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AMDT
06/2020
Effective date
05 NOV 2020
Publication date
05 NOV 2020

wp-AMDT-2020-06

1. Significant information and changes

1.1 Singapore FIR

- a. Revised description on Minimum Flight Altitude in GEN 3.3, paragraph 5.

1.2 Singapore Changi Airport

- a. Inclusion of additional note on close-in obstacles for AD-2-WSSS-SID-2, AD-2-WSSS-SID-4, AD-2-WSSS-SID-6, AD-2-WSSS-SID-8, AD-2-WSSS-SID-11, AD-2-WSSS-SID-12, AD-2-WSSS-SID-14, AD-2-WSSS-SID-15 and AD-2-WSSS-SID-17 charts.

2. This amendment incorporates information contained in the listed NOTAMs which are hereby superseded:

NOTAMs

A4010/20 dated 07/10/2020
A4011/20 dated 07/10/2020
A4012/20 dated 07/10/2020
A4013/20 dated 07/10/2020
A4014/20 dated 07/10/2020
A4015/20 dated 07/10/2020

Amended Pages

GEN 0.2-1/2:	: <i>replace.</i>
GEN 0.3-1/2:	: <i>replace.</i>
GEN 0.3-3/4:	: <i>replace.</i>
GEN 0.3-5/6:	: <i>replace.</i>
GEN 0.4-1/2:	: <i>replace.</i>
GEN 0.4-3:	: <i>replace.</i>
GEN 0.6-1/2:	: <i>replace.</i>
GEN 1.2-1/2:	: <i>replace.</i>
GEN 1.4-1/2:	: <i>replace.</i>
GEN 1.4-3:	: <i>replace.</i>
GEN 1.6-1/2:	: <i>replace.</i>
GEN 1.6-3/4:	: <i>replace.</i>
GEN 2.1-1/2:	: <i>replace.</i>
GEN 3.2-3/4:	: <i>replace.</i>
GEN 3.3-1/2:	: <i>replace.</i>
ENR 1.10-3:	: <i>replace.</i>
ENR-2.1-15:	: <i>replace.</i>
ENR-3.1/ATS Chart:	: <i>replace.</i>
ERC-6-1 En-Route Chart:	: <i>replace.</i>
AD-2-WSSS-SID-2 to 2.1:	: <i>replace.</i>

AD-2-WSSS-SID-4 to 4.1: : *replace.*
AD-2-WSSS-SID-6 to 6.1: : *replace.*
AD-2-WSSS-SID-8 to 8.1: : *replace.*
AD-2-WSSS-SID-11 to 11.1: : *replace.*
AD-2-WSSS-SID-12 to 12.1: : *replace.*
AD-2-WSSS-SID-14 to 14.1: : *replace.*
AD-2-WSSS-SID-15 to 15.1: : *replace.*
AD-2-WSSS-SID-17 to 17.1: : *replace.*
AD-2-WSSS-IAC-9: : *replace.*
AD-2-WSSS-IAC-10: : *replace.*
AD-2-WSSS-IAC-11: : *replace.*
AD-2-WSSS-IAC-12: : *replace.*
AD 2.WSSL-17/18: : *replace.*
AD 2.WSSL-21/22: : *replace.*
AD 2.WSSL-23/24: : *replace.*

GEN 0.2 RECORD OF AIP AMENDMENTS**AIP AMENDMENT**

NR/Year	Publication date	Date inserted	Inserted by
5/2014	18 SEP 2014	18 SEP 2014	
6/2014	13 NOV 2014	13 NOV 2014	
1/2015	08 JAN 2015	08 JAN 2015	
2/2015	05 MAR 2015	05 MAR 2015	
3/2015	30 APR 2015	30 APR 2015	
4/2015	25 JUN 2015	25 JUN 2015	
5/2015	20 AUG 2015	20 AUG 2015	
6/2015	15 OCT 2015	15 OCT 2015	
07/2015	10 DEC 2015	10 DEC 2015	
01/2016	04 FEB 2016	04 FEB 2016	
02/2016	31 MAR 2016	31 MAR 2016	
03/2016	26 MAY 2016	26 MAY 2016	
04/2016	21 JUL 2016	21 JUL 2016	
05/2016	15 SEP 2016	15 SEP 2016	
06/2016	10 NOV 2016	10 NOV 2016	
01/2017	05 JAN 2017	05 JAN 2017	
02/2017	02 MAR 2017	02 MAR 2017	
03/2017	27 APR 2017	27 APR 2017	
04/2017	22 JUN 2017	22 JUN 2017	
05/2017	17 AUG 2017	17 AUG 2017	
06/2017	12 OCT 2017	12 OCT 2017	
07/2017	07 DEC 2017	07 DEC 2017	
01/2018	01 FEB 2018	01 FEB 2018	
02/2018	29 MAR 2018	29 MAR 2018	
03/2018	24 MAY 2018	24 MAY 2018	
04/2018	19 JUL 2018	19 JUL 2018	
05/2018	13 SEP 2018	13 SEP 2018	

AIP AMENDMENT

NR/Year	Publication date	Date inserted	Inserted by
06/2018	08 NOV 2018	08 NOV 2018	
01/2019	03 JAN 2019	03 JAN 2019	
02/2019	28 FEB 2019	28 FEB 2019	
03/2019	25 APR 2019	25 APR 2019	
04/2019	20 JUN 2019	20 JUN 2019	
05/2019	15 AUG 2019	15 AUG 2019	
06/2019	10 OCT 2019	10 OCT 2019	
07/2019	05 DEC 2019	05 DEC 2019	
01/2020	30 JAN 2020	30 JAN 2020	
02/2020	26 MAR 2020	26 MAR 2020	
03/2020	21 MAY 2020	21 MAY 2020	
04/2020	16 JUL 2020	16 JUL 2020	
05/2020	10 SEP 2020	10 SEP 2020	
06/2020	05 NOV 2020	05 NOV 2020	

GEN 0.3 RECORD OF CURRENT AIP SUPPLEMENTS

NR/Year	Subject	AIP section(s) affected	Period of validity (from/to)	Cancellation record
122/2017	Paya Lebar Airport - Luffer Cranes	AD	10 DEC 2017 / 31 DEC 2020	
123/2017	Paya Lebar Airport - Luffer Cranes	AD	10 DEC 2017 / 31 DEC 2020	
124/2017	Paya Lebar Airport - Luffer Crane	AD	10 DEC 2017 / 31 DEC 2020	
006/2018	Paya Lebar Airport - Topless Crane and Luffer Crane	AD	22 JAN 2018 / 28 FEB 2021	
019/2018	Paya Lebar Airport - Luffer Crane	AD	06 APR 2018 / 31 DEC 2020	
020/2018	Paya Lebar Airport - Mobile Crane	AD	06 APR 2018 / 03 FEB 2021	
021/2018	Paya Lebar Airport - Luffer Crane and Saddle Cranes	AD	06 APR 2018 / 31 DEC 2022	
028/2018	Paya Lebar Airport - Saddle Cranes	AD	20 JUN 2018 / 31 DEC 2022	
029/2018	Paya Lebar Airport - Luffer Cranes	AD	20 JUN 2018 / 31 DEC 2021	
030/2018	Paya Lebar Airport - Luffer Crane and Topless Cranes	AD	20 JUN 2018 / 31 DEC 2021	
053/2018	Sembawang Aerodrome - Saddle Cranes	AD	25 SEP 2018 / 31 DEC 2021	
062/2018	Paya Lebar Airport - Topless Cranes and Luffer Cranes	AD	25 SEP 2018 / 31 DEC 2020	
070/2018	Paya Lebar Airport - Luffer Cranes and Flat Top Cranes	AD	13 NOV 2018 / 31 DEC 2020	
071/2018	Paya Lebar Airport - Saddle Cranes	AD	13 NOV 2018 / 31 DEC 2023	
076/2018	Paya Lebar Airport - Topless Cranes	AD	29 NOV 2018 / 30 NOV 2020	
077/2018	Paya Lebar Airport - Luffer Crane	AD	28 NOV 2018 / 18 NOV 2021	
078/2018	Paya Lebar Airport - Luffer Cranes	AD	28 NOV 2018 / 30 DEC 2022	
006/2019	Paya Lebar Airport - Topless Cranes and Luffer Crane	AD	30 JAN 2019 / 09 JAN 2021	
007/2019	Tengah Aerodrome - Topless Cranes and Luffer Crane	AD	30 JAN 2019 / 31 JAN 2021	
008/2019	Paya Lebar Airport - Mobile Crane	AD	31 JAN 2019 / 31 JAN 2021	
009/2019	Paya Lebar Airport - Luffer Cranes	AD	01 JUN 2019 / 31 MAY 2021	
011/2019	Paya Lebar Airport - Mobile Crane	AD	01 FEB 2019 / 22 DEC 2020	
014/2019	Paya Lebar Airport - Topless Cranes	AD	01 FEB 2019 / 31 JAN 2021	
028/2019	Paya Lebar Airport - Topless Cranes	AD	27 MAR 2019 / 20 MAR 2021	
029/2019	Paya Lebar Airport - Topless Cranes	AD	27 MAR 2019 / 20 MAR 2021	
030/2019	Paya Lebar Airport - Luffer Crane and Topless Cranes	AD	27 MAR 2019 / 30 JUL 2021	
031/2019	Paya Lebar Airport - Luffer Cranes	AD	27 MAR 2019 / 28 JAN 2022	
032/2019	Paya Lebar Airport - Topless Cranes	AD	27 MAR 2019 / 09 MAR 2022	

NR/Year	Subject	AIP section(s) affected	Period of validity (from/to)	Cancellation record
033/2019	Paya Lebar Airport - Luffer Crane	AD	27 MAR 2019 / 31 DEC 2022	
034/2019	Paya Lebar Airport - Saddle Cranes	AD	27 MAR 2019 / 31 DEC 2022	
035/2019	Paya Lebar Airport - Luffer Crane	AD	27 MAR 2019 / 31 DEC 2022	
042/2019	Paya Lebar Airport - Luffer Cranes	AD	04 APR 2019 / 31 DEC 2020	
043/2019	Paya Lebar Airport - Saddle Cranes	AD	04 APR 2019 / 31 DEC 2020	
044/2019	Paya Lebar Airport - Luffer Crane	AD	04 APR 2019 / 13 MAR 2021	
049/2019	Paya Lebar Airport - Topless Cranes	AD	07 MAY 2019 / 30 DEC 2020	
050/2019	Paya Lebar Airport - Crawler Crane	AD	07 MAY 2019 / 30 NOV 2020	
051/2019	Paya Lebar Airport - Luffer Crane	AD	07 MAY 2019 / 22 APR 2021	
053/2019	Paya Lebar Airport - Saddle Cranes and Luffer Crane	AD	07 MAY 2019 / 31 DEC 2023	
055/2019	Paya Lebar Airport - Topless Cranes	AD	07 MAY 2019 / 25 APR 2021	
060/2019	Paya Lebar Airport - Topless Crane	AD	06 JUN 2019 / 14 NOV 2021	
066/2019	Paya Lebar Airport - Luffing Crane	AD	04 JUL 2019 / 16 JUN 2021	
067/2019	Paya Lebar Airport - Topless Cranes	AD	04 JUL 2019 / 30 JUN 2021	
068/2019	Paya Lebar Airport - Luffing Crane	AD	04 JUL 2019 / 30 DEC 2021	
069/2019	Paya Lebar Airport - Luffing Crane	AD	04 JUL 2019 / 30 DEC 2020	
073/2019	Paya Lebar Airport - Luffer Cranes	AD	19 AUG 2019 / 31 DEC 2021	
075/2019	Paya Lebar Airport - Luffing Crane	AD	19 AUG 2019 / 31 DEC 2021	
091/2019	Paya Lebar Airport - Cranes	AD	10 SEP 2019 / 30 DEC 2021	
095/2019	Paya Lebar Airport - Mobile Cranes	AD	10 SEP 2019 / 30 DEC 2020	
096/2019	Paya Lebar Airport - Flat Top Cranes	AD	10 SEP 2019 / 31 DEC 2020	
097/2019	Paya Lebar Airport - Cranes	AD	10 SEP 2019 / 31 DEC 2020	
100/2019	Paya Lebar Airport - Cranes	AD	10 SEP 2019 / 31 DEC 2020	
105/2019	Paya Lebar Airport - Cranes	AD	10 OCT 2019 / 31 DEC 2020	
108/2019	Paya Lebar Airport - Cranes	AD	10 OCT 2019 / 30 DEC 2020	
116/2019	Paya Lebar Airport - Luffer Cranes	AD	12 NOV 2019 / 30 NOV 2020	
117/2019	Paya Lebar Airport - Luffing Crane	AD	12 NOV 2019 / 31 MAR 2021	
118/2019	Paya Lebar Airport - Flat Top Cranes	AD	12 NOV 2019 / 31 DEC 2020	
120/2019	Paya Lebar Airport - Topless Cranes	AD	12 NOV 2019 / 31 DEC 2020	
123/2019	Paya Lebar Airport - Mobile Crane	AD	12 NOV 2019 / 31 DEC 2020	

NR/Year	Subject	AIP section(s) affected	Period of validity (from/to)	Cancellation record
124/2019	Paya Lebar Airport - Cranes	AD	12 NOV 2019 / 31 DEC 2020	
125/2019	Paya Lebar Airport - Luffer Cranes	AD	12 NOV 2019 / 31 DEC 2020	
126/2019	Paya Lebar Airport - Luffer Cranes	AD	12 NOV 2019 / 31 DEC 2022	
128/2019	Paya Lebar Airport - Obstacles	AD	05 DEC 2019 / 21 NOV 2020	
129/2019	Paya Lebar Airport - Cranes	AD	05 DEC 2019 / 20 NOV 2020	
131/2019	Paya Lebar Airport - Cranes	AD	31 DEC 2019 / 31 DEC 2020	
136/2019	Paya Lebar Airport - Cranes	AD	05 DEC 2019 / 31 DEC 2020	
002/2020	Paya Lebar Airport - Luffing Crane	AD	14 JAN 2020 / 31 DEC 2020	
003/2020	Paya Lebar Airport - Topless Cranes	AD	08 JAN 2020 / 05 JAN 2021	
004/2020	Paya Lebar Airport - Mobile Cranes	AD	08 JAN 2020 / 20 JUN 2021	
005/2020	Paya Lebar Airport - Luffer Cranes	AD	08 JAN 2020 / 15 DEC 2020	
006/2020	Paya Lebar Airport - Topless Cranes	AD	08 JAN 2020 / 31 DEC 2020	
008/2020	Paya Lebar Airport - Luffing Crane	AD	11 FEB 2020 / 05 APR 2021	
009/2020	Paya Lebar Airport - Topless Cranes	AD	11 FEB 2020 / 30 APR 2021	
012/2020	Paya Lebar Airport - Luffer Crane	AD	11 FEB 2020 / 01 FEB 2021	
014/2020	Paya Lebar Airport - Luffer Cranes	AD	11 FEB 2020 / 31 DEC 2020	
015/2020	Paya Lebar Airport - Saddle Cranes	AD	11 FEB 2020 / 31 DEC 2020	
017/2020	Paya Lebar Airport - Luffing Crane	AD	11 FEB 2020 / 31 DEC 2020	
018/2020	Paya Lebar Airport - Luffer Crane	AD	11 FEB 2020 / 31 JAN 2021	
019/2020	Paya Lebar Airport - Luffer Crane	AD	11 FEB 2020 / 31 JAN 2021	
021/2020	Singapore Changi Airport - Long term closure of aircraft stand E5 at Terminal 2, Singapore Changi Airport	AD	30 MAR 2020 / 30 DEC 2024	
024/2020	Paya Lebar Airport - Mobile Cranes	AD	10 MAR 2020 / 31 DEC 2020	
025/2020	Paya Lebar Airport - Luffing Cranes	AD	10 MAR 2020 / 31 DEC 2021	
028/2020	Paya Lebar Airport - Mobile Cranes	AD	19 MAY 2020 / 31 DEC 2020	
029/2020	Paya Lebar Airport - Luffer Cranes	AD	19 MAY 2020 / 05 APR 2021	
030/2020	Paya Lebar Airport - Luffer Cranes	AD	19 MAY 2020 / 31 DEC 2020	
031/2020	Paya Lebar Airport - Cranes	AD	19 MAY 2020 / 31 MAR 2021	
032/2020	Paya Lebar Airport - Luffing Cranes	AD	19 MAY 2020 / 05 APR 2021	
033/2020	Paya Lebar Airport - Cranes	AD	19 MAY 2020 / 31 DEC 2021	

NR/Year	Subject	AIP section(s) affected	Period of validity (from/to)	Cancellation record
034/2020	Paya Lebar Airport - Cranes	AD	19 MAY 2020 / 31 DEC 2021	
035/2020	Paya Lebar Airport - Luffing Crane	AD	19 MAY 2020 / 30 DEC 2021	
036/2020	Paya Lebar Airport - Cranes	AD	19 MAY 2020 / 01 MAR 2021	
037/2020	Paya Lebar Airport - Crawler Cranes	AD	19 MAY 2020 / 10 APR 2021	
038/2020	Paya Lebar Airport - Topless Cranes	AD	19 MAY 2020 / 01 APR 2021	
042/2020	Paya Lebar Airport - Crawler Crane	AD	12 JUN 2020 / 05 MAY 2021	
043/2020	Paya Lebar Airport - Topless Cranes	AD	12 JUN 2020 / 31 MAY 2021	
044/2020	Paya Lebar Airport - Obstacles	AD	12 JUN 2020 / 31 DEC 2021	
045/2020	Paya Lebar Airport - Topless Cranes	AD	12 JUN 2020 / 01 MAY 2021	
046/2020	Paya Lebar Airport - Luffer Crane	AD	12 JUN 2020 / 31 MAR 2021	
047/2020	Paya Lebar Airport - Saddle Crane	AD	12 JUN 2020 / 16 APR 2021	
048/2020	Paya Lebar Airport - Topless Cranes	AD	31 JUL 2020 / 01 AUG 2021	
049/2020	Paya Lebar Airport - Cranes	AD	12 JUN 2020 / 15 MAY 2021	
050/2020	Paya Lebar Airport - Mobile Crane	AD	12 JUN 2020 / 30 APR 2021	
051/2020	Paya Lebar Airport - Topless Crane	AD	12 JUN 2020 / 12 APR 2021	
052/2020	Paya Lebar Airport - Crawler Crane	AD	12 JUN 2020 / 31 DEC 2021	
053/2020	Sembawang Aerodrome - Saddle Cranes	AD	15 JUN 2020 / 30 DEC 2021	
055/2020	Paya Lebar Airport - Cranes	AD	16 JUL 2020 / 15 DEC 2020	
056/2020	Paya Lebar Airport - Flat Top Cranes	AD	16 JUL 2020 / 30 DEC 2021	
057/2020	Paya Lebar Airport - Flat Top Cranes	AD	16 JUL 2020 / 30 DEC 2021	
058/2020	Sembawang Aerodrome - Mobile Crane	AD	16 JUL 2020 / 24 JUN 2021	
059/2020	Singapore Changi Airport - Long term closure of aircraft stand E20 at Terminal 2, Singapore Changi Airport	AD	25 AUG 2020 / 30 DEC 2026	
060/2020	Paya Lebar Airport - Topless Cranes	AD	06 AUG 2020 / 30 JUN 2021	
061/2020	Paya Lebar Airport - Luffer Cranes	AD	06 AUG 2020 / 26 JUL 2021	
062/2020	Paya Lebar Airport - Topless Cranes	AD	06 AUG 2020 / 31 MAY 2021	
063/2020	Paya Lebar Airport - Cranes	AD	06 AUG 2020 / 19 JUN 2021	
064/2020	Paya Lebar Airport - Luffing Crane	AD	06 AUG 2020 / 30 MAR 2021	
065/2020	Paya Lebar Airport - Cranes	AD	06 AUG 2020 / 31 DEC 2021	
066/2020	Paya Lebar Airport - Topless Cranes	AD	06 AUG 2020 / 31 DEC 2021	

NR/Year	Subject	AIP section(s) affected	Period of validity (from/to)	Cancellation record
067/2020	Paya Lebar Airport - Luffing Cranes	AD	06 AUG 2020 / 01 AUG 2021	
068/2020	Paya Lebar Airport - Topless Cranes	AD	17 SEP 2020 / 01 SEP 2021	
069/2020	Paya Lebar Airport - Mobile Crane	AD	17 SEP 2020 / 27 AUG 2021	
070/2020	Paya Lebar Airport - Mobile Crane	AD	17 SEP 2020 / 27 AUG 2021	
071/2020	Paya Lebar Airport - Topless Cranes	AD	17 SEP 2020 / 29 AUG 2021	
072/2020	Paya Lebar Airport - Luffing Cranes	AD	17 SEP 2020 / 29 AUG 2021	
073/2020	Paya Lebar Airport - Cranes	AD	17 SEP 2020 / 01 JUN 2021	
074/2020	Paya Lebar Airport - Luffer Cranes	AD	17 SEP 2020 / 29 AUG 2021	
075/2020	Paya Lebar Airport - Mobile Crane	AD	17 SEP 2020 / 01 NOV 2021	
076/2020	Paya Lebar Airport - Topless Crane	AD	17 SEP 2020 / 01 SEP 2021	
077/2020	Paya Lebar Airport - Luffing Crane	AD	17 SEP 2020 / 31 DEC 2020	
078/2020	Paya Lebar Airport - Luffer Crane	AD	17 SEP 2020 / 06 AUG 2021	
079/2020	Paya Lebar Airport - Luffer Cranes	AD	17 SEP 2020 / 06 AUG 2021	
080/2020	Paya Lebar Airport - Mobile Crane	AD	17 SEP 2020 / 30 JUN 2021	
081/2020	Paya Lebar Airport - Luffing Cranes	AD	17 SEP 2020 / 30 DEC 2021	
082/2020	Paya Lebar Airport - Mobile Crane	AD	17 SEP 2020 / 31 DEC 2020	
083/2020	Paya Lebar Airport - Cranes	AD	17 SEP 2020 / 09 DEC 2021	
084/2020	Departure and Arrival Procedures for Singapore Changi Airport	AD	03 DEC 2020 PERM	
085/2020	Singapore Changi Airport - Updated information and data for runway 02R/20L and connecting taxiways	AD	03 DEC 2020 PERM	
086/2020	Paya Lebar Airport - Cranes	AD	08 OCT 2020 / 20 DEC 2021	
087/2020	Paya Lebar Airport - Topless Cranes	AD	08 OCT 2020 / 01 MAY 2021	
088/2020	Paya Lebar Airport - Mobile Cranes	AD	08 OCT 2020 / 01 JUL 2021	
089/2020	Paya Lebar Airport - Luffing Crane	AD	08 OCT 2020 / 31 DEC 2021	
090/2020	Paya Lebar Airport - Topless Cranes	AD	08 OCT 2020 / 01 OCT 2021	
091/2020	Paya Lebar Airport - Luffing Crane	AD	08 OCT 2020 / 31 DEC 2021	
092/2020	Paya Lebar Airport - Luffer Cranes	AD	08 OCT 2020 / 31 DEC 2021	
093/2020	Paya Lebar Airport - Mobile Cranes	AD	08 OCT 2020 / 01 NOV 2021	
094/2020	Paya Lebar Airport - Luffing Cranes	AD	08 OCT 2020 / 01 OCT 2021	
095/2020	Paya Lebar Airport - Flat Top Cranes	AD	02 NOV 2020 / 31 DEC 2021	

NR/Year	Subject	AIP section(s) affected	Period of validity (from/to)	Cancellation record
096/2020	Paya Lebar Airport - Luffing Cranes	AD	08 OCT 2020 / 14 SEP 2021	
097/2020	Paya Lebar Airport - Saddle Cranes	AD	08 OCT 2020 / 31 DEC 2021	
098/2020	Paya Lebar Airport - Topless Crane	AD	08 OCT 2020 / 01 OCT 2021	
099/2020	Paya Lebar Airport - Mobile Crane	AD	08 OCT 2020 / 01 JUL 2021	
100/2020	Singapore Changi Airport - Partial closure of taxilane R1 and temporary revision/removal of ground markings at taxilane R1 at Terminal 2	AD	18 NOV 2020 / 12 MAY 2021	
101/2020	Singapore Changi Airport - Works schedule and movement area restrictions pertaining to Changi East development works	AD	25 OCT 2020 / 02 DEC 2020	
102/2020	Singapore Changi Airport - Closure of runway 02C/20C due to Changi East development works	AD	03 DEC 2020 / 19 MAY 2021	

