6 FEB 14	* 3.6-1	3 APR 14	1.7-2	15 MAR 07
1.7-4	6 FEB 14	* 3.6-2	3 APR 14	1.7-3	15 MAR 07
1.7-5	6 FEB 14	* 3.6-3	3 APR 14	1.7-4	15 MAR 07
		* 3.6-4	3 APR 14	1.7-5	29 JUL 10
GEN 2		3.6-5/chart	18 JAN 07	1.7-6	29 JUL 10
2.1-1	27 JUN 13			1.7-7	11 FEB 10
2.1-2	27 JUN 13	GEN 4		1.7-8	11 FEB 10
2.2-1	20 NOV 08	4.1-1	20 SEP 12	1.7-9	11 FEB 10
2.2-2	20 NOV 08	4.2-1	17 OCT 13	1.8-1	31 JUL 08
2.2-3	20 DEC 07	4.2-2	17 OCT 13	1.8-2	31 JUL 08
2.2-4	20 DEC 07	4.2-3	20 OCT 11	1.8-3	31 JUL 08
2.2-5	23 SEP 10	4.2-4	20 OCT 11	1.8-4	31 JUL 08

GEN 0.4 CHECKLIST OF AIP PAGES					
PAGE	DATE	PAGE	DATE	PAGE	DATE
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1.8-6	31 JUL 08	3.1-6	22 AUG 13		
1.8-7	31 JUL 08	3.1-7	20 SEP 12	* 6-1/chart	3 APR 14
1.8-8	31 JUL 08	3.1-8	20 SEP 12	WAC 2860	15 JUL 99
1.8-9	1 SEP 05	* 3.1-17/chart	3 APR 14	PART 3 - AERODROME (AD)	
1.8-10	1 SEP 05	* 3.3-1	3 APR 14	AD 0	
1.8-11	3 JUN 10	* 3.3-2	3 APR 14	0.6-1	17 OCT 13
1.8-12	3 JUN 10	3.3-3	6 FEB 14	0.6-2	17 OCT 13
1.8-13	29 JUL 10	3.3-4	6 FEB 14	0.6-3	17 OCT 13
1.8-14	29 JUL 10	3.3-5	20 SEP 12	0.6-4	17 OCT 13
1.8-15	27 JUN 13	3.3-6	20 SEP 12	AD 1	
1.8-16	27 JUN 13	* 3.3-7	3 APR 14	1.1-1	27 AUG 09
1.8-17	18 NOV 10	* 3.3-8	3 APR 14	1.1-2	27 AUG 09
1.8-18	18 NOV 10	3.3-9	6 FEB 14	1.1-3	2 MAY 13
1.8-19	18 NOV 10	3.3-10	6 FEB 14	1.1-4	2 MAY 13
1.8-20	26 JUL 12	* 3.3-11	3 APR 14	1.2-1	18 JAN 07
1.8-21	26 JUL 12	* 3.3-12	3 APR 14	1.3-1	10 MAY 07
1.8-22	22 AUG 13	3.3-13	20 SEP 12	1.3-3/chart	15 MAR 07
1.8-23	22 AUG 13	3.3-14	20 SEP 12	1.4-1	18 JAN 07
1.9-1	15 JAN 09	* 3.4-1	3 APR 14	1.5-1	17 DEC 09
1.9-2	15 JAN 09	* 3.4-2	3 APR 14	AD 2	
1.9-3	5 JUL 07	3.4-3	18 NOV 10	WSSS AD 2-1	6 FEB 14
1.9-4	5 JUL 07	3.4-4	18 NOV 10	WSSS AD 2-2	6 FEB 14
1.9-5	5 JUL 07	* 3.4-5/chart	3 APR 14	* WSSS AD 2-3	3 APR 14
* 1.10-1	3 APR 14	3.4-7/chart	18 JAN 07	* WSSS AD 2-4	3 APR 14
* 1.10-2	3 APR 14	3.5-1	27 JUN 13	WSSS AD 2-5.1	6 FEB 14
1.10-3	15 NOV 12	3.5-2	27 JUN 13	WSSS AD 2-5.2	6 FEB 14
1.10-4	15 NOV 12	3.5-3/chart	13 JAN 11	WSSS AD 2-5.3	6 FEB 14
1.11-1	10 MAR 11	3.6-1	20 OCT 11	WSSS AD 2-6.1	15 NOV 12
1.12-1	8 APR 10	3.6-2	20 OCT 11	WSSS AD 2-6.2	15 NOV 12
1.12-2	8 APR 10	3.6-3/chart	20 SEP 12	* WSSS AD 2-6.3	3 APR 14
1.12-3	18 JAN 07	3.6-5/chart	20 SEP 12	* WSSS AD 2-6.4	3 APR 14
1.12-4	18 JAN 07	3.6-7/chart	20 SEP 12	* WSSS AD 2-6.5	3 APR 14
1.13-1	18 JAN 07	3.6-9/chart	20 SEP 12	* WSSS AD 2-6.6	3 APR 14
1.14-1	10 MAR 11	ENR 4		WSSS AD 2-6.7	12 DEC 13
1.14-2	10 MAR 11	4.1-1	20 SEP 12	WSSS AD 2-6.8	12 DEC 13
1.14-3	3 JUN 10	4.1-2	20 SEP 12	WSSS AD 2-7.1	7 MAY 09
1.14-4	3 JUN 10	4.2-1	10 MAR 11	WSSS AD 2-7.2	7 MAY 09
1.14-5	3 JUN 10	4.3-1	10 MAR 11	WSSS AD 2-7.3	7 MAY 09
1.14-6	3 JUN 10	4.4-1	20 SEP 12	WSSS AD 2-7.4	7 MAY 09
1.15-1	10 JAN 13	4.4-2	20 SEP 12	WSSS AD 2-7.5	6 FEB 14
1.15-3	2 MAY 13	4.4-3	20 SEP 12	WSSS AD 2-7.6	6 FEB 14
1.15-4	2 MAY 13	4.4-4	20 SEP 12	WSSS AD 2-7.7	2 MAY 13
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2.1-2	18 NOV 10	5.1-1	8 APR 10	WSSS AD 2-7.10	2 MAY 13
2.1-3	18 NOV 10	5.1-3	10 MAR 11	WSSS AD 2-7.11	2 MAY 13
2.1-4	18 NOV 10	5.1-4	10 MAR 11	WSSS AD 2-7.12	2 MAY 13
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2.1-11A/diagram	8 APR 10	5.1-7/chart	20 SEP 12	WSSS AD 2-7.15	2 MAY 13
2.1-11B/diagram	8 APR 10	5.1-9/chart	10 MAR 11	WSSS AD 2-7.16	2 MAY 13
2.1-13/diagram	8 OCT 98	5.2-1	18 NOV 10	WSSS AD 2-8.1	8 APR 10
* 2.1-15/chart	3 APR 14	5.2-2	18 NOV 10	WSSS AD 2-8.2	8 APR 10
2.2-1	18 JAN 07	5.3-1	11 FEB 10		
ENR 3		5.4-1	10 MAR 11		
3.1-1	10 JAN 13	5.5-1	15 DEC 11		
3.1-2	10 JAN 13	5.6-1	10 JAN 13		
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* WSSS AD 2-11	3 APR 14	WSSS AD 2-73/chart	10 JAN 13	WSSS AD 2-105/chart	10 MAR 11
* WSSS AD 2-12	3 APR 14	WSSS AD 2-74	10 JAN 13	WSSS AD 2-107/chart	10 MAR 11
WSSS AD 2-13	23 NOV 06	WSSS AD 2-73-1/chart	10 JAN 13	WSSS AD 2-109/chart	10 MAR 11
WSSS AD 2-14	23 NOV 06	WSSS AD 2-74-1	10 JAN 13	WSSS AD 2-111/chart	10 MAR 11
* WSSS AD 2-15	3 APR 14	WSSS AD 2-75/chart	10 JAN 13	WSSS AD 2-113/chart	10 MAR 11
* WSSS AD 2-16	3 APR 14	WSSS AD 2-76	10 JAN 13	WSSS AD 2-115/chart	18 NOV 10
WSSS AD 2-17	12 DEC 13	WSSS AD 2-77/chart	10 JAN 13	WSSS AD 2-117/chart	10 MAR 11
WSSS AD 2-18	12 DEC 13	WSSS AD 2-78	10 JAN 13	WSSS AD 2-119/chart	7 MAR 13
WSSS AD 2-19	15 DEC 11			WSSS AD 2-121/chart	10 MAR 11
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WSSS AD 2-21	17 OCT 13	WSSS AD 2-82	26 JUL 12	WSSL AD 2-1	12 DEC 13
WSSS AD 2-22	17 OCT 13	WSSS AD 2-81-1/chart	5 APR 12	WSSL AD 2-2	12 DEC 13
WSSS AD 2-23	20 SEP 12	WSSS AD 2-82-1	5 APR 12	WSSL AD 2-3-1	6 FEB 14
WSSS AD 2-24	20 SEP 12	WSSS AD 2-83/chart	26 JUL 12	WSSL AD 2-3-2	6 FEB 14
WSSS AD 2-25	20 SEP 12	WSSS AD 2-84	26 JUL 12	WSSL AD 2-4-1	17 OCT 13
WSSS AD 2-26	20 SEP 12	WSSS AD 2-83-1/chart	5 APR 12	WSSL AD 2-4-2	17 OCT 13
WSSS AD 2-27	6 FEB 14	WSSS AD 2-84-1	5 APR 12	WSSL AD 2-5	6 FEB 14
WSSS AD 2-28	6 FEB 14	WSSS AD 2-85/chart	26 JUL 12	WSSL AD 2-6	6 FEB 14
WSSS AD 2-29	1 SEP 05	WSSS AD 2-86	26 JUL 12	WSSL AD 2-7	9 FEB 12
		WSSS AD 2-85-1/chart	5 APR 12	WSSL AD 2-8	9 FEB 12
* WSSS AD 2-31/chart	3 APR 14	WSSS AD 2-86-1	5 APR 12	* WSSL AD 2-9	3 APR 14
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* WSSS AD 2-37/chart	3 APR 14	WSSS AD 2-87/chart	26 JUL 12	WSSL AD 2-11	20 OCT 11
* WSSS AD 2-39/chart	3 APR 14	WSSS AD 2-88	26 JUL 12	WSSL AD 2-12	20 OCT 11
* WSSS AD 2-41/chart	3 APR 14	WSSS AD 2-87-1/chart	5 APR 12	WSSL AD 2-12-1	12 DEC 13
WSSS AD 2-43/chart	25 APR 96	WSSS AD 2-88-1	5 APR 12	WSSL AD 2-12-2	12 DEC 13
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* WSSS AD 2-47	3 APR 14	WSSS AD 2-89/chart	26 JUL 12	* WSSL AD 2-15/chart	3 APR 14
* WSSS AD 2-48	3 APR 14	WSSS AD 2-90	26 JUL 12	WSSL AD 2-17/chart	6 FEB 14
WSSS AD 2-49	20 SEP 12			WSSL AD 2-19/chart	6 FEB 14
WSSS AD 2-50	20 SEP 12	WSSS AD 2-91/chart	26 JUL 12	WSSL AD 2-21/chart	12 DEC 13
WSSS AD 2-50-1	26 JUL 12	WSSS AD 2-92	26 JUL 12	WSSL AD 2-23/chart	12 DEC 13
WSSS AD 2-50-2	26 JUL 12	WSSS AD 2-91-1/chart	5 APR 12	WSSL AD 2-25/chart	12 DEC 13
WSSS AD 2-50-3	5 APR 12	WSSS AD 2-92-1	5 APR 12	WSSL AD 2-27/chart	12 DEC 13
WSSS AD 2-50-4	5 APR 12	WSSS AD 2-92-2	5 APR 12	WSSL AD 2-29/chart	12 DEC 13
		WSSS AD 2-93/chart	26 JUL 12	WSSL AD 2-31/chart	12 DEC 13
WSSS AD 2-51/chart	2 MAY 13	WSSS AD 2-94	26 JUL 12	* WSSL AD 2-33/chart	3 APR 14
WSSS AD 2-52	2 MAY 13	WSSS AD 2-93-1/chart	5 APR 12	WSSL AD 2-35/chart	30 JUN 11
WSSS AD 2-53/chart	2 MAY 13	WSSS AD 2-94-1	5 APR 12	WSSL AD 2-37/chart	30 JUN 11
WSSS AD 2-54	2 MAY 13	WSSS AD 2-94-2	5 APR 12		
WSSS AD 2-55/chart	10 JAN 13			WSAP AD 2-1	6 FEB 14
WSSS AD 2-56	10 JAN 13	WSSS AD 2-97/chart	26 JUL 12	WSAP AD 2-2	6 FEB 14
WSSS AD 2-57/chart	10 JAN 13	WSSS AD 2-98	26 JUL 12	WSAP AD 2-3	18 NOV 10
WSSS AD 2-58	10 JAN 13	WSSS AD 2-97-1/chart	5 APR 12	WSAP AD 2-4	18 NOV 10
		WSSS AD 2-98-1	5 APR 12	WSAP AD 2-5	6 FEB 14
WSSS AD 2-63/chart	10 JAN 13	WSSS AD 2-99/chart	26 JUL 12	WSAP AD 2-6	6 FEB 14
WSSS AD 2-64	10 JAN 13	WSSS AD 2-100	26 JUL 12	WSAP AD 2-7	20 OCT 11
WSSS AD 2-65/chart	10 JAN 13	WSSS AD 2-99-1/chart	5 APR 12	WSAP AD 2-8	20 OCT 11
WSSS AD 2-66	10 JAN 13	WSSS AD 2-100-1	5 APR 12	WSAP AD 2-9	18 NOV 10
WSSS AD 2-67/chart	10 JAN 13			WSAP AD 2-10	18 NOV 10
WSSS AD 2-68	10 JAN 13			* WSAP AD 2-11/chart	3 APR 14
WSSS AD 2-69/chart	10 JAN 13			* WSAP AD 2-13/chart	3 APR 14
WSSS AD 2-70	10 JAN 13			WSAP AD 2-15/chart	25 APR 96
WSSS AD 2-71/chart	10 JAN 13			WSAP AD 2-17/chart	10 MAR 11
WSSS AD 2-72	10 JAN 13			WSAP AD 2-19/chart	10 MAR 11
				WSAP AD 2-21/chart	10 MAR 11
				WSAP AD 2-23/chart	10 MAR 11

GEN 0.4 CHECKLIST OF AIP PAGES					
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WSAT AD 2-4	5 APR 12				
WSAT AD 2-5	20 OCT 11				
WSAT AD 2-6	20 OCT 11				
WSAT AD 2-7	20 SEP 12				
WSAT AD 2-8	20 SEP 12				
WSAT AD 2-9	18 NOV 10				
WSAT AD 2-11/chart	1 JAN 98				
WSAG AD 2-1	5 APR 12				
WSAG AD 2-2	5 APR 12				
WSAG AD 2-3	18 NOV 10				
WMKJ AD 2-1	7 MAR 13				
WIDD AD 2-1	20 SEP 12				
WIDD AD 2-3	12 MAY 05				
WIDD AD 2-5/chart	12 MAY 05				
WIDD AD 2-6/chart	12 MAY 05				
WIDD AD 2-7/chart	12 MAY 05				
WIDD AD 2-8/chart	12 MAY 05				
WIDD AD 2-9/chart	12 MAY 05				
WIDD AD 2-10/chart	12 MAY 05				
WIDD AD 2-11/chart	12 MAY 05				
WIDD AD 2-12/chart	12 MAY 05				
WIDN AD 2-1	9 FEB 12				
WIDN AD 2-3	15 DEC 11				
WIDN AD 2-5/chart	15 DEC 11				
WIDN AD 2-6/chart	15 DEC 11				
WIDN AD 2-7/chart	15 DEC 11				
WIDN AD 2-8/chart	15 DEC 11				
WIDN AD 2-9/chart	15 DEC 11				
WIDN AD 2-10/chart	15 DEC 11				
WIDN AD 2-11/chart	15 DEC 11				
WIDN AD 2-12/chart	15 DEC 11				

GEN 0.5 LIST OF HAND AMENDMENTS TO THE AIP		
<i>AIP page(s) affected</i>	<i>Amendment text</i>	<i>Introduced by AIP Amendment NR</i>
WAC 2860/chart	a) Delete SJ NDB.	1/01
	b) Redesignation of Danger Areas WSD8, WSD12, WSD21 to read as WMD8, WMD12, WMD21 respectively.	5/07
	c) Upper limit of WSD13/14/15/44/45 and WMD8/12 to read as FL550.	2/10
WSSS AD 2-45	RWY 02R and 20L to read as RWY 02C and 20C.	1/05
WSAP AD 2-15	Magnetic Variation to read as 27'E(2010).	6/10
WSAT AD 2-11	Magnetic Variation to read as 27'E(2010).	6/10

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GEN 1.6 SUMMARY OF NATIONAL REGULATIONS AND INTERNATIONAL AGREEMENTS/CONVENTIONS

1. LIST OF CIVIL AVIATION LEGISLATION, AIR NAVIGATION REGULATIONS AND ORDERS

The following is a list of legislation (Acts and subsidiary legislation) affecting aviation and air navigation in the Republic of Singapore together with the International Agreements/Conventions acceded to by the Republic of Singapore. It is essential that anyone engaged in air operations be acquainted with the relevant legal documents.

Electronic versions of the legislation may be freely accessed at
<http://www.caas.gov.sg>

Electronic versions of all Singapore legislation may be accessed via subscription to Lawnet at
<http://www.lawnet.com.sg>

Print copies of all the legislation may be purchased from:
Toppan Leefung Pte. Ltd.,
No. 1 Kim Seng Promenade, #18-01,
Great World City, East Tower
Singapore 237994.

TEL: (65) 68269600
FAX: (65) 68203341
Website: www.toppanleefung.com

1.1 CIVIL AVIATION LEGISLATION

No	Legislation	Citation
1	Civil Aviation Authority of Singapore Act 2009	No. 17 of 2009
2	Civil Aviation Authority of Singapore (Aviation Levy) 2009	S459/2009
3	Civil Aviation Authority of Singapore (Changi Airport) By-Laws 2009	S313/2009
4	Civil Aviation Authority of Singapore (Changi Airport) Notification 2009	S293/2009
5	Civil Aviation Authority of Singapore (Composition of Offences) Regulations 2009	S315/2009
6	Civil Aviation Authority of Singapore (Licensing of Airport Operators) Regulations 2009	S311/2009
7	Civil Aviation Authority of Singapore (Seletar Airport) By-Laws 2009	S314/2009
8	Civil Aviation Authority of Singapore (Seletar Airport) Notification 2009	S294/2009
9	Civil Aviation Authority of Singapore (Service Charge) Order 2009	S310/2009
10	Air Navigation Act	Cap. 6 (1985 Rev Ed.)
11	Air Navigation Order	Cap. 6, O2 (1990 Rev Ed.)
12	Air Navigation (Aviation Security) Order	Cap. 6, O5
13	Air Navigation (Composition of Offences) Rules	Cap. 6, R1
14	Air Navigation (Delegation of Powers) Notification	Cap. 6, N3
15	Air Navigation (Investigation of Accidents and Incidents) Order 2003	Cap. 6, O7
16	Air Navigation (Licensing of Air Services) Regulations	Cap. 6, Rg 2
17	Air Navigation (Paya Lebar and Tengah Aerodrome Fees) Order	Cap. 6, O1
18	Air Navigation (Prohibited Flights) Order	Cap. 6, O6

GEN 1.6 SUMMARY OF NATIONAL REGULATIONS AND INTERNATIONAL AGREEMENTS/CONVENTIONS

No	Legislation	Citation
19	Air Navigation (Regulated Air Cargo Agents) Order	Cap. 6, O8
20	Air Navigation (Wreck and Salvage of Aircraft) Regulations	Cap. 6, Rg 1
21	Designation of Authorised Persons	Cap. 6, N2
22	Use of Seletar Aerodrome	Cap. 6, N1
23	Carriage by Air Act	Cap. 32A (2001 Rev Ed.)
24	Carriage by Air (Parties to Conventions) Order	Cap. 32A, O1
25	Carriage by Air (Singapore Currency Equivalents) Order	Cap. 32A, O2
26	Carriage by Air (Montreal Convention, 1999) Act	Cap. 32B (2008 Rev Ed.)
27	Carriage by Air (Montreal Convention, 1999) (Exclusion from Convention) Order	Cap. 32B, O1
28	Tokyo Convention Act	Cap. 327
29	Tokyo Convention (Convention Countries) Notification	Cap. 327, N1
30	Hijacking of Aircraft and Protection of Aircraft and International Airports Act	Cap. 124 (1997 Rev Ed.)
31	International Interests in Aircraft Equipment Act 2009	Cap. 144B
32	Immigration Act	Cap. 133
33	Immigration (Authorised Places Of Entry And Departure, And Rates) Notification 2012	Cap. 133, No. S627/2012
34	Immigration Regulations	Cap. 133, Rg 1
35	Arms and Explosives Act	Cap. 13
36	Arms and Explosives (Aircraft Exemption) Rules	Cap. 13, R3
37	Arms and Explosives (Explosives) Rules	Cap. 13, R2
38	Arms and Explosives (Movement Control) Rules	Cap. 13, R4

1.2 OTHER RELEVANT LEGISLATION

No	Legislation	Citation
1	Infectious Diseases Act	Cap. 137 (2003 Rev Ed.)
2	Infectious Diseases (Quarantine) Regulations	Cap. 137, Rg 1
3	Infectious Diseases (Measures to Prevent or Control the Spread of Infectious Diseases) Regulations 2004	S13/2004
4	Infectious Diseases (Certificates of Vaccination or Other Prophylaxis) Regulations 2008	S611/2008
5	Arms and Explosives (Arms) Rules	Cap. 13, R1
6	Inspector of Explosives	Cap. 13, N1
7	Arms Offences Act	Cap. 14 (2008 Rev Ed.)