Part 1 – General (GEN)					
GEN 0					
GEN 0.1-1	26 MAR 2020	GEN 3.2-1	10 OCT 2019	ENR 1.6-6	29 MAR 2018
GEN 0.1-2	10 OCT 2019	GEN 3.2-2	31 MAR 2016	ENR 1.6-7	29 MAR 2018
GEN-0.1-3	08 NOV 2018	GEN 3.2-3	31 MAR 2016	ENR 1.6-8	29 MAR 2018
GEN 0.2-1	13 SEP 2018	GEN 3.2-4	05 NOV 2020	ENR-1.6-9	21 JUL 2016
GEN 0.2-2	05 NOV 2020	GEN 3.2-5	25 APR 2019	ENR-1.6-11	21 JUL 2016
GEN 0.3-1	05 NOV 2020	GEN 3.2-6	31 MAR 2016	ENR 1.7-1	15 AUG 2019
GEN 0.3-2	05 NOV 2020	GEN 3.3-1	12 NOV 2015	ENR 1.7-2	15 AUG 2019
GEN 0.3-3	05 NOV 2020	GEN 3.3-2	05 NOV 2020	ENR 1.7-3	15 AUG 2019
GEN 0.3-4	05 NOV 2020	GEN 3.4-1	12 NOV 2015	ENR 1.7-4	15 AUG 2019
GEN 0.3-5	05 NOV 2020	GEN 3.4-2	10 SEP 2020	ENR 1.7-5	15 AUG 2019
GEN 0.3-6	05 NOV 2020	GEN 3.4-3	10 SEP 2020	ENR 1.7-6	15 AUG 2019
GEN 0.4-1	05 NOV 2020	GEN 3.4-4	10 SEP 2020	ENR 1.7-7	15 AUG 2019
GEN 0.4-2	05 NOV 2020	GEN 3.4-5	12 NOV 2015	ENR 1.8-1	10 OCT 2019
GEN 0.4-3	05 NOV 2020	GEN-3.4-7	10 SEP 2020	ENR 1.8-2	15 AUG 2019
GEN 0.5-1	30 JAN 2020	GEN-3.4-9	21 JUL 2016	ENR 1.8-3	15 AUG 2019
GEN 0.6-1	05 NOV 2020	GEN 3.5-1	25 APR 2019	ENR 1.8-4	15 AUG 2019
GEN 0.6-2	05 NOV 2020	GEN 3.5-2	10 SEP 2020	ENR 1.8-5	15 AUG 2019
GEN 0.6-3	30 JAN 2020	GEN 3.5-3	25 APR 2019	ENR 1.8-6	15 AUG 2019
GEN 1		GEN 3.5-4	08 NOV 2018	ENR 1.8-7	29 MAR 2018
GEN 1.1-1	05 DEC 2019	GEN 3.5-5	10 OCT 2019	ENR 1.8-8	29 MAR 2018
GEN 1.1-2	25 APR 2019	GEN 3.5-6	12 NOV 2015	ENR 1.8-9	29 MAR 2018
GEN 1.2-1	05 NOV 2020	GEN 3.5-7	25 APR 2019	ENR 1.8-10	29 MAR 2018
GEN 1.2-2	30 JAN 2020	GEN 3.5-8	25 APR 2019	ENR 1.8-11	29 MAR 2018
GEN 1.2-3	30 JAN 2020	GEN 3.5-9	08 NOV 2018	ENR 1.8-12	15 AUG 2019
GEN 1.2-4	21 MAY 2020	GEN 3.6-1	12 NOV 2015	ENR 1.8-13	15 AUG 2019
GEN 1.2-5	30 JAN 2020	GEN 3.6-2	12 NOV 2015	ENR 1.8-14	15 AUG 2019
GEN 1.2-6	16 JUL 2020	GEN 3.6-3	12 NOV 2015	ENR 1.8-15	15 AUG 2019
GEN 1.2-7	30 JAN 2020	GEN 3.6-4	12 NOV 2015	ENR 1.8-16	15 AUG 2019
GEN 1.3-1	25 APR 2019	GEN-3.6-5	21 JUL 2016	ENR 1.8-17	15 AUG 2019
GEN 1.3-2	25 APR 2019	GEN 4		ENR 1.8-18	15 AUG 2019
GEN 1.3-3	25 APR 2019	GEN 4.1-1	15 SEP 2016	ENR 1.8-19	15 AUG 2019
GEN 1.3-4	25 APR 2019	GEN 4.2-1	24 MAY 2018	ENR 1.8-20	15 AUG 2019
GEN 1.3-5	25 APR 2019	GEN 4.2-2	12 NOV 2015	ENR 1.8-21	15 AUG 2019
GEN-1.3/ARR PAX FLOW	25 APR 2019	GEN 4.2-3	12 NOV 2015	ENR 1.8-22	15 AUG 2019
GEN-1.3/DEP PAX FLOW 1	25 APR 2019	GEN 4.2-4	12 NOV 2015	ENR 1.8-23	15 AUG 2019
GEN-1.3/DEP PAX FLOW 2	25 APR 2019	GEN 4.2-5	12 NOV 2015	ENR 1.8-24	15 AUG 2019
GEN 1.4-1	20 JUN 2019	GEN 4.2-6	12 NOV 2015	ENR 1.8-25	05 DEC 2019
GEN 1.4-2	05 NOV 2020	Part 2 – EN-ROUTE (ENR)		ENR 1.8-26	15 AUG 2019
GEN 1.4-3	05 NOV 2020	ENR 0		ENR 1.8-27	15 AUG 2019
GEN 1.5-1	12 NOV 2015	ENR 0.6-1	08 NOV 2018	ENR 1.8-28	15 AUG 2019
GEN 1.6-1	26 MAR 2020	ENR 0.6-2	15 AUG 2019	ENR 1.8-29	15 AUG 2019
GEN 1.6-2	05 NOV 2020	ENR 0.6-3	15 AUG 2019	ENR 1.9-1	30 JAN 2020
GEN 1.6-3	05 NOV 2020	ENR 0.6-4	30 JAN 2020	ENR 1.9-2	30 JAN 2020
GEN 1.6-4	05 NOV 2020	ENR 0.6-5	30 JAN 2020	ENR 1.9-3	10 SEP 2020
GEN 1.7-1	03 JAN 2019	ENR 0.6-6	26 MAR 2020	ENR 1.9-4	10 SEP 2020
GEN 1.7-2	26 MAR 2020	ENR 1		ENR 1.9-5	10 SEP 2020
GEN 1.7-3	26 MAR 2020	ENR 1.1-1	25 APR 2019	ENR 1.9-6	30 JAN 2020
GEN 1.7-4	26 MAR 2020	ENR 1.1-2	12 NOV 2015	ENR 1.10-1	10 OCT 2019
GEN 2		ENR 1.1-3	12 NOV 2015	ENR 1.10-2	10 SEP 2020
GEN 2.1-1	12 NOV 2015	ENR 1.1-4	12 NOV 2015	ENR 1.10-3	05 NOV 2020
GEN 2.1-2	05 NOV 2020	ENR 1.1-5	12 NOV 2015		

ENR 3.1-3	28 FEB 2019	ENR 4.1-1	02 MAR 2017	AD 2.WSSS-25	10 SEP 2020
ENR 3.1-4	10 NOV 2016	ENR 4.1-2	02 MAR 2017	AD 2.WSSS-26	10 SEP 2020
ENR 3.1-5	12 NOV 2015	ENR 4.3-1	12 NOV 2015	AD 2.WSSS-27	10 SEP 2020
ENR 3.1-6	02 MAR 2017	ENR 4.4-1	19 JUL 2018	AD 2.WSSS-28	10 SEP 2020
ENR 3.1-7	05 DEC 2019	ENR 4.4-2	19 JUL 2018	AD 2.WSSS-29	10 SEP 2020
ENR 3.1-8	10 NOV 2016	ENR 4.4-3	19 JUL 2018	AD 2.WSSS-30	10 SEP 2020
ENR 3.1-9	12 NOV 2015	ENR 4.4-4	10 SEP 2020	AD 2.WSSS-31	10 SEP 2020
ENR 3.1-10	02 MAR 2017	ENR 4.4-5	10 SEP 2020	AD 2.WSSS-32	10 SEP 2020
ENR 3.1-11	02 MAR 2017	ENR 4.4-6	10 SEP 2020	AD 2.WSSS-33	10 SEP 2020
ENR 3.1-12	10 NOV 2016	ENR 4.5-1	10 SEP 2020	AD 2.WSSS-34	10 SEP 2020
ENR 3.1-13	19 JUL 2018	ENR 5		AD 2.WSSS-35	10 SEP 2020
ENR 3.1-14	02 MAR 2017			AD 2.WSSS-36	10 SEP 2020
ENR 3.1-15	12 NOV 2015	ENR 5.1-1	30 JAN 2020	AD 2.WSSS-37	10 SEP 2020
ENR 3.1-16	02 MAR 2017	ENR 5.1-2	30 JAN 2020	AD 2.WSSS-38	10 SEP 2020
ENR 3.1-17	12 NOV 2015	ENR 5.1-3	10 OCT 2019	AD 2.WSSS-39	10 SEP 2020
ENR 3.1-18	02 MAR 2017	ENR 5.1-4	10 OCT 2019	AD 2.WSSS-40	10 SEP 2020
ENR 3.1-19	02 MAR 2017	ENR 5.1-5	10 OCT 2019	AD 2.WSSS-41	10 SEP 2020
ENR 3.1-20	12 NOV 2015	ENR 5.1-7	30 JAN 2020	AD-2.WSSS-ADC-1	15 SEP 2016
ENR-3.1/ATS Chart	05 NOV 2020	ENR 5.1-9	30 JAN 2020	AD-2.WSSS-ADC-2	10 SEP 2020
ENR 3.3-1	07 DEC 2017	ENR 5.2-1	03 JAN 2019	AD-2.WSSS-ADC-3	10 SEP 2020
ENR 3.3-2	02 MAR 2017	ENR 5.2-2	03 JAN 2019	AD-2.WSSS-AOC-1	16 JUL 2020
ENR 3.3-3	19 JUL 2018	ENR 5.2-3	03 JAN 2019	AD-2.WSSS-AOC-2	16 JUL 2020
ENR 3.3-4	12 NOV 2015	ENR 5.3-1	10 SEP 2020	AD-2.WSSS-AOC-3	16 JUL 2020
ENR 3.3-5	12 NOV 2015	ENR 5.4-1	12 NOV 2015	AD-2.WSSS-PATC-1	10 OCT 2019
ENR 3.3-6	22 JUN 2017	ENR 5.5-1	03 JAN 2019	AD-2.WSSS-PATC-2	01 FEB 2018
ENR 3.3-7	10 OCT 2019	ENR 5.6-1	21 MAY 2020	AD-2.WSSS-SID-1 to 1.1	16 JUL 2020
ENR 3.3-8	02 MAR 2017	ENR 5.6-2	12 NOV 2015	AD-2.WSSS-SID-2 to 2.1	05 NOV 2020
ENR 3.3-9	07 DEC 2017	ENR 6		AD-2.WSSS-SID-3 to 3.1	16 JUL 2020
ENR 3.3-10	07 DEC 2017			AD-2.WSSS-SID-4 to 4.1	05 NOV 2020
ENR 3.3-11	29 MAR 2018	ENR 6-1	15 SEP 2016	AD-2.WSSS-SID-5 to 5.1	16 JUL 2020
ENR 3.3-12	19 JUL 2018	ERC-6-1 En-Route Chart	05 NOV 2020	AD-2.WSSS-SID-6 to 6.1	05 NOV 2020
ENR 3.3-13	07 DEC 2017	WAC-2860-Singapore-Island	30 JAN 2020	AD-2.WSSS-SID-7 to 7.1	16 JUL 2020
ENR 3.3-14	07 DEC 2017	Part 3 – AERODROMES (AD)		AD-2.WSSS-SID-8 to 8.1	05 NOV 2020
ENR 3.3-15	07 DEC 2017	AD 0		AD-2.WSSS-SID-9 to 9.1	16 JUL 2020
ENR 3.3-16	07 DEC 2017			AD-2.WSSS-SID-10 to 10.1	16 JUL 2020
ENR 3.3-17	07 DEC 2017			AD-2.WSSS-SID-11 to 11.1	05 NOV 2020
ENR 3.3-18	07 DEC 2017	AD 0.6-1	10 SEP 2020	AD-2.WSSS-SID-12 to 12.1	05 NOV 2020
ENR 3.3-19	19 JUL 2018	AD 0.6-2	10 SEP 2020	AD-2.WSSS-SID-13 to 13.1	16 JUL 2020
ENR 3.3-20	07 DEC 2017	AD 0.6-3	10 SEP 2020	AD-2.WSSS-SID-14 to 14.1	05 NOV 2020
ENR 3.3-21	19 JUL 2018	AD 0.6-4	16 JUL 2020	AD-2.WSSS-SID-15 to 15.1	05 NOV 2020
ENR 3.3-22	19 JUL 2018	AD 0.6-5	16 JUL 2020	AD-2.WSSS-SID-16 to 16.1	16 JUL 2020
ENR 3.3-23	07 DEC 2017	AD 0.6-6	19 JUL 2018	AD-2.WSSS-SID-17 to 17.1	05 NOV 2020
ENR 3.3-24	07 DEC 2017	AD 0.6-7	19 JUL 2018	AD-2.WSSS-SID-18 to 18.1	16 JUL 2020
ENR 3.3-25	07 DEC 2017	AD 1		AD-2.WSSS-STAR-1 to 1.1	16 JUL 2020
ENR 3.3-26	07 DEC 2017			AD-2.WSSS-STAR-2 to 2.1	16 JUL 2020
ENR 3.3-27	07 DEC 2017	AD 1.1-1	12 NOV 2015	AD-2.WSSS-STAR-3 to 3.1	16 JUL 2020
ENR 3.3-28	07 DEC 2017	AD 1.1-2	12 NOV 2015	AD-2.WSSS-STAR-4 to 4.1	16 JUL 2020
ENR 3.3-29	19 JUL 2018	AD 1.1-3	15 AUG 2019	AD-2.WSSS-STAR-5 to 5.1	16 JUL 2020
ENR 3.3-30	07 DEC 2017	AD 1.1-4	15 AUG 2019	AD-2.WSSS-STAR-6 to 6.1	16 JUL 2020
ENR 3.3-31	07 DEC 2017	AD 1.2-1	12 NOV 2015	AD-2.WSSS-STAR-7 to 7.1	16 JUL 2020
ENR 3.3-32	07 DEC 2017	AD 1.3-1	12 NOV 2015	AD-2.WSSS-STAR-8 to 8.1	16 JUL 2020
ENR 3.3-33	07 DEC 2017	AD-1.3-3	21 JUL 2016	AD-2.WSSS-STAR-9 to 9.1	16 JUL 2020
ENR 3.3-34	07 DEC 2017	AD 1.4-1	12 NOV 2015	AD-2.WSSS-STAR-11 to 11.1	16 JUL 2020
ENR 3.3-35	07 DEC 2017	AD 1.5-1	10 SEP 2020	AD-2.WSSS-STAR-13 to 13.1	16 JUL 2020
ENR 3.3-36	07 DEC 2017	AD 2		AD-2.WSSS-STAR-14 to 14.1	16 JUL 2020
ENR 3.3-37	07 DEC 2017			AD-2.WSSS-STAR-15 to 15.1	16 JUL 2020
ENR 3.3-38	07 DEC 2017	AD 2.WSSS-1	10 SEP 2020	AD-2.WSSS-STAR-16 to 16.1	16 JUL 2020
ENR 3.3-39	07 DEC 2017	AD 2.WSSS-2	10 SEP 2020	AD-2.WSSS-STAR-17 to 17.1	16 JUL 2020
ENR 3.3-40	07 DEC 2017	AD 2.WSSS-3	10 SEP 2020	AD-2.WSSS-STAR-18 to 18.1	16 JUL 2020
ENR 3.3-41	07 DEC 2017	AD 2.WSSS-4	10 SEP 2020	AD-2.WSSS-STAR-19 to 19.1	16 JUL 2020
ENR 3.3-42	07 DEC 2017	AD 2.WSSS-5	10 SEP 2020	AD-2.WSSS-STAR-20 to 20.1	16 JUL 2020
ENR 3.3-43	07 DEC 2017	AD 2.WSSS-6	10 SEP 2020	AD-2.WSSS-STAR-21 to 21.1	16 JUL 2020
ENR 3.3-44	10 SEP 2020	AD 2.WSSS-7	10 SEP 2020	AD-2.WSSS-IAC-1	10 SEP 2020
ENR 3.4-1	12 NOV 2015	AD 2.WSSS-8	10 SEP 2020	AD-2.WSSS-IAC-2	10 SEP 2020
ENR 3.4-2	12 OCT 2017	AD 2.WSSS-9	10 SEP 2020	AD-2.WSSS-IAC-5	10 SEP 2020
ENR 3.4-3	28 FEB 2019	AD 2.WSSS-10	10 SEP 2020	AD-2.WSSS-IAC-6	10 SEP 2020
ENR 3.4-4	12 NOV 2015	AD 2.WSSS-11	10 SEP 2020	AD-2.WSSS-IAC-7	10 SEP 2020
ENR-3.4-5	08 NOV 2018	AD 2.WSSS-12	10 SEP 2020	AD-2.WSSS-IAC-9	05 NOV 2020
ENR-3.4-7	21 JUL 2016	AD 2.WSSS-13	10 SEP 2020	AD-2.WSSS-IAC-10	05 NOV 2020
ENR 3.5-1	02 MAR 2017	AD 2.WSSS-14	10 SEP 2020	AD-2.WSSS-IAC-11	05 NOV 2020
ENR 3.5-2	02 MAR 2017	AD 2.WSSS-15	10 SEP 2020	AD-2.WSSS-IAC-12	05 NOV 2020
ENR-3.5-3	30 JAN 2020	AD 2.WSSS-16	10 SEP 2020	AD-2.WSSS-VAC-1	10 SEP 2020
ENR 3.6-1	27 APR 2017	AD 2.WSSS-17	10 SEP 2020	AD 2.WSSL-1	10 SEP 2020
ENR 3.6-2	27 APR 2017	AD 2.WSSS-18	10 SEP 2020	AD 2.WSSL-2	28 FEB 2019
ENR-3.6-3	05 JAN 2017	AD 2.WSSS-19	10 SEP 2020	AD 2.WSSL-3	15 AUG 2019
ENR-3.6-5	30 JAN 2020	AD 2.WSSS-20	10 SEP 2020	AD 2.WSSL-4	05 DEC 2019
ENR-3.6-7	16 JUL 2020	AD 2.WSSS-21	10 SEP 2020	AD 2.WSSL-5	21 MAY 2020
ENR-3.6-9	16 JUL 2020	AD 2.WSSS-22	10 SEP 2020	AD 2.WSSL-6	15 AUG 2019
ENR 4		AD 2.WSSS-23	10 SEP 2020	AD 2.WSSL-7	15 AUG 2019
		AD 2.WSSS-24	10 SEP 2020	AD 2.WSSL-8	15 AUG 2019

AD 2.WSSL-9	15 AUG 2019	AD-2-WIDN-SID-4	12 NOV 2015
AD 2.WSSL-10	15 AUG 2019	AD-2-WIDN-STAR-1	12 NOV 2015
AD 2.WSSL-11	15 AUG 2019	AD-2-WIDN-STAR-2	12 NOV 2015
AD 2.WSSL-12	26 MAR 2020	AD-2-WIDN-STAR-3	21 JUL 2016
AD 2.WSSL-13	05 DEC 2019	AD-2-WIDN-STAR-4	12 NOV 2015
AD 2.WSSL-14	15 AUG 2019		
AD 2.WSSL-15	10 SEP 2020		
AD 2.WSSL-16	10 OCT 2019		
AD 2.WSSL-17	05 NOV 2020		
AD 2.WSSL-18	05 NOV 2020		
AD 2.WSSL-19	15 AUG 2019		
AD 2.WSSL-20	10 OCT 2019		
AD 2.WSSL-21	05 NOV 2020		
AD 2.WSSL-22	10 OCT 2019		
AD 2.WSSL-23	05 NOV 2020		
AD 2.WSSL-24	15 AUG 2019		
AD 2.WSSL-25	10 OCT 2019		
AD-2-WSSL-ADC-1	16 JUL 2020		
AD-2-WSSL-ADC-2	16 JUL 2020		
AD-2-WSSL-ADC-3	16 JUL 2020		
AD-2-WSSL-AOC-1	16 JUL 2020		
AD-2-WSSL-AOC-2	16 JUL 2020		
AD-2-WSSL-VAC-1	16 JUL 2020		
AD-2-WSSL-VAC-2	16 JUL 2020		
AD-2-WSSL-VAC-3	16 JUL 2020		
AD-2-WSSL-VAC-4	16 JUL 2020		
AD-2-WSSL-VDC-1	16 JUL 2020		
AD-2-WSSL-VDC-2	16 JUL 2020		
AD-2-WSSL-VFR-1	15 AUG 2019		
AD-2-WSSL-IFR-1	10 OCT 2019		
AD-2-WSSL-IFR-2	10 OCT 2019		
AD 2.WSAP-1	16 JUL 2020		
AD 2.WSAP-2	19 JUL 2018		
AD 2.WSAP-3	10 OCT 2019		
AD 2.WSAP-4	19 JUL 2018		
AD 2.WSAP-5	10 OCT 2019		
AD 2.WSAP-6	12 OCT 2017		
AD 2.WSAP-7	19 JUL 2018		
AD 2.WSAP-8	10 SEP 2020		
AD 2.WSAP-9	16 JUL 2020		
AD 2.WSAP-10	16 JUL 2020		
AD 2.WSAP-11	10 SEP 2020		
AD-2-WSAP-ADC-1	16 JUL 2020		
AD-2-WSAP-ADC-2	16 JUL 2020		
AD-2-WSAP-AOC-1	16 JUL 2020		
AD-2-WSAP-IAC-1	10 SEP 2020		
AD-2-WSAP-IAC-2	16 JUL 2020		
AD-2-WSAP-IAC-3	10 SEP 2020		
AD-2-WSAP-IAC-4	16 JUL 2020		
AD-2-WSAP-IAC-5	10 SEP 2020		
AD-2-WSAP-IAC-6	10 SEP 2020		
AD 2.WSAT-1	16 JUL 2020		
AD 2.WSAT-2	26 MAR 2020		
AD 2.WSAT-3	25 APR 2019		
AD 2.WSAT-4	25 APR 2019		
AD 2.WSAT-5	10 SEP 2020		
AD 2.WSAT-6	16 JUL 2020		
AD 2.WSAT-7	12 NOV 2015		
AD 2.WSAT-8	12 NOV 2015		
AD-2-WSAT-ADC-1	16 JUL 2020		
AD 2.WSAG-1	16 JUL 2020		
AD 2.WSAG-2	08 NOV 2018		
AD 2.WSAG-3	10 SEP 2020		
AD 2.WSAG-4	16 JUL 2020		
AD 2.WMKJ-1	12 NOV 2015		
AD 2.WIDD-1	12 NOV 2015		
AD 2.WIDD-2	12 NOV 2015		
AD-2-WIDD-SID-1	12 NOV 2015		
AD-2-WIDD-SID-2	12 NOV 2015		
AD-2-WIDD-SID-3	12 NOV 2015		
AD-2-WIDD-SID-4	12 NOV 2015		
AD-2-WIDD-STAR-1	12 NOV 2015		
AD-2-WIDD-STAR-2	12 NOV 2015		
AD-2-WIDD-STAR-3	12 NOV 2015		
AD-2-WIDD-STAR-4	12 NOV 2015		
AD 2.WIDN-1	03 JAN 2019		
AD 2.WIDN-2	03 JAN 2019		
AD-2-WIDN-SID-1	12 NOV 2015		
AD-2-WIDN-SID-2	12 NOV 2015		
AD-2-WIDN-SID-3	12 NOV 2015		

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GEN 0.6 TABLE OF CONTENTS TO PART 1

GEN 0.1	PREFACE	GEN 0.1-1
1	Name of the publishing authority	GEN 0.1-1
2	Applicable ICAO documents	GEN 0.1-1
3	Publication Media	GEN 0.1-1
4	The AIP structure and established regular amendment interval	GEN 0.1-1
5	Service to contact in case of detected AIP errors or omissions	GEN 0.1-2
GEN 0.2	RECORD OF AIP AMENDMENTS	GEN 0.2-1
GEN 0.3	RECORD OF CURRENT AIP SUPPLEMENTS	GEN 0.3-1
GEN 0.4	CHECKLIST OF AIP PAGES	GEN 0.4-1
GEN 0.5	LIST OF HAND AMENDMENTS TO THE AIP	GEN 0.5-1
GEN 0.6	TABLE OF CONTENTS TO PART 1	GEN 0.6-1
GEN 1	NATIONAL REGULATIONS AND REQUIREMENTS	
GEN 1.1	DESIGNATED AUTHORITIES	GEN 1.1-1
1	CIVIL AVIATION	GEN 1.1-1
2	METEOROLOGY	GEN 1.1-1
3	CUSTOMS	GEN 1.1-1
4	IMMIGRATION	GEN 1.1-1
5	HEALTH	GEN 1.1-1
6	ENROUTE AND AERODROME CHARGES	GEN 1.1-2
7	AGRICULTURE QUARANTINE	GEN 1.1-2
8	TRANSPORT SAFETY INVESTIGATION BUREAU	GEN 1.1-2
GEN 1.2	ENTRY, TRANSIT AND DEPARTURE OF AIRCRAFT	GEN 1.2-1
1	INTRODUCTION	GEN 1.2-1
2	APPLICATION FOR SLOTS AT SINGAPORE CHANGI AIRPORT	GEN 1.2-1
3	SUBMISSION OF FLIGHT DETAILS AND APPLICATION FOR SLOTS AT SELETAR AIRPORT	GEN 1.2-2
4	CIVIL SCHEDULED FLIGHTS	GEN 1.2-3
5	CIVIL NON-SCHEDULED FLIGHTS	GEN 1.2-3
6	APPLICATION FOR TEST FLIGHTS	GEN 1.2-6
7	AIRCRAFT BANNED FROM OPERATIONS AT SINGAPORE AERODROMES	GEN 1.2-7
GEN 1.3	ENTRY, TRANSIT AND DEPARTURE OF PASSENGERS AND CREW	GEN 1.3-1
1	CUSTOMS REQUIREMENTS	GEN 1.3-1
2	IMMIGRATION REQUIREMENTS	GEN 1.3-2
3	PUBLIC HEALTH REQUIREMENTS	GEN 1.3-4
4	FLYING LICENCES AND RATINGS	GEN 1.3-5
GEN 1.4	ENTRY, TRANSIT AND DEPARTURE OF CARGO	GEN 1.4-1
1	CUSTOMS REQUIREMENTS CONCERNING CARGO AND OTHER ARTICLES	GEN 1.4-1
2	VETERINARY, ANIMALS, BIRDS, MEAT, FISH AND PLANT QUARANTINE REQUIREMENTS	GEN 1.4-1
3	REQUIREMENTS RELATING TO ARMS AND EXPLOSIVES	GEN 1.4-2
4	REQUIREMENTS FOR THE CARRIAGE OF DANGEROUS GOODS IN AIRCRAFT	GEN 1.4-2
5	REPORTING OF DANGEROUS GOODS ACCIDENT/INCIDENT	GEN 1.4-2
GEN 1.5	AIRCRAFT INSTRUMENTS, EQUIPMENT AND FLIGHT DOCUMENTS	GEN 1.5-1
1	MANDATORY CARRIAGE AND OPERATION OF AIRBORNE COLLISION AVOIDANCE SYSTEM (ACAS II)	GEN 1.5-1

GEN 1.6	SUMMARY OF NATIONAL REGULATIONS AND INTERNATIONAL AGREEMENTS/CONVENTIONS	GEN 1.6-1
1	LIST OF CIVIL AVIATION LEGISLATION, AIR NAVIGATION REGULATIONS AND ORDERS	GEN 1.6-1
2	TAXATION IN THE FIELD OF INTERNATIONAL AIR TRANSPORT	GEN 1.6-4
GEN 1.7	DIFFERENCES FROM ICAO STANDARDS, RECOMMENDED PRACTICES AND PROCEDURES	GEN 1.7-1
GEN 2	TABLES AND CODES	
GEN 2.1	MEASURING SYSTEM, AIRCRAFT MARKING, HOLIDAYS	GEN 2.1-1
1	UNITS OF MEASUREMENT	GEN 2.1-1
2	TIME SYSTEM	GEN 2.1-1
3	GEODETIC REFERENCE DATUM	GEN 2.1-1
4	AIRCRAFT NATIONALITY AND REGISTRATION MARKS	GEN 2.1-1
5	PUBLIC HOLIDAYS IN SINGAPORE	GEN 2.1-2
GEN 2.2	ABBREVIATIONS USED IN AIS PUBLICATIONS	GEN 2.2-1
GEN 2.3	CHART SYMBOLS	GEN 2.3-1
1	AERODROMES	GEN 2.3-1
2	AERODROME INSTALLATIONS AND LIGHTS	GEN 2.3-2
3	MISCELLANEOUS	GEN 2.3-3
GEN 2.4	LOCATION INDICATORS	GEN 2.4-1
GEN 2.5	LIST OF RADIO NAVIGATION AIDS	GEN 2.5-1
GEN 2.6	CONVERSIONS TABLES	GEN 2.6-1
GEN 2.7	SUNRISE/SUNSET TABLES	GEN 2.7-1
GEN 3	SERVICES	
GEN 3.1	AERONAUTICAL INFORMATION SERVICES	GEN 3.1-1
1	RESPONSIBLE SERVICE	GEN 3.1-1
2	AREA OF RESPONSIBILITY	GEN 3.1-1
3	AERONAUTICAL PUBLICATIONS	GEN 3.1-1
4	AIRAC SYSTEM	GEN 3.1-3
5	PRE-FLIGHT INFORMATION SERVICE AT AERODROMES	GEN 3.1-4
GEN 3.2	AERONAUTICAL CHARTS	GEN 3.2-1
1	RESPONSIBLE SERVICES	GEN 3.2-1
2	MAINTENANCE OF CHARTS	GEN 3.2-1
3	AVAILABILITY OF CHARTS	GEN 3.2-1
4	AERONAUTICAL CHART SERIES AVAILABLE	GEN 3.2-1
5	LIST OF AERONAUTICAL CHARTS AVAILABLE	GEN 3.2-4
6	INDEX TO THE WORLD AERONAUTICAL CHART (WAC) - ICAO 1:1 000 000	GEN 3.2-5
7	CORRECTIONS TO CHARTS NOT CONTAINED IN THE AIP	GEN 3.2-6
GEN 3.3	AIR TRAFFIC SERVICES	GEN 3.3-1
1	RESPONSIBLE SERVICE	GEN 3.3-1
2	AREA OF RESPONSIBILITY	GEN 3.3-1
3	TYPES OF SERVICES	GEN 3.3-1
4	CO-ORDINATION BETWEEN THE OPERATOR AND ATS	GEN 3.3-2
5	MINIMUM FLIGHT ALTITUDE	GEN 3.3-2
6	ATS UNITS ADDRESS LIST	GEN 3.3-2
GEN 3.4	COMMUNICATION SERVICES	GEN 3.4-1
1	RESPONSIBLE SERVICE	GEN 3.4-1
2	AREA OF RESPONSIBILITY	GEN 3.4-1

GEN 1.2 ENTRY, TRANSIT AND DEPARTURE OF AIRCRAFT

1 INTRODUCTION

- 1.1 International flights into, from or over Singapore territory shall be subject to the current Singapore regulations relating to civil aviation. These regulations correspond in all essentials to the Standards and Recommended Practices contained in Annex 9 to the Convention on International Civil Aviation.
- 1.2 Aircraft flying into or departing from Singapore territory shall make their first landing at, or final departure from an international aerodrome (see AIP Singapore page AD 1.3-1 and section AD 2).
- 1.3 Notwithstanding the regulations relating to civil aviation over Singapore territory, aircraft operators should consult the respective AIPs for other documentary and / or permit requirements for flights intending to enter, depart, and / or overfly the sovereign airspaces of States along the planned flight routes.
- 1.4 In particular, for Indonesian sovereign airspace within Singapore FIR, aircraft operators should also consult AIP Indonesia GEN 1.2 Entry, Transit and Departure of Aircraft at <https://aimindonesia.dephub.go.id> for Indonesia's requirements for flights intending to enter, depart, and/or overfly its sovereign airspace. Please note that this AIP's reference to these requirements is without prejudice to Singapore's legal position on such requirements.

← 2 APPLICATION FOR SLOTS AT SINGAPORE CHANGI AIRPORT

- 2.1 Singapore Changi Airport is a slot coordinated airport, with Changi Airport Group (CAG) as the Slot Coordinator. To ensure efficiency of aircraft operations and optimisation of airport resources, all operators of scheduled and non-scheduled (commercial and non-commercial) flights must obtain slots from the Changi Slot Coordinator prior to the operation of such flights.
- 2.2 To apply for slots for access to Singapore Changi Airport, all operators or agents of non-scheduled, commercial and non-commercial flights shall submit applications for slots via either a Slot Clearance Request (SCR) to the Changi Slot Coordinator, or for operators without a 2-letter IATA airline code, a General (Aviation) Clearance Request (GCR) through the Online Coordination System (OCS) (at www.online-coordination.com).
Changi Slot Coordinator
c/o Changi Airport Group (Singapore) Pte Ltd
Singapore Changi Airport
P.O. Box 168
Singapore 918146
[Email: csc@changiairport.com](mailto:csc@changiairport.com)
Tel: +65 6541 2378 or +65 6541 3064
- 2.3 Operators or agents of non-scheduled, commercial and non-commercial flights shall submit their slot requests to the Changi Slot Coordinator no earlier than 7 calendar days and but no later than 24 hours prior to the operation of the flight, for which the slot will be utilized.
- 2.4 To facilitate the optimisation of aircraft parking resources at Singapore Changi Airport, operators or agents of non-scheduled, commercial and non-commercial flights are strongly advised to limit their ground time to no more than 48 hours from the arrival slot timing.
- 2.5 For urgent non-scheduled, commercial and non-commercial flight operations that are less than 24 hours from the proposed date of operation, in addition to submitting the SCR/GCR, operators/agents must also inform the Airside Operations Section of CAG (Airside Management Centre) at +65 6603 4906 / +65 6541 2275 / +65 6541 2273.
- 2.6 **EXEMPT FLIGHTS**
- 2.6.1 Notwithstanding paragraph 2.1, the following types of flights may operate to / from Singapore Changi Airport without obtaining slots from the Changi Slot Coordinator:
- Emergency landings. e.g. diversions or quick returns after takeoff, oil spill response operations
 - Flights operating under diplomatic cover
 - Flights operated by the military, including those carrying supplies but excluding those chartered on a commercial basis by the military
 - Humanitarian flights including those responding to medical emergencies where the safety of human life is concerned or involved in search and rescue operations
 - Technical flights including radar and NAVAID calibration / check flights
- 2.7 **RESTRICTIONS ON OPERATION OF PROPELLER AIRCRAFT AT SINGAPORE CHANGI AIRPORT**
- 2.7.1 Both scheduled and non-scheduled (commercial and non-commercial) propeller aircraft operations will not be allocated new slots at Singapore Changi Airport.

3 SUBMISSION OF FLIGHT DETAILS AND APPLICATION FOR SLOTS AT SELETAR AIRPORT

- 3.1 Seletar Airport is a schedules facilitated airport, with Changi Airport Group (CAG) as the Seletar Schedules Facilitator. To ensure efficiency of aircraft operations and optimisation of airport resources, all operators of non-scheduled (commercial and non-commercial) flights must submit details of their planned operations to the Seletar Schedules Facilitator prior to these operations. Operators shall also be prepared to make adjustments to their schedules when necessary as advised by the Seletar Schedules Facilitator to ensure that airport capacity parameters are not exceeded. In addition, all operators of scheduled flights must obtain slots from the Seletar Schedules Facilitator prior to the operation of such flights. No operation will be permitted without the approval of the Seletar Schedules Facilitator.
- 3.2 For non-scheduled (commercial and non-commercial) flight operations, operators or agents shall submit details of their planned operations to seletar.airside@changiairport.com during the flights submission window, defined as no earlier than 7 calendar days but no later than 1400 UTC / 2200 LT on the day prior to the planned operations.
- 3.3 For urgent non-scheduled (commercial and non-commercial) flight operations of which details were not submitted during the flights submission window, operators or agents must submit the details to seletar.airside@changiairport.com and call to inform the Airside Operations Section of Seletar Airport at +65 6481 5077.
- 3.4 Operators or agents shall include the following details of the flight operations in their submission:
- Name of operator and appointed ground handling agent;
 - Date and time of arrival and departure (in local time);
 - Aircraft type and seat capacity;
 - Origin and destination;
 - Aircraft registration number; and
 - Purpose of flight (e.g. business aviation; general aviation; cargo; maintenance, repair and operations (MRO); etc.).
- 3.5 For scheduled flight operations, operators shall submit applications for slots via a Slot Clearance Request (SCR) to csc@changiairport.com.
- 3.6 All operators shall adhere to the IATA Worldwide Slot Guidelines (WSG). A copy of this document can be obtained from www.iata.org/wsg

3.7 EXEMPT FLIGHTS

- 3.7.1 Notwithstanding paragraph 3.1, the following types of flights may operate to / from Seletar Airport without submitting details of their flight operations to the Seletar Schedules Facilitator during the flights submission window as stipulated in paragraph 3.2:
- Emergency landings, e.g. diversions or quick returns after takeoff, oil spill response operations;
 - Flights operating under diplomatic cover;
 - Flights operated by the military, including those carrying supplies but excluding those chartered on a commercial basis by the military;
 - Humanitarian flights including those responding to medical emergencies where the safety of human life is concerned or involved in search & rescue operations; and
 - Technical flights including radar and NAVAID calibration /check flights.
- 3.7.2 However, operators or agents of exempt flights shall call to inform the Airside Operations Section of Seletar Airport at +65 6481 5077 of their flight operations in advance.

3.8 DESIGNATED HOURS FOR TRAINING FLIGHTS

- 3.8.1 To optimise the use of capacity, training and non-training flights will be segregated through designated hours for training flights. Non-training flights will not be permitted at Seletar Airport during the following periods from Tuesdays to Sundays:
- 0130 to 0230 UTC / 0930 to 1030 LT;
 - 0400 to 0500 UTC / 1200 to 1300 LT;
 - 0700 to 0800 UTC / 1500 to 1600 LT; and
 - 0900 to 1000 UTC / 1700 to 1800 LT.
- 3.8.2 All operators or agents and pilots are to plan their flight schedules with sufficient buffers to avoid the designated hours for training flights.
- 3.8.3 Notwithstanding paragraph 3.8.1, the following types of flights may be permitted during the designated hours for training flights:

GEN 1.4 ENTRY, TRANSIT AND DEPARTURE OF CARGO

1 CUSTOMS REQUIREMENTS CONCERNING CARGO AND OTHER ARTICLES

- 1.1 The following supporting documents: Airway Bill, Invoice, Packing List together with Customs Permits [for all goods including controlled goods, dutiable goods and goods subject to Goods and Services Tax (GST)] are to be produced if they are required for checks by Immigration and Checkpoints Authority officers at the checkpoint.
- 1.2 The following are applicable to the Free Trade Zone (FTZ):
- Transshipment within the same FTZ (In Through Airway Bill cases), no Customs documentation is required if the items are not controlled by the Competent Authorities (CAs);
 - Transshipment of controlled goods within the same FTZ (In Through Airway Bill cases), a transshipment (Through transshipment within the same FTZ) permit is required; and
 - Import for re-export within the same FTZ (In Non-Through Airway Bill cases), an import permit is required for the importation of goods into the FTZ and an export permit is required for the exportation of goods from the same FTZ.
- 1.3 Under the Strategic Goods (Control) Act (SGCA), goods in transshipment or transit are subject to controls under the full control list. No clearance documents are required for strategic goods in transshipment or transit which are taken into a FTZ immediately after they have been brought into Singapore and stay in the FTZ for not more than 45-days (for sea) / 21-days (for air) except for certain categories of goods. For transshipment and transit of certain sensitive strategic goods (listed under the Fourth and Fifth Schedule of the SGCR) and goods that are intended or likely to be used for nuclear, chemical or biological weapon purposes, or missiles capable of delivering such weapons (i.e. catch-all for WMD purposes), a strategic good permit is still required. Depending on the conditions stated in the permits, these goods may be required to be presented for Customs clearance at the checkpoint
- 1.4 For the exportation of dutiable goods from a Licensed Warehouse, or non-dutiable goods from a Zero-GST Warehouse, Customs outward permits are to be presented for checkpoint inspection and clearance.
- 1.5 For the importation and exportation of controlled goods, depending on the Competent Authorities' (CA) requirements, these goods may be required to be presented for Customs clearance at the checkpoint. For more information on the list of Controlled and Prohibited Goods for the importation and exportation of goods, please visit the respective pages on the Singapore Customs website. You may also refer to the [Strategic Goods](#) and the [United Nations Security Council Sanctions](#) webpages for more information on the relevant topics.

2 VETERINARY, ANIMALS, BIRDS, MEAT, FISH AND PLANT QUARANTINE REQUIREMENTS

- 2.1 Prior permission of the Agri-Food and Veterinary Authority (AVA) is required for import, export or transshipment of:
- Animals, birds, eggs, meat and meat products (including canned or processed meat), animal products, veterinary biological, fertilizers containing animal products;
 - Fish (for human consumption as well as for aquaria), fisheries products (in all forms), aquatic animals (alive or dead).
 - Plants and propagatable plant parts including cuttings, seeds and bulbs with or without potting medium, organic fertilisers of plant origin, live insects and microorganisms. Plant produce including cutflowers, fruits and vegetables from the American Tropics (between Lat 23 1 / 2 °N and 23 1 / 2 °S).
- 2.2 In the case of live animals, prior permission is also required for animals in transit. No prior permission required for transshipment of plants and plant products.
- 2.3 Prior permission of the Agri-Food and Veterinary Authority (AVA) is required for the import and export of all species of wild animals and plants and their parts or derivatives protected under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

3 REQUIREMENTS RELATING TO ARMS AND EXPLOSIVES

- ← 3.1 Arms, explosives and explosives precursors are items regulated under the Arms & Explosives Act, Chapter 13. Under the said Act, any import or export of any of these items will require a licence from the Police Licensing & Regulatory Department (PLRD). For avoidance of any doubt, any transshipment (i.e. import of goods into Singapore on one conveyance and moved to another conveyance for the sole purpose of export to any place outside of Singapore) would similarly require an import and export licence respectively.
- 3.2 Application for the necessary licences can be submitted via Singapore Custom's TradeNet website (for traders) or GoBusiness website (<https://www.gobusiness.gov.sg>). More information can be obtained from PLRD's website at <https://www.police.gov.sg/licence> or email: spf_licensing_feedback@spf.gov.sg.

← 4 REQUIREMENTS FOR THE CARRIAGE OF DANGEROUS GOODS IN AIRCRAFT

4.1 DANGEROUS GOODS

- 4.1.1 Paragraph 50D of the Air Navigation Order state that dangerous goods shall not be carried or have loaded in an aircraft unless the operator of the aircraft has been granted with a dangerous goods permit granted by the Director-General of Civil Aviation and in accordance with any conditions which may be imposed. This provision applies to all aircraft flying to, from or over the Republic of Singapore, and to Singapore registered aircraft wherever they may be. Where an operator of an aircraft has diplomatic clearance from the Ministry of Foreign Affairs to land the aircraft in Singapore, the operator is not required, for the period of time that the diplomatic clearance is valid, to obtain a dangerous goods permit.
- 4.1.2 A dangerous goods permit, if granted, is subject to compliance with Annex 18 to the Convention on International Civil Aviation and the latest edition of the ICAO Technical Instructions relating to the Safe Transport of Dangerous Goods by Air.
- 4.1.3 Operators who wish to carry dangerous goods should submit their applications to the address below, in the prescribed form, giving full details of the consignment:
- Flight Standards Division
Civil Aviation Authority of Singapore
Singapore Changi Airport
P.O.Box 1, Singapore 918141
FAX: (65) 65456519
TEL: (65) 65413487

Each application must be supported by a shipper's declaration form, airway bill and commercial invoice. All airline operators planning to carry dangerous goods to, from or through Singapore may request for the application forms from Flight Standards Division, CAAS (email: CAAS_dangerousgoods@caas.gov.sg). These applications should be submitted at least 7 working days before the intended date of carriage.

← 5 REPORTING OF DANGEROUS GOODS ACCIDENT/INCIDENT

- 5.1 Operators are required to submit a written report to the CAAS within 24 hours of the occurrence coming to the knowledge of the person making the report in the event of any dangerous goods accident, dangerous goods incident or the finding of undeclared or mis declared munitions of war or dangerous goods in cargo or passenger's baggage on board any aircraft operated by that operator.
- 5.2 When any dangerous goods accident occurs on board any Singapore aircraft, or any aircraft that lands in or departs from Singapore, the operator of that aircraft should notify CAAS immediately through the most expeditious means (i.e. Telephone call or SMS etc.) and submit a written notification within 3 hours from immediate notification. The initial report may be made by any means but a written report utilising Part 4 of CAAS AW139 form, including all relevant documents, should be sent as soon as possible and which shall in any case be within 24 hours, even if all the information is not available. The report should then be updated as soon as more information becomes available.
- 5.3 Where any information referred to in paragraph 5.4 below is not in the possession of the person making a report, that person shall dispatch the information in a form as specified by the Chief Executive, and by the quickest available means within 24 hours of the information coming into his possession.

- 5.4 A report required shall contain such of the following information as is appropriate to the occurrence:
- date of the occurrence;
 - State of the operator;
 - State of origin;
 - State of registry;
 - location of the occurrence, flight number and flight date;
 - description of the goods and the reference number of the airway bill, pouch, baggage tag and ticket;
 - proper shipping name (including the technical name, if applicable);
 - UN or ID number, whichever is applicable;
 - class or division of the goods in accordance with the Technical Instructions and any subsidiary risk;
 - type of packaging and the packaging specification marking;
 - quantity of the munitions of war or dangerous goods;
 - name and address of the shipper or passenger;
 - suspected cause of the occurrence;
 - action taken upon discovery of the occurrence, including any mitigation measures;
 - any serious injury, death or damage of property caused by the occurrence;
 - any other reporting action taken;
 - name, title, address and contact number of the reporter;
 - any other relevant details.
- 5.5 All formal written notifications shall be made by the air operator through the submission of the Part 4 of CAAS AW139 form in an email to CAAS at "caas_dfirs@caas.gov.sg" or in any other manner acceptable to CAAS. Providing it is safe to do so, all dangerous goods, packaging, documents, etc., relating to the occurrence must be retained by the operator and its agent until CAAS authorises its release.
- 5.6 The prescribed form above is available on the CAAS website from the following link below:
http://www.caas.gov.sg/caas/en/eServices_Forms/sai_reporting.html?_locale=en
- 5.7 The existing CAAS FO130 (Dangerous Goods Occurrence Report) form has been discontinued from 1st April 2011.

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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.

Copies of the legislation may be obtained as follows:

Electronic versions of the legislation may be freely accessed at

<http://sso.agc.gov.sg>

<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 (by post) from:

Post:

Toppan Leefung Pte. Ltd.,
No. 1 Kim Seng Promenade, #18-01,
Great World City, East Tower
Singapore 237994.

Tel: (65) 68269600

Fax: (65) 68203341

URL: www.toppanleefung.com

1.1 CIVIL AVIATION LEGISLATION

No	Legislation	Citation
<u>Civil Aviation Authority of Singapore Act & related legislation</u>		
1	Civil Aviation Authority of Singapore Act	Cap. 41 (2014 Rev Ed.)
2	Civil Aviation Authority of Singapore (Airport Development Levy) Order 2018	S437/2018
3	Civil Aviation Authority of Singapore (Aviation Levy) Order 2018	S522/2018
4	Civil Aviation Authority of Singapore (Changi Airport) By-laws 2009	S313/2009
5	Civil Aviation Authority of Singapore (Changi Airport) Notification 2009	S293/2009
6	Civil Aviation Authority of Singapore (Composition of Offences) Regulations 2009	S315/2009
7	Civil Aviation Authority of Singapore (Licensing of Airport Operators) Regulations 2009	S311/2009
8	Civil Aviation Authority of Singapore (Price Control of Aeronautical Charges) Rules 2009	S298/2009
9	Civil Aviation Authority of Singapore (Seletar Airport) By-laws 2009	S314/2009
10	Civil Aviation Authority of Singapore (Seletar Airport) Notification 2009	S294/2009
11	Delegation of Powers	Cap. 41, N1
<u>Air Navigation Act & related legislation</u>		
12	Air Navigation Act	Cap. 6 (2014 Rev Ed.)
13	Air Navigation Order	Cap. 6, O2 (1990 Rev Ed.)
14	Air Navigation (101 - Unmanned Aircraft Operations) Regulations 2019	S833/2019
15	Air Navigation (119 - Air Operator Certification) Regulations 2018	S443/2018
16	Air Navigation (121 - Commercial Air Transport by Large Aeroplanes) Regulations 2018	S444/2018
17	Air Navigation (125 - Complex General Aviation) Regulations 2018	S501/2018

No	Legislation	Citation
18	Air Navigation (135 – Commercial Air Transport by Helicopters and Small Aeroplanes) Regulations 2018	S445/2018
19	Air Navigation (137 – Aerial Work) Regulations 2018	S502/2018
20	Air Navigation (91 – General Operating Rules) Regulations 2018	S441/2018
21	Air Navigation (98 – Special Operations) Regulations 2018	S442/2018
22	Air Navigation (99 - Breath Testing for Alcohol) Regulations 2019	S177/2019
23	Air Navigation (Flight Crew Recency - Exemption) Order 2020	S347/2020
24	Air Navigation (Investigation of Accidents and Incidents) Order	Cap. 6, O7
25	Air Navigation (Wreck and Salvage of Aircraft) Regulations	Cap. 6, RG 1
26	Air Navigation (Aviation Security) Order	Cap. 6, O5
27	Air Navigation (Regulated Air Cargo Agents) Regulations 2017	S166/2017
28	Air Navigation (Protected Areas) Order 2015	S350/2015
29	Air Navigation (Protected Areas) (No. 2) Order 2015	S435/2015
30	Air Navigation (Composition of Offences) Rules 2017	S667/2017
31	Air Navigation (Delegation of Powers) Notification	Cap. 6, N3
32	Designation of Authorised Persons	Cap. 6, N2
33	Air Navigation (Licensing of Air Services) Regulations	Cap. 6, RG 2
34	Air Navigation (Paya Lebar and Tengah Aerodrome Fees) Order	Cap. 6, O1
35	Air Navigation (Prohibited Flights) Order	Cap. 6, O6
36	Use of Seletar Aerodrome	Cap. 6, N1
<u>Other Acts & related legislation</u>		
37	Carriage by Air Act	Cap. 32A (2001 Rev Ed.)
38	Carriage by Air (Parties to Conventions) Order	Cap. 32A, O1
39	Carriage by Air (Singapore Currency Equivalents) Order	Cap. 32A, O2
40	Carriage by Air (Montreal Convention, 1999) Act	Cap. 32B (2008 Rev Ed.)
41	Carriage by Air (Montreal Convention, 1999) (Exclusion from Convention) Order	Cap. 32B, O1
42	Tokyo Convention Act	Cap. 327 (1985 Rev Ed.)
43	Tokyo Convention (Convention Countries) Notification	Cap. 327, N1
44	Tokyo Convention (Protocol Countries) Notification 2019	S893/2019
45	Hijacking of Aircraft and Protection of Aircraft and International Airports Act	Cap. 124 (1997 Rev Ed.)
46	International Interests in Aircraft Equipment Act	Cap. 144B (2012 Rev Ed.)
47	Infrastructure Protection Act 2017	Act 41 of 2017
48	Immigration Act	Cap. 133 (2008 Rev Ed.)
49	Immigration (Authorised Places of Entry and Departure, and Rates) Notification 2012	S627/2012
50	Immigration Regulations	Cap. 133, RG 1
51	Arms and Explosives Act	Cap. 13 (2003 Rev Ed.)
52	Arms and Explosives (Aircraft Exemption) Rules	Cap. 13, R3
53	Arms and Explosives (Explosives) Rules	Cap. 13, R2
54	Arms and Explosives (Movement Control) Rules	Cap. 13, R4
55	International Organisations (Immunities and Privileges) Act	Cap. 145 (2013 Rev Ed.)
56	International Organisations (Immunities and Privileges) (International Civil Aviation Organisation) Order	Cap. 145, OR 4

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 (Certificates of Vaccination or Other Prophylaxis) Regulations 2008	S611/2008
4	Arms and Explosives (Arms) Rules	Cap. 13, R1
5	Inspector of Explosives	Cap. 13, N1
6	Arms Offences Act	Cap. 14 (2008 Rev Ed.)

Note: “Cap.” means “Chapter”, unless otherwise stated.

1.3 INTERNATIONAL CONVENTIONS AND PROTOCOLS

No	Legislation
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 83 bis], signed at Montreal on 6 October 1980
4	Convention on Offences and Certain Other Acts Committed on Board Aircraft, signed at Tokyo on 14 September 1963
5	Protocol to Amend the Convention on Offences and Certain Other Acts Committed on Board Aircraft, done at Montreal on 4 April 2014
6	Convention for the Suppression of Unlawful Seizure of Aircraft, signed at The Hague on 16 December 1970
7	Convention for the Suppression of Unlawful Acts against the Safety of Civil Aviation, signed at Montreal on 23 September 1971
8	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
9	Convention on the Marking of Plastic Explosives for the Purpose of Detection, signed at Montreal on 1 March 1991
10	Convention for the Unification of Certain Rules Relating to International Carriage by Air, signed at Warsaw on 12 October 1929
11	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
12	Montreal Protocol No. 4 to Amend the Convention for the Unification of Certain Rules Relating to International Carriage by Air, signed at Warsaw on 12 October 1929, signed at Montreal on 25 September 1975
13	Convention for the Unification of Certain Rules for International Carriage by Air, signed at Montreal on 28 May 1999
14	Convention on International interests in Mobile Equipment, signed at Cape Town on 16 November 2001
15	Protocol to the Convention on International Interests in Mobile Equipment on Matters Specific to Aircraft Equipment, signed at Cape Town on 16 November 2001
16	Protocol for the Amendment Agreement on the Joint Financing of Certain Air Navigation Services in Iceland (1956) as amended in 1982 and 2008
17	Protocol for the Amendment Agreement on the Joint Financing of Certain Air Navigation Services in Greenland (1956) as amended in 1982 and 2008
18	The International COSPAS-SARSAT Programme Agreement, done at Paris on 1 July 1988

2 TAXATION IN THE FIELD OF INTERNATIONAL AIR TRANSPORT

2.1 *Petroleum exemptions and income tax*

- a. Petroleum for aircraft is granted Goods and Services Tax (GST) relief under item 11 of the Schedule to the GST (Imports Relief) Order (2001 Rev Ed.).
- b. The matter of income tax on air transport is contained within Section 12(2) of the Income Tax Act (2014 Rev Ed.).

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 *Capital gains tax, or income on wealth, etc.*

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

GEN 2 TABLES AND CODES

GEN 2.1 MEASURING SYSTEM, AIRCRAFT MARKING, HOLIDAYS

1 UNITS OF MEASUREMENT

- 1.1 The table of units of measurement shown below is used for the dissemination of information and in messages transmitted to aircraft.

<i>Measurement of</i>	<i>Units</i>
Distance used in navigation, position report, etc. - generally in excess of 4000m	* Kilometres (km) or Nautical miles (NM)
Relatively short distances such as those relating to aerodromes (e.g. runway lengths)	Metres (m)
Altitudes, elevations and heights	Metres (m) or Feet (ft)
Horizontal speed including wind speed	Knots (kt)
Vertical speed	Feet per minute (ft/min)
Wind direction for landing and taking-off	Degrees Magnetic (°M)
Wind direction except for landing and taking-off	Degrees True (°T)
Visibility, including runway visual range	Metres (m) or Kilometres (km)
Altimeter Setting	Hectopascals (hPa)
Temperature	Degrees Celsius (Centigrade) (°C)
Weight	Metric tonnes (t) or kilogrammes (kg)
Time	Hours and minutes, the day of 24 hours beginning at midnight UTC (hhmm)
* International nautical miles, for which conversion into metres is given by: 1 international NM = 1852 metres	

2 TIME SYSTEM

- 2.1 Co-ordinated Universal Time (UTC) is used in the air traffic and communication services and in documents published for international distribution by the Aeronautical Information Service. Reporting of time is expressed to the nearest minute, e.g. 12:40:35 is reported as 1241. Local time is 8 hours ahead of UTC. Time checks to aircraft are accurate to within 30 seconds.

3 GEODETIC REFERENCE DATUM

3.1 *Name/designation of datum*

- 3.1.1 All published geographical coordinates in the Singapore FIR indicating latitude and longitude are expressed in terms of the World Geodetic System-1984 (WGS-84) geodetic reference datum.

3.2 *Area of Application*

- 3.2.1 The area of application for the published geographical coordinates coincides with the area of responsibility of the Aeronautical Information Service, i.e. the entire territory of Singapore as well as the airspace over the high seas encompassed by the Singapore Flight Information Region.

3.3 *Use of asterisk*

- 3.3.1 An asterisk (*) will be used to identify those published geographical coordinates which have been transformed into WGS-84 coordinates but whose accuracy of original field work does not meet the requirements in ICAO Annex 11, Chapter 2 and ICAO Annex 14, Volume I, Chapter 2. Specifications for determination and reporting of WGS-84 coordinates are given in ICAO Annex 11, Chapter 2 and ICAO Annex 14, Volume I, Chapter 2.

4 AIRCRAFT NATIONALITY AND REGISTRATION MARKS

- 4.1 The nationality mark for aircraft registered in Singapore is the figure 9, followed by the letter V, i.e. 9V. The nationality mark is followed by a hyphen and a registration mark consisting of a three letter group, e.g. 9V-BAA.