Note: "Cap." means "Chapter of the 1985 Revised Edition of the Acts of Singapore", unless otherwise stated.

GEN 1.6 SUMMARY OF NATIONAL REGULATIONS AND INTERNATIONAL AGREEMENTS/CONVENTIONS

1.3 INTERNATIONAL CONVENTIONS AND PROTOCOLS

1	Convention on International Civil Aviation, done at Chicago on 7 December 1944
2	International Air Services Transit Agreement, signed at Chicago on 7 December 1944
3	Protocol Relating to an Amendment to the Convention on International Civil Aviation [Article 93 <i>Bis</i>], signed at Montreal on 27 May 1947
4	Protocol Relating to an Amendment to the Convention on International Civil Aviation [Article 45], signed at Montreal on 14 June 1954
5	Protocol Relating to Certain Amendments to the Convention on International Civil Aviation [Articles 48(a), 49(e) and 61], signed at Montreal on 14 June 1954
6	Protocol Relating to an Amendment to the Convention on International Civil Aviation [Article 50(a)], signed at Montreal on 21 June 1961
7	Protocol Relating to an Amendment to the Convention on International Civil Aviation [Article 48(a)], signed at Rome on 15 September 1962
8	Convention for the Unification of Certain Rules Relating to International Carriage by Air signed at Warsaw on 12 October 1929
9	Protocol to Amend the Convention for the Unification of Certain Rules Relating to International Carriage by Air signed at Warsaw on 12 October 1929, done at The Hague on 28 September 1955
10	Convention on Offences and Certain Other Acts Committed on Board Aircraft, signed at Tokyo on 14 September 1963
11	Protocol Relating to an Amendment to the Convention on International Civil Aviation [Article 50(a)], signed at New York on 12 March 1971
12	Protocol Relating to an Amendment to the Convention on International Civil Aviation [Article 56], signed at Vienna on 7 July 1971
13	Protocol Relating to an Amendment to the Convention on International Civil Aviation [Article 50(a)], signed at Montreal on 16 October 1974
14	Convention for the Suppression of Unlawful Seizure of Aircraft, signed at The Hague on 16 December 1970
15	Convention for the Suppression of Unlawful Acts against the Safety of Civil Aviation, signed at Montreal on 23 September 1971
16	Protocol Relating to an Amendment to the Convention on International Civil Aviation [Article 83 <i>Bis</i>], signed at Montreal on 6 October 1980
17	Protocol Relating to an Amendment to the Convention on International Civil Aviation [Article 56], signed at Montreal on 26 October 1990
18	Protocol Relating to an Amendment to the Convention on International Civil Aviation [Article 50(a)], signed at Montreal on 6 October 1989
19	Protocol Relating to an Amendment to the Convention for the Unification of Certain Rules Relating to International Carriage by Air, signed at Montreal on 25 September 1975
20	Convention for the Unification of Certain Rules for International Carriage by Air, signed at Montreal on 28 May 1999
21	Protocol for the Suppression of Unlawful Acts of Violence at Airports Serving International Civil Aviation, Supplementary to the Convention for the Suppression of Unlawful Acts against the Safety of Civil Aviation, done at Montreal on 23 September 1971, signed at Montreal on 24 February 1988
22	Convention on the Marking of Plastic Explosives for the Purpose of Detection, signed at Montreal on 1 March 1991

GEN 1.6 SUMMARY OF NATIONAL REGULATIONS AND INTERNATIONAL AGREEMENTS/CONVENTIONS

23	Convention on International Interests in Mobile Equipment, signed at Cape Town on 16 November 2001
24	Protocol to the Convention on International Interests in Mobile Equipment on Matters Specific to Aircraft Equipment, signed at Cape Town on 16 November 2001
25	Protocol for the Amendment of the 1956 Agreement on the Joint Financing of Certain Air Navigation Services in Iceland, signed at Montreal on 3 November 1982
26	Protocol for the Amendment of the 1956 Agreement on the Joint Financing of Certain Air Navigation Services in Greenland and the Faroe Islands, signed at Montreal on 3 November 1982
27	The International COSPAS-SARSAT Programme Agreement, signed at Paris on 1 July 1988
28	Convention on the Privileges and Immunities of the Specialized Agencies, 21/11/47 - application to ICAO (Annex 111), 21/6/48 18/3

2. TAXATION IN THE FIELD OF INTERNATIONAL AIR TRANSPORT

- 2.1 a) Petroleum for aircraft is granted GST (Goods and Services Tax) relief under item 11 of Part 1 of the Schedule to the GST (Imports Relief) Order (2001 Rev Ed.) respectively.
- b) The matter of income tax on air transport is contained within Section 12(2) of the Income Tax Act.

Where a non-resident person carries on either:

- i) the business of shipowner or charterer, or
- ii) the business of air transport,

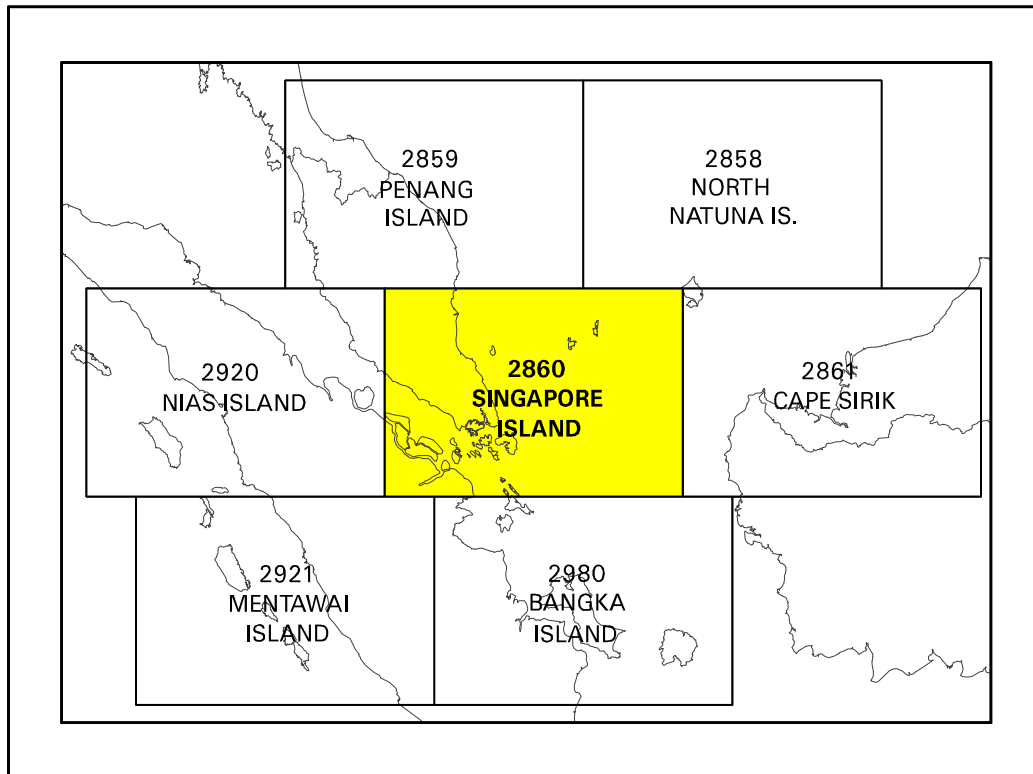
and any ship or aircraft owned or chartered by him calls at a port, an aerodrome or an airport in Singapore, his full profits arising from the carriage of passengers, mail, livestock or goods shipped, or loaded into an aircraft, in Singapore shall be deemed to accrue in Singapore.

This subsection shall not apply to passengers, mail, livestock or goods which are brought to Singapore solely for transshipment, or for transfer from one aircraft to another or from an aircraft to a ship or from a ship to an aircraft.

- 2.2 There is no capital gains tax, or income on wealth, etc., which are chargeable on the sale or use of international air transport.

GEN 3.2.5 LIST OF AERONAUTICAL CHARTS AVAILABLE					
<i>Title of Chart Series</i>	<i>Scale</i>	<i>Name and/or number</i>		<i>Price (\$)</i>	<i>Date</i>
World Aeronautical Chart ICAO (WAC)	1:1 000 000	WAC 2860		In AIP	15 JUL 99
Enroute Chart ICAO (ENRC)		ENR 6-1		In AIP	3 APR 14
Instrument Approach Chart ICAO (IAC)	1:400 000	Singapore Changi RWY 02L - ICW ILS/DME WSSS AD 2-101		In AIP	10 MAR 11
	1:400 000	RWY 02C - ICE ILS/DME WSSS AD 2-103		In AIP	10 MAR 11
	1:400 000	RWY 02C - VTK DVOR/DME WSSS AD 2-105		In AIP	10 MAR 11
	1:400 000	RWY 02R - ICX ILS/DME WSSS AD 2-107		In AIP	10 MAR 11
	1:400 000	RWY 20R - ICH ILS/DME WSSS AD 2-109		In AIP	10 MAR 11
	1:400 000	RWY 20C - ICC ILS/DME WSSS AD 2-111		In AIP	10 MAR 11
	1:400 000	RWY 20C - VTK DVOR/DME WSSS AD 2-113		In AIP	10 MAR 11
	1:400 000	RWY 20L - ICZ ILS/DME WSSS AD 2-115		In AIP	10 MAR 11
	1:400 000	RWY 02L - RNAV(GNSS) WSSS AD 2-117		In AIP	10 MAR 11
	1:400 000	RWY 20R - RNAV(GNSS) WSSS AD 2-119		In AIP	7 MAR 13
	1:400 000	Paya Lebar RWY 20 - PU DVOR/DME WSAP AD 2-17		In AIP	10 MAR 11
	1:400 000	RWY 02 - PU DVOR/DME WSAP AD 2-19		In AIP	10 MAR 11
	1:400 000	RWY 20 - IPS ILS/DME WSAP AD 2-21		In AIP	10 MAR 11
	1:400 000	RWY 02 - IPN ILS/DME WSAP AD 2-23		In AIP	10 MAR 11
Visual Approach Chart ICAO (VAC)	1:400 000	Singapore Changi WSSS AD 2-121		In AIP	10 MAR 11
	1:100 000	Seletar RWY 03 WSSL AD 2-21		In AIP	9 FEB 12
	1:100 000	RWY 21 WSSL AD 2-23		In AIP	9 FEB 12
	1:100 000	RWY 03 WSSL AD 2-25		In AIP	9 FEB 12
	1:100 000	RWY 21 WSSL AD 2-27		In AIP	9 FEB 12
Visual Departure Chart	1:100 000	Seletar RWY 03 WSSL AD 2-29		In AIP	9 FEB 12
	1:100 000	RWY 21 WSSL AD 2-31		In AIP	9 FEB 12
Aerodrome Chart ICAO (AC)		Singapore Changi WSSS AD 2-31		In AIP	3 APR 14
		Seletar WSSL AD 2-13		In AIP	3 APR 14
		Paya Lebar WSAP AD 2-11		In AIP	3 APR 14
Aerodrome Obstacle Chart ICAO TYPE A (AOC)	1:10 000	Singapore Changi RWY 20R/02L WSSS AD 2-37		In AIP	3 APR 14
	1:10 000	RWY 20C/02C WSSS AD 2-39		In AIP	3 APR 14
	1:10 000	Seletar RWY 03/21 WSSL AD 2 -17		In AIP	6 FEB 14
	1:20 000	Paya Lebar RWY 20/02 WSAP AD 2-15		In AIP	25 APR 96
Aerodrome Obstacle Chart ICAO TYPE B (AOC)	1:25 000	Singapore Changi RWY 02L/20R and 02C/20C WSSS AD 2-41		In AIP	3 APR 14
	1:12 500	Seletar RWY 03/21 WSSL AD 2-19		In AIP	6 FEB 14
Precision Approach Terrain Chart - ICAO (PATC)	1:2 500	Singapore Changi RWY 02L WSSS AD 2-43		In AIP	25 APR 96
	1:2 500	RWY 02C WSSS AD 2-45		In AIP	25 APR 96

GEN 3.2.6 INDEX TO THE WORLD AERONAUTICAL CHART (WAC) - ICAO 1:1 000 000



GEN 3.6 SEARCH AND RESCUE

1. RESPONSIBLE SERVICE (S)

- 1.1 The search and rescue service in Singapore is provided by the Civil Aviation Authority of Singapore, in collaboration with the Ministry of Defence, Meteorological Service and Maritime and Port Authority of Singapore, which have the responsibility for making the necessary facilities available. The postal and telegraphic addresses of the Civil Aviation Authority of Singapore are given on page GEN 1.1-1.

Address : Rescue Coordination Centre (RCC),
60 Biggin Hill Road,
Singapore 509950.

TEL : (65) 65425024 - Singapore RCC
(65) 65412668 or (65) 65412672 - Singapore ACC
FAX : (65) 65422548
AFS : WSJCZGZX or WSJCYCYX

- 1.2 The service is provided in accordance with the provisions contained in the following ICAO documents and local procedures:

Annex 12 - Search and Rescue

Annex 13 - Aircraft Accident and Incident Investigation

Doc 7030 - Regional Supplementary Procedures for Alerting and SAR services applicable in the SEA Region.

Doc 9731 - International Aeronautical and Maritime Search and Rescue Manuals Volume 1, 2 and 3
Singapore local procedures

2. AREA OF RESPONSIBILITY

- 2.1 The search and rescue service is responsible for SAR operations within Singapore FIR.

3. TYPES OF SERVICES

- 3.1 Details of the rescue coordination centre and related supporting rescue units are given in the table on page GEN 3.6-3 titled - Search and Rescue Units. In addition, various elements of the Singapore Police Force, Maritime and Port Authority of Singapore and the Merchant Marine are available for search and rescue missions, when required. The aeronautical, maritime and public telecommunication services are available to the search and rescue organisation.

- 3.2 All search aircraft are land planes and carry survival equipment, capable of being dropped, consisting of inflatable rubber dinghies equipped with general purpose first aid supplies, emergency rations and survival radio equipment. Aircraft are equipped to communicate on 121.5MHz, 123.1MHz, 243.0MHz, 282.8MHz, 2182KHz, 3023KHz and 5680KHz and are also equipped with VHF/UHF direction finder. Marine craft are equipped to communicate on 123.1MHz, 282.8MHz, 2182KHz, 3023KHz and 5680KHz and are equipped with radar.

- 3.3 The Singapore RCC provides distress alert detection of Emergency Locator Transmitters (ELTs), Emergency Position Indicator Radio Beacons (EPIRBs) and Personal Locator Beacons (PLBs) using the Cospas-Sarsat Satellite Aided Tracking System. This system is able to detect 406.0MHz beacons globally and the information is shared with the other users of the system. A database of the Singapore registered aviation beacons is kept at the RCC and the Maritime beacons are in the Maritime and Port Authority database.

- 3.4 Users of 406.0MHz beacons that are coupled with the 121.5MHz frequency will be able to use the 121.5MHz for homing purposes only by search units.

4 SAR AGREEMENTS

- 4.1 SAR agreements have been concluded between Civil Aviation Authority of Singapore and the SAR authorities or agencies of Indonesia, Malaysia, Philippines, Thailand and Vietnam. These agreements provide for mutual assistance in the conduct of SAR operations within each others' SAR Regions (SRR) and approval for entry of SAR aircraft, vessels and personnel of one State into the SRR of another State, with prior permission, for the purpose of conducting SAR operations or rendering SAR assistance and for direct communications between the SAR authorities or agencies on all common SAR matters.
- 4.2 Requests for the entry of aircraft, equipment and personnel from other States to engage in search for aircraft in distress or to rescue survivors of aircraft accidents should be transmitted to the Rescue Coordination Centre. Instructions as to the control which will be exercised on entry of such aircraft and/or personnel will be given by the Rescue Coordination Centre in accordance with the standing plan for the conduct of search and rescue in the area.
- 4.3 Civil Aviation Authority of Singapore has also concluded an SAR agreement with the SAR Coordinator Pacific RCC, United States Air Force (USAF). The agreement provides for all possible assistance to assist RCC Singapore in its response to United States (US) military SAR incidents within the Singapore SRR. It will also provide US assistance to RCC Singapore in its prosecution of civil SAR incidents when requested.

5. CONDITIONS OF AVAILABILITY

- 5.1 The SAR service and facilities in Singapore are available without charge to neighbouring states on opportunity basis and upon request to the Rescue Coordination Centre Singapore or the Singapore Air Traffic Control Centre. All facilities are specialised in SAR techniques and functions.

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 ICAO Annex 12, Chapter 5.
- 6.1.2 Ditching reports, requested by aircraft about to ditch, are given in accordance with the provisions in *Procedures for Air Navigation Services, Meteorology* (Doc 7605-MET/526)

6.2 Communications

- 6.2.1 Transmission and reception of distress messages within the Singapore Search and Rescue Region are handled in accordance with ICAO Annex 10, Volume II, Chapter 5, para 5.3.
- 6.2.2 For communications during search and rescue operations, the codes and abbreviations published in ICAO *Abbreviations and Codes* (Doc 8400) are used.
- 6.2.3 Information concerning positions, callsigns, frequencies and hours of operation of Singapore aeronautical stations is published in sections AD 2 and ENR 2.
- 6.2.4 The frequency 121.5MHz is guarded continuously by the Control Tower, Singapore Changi Airport, the Singapore Air Traffic Control Centre and Control Tower, Seletar Aerodrome. The Coast Radio Station in Singapore guards the international distress frequencies.
- 6.2.5 Search and Rescue aircraft conducting Search and Rescue Operations will use the following callsigns:
a) Fixed Wing 'Rescue (plus number 61 to 85)'
b) Rotary Wing 'Rescue (plus number 10 to 19)'
- 6.2.6 Rescue vessels / boats conducting Search and Rescue Operations will use the following callsigns:
a) 'Rescue Vessel (plus number 21 to 31)'
b) 'Rescue Boat (plus number or callsign)'

6.3 Search and Rescue Signals

6.3.1 The search and rescue signals to be used are those prescribed in ICAO Annex 12, Chapter 5, para 5.10.

6.3.2 Ground/Air Visual Signal Codes for use by Survivors

GROUND/AIR VISUAL SIGNAL CODES FOR USE BY SURVIVORS			
<i>Nr.</i>	<i>Message</i>	<i>Code symbol</i>	<i>Instructions for use</i>
1	Require assistance	V	a) Make signals not less than 8ft (2.5m). b) Take care to lay out signals exactly as shown. Provide as much colour contrast as possible between signals and background. c) Make every effort to attract attention by other means such as radio, flares, smoke, reflected light. d)
2	Require medical assistance	X	
3	No or Negative	N	
4	Yes or Affirmative	Y	
5	Proceeding in this direction	↑	

6.4 Search and Rescue Units

SEARCH AND RESCUE UNITS			
<i>Name</i>	<i>Location</i>	<i>Facilities</i>	<i>Remarks</i>
MINDEF	Singapore	LRG VLR Hel-M Hel-H RV	One search and locate aircraft. One search and locate aircraft. One search and rescue aircraft. One search and rescue aircraft. Two search and locate ship.
CHANGI AIRPORT EMERG SERVICE	Singapore Changi Airport	RB	Additional maritime cover is provided by vessels of the Police Coast Guard and the Maritime and Port Authority of Singapore.
USAF PACIFIC RCC	Hickham Airforce Base	LRG	On opportunity basis. Singapore in coordination with USAF Pacific RCC.