5 PUBLIC HOLIDAYS IN SINGAPORE

5.1 The following dates are notified as public holidays:

Name of Holiday	Date	Day
Deepavali	14 November 2020	Saturday
Christmas Day	25 December 2020	Friday
New Year's Day	01 January 2021	Friday
Chinese New Year	12 February 2021	Friday
	13 February 2021	Saturday
Good Friday	02 April 2021	Friday
Labour Day	01 May 2021	Saturday
Hari Raya Puasa	13 May 2021	Thursday
Vesak Day	26 May 2021	Wednesday
Hari Raya Haji	20 July 2021	Tuesday
National Day	09 August 2021	Monday
Deepavali	04 November 2021	Thursday
Christmas Day	25 December 2021	Saturday

k. **Visual Approach Chart - ICAO**

This chart is produced for aerodromes used by civil aviation where:

- * only limited navigation facilities are available; or
- * radio communication facilities are not available; or
- * no adequate aeronautical charts of the aerodrome and its surroundings at 1:500 000 or greater scale are available; or
- * visual approach procedures have been established

The aeronautical data shown include information on aerodromes obstacles, designated airspace, visual approach information, radio navigation aids and communication facilities, as appropriate.

5 LIST OF AERONAUTICAL CHARTS AVAILABLE

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	30 JAN 20
Enroute Chart ICAO (ENRC)		ERC 6-1		In AIP	05 NOV 20
Instrument Approach Chart ICAO (IAC)	1:400 000	Singapore Changi RWY 02L - ICW ILS/DME	AD-2-WSSS-IAC-1	In AIP	10 SEP 20
	1:400 000	RWY 02C - ICE ILS/DME	AD-2-WSSS-IAC-2	In AIP	10 SEP 20
	1:400 000	RWY 20R - ICH ILS/DME	AD-2-WSSS-IAC-5	In AIP	10 SEP 20
	1:400 000	RWY 20C - ICC ILS/DME	AD-2-WSSS-IAC-6	In AIP	10 SEP 20
	1:400 000	RWY 20C - VTK DVOR/DME	AD-2-WSSS-IAC-7	In AIP	10 SEP 20
	1:400 000	RWY 02L - RNP	AD-2-WSSS-IAC-9	In AIP	05 NOV 20
	1:400 000	RWY 02C - RNP	AD-2-WSSS-IAC-10	In AIP	05 NOV 20
	1:400 000	RWY 20R - RNP	AD-2-WSSS-IAC-11	In AIP	05 NOV 20
	1:400 000	RWY 20C - RNP	AD-2-WSSS-IAC-12	In AIP	05 NOV 20
		Paya Lebar			
	1:400 000	RWY 20 - PU DVOR/DME	AD-2-WSAP IAC-1	In AIP	10 SEP 20
	1:400 000	RWY 02 - PU DVOR/DME	AD-2-WSAP IAC-2	In AIP	16 JUL 20
	1:400 000	RWY 20 - IPS ILS/DME	AD-2-WSAP IAC-3	In AIP	10 SEP 20
	1:400 000	RWY 02 - IPN ILS/DME	AD-2-WSAP IAC-4	In AIP	16 JUL 20
	1:400 000	RWY 02 - RNP	AD-2-WSAP-IAC-5	In AIP	10 SEP 20
	1:400 000	RWY 20 - RNP	AD-2-WSAP-IAC-6	In AIP	10 SEP 20
Visual Approach Chart ICAO (VAC)	1:400 000	Singapore Changi	AD-2-WSSS-VAC-1	In AIP	10 SEP 20
		Seletar			
	1:100 000	RWY 03	AD-2-WSSL-VAC-1	In AIP	16 JUL 20
	1:100 000	RWY 21	AD-2-WSSL-VAC-2	In AIP	16 JUL 20
	1:100 000	RWY 03	AD-2-WSSL-VAC-3	In AIP	16 JUL 20
Visual Departure Chart	1:100 000	Seletar RWY 03	AD-2-WSSL-VDC-1	In AIP	16 JUL 20
	1:100 000	RWY 21	AD-2-WSSL-VDC-2	In AIP	16 JUL 20
Aerodrome Chart ICAO (AC)		Singapore Changi	AD-2-WSSS-ADC-2	In AIP	10 SEP 20
		Seletar	AD-2-WSSL-ADC-1	In AIP	16 JUL 20
		Paya Lebar	AD-2-WSAP-ADC-1	In AIP	16 JUL 20
Aerodrome Obstacle Chart ICAO TYPE A (AOC)	1:10 000	Singapore Changi RWY 20R/02L	AD-2-WSSS-AOC-1	In AIP	16 JUL 20
	1:10 000	RWY 20C/02C	AD-2-WSSS-AOC-2	In AIP	16 JUL 20
		Seletar			
	1:10 000	RWY 03/21	AD-2-WSSL-AOC-1	In AIP	16 JUL 20
		Paya Lebar			
	1:20 000	RWY 20/02	AD-2-WSAP-AOC-1	In AIP	16 JUL 20
		Singapore Changi			
Aerodrome Obstacle Chart ICAO TYPE B (AOC)	1:20 000	RWY 02L/20R and 02C/20C	AD-2-WSSS-AOC-3	In AIP	16 JUL 20
	1:20 000	Seletar RWY 03/21	AD-2-WSSL-AOC-2	In AIP	16 JUL 20
Precision Approach Terrain Chart ICAO (PATC)	1:2 500	Singapore Changi RWY 02L	AD-2-WSSS-PATC-1	In AIP	10 OCT 19
	1:2 500	RWY 20C	AD-2-WSSS-PATC-2	In AIP	01 FEB 18

GEN 3.3 AIR TRAFFIC SERVICES

1 RESPONSIBLE SERVICE

- 1.1 The Chief Air Traffic Control Officer of the Air Traffic Services Division of the Civil Aviation Authority of Singapore (CAAS) acting under the authority of the Director-General of Civil Aviation is the authority responsible for the overall administration of air traffic services within the Singapore FIR.

Post:	Tel: (65) 65412405
Chief Air Traffic Control Officer	Fax: (65) 6441 0221
Air Traffic Services Division	AFS: WSJCZQZX
Civil Aviation Authority of Singapore	
Singapore Changi Airport	
P. O. Box 1, Singapore 918141	

- 1.2 The services are provided in accordance with the provisions contained in the following ICAO documents:
- Annex 2 – *Rules of the Air*
 - Annex 11 – *Air Traffic Services*
 - Doc 4444 – *Procedures for Air Navigation Services - Air Traffic Management (PANS-ATM)*
 - Doc 8168 – *Procedures for Air Navigation Services - Aircraft Operations (PANS-OPS)*
 - Doc 7030 – *Regional Supplementary Procedures*

- 1.3 Differences to these provisions are detailed in subsection GEN 1.7.

2 AREA OF RESPONSIBILITY

- 2.1 Air traffic services are provided for the entire territory of Singapore, including its territorial waters as well as the airspace over the high seas within the Singapore FIR.
- 2.2 In some cases, in accordance with the regional air navigation agreement, air traffic services are provided, under the delegated authority, in the airspace within another bordering FIR. Details of such services are provided in section ENR 2.

3 TYPES OF SERVICES

- 3.1 The following types of services are provided:
- Flight Information Service (FIS) and Alerting Service (ALRS);
 - Area Control (ACC); and
 - Radar
- 3.2 With the exception of services provided at military air bases, the following types of services are provided at aerodromes:
- Aerodrome Control (TWR);
 - Aerodrome Flight Information Service (AFIS); and
 - Automatic Terminal Information Service (ATIS) at certain aerodromes
- 3.3 Air Traffic Control is exercised:
- a. on airways covering the main ATS routes;
 - b. within the Singapore/Johor Airspace Complex and in control zones at controlled aerodromes equipped with approach and/or landing aids.
- 3.4 Flight information service and alerting service within the Singapore FIR and air traffic control services in control areas are provided by one centre (ACC Singapore). There is no distinction between upper and lower controlled airspace. The axis of each airway is constituted by a line connecting reference points identified normally by radio navigational facilities.
- 3.5 Air traffic control, flight information and alerting services are provided by:
- a. ACC Singapore along the airways including those parts of the airways traversing the Singapore/ Johor Airspace Complex;
 - b. the relevant aerodrome control tower in coordination with ACC Singapore as necessary, for arriving and departing aircraft.

- 3.6 Radar service is an integral part of the ATS system. A description of radar services and procedures is provided in subsection ENR 1.6. Additional procedures applicable within the Singapore / Johor Airspace Complex are contained in sub-section ENR 1.1.
- 3.7 The description of the airspace designated for air traffic services purpose is found in several tables, all forming part of sub-section ENR 2.1.
- 3.8 In general, the air traffic rules and procedures in force and the organisation of air traffic services are in conformity with ICAO Standards, Recommended Practices and Procedures. The regional supplementary procedures and altimeter setting procedures are set out in full. Differences between the national and international rules and procedures are given in sub-section GEN 1.7.
- 3.9 A few prohibited areas, restricted areas and danger areas are established within the Singapore/Johor Airspace Complex. These areas are shown in sub-section ENR 5.1. Activation of areas subject to intermittent activity is notified well in advance by NOTAM, giving reference to the area only by its identification.
- 3.10 4D/15 service is provided to the following category of aircraft:
- Aircraft operating within areas of Singapore FIR where radar services is provided by ATC;
 - ADS-B equipped aircraft operating in ADS-B airspace; and
 - ADS-C equipped aircraft logged on to WSJC on routes providing ADS/CPDLC service.

4 CO-ORDINATION BETWEEN THE OPERATOR AND ATS

- 4.1 Co-ordination between the operator and air traffic services is effected in accordance with Chapter 2, paragraph 2.15 of ICAO Annex 11 - Air Traffic Services and Chapter II, paragraphs 11.2.1.1.4 and 11.2.1.1.5 ICAO Doc 4444 - Procedures for Air Navigation Services - Air Traffic Management (PANS-ATM).

5 MINIMUM FLIGHT ALTITUDE

- ← 5.1 The minimum flight altitudes on the ATS routes listed in section ENR 3, have been determined to ensure at least 1,000ft (300m) vertical clearance above the highest known obstacle within the lateral limits of the route within Singapore FIR and the adjacent areas of adjoining FIRs.

6 ATS UNITS ADDRESS LIST

<i>Unit Name</i>	<i>Postal Address</i>	<i>Telephone Nr</i>	<i>Telefax Nr</i>	<i>Telex Nr</i>	<i>AFS Address</i>
1	2	3	4	5	6
SINGAPORE ACC / APP	Singapore Air Traffic Control Centre (SATCC) 60, Biggin Hill Road Singapore 509950	(65) 65412668 (65) 65412672	(65) 65456252	-	WSJCZQZX
SINGAPORE TOWER	Singapore Changi Control Tower Civil Aviation Authority of Singapore P.O Box 1, Singapore Changi Airport Singapore 918141	(65) 65956057 (65) 65412410 (65) 65412416	(65) 65456224	-	Nil
SELETAR TOWER	Seletar Control Tower Civil Aviation Authority of Singapore Seletar Airport Building 1007, West Camp Road Singapore 797794	(65) 64812893	(65) 64813510	-	WSSLZTZX

- 1.6.2 Aircraft flying on RNAV routes L642 (CHEUNG CHAU-MERSING), L644 (DUDIS-KIKOR), L649 (DAKIX-LAXOR), M771 (MERSING-CHEUNG CHAU), M772 (ASISU-LAXOR), N892 (HENGCHUN-MERSING), L625 (TOMAN-MEVIN), N884 (MERSING-MANILA) and M767 (JOMALIG-TOMAN) (see page ENR 1.8-16) 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)

- 1.6.3 Operators of aircraft unable to meet the RNP 10 requirements (see page ENR 1.8-16) and wishing to operate at or above FL290 on RNAV routes specified in paragraph 1.6.2 shall annotate their flight plan as follows:

Item 18 - insert "RMK/REQ FL (insert level)" where FL = the preferred flight level (subject to ATC co-ordination)

- 1.6.4 Operators of aircraft approved for RNP 1 (P-RNAV) operations shall also include the following information in their flight plan:

Item 10 - "R" where R = PBN approved

Item 18 - PBN/O1 where O1 = Basic RNP1 all permitted sensors, or

PBN/O2 where O2 = Basic RNP1 GNSS, or

PBN/O3 where O3 = Basic RNP1 DME/DME, or

PBN/O4 where O4 = Basic RNP1 DME/DME/IRU

1.7 ***RVSM and NON-RVSM Approved Aircraft***

- 1.7.1 Operators of RVSM approved or non-RVSM approved aircraft operating in RVSM airspace (see page ENR 1.8-5) shall annotate their flight plan as follows:

	Item 10	Item 18
RVSM approved aircraft	W	
Non-RVSM approved aircraft		STS/NONRVSM

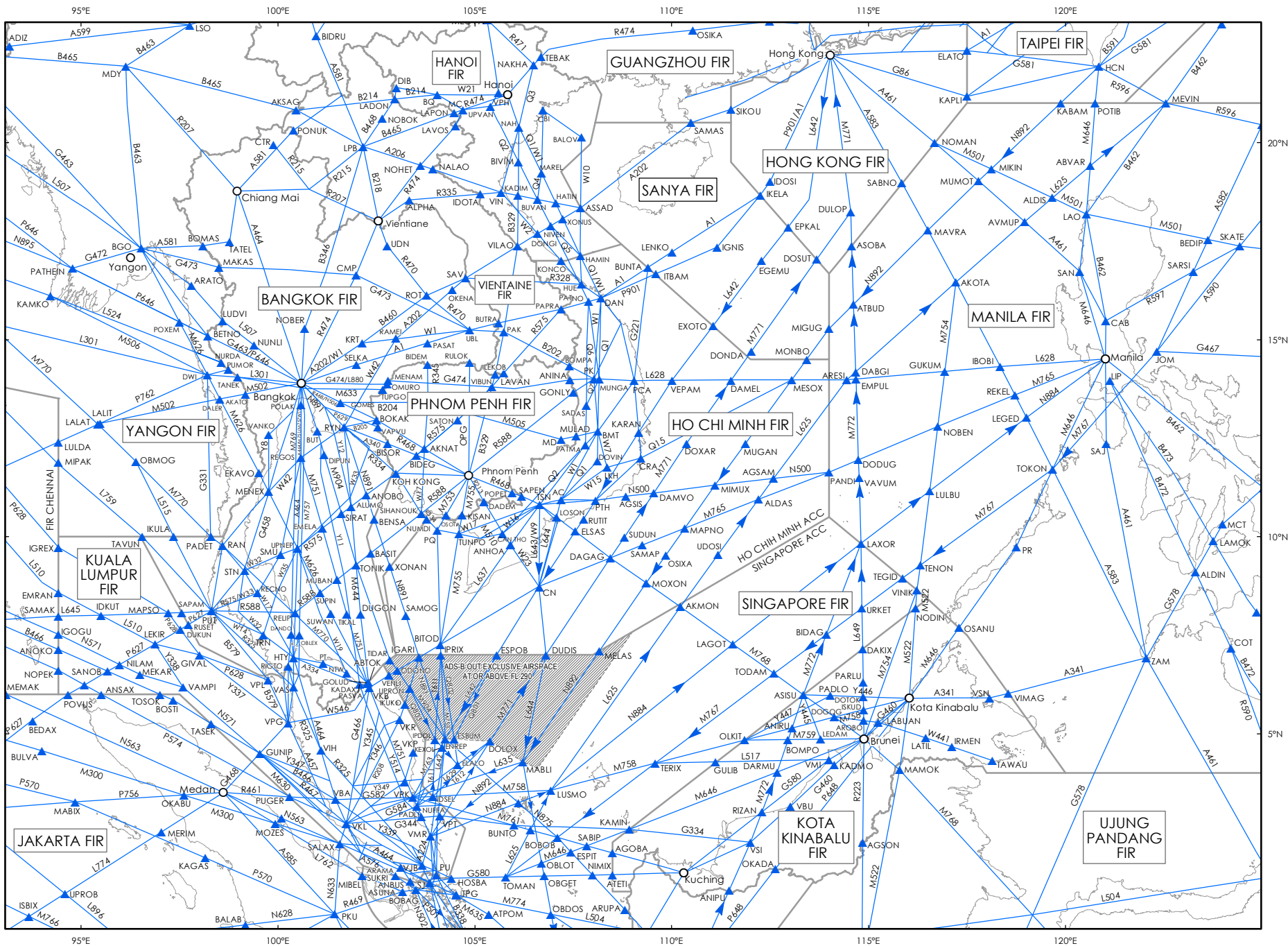
1.8 ***Other Documentary and / or Permit Requirements***

- 1.8.1 In addition to the flight planning requirements, all pilots-in-command and aircraft operators should consult the respective AIPs for other documentary and / or permit requirements for flights intending to enter, depart, and / or overfly the sovereign airspaces of States along the planned flight routes.
- 1.8.2 In particular, for Indonesian sovereign airspace within Singapore FIR, aircraft operators should also consult AIP Indonesia GEN 1.2 Entry, Transit and Departure of Aircraft at <https://aimindonesia.dephub.go.id> for Indonesia's requirements for flights intending to enter, depart, and/or overfly its sovereign airspace. Please note that this AIP's reference to these requirements is without prejudice to Singapore's legal position on such requirements.

←

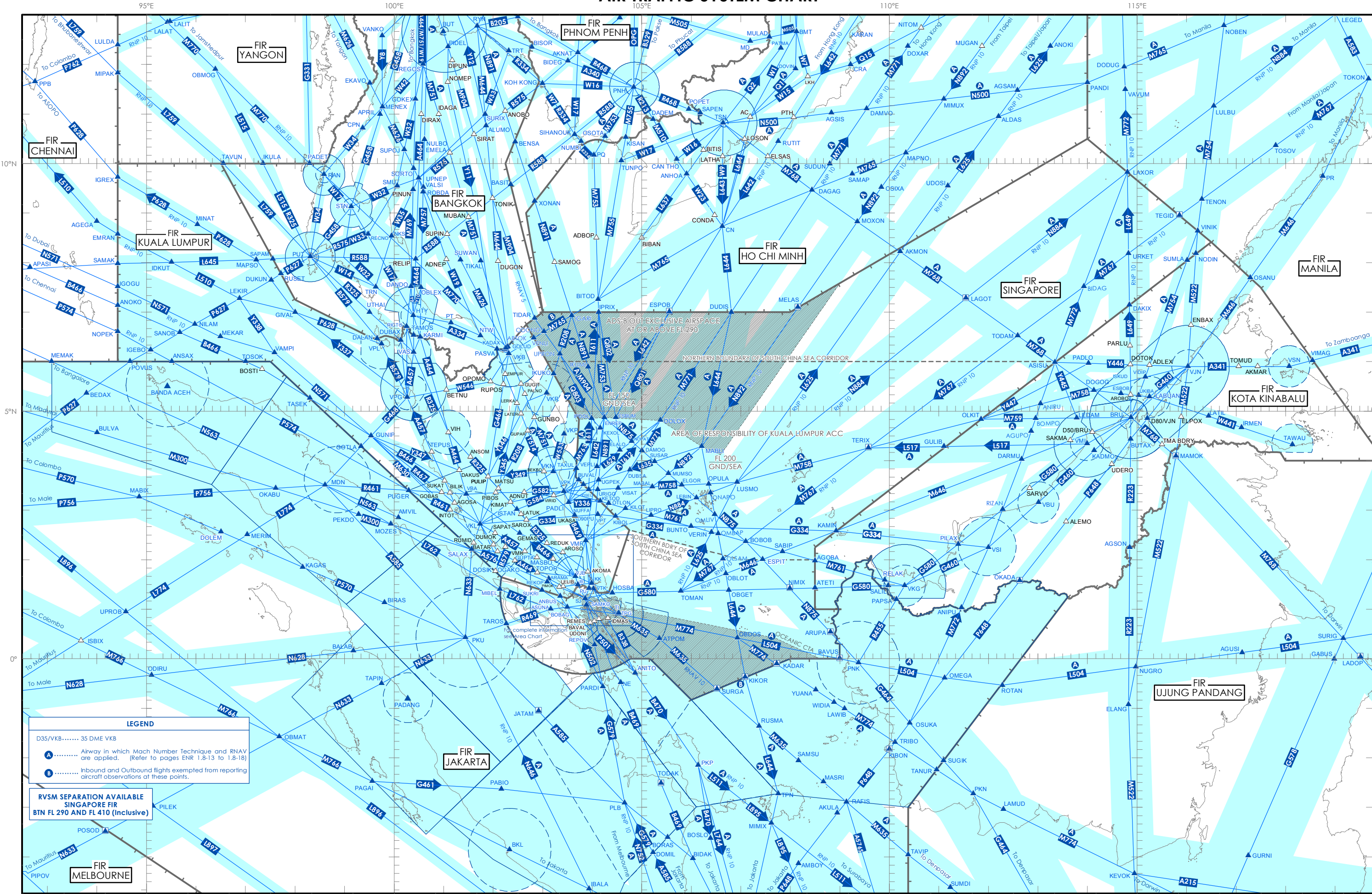
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ATS ROUTE STRUCTURE WITHIN SINGAPORE & ADJACENT FIRS

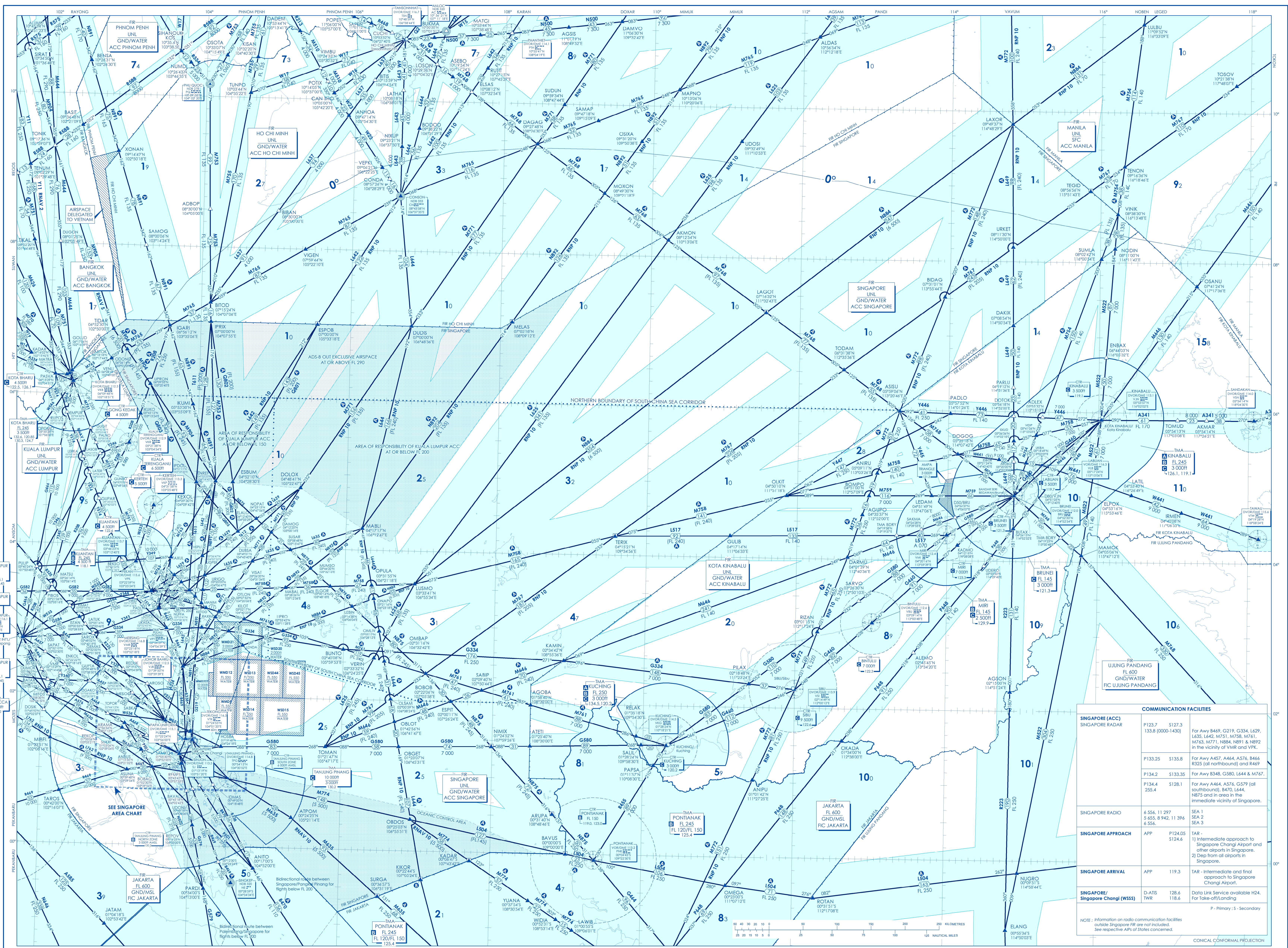
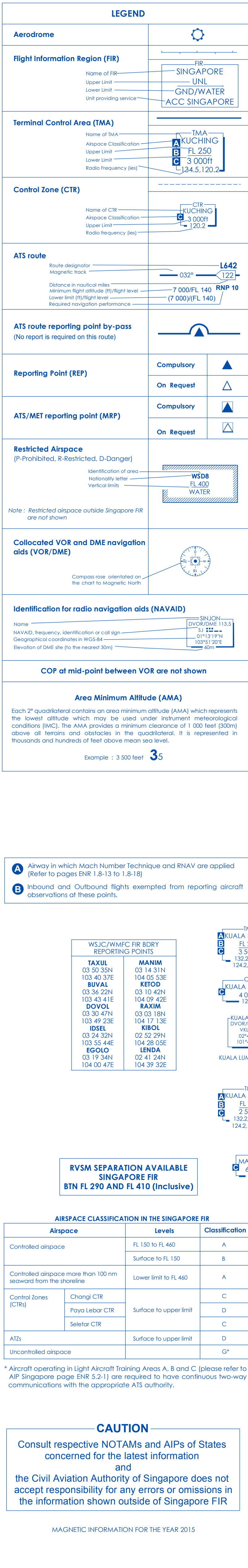


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AIR TRAFFIC SYSTEM CHART



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STANDARD DEPARTURE CHART
RNAV (GNSS) -
INSTRUMENT (SID)

TWR 118.6 / 118.25
APP 120.3
124.05
ACC 134.4

TRANSITION ALTITUDE
11 000ft

D-ATIS AP ID-WSSS
128.6

SINGAPORE/Singapore Changi
RWY 02C/20C
ANITO DEPARTURES
ANITO 6A (R02C)
ANITO 7B (R20C)

- NOTE:** RADAR REQUIRED
- NOTE:** RNAV-1 NAVIGATION SPECIFICATION
GNSS REQUIRED
- NOTE:** CLOSE-IN OBSTACLES (AIRCRAFT UP TO 80FT)
EXIST ON TAXIWAYS WEST OF RUNWAY 02C
- NOTE:** ACFT UNABLE TO FLY THE SID
PROFILE SHALL INFORM ATC
PRIOR TO DEPARTURE AND TO
EXPECT RADAR VECTORED,
IF NECESSARY
- NOTE:** WHEN TAKEN OFF THE SID,
AS INSTRUCTED BY ATC,
REFER TO ENR 1.5, SECTION 3,
PARAGRAPH 3.3 [A] - FOR RWY 02C MINIMUM CLIMB GRADIENT AND
PARAGRAPH 3.4.1 - FOR RWY 20C MINIMUM CLIMB GRADIENT
- NOTE:** REFER TO BACK PAGE FOR
- FORMAL AND TABULAR DESCRIPTIONS
- RADIO COM FAILURE PROCEDURES

GENERAL INFORMATION

INITIAL CLIMB
3000FT

ON INITIAL CONTACT WHEN REQUESTING ATC,
INFORM ATC OF THE FLIGHT LEVEL AIRCRAFT
CAN CROSS ANITO

ALL SIDs INCLUDE NOISE PREFERENTIAL ROUTES.

RWY 02C

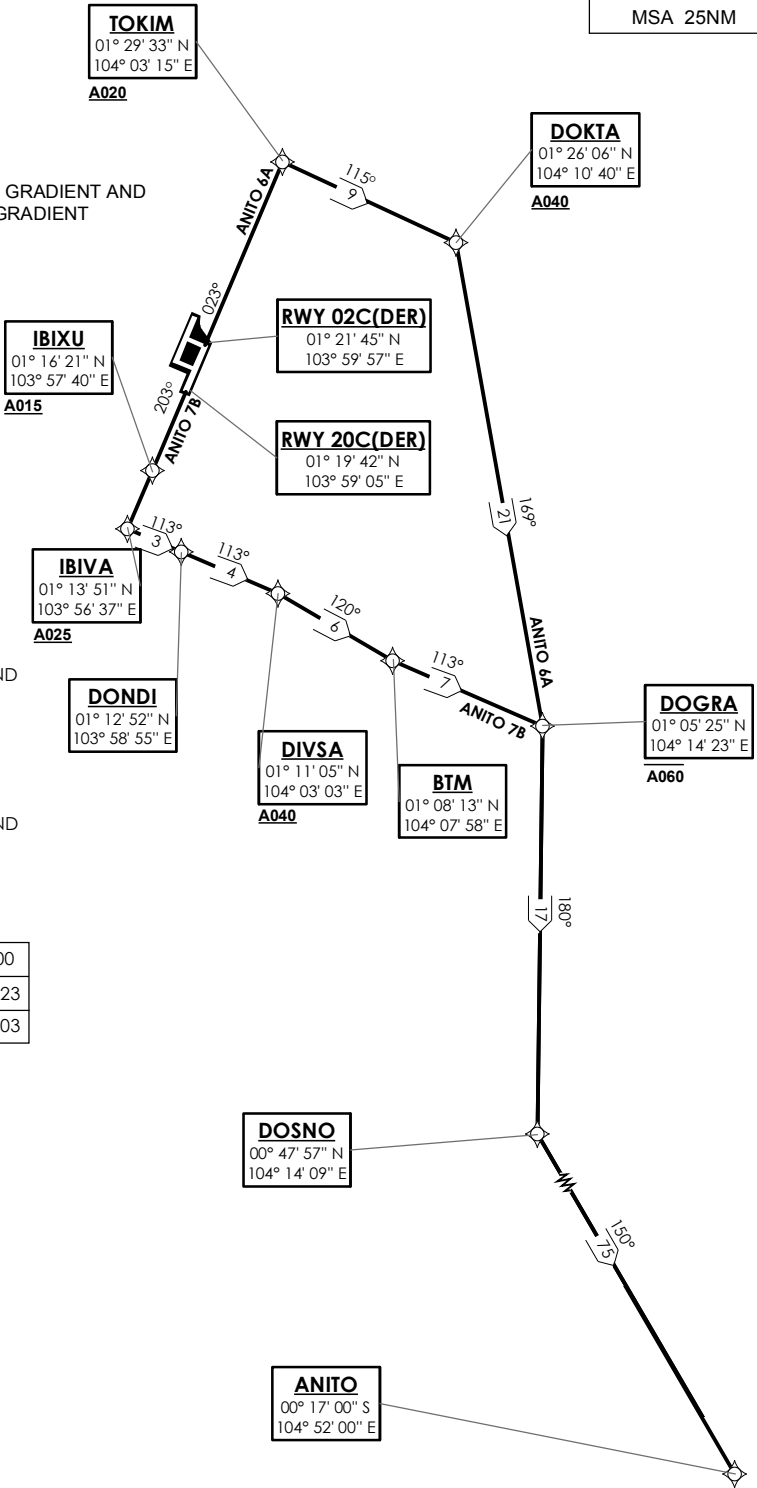
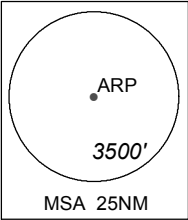
SHALL NOT EXCEED IAS 230KTS UNTIL PASSING 4000FT AMSL AND
NOT EXCEED IAS 250KTS UNTIL PASSING 10000FT AMSL.
CRUISING LEVELS WILL BE ISSUED AFTER TAKE-OFF
BY SINGAPORE RADAR.
SID SHALL BE ON A MINIMUM CLIMB GRADIENT OF 3.3%.

RWY 20C

SHALL NOT EXCEED IAS 230KTS UNTIL PASSING 4000FT AMSL AND
NOT EXCEED IAS 250KTS UNTIL PASSING 10000FT AMSL.
CRUISING LEVELS WILL BE ISSUED AFTER TAKE-OFF
BY SINGAPORE RADAR.
SID SHALL BE ON A MINIMUM CLIMB GRADIENT OF 7%
UNTIL REACHING OR PASSING 2500FT, THEREAFTER 3.3%.

GND SPEED - KNOTS	75	100	150	200	250	300
7% V/V (fpm)	532	709	1062	1416	1769	2123
3.3% V/V (fpm)	251	334	501	668	835	1003

ELEV, ALT IN FEET
BEARINGS, TRACKS AND
RADIALS ARE MAGNETIC
VAR 23°E (2020)
DISTANCES IN NM



5 NOV 2020

ANITO 6A (SID) RNAV GNSS RWY 02C - DESCRIPTIONS**Formal & Abbreviated Descriptions**

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
To TOKIM on course 023° at or above 2000ft, turn right. To DOKTA at or above 4000ft, turn right. To DOGRA at or below 6000ft, turn right. To DOSNO, turn left. To ANITO.	TOKIM [M023; A020+; R] -	CF	N
	DOKTA [A040+; R] -	TF	N
	DOGRA [A060-; R] -	TF	N
	DOSNO [L] -	TF	N
	ANITO	TF	N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
CF	TOKIM	-	023(022.5)	-0.5	R	A020+	-	RNAV1
TF	DOKTA	-	115(114.5)	-0.5	R	A040+	-	RNAV1
TF	DOGRA	-	169(168.5)	-0.5	R	A060-	-	RNAV1
TF	DOSNO	-	180(179.5)	-0.5	L	-	-	RNAV1
TF	ANITO	-	150(149.5)	-0.5	-	-	-	RNAV1

ANITO 7B (SID) RNAV GNSS RWY 20C - DESCRIPTIONS**Formal & Abbreviated Descriptions**

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
To IBIXU on course 203° at or above 1500ft. To IBIVA at or above 2500ft, turn left. To DONDI. To DIVSA at or above 4000ft, turn right. To BTM, turn left. To DOGRA at or below 6000ft, turn right. To DOSNO, turn left. To ANITO.	IBIXU [M203; A015+] -	CF	N
	IBIVA [A025+; L] -	TF	N
	DONDI -	TF	N
	DIVSA [A040+; R] -	TF	N
	BTM [L] -	TF	N
	DOGRA [A060-; R] -	TF	N
	DOSNO [L] -	TF	N
	ANITO	TF	N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
CF	IBIXU	-	203(202.5)	-0.5	-	A015+	-	RNAV1
TF	IBIVA	-	203(202.5)	-0.5	L	A025+	-	RNAV1
TF	DONDI	-	113(112.5)	-0.5	-	-	-	RNAV1
TF	DIVSA	-	113(112.5)	-0.5	R	A040+	-	RNAV1
TF	BTM	-	120(119.5)	-0.5	L	-	-	RNAV1
TF	DOGRA	-	113(112.5)	-0.5	R	A060-	-	RNAV1
TF	DOSNO	-	180(179.5)	-0.5	L	-	-	RNAV1
TF	ANITO	-	150(149.5)	-0.5	-	-	-	RNAV1

RADIO COMMUNICATIONS FAILURE PROCEDURE

1	SET TRANSPONDER TO MODE A/C CODE 7600
2	<p>COMMUNICATIONS FAILURE OCCURS IMMEDIATELY AFTER DEPARTURE ON:</p> <p>RWY 02C - PROCEED STRAIGHT AHEAD TO NYLON HOLDING AREA (NHA) CLIMBING TO THE LAST ASSIGNED ALTITUDE, THEREAFTER REFER TO SINGAPORE AIP ON RADIO COMMUNICATIONS FAILURE PROCEDURE.</p> <p>RWY 20C - PROCEED STRAIGHT AHEAD TO SAMKO HOLDING AREA (SHA) CLIMBING TO THE LAST ASSIGNED ALTITUDE, THEREAFTER REFER TO SINGAPORE AIP ON RADIO COMMUNICATIONS FAILURE PROCEDURE.</p>

**STANDARD DEPARTURE CHART
RNAV (GNSS) -
INSTRUMENT (SID)**

TWR 118.6 / 118.25
APP 120.3
124.05
ACC 133.25

TRANSITION ALTITUDE
11 000ft

D-ATIS AP ID-WSSS
128.6

**SINGAPORE/Singapore Changi
RWY 02C/20C**

**ADMIM DEPARTURES
ADMIM 1A (R02C)
ADMIM 3B (R20C)**

ELEV, ALT IN FEET

BEARINGS, TRACKS AND
RADIALS ARE MAGNETIC
VAR 23°E (2020)

DISTANCES IN NM

NOTE: RADAR REQUIRED

NOTE: RNAV-1 NAVIGATION SPECIFICATION
GNSS REQUIRED

NOTE: CLOSE-IN OBSTACLES (AIRCRAFT UP TO 80FT)
EXIST ON TAXIWAYS WEST OF RUNWAY 02C

NOTE: ACFT UNABLE TO FLY THE SID
PROFILE SHALL INFORM ATC
PRIOR TO DEPARTURE AND TO
EXPECT RADAR VECTURING,
IF NECESSARY

NOTE: WHEN TAKEN OFF THE SID,
AS INSTRUCTED BY ATC,
REFER TO ENR 1.5, SECTION 3,
PARAGRAPH 3.3 [A] - FOR RWY 02C MINIMUM CLIMB GRADIENT AND
PARAGRAPH 3.4.1 - FOR RWY 20C MINIMUM CLIMB GRADIENT

NOTE: REFER TO BACK PAGE FOR
- FORMAL AND TABULAR DESCRIPTIONS
- RADIO COM FAILURE PROCEDURES

GENERAL INFORMATION**INITIAL CLIMB
3000FT**

ALL SIDs INCLUDE NOISE PREFERENTIAL ROUTES.

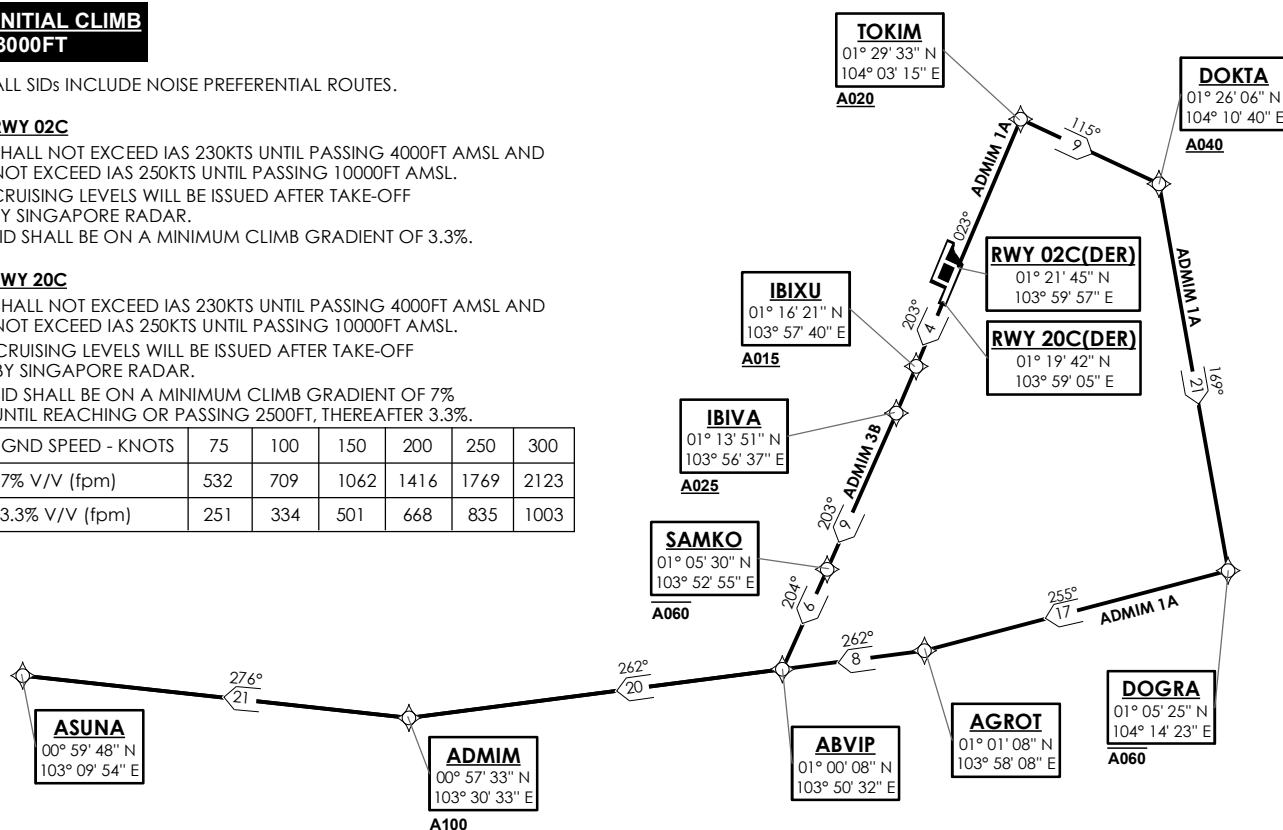
RWY 02C

SHALL NOT EXCEED IAS 230KTS UNTIL PASSING 4000FT AMSL AND
NOT EXCEED IAS 250KTS UNTIL PASSING 10000FT AMSL.
CRUISING LEVELS WILL BE ISSUED AFTER TAKE-OFF
BY SINGAPORE RADAR.
SID SHALL BE ON A MINIMUM CLIMB GRADIENT OF 3.3%.

RWY 20C

SHALL NOT EXCEED IAS 230KTS UNTIL PASSING 4000FT AMSL AND
NOT EXCEED IAS 250KTS UNTIL PASSING 10000FT AMSL.
CRUISING LEVELS WILL BE ISSUED AFTER TAKE-OFF
BY SINGAPORE RADAR.
SID SHALL BE ON A MINIMUM CLIMB GRADIENT OF 7%
UNTIL REACHING OR PASSING 2500FT, THEREAFTER 3.3%.

GND SPEED - KNOTS	75	100	150	200	250	300
7% V/V (fpm)	532	709	1062	1416	1769	2123
3.3% V/V (fpm)	251	334	501	668	835	1003



NOT TO SCALE

5 NOV 2020

ADMIM 1A (SID) RNAV GNSS RWY 02C - DESCRIPTIONS**Formal & Abbreviated Descriptions**

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
To TOKIM on course 023° at or above 2000ft, turn right. To DOKTA at or above 4000ft, turn right. To DOGRA at or below 6000ft, turn right. To AGROT, turn right. To ABVIP. To ADMIM at or above 10000ft, turn right. To ASUNA.	TOKIM [M023; A020+; R] -	CF	N
	DOKTA [A040+; R] -	TF	N
	DOGRA [A060-; R] -	TF	N
	AGROT [R] -	TF	N
	ABVIP -	TF	N
	ADMIM [A100+; R] -	TF	N
	ASUNA	TF	N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
CF	TOKIM	-	023(022.5)	-0.5	R	A020+	-	RNAV1
TF	DOKTA	-	115(114.5)	-0.5	R	A040+	-	RNAV1
TF	DOGRA	-	169(168.5)	-0.5	R	A060-	-	RNAV1
TF	AGROT	-	255(254.5)	-0.5	R	-	-	RNAV1
TF	ABVIP	-	262(261.5)	-0.5	-	-	-	RNAV1
TF	ADMIM	-	262(261.5)	-0.5	R	A100+	-	RNAV1
TF	ASUNA	-	276(275.5)	-0.5	-	-	-	RNAV1

ADMIM 3B (SID) RNAV GNSS RWY 20C - DESCRIPTIONS**Formal & Abbreviated Descriptions**

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
To IBIXU on course 203° at or above 1500ft. To IBIVA at or above 2500ft. To SAMKO at or below 6000ft, turn right. To ABVIP, turn right. To ADMIM at or above 10000ft, turn right. To ASUNA.	IBIXU [M203; A015+] -	CF	N
	IBIVA [A025+] -	TF	N
	SAMKO [A060-; R] -	TF	N
	ABVIP [R] -	TF	N
	ADMIM [A100+; R] -	TF	N
	ASUNA	TF	N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
CF	IBIXU	-	203(202.5)	-0.5	-	A015+	-	RNAV1
TF	IBIVA	-	203(202.5)	-0.5	-	A025+	-	RNAV1
TF	SAMKO	-	203(202.5)	-0.5	R	A060-	-	RNAV1
TF	ABVIP	-	204(203.5)	-0.5	R	-	-	RNAV1
TF	ADMIM	-	262(261.5)	-0.5	R	A100+	-	RNAV1
TF	ASUNA	-	276(275.5)	-0.5	-	-	-	RNAV1

RADIO COMMUNICATIONS FAILURE PROCEDURE

1	SET TRANSPONDER TO MODE A/C CODE 7600
2	COMMUNICATIONS FAILURE OCCURS IMMEDIATELY AFTER DEPARTURE ON: RWY 02C - PROCEED STRAIGHT AHEAD TO NYLON HOLDING AREA (NHA) CLIMBING TO THE LAST ASSIGNED ALTITUDE, THEREAFTER REFER TO SINGAPORE AIP ON RADIO COMMUNICATIONS FAILURE PROCEDURE. RWY 20C - PROCEED STRAIGHT AHEAD TO SAMKO HOLDING AREA (SHA) CLIMBING TO THE LAST ASSIGNED ALTITUDE, THEREAFTER REFER TO SINGAPORE AIP ON RADIO COMMUNICATIONS FAILURE PROCEDURE.

**STANDARD DEPARTURE CHART
RNAV (GNSS) -
INSTRUMENT (SID)**

TWR 118.6 / 118.25
APP 120.3
124.05
ACC 134.2

TRANSITION ALTITUDE
11 000ft

D-ATIS AP ID-WSSS
128.6

**SINGAPORE/Singapore Changi
RWY 02C/20C
TOMAN DEPARTURES
TOMAN 2A (R02C)
TOMAN 4B (R20C)**

ELEV, ALT IN FEET
BEARINGS, TRACKS AND
RADIALS ARE MAGNETIC
VAR 23°E (2020)

DISTANCES IN NM

NOTE: RADAR REQUIRED

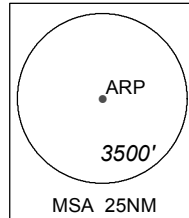
NOTE: RNAV-1 NAVIGATION SPECIFICATION
GNSS REQUIRED

NOTE: CLOSE-IN OBSTACLES (AIRCRAFT UP TO 80FT)
EXIST ON TAXIWAYS WEST OF RUNWAY 02C

NOTE: ACFT UNABLE TO FLY THE SID
PROFILE SHALL INFORM ATC
PRIOR TO DEPARTURE AND TO
EXPECT RADAR VECTURING,
IF NECESSARY

NOTE: WHEN TAKEN OFF THE SID,
AS INSTRUCTED BY ATC,
REFER TO ENR 1.5, SECTION 3,
PARAGRAPH 3.3 [A] - FOR RWY 02C MINIMUM CLIMB GRADIENT AND
PARAGRAPH 3.4.1 - FOR RWY 20C MINIMUM CLIMB GRADIENT

NOTE: REFER TO BACK PAGE FOR
- FORMAL AND TABULAR DESCRIPTIONS
- RADIO COM FAILURE PROCEDURES

**GENERAL INFORMATION****INITIAL CLIMB
3000FT**

ALL SIDs INCLUDE NOISE PREFERENTIAL ROUTES.

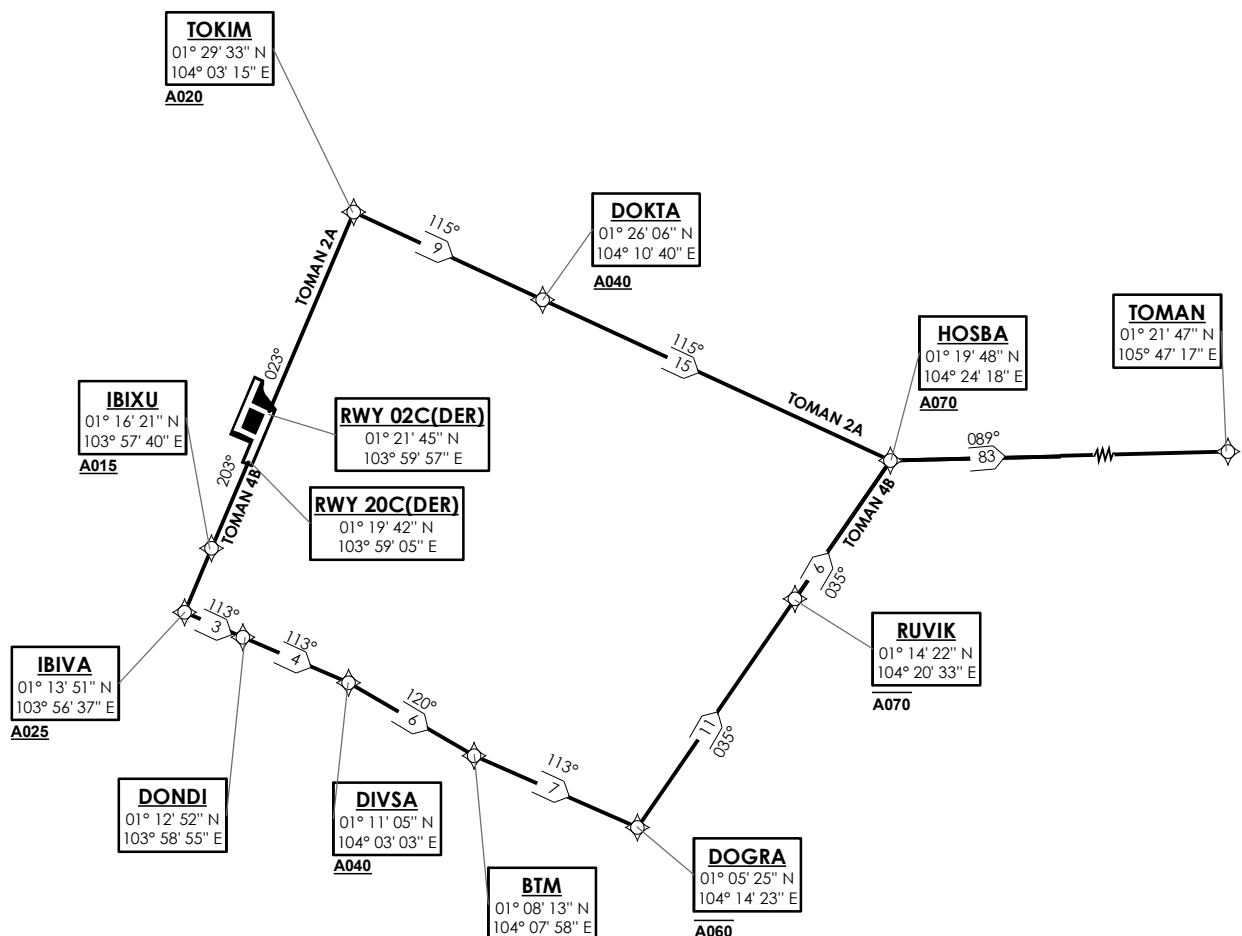
RWY 02C

SHALL NOT EXCEED IAS 230KTS UNTIL PASSING 4000FT AMSL AND
NOT EXCEED IAS 250KTS UNTIL PASSING 10000FT AMSL.
CRUISING LEVELS WILL BE ISSUED AFTER TAKE-OFF
BY SINGAPORE RADAR.
SID SHALL BE ON A MINIMUM CLIMB GRADIENT OF 3.3%.

RWY 20C

SHALL NOT EXCEED IAS 230KTS UNTIL PASSING 4000FT AMSL AND
NOT EXCEED IAS 250KTS UNTIL PASSING 10000FT AMSL.
CRUISING LEVELS WILL BE ISSUED AFTER TAKE-OFF
BY SINGAPORE RADAR.
SID SHALL BE ON A MINIMUM CLIMB GRADIENT OF 7%
UNTIL REACHING OR PASSING 2500FT, THEREAFTER 3.3%.

GND SPEED - KNOTS	75	100	150	200	250	300
7% V/V (fpm)	532	709	1062	1416	1769	2123
3.3% V/V (fpm)	251	334	501	668	835	1003



NOT TO SCALE

5 NOV 2020

TOMAN 2A (SID) RNAV GNSS RWY 02C - DESCRIPTIONS**Formal & Abbreviated Descriptions**

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
To TOKIM on course 023° at or above 2000ft, turn right. To DOKTA at or above 4000ft. To HOSBA at or above 7000ft, turn left. To TOMAN.	TOKIM [M023; A020+; R] -	CF	N
	DOKTA [A040+] -	TF	N
	HOSBA [A070+; L] -	TF	N
	TOMAN	TF	N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
CF	TOKIM	-	023(022.5)	-0.5	R	A020+	-	RNAV1
TF	DOKTA	-	115(114.5)	-0.5	-	A040+	-	RNAV1
TF	HOSBA	-	115(114.5)	-0.5	L	A070+	-	RNAV1
TF	TOMAN	-	089(088.5)	-0.5	-	-	-	RNAV1

TOMAN 4B (SID) RNAV GNSS RWY 20C - DESCRIPTIONS**Formal & Abbreviated Descriptions**

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
To IBIXU on course 203° at or above 1500ft. To IBIVA at or above 2500ft, turn left. To DONDI. To DIVSA at or above 4000ft, turn right. To BTM, turn left. To DOGRA at or below 6000ft, turn left. To RUVIK at or below 7000ft. To HOSBA at or above 7000ft, turn right. To TOMAN.	IBIXU [M203; A015+] -	CF	N
	IBIVA [A025+; L] -	TF	N
	DONDI -	TF	N
	DIVSA [A040+; R] -	TF	N
	BTM [L] -	TF	N
	DOGRA [A060-; L] -	TF	N
	RUVIK [A070-] -	TF	N
	HOSBA [A070+; R] -	TF	N
	TOMAN	TF	N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
CF	IBIXU	-	203(202.5)	-0.5	-	A015+	-	RNAV1
TF	IBIVA	-	203(202.5)	-0.5	L	A025+	-	RNAV1
TF	DONDI	-	113(112.5)	-0.5	-	-	-	RNAV1
TF	DIVSA	-	113(112.5)	-0.5	R	A040+	-	RNAV1
TF	BTM	-	120(119.5)	-0.5	L	-	-	RNAV1
TF	DOGRA	-	113(112.5)	-0.5	L	A060-	-	RNAV1
TF	RUVIK	-	035(034.5)	-0.5	-	A070-	-	RNAV1
TF	HOSBA	-	035(034.5)	-0.5	R	A070+	-	RNAV1
TF	TOMAN	-	089(088.5)	-0.5	-	-	-	RNAV1

RADIO COMMUNICATIONS FAILURE PROCEDURE

1	SET TRANSPONDER TO MODE A/C CODE 7600
2	<p>COMMUNICATIONS FAILURE OCCURS IMMEDIATELY AFTER DEPARTURE ON:</p> <p>RWY 02C - PROCEED STRAIGHT AHEAD TO NYLON HOLDING AREA (NHA) CLIMBING TO THE LAST ASSIGNED ALTITUDE, THEREAFTER REFER TO SINGAPORE AIP ON RADIO COMMUNICATIONS FAILURE PROCEDURE.</p> <p>RWY 20C - PROCEED STRAIGHT AHEAD TO SAMKO HOLDING AREA (SHA) CLIMBING TO THE LAST ASSIGNED ALTITUDE, THEREAFTER REFER TO SINGAPORE AIP ON RADIO COMMUNICATIONS FAILURE PROCEDURE.</p>

STANDARD DEPARTURE CHART RNAV (GNSS) - INSTRUMENT (SID)

TWR 118.6 / 118.25
APP 120.3
124.05
ACC 134.4

TRANSITION ALTITUDE
11 000ft

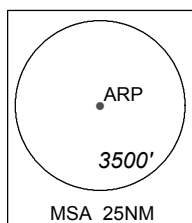
D-ATIS AP ID-WSSS
128.6

SINGAPORE/Singapore Changi RWY 02C/20C

BAVUS DEPARTURES
BAVUS 1A (R02C)
BAVUS 3B (R20C)

ELEV, ALT IN FEET
BEARINGS, TRACKS AND
RADIALS ARE MAGNETIC
VAR 23°E (2020)

DISTANCES IN NM



NOTE: RADAR REQUIRED

NOTE: RNAV-1 NAVIGATION SPECIFICATION
GNSS REQUIRED

NOTE: CLOSE-IN OBSTACLES (AIRCRAFT UP TO 80FT)
EXIST ON TAXIWAYS WEST OF RUNWAY 02C

NOTE: ACFT UNABLE TO FLY THE SID
PROFILE SHALL INFORM ATC
PRIOR TO DEPARTURE AND TO
EXPECT RADAR VECTURING,
IF NECESSARY

NOTE: WHEN TAKEN OFF THE SID,
AS INSTRUCTED BY ATC,
REFER TO ENR 1.5, SECTION 3,
PARAGRAPH 3.3 [A] - FOR RWY 02C MINIMUM CLIMB GRADIENT AND
PARAGRAPH 3.4.1 - FOR RWY 20C MINIMUM CLIMB GRADIENT

NOTE: REFER TO BACK PAGE FOR
- FORMAL AND TABULAR DESCRIPTIONS
- RADIO COM FAILURE PROCEDURES

GENERAL INFORMATION

INITIAL CLIMB 3000FT

ALL SIDs INCLUDE NOISE PREFERENTIAL ROUTES.