6.5 Search and Rescue Frequencies

SEARCH AND RESCUE FREQUENCIES			
<i>Purpose</i>	<i>Frequency</i>	<i>Period</i>	<i>Watch Kept By</i>
International Distress Frequencies	121.5 MHz	24 hours watch	RSAF (SATCC) RCC Singapore
	243.0 MHz	24 hours watch	RSAF (SATCC)
	156.8 MHz (Channel 16)	24 hours watch	Maritime and Port Authority Ships at sea.
	156.525 MHz (DSC Channel 70)	24 hours watch	Maritime and Port Authority Ships at sea.
Scene of Search	2 182 KHz	As required	RCC Singapore
	282.8 MHz	As required	Search Aircraft RCC Singapore
	123.1 MHz	As required	RCC Singapore Merchant Shipping (if equipped)
	3 023 KHz	As required	RCC Singapore
	5 680 KHz	As required	RCC Singapore

Note:

Speech circuits exist between all ATS Units in Peninsular Malaysia and Singapore. Speech circuits also exist between Singapore ATS Unit and Kota Kinabalu ATS Unit in Sabah. Direct speech communications between Kuching and Singapore ATS Unit is also available. Direct speech communications circuits exist between Singapore ATS Unit and Bangkok, Jakarta, Manila and Ho Chi Minh ATS Units and are available for relay of messages between Singapore RCC and the respective RCCs but may be subject to delays.

ENR 1.10 FLIGHT PLANNING

1. PROCEDURES FOR SUBMISSION OF A FLIGHT PLAN

1.1 Requirement for submission of a Flight Plan

- 1.1.1 The pilot-in-command or the operator shall submit a flight plan to ATC in respect of the following flights by using the automated AIM-SG system at Changi AIS office or via the AFS and Internet:
- Flights on airways, associated holding areas and all other controlled airspaces whether IFR or VFR;
 - Any flight or portion thereof to be provided with air traffic control service;
 - Any flight within or into designated areas, or along designated routes to facilitate co-ordination with appropriate military units or with air traffic service units in adjacent States in order to avoid the possible need for interception for the purpose of identification;
 - Any flight across international borders.
- 1.1.2 The pilot-in-command or the operator shall use the ICAO flight plan form except for the following:
- where the flights are in the Repetitive Flight Plan (RPL) system; or
 - where the flights are conducted wholly within the territory of Singapore.
- 1.1.3 Where a flight is planned to be conducted in the aerodrome circuit or in Light Aircraft Training Areas A, B and C, details of the flight shall be submitted by facsimile to AIS.
- 1.1.4 The pilot-in-command or the operator of IFR flight operating out of Seletar is required to file via KK.
- 1.1.5 VFR flight operating between Seletar and Johor Bahru shall route via Point X (012830N1034954E), Tebrau City Mall (013259N1034748E), Felda Ulu Tebrau (013751N1034510E) and vice versa.

1.2 Requirement for submission of a Flight Plan for Test Flights

- 1.2.1 Test flights shall be conducted on Airway G580 between HOSBA and NIMIX to minimise disruption to civil scheduled flight movements and to facilitate the test flight operations.
- 1.2.2 A flight plan shall be submitted for a test flight at least one hour before departure. The pilot-in-command or the operator shall include in Item 18 of the flight plan 'RMK/TEST FLT APPROVED BY ATC'.
- 1.2.3 The pilot-in-command shall maintain a 2-way VHF communication with Singapore ATC on the assigned VHF frequency at all times.
- 1.2.4 The pilot-in-command of the test flight shall adhere to ATC instructions at all times. Test flight manoeuvres are subject to ATC clearance, real-time coordination and traffic.
- 1.2.5 Procedures for application to conduct test flights are provided on page GEN 1.2-6 paragraph 4.

1.3 Lead time for filing flight plans and flight plan associated messages

- 1.3.1 Flight plan shall be filed 120 hours, or five days, at the earliest but no later than 60 minutes prior to departure (estimated off-block time).
- 1.3.2 In the event of a delay of 30 minutes in excess of the estimated off-block time, the flight plan should be amended or a new flight plan submitted and the old flight plan cancelled, whichever is applicable. To indicate a delay to a flight, a DLA or a CHG message may be used depending on the circumstances.
- 1.3.3 The old flight plan shall be cancelled and a new flight plan shall be submitted when changes are made to any one of the following fields:
7/Aircraft Identification, 15/Route and/or 16/Destination Aerodrome.
- 1.3.4 A flight plan submitted in flight on HF RTF shall be submitted at least 20 minutes (or if on VHF RTF at least 10 minutes) prior to the intended point of entry into a control zone, control area, advisory area or advisory route.

1.3.5 A pilot-in-command may change from an IFR flight plan to a VFR flight plan by reporting "CANCELLING MY IFR FLIGHT" when weather conditions indicate that the remainder of the flight can be conducted under VFR. [However, within Singapore, all flights whether IFR or VFR shall be regulated in accordance with instrument flight rules.] (see note 2 below).

1.3.6 ATC will acknowledge:

"IFR flight cancelled at.....(time)" or

if information is available which indicates the likelihood of IMC prevailing along the route, will notify these conditions as follows:

"Instrument MET conditions reported (or forecast) in the vicinity of....."

Note 1: The fact that pilot flying in VMC does not by itself constitute cancellation of an IFR flight plan.

Note 2: Within the Singapore/Johor Airspace Complex and Control Zones all flights are regulated in accordance with IFR separation standards.

1.4 Persons on board (POB)

1.4.1 The pilot-in-command or his representative is required to state the total number of persons on board (POB - i.e. passengers and crew) in the flight plan.

1.5 DATA LINK Communication

1.5.1 Aircraft using data link communications (page ENR 1.1-15) must insert one or more of the following letters in Item 10a of their flight plan to indicate serviceable COM aid equipment and capabilities available:

- J1** CPDLC ATN VDL Mode 2
- J2** CPDLC FANS 1/A HF DL
- J3** CPDLC FANS 1/A VDL Mode 4A
- J4** CPDLC FANS 1/A VDL Mode 2
- J5** CPDLC FANS 1/A SATCOM (INMARSAT)
- J6** CPDLC FANS 1/A SATCOM (MTSAT)

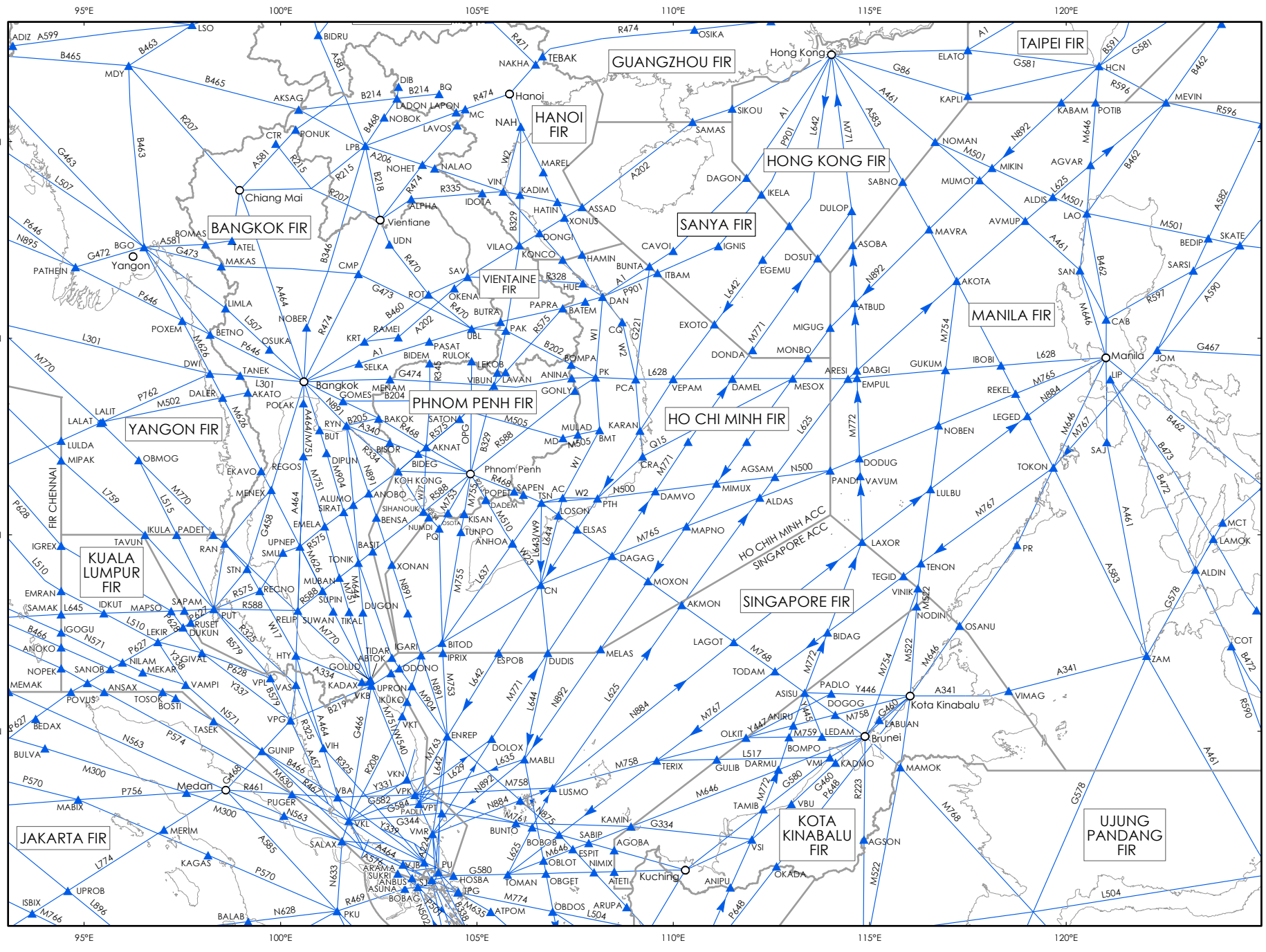
1.6 RNAV Approved Aircraft

1.6.1 Aircraft flying on RNAV routes A464, A576, B348, B470, G334, L625, L642, L644, M751, M753, M758, M761, M767, M768, M771, M772, M774, N875, N884, N891 and N892 (see page ENR 1.8-13) must be RNAV equipped and should annotate their flight plan as follows:

	Item 10	Item 15	Item 18
RNAV equipment is carried	<p>G (GNSS)</p> <p>I (Inertial Navigation)</p> <p>R (PBN approved) Guidance material in the application of performance based navigation to a specific route segment, route or area is contained in the Performance Based Navigation Manual (Doc 9613).</p>	True Mach NR and FL at entry and exit points	<p>The types of external GNSS augmentation, if any, are specified following the indicator NAV/ and separated by a space.</p> <p>The performance based navigation levels that can be met shall be specified following the indicator PBN/.</p>

1.6.2 Aircraft flying on RNAV routes L642(CHEUNG CHAU-MERSING), L644(DUDIS-KIKOR), M771(MERSING-CHEUNG CHAU), M772(ASISU-LAXOR), N892(HENGCHUN-MERSING), L625(LUSMO-MEVIN), N884(MERSING-MANILA) and M767(JOMALIG-TOMAN) (see page ENR 1.8-17) must be RNP 10 approved and shall indicate in their flight plan:
Item 10 - "R" where R = PBN approved
Item 18 - PBN/A1 where A1 = RNAV 10 (RNP 10)

ATS ROUTE STRUCTURE WITHIN SINGAPORE & ADJACENT FIRS

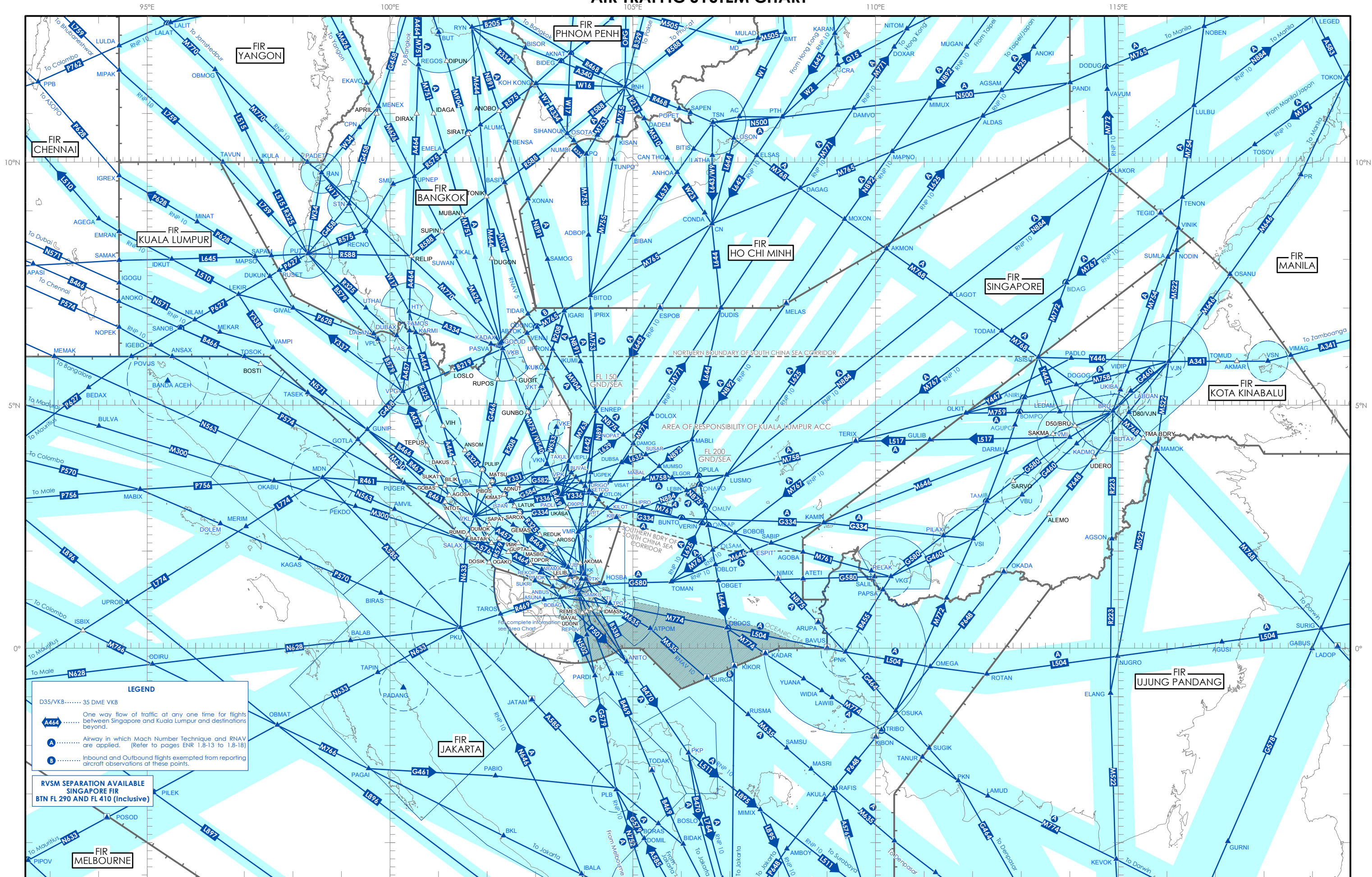


CIVIL AVIATION AUTHORITY SINGAPORE

CHANGES : ATS routes M753 and R334 revised.
ATS routes R328 and R335 added.

AIP AMDT 2/14

AIR TRAFFIC SYSTEM CHART



ENR 3 ATS ROUTES ENR 3.3 AREA NAVIGATION (RNAV) ROUTES						
Route Designator (RNP Type) Name of Significant Points Coordinates	Way-point IDENT of VOR/DME BRG & DIST ELEV DME Antenna	Great Circle DIST (NM)	<u>Upper Limits</u> <u>Lower Limits</u> Minimum Ft Alt Airspace Classification	Direction of Cruising Levels		Remarks Controlling Unit Frequency
				Odd	Even	
1	2	3	4	5		6
L504 (RNAV)						
▲ OBDOS 002503N 1065551E ▲ BAVUS (WSJC/WIIZ FIR BDRY) 000000S 1090000E	NIL	126.9	FL 460 FL 145 FL 150 Class A	↓	↑	Lateral Limits: 25NM either side of line joining OBDOS to BAVUS. Singapore ACC FREQ: P134.4 MHz S128.1 MHz
L517						
▲ TERIX 041521N 1093456E ▲ GULIB (WSJC/WBFC FIR BDRY) 041714N 1110633E	NIL VMI 269° 173NM	92	FL 460 FL 240 FL 250 Class A		↑	Lateral Limits: 25NM either side of line joining GULIB to TERIX. Singapore ACC FREQ: P123.7 MHz S127.3 MHz
L625 (RNP 10)						
▲ AKMON 081256N 1101308E ▲ LUSMO 033341N 1065534E ▲ VERIN 023332N 1062425E ▲ TOMAN 012147N 1054717E	NIL VMR 069° 196.3NM NIL NIL	 035° 340.6 027° 67.5 027° 80.5	 FL 460 FL 135 Class A FL 460 FL 245 Class A		*	Lateral Limits: 10NM either side of line joining TOMAN to LUSMO and 25NM either side of the line joining LUSMO to AKMON. Singapore ACC FREQ: P123.7 MHz S127.3 MHz Singapore ACC FREQ: P134.2MHz S133.35MHz * Uni-directional. No PDC Flight Levels FL310, FL320, FL350, FL360, FL390, FL400 applicable. Other levels available with prior approval.
L629						
▲ DOLOX 044841N 1052247E ▲ NOPAT 042313N 1044756E ▲ VEPLI 035223N 1040542E ▲ BUVAL (WSJC/MMFC FIR BDRY) 033622N 1034341 E ▲ PEKAN DVOR/DME (VPK) 032259N 1032524E	NIL NIL NIL NIL	43.1 52.2 27.2 22.6	 FL 460 FL 240 FL 250 Class A		↑	Lateral Limits: 10NM either side of line joining VPK DVOR/DME to BUVAL and 25NM either side of line joining BUVAL to DOLOX. Singapore ACC FREQ: P123.7MHz S127.3 MHz

ENR 3. ATS ROUTES						
ENR 3.3 AREA NAVIGATION (RNAV) ROUTES						
Route Designator (RNP Type) Name of Significant Points Coordinates	Way-point IDENT of VOR/DME BRG & DIST ELEV DME Antenna	Great Circle DIST (NM)	Upper Limits Lower Limits Minimum Flt Alt Airspace Classification	Direction of Cruising Levels		Remarks Controlling Unit Frequency
				Odd	Even	
1	2	3	4	5		6
L635						
▲ MABLI 041717N 1061247E	NIL	59.9	FL 460 FL 240 FL 250 Class A	↓		Lateral Limits: 10NM either side of line joining VPK DVOR/DME to DOVOL and 25NM either side of the line joining DOVOL to MABLI Singapore ACC FREQ: P123.7 MHz S127.3 MHz
▲ SUSAR 035848N 1051547E	NIL	31.6				
▲ DUBSA 034901N 1044540E	NIL	39.7				
▲ UGPEK 033647N 1040752E	NIL	19.4				
▲ DOVOL (WSJC/MMFC FIR BDRY) 033047N 1034923E	NIL	25.2				
▲ PEKAN DVOR/DME (VPK) 032259N 1032524E						
L642 (RNP 10)						
▲ ESPOB (VVTWS/WSJC FIR BDRY) 070000N 1053317E	NIL	149.2		*		* Uni-directional. No PDC Flight Levels FL310, FL320, FL350, FL360, FL390, FL400 applicable. Other levels available with prior approval. Lateral Limits: 10NM either side of line joining VMR DVOR/DME to EGOLO and 25NM either side of line joining EGOLO to ESPOB. Bi-directional between VMR and ENREP. Singapore ACC FREQ: P123.7 MHz S127.3 MHz
▲ ENREP 045223N 1041442E	VMR 008° 150.0NM	60.4	FL 460 FL 135 FL 140 Class A	↓		
▲ VEPLI 035223N 1040542E	VMR 008° 89.7NM	33.0				
▲ EGOLO (WSJC/MMFC FIR BDRY) 031934N 1040047E	VMR 008° 56.6NM	25.1				
▲ ROBMO 025440N 1035700E	VMR 008° 31.6NM	31.6				
▲ MERSING DVOR/DME (VMR) 022318N 1035218E						

ENR 3. ATS ROUTES						
ENR 3.3 AREA NAVIGATION (RNAV) ROUTES						
Route Designator (RNP Type) Name of Significant Points Coordinates	Way-point IDENT of VOR/DME BRG & DIST ELEV DME Antenna	Great Circle DIST (NM)	Upper Limits Lower Limits Minimum Flt Alt Airspace Classification	Direction of Cruising Levels		Remarks Controlling Unit Frequency
				Odd	Even	
1	2	3	4	5		6
M765						
▲ IGARI 065610N 1033506E ▲ VENLI (WMFC/WSJC FIR BDRY) 062848N 1024900E	VKB 058° 88.8NM	53.3	FL 460 FL 135	↓ ↑	Lateral Limits: 10NM either side of line joining VKB DVOR/DME to IGARI. Portion of M765 within the Singapore FIR has been delegated to Lumpur ACC for provision of ATS. Lumpur ACC FREQ: 132.6MHz	
			FL 140 Class B			
M767 (RNP 10)						
▲ TEGID (RPHI/WSJC FIR BDRY) 085656N 1155143E ▲ TODAM 063138N 1123536E ▲ TERIX 041521N 1093456E ▲ BOBOB 022206N 1070558E ▲ TOMAN 012147N 1054717E	NIL	242.5	FL 460 FL 205 FL 210 Class A	*	Lateral Limits: 25NM either side of line joining TOMAN to TEGID. Singapore ACC FREQ: P134.2MHz S133.35MHz * Uni-directional. No PDC Flight Levels FL310, FL320, FL350, FL360, FL390, FL400 applicable. Other levels available with prior approval.	
	NIL	225.5				
	NIL	186.8				
	NIL	99.0				
	NIL					