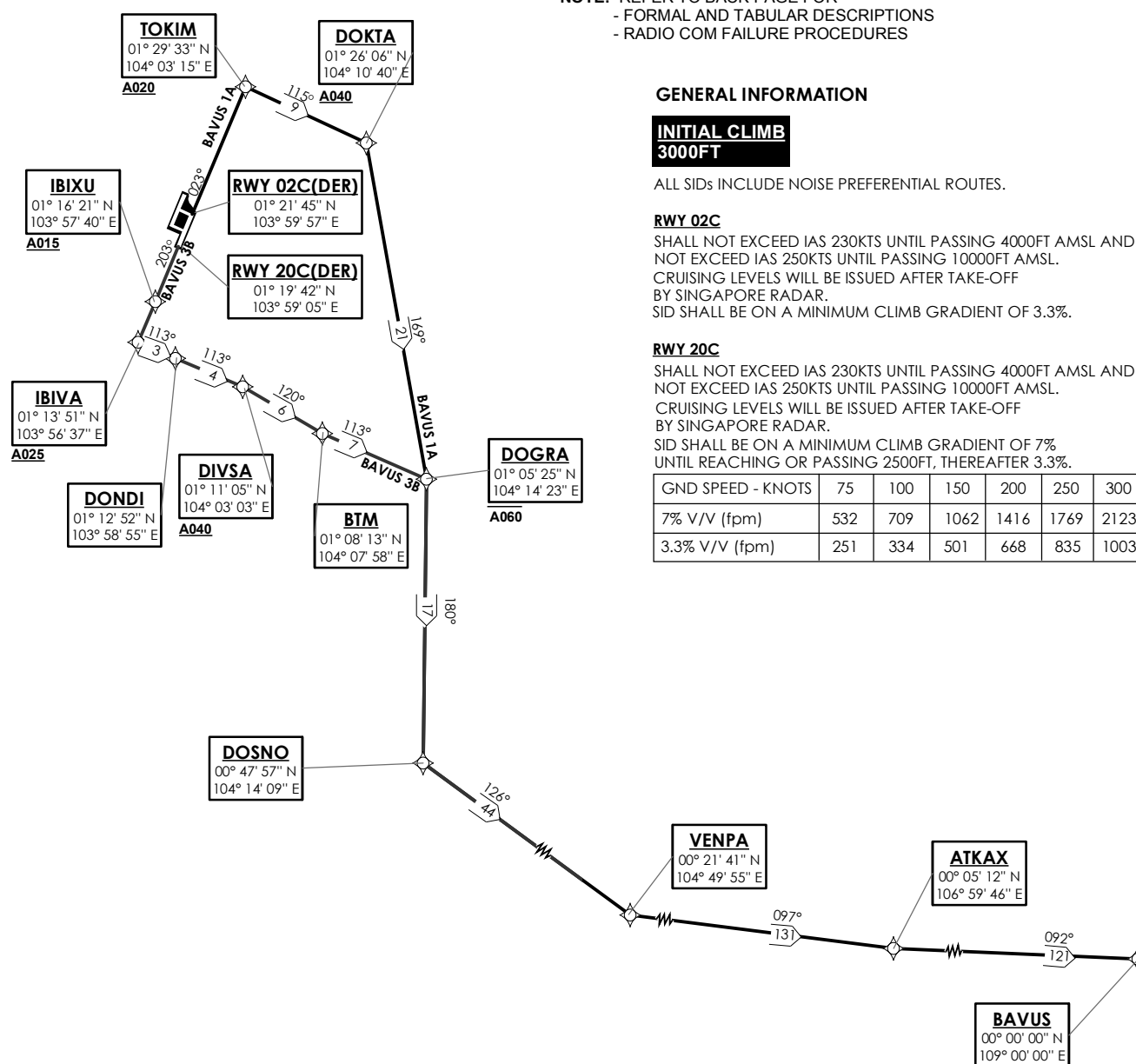
RWY 02C

SHALL NOT EXCEED IAS 230KTS UNTIL PASSING 4000FT AMSL AND
NOT EXCEED IAS 250KTS UNTIL PASSING 10000FT AMSL.
CRUISING LEVELS WILL BE ISSUED AFTER TAKE-OFF
BY SINGAPORE RADAR.
SID SHALL BE ON A MINIMUM CLIMB GRADIENT OF 3.3%.

RWY 20C

SHALL NOT EXCEED IAS 230KTS UNTIL PASSING 4000FT AMSL AND
NOT EXCEED IAS 250KTS UNTIL PASSING 10000FT AMSL.
CRUISING LEVELS WILL BE ISSUED AFTER TAKE-OFF
BY SINGAPORE RADAR.
SID SHALL BE ON A MINIMUM CLIMB GRADIENT OF 7%
UNTIL REACHING OR PASSING 2500FT, THEREAFTER 3.3%.

GND SPEED - KNOTS	75	100	150	200	250	300
7% V/V (fpm)	532	709	1062	1416	1769	2123
3.3% V/V (fpm)	251	334	501	668	835	1003



NOT TO SCALE

5 NOV 2020

BAVUS 1A (SID) RNAV GNSS RWY 02C - DESCRIPTIONS**Formal & Abbreviated Descriptions**

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
To TOKIM on course 023° at or above 2000ft, turn right. To DOKTA at or above 4000ft, turn right. To DOGRA at or below 6000ft, turn right. To DOSNO, turn left. To VENPA, turn left. To ATKAX, turn left. To BAVUS.	TOKIM [M023; A020+; R] -	CF	N
	DOKTA [A040+; R] -	TF	N
	DOGRA [A060-; R] -	TF	N
	DOSNO [L] -	TF	N
	VENPA [L] -	TF	N
	ATKAX [L] -	TF	N
	BAVUS	TF	N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
CF	TOKIM	-	023(022.5)	-0.5	R	A020+	-	RNAV1
TF	DOKTA	-	115(114.5)	-0.5	R	A040+	-	RNAV1
TF	DOGRA	-	169(168.5)	-0.5	R	A060-	-	RNAV1
TF	DOSNO	-	180(179.5)	-0.5	L	-	-	RNAV1
TF	VENPA	-	126(125.5)	-0.5	L	-	-	RNAV1
TF	ATKAX	-	097(096.5)	-0.5	L	-	-	RNAV1
TF	BAVUS	-	092(091.5)	-0.5	-	-	-	RNAV1

BAVUS 3B (SID) RNAV GNSS RWY 20C - DESCRIPTIONS**Formal & Abbreviated Descriptions**

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
To IBIXU on course 203° at or above 1500ft. To IBIVA at or above 2500ft, turn left. To DONDI. To DIVSA at or above 4000ft, turn right. To BTM, turn left. To DOGRA at or below 6000ft, turn right. To DOSNO, turn left. To VENPA, turn left. To ATKAX, turn left. To BAVUS.	IBIXU [M203; A015+] -	CF	N
	IBIVA [A025+; L] -	TF	N
	DONDI -	TF	N
	DIVSA [A040+; R] -	TF	N
	BTM [L] -	TF	N
	DOGRA [A060-; R] -	TF	N
	DOSNO [L] -	TF	N
	VENPA [L] -	TF	N
	ATKAX [L] -	TF	N
	BAVUS	TF	N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
CF	IBIXU	-	203(202.5)	-0.5	-	A015+	-	RNAV1
TF	IBIVA	-	203(202.5)	-0.5	L	A025+	-	RNAV1
TF	DONDI	-	113(112.5)	-0.5	-	-	-	RNAV1
TF	DIVSA	-	113(112.5)	-0.5	R	A040+	-	RNAV1
TF	BTM	-	120(119.5)	-0.5	L	-	-	RNAV1
TF	DOGRA	-	113(112.5)	-0.5	R	A060-	-	RNAV1
TF	DOSNO	-	180(179.5)	-0.5	L	-	-	RNAV1
TF	VENPA	-	126(125.5)	-0.5	L	-	-	RNAV1
TF	ATKAX	-	097(096.5)	-0.5	L	-	-	RNAV1
TF	BAVUS	-	092(091.5)	-0.5	-	-	-	RNAV1

RADIO COMMUNICATIONS FAILURE PROCEDURE

1	SET TRANSPONDER TO MODE A/C CODE 7600
2	COMMUNICATIONS FAILURE OCCURS IMMEDIATELY AFTER DEPARTURE ON: RWY 02C - PROCEED STRAIGHT AHEAD TO NYLON HOLDING AREA (NHA) CLIMBING TO THE LAST ASSIGNED ALTITUDE, THEREAFTER REFER TO SINGAPORE AIP ON RADIO COMMUNICATIONS FAILURE PROCEDURE. RWY 20C - PROCEED STRAIGHT AHEAD TO SAMKO HOLDING AREA (SHA) CLIMBING TO THE LAST ASSIGNED ALTITUDE, THEREAFTER REFER TO SINGAPORE AIP ON RADIO COMMUNICATIONS FAILURE PROCEDURE.

**STANDARD DEPARTURE CHART
RNAV (GNSS) -
INSTRUMENT (SID)**

TWR 118.6 / 118.25
APP 120.3
124.05
ACC 133.25

TRANSITION ALTITUDE
11 000ft

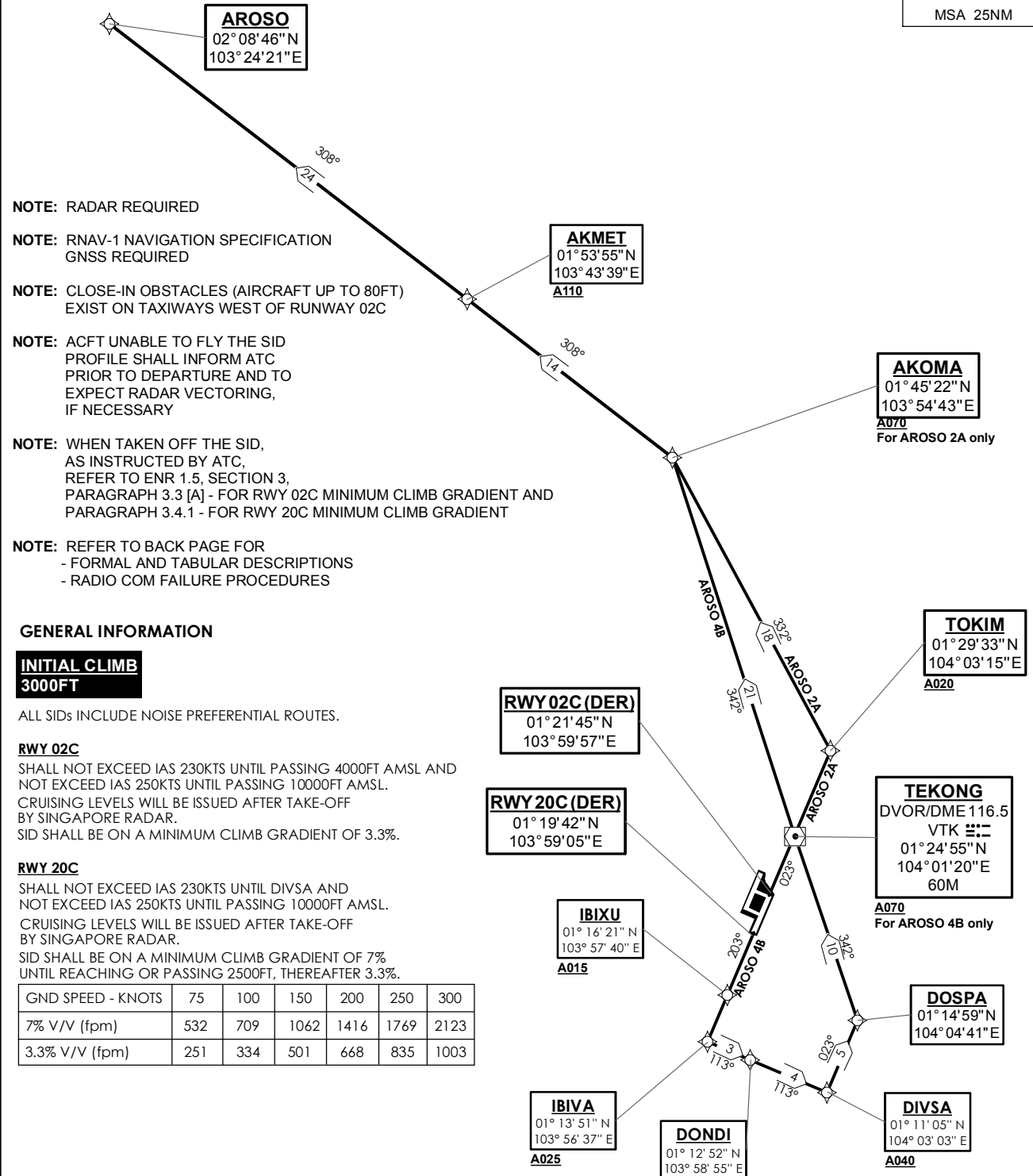
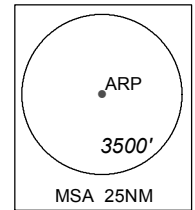
D-ATIS AP ID-WSSS
128.6

**SINGAPORE/Singapore Changi
RWY 02C/20C
AROSO DEPARTURES
AROSO 2A (R02C)
AROSO 4B (R20C)**

ELEV, ALT IN FEET

BEARINGS, TRACKS AND
RADIALS ARE MAGNETIC
VAR 23°E (2020)

DISTANCES IN NM



NOT TO SCALE

5 NOV 2020

AROSO 2A (SID) RNAV GNSS RWY 02C - DESCRIPTIONS**Formal & Abbreviated Descriptions**

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
To TOKIM on course 023° at or above 2000ft, turn left. To AKOMA at or above 7000ft, turn left. To AKMET at or above 11000ft. To AROSO.	TOKIM [M023; A020+; L] -	CF	N
	AKOMA [A070+; L] -	TF	N
	AKMET [A110+] -	TF	N
	AROSO	TF	N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
CF	TOKIM	-	023(022.5)	-0.5	L	A020+	-	RNAV1
TF	AKOMA	-	332(331.5)	-0.5	L	A070+	-	RNAV1
TF	AKMET	-	308(307.5)	-0.5	-	A110+	-	RNAV1
TF	AROSO	-	308(307.5)	-0.5	-	-	-	RNAV1

AROSO 4B (SID) RNAV GNSS RWY 20C - DESCRIPTIONS**Formal & Abbreviated Descriptions**

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
To IBIXU on course 203° at or above 1500ft. To IBIVA at or above 2500ft, turn left. To DONDI. To DIVSA at or above 4000ft, speed 230kts, turn left. To DOSPA, turn left. To VTK at or above 7000ft. To AKOMA, turn left. To AKMET at or above 11000ft. To AROSO.	IBIXU [M203; A015+] -	CF	N
	IBIVA [A025+; L] -	TF	N
	DONDI -	TF	N
	DIVSA [A040+; K230; L] -	TF	N
	DOSPA [L] -	TF	N
	VTK [A070+] -	TF	N
	AKOMA [L] -	TF	N
	AKMET [A110+] -	TF	N
	AROSO	TF	N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
CF	IBIXU	-	203(202.5)	-0.5	-	A015+	-	RNAV1
TF	IBIVA	-	203(202.5)	-0.5	L	A025+	-	RNAV1
TF	DONDI	-	113(113.3)	-0.5	-	-	-	RNAV1
TF	DIVSA	-	113(113.3)	-0.5	L	A040+	K230	RNAV1
TF	DOSPA	-	023(023.6)	-0.5	L	-	-	RNAV1
TF	VTK	-	342(341.5)	-0.5	-	A070+	-	RNAV1
TF	AKOMA	-	342(341.5)	-0.5	L	-	-	RNAV1
TF	AKMET	-	308(307.5)	-0.5	-	A110+	-	RNAV1
TF	AROSO	-	308(307.5)	-0.5	-	-	-	RNAV1

RADIO COMMUNICATIONS FAILURE PROCEDURE

1	SET TRANSPONDER TO MODE A/C CODE 7600
2	<p>COMMUNICATIONS FAILURE OCCURS IMMEDIATELY AFTER DEPARTURE ON:</p> <p>RWY 02C - PROCEED STRAIGHT AHEAD TO NYLON HOLDING AREA (NHA) CLIMBING TO THE LAST ASSIGNED ALTITUDE, THEREAFTER REFER TO SINGAPORE AIP ON RADIO COMMUNICATIONS FAILURE PROCEDURE.</p> <p>RWY 20C - PROCEED STRAIGHT AHEAD TO SAMKO HOLDING AREA (SHA) CLIMBING TO THE LAST ASSIGNED ALTITUDE, THEREAFTER REFER TO SINGAPORE AIP ON RADIO COMMUNICATIONS FAILURE PROCEDURE.</p>

**STANDARD DEPARTURE CHART
RNAV (GNSS) -
INSTRUMENT (SID)**

TWR 118.6 / 118.25
APP 120.3
124.05
ACC 133.25

TRANSITION ALTITUDE
11 000ft

D-ATIS AP ID-WSSS
128.6

**SINGAPORE/Singapore Changi
RWY 02C/20C**
MASBO DEPARTURES
MASBO 2A (R02C)
MASBO 4B (R20C)

ELEV, ALT IN FEET

BEARINGS, TRACKS AND
RADIALS ARE MAGNETIC
VAR 23°E (2020)

DISTANCES IN NM

NOTE: RADAR REQUIRED

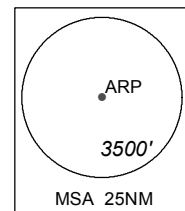
NOTE: RNAV-1 NAVIGATION SPECIFICATION
GNSS REQUIRED

NOTE: CLOSE-IN OBSTACLES (AIRCRAFT UP TO 80FT)
EXIST ON TAXIWAYS WEST OF RUNWAY 02C

NOTE: ACFT UNABLE TO FLY THE SID
PROFILE SHALL INFORM ATC
PRIOR TO DEPARTURE AND TO
EXPECT RADAR VECTORING,
IF NECESSARY

NOTE: WHEN TAKEN OFF THE SID,
AS INSTRUCTED BY ATC,
REFER TO ENR 1.5, SECTION 3,
PARAGRAPH 3.3 [A] - FOR RWY 02C MINIMUM CLIMB GRADIENT AND
PARAGRAPH 3.4.1 - FOR RWY 20C MINIMUM CLIMB GRADIENT

NOTE: REFER TO BACK PAGE FOR
- FORMAL AND TABULAR DESCRIPTIONS
- RADIO COM FAILURE PROCEDURES



MASBO
02°02'48"N
102°52'51"E

SABKA
01°50'51"N
103°17'13"E

AGVAR
01°47'19"N
103°41'45"E
A110

AKOMA
01°45'22"N
103°54'43"E
A070
For MASBO 2A only

TOKIM
01°29'33"N
104°03'15"E
A020

TEKONG
DVOR/DME 116.5
VTK
01°24'55"N
104°01'20"E
60M
A070
For MASBO 4B only

DOSPA
01°14'59"N
104°04'41"E

DIVSA
01°11'05"N
104°03'03"E
A040

DONDI
01°12'52"N
103°58'55"E

IBIXU
01°16'21"N
103°57'40"E
A015

IBIVA
01°13'51"N
103°56'37"E
A025

RWY 02C (DER)
01°21'45"N
103°59'57"E

RWY 20C (DER)
01°19'42"N
103°59'05"E

GENERAL INFORMATION**INITIAL CLIMB
3000FT**

ALL SIDs INCLUDE NOISE PREFERENTIAL ROUTES.

RWY 02C

SHALL NOT EXCEED IAS 230KTS UNTIL PASSING 4000FT AMSL AND
NOT EXCEED IAS 250KTS UNTIL PASSING 10000FT AMSL.
CRUISING LEVELS WILL BE ISSUED AFTER TAKE-OFF
BY SINGAPORE RADAR.
SID SHALL BE ON A MINIMUM CLIMB GRADIENT OF 3.3%.

RWY 20C

SHALL NOT EXCEED IAS 230KTS UNTIL DIVSA AND
NOT EXCEED IAS 250KTS UNTIL PASSING 10000FT AMSL.
CRUISING LEVELS WILL BE ISSUED AFTER TAKE-OFF
BY SINGAPORE RADAR.
SID SHALL BE ON A MINIMUM CLIMB GRADIENT OF 7%
UNTIL REACHING OR PASSING 2500FT, THEREAFTER 3.3%.

GND SPEED - KNOTS	75	100	150	200	250	300
7% V/V (fpm)	532	709	1062	1416	1769	2123
3.3% V/V (fpm)	251	334	501	668	835	1003

NOT TO SCALE

5 NOV 2020

MASBO 2A (SID) RNAV GNSS RWY 02C - DESCRIPTIONS**Formal & Abbreviated Descriptions**

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
To TOKIM on course 023° at or above 2000ft, turn left. To AKOMA at or above 7000ft, turn left. To AGVAR at or above 11000ft. To SABKA, turn right. To MASBO.	TOKIM [M023; A020+; L] -	CF	N
	AKOMA [A070+; L] -	TF	N
	AGVAR [A110+] -	TF	N
	SABKA [R] -	TF	N
	MASBO	TF	N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
CF	TOKIM	-	023(022.5)	-0.5	L	A020+	-	RNAV1
TF	AKOMA	-	332(331.5)	-0.5	L	A070+	-	RNAV1
TF	AGVAR	-	278(277.5)	-0.5	-	A110+	-	RNAV1
TF	SABKA	-	278(277.5)	-0.5	R	-	-	RNAV1
TF	MASBO	-	296(295.5)	-0.5	-	-	-	RNAV1

MASBO 4B (SID) RNAV GNSS RWY 20C - DESCRIPTIONS**Formal & Abbreviated Descriptions**

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
To IBIXU on course 203° at or above 1500ft. To IBIVA at or above 2500ft, turn left. To DOND I. To DIVSA at or above 4000ft, speed 230kts, turn left. To DOSPA, turn left. To VTK at or above 7000ft. To AKOMA, turn left. To AGVAR at or above 11000ft. To SABKA, turn right. To MASBO.	IBIXU [M203; A015+] -	CF	N
	IBIVA [A025+; L] -	TF	N
	DOND I -	TF	N
	DIVSA [A040+; K230; L] -	TF	N
	DOSPA [L] -	TF	N
	VTK [A070+] -	TF	N
	AKOMA [L] -	TF	N
	AGVAR [A110+] -	TF	N
	SABKA [R] -	TF	N
	MASBO	TF	N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
CF	IBIXU	-	203(202.5)	-0.5	-	A015+	-	RNAV1
TF	IBIVA	-	203(202.5)	-0.5	L	A025+	-	RNAV1
TF	DOND I	-	113(112.5)	-0.5	-	-	-	RNAV1
TF	DIVSA	-	113(112.5)	-0.5	L	A040+	K230	RNAV1
TF	DOSPA	-	023(022.5)	-0.5	L	-	-	RNAV1
TF	VTK	-	342(341.5)	-0.5	-	A070+	-	RNAV1
TF	AKOMA	-	342(341.5)	-0.5	L	-	-	RNAV1
TF	AGVAR	-	278(277.5)	-0.5	-	A110+	-	RNAV1
TF	SABKA	-	278(277.5)	-0.5	R	-	-	RNAV1
TF	MASBO	-	296(295.5)	-0.5	-	-	-	RNAV1

RADIO COMMUNICATIONS FAILURE PROCEDURE

1	SET TRANSPONDER TO MODE A/C CODE 7600
2	<p>COMMUNICATIONS FAILURE OCCURS IMMEDIATELY AFTER DEPARTURE ON:</p> <p>RWY 02C - PROCEED STRAIGHT AHEAD TO NYLON HOLDING AREA (NHA) CLIMBING TO THE LAST ASSIGNED ALTITUDE, THEREAFTER REFER TO SINGAPORE AIP ON RADIO COMMUNICATIONS FAILURE PROCEDURE.</p> <p>RWY 20C - PROCEED STRAIGHT AHEAD TO SAMKO HOLDING AREA (SHA) CLIMBING TO THE LAST ASSIGNED ALTITUDE, THEREAFTER REFER TO SINGAPORE AIP ON RADIO COMMUNICATIONS FAILURE PROCEDURE.</p>

**STANDARD DEPARTURE CHART
RNAV (GNSS) -
INSTRUMENT (SID)**

TWR 118.6 / 118.25
APP 120.3
124.05
ACC 133.8

TRANSITION ALTITUDE
11 000ft

D-ATIS AP ID-WSSS
128.6

SINGAPORE/Singapore Changi
RWY 02C/20C
MERSING DEPARTURES
VMR 5A (R02C)
VMR 8B (R20C)

ELEV, ALT IN FEET

BEARINGS, TRACKS AND
RADIALS ARE MAGNETIC
VAR 23°E (2020)

DISTANCES IN NM

NOTE: RADAR REQUIRED

NOTE: RNAV-1 NAVIGATION SPECIFICATION
GNSS REQUIRED

NOTE: CLOSE-IN OBSTACLES (AIRCRAFT UP TO 80FT)
EXIST ON TAXIWAYS WEST OF RUNWAY 02C

NOTE: ACFT UNABLE TO FLY THE SID
PROFILE SHALL INFORM ATC
PRIOR TO DEPARTURE AND TO
EXPECT RADAR VECTURING,
IF NECESSARY

NOTE: WHEN TAKEN OFF THE SID,
AS INSTRUCTED BY ATC,
REFER TO ENR 1.5, SECTION 3,
PARAGRAPH 3.3 [A] - FOR RWY 02C MINIMUM CLIMB GRADIENT AND
PARAGRAPH 3.4.1 - FOR RWY 20C MINIMUM CLIMB GRADIENT

NOTE: REFER TO BACK PAGE FOR
- FORMAL AND TABULAR DESCRIPTIONS
- RADIO COM FAILURE PROCEDURES

GENERAL INFORMATION**INITIAL CLIMB
3000FT**

ALL SIDs INCLUDE NOISE PREFERENTIAL ROUTES.

RWY 02C

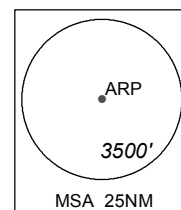
SHALL NOT EXCEED IAS 230KTS UNTIL PASSING 4000FT AMSL AND
NOT EXCEED IAS 250KTS UNTIL PASSING 10000FT AMSL.
CRUISING LEVELS WILL BE ISSUED AFTER TAKE-OFF
BY SINGAPORE RADAR.
SID SHALL BE ON A MINIMUM CLIMB GRADIENT OF 3.3%.

RWY 20C

SHALL NOT EXCEED IAS 230KTS UNTIL DIVSA AND
NOT EXCEED IAS 250KTS UNTIL PASSING 10000FT AMSL.
CRUISING LEVELS WILL BE ISSUED AFTER TAKE-OFF
BY SINGAPORE RADAR.
SID SHALL BE ON A MINIMUM CLIMB GRADIENT OF 7%
UNTIL REACHING OR PASSING 2500FT, THEREAFTER 3.3%.

GND SPEED - KNOTS	75	100	150	200	250	300
7% V/V (fpm)	532	709	1062	1416	1769	2123
3.3% V/V (fpm)	251	334	501	668	835	1003

VMR
02°23'18"N
103°52'18"E



AKOMA
01°45'22"N
103°54'43"E

A070
For VMR 5A only

TOKIM
01°29'33"N
104°03'15"E

A020

RWY02C(DER)
01°21'45"N
103°59'57"E

RWY20C(DER)
01°19'42"N
103°59'05"E

IBIXU
01°16'21"N
103°57'40"E

A015

TEKONG
DVOR/DME 116.5
VTK
01°24'55"N
104°01'20"E
60M

A070
For VMR 8B only

DOSPA
01°14'59"N
104°04'41"E

IBIVA
01°13'51"N
103°56'37"E

A025

DONDI
01°12'52"N
103°58'55"E

DIVSA
01°11'05"N
104°03'03"E

A040

NOT TO SCALE

5 NOV 2020

VMR 5A (SID) RNAV GNSS RWY 02C - DESCRIPTIONS**Formal & Abbreviated Descriptions**

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
To TOKIM on course 023° at or above 2000ft, turn left. To AKOMA at or above 7000ft, turn right. To VMR.	TOKIM [M023; A020+; L] - AKOMA [A070+; R] - VMR	CF TF TF	N N N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
CF	TOKIM	-	023(022.5)	-0.5	L	A020+	-	RNAV1
TF	AKOMA	-	332(331.5)	-0.5	R	A070+	-	RNAV1
TF	VMR	-	356(355.5)	-0.5	-	-	-	RNAV1

VMR 8B (SID) RNAV GNSS RWY 20C - DESCRIPTIONS**Formal & Abbreviated Descriptions**

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
To IBIXU on course 203° at or above 1500ft. To IBIVA at or above 2500ft, turn left. To DONDI. To DIVSA at or above 4000ft, speed 230kts, turn left. To DOSPA, turn left. To VTK at or above 7000ft. To AKOMA, turn right. To VMR.	IBIXU [M203; A015+] - IBIVA [A025+; L] - DONDI - DIVSA [A040+; K230; L] - DOSPA [L] - VTK [A070+] - AKOMA [R] - VMR	CF TF TF TF TF TF TF TF	N N N N N N N N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
CF	IBIXU	-	203(202.5)	-0.5	-	A015+	-	RNAV1
TF	IBIVA	-	203(202.5)	-0.5	L	A025+	-	RNAV1
TF	DONDI	-	113(112.5)	-0.5	-	-	-	RNAV1
TF	DIVSA	-	113(112.5)	-0.5	L	A040+	K230	RNAV1
TF	DOSPA	-	023(022.5)	-0.5	L	-	-	RNAV1
TF	VTK	-	342(341.5)	-0.5	-	A070+	-	RNAV1
TF	AKOMA	-	342(341.5)	-0.5	R	-	-	RNAV1
TF	VMR	-	356(355.5)	-0.5	-	-	-	RNAV1

RADIO COMMUNICATIONS FAILURE PROCEDURE

1	SET TRANSPONDER TO MODE A/C CODE 7600
2	COMMUNICATIONS FAILURE OCCURS IMMEDIATELY AFTER DEPARTURE ON: RWY 02C - PROCEED STRAIGHT AHEAD TO NYLON HOLDING AREA (NHA) CLIMBING TO THE LAST ASSIGNED ALTITUDE, THEREAFTER REFER TO SINGAPORE AIP ON RADIO COMMUNICATIONS FAILURE PROCEDURE. RWY 20C - PROCEED STRAIGHT AHEAD TO SAMKO HOLDING AREA (SHA) CLIMBING TO THE LAST ASSIGNED ALTITUDE, THEREAFTER REFER TO SINGAPORE AIP ON RADIO COMMUNICATIONS FAILURE PROCEDURE.

STANDARD DEPARTURE CHART RNAV (GNSS) - INSTRUMENT (SID)

TWR 118.6 / 118.25
APP 120.3
124.05
ACC 134.4

TRANSITION ALTITUDE
11 000ft

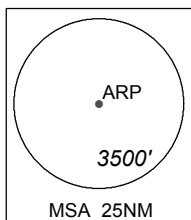
D-ATIS AP ID-WSSS
128.6

**SINGAPORE/Singapore Changi
RWY 02C/20C**

**VENIX DEPARTURES
VENIX 1A (R02C)
VENIX 3B (R20C)**

ELEV, ALT IN FEET
BEARINGS, TRACKS AND
RADIALS ARE MAGNETIC
VAR 23°E (2020)

DISTANCES IN NM



NOTE: RADAR REQUIRED

NOTE: RNAV-1 NAVIGATION SPECIFICATION
GNSS REQUIRED

NOTE: CLOSE-IN OBSTACLES (AIRCRAFT UP TO 80FT)
EXIST ON TAXIWAYS WEST OF RUNWAY 02C

NOTE: ACFT UNABLE TO FLY THE SID
PROFILE SHALL INFORM ATC
PRIOR TO DEPARTURE AND TO
EXPECT RADAR VECTURING,
IF NECESSARY

NOTE: WHEN TAKEN OFF THE SID,
AS INSTRUCTED BY ATC,
REFER TO ENR 1.5, SECTION 3,
PARAGRAPH 3.3 [A] - FOR RWY 02C MINIMUM CLIMB GRADIENT AND
PARAGRAPH 3.4.1 - FOR RWY 20C MINIMUM CLIMB GRADIENT

NOTE: REFER TO BACK PAGE FOR
- FORMAL AND TABULAR DESCRIPTIONS
- RADIO COM FAILURE PROCEDURES

GENERAL INFORMATION

INITIAL CLIMB 3000FT

ALL SIDs INCLUDE NOISE PREFERENTIAL ROUTES.

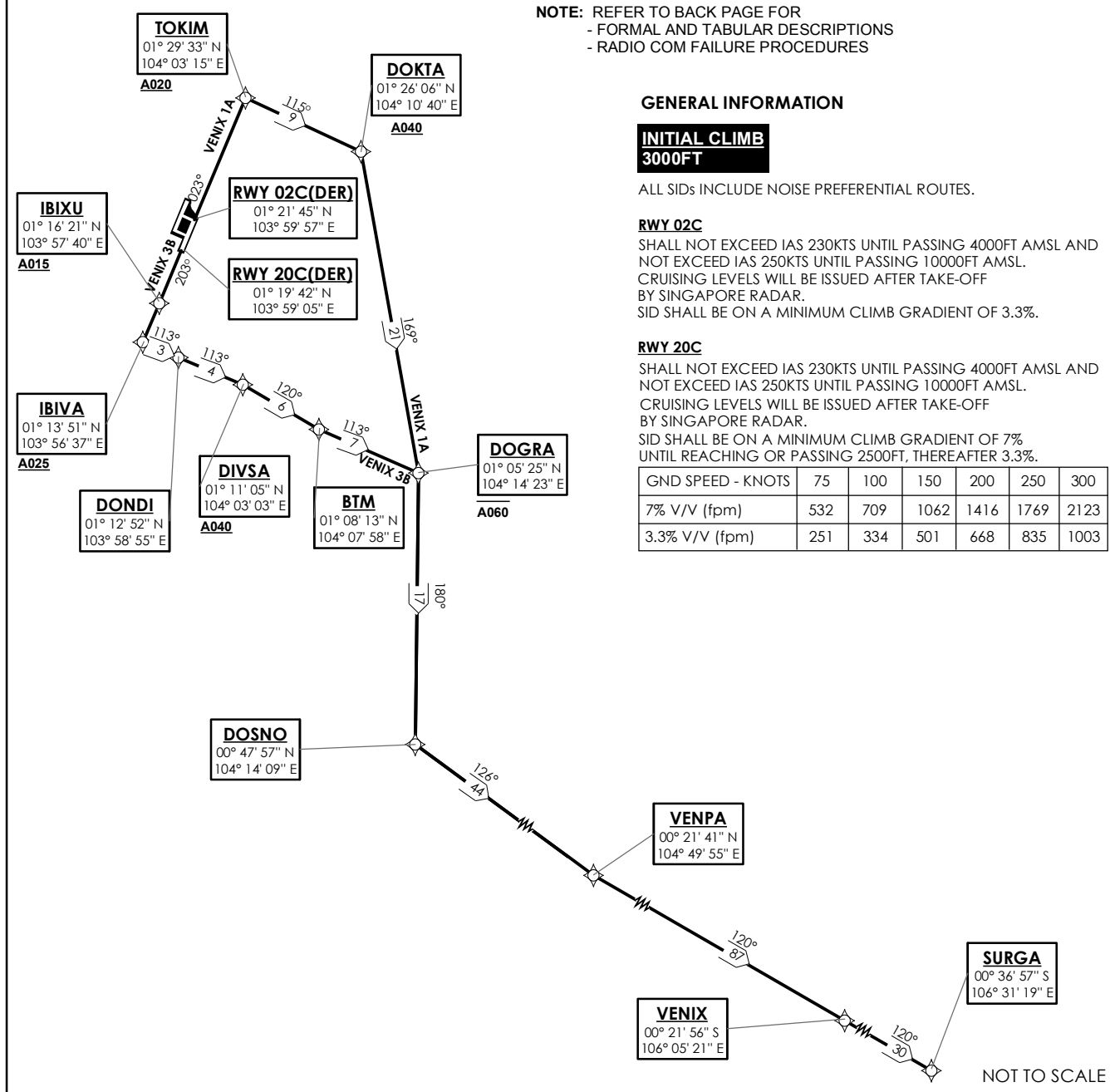
RWY 02C

SHALL NOT EXCEED IAS 230KTS UNTIL PASSING 4000FT AMSL AND
NOT EXCEED IAS 250KTS UNTIL PASSING 10000FT AMSL.
CRUISING LEVELS WILL BE ISSUED AFTER TAKE-OFF
BY SINGAPORE RADAR.
SID SHALL BE ON A MINIMUM CLIMB GRADIENT OF 3.3%.

RWY 20C

SHALL NOT EXCEED IAS 230KTS UNTIL PASSING 4000FT AMSL AND
NOT EXCEED IAS 250KTS UNTIL PASSING 10000FT AMSL.
CRUISING LEVELS WILL BE ISSUED AFTER TAKE-OFF
BY SINGAPORE RADAR.
SID SHALL BE ON A MINIMUM CLIMB GRADIENT OF 7%
UNTIL REACHING OR PASSING 2500FT, THEREAFTER 3.3%.

GND SPEED - KNOTS	75	100	150	200	250	300
7% V/V (fpm)	532	709	1062	1416	1769	2123
3.3% V/V (fpm)	251	334	501	668	835	1003



5 NOV 2020

VENIX 1A (SID) RNAV GNSS RWY 02C - DESCRIPTIONS**Formal & Abbreviated Descriptions**

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
To TOKIM on course 023° at or above 2000ft., turn right. To DOKTA at or above 4000ft, turn right. To DOGRA at or below 6000ft, turn right. To DOSNO, turn left. To VENPA, turn left. To VENIX. To SURGA.	TOKIM [M023; A020+; R] -	CF	N
	DOKTA [A040+; R] -	TF	N
	DOGRA [A060-; R] -	TF	N
	DOSNO [L] -	TF	N
	VENPA [L] -	TF	N
	VENIX -	TF	N
	SURGA	TF	N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
CF	TOKIM	-	023(022.5)	-0.5	R	A020+	-	RNAV1
TF	DOKTA	-	115(114.5)	-0.5	R	A040+	-	RNAV1
TF	DOGRA	-	169(168.5)	-0.5	R	A060-	-	RNAV1
TF	DOSNO	-	180(179.5)	-0.5	L	-	-	RNAV1
TF	VENPA	-	126(125.5)	-0.5	L	-	-	RNAV1
TF	VENIX	-	120(199.5)	-0.5	-	-	-	RNAV1
TF	SURGA	-	120(199.5)	-0.5	-	-	-	RNAV1

VENIX 3B (SID) RNAV GNSS RWY 20C - DESCRIPTIONS**Formal & Abbreviated Descriptions**

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
To IBIXU on course 203° at or above 1500ft. To IBIVA at or above 2500ft, turn left. To DONDI. To DIVSA at or above 4000ft, turn right. To BTM, turn left. To DOGRA at or below 6000ft, turn right. To DOSNO, turn left. To VENPA, turn left. To VENIX. To SURGA.	IBIXU [M203; A015+] -	CF	N
	IBIVA [A025+; L] -	TF	N
	DONDI -	TF	N
	DIVSA [A040+; R] -	TF	N
	BTM [L] -	TF	N
	DOGRA [A060-; R] -	TF	N
	DOSNO [L] -	TF	N
	VENPA [L] -	TF	N
	VENIX -	TF	N
	SURGA	TF	N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
CF	IBIXU	-	203(202.5)	-0.5	-	A015+	-	RNAV1
TF	IBIVA	-	203(202.5)	-0.5	L	A025+	-	RNAV1
TF	DONDI	-	113(112.5)	-0.5	-	-	-	RNAV1
TF	DIVSA	-	113(112.5)	-0.5	R	A040+	-	RNAV1
TF	BTM	-	120(119.5)	-0.5	L	-	-	RNAV1
TF	DOGRA	-	113(112.5)	-0.5	R	A060-	-	RNAV1
TF	DOSNO	-	180(179.5)	-0.5	L	-	-	RNAV1
TF	VENPA	-	126(125.5)	-0.5	L	-	-	RNAV1
TF	VENIX	-	120(199.5)	-0.5	-	-	-	RNAV1
TF	SURGA	-	120(199.5)	-0.5	-	-	-	RNAV1

RADIO COMMUNICATIONS FAILURE PROCEDURE

1	SET TRANSPONDER TO MODE A/C CODE 7600
2	<p>COMMUNICATIONS FAILURE OCCURS IMMEDIATELY AFTER DEPARTURE ON:</p> <p>RWY 02C - PROCEED STRAIGHT AHEAD TO NYLON HOLDING AREA (NHA) CLIMBING TO THE LAST ASSIGNED ALTITUDE, THEREAFTER REFER TO SINGAPORE AIP ON RADIO COMMUNICATIONS FAILURE PROCEDURE.</p> <p>RWY 20C - PROCEED STRAIGHT AHEAD TO SAMKO HOLDING AREA (SHA) CLIMBING TO THE LAST ASSIGNED ALTITUDE, THEREAFTER REFER TO SINGAPORE AIP ON RADIO COMMUNICATIONS FAILURE PROCEDURE.</p>

STANDARD DEPARTURE CHART RNAV (GNSS) - INSTRUMENT (SID)

TWR 118.6 / 118.25
APP 120.3
124.05
ACC 134.4

TRANSITION ALTITUDE
11 000ft

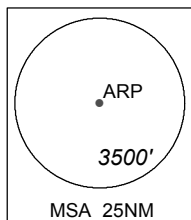
D-ATIS AP ID-WSSS
128.6

**SINGAPORE/Singapore Changi
RWY 02C/20C**

**KADAR DEPARTURES
KADAR 1A (R02C)
KADAR 3B (R20C)**

ELEV, ALT IN FEET
BEARINGS, TRACKS AND
RADIALS ARE MAGNETIC
VAR 23°E (2020)

DISTANCES IN NM



NOTE: RADAR REQUIRED

NOTE: RNAV-1 NAVIGATION SPECIFICATION
GNSS REQUIRED

NOTE: CLOSE-IN OBSTACLES (AIRCRAFT UP TO 80FT)
EXIST ON TAXIWAYS WEST OF RUNWAY 02C

NOTE: ACFT UNABLE TO FLY THE SID
PROFILE SHALL INFORM ATC
PRIOR TO DEPARTURE AND TO
EXPECT RADAR VECTORING,
IF NECESSARY

NOTE: WHEN TAKEN OFF THE SID,
AS INSTRUCTED BY ATC,
REFER TO ENR 1.5, SECTION 3,
PARAGRAPH 3.3 [A] - FOR RWY 02C MINIMUM CLIMB GRADIENT AND
PARAGRAPH 3.4.1 - FOR RWY 20C MINIMUM CLIMB GRADIENT

NOTE: REFER TO BACK PAGE FOR
- FORMAL AND TABULAR DESCRIPTIONS
- RADIO COM FAILURE PROCEDURES

GENERAL INFORMATION

INITIAL CLIMB 3000FT

ALL SIDs INCLUDE NOISE PREFERENTIAL ROUTES.

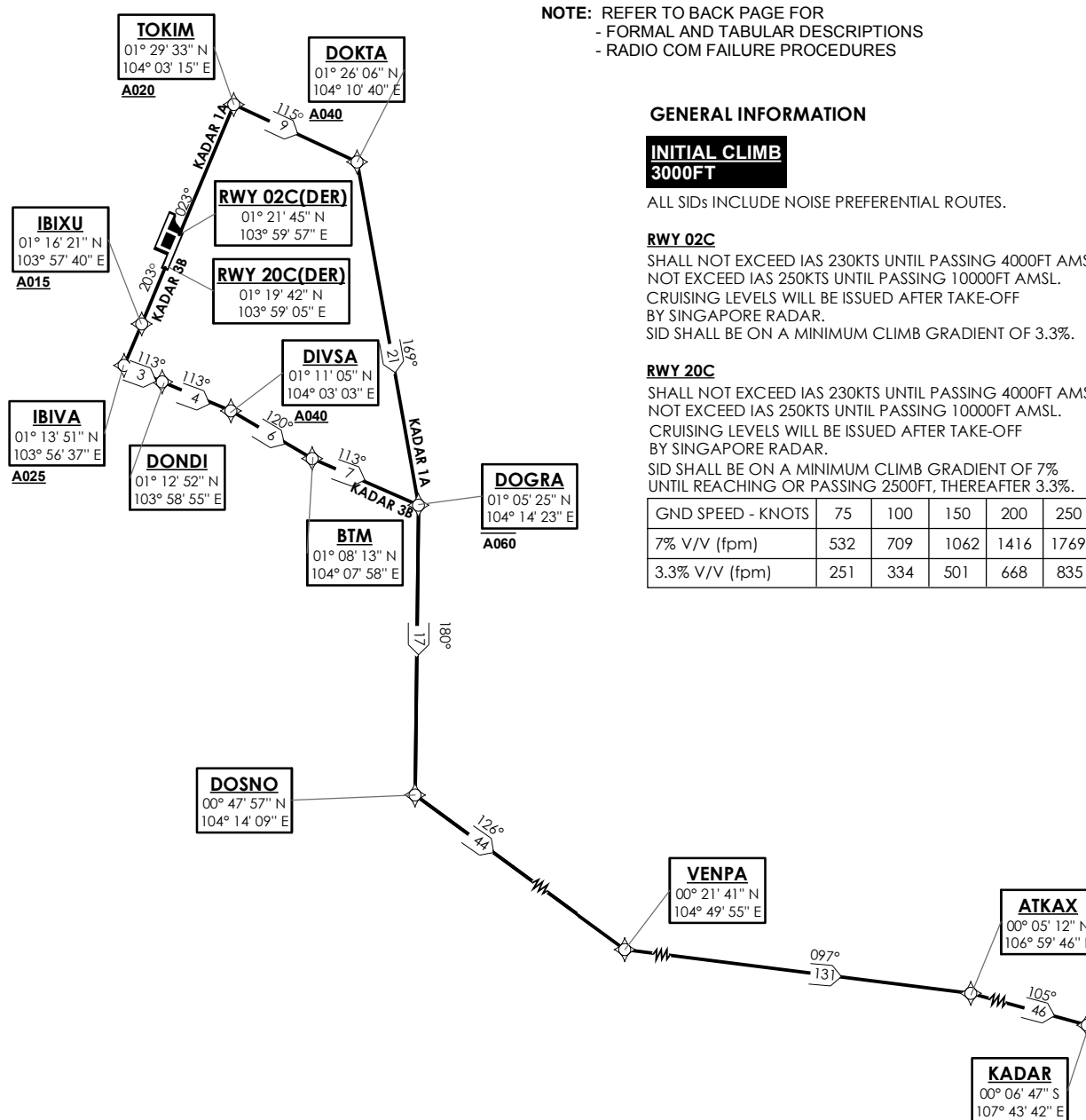
RWY 02C

SHALL NOT EXCEED IAS 230KTS UNTIL PASSING 4000FT AMSL AND
NOT EXCEED IAS 250KTS UNTIL PASSING 10000FT AMSL.
CRUISING LEVELS WILL BE ISSUED AFTER TAKE-OFF
BY SINGAPORE RADAR.
SID SHALL BE ON A MINIMUM CLIMB GRADIENT OF 3.3%.

RWY 20C

SHALL NOT EXCEED IAS 230KTS UNTIL PASSING 4000FT AMSL AND
NOT EXCEED IAS 250KTS UNTIL PASSING 10000FT AMSL.
CRUISING LEVELS WILL BE ISSUED AFTER TAKE-OFF
BY SINGAPORE RADAR.
SID SHALL BE ON A MINIMUM CLIMB GRADIENT OF 7%
UNTIL REACHING OR PASSING 2500FT, THEREAFTER 3.3%.

GND SPEED - KNOTS	75	100	150	200	250	300
7% V/V (fpm)	532	709	1062	1416	1769	2123
3.3% V/V (fpm)	251	334	501	668	835	1003



NOT TO SCALE

5 NOV 2020

KADAR 1A (SID) RNAV GNSS RWY 02C - DESCRIPTIONS**Formal & Abbreviated Descriptions**

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
To TOKIM on course 023° at or above 2000ft, turn right. To DOKTA at or above 4000ft, turn right. To DOGRA at or below 6000ft, turn right. To DOSNO, turn left. To VENPA, turn left. To ATKAX, turn right. To KADAR.	TOKIM [M023; A020+; R] -	CF	N
	DOKTA [A040+; R] -	TF	N
	DOGRA [A060-; R] -	TF	N
	DOSNO [L] -	TF	N
	VENPA [L] -	TF	N
	ATKAX [R] -	TF	N
	KADAR	TF	N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
CF	TOKIM	-	023(022.5)	-0.5	R	A020+	-	RNAV1
TF	DOKTA	-	115(114.5)	-0.5	R	A040+	-	RNAV1
TF	DOGRA	-	169(168.5)	-0.5	R	A060-	-	RNAV1
TF	DOSNO	-	180(179.5)	-0.5	L	-	-	RNAV1
TF	VENPA	-	126(125.5)	-0.5	L	-	-	RNAV1
TF	ATKAX	-	097(096.5)	-0.5	R	-	-	RNAV1
TF	KADAR	-	105(104.5)	-0.5	-	-	-	RNAV1

KADAR 3B (SID) RNAV GNSS RWY 20C - DESCRIPTIONS**Formal & Abbreviated Descriptions**

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
To IBIXU on course 203° at or above 1500ft. To IBIVA at or above 2500ft, turn left. To DONDI. To DIVSA at or above 4000ft, turn right. To BTM, turn left. To DOGRA at or below 6000ft, turn right. To DOSNO, turn left. To VENPA, turn left. To ATKAX, turn right. To KADAR.	IBIXU [M203; A015+] -	CF	N
	IBIVA [A025+; L] -	TF	N
	DONDI -	TF	N
	DIVSA [A040+; R] -	TF	N
	BTM [L] -	TF	N
	DOGRA [A060-; R] -	TF	N
	DOSNO [L] -	TF	N
	VENPA [L] -	TF	N
	ATKAX [R] -	TF	N
	KADAR	TF	N

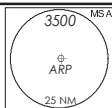
Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
CF	IBIXU	-	203(202.5)	-0.5	-	A015+	-	RNAV1
TF	IBIVA	-	203(202.5)	-0.5	L	A025+	-	RNAV1
TF	DONDI	-	113(112.5)	-0.5	-	-	-	RNAV1
TF	DIVSA	-	113(112.5)	-0.5	R	A040+	-	RNAV1
TF	BTM	-	120(119.5)	-0.5	L	-	-	RNAV1
TF	DOGRA	-	113(112.5)	-0.5	R	A060-	-	RNAV1
TF	DOSNO	-	180(179.5)	-0.5	L	-	-	RNAV1
TF	VENPA	-	126(125.5)	-0.5	L	-	-	RNAV1
TF	ATKAX	-	097(096.5)	-0.5	R	-	-	RNAV1
TF	KADAR	-	105(104.5)	-0.5	-	-	-	RNAV1