ENR 3. ATS ROUTES ENR 3.3 AREA NAVIGATION (RNAV) ROUTES						
<i>Route Designator (RNP Type) Name of Significant Points Coordinates</i>	<i>Way-point IDENT of VOR/DME BRG & DIST ELEV DME Antenna</i>	<i>Great Circle DIST (NM)</i>	<i>Upper Limits Lower Limits Minimum Flt Alt Airspace Classification</i>	<i>Direction of Cruising Levels</i>		<i>Remarks Controlling Unit Frequency</i>
				<i>Odd</i>	<i>Even</i>	
1	2	3	4	5		6
M768						
▲ AKMON 081256N 1101308E	NIL	96.9	FL 460 FL 135 FL 140 Class A	↓	↑	Lateral Limits: 25NM either side of line joining ASISU to AKMON. Singapore ACC FREQ: P123.7 MHz S127.3 MHz
▲ LAGOT 071632N 1113243E	NIL	76.9				
▲ TODAM 063138N 1123536E	NIL	55.4				
▲ ASISU (WSJC/WBFC FIR BDRY) 055906N 1132046E	BRU 305° 113.3NM					
M771 (RNP 10)						
▲ DUDIS (WSJC/VVTS FIR BDRY) 070000N 1064834E	NIL	156.2	FL 460 FL 135 FL 140 Class A	*	*	Lateral Limits: 10NM either side of line joining VMR DVOR/DME to RAXIM and 25NM either side of line joining RAXIM to DUDIS. Singapore ACC FREQ: P123.7 MHz S127.3 MHz * Uni-directional. No PDC Flight Levels FL310, FL320, FL350, FL360, FL390, FL400 applicable. Other levels available with prior approval.
▲ DOLOX 044841N 1052247E	VMR 031° 170.6NM	42.5				
▲ DAMOG 041225N 1050014E	VMR 031° 128.1NM	27.5				
▲ DUBSA 034901N 1044540E	VMR 032° 100.6NM	26.6				
▲ VISAT 032620N 1043134E	VMR 032° 74.0NM	21.7				
▲ OTLON 030752N 1042006E	VMR 032° 52.4NM	5.4				
▲ RAXIM (WMFC/WSJC FIR BDRY) 030318N 1041713E	VMR 032° 47.0NM	47.0				
▲ MERSING DVOR/DME (VMR) 022318N 1035218E						

ENR 3 ATS ROUTES ENR 3.3 AREA NAVIGATION (RNAV) ROUTES						
Route Designator (RNP Type) Name of Significant Points Coordinates	Way-point IDENT of VOR/DME BRG & DIST ELEV DME Antenna	Great Circle DIST (NM)	Upper Limits Lower Limits Minimum Flt Alt Airspace Classification	Direction of Cruising Levels		Remarks Controlling Unit Frequency
				Odd	Even	
1	2	3	4	5		6
N884 (RNP 10)						
▲ LAXOR (WSJC/RPHI FIR BDRY) 094937N 1144829E	NIL	246.6	FL 460 6 500ft ALT 7 000ft Class A	*		Lateral Limits: 5NM either side of line joining VMR DVOR/DME to LUSMO funnelling out at an angle of 5° from VMR to 25NM of either side of track. It then continues at this width until LAXOR. Singapore ACC FREQ: P123.7 MHz S127.3 MHz * Uni-directional. No PDC Flight Levels FL310, FL320, FL350, FL360, FL390, FL400 applicable. Other levels available with prior approval.
▣ LAGOT 071632N 1113243E	NIL	354.3				
▲ LUSMO 033341N 1065534E	VMR 069° 196.3NM	53.0				
▲ LEBIN 031438N 1060604E	VMR 069° 143.3NM	58.5				
▲ LIPRO 025342N 1051128E	VMR 069° 84.8NM	34.2				
▲ LENDA (WSJC/MMFC FIR BDRY) 024124N 1043932E	VMR 069° 50.6NM	50.6				
▲ MERSING DVOR/DME (VMR) 022318N 1035218E						
N891						
▲ IGARI 065610N 1033506E	NIL	65.4	FL 460 FL 155 FL 160 Class A		Lateral Limits: 5NM either side of line joining PU DVOR/DME to ENREP funnelling out at an angle of 5° from PU to 25NM of either side of track. It then continues at this width until WSJC/VVTS FIR BDRY. *WSJC/MMFC FIR boundary approximately 0.4NM North of PU. Singapore ACC FREQ: P123.7 MHz S127.3 MHz	
▲ IKUMI 055338N 1035509E	NIL	64.0				
▲ ENREP 045223N 1041442E	PU 005° 206.8NM 60m	75.5				
▲ UGPEK 033647N 1040752E	PU 005° 131.3NM 60m	11.7				
▲ URIGO 032505N 1040647E	PU 005° 119.6NM 60m	10.6				
▲ MANIM (MMFC/WSJC FIR BDRY) 031431N 1040553E	PU 005° 109.0NM 60m	2.6				
▲ OBDAB 031153N 1040538E	PU 005° 106.4NM 60m	106.4				
▲ PAPA UNIFORM* DVOR/DME (PU) 012524N 1035600N						

ENR 3. ATS ROUTES						
ENR 3.3 AREA NAVIGATION (RNAV) ROUTES						
Route Designator (RNP Type) Name of Significant Points Coordinates	Way-point IDENT of VOR/DME BRG & DIST ELEV DME Antenna	Great Circle DIST (NM)	Upper Limits Lower Limits Minimum Flt Alt Airspace Classification	Direction of Cruising Levels		Remarks Controlling Unit Frequency
				Odd	Even	
1	2	3	4	5		6
N892						
(RNP 10)						
<p>▲ MELAS (VVTWSJJC FIR BDRY) 070520N 108091E</p> <p>▲ MABLI 041717N 106124E</p> <p>▲ MUMSO 034420N 105321E</p> <p>▲ MABAL 032826N 105123E</p> <p>▲ KILOT 030217N 104402E</p> <p>▲ KIBOL WSJJC/WMFC FIR BDRY 025229N 104280E</p> <p>▲ PEKLA 023437N 104061E</p> <p>▲ MERSING DVOR/DME (VMR) 022318N 103521E</p>	<p>VMR 051° 180.6NM</p> <p>VMR 051° 128.4NM</p> <p>VMR 051° 103.2NM</p> <p>VMR 051° 61.8NM</p> <p>VMR 050° 46.1NM</p> <p>VMR 051° 18.0NM</p>	<p>203.6</p> <p>52.1</p> <p>25.2</p> <p>41.4</p> <p>15.7</p> <p>28.1</p> <p>18.0</p>	<p>FL 460 FL 135</p> <p>FL 140</p> <p>Class A</p>	*		<p>Lateral Limits: 10NM either side of line joining VMR DVOR/DME to KIBOL and 25NM either side of line joining KIBOL to MELAS.</p> <p>Singapore ACC FREQ: P123.7MHz S127.3MHz</p> <p>* Uni-directional. No PDC Flight Levels FL310, FL320, FL350, FL360, FL390, FL400 applicable. Other levels available with prior approval.</p>
P501						
<p>▲ ARAMA (50DME SJ) 013654N 103071E) (delegated airspace BDRY)</p> <p>▲ ANBUS (WMFC/WSJJC FIR BDRY) 011556N 103210E</p> <p>▲ BOBAG (R243/24 DME SJ) 010230N 103295E</p> <p>▲ ANITO 001700S 104520E</p>	<p>NIL</p> <p>NIL</p> <p>NIL</p> <p>NIL</p>	<p>146° 25.0</p> <p>146° 16.0</p> <p>133° 114.1</p>	<p>FL460 9 500ft ALT</p> <p>10 000ft</p> <p>Class A-ABV FL150 Class B-BLW FL150</p> <p>FL460 FL275</p> <p>FL280</p>	↓		<p>Lateral Limits: 10NM on the western side and 5NM on the eastern side of line joining ARAMA to BOBAG.</p> <p>Singapore ACC FREQ: P133.25MHz S135.8MHz</p> <p>Lateral Limits: 10NM on the western side and 5NM on the eastern side of line joining BOBAG to ANITO.</p> <p>Singapore ACC FREQ: P134.4MHz S128.1MHz</p>

ENR 3.4 HELICOPTER ROUTES

1. HELICOPTER OPERATIONS OVER SINGAPORE ISLAND

1.1 INTRODUCTION

1.1.1 The rapid building development in many parts of Singapore has made it necessary for helicopter operations to be more stringently regulated in order to enhance safety. All helicopter operators are required to adhere strictly to the following procedures.

1.2 RESTRICTED AREA -SINGLE-ENGINE HELICOPTER OPERATIONS RESTRICTED

1.2.1 Single-engine helicopters are restricted from operating over and within the city area enclosed in the triangle bounded by the following locations:

- a) South of Rochor River/Kallang River (011817N 1035205E);
- b) Shenton Way/Keppel Road (011623N 1035045E); and
- c) Scotts Road/Orchard Road (011818N 1034954E).

Part of this triangle lies within the existing Restricted Area WSR38 (see charts ENR 3.4-5 and ENR 3.4-7).

1.3 ROUTEINGS

1.3.1 All helicopters must fly over water or use routes approved by the CAAS. There are two over-water and one over-land helicopter routes.

1.3.2 These helicopter routes are to be flown in VMC and in daylight hours. They could either be flown separately or in combination (see chart ENR 3.4-5).

1.4 OVER-WATER ROUTES

1.4.1 One of the two over-water routes is to the north of Singapore Island for helicopter flights into and out of Seletar Aerodrome. The other route is along the southern shore of Singapore. They are as described below.

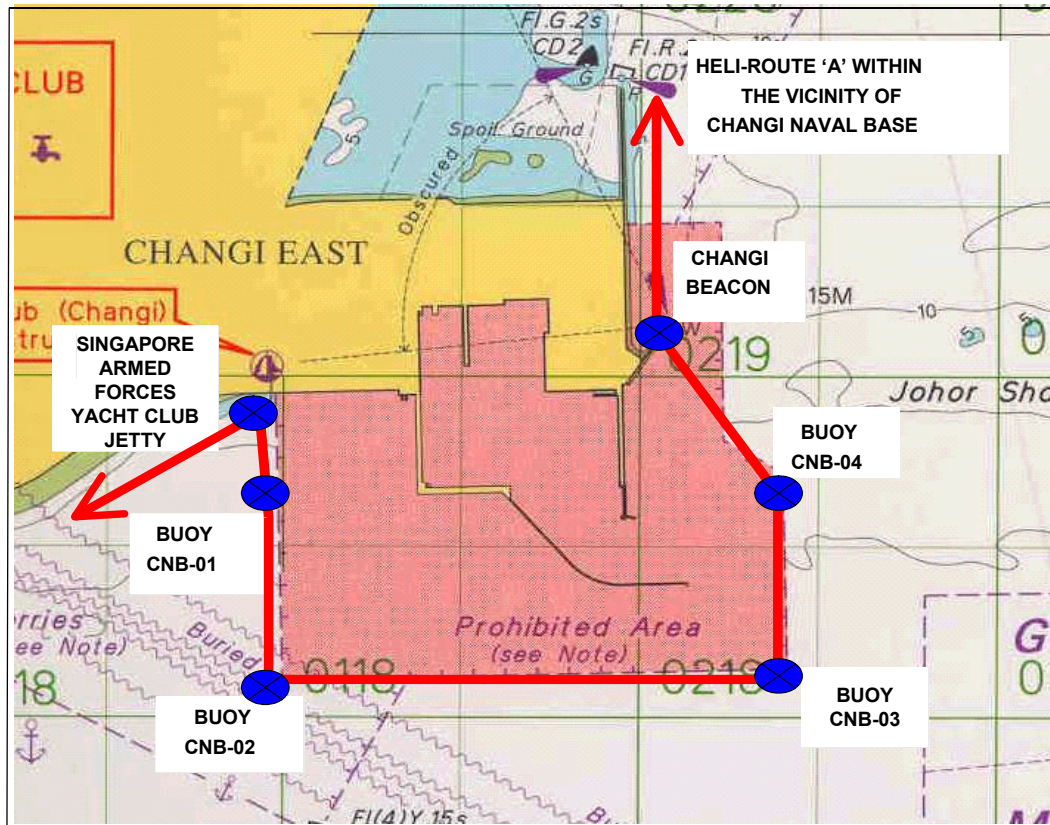
1.4.1.1 Heli-Route Alpha

This route covers the area from Johor Causeway eastbound over water along Selat Johor, following the coastline of Singapore Island via the northern contour of Pulau Ubin and along the eastern coastline, down to Bedok NDB and vice versa. Within the vicinity of Changi Naval Base (CNB), transiting helicopters are to keep laterally clear by tracking along the following markers located about 1km from the Naval Base (see table below and diagram on page ENR 3.4-2).

	<i>Markers Description</i>	<i>Coordinates</i>	<i>Remarks</i>
a)	Changi Beacon	011909N 1040206E	white lights, 3 flashes every 15 sec
b)	Buoy CNB-04	011844N 1040224E	yellow buoy, 3m above waterline yellow lights, 1 flash every 2 sec
c)	Buoy CNB-03	011809N 1040224E	yellow buoy, 3m about waterline yellow lights, 1 flash every 2 sec
d)	Buoy CNB-02	011806N 1040100E	yellow buoy, 3m about waterline yellow lights, 1 flash every 2 sec
e)	Buoy CNB-01	011829N 1040059E	yellow buoy, 3m about waterline yellow lights, 1 flash every 2 sec
f)	Singapore Armed Forces Yacht Club Jetty	011851N 1040058E	yellow lights, 3 lamp posts along jetty
Note: Pilots are to adhere strictly to the above transit routes.			

Height: Minimum 200ft AMSL or as specified by the appropriate air traffic control authority.

HELI-ROUTE 'ALPHA' WITHIN THE VICINITY OF CHANGI NAVAL BASE



1.4.1.2 Heli-Route Bravo

Originates from Bedok NDB over water, following the coastline of Singapore Island via the southern tip and contour of Sentosa towards Tuas and vice versa.
Height: Minimum 200ft AMSL or as specified by the appropriate air traffic control authority.

1.5 OVER-LAND ROUTE

1.5.1 The over-land transit route established to facilitate helicopter movements across the Singapore Island is as follows:

1.5.1.1 Heli-Route Charlie

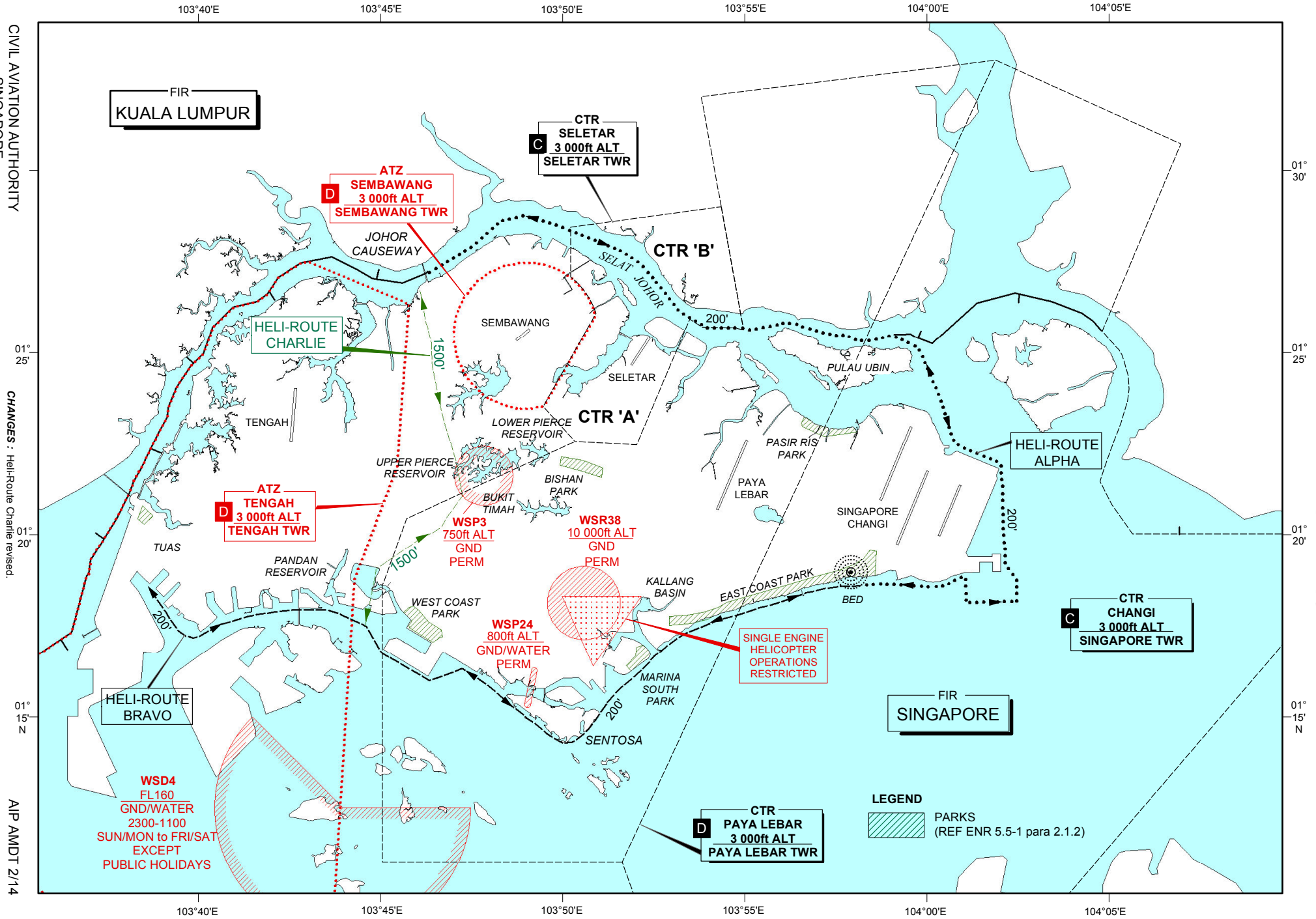
Originates from Johor Causeway, southbound to Murnane Reservoir (012104N1034710E) along the eastern side of Bukit Timah Expressway. From Murnane Reservoir to Pandan Reservoir (011855N1034436E) and vice versa. To avoid overflying built-up areas en-route by routing over open areas / nature reserve areas. Height: Minimum 1,500ft AMSL or as specified by the appropriate traffic control authority.

1.6 CONDITIONS GOVERNING THE USE OF HELI-ROUTE Charlie

1.6.1 The over-land route is established based on evidence of ground features and is therefore subject to CAAS's review. Approval to use the route is given with the following conditions:

- a) The operator is fully satisfied that the route can be flown within the flight capability of the helicopter and that there are adequate suitable emergency landing sites along the route when in use. It remains the responsibility of the operator to ensure that his pilots are familiar with the route and the conditions governing them.
- b) The route is to be flown in VMC and in daylight hours.
- c) Prior ATC clearance from the appropriate controlling authority must be obtained.

HELICOPTER ROUTES IN VMC



CHANGES : Heli-Route Charlie revised.

ENROUTE CHART - ICAO

LEGEND

- Aerodrome**
 - FL 150 to FL 460
 - FL 150 to FL 150
- Flight Information Region (FIR)**
 - SINGAPORE
 - GND/WATER ACC SINGAPORE
- Terminal Control Area (TMA)**
 - KLUCHING
 - FL 250
 - FL 250
 - FL 250
- Control Zone (CTR)**
 - KLUCHING
 - FL 3000
 - FL 3000
- ATS route**
 - Magnetic track
 - Magnetic track
 - Magnetic track
 - Magnetic track
 - Magnetic track
 - Magnetic track
 - Magnetic track
- ATS route reporting point by-pass**
 - (No report is required on this route)
- Reporting Point (RFP)**
 - Compulsory
 - On Request
- ATS/MET reporting point (MRP)**
 - Compulsory
 - On Request
- Restricted Airspace**
 - (Prohibited, R, Restricted, D, Danger)
 - FL 400
 - FL 400
- Collocated VOR and DME navigation aids (VOR/DME)**
 - Compass rose oriented on the chart to magnetic north
- Identification for radio navigation aids (NAVAID)**
 - Name
 - NAVAID frequency identification or call sign
 - Geographical coordinates in WGS 84
 - Revision of DME site (to the nearest 2nd)
- COP at mid-point between VOR are not shown**
- Area Minimum Altitude (AMA)**
 - Each 2° quadrantal contains an area minimum altitude (AMA) which represents the lowest altitude which may be used under instrument meteorological conditions (IMC). The AMA provides a minimum clearance of 1 000 feet (300m) above all terrain and obstacles in the quadrilateral. It is represented in thousands and hundreds of feet above mean sea level.
 - Example: 3 500 feet
- ATS route**
 - Way flow of traffic at any one time for flights between Singapore and Kuala Lumpur and destinations beyond

A Airway in which Mach Number Technique and RNAV are applied (Refer to pages ENR 1.8-13 to 1.8-18)

B Inbound and Outbound flights exempted from reporting aircraft observations at these points.

WSJ/WMC FIR BDRY REPORTING POINTS

TAKUL 03 35 33N 103 40 37E	MANIM 03 14 31N 104 05 53E
NIWAL 03 38 22N 104 09 48E	RAXIM 03 30 47N 104 17 13E
DOVAL 03 30 47N 104 17 13E	KIBOL 02 52 29N 104 28 05E
ISOL 03 24 52N 103 55 44E	ESOLO 03 19 34N 104 00 47E

RYSM SEPARATION AVAILABLE SINGAPORE FIR B7N FL 290 AND FL 410 (inclusive)

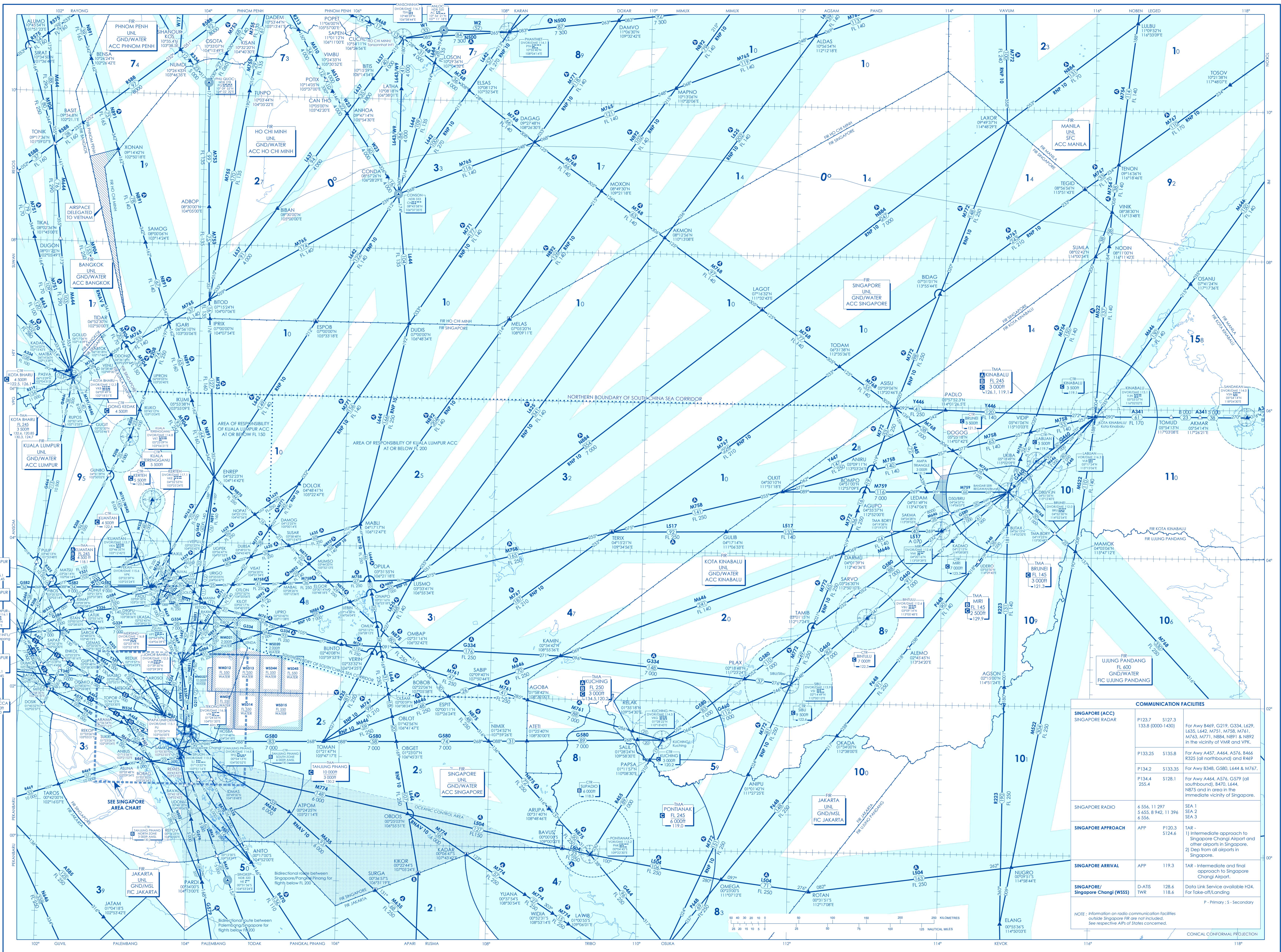
Airspace	Levels	Classification
Controlled airspace	FL 150 to FL 460	A
Controlled airspace more than 100 nm seaward from the shoreline	Surface to FL 150	B
Controlled airspace more than 100 nm seaward from the shoreline	Lower limit to FL 460	A
Control Zones (CTR)	Change CTR	C
Control Zones (CTR)	Payo Labor CTR	D
Control Zones (CTR)	Sektor CTR	D
ATIS	Surface to upper limit	C
Uncontrolled airspace		G*

* Aircraft operating in Light Aircraft Training Areas A, B and C (please refer to AIP Singapore page ENR 5.2-1) are required to have continuous two-way communications with the appropriate ATIS authority.

CAUTION

Consult respective NOTAMS and AIPs of States concerned for the latest information and the Civil Aviation Authority of Singapore does not accept responsibility for any errors or omissions in the information shown outside of Singapore FIR

MAGNETIC INFORMATION FOR THE YEAR 2010



COMMUNICATION FACILITIES

SINGAPORE (ACC)	P123.7	S127.3	For Awy B469, G239, G334, L629, L635, L642, M751, M758, M761, M763, M771, N884, N891 & N892 in the vicinity of VMR and VPK.
SINGAPORE RADAR	P133.8 (0000-1430)		
	P133.25	S135.8	For Awy A457, A464, A576, B466, B469, B473 (all northbound) and B469.
	P134.2	S133.35	For Awy B348, G580, L644 & M767.
	P134.4	S128.1	For Awy A464, A576, G579 (all southbound), B470, L644, N875 and in area in the immediate vicinity of Singapore.
SINGAPORE RADIO	6 556, 11 297, 5 455, 8 942, 11 396, 6 556	SEA 1, SEA 2, SEA 3	
SINGAPORE APPROACH	APP P120.3	TAR-	1) Intermediate approach to Singapore Changi Airport and other airports in Singapore. 2) Dep from all airports in Singapore.
SINGAPORE ARRIVAL	APP P119.3	TAR-	Intermediate and final approach to Singapore Changi Airport.
SINGAPORE/SINGAPORE CHANGI (WSSS)	D-ATIS TWR 118.6	128.6, 118.6	Data Link Service available H24. For Take-off/Landing

NOTE: Information on radio communication facilities outside Singapore FIR are not included. See respective AIPs of States concerned.

P - Primary; S - Secondary

WSSS AD 2.6 RESCUE AND FIRE FIGHTING SERVICES		
1	<i>AD category for fire fighting</i>	CAT 10 (No facilities for foaming of runways) CAT 7 (for RWY 02R/20L)
2	<i>Rescue equipment</i>	Adequately provided as recommended by ICAO.
3	<i>Capability for removal of disabled aircraft</i>	Four 25-ton (Type G) and two 40-ton (Type F) pneumatic elevators, two 80-ton hydraulic recovery jacks, one set of tethering equipment and other accessory equipment. Capable of handling all wide-bodied aircraft. Provided by SIA at Tel:(65)65416329 or (65)65427116.
4	<i>Remarks</i>	All Airport Emergency Service personnel are trained in rescue and fire-fighting as well as medical first-aid.

WSSS AD 2.7 SEASONAL AVAILABILITY - CLEARING	
There is no requirement for clearing. The aerodrome is available throughout the year.	

WSSS AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA			
1	<i>Apron surface and strength</i>	<i>RWY 02L/20R RWY 02C/20C</i>	<i>Surface:</i> Concrete <i>Strength:</i> PCN 85/R/B/W/U
		<i>RWY 02R/20L</i>	<i>Surface:</i> Asphalt (Transport Apron 358m x 132m) Concrete (Transport Apron 280m x 60m) <i>Strength:</i> PCN 45/F/B/W/U
2	<i>Taxiway width, surface and strength</i>	<i>RWY 02L/20R RWY 02C/20C</i>	<i>Width:</i> 35m (115ft) Taxiways NC3, EP and WP 25m (82ft) Taxiway EP (from Taxilanes B1 and B3) <i>Surface:</i> 30m (100ft) All other Taxiways Cement Concrete - Taxiways W1, W9, E1, E3, E11 and EP (between E10 and E11) Bituminous Concrete - All other Taxiways <i>Strength:</i> PCN 85/R/B/W/U - Taxiways W1, W9, E1, E3, E11 and EP (between E10 and E11) PCN 72/F/B/W/U - All other Taxiways
		<i>RWY 02R/20L</i>	<i>Width:</i> 23m (75.5ft) 50m (164ft) E1 and E6 23m (75.5ft) E2 to E5 <i>Surface:</i> Asphalt <i>Strength:</i> PCN 45/F/B/W/T
3	<i>ACL location and elevation</i>	See WSSS AD 2-31/Chart (flip side) for coordinates and elevations of aircraft stands.	
4	<i>INS checkpoints</i>		
5	<i>Remarks</i>	NIL	

WSSS AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS	
1	<p><i>Use of aircraft stand ID signs, TWY guidelines and visual docking/parking guidance system of aircraft stands.</i></p> <p>Taxiing guidance signs at all intersections with TWY and RWY at all holding positions. Guidelines at apron. Nose-in guidance at aircraft stands. For information on Safegate Aircraft Docking Guidance System, Aircraft Parking Restrictions, Procedures for Start-up and Pushback of Aircraft, Pushback Procedures for Aircraft (Diagrams), Taxiing Guidance System at Singapore Changi Airport, refer to pages WSSS AD 2-5 to WSSS AD 2-9.</p> <p>Fixed yellow lights (aircraft stand manoeuvring guidance lights: ASMGL) are provided along aircraft stands 4 to 9 lead-in markings with one fixed red light near the aircraft nose gear stopping position at the Budget Terminal apron.</p>
2	<p><i>RWY and TWY markings and LGT</i></p> <p><u>RWY 02L/02C and RWY 20C</u></p> <p>RWY LGT: refer to pages WSSS AD 2-14 and WSSS AD 2-15.</p> <p>TWY LGT: Blue LGT on TWY curved edges, selected straight TWY edge sections and apron TWY edges only. Blue TWY edge markers along selected straight TWY edge sections. Red stop bar at TWY INT controllable on/off. Red stop bar LGT at TWY HLDG PSN entrances to RWY are controllable on/off and are supplemented with elevated RWY guard LGT at the sides. Internally/externally lighted mandatory or information TWY signboards. Yellow TWY centre line markings, supplemented by green centre line LGT with selective control along rapid exit TWY, taxi-routes to and from main RWY and aprons.</p> <p>MARKING AIDS: THR, touchdown zone, centre line, side stripe, RWY designations, aiming point markings, TWY centre line, taxi holding positions - all taxiways, apron guide lines. For positions of aircraft nosewheel in relation to stopbar and description of the Safegate Aircraft Docking Guidance System - see pages WSSS AD 2-5.1 and WSSS AD 2-5.2.</p> <p><u>RWY 20R</u></p> <p>RWY LGT: refer to pages WSSS AD 2-14 and WSSS AD 2-15.</p> <p>TWY LGT: same as for RWY 02L/02C and RWY 20C.</p> <p>MARKING AIDS: Pre-threshold centre-line, transverse stripe for displaced THR, RWY designations, THR, touchdown zone, aiming point marking, RWY centre-line and stripe marking aids.</p> <p><u>RWY 02R/20L</u></p> <p>RWY LGT: refer to page WSSS AD 2-14.</p> <p>TWY LGT: Elevated and inset blue LGT on TWY edge.</p> <p>STOP BAR LGT: Controllable red stop-bar LGT at TWY accesses leading to RWY 02R/20L.</p> <p>MARKING AIDS: Pre-threshold, RWY designations, THR, touchdown zone, RWY centreline, TWY centreline, taxi holding positions and apron lead-in lines. The yellow hookwire markings on the RWY are painted in accordance with STANAG requirements.</p>
3	<p><i>Stop Bars: Stop bars where appropriate.</i></p>
4	<p><i>Remarks: Nil</i></p>

3. TERMINAL 2 AIRCRAFT STANDS - Aircraft types that can be parked at stands (→) are as follows:

Stands	E1	E2	E3	E4	E5	E6	E7	E8	E10	E11	E12	E20	E22	E24	E26	E27	E28
A300		→	→	→	→	→		→		→	→	→	→	→	→	→	→
A310	→	→	→	→	→	→	→	→		→	→	→	→	→	→	→	→
A319	→	→	→	→	→	→	→	→	→	→	→	→	→		→	→	→
A320	→	→	→	→	→	→	→	→		→	→	→	→		→	→	→
A321			→		→								→		→	→	→
A332			→	→	→			→		→	→	→	→	→	→	→	→
A333			→	→	→			→		→	→	→	→	→	→	→	→
A342			→	→	→			→		→	→		→	→	→	→	→
A343			→	→	→			→		→	→		→	→	→	→	→
A345			→	→	→			→		→	→		→	→	→	→	→
A346				→	→			→									
A380					→			→		→							
B707															→	→	→
B727	→	→	→	→	→	→		→		→	→	→	→	→	→	→	→
B737	→	→	→	→	→	→	→	→		→	→	→	→		→	→	→
B747			→	→	→			→		→	→	→	→	→	→	→	→
B74S			→	→	→			→		→	→		→	→	→	→	→
B757	→	→	→	→	→	→		→		→	→	→	→	→	→	→	→
B762	→	→	→	→	→	→		→		→	→	→	→	→	→	→	→
B763	→	→	→	→	→	→		→		→	→	→	→	→	→	→	→
B772			→	→	→			→		→	→	→	→	→	→	→	→
B773				→	→	→		→		→	→		→	→	→	→	→
B773ER				→	→			→		→	→		→	→	→	→	→
B788												→	→		→	→	→
DC10				→	→	→		→		→	→				→	→	→
DC9												→					
F70	→	→	→	→	→	→	→	→	→	→	→	→	→	→			
F100															→	→	→
IL62															→	→	→
IL86															→	→	→
IL96															→	→	→
L101				→	→	→		→		→	→				→	→	→
MD11				→	→	→		→		→	→				→	→	→
MD80															→	→	→
MD82															→	→	→
MD87												→					
MD88															→	→	→

Stands	E24L	E24R
A319, A320, A321, B737	→	→

4. TERMINAL 2 AIRCRAFT STANDS - Aircraft types that can be parked at stands (→) are as follows:

Stands	F30	F31	F32	F33	F34	F35	F36	F37	F40	F41	F42	F50	F52	F52L	F52R	F54	F56	F58	F59	F60
A300		→	→		→	→			→	→	→	→	→			→	→	→	→	→
A310		→	→	→	→	→	→		→	→	→	→	→			→	→	→	→	→
A319	→	→	→	→	→	→	→	→	→	→	→	→		→	→	→		→		→
A320	→	→	→	→	→	→	→	→	→	→	→	→		→	→	→		→		→
A321														→	→					
A332		→			→				→	→	→	→	→			→	→	→	→	→
A333		→			→				→	→	→	→	→			→	→	→	→	→
A342		→			→				→	→	→		→			→	→	→	→	→
A343		→			→				→	→	→		→			→	→	→	→	→
A345		→			→				→	→	→		→			→	→	→	→	→
A346											→									→
A380		→									→									→
B707												→				→			→	→
B727	→	→	→	→	→	→		→	→	→	→	→				→	→	→	→	→
B737	→	→	→	→	→	→	→	→	→	→	→	→		→	→	→		→		→
B747		→			→	→			→	→	→	→	→			→	→	→	→	→
B74S		→			→				→	→	→					→	→	→	→	→
B757		→	→	→	→	→			→	→	→	→	→			→	→	→	→	→
B762		→	→		→	→			→	→	→	→	→			→	→	→	→	→
B763		→	→		→	→			→	→	→	→	→			→	→	→	→	→
B772		→		→	→				→	→	→	→	→			→	→	→	→	→
B773										→	→					→	→	→	→	→
B773ER										→	→					→	→	→	→	→
B788		→										→	→			→	→	→	→	→
DC10					→	→				→	→					→	→	→	→	→
DC8																				
DC9												→				→	→	→		
F70	→	→	→	→	→	→	→	→	→	→	→	→				→	→	→	→	→
L101					→	→				→	→					→	→	→	→	→
MD11					→	→				→	→					→	→	→	→	→
MD87												→				→				

Stands	F56L	F56R	F59L	F59R
A319	→	→	→	→
A320	→	→	→	→
A321	→	→	→	→
B737	→	→	→	→

5. TERMINAL 3 AIRCRAFT STANDS - Aircraft types that can be parked at stands (→) are as follows:

Stands	A1	A2	A3	A4	A5	A9	A10	A11	A12	A13	A14	A15	A16	A17	A18	A19	A20	A21
A300		→	→	→	→	→	→	→	→	→	→	→	→	→	→	→		
A310		→	→	→	→	→	→	→	→	→	→	→	→	→	→	→		
A319		→	→	→	→	→	→	→	→	→	→	→	→	→	→	→		
A320		→	→	→	→	→	→	→	→	→	→	→	→	→	→	→		
A321		→	→	→	→	→	→	→	→	→	→	→	→	→	→	→		
A332	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→		→
A333	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
A343	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
A345	→	→	→	→	→		→	→	→	→	→	→	→	→				
A346		→		→	→		→	→	→	→	→							
A380		→		→	→		→											
B737			→					→	→	→	→		→	→	→	→		
B744	→	→	→	→	→		→	→	→	→	→	→	→	→				
B788		→		→			→									→	→	→
B757		→	→	→	→	→	→	→	→	→	→	→	→	→	→	→		
B767		→	→	→	→	→	→	→	→	→	→	→	→	→	→	→		
B772	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
B773		→		→	→		→	→	→	→	→							
B773ER		→		→	→		→	→	→	→	→							



Stands	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
A300		→	→	→	→	→	→	→	→	→
A310		→	→	→	→	→	→	→	→	→
A319		→	→	→	→	→	→	→	→	→
A320		→	→	→	→	→	→	→	→	→
A321		→	→	→	→	→	→	→	→	→
A332	→	→	→	→	→	→	→	→	→	→
A333	→	→	→	→	→	→	→	→	→	→
A343	→	→	→	→	→	→	→	→	→	→
A345	→	→	→	→	→	→	→	→	→	→
A346		→		→	→		→			
A380		→		→	→		→			
B707									→	→
B737						→				
B744	→	→	→	→	→	→	→	→	→	→
B788								→	→	→
B757		→	→	→	→	→	→	→	→	→
B767		→	→	→	→	→	→	→	→	→
B772	→	→	→	→	→	→	→	→	→	→
B773		→		→	→	→	→	→	→	→
B773ER		→		→	→	→	→	→	→	→



6. REMOTE STANDS - Aircraft types that can be parked at stands (→) are as follows:

Stands	103	104	200	200L	200R	201	202	202L	202R	203	205	206	207	208	209
A300, A310	→	→	→			→	→			→	→	→	→	→	→
A319, A320	→	→		→	→	→		→	→	→	→	→	→	→	→
A321				→	→			→	→						
A330, A342	→	→	→			→	→			→	→	→			
A343, A345	→	→	→			→	→			→	→	→			
A380	→	→													
AT72			→			→	→			→	→	→	→	→	→
B707, B727	→	→	→			→	→			→	→	→	→	→	→
B737	→	→		→	→	→		→	→	→	→	→	→	→	→
B747, B74S, B788	→	→	→			→	→			→	→	→			
B748	→	→													
B757	→	→	→			→	→			→	→	→	→	→	→
B767, B772, B773	→	→	→			→	→			→	→	→			
B773ER	→	→	→			→	→			→	→	→			
DC8	→	→													
DC10	→	→	→			→	→			→	→	→			
DHC7													→	→	→
F70	→	→	→			→	→			→	→	→	→	→	→
IL62			→			→	→			→	→	→			
L101	→	→	→			→	→			→	→	→			
MD11	→	→	→			→	→			→	→	→			

Stands	300	301	302	303	304	305	306	307	308	309	310	400	401	402	403	404
A300, A310	→	→	→	→	→	→	→			→	→	→	→	→	→	
A319, A320	→	→	→	→	→	→	→			→	→	→	→	→	→	
A330, A342	→		→								→	→	→			
A343, A345	→		→								→	→	→			
AT72				→	→	→	→									
B707	→	→	→	→	→	→	→			→	→	→	→	→	→	
B727	→	→	→	→	→	→	→			→	→	→	→	→	→	→
B737	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
B747	→		→								→	→	→			
B74S, B788	→		→								→	→	→			
B757, B767	→	→	→	→	→	→	→			→	→	→	→	→	→	
B772, B773	→		→								→	→	→			
B773ER	→		→								→	→	→			
DC10	→		→				→				→	→	→			
DC8	→	→	→	→	→	→	→			→	→					
F70	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
L101	→		→				→				→	→	→			
MD11	→		→				→				→	→	→			

WSSS AD 2.11 METEOROLOGICAL INFORMATION PROVIDED		
1	Associated MET Office	Singapore Changi (WSSS)
2	Hours of service	H24
3	Office responsible for TAF preparation Periods of validity	Singapore Changi (WSSS) 12, 30
4	Type of landing forecast, Interval of issuance	TREND
5	Briefing/consultation provided	P
6	Flight documentation, Language used	Charts or Tabular forms, English
7	Charts and other information available for briefing or consultation	S, U, P
8	Supplementary equipment available for providing information	HRPT: High Resolution Picture Transmission APT: Automatic Picture Transmission MDWR: MET Doppler Weather Radar MAINT: Second WED of every month BTN 0200-0900 ALTN period: THU following the second WED.
9	ATS units provided with information	Singapore ACC, Singapore RCC
10	Additional information	TEL: 65422837 (MET Office)

WSSS AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS					
Designations RWY NR	TRUE BRG	Dimensions of RWY (m)	Strength (PCN) and surface of RWY and SWY	THR coordinates (THR Geoid Undulation)	THR elevation and highest elevation of TDZ of precision approach RWY
1	2	3	4	5	6
02L	023.02°	4 000 x 60	72/F/B/W/U Bituminous concrete	012056.26N 1035838.83E (10.29m)	6.66m 6.23m
20R (Threshold displaced by 740m southwards)	203.02°	4 000 x 60	72/F/B/W/U Bituminous concrete	012233.95N 1035920.06E (10.29m)	4.01m 4.31m
02C	023.03°	4 000 x 60	72/F/B/W/U Bituminous concrete	011943.51N 1035905.86E (10.28m)	4.32m 4.52m
20C	203.03°	4 000 x 60	72/F/B/W/U Bituminous concrete	012143.37N 1035956.46E (10.28m)	4.58m 4.56m
02R	023°	2 750 x 60	72/F/B/W/U Asphalt	011958.05N 1040015.26E	-
20L	203°	2 750 x 60	72/F/B/W/U Asphalt	012120.45N 1040050.05E	-

Note: RWY 02R/20L is used solely by the Republic of Singapore Air Force (RSAF) aircraft.

WSSS AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS (continued)					
<i>Slope of RWY-SWY Transverse / Longitudinal</i>	<i>SWY Dimensions (m)</i>	<i>CWY Dimensions (m)</i>	<i>STRIP Dimensions (m)</i>	<i>OFZ</i>	<i>Remarks</i>
7	8	9	10	11	12
RWY 02L 0.76 / 0.24%	60 X 60	270 X 150	4 240 X 300	Yes	Scheduled closure of runways (see below)
RWY 20R 1.45 / 0.25%	60 X 60	270 X 150	4 240 X 300		
RWY 02C 1.50 / 0.03%	60 X 60	270 X 150	4 240 X 300		
RWY 20C 1.38 / 0.07%	60 X 60	270 X 150	4 240 X 300		
RWY 02R	150 X 60	-	3 050 X 300	-	Hookwire cable installed 450m (1476ft) from the southern THR and 457m (1500ft) from the northern THR.
RWY 20L	150 X 60	-	3 050 X 300	-	

Remarks (continued from above)	
Scheduled Closure of RWY 02L/20R	
1a)	BTN 1700-2300 on first FRI, third MON and third WED of every month (<i>preventive maintenance work</i>). In the event of an emergency, RWY will be re-opened within 30 minutes.
1b)	BTN 0225-0240 0630-0635 1000-1005 2300-2305 daily (<i>inspection</i>). In the event of an emergency, RWY will be re-opened within 5 minutes.
1c)	BTN 1745-1915 daily (<i>maintenance</i>). In the event of an emergency, RWY will be re-opened in 30 minutes.
Scheduled Closure of RWY 02C/20C	
2a)	BTN 1700-2300 on second FRI, fourth MON and fourth WED of every month (<i>preventive maintenance work</i>). In the event of an emergency, RWY will be re-opened within 30 minutes.
2b)	BTN 0300-0315 0650-0655 1020-1025 1720-1730 2320-2325 daily (<i>inspection</i>). In the event of emergency, RWY will be re-opened within 5 minutes.
2c)	BTN 1930-2100 daily (<i>maintenance</i>). In the event of emergency, RWY will be re-opened in 30 minutes.

WSSS AD 2.14 APPROACH AND RUNWAY LIGHTING (continued)								
<i>RWY</i>	<i>Apch Lgt Type, Len Intensity</i>	<i>THR Lgt colour WBAR</i>	<i>PAPI (MEHT)</i>	<i>TDZ Lgt Len</i>	<i>RWY Centreline Lgt Len, spacing, colour, INTST</i>	<i>RWY Edge Lgt, Len, spacing, colour, INTST</i>	<i>RWY End Lgt colour</i>	<i>SWY Lgt colour</i>
1	2	3	4	5	6	7	8	9
20C	CAT II High Intensity consisting of extended centreline and red row barrettes, 2 crossbars, 2 approach beacons and sequenced flashing lights.	Green supplemented by green wing-bar and 2 THR ident lights.	PAPI 3° located left side of RWY, 418m fm THR. 2 white LGT and 2 red LGT (20.4m), 3 white LGT and 1 red LGT (23.1m), 4 white LGT (25.5m) Aircraft with eye-to-wheel hgt greater than 8m are adz to fly with 2 white and 2 red LGT visible so as to achieve sufficient wheel clr.	White	Inset High Intensity centreline lights as flw: From THR to 900m fm RWY end: White, 300m to 900m fm RWY end: Altn red/white, 300m to RWY end: Red.	Bi-directional raised white/amber edge lights.	Red	Elevated Red
02R	CAT I 1 centreline barricade showing white flashes, 5 crossbars and capacitor discharge strobe lights.	Green supplemented by 10 green wing-bars.	PAPI 3° loc at 323m up the THR. 2 units on each side of the RWY at RWY 02R apch and only 1 unit on west side of the RWY at RWY 20L apch.	Nil	Nil	Bi-directional elevated and inset high intensity edge white/amber lights.	Red	Red
20L	CAT I 1 centreline barricade showing white flashes, 5 crossbars and capacitor discharge strobe lights.	Green supplemented by 10 green wing-bars.	PAPI 3° loc at 323m up the THR. 2 units on each side of the RWY at RWY 02R apch and only 1 unit on west side of the RWY at RWY 20L apch.	Nil	Nil	Bi-directional elevated and inset high intensity edge white/amber lights.	Red	Red

WSSS AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY		
1	<i>ABN/IBN location, characteristics and hours of operation</i>	ABN: 012209.22N 1035858.47E (western side of RWY 02L/20R) Altn FLG W G EV 2.3 SEC, Opr hours HN + IMC IBN: 012301.28N 1035959.52E (top of building N of SIA hangar) FLG G 'CH' EV 7 SEC, Opr hours HN + IMC
2	<i>LDI location and LGT Anemometer location and LGT</i>	Pressure tube anemometer and wind vane situated 345m west of middle of RWY 02L/20R. Cup anemometers and wind vanes at ends and middle of both runways. Windssocks at ends of both runways. Transmissometers at both ends and in the middle of both runways
3	<i>TWY Edge and Centreline Lighting</i>	RWY 02L/20R and RWY 02C/20C: blue lgts on twy curved edges and apron twy edges and green centreline lgts on all twy. RWY 02R/20L: Elevated and inset blue twy edge lgt.
4	<i>Secondary power supply/switch-over time</i>	Automatic standby generator power supply available for airfield lighting with switchover time of 1 second during Category II low visibility operations.
5	<i>Remarks</i>	Vehicles painted yellow or displaying chequered red/white or orange/white flag at highest point of vehicle

WSSS AD 2.16 HELICOPTER LANDING AREA	
Please see section ENR 3.4	

WSSS AD 2.17 ATS AIRSPACE		
1	<i>Designation and Lateral Limits</i>	CHANGI CTR 013300N 1040149E 013042N 1040654E 012542N 1040448E thence along Kuala Lumpur/Singapore FIR bdry to 012000N 1041218E 010018N 1035524E 011100N 1035134E 013300N 1040149E
2	<i>Vertical Limits</i>	SFC to 3,000ft ALT
3	<i>Airspace Classification</i>	C
4	<i>ATS Unit Callsign Language(s)</i>	Singapore Tower English
5	<i>Transition Altitude</i>	11,000ft (3,350m)
6	<i>Remarks</i>	Nil

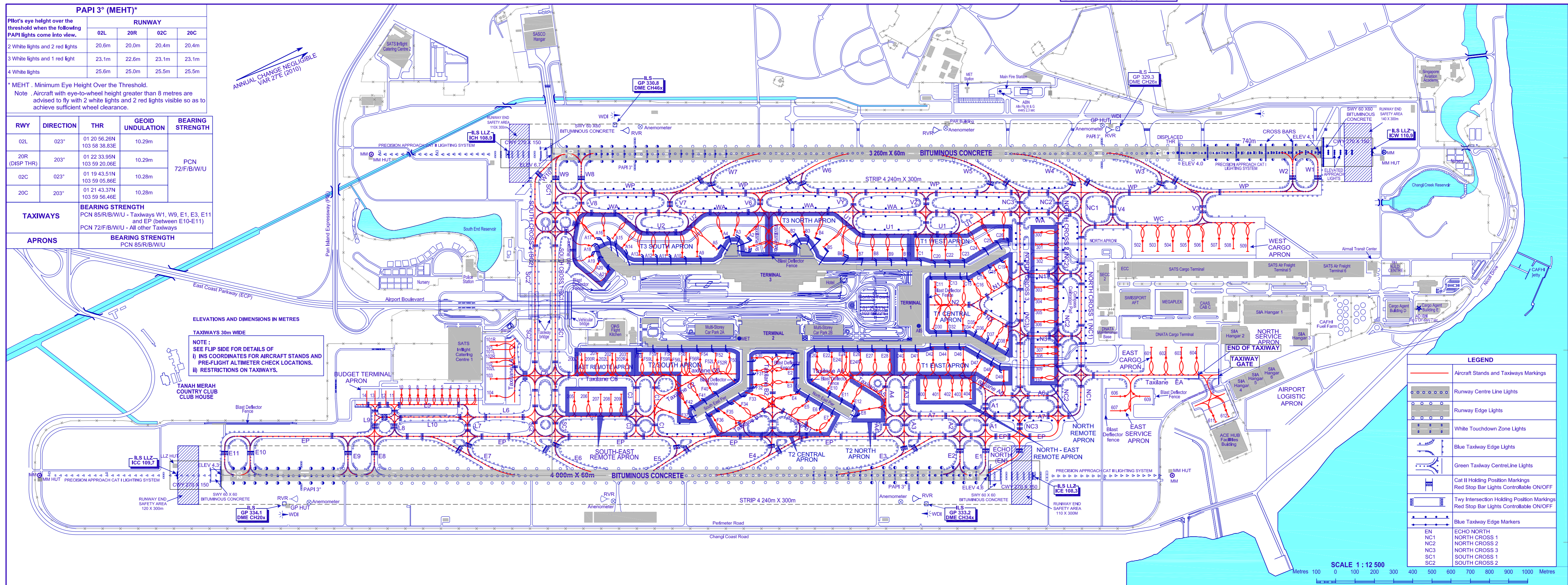
AERODROME CHART - ICAO

01° 21' 33"N
103°59' 22"E

AERODROME ELEVATION 6.66m

TWR 118.6 / 118.25
GND 124.3
DELIVERY 121.65

SINGAPORE/SINGAPORE CHANGI



PAPI 3° (MEHT)*				
Pilot's eye height over the threshold when the following PAPI lights come into view.	RUNWAY			
	02L	20R	02C	20C
2 White lights and 2 red lights	20.6m	20.0m	20.4m	20.4m
3 White lights and 1 red light	23.1m	22.6m	23.1m	23.1m
4 White lights	25.6m	25.0m	25.5m	25.5m

* MEHT - Minimum Eye Height Over the Threshold.
Note - Aircraft with eye-to-wheel height greater than 8 metres are advised to fly with 2 white lights and 2 red lights visible so as to achieve sufficient wheel clearance.

RWY	DIRECTION	THR	GEOD UNDULATION	BEARING STRENGTH
02L	023°	01 20 56.26N 103 58 38.83E	10.29m	PCN 72/F/B/W/U
20R (DISP THR)	203°	01 22 33.95N 103 59 20.06E	10.29m	
02C	023°	01 19 43.51N 103 59 05.86E	10.28m	
20C	203°	01 21 43.37N 103 59 56.46E	10.28m	

TAXIWAYS	BEARING STRENGTH
PCN 85/R/B/W/U - Taxiways W1, W9, E1, E3, E11 and EP (between E10-E11)	PCN 72/F/B/W/U
APRONS	BEARING STRENGTH
	PCN 85/R/B/W/U

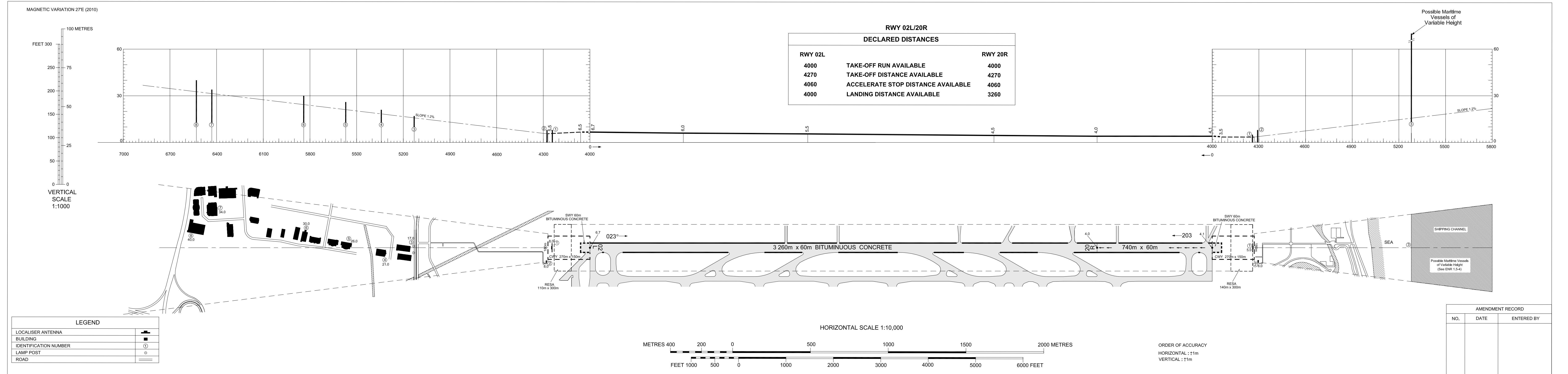
ELEVATIONS AND DIMENSIONS IN METRES
TAXIWAYS 30m WIDE
NOTE:
SEE FLIP SIDE FOR DETAILS OF
i) INS COORDINATES FOR AIRCRAFT STANDS AND PRE-FLIGHT ALTIMETER CHECK LOCATIONS.
ii) RESTRICTIONS ON TAXIWAYS.

LEGEND	
	Aircraft Stands and Taxiways Markings
	Runway Centre Line Lights
	Runway Edge Lights
	White Touchdown Zone Lights
	Blue Taxiway Edge Lights
	Green Taxiway Centre Line Lights
	Cat II Holding Position Markings
	Red Stop Bar Lights Controllable ON/OFF
	Twy Intersection Holding Position Markings
	Red Stop Bar Lights Controllable ON/OFF
	Blue Taxiway Edge Markers
EN	ECHO NORTH
NC1	NORTH CROSS 1
NC2	NORTH CROSS 2
NC3	NORTH CROSS 3
SC1	SOUTH CROSS 1
SC2	SOUTH CROSS 2

DIMENSIONS AND ELEVATIONS IN METRES

**AERODROME OBSTACLE CHART - ICAO
TYPE A (OPERATING LIMITATIONS)**

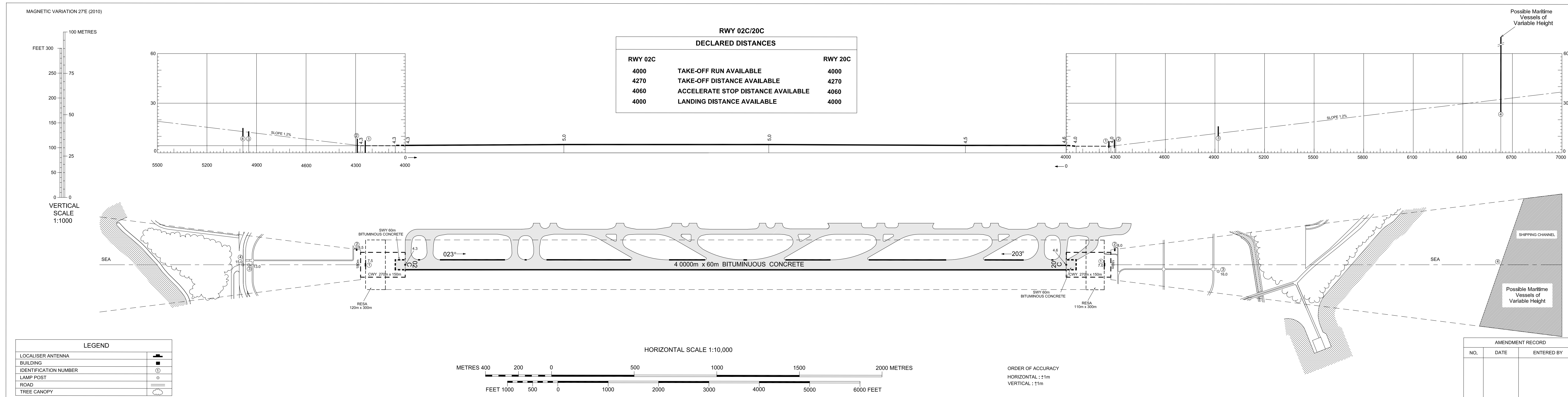
SINGAPORE/Singapore Changi



DIMENSIONS AND ELEVATIONS IN METRES

**AERODROME OBSTACLE CHART - ICAO
TYPE A (OPERATING LIMITATIONS)**

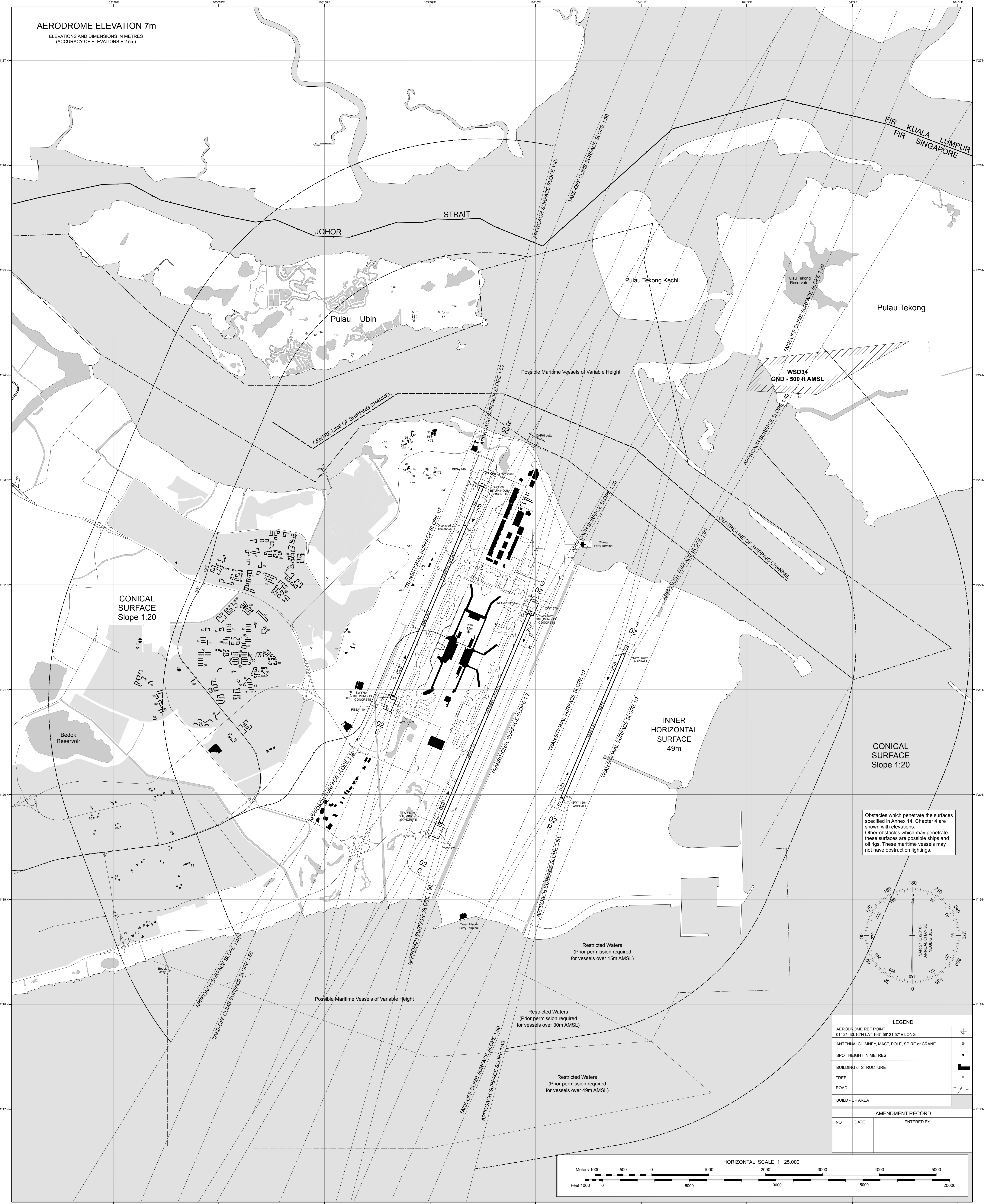
SINGAPORE/Singapore Changi



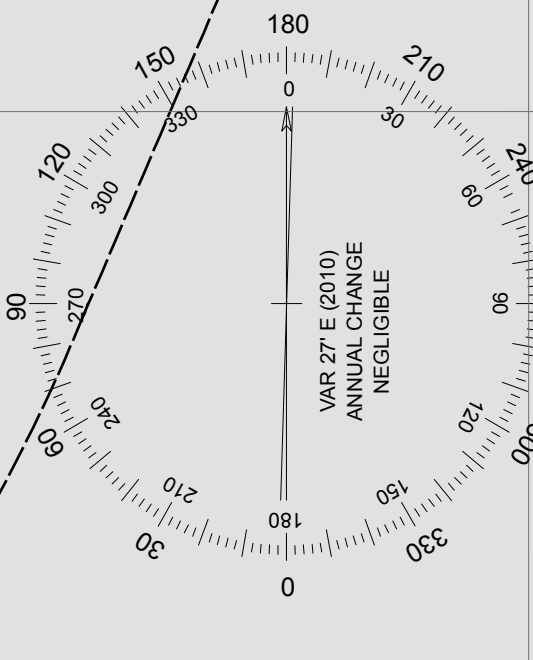
AERODROME OBSTACLE CHART - ICAO TYPE B

SINGAPORE / Singapore Changi

AERODROME ELEVATION 7m
ELEVATIONS AND DIMENSIONS IN METRES
(ACCURACY OF ELEVATIONS ± 2.5m)

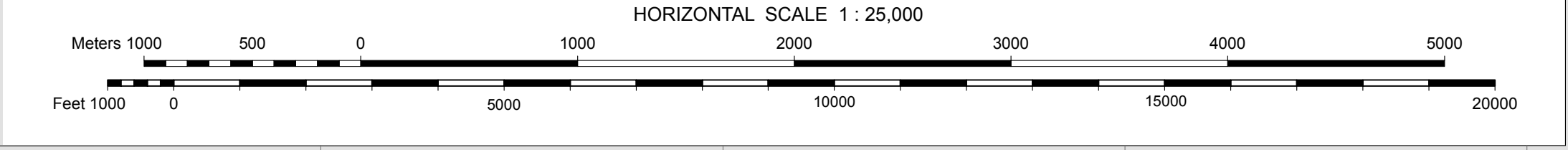


Obstacles which penetrate the surfaces specified in Annex 14, Chapter 4 are shown with elevations. Other obstacles which may penetrate these surfaces are possible ships and oil rigs. These maritime vessels may not have obstruction lightings.



LEGEND	
AERODROME REF POINT	⊕
ANTENNA, CHIMNEY, MAST, POLE, SPIRE or CRANE	⊙
SPOT HEIGHT IN METRES	•
BUILDING or STRUCTURE	■
TREE	*
ROAD	—
BUILD-UP AREA	▨

AMENDMENT RECORD		
NO	DATE	ENTERED BY



RNAV_(GNSS) SIDS AND STARS

1. INTRODUCTION

- 1.1 The RNAV_(GNSS) SIDs and STARs are designed in accordance with the ICAO RNAV_(GNSS) Departure and Arrival criteria as stipulated in the ICAO PANS-OPS (Doc 8168) Volume II.
- 1.2 For RNAV_(GNSS) SIDs and STARs operations, the aircraft shall be GNSS-equipped and the navigation systems shall meet ICAO RNP-1 standard of accuracy, or equivalent, such as JAA TGL 10 or FAA AC 90-96A Appendix 2 - Precision Area Navigation (P-RNAV).
- 1.3 To avoid proliferation of SIDs and STARs, the basic RNAV SIDs and STARs have been modified to follow similar tracks as the RNAV_(GNSS) SIDs and STARs using the same set of SIDs and STARs identification.
- 1.4 Operators/pilots who are not approved to fly the RNAV_(GNSS) SIDs and STARs shall fly the alternate basic RNAV SIDs and STARs or expect radar vectors from ATC.

2. ARRIVALS

- 2.1 STARs are presented in diagrammatic and textual format on a chart which comprises two main elements:
 - a) A TRANSITION route; and
 - b) An ARRIVAL route.
- 2.2 A TRANSITION starts at a waypoint on the ATS route and then requires VOR/DME or RNAV tracking to position the aircraft for the ARRIVAL route.
- 2.3 All arriving aircraft are required to follow the appropriate TRANSITION and ARRIVAL routes. The TRANSITION routes are as follows:

ATS Route	Transition	Transition Route	RNAV STAR
B469 (southbound to Singapore) L642 N892	BIKTA VEPLI MABAL	BIKTA-PIBAP-PASPU VEPLI-VINIL-PIBAP-PASPU MABAL-KILOT-VINIL-PIBAP-PASPU	PASPU ARRIVAL
A464 (southbound to Singapore) A576 (southbound to Singapore) R469	ARAMA REKOP no transition	ARAMA-BOBAG REKOP-BOBAG no transition	BOBAG ARRIVAL
G579	no transition	no transition	REMES ARRIVAL
L504 M635 M774	OBDOS SURGA OBDOS	OBDOS-IKAGO-IKIMA-IBULA-LAVAX SURGA-IKAGO-IKIMA-IBULA-LAVAX OBDOS-IKAGO-IKIMA-IBULA-LAVAX	LAVAX ARRIVAL
M767 / G580 B348 / G580 G580	TOMAN	TOMAN-KARTO-KEXAS-LAVAX	

Note: Aircraft landing at Singapore Changi Airport operating on N891, M753 and L642 shall flight plan only on L642 after ENREP.

- 2.4 Additional elements on the STAR chart include the following:
- a) *Vertical restrictions*, designed to contain aircraft in controlled airspace and to separate aircraft from obstacles and to avoid, to the degree possible, conflict with departing traffic.
 - b) *Speed restrictions*, designed for flow control purposes.
 - c) *Minimum safe altitude (MSA)* within 25NM of VTK and SJ DVOR/DME. The MSA provides a minimum of 1000ft vertical clearance within 5NM of any obstacle.
- 2.5 Arrivals to Singapore Changi Airport can expect radar vectors to intercept the localizer for an ILS approach after the initial approach fix on the RNAV STARS.
- 2.6 STARS shall be issued by ATC in the following order:
- a) ARRIVAL identifier;
 - b) TRANSITION identifier;
 - c) Runway-in-use;
 - d) An assigned level

Example:

<Callsign>cleared to Singapore via PASPU 1A ARRIVAL, VEPLI TRANSITION, Runway 02, maintain / descend to flight level one five zero.

3. DEPARTURES

- 3.1 All departing aircraft will be cleared on the appropriate RNAV_(GNSS) SID and shall climb initially to 3,000ft.
- 3.2 Operators are to note that RNAV_(GNSS) SIDs VENPA 1A and 1B will be assigned to departures from Singapore Changi Airport that flight plan to destinations south of Singapore on L504, M635 and M774.

There will be 3 Transitions as shown below:

ATS Route	Transition	Transition Route	RNAV SID
L504	BAVUS	VENPA-ATKAX-BAVUS	VENPA DEPARTURE
M635	SURGA	VENPA-VENIX-SURGA	
M774	KADAR	VENPA-ATKAX-KADAR	

- 3.3 A Transition will be issued by ATC in conjunction with the RNAV_(GNSS) SID, for example a departure from Singapore to Brisbane via airway M774 will read as follows:

Example:

<Callsign> cleared to Brisbane via VENPA 1A departure Transition KADAR, airway M774, flight plan route, maintain FL330, squawk alfa 2234 on departure.

3. WRONG APPROACHES AND LANDINGS OF AIRCRAFT BOUND FOR SELETAR AERODROME AND SEMBAWANG MILITARY AERODROME

3.1 INTRODUCTION

- 3.1.1 The attention of all pilots is drawn to the existence of RSAF Sembawang Aerodrome, 3NM to the west of Seletar Aerodrome. The runway at Sembawang is orientated in almost the same direction as the runway at Seletar Aerodrome i.e. 03/21 for Seletar Aerodrome and 05/23 for Sembawang. Due to the close proximity of these two runways, pilots are cautioned against mistaking Sembawang Aerodrome for Seletar Aerodrome and thus making an inadvertent visual landing or approach to land at Sembawang.
- 3.1.2 Erroneous approaches or landings usually occurred in marginal weather conditions. In almost every instance, the prevailing weather at the time of the incident contributed towards a hasty and erroneous identification of the correct aerodrome.
- 3.1.3 There is intensive local flying at both aerodromes during the day and night. As pilot training is the major activity at both aerodromes, the risk of collision is very great if a wrong approach or landing is made at either of the two aerodromes.

3.2 POINTS TO BEAR IN MIND WHEN APPROACHING SELETAR AD OR SEMBAWANG AD

- 3.2.1 The following points are highlighted to serve as a guide to assist pilots in identifying Seletar AD or Sembawang AD and should be remembered and followed:
- The runways at Seletar and Sembawang are almost identically aligned. Extra vigilance, therefore, is required when approaching either aerodrome, or when commencing an approach to land.
 - Make full use of available navigational and landing aids, and positively identify each aid used.
 - Adhere strictly to the joining instructions issued by ATC.

3.3 AERODROME CHARACTERISTICS OF SELETAR AND SEMBAWANG AERODROMES

Aeronautical Service	Seletar AD	Sembawang AD	Significant Differences and Remarks
RWY Designation	03/21	05/23	Exercise caution due to almost similar RWY alignment
Location	Adjacent to the Straits of Johor on the eastern bank of Seletar River. Seletar AD is situated APRX 3NM NW of Paya Lebar AP.	APRX 3NM west of Seletar AD and 3NM inland from the Straits of Johor	Seletar RWY commences almost from the edge of the shore. Also note that Sembawang AD is inland and not next to the sea.
RWY LGT	White/Amber RWY edge LGT	Nil	Sembawang AD has no RWY LGT
Approach LGT	Simple approach LGT available for RWY 03 approach, consisting of 4 rows of barettes and 1 crossbar (5th row). <u>RWY 03</u> - white, elevated, uni-directional approach LGT and white, omni-directional CGL on top of elevated approach LGT. Approach LGT available for RWY 21 approach, consisting of 1 row of inset approach LGT (1st row) and 4 rows of barettes. <u>RWY 21</u> - white, inset and elevated, uni-directional approach LGT and white, omni-directional CGL on top of elevated approach LGT.	Nil	No visual approach slope indicator at Sembawang AD
IBN	Flashing Green 'SL'	Flashing R 'AG' EV 20 SEC HN and IMC	Nil
ABN	ALTN Flashing W G EV 2.5 SEC	Nil	Sembawang AD has no ABN
Parking Apron	Relatively large aircraft parking apron to the west of RWY, connected to the RWY by three taxiways	Small aircraft parking apron	Differences in size and location of the parking apron

WSSL AD 2.21 NOISE ABATEMENT PROCEDURES

- 1.1 To alleviate the problem of noise, all aircraft on AWY G579 between Sinjon (SJ) and Jaybee (JB) shall operate at/above 5,000ft.
- 1.2 Aircraft are restricted from overflying built-up residential areas around Seletar AP (refer to charts WSSL AD 2-21, WSSL AD 2-23, WSSL AD 2-25 and WSSL AD 2-27) at an altitude of below 1,500ft. Aircraft types which are unable to safely manoeuvre clear of the built-up residential areas are not allowed to operate at Seletar AP.
- 1.3 Freighter flights are not permitted between 1400-2300.
- 1.4 No engine run up shall be permitted between 1400-2300.

WSSL AD 2.22 FLIGHT PROCEDURES

1. PROCEDURES FOR ARRIVALS INTO SELETAR AERODROME

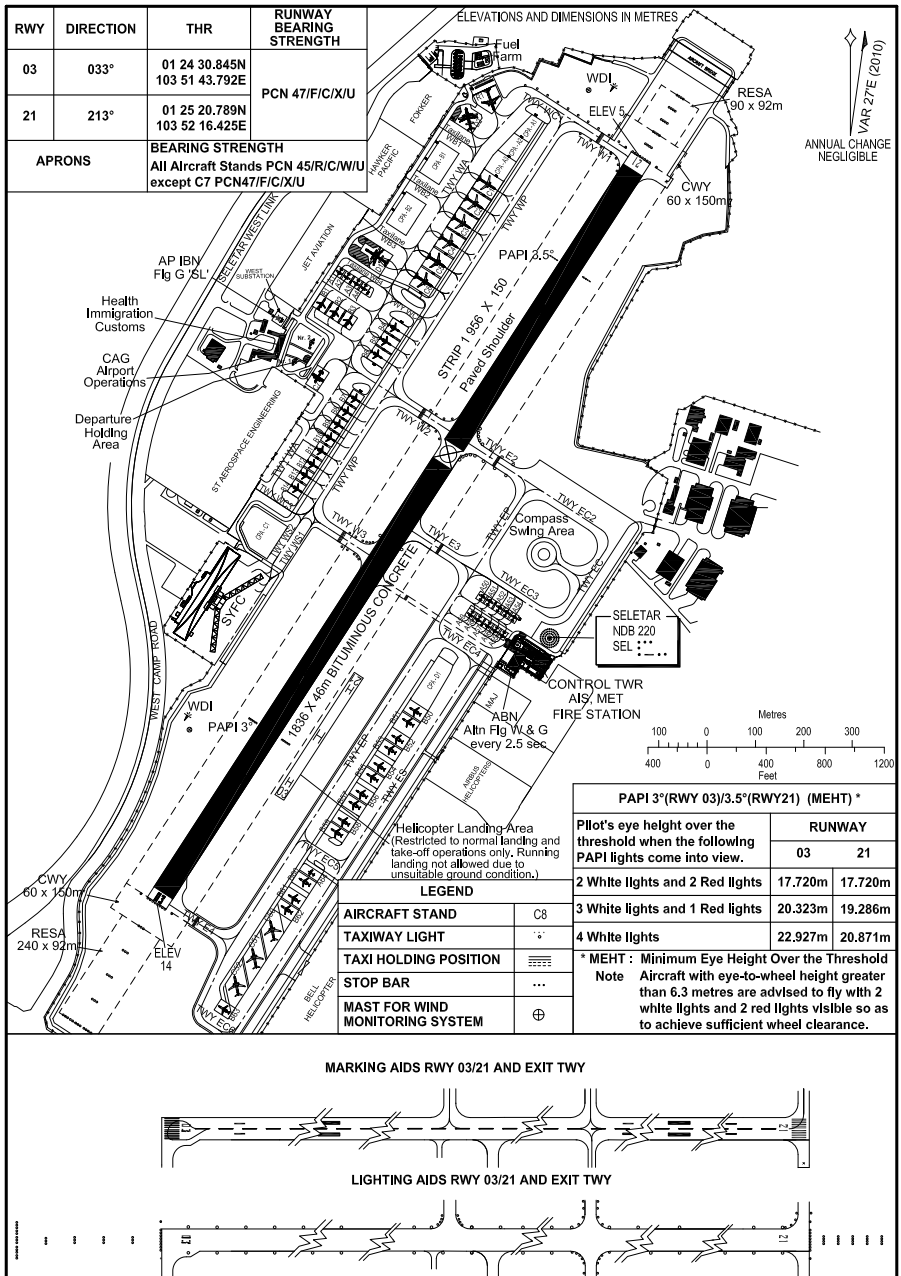
1.1 Introduction

- 1.1.1 Aircraft on VFR flight plan, routing via Tebrau City Mall (013259N1034748E) to Seletar shall follow the joining procedures as described in paragraph 1.2 and illustrated in charts WSSL AD2-21, WSSL AD2-23 and WSSL AD2-33.
- 1.1.2 Aircraft returning from Light Aircraft Training Areas shall follow the joining procedures as described in paragraph 1.3 and illustrated in charts WSSL AD2-21 and WSSL AD2-23.
- 1.1.3 Aircraft on IFR flight plan, routing via JB or KK to Seletar shall be vectored under radar for a visual approach. Paya Lebar Approach shall provide the radar service. When Paya Lebar Approach is closed, Singapore Approach shall provide the service. Unless authorised by ATC, pilots shall follow the joining procedures as described in paragraph 1.4 and 1.5. The joining procedures are illustrated in charts WSSL AD2-25, WSSL AD2-27, WSSL AD2-35 and WSSL AD2-37.
- 1.1.4 When within 5km of the aerodrome reference point, aircraft are to fly; at a manoeuvring speed of not more than 170kt unless otherwise authorised by ATC. All aircraft are required to keep well clear of Sembawang ATZ and Paya Lebar CTR.
- 1.1.5 Circuit traffic already downwind shall have priority. Arriving aircraft shall position and sequence itself accordingly, unless directed otherwise by ATC.
- 1.1.6 Pilots shall not fly east of the runway. This is due to tall buildings up to 90m (296ft) AMSL to the east of Seletar CTR (the location is depicted in charts WSSL AD2-21 to WSSL AD2-27).

1.2 Joining Procedures for VFR flights from Tebrau City Mall (013259N1034748E)

- 1.2.1 Aircraft on VFR flight plan joining Seletar CTR from East of JB Town are to descend to altitude cleared by ATC. From Tebrau City Mall (013259N1034748E) descend in VMC to altitude cleared by ATC and proceed to POINT 'X' (located 012830N 1034954E or radial 297/7DME from PU DVOR/DME) keeping clear of WMP228 and then direct to overhead the airfield.
- 1.2.2 When overhead the airfield, the joining aircraft shall make a turn overflying the runway and after passing abeam the Control Tower, commence descent as cleared to cross the upwind end of the runway at 1,500ft. Passing over the end of the runway, descend to circuit altitude as cleared by ATC. Pilots shall ensure to keep clear of Sembawang ATZ and Paya Lebar CTR and not to fly east of the runway. This is to keep clear of tall buildings up to 90m AMSL to the east of Seletar CTR. The area where the tall buildings are located is indicated in the Seletar Visual Approach Charts WSSL AD 2-21 to WSSL AD 2-27. Procedures are illustrated in the following charts:
 - i) WSSL AD 2-21: VAC - RWY 03
 - ii) WSSL AD 2-23: VAC - RWY 21
- 1.2.3 Traffic permitting and in good visibility, joining aircraft may be cleared to join directly for right base when landing on RWY 21 or turn downwind for RWY 03 from Position 'A'.

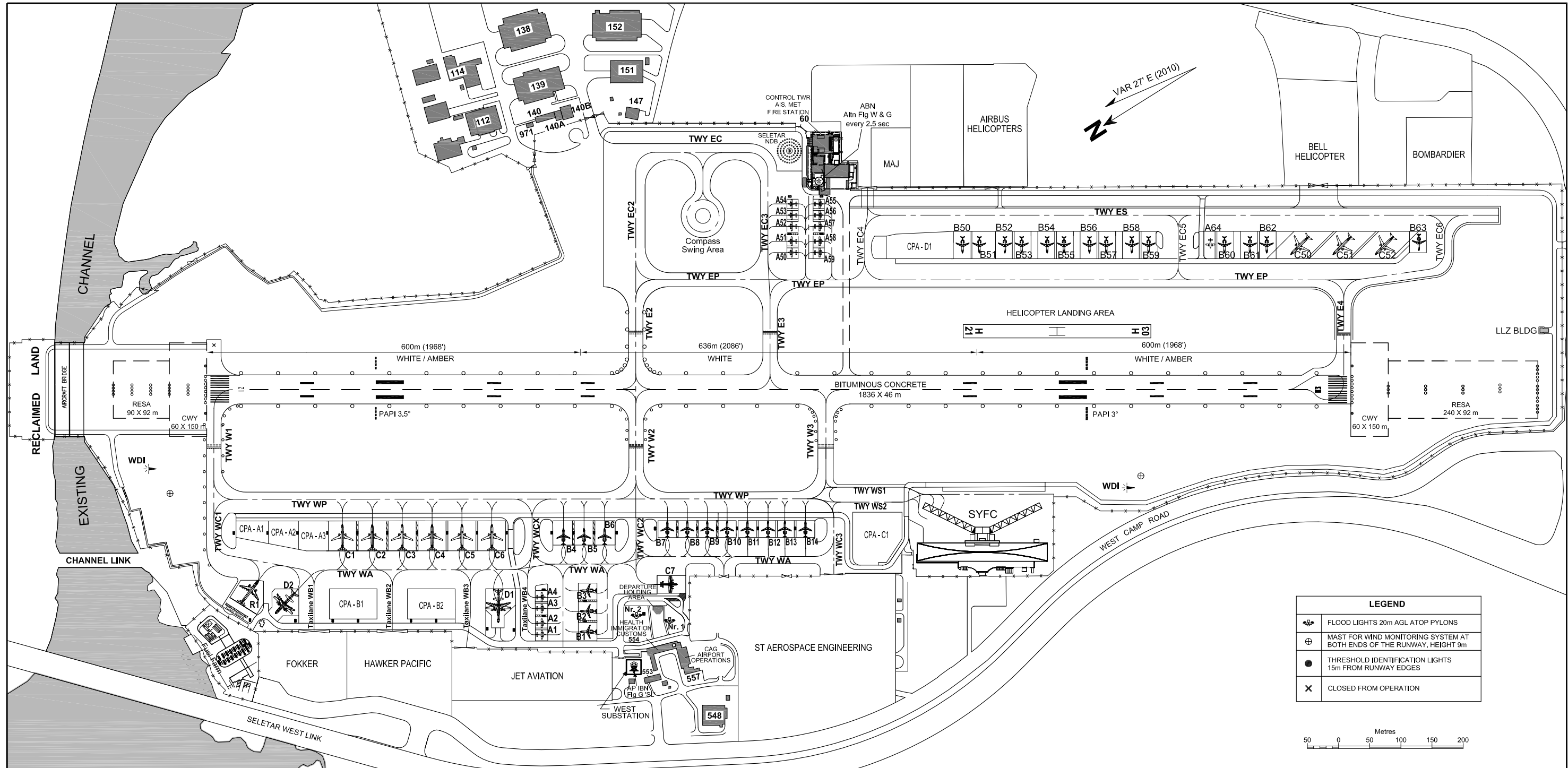
AERODROME CHART - ICAO 01° 25' 01"N 103° 52' 04"E ELEV 14m TWR 118.45 121.6 SINGAPORE/SELETAR



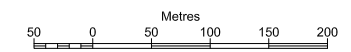
INS COORDINATES FOR AIRCRAFT STANDS

STAND NR	NORTH LATITUDE	EAST LONGITUDE	ELEVATION
A1	01 25 13.101	103 51 56.167	6.131m (20.114ft)
A2	01 25 12.779	103 51 56.652	6.319m (20.731ft)
A3	01 25 12.350	103 51 57.301	6.538m (21.450ft)
A4	01 25 12.029	103 51 57.787	6.702m (21.988ft)
A50	01 24 51.431	103 52 05.764	7.757m (25.449ft)
A51	01 24 51.109	103 52 06.251	7.890m (25.886ft)
A52	01 24 50.680	103 52 06.899	8.049m (26.407ft)
A53	01 24 50.358	103 52 07.386	8.168m (26.798ft)
A54	01 24 50.036	103 52 07.872	8.297m (27.221ft)
A55	01 24 48.591	103 52 06.929	8.691m (28.514ft)
A56	01 24 48.913	103 52 06.442	8.527m (27.976ft)
A57	01 24 49.235	103 52 05.955	8.361m (27.431ft)
A58	01 24 49.664	103 52 05.307	8.130m (26.673ft)
A59	01 24 49.986	103 52 04.820	7.972m (26.155ft)
B1	01 25 11.402	103 51 55.230	6.271m (20.574ft)
B2	01 25 10.812	103 51 56.122	6.595m (21.637ft)
B3	01 25 10.220	103 51 57.014	6.922m (22.710ft)
B4	01 25 09.179	103 52 00.361	7.654m (25.111ft)
B5	01 25 08.257	103 51 59.759	7.889m (25.882ft)
B6	01 25 07.346	103 51 59.164	8.125m (26.656ft)
B7	01 25 04.505	103 51 57.521	8.368m (27.454ft)
B8	01 25 03.634	103 51 56.952	8.352m (27.401ft)
B9	01 25 02.764	103 51 56.383	8.328m (27.322ft)
B10	01 25 01.716	103 51 56.082	8.299m (27.227ft)
B11	01 25 01.006	103 51 55.237	8.303m (27.240ft)
B12	01 25 00.108	103 51 54.649	8.417m (27.614ft)
B13	01 24 59.374	103 51 54.169	8.515m (27.936ft)
B14	01 24 58.477	103 51 53.582	8.520m (27.952ft)
B50	01 24 43.888	103 52 00.873	8.800m (28.871ft)
B51	01 24 43.154	103 52 00.394	8.896m (29.186ft)
B52	01 24 42.063	103 51 59.682	9.041m (29.662ft)
B53	01 24 41.329	103 51 59.202	9.136m (29.973ft)
B54	01 24 40.154	103 51 58.435	9.296m (30.498ft)
B55	01 24 39.420	103 51 57.955	9.391m (30.810ft)
B56	01 24 38.348	103 51 57.253	9.538m (31.292ft)
B57	01 24 37.614	103 51 56.774	9.632m (31.601ft)
B58	01 24 36.463	103 51 56.021	9.786m (32.106ft)
B59	01 24 35.728	103 51 55.542	9.887m (32.437ft)
B60	01 24 32.415	103 51 53.375	11.004m (36.102ft)
B61	01 24 31.265	103 51 52.624	10.129m (33.231ft)
B62	01 24 30.531	103 51 52.144	10.216m (33.517ft)
B63	01 24 23.859	103 51 47.938	10.580m (34.711ft)
C1	01 25 18.803	103 52 06.626	5.043m (16.545ft)
C2	01 25 17.498	103 52 05.773	5.380m (17.650ft)
C3	01 25 16.192	103 52 04.920	5.716m (18.753ft)
C4	01 25 14.886	103 52 04.069	6.186m (20.295ft)
C5	01 25 13.580	103 52 03.214	6.793m (22.286ft)
C6	01 25 12.274	103 52 02.361	7.297m (23.940ft)
C7	01 25 05.903	103 51 54.572	7.174m (23.537ft)
C50	01 24 29.477	103 51 51.396	10.361m (33.992ft)
C51	01 24 27.626	103 51 50.188	10.575m (34.694ft)
C52	01 24 25.779	103 51 48.980	10.724m (35.183ft)
D1	01 25 14.663	103 51 58.151	6.359m (20.862ft)
D2	01 25 24.032	103 52 04.804	3.413m (11.197ft)

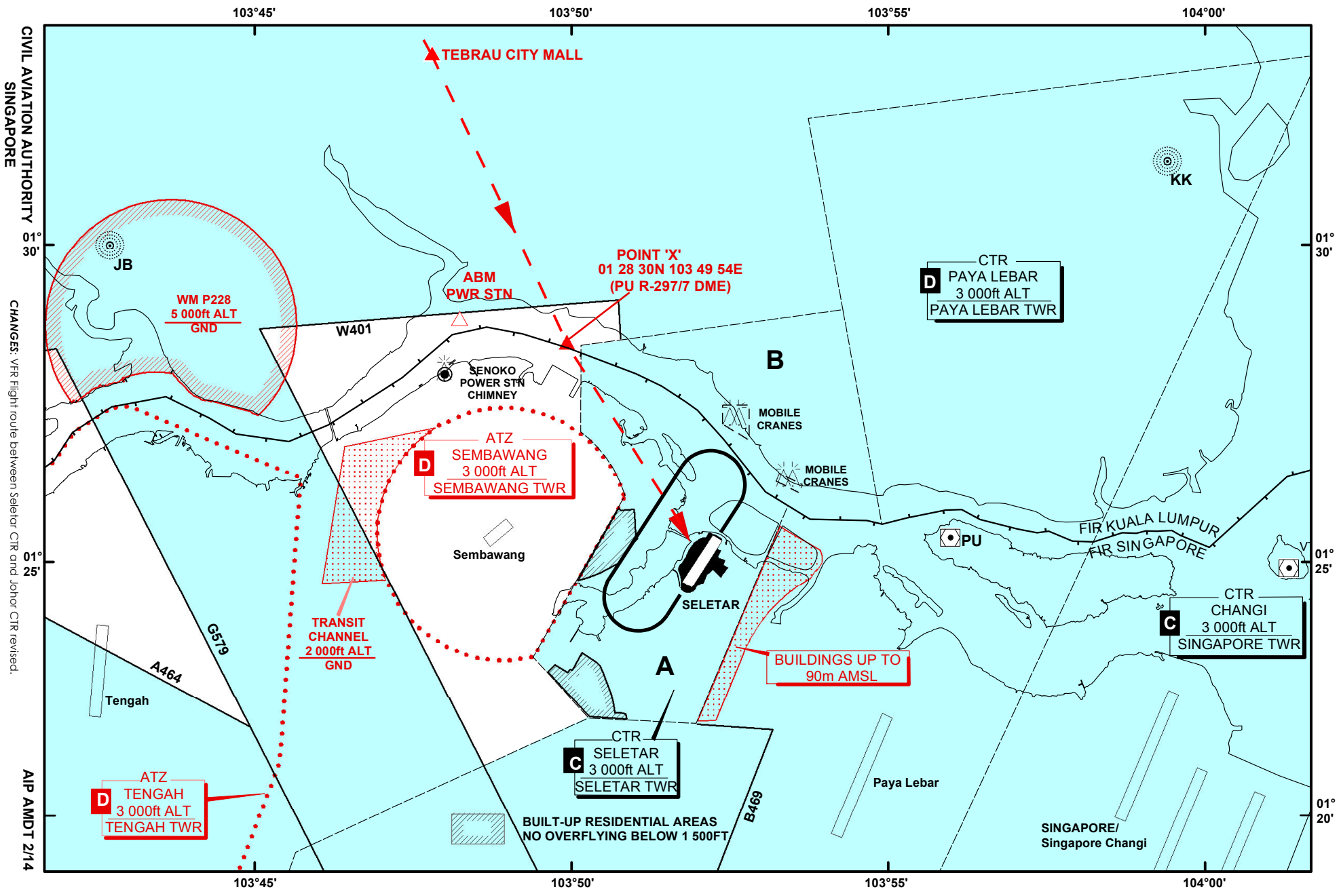
SELETAR AERODROME LAYOUT OF SIGNIFICANT AERODROME BUILDINGS AND APRON FACILITIES



LEGEND	
	FLOOD LIGHTS 20m AGL ATOP PYLONS
	MAST FOR WIND MONITORING SYSTEM AT BOTH ENDS OF THE RUNWAY, HEIGHT 9m
	THRESHOLD IDENTIFICATION LIGHTS 15m FROM RUNWAY EDGES
	CLOSED FROM OPERATION



SELETAR AERODROME JOINING PROCEDURE (VFR FLIGHTS) FROM JOHOR BAHRU

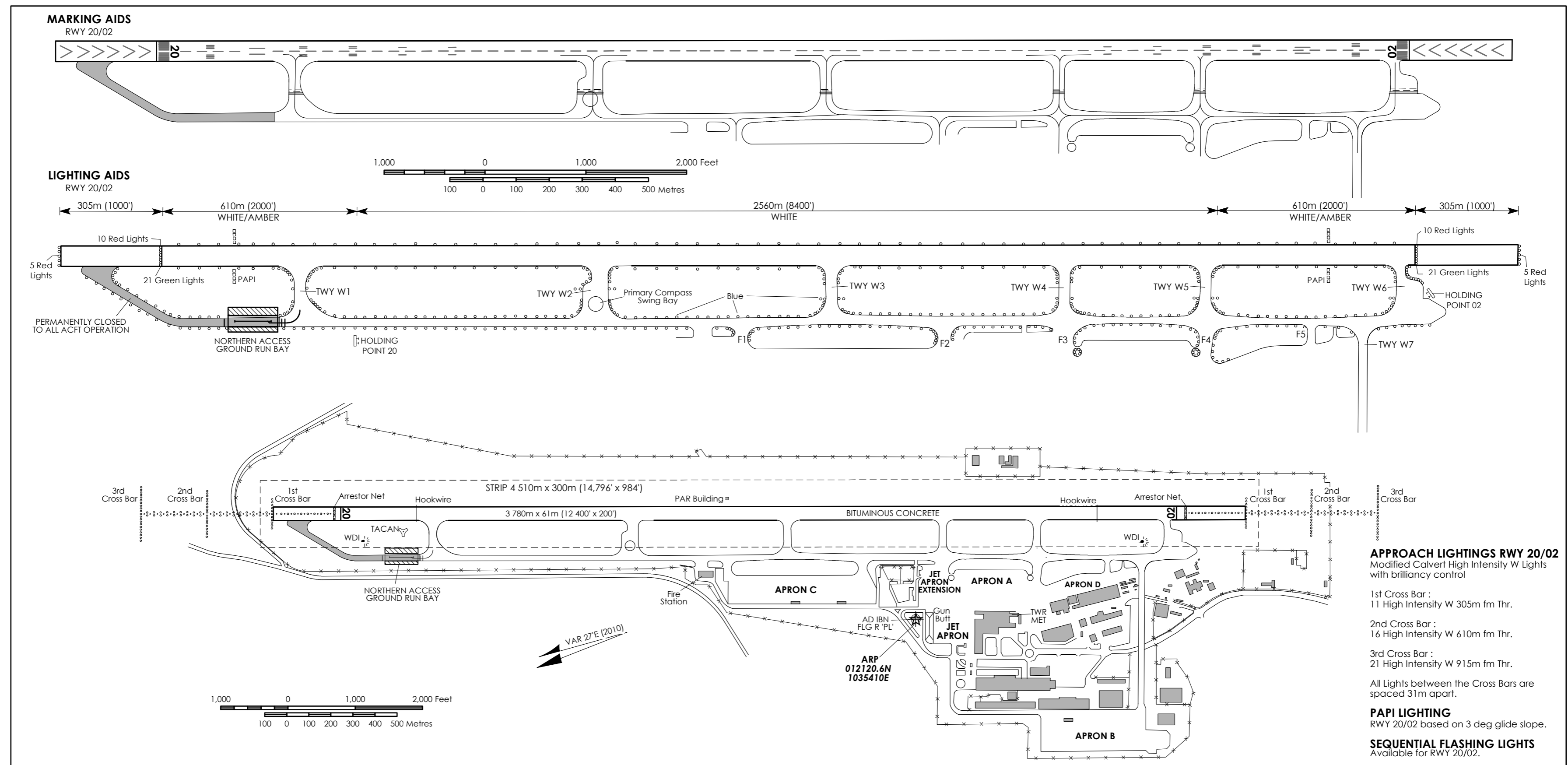


CIVIL AVIATION AUTHORITY SINGAPORE

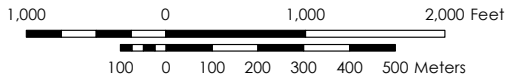
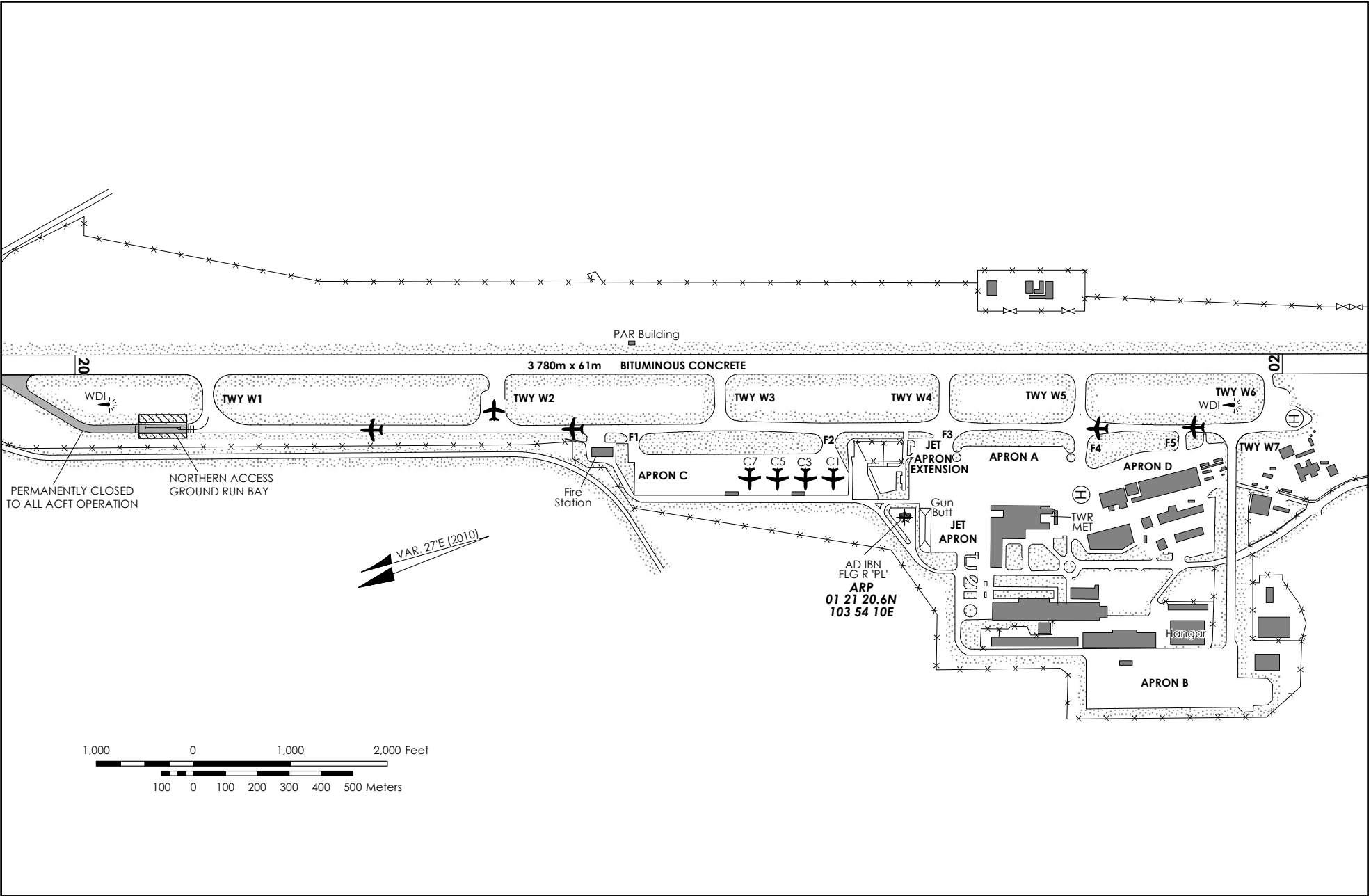
CHANGES: VFR flight route between Seletar CTR and Johor CTR revised.

AIP AMDT 2/14

AERODROME CHART - PAYA LEBAR AIRPORT



LOCATION OF AIRCRAFT STANDS FOR CIVIL AIRCRAFT
AT PAYA LEBAR AIRPORT



VAR. 27°E (2010)

PERMANENTLY CLOSED TO ALL ACFT OPERATION
NORTHERN ACCESS GROUND RUN BAY

AD IBN
FLG R 'PL'
ARP
01 21 20.6N
103 54 10E

PAR Building

3 780m x 61m BITUMINOUS CONCRETE

TWY W1

TWY W2

TWY W3

TWY W4

TWY W5

TWY W6

TWY W7

APRON C

APRON A

APRON D

APRON B

Fire Station

Gun Butt

JET APRON

JET APRON EXTENSION

TWR MET

Hanger

F1

F2

F3

F4

F5

C7

C5

C3

C1

20

20

WDL

WDL