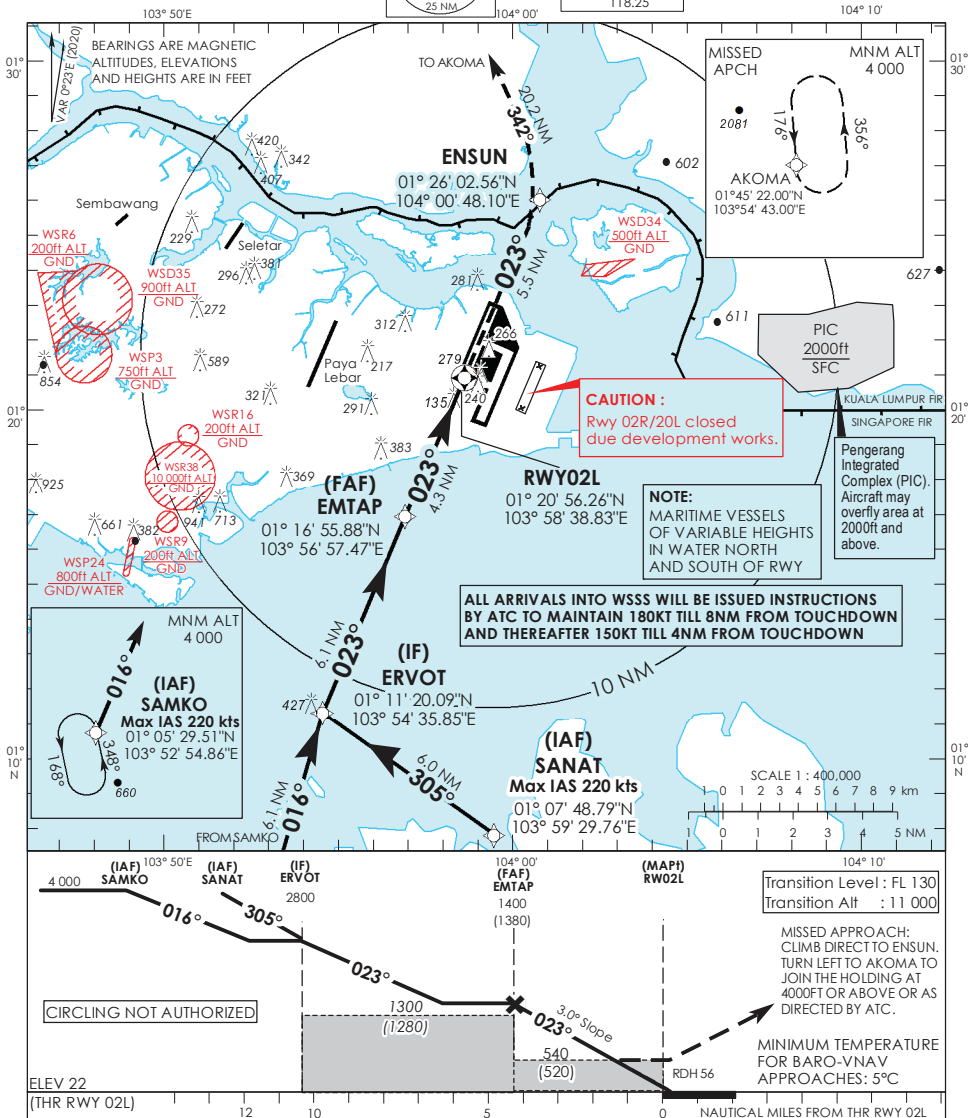
RADIO COMMUNICATIONS FAILURE PROCEDURE

1	SET TRANSPONDER TO MODE A/C CODE 7600
2	<p>COMMUNICATIONS FAILURE OCCURS IMMEDIATELY AFTER DEPARTURE ON:</p> <p>RWY 02C - PROCEED STRAIGHT AHEAD TO NYLON HOLDING AREA (NHA) CLIMBING TO THE LAST ASSIGNED ALTITUDE, THEREAFTER REFER TO SINGAPORE AIP ON RADIO COMMUNICATIONS FAILURE PROCEDURE.</p> <p>RWY 20C - PROCEED STRAIGHT AHEAD TO SAMKO HOLDING AREA (SHA) CLIMBING TO THE LAST ASSIGNED ALTITUDE, THEREAFTER REFER TO SINGAPORE AIP ON RADIO COMMUNICATIONS FAILURE PROCEDURE.</p>

**INSTRUMENT
APPROACH
CHART - ICAO**

 AERODROME ELEV 22ft
 HEIGHT RELATED TO
 THR RWY 02L - ELEV 22ft


D-ATIS	AP ID	WSSS
APP	128.025	
TWR	124.05	
	119.3	
	118.6	
	118.25	

**SINGAPORE/
SINGAPORE CHANGI
RNP RWY 02L**


		OCA (OCH)					
Category of Aircraft		A	B	C	D		
LNAV/VNAV	2.5%	450 (430)					
LNAV	2.5%	540 (520)					
Fix	SAMKO	SANAT	ERVOT	EMTAP	RW02L	ENSUN	AKOMA
Altitude (Height)	4000 (3978)	4000 (3978)	2800 (2778)	1400 (1378)	540 (518)	880 (858)	4000 (3978)
Speed	knots	80	100	120	140	160	180
FAF - MAP1 4.3nm	min : s	3 : 14	2 : 35	2 : 09	1 : 51	1 : 37	1 : 26
Rate of descent/GS	ft/min	424	530	637	743	849	955

SINGAPORE CHANGI RNP-APCH RWY 02L – Approach from SAMKO

Path Terminator	Waypoint	Fly-Over	Course °M (°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA/ TCH(FT)	Navigation Specification
IF	SAMKO	-	-	-0.4	-	-	A040+	220	-	RNP APCH
TF	ERVOT	-	016 (016.4)	-0.4	6.1	R	A028+	-	-	RNP APCH
TF	EMTAP	-	023 (023.4)	-0.4	6.1	-	A014+	-	-	RNP APCH
TF	RW02L	Y	023 (023.4)	-0.4	4.3	-	-	-	-3.0° / 50	RNP APCH
DF	ENSUN	-	-	-0.4	-	L	-	-	-	RNP APCH
TF	AKOMA	-	342 (342.4)	-0.4	20.2	-	A040+	-	-	RNP APCH

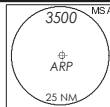
SINGAPORE CHANGI RNP-APCH RWY 02L – Approach from SANAT

Path Terminator	Waypoint	Fly-Over	Course °M (°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA/ TCH(FT)	Navigation Specification
IF	SANAT	-	-	-0.4	-	-	A040+	220	-	RNP APCH
TF	ERVOT	-	305 (305.4)	-0.4	6.0	R	A028+	-	-	RNP APCH
TF	EMTAP	-	023 (023.4)	-0.4	6.1	-	A014+	-	-	RNP APCH
TF	RW02L	Y	023 (023.4)	-0.4	4.3	-	-	-	-3.0° / 50	RNP APCH
DF	ENSUN	-	-	-0.4	-	L	-	-	-	RNP APCH
TF	AKOMA	-	342 (342.4)	-0.4	20.2	-	A040+	-	-	RNP APCH

Waypoint Coordinates

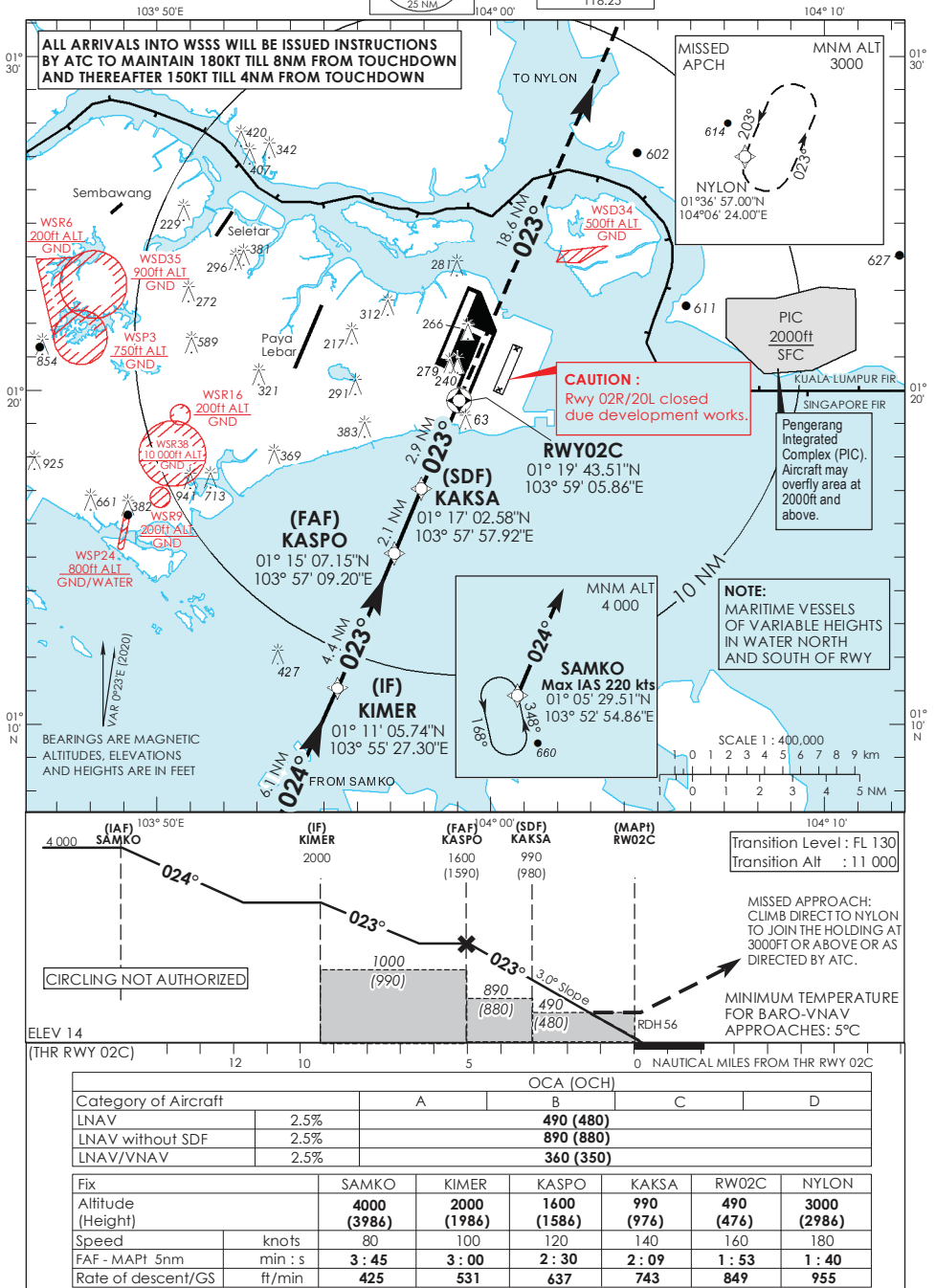
Name	Latitude	Longitude
SAMKO (IAF)	01° 05' 29.51" N	103° 52' 54.86" E
SANAT (IAF)	01° 07' 48.79" N	103° 59' 29.76" E
ERVOT (IF)	01° 11' 20.09" N	103° 54' 35.85" E
EMTAP (FAF)	01° 16' 55.88" N	103° 56' 57.47" E
RW02L	01° 20' 56.26" N	103° 58' 38.83" E
ENSUN	01° 26' 02.56" N	104° 00' 48.10" E
AKOMA	01° 45' 22.00" N	103° 54' 43.00" E

AERODROME ELEV 22ft
HEIGHT RELATED TO
THR RWY 02C - ELEV 14ft



D-ATIS	AP ID	WSSS
		128.025
APP		124.05
		119.3
TWR		118.6
		118.25

SINGAPORE/
SINGAPORE CHANGI
RNP RWY 02C



SINGAPORE CHANGI RNP-APCH RWY 02C – Approach from SAMKO

Path Terminator	Waypoint	Fly-Over	Course °M (°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA/ TCH(FT)	Navigation Specification
IF	SAMKO	-	-	-0.4	-	-	A040+	220	-	RNP APCH
TF	KIMER	-	024 (024.4)	-0.4	6.1	-	A020+	-	-	RNP APCH
TF	KASPO	-	023 (023.4)	-0.4	4.4	-	A016+	-	-	RNP APCH
TF	KAкса	-	023 (023.4)	-0.4	2.1	-	990ft+	-	-	RNP APCH
TF	RW02C	Y	023 (023.4)	-0.4	2.9	-	-	-	-3.0° / 50	RNP APCH
DF	NYLON	-	-	-0.4	-	-	A030+	-	-	RNP APCH

Waypoint Coordinates

Name	Latitude	Longitude
SAMKO (IAF)	01° 05' 29.51" N	103° 52' 54.86" E
KIMER (IF)	01° 11' 05.74" N	103° 55' 27.30" E
KASPO (FAF)	01° 15' 07.15" N	103° 57' 09.20" E
KAкса (SDF)	01° 17' 02.58" N	103° 57' 57.92" E
RW02C	01° 19' 43.51" N	103° 59' 05.86" E
NYLON	01° 36' 57.00" N	104° 06' 24.00" E

SINGAPORE/
SINGAPORE CHANGI
RNP RWY 20R

SINGAPORE CHANGI RNP-APCH RWY 20R – Approach from BIDUS

Path Terminator	Waypoint	Fly-Over	Course °M (°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA/ TCH(FT)	Navigation Specification
IF	BIDUS	-	-	-0.4	-	-	A034+	220	-	RNP APCH
TF	ELBEX	-	127 (127.4)	-0.4	6.7	R	A020+	-	-	RNP APCH
TF	ELGAP	-	203 (203.4)	-0.4	3.8	-	A020+	-	-	RNP APCH
TF	RW20R	Y	203 (203.4)	-0.4	6.2	-	-	-	-3.0° / 50	RNP APCH
DF	ENLES	-	-	-0.4	-	L	-	-	-	RNP APCH
TF	SAMKO	-	192 (192.4)	-0.4	4.1	-	A032+	-	-	RNP APCH

SINGAPORE CHANGI RNP-APCH RWY 20R – Approach from NYLON

Path Terminator	Waypoint	Fly-Over	Course °M (°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA/ TCH(FT)	Navigation Specification
IF	NYLON	-	-	-0.4	-	-	A030+	220	-	RNP APCH
TF	ELBEX	-	211 (211.4)	-0.4	6.0	L	A020+	-	-	RNP APCH
TF	ELGAP	-	203 (203.4)	-0.4	3.8	-	A020+	-	-	RNP APCH
TF	RW20R	Y	203 (203.4)	-0.4	6.2	-	-	-	-3.0° / 50	RNP APCH
DF	ENLES	-	-	-0.4	-	L	-	-	-	RNP APCH
TF	SAMKO	-	192 (192.4)	-0.4	4.1	-	A032+	-	-	RNP APCH

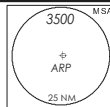
SINGAPORE CHANGI RNP-APCH RWY 20R – Approach from BIPOP

Path Terminator	Waypoint	Fly-Over	Course °M (°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA/ TCH(FT)	Navigation Specification
IF	BIPOP	-	-	-0.4	-	-	A030+	220	-	RNP APCH
TF	ELBEX	-	273 (273.4)	-0.4	7.1	L	A020+	-	-	RNP APCH
TF	ELGAP	-	203 (203.4)	-0.4	3.8	-	A020+	-	-	RNP APCH
TF	RW20R	Y	203 (203.4)	-0.4	6.2	-	-	-	-3.0° / 50	RNP APCH
DF	ENLES	-	-	-0.4	-	L	-	-	-	RNP APCH
TF	SAMKO	-	192 (192.4)	-0.4	4.1	-	A032+	-	-	RNP APCH

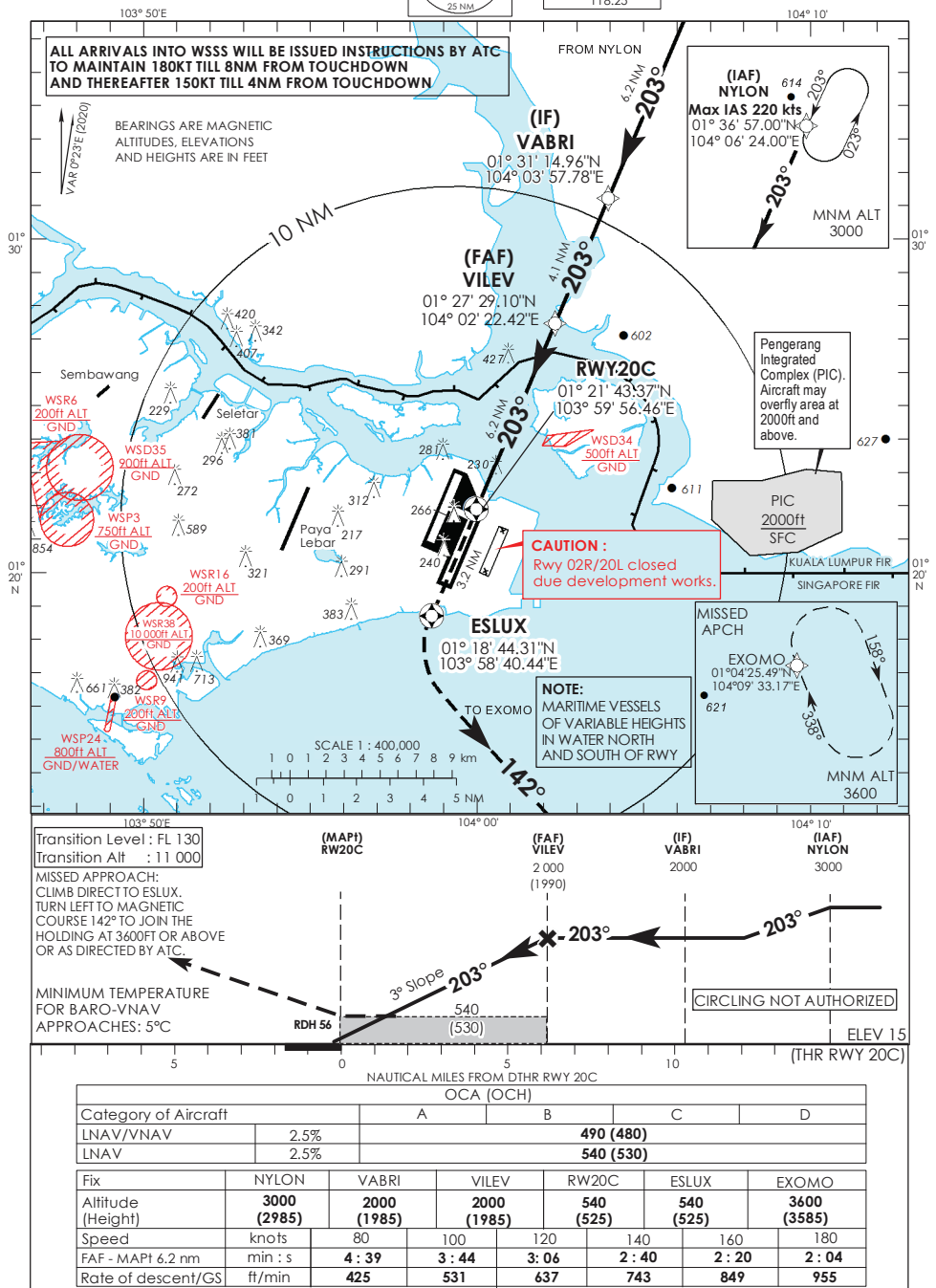
Waypoint Coordinates

Name	Latitude	Longitude
BIDUS (IAF)	01° 35' 54.05" N	103° 57' 54.86" E
NYLON (IAF)	01° 36' 57.00" N	104° 06' 24.00" E
BIPOP (IAF)	01° 31' 21.83" N	104° 10' 18.03" E
ELBEX (IF)	01° 31' 48.96" N	104° 03' 14.18" E
ELGAP (FAF)	01° 28' 20.28" N	104° 01' 46.15" E
RW20R	01° 22' 33.95" N	103° 59' 20.06" E
ENLES	01° 09' 31.51" N	103° 53' 49.83" E
SAMKO	01° 05' 29.51" N	103° 52' 54.86" E

**INSTRUMENT
APPROACH
CHART - ICAO**

 AERODROME ELEV 22ft
 HEIGHT RELATED TO
 THR RWY 20C - ELEV 15ft


D-ATIS	AP ID	WSSS
APP	124.05	
TWR	119.3	
	118.6	
	118.25	

**SINGAPORE/
SINGAPORE CHANGI
RNP RWY 20C**


SINGAPORE CHANGI RNP-APCH RWY 20C – Approach from NYLON

Path Terminator	Waypoint	Fly-Over	Course °M (°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA/ TCH(FT)	Navigation Specification
IF	NYLON	-	-	-0.4	-	-	A030+	220	-	RNP APCH
TF	VABRI	-	203 (203.4)	-0.4	6.2	-	A020+	-	-	RNP APCH
TF	VILEV	-	203 (203.4)	-0.4	4.1	-	A020+	-	-	RNP APCH
TF	RW20C	Y	203 (203.4)	-0.4	6.2	-	-	-	-3.0° / 50	RNP APCH
DF	ESLUX	Y	-	-0.4	-	L	-	-	-	RNP APCH
TF	EXOMO	-	142(142.4)	-0.4	-	-	A036+	-	-	RNP APCH

Waypoint Coordinates

Name	Latitude	Longitude
NYLON (IAF)	01° 36' 57.00" N	104° 06' 24.00" E
VABRI (IF)	01° 31' 14.96" N	104° 03' 57.78" E
VILEV (FAF)	01° 27' 29.10" N	104° 02' 22.42" E
RW20C	01° 21' 43.37" N	103° 59' 56.46" E
ESLUX	01° 18' 44.31" N	103° 58' 40.44" E
EXOMO	01° 04' 25.49" N	104° 09' 33.17" E

- 2.4 Flight details should contain the following information:
- Aircraft identification;
 - Name and contact number of pilot;
 - Number of persons on board;
 - ETD;
 - Flight duration;
 - Total endurance;
 - Area of flight (Light Aircraft Training Areas A, B or C)
- 2.5 For flights other than those classified in para 2.2 and 2.3 above, a flight plan shall be filed.
- 2.6 Light aircraft engaged in flying training shall maintain VHF communication.
- 2.7 Light aircraft flying on airways shall, in addition to radio communication apparatus, be equipped with a radio compass.
- 2.8 All fixed wing aircraft are to use the runway for take-off and landing. After landing, the pilot-in-command shall vacate the runway as soon as possible via TWY W1, W2 or W3, or in accordance with instructions from Aerodrome Control.
- 2.9 Fixed-wing circuit patterns are left hand for RWY 03 and right hand for RWY 21 (arrival and departure).
- 2.10 All light aircraft training flights shall not descend below 200ft on Seletar QNH when on final approach to land or for a touch-and-go landing unless a landing/touch-and-go clearance has been obtained from ATC. If no such clearance has been obtained from ATC by 200ft the aircraft shall break-off its approach and carry out a go-around procedure.

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.
 - To keep clear of Sembawang ATZ while approaching Seletar AD for landing and vice versa.
- 3.2.2 Pilots are required to take note of the proximity of Sembawang ATZ, Paya Lebar CTR and all Prohibited/Restricted/Danger Areas (e.g. WSR38 and WSD4). All arriving and departing aircraft will have to keep clear of these areas.

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. Pilots operating in either AD are to keep clear of the other AD ATZ/CTR at all times.
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). RWY 03 - 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. RWY 21 - white, inset and elevated, uni-directional approach LGT and white, omni-directional CGL on top of elevated approach LGT. Simple touchdown zone LGT for both RWY 03 and RWY 21 approach consisting of 2 pairs of white, inset, uni-directional LGT	NIL	No visual approach slope indicator at Sembawang AD
IBN	FLG G 'SL' EV 7 SEC	FLG R 'AG' EV 20 SEC HN and IMC	NIL
ABN	ALTN FLG 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

- ← 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, Paya Lebar CTR and any Prohibited/Restricted/Danger Areas (e.g. WSR38 and WSD4) within the vicinity.
- 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 AD-2-WSSL-VAC-1 to AD-2-WSSL-VAC-4).
- 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 AD-2-WSSL-VAC-1 to AD-2-WSSL-VAC-4. Procedures are illustrated in the following charts:
- i. AD-2-WSSL-VAC-1 : Visual Approach Chart - RWY 03
 - ii. AD-2-WSSL-VAC-2 : Visual Approach Chart - 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 north-end of the runway (THR RWY 21).
- 1.3 *Joining Procedures from Light Aircraft Training Areas***
- 1.3.1 Unless otherwise authorised by ATC, aircraft are to join overhead the airfield at 2,000ft keeping clear of Sembawang ATZ and Paya Lebar CTR.
- 1.3.2 When overhead the airfield, the joining aircraft shall make a turn to the eastern side of 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 Approach Charts AD-2-WSSL-VAC-1 to AD-2-WSSL-VAC-4. Procedures are illustrated in the following charts:
- i. AD-2-WSSL-VAC-1: Visual Approach Chart - RWY 03
 - ii. AD-2-WSSL-VAC-2: Visual Approach Chart - RWY 21
- 1.3.3 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 north-end of the runway (THR RWY 21).
- 1.4 *Joining Procedures for IFR flights from JB, KK or SJ - RWY 03***
- 1.4.1 From KK
Cross KK at or above 3,000ft. On passing KK descend in VMC to 2,000ft or altitude cleared by ATC and join downwind RWY 03.
- i. Straight-in-Approach
Join downwind RWY 03 at 2,000ft (keeping clear of Sembawang ATZ). When downwind descend from 2,000ft for visual approach RWY 03, or as cleared by ATC. Pilots should have the runway in sight.
 - ii. Circling Approach
Join downwind RWY 03 at 2,000ft (keeping clear of Sembawang ATZ). At end of downwind turn left and overfly the runway. When passing over north end of the runway (THR RWY 21), descend from 2,000ft to 1,500ft and turn left for downwind RWY 03. At downwind descend for a visual approach RWY 03 or as cleared by ATC. Pilots should have the runway in sight.

- 1.4.2 From JB
Cross JB at or above 6,000ft enroute to Point ALFA. On passing Point ALFA, descend in VMC to 2,000ft or altitude cleared by ATC. (Point ALFA is located at 013033N 1034942E or Radial 296/7 DME VTK)
- Straight-in-Approach
On passing Point ALFA, turn right for downwind RWY 03 (keeping clear of Sembawang ATZ). At downwind descend from 2,000ft for a visual approach RWY 03, or as cleared by ATC. Pilots should have the runway in sight.
 - Circling Approach
On passing Point ALFA, turn right for downwind RWY 03 (keeping clear of Sembawang ATZ). At end of downwind, turn left and overfly the runway. Passing over north end of the runway (THR RWY 21), descend from 2,000ft to 1,500ft and turn left for downwind RWY 03. At downwind descend for a visual approach RWY 03 or as cleared by ATC. Pilots should have the runway in sight.
- 1.4.3 From SJ
Cross SJ at 4,000ft or as cleared by ATC. On passing SJ, descend to 3,000ft for PONJO. On passing PONJO, descend in VMC to 2,000ft or altitude cleared by ATC. (PONJO is located at 011629N 1034629E or Radial 303 SJ)
- Straight-in-Approach
Join direct for a straight-in visual approach RWY 03 descending from 2,000ft at a speed of not more than 170kt, or as cleared by ATC. Pilots should have the runway in sight.
 - Circling Approach
Overfly the runway at 2,000ft at a speed of not more than 160kt, or as cleared by ATC. When passing over the north-end of runway (THR RWY 21), descend from 2,000ft to 1,500ft and turn left for downwind RWY 03 (keeping clear of Sembawang ATZ and Light Aircraft Training Area A). At downwind, descend for visual approach or as cleared by ATC. Pilots should have the runway in sight.
- 1.4.4 Procedures are illustrated in the following charts:
- AD-2-WSSL-VAC-3 : Visual Approach Chart - RWY 03
 - AD-2-WSSL-IFR-1 : Seletar Aerodrome Joining Procedures (IFR flights) from JB, KK and SJ - RWY 03

1.5 *Joining Procedures for IFR flights from JB, KK or SJ - RWY 21*

- 1.5.1 From KK
Cross KK at or above 3,000ft. On passing KK descend in VMC to 2,000ft or altitude cleared by ATC.
- Straight-in-Approach
Join direct for a straight-in visual approach Rwy 21 descending from 2,000ft, or as cleared by ATC. Pilots should have the runway in sight.
 - Circling Approach
Overfly the runway at 2,000ft, or as cleared by ATC. Passing over the south-end of the runway (THR RWY 03), descend from 2,000ft to 1,500ft and turn right for downwind RWY 21 (keeping clear of Light Aircraft Training Area A and Sembawang ATZ). At downwind descend for a visual approach RWY 21 or as cleared by ATC. Pilots should have the runway in sight.
- 1.5.2 From JB
Cross JB at or above 6,000ft enroute to Point ALFA. On passing Point ALFA, descend in VMC to 2,000ft or altitude cleared by ATC. (Point ALFA is located at 013033N 1034942E or Radial 296 VTK)
- Straight-in-Approach
On passing Point ALFA, join direct for a straight-in visual approach RWY 21 descending from 2,000ft, or as cleared by ATC (keeping clear of Sembawang ATZ).
 - Circling Approach
On passing Point ALFA, overfly the runway at 2,000ft. When passing over the south end of the runway (THR RWY 03), descend from 2,000ft to 1,500ft and turn right for downwind RWY 21 (keeping clear of Light Aircraft Training Area A and Sembawang ATZ). At downwind descend for a visual approach RWY 21 or as cleared by ATC. Pilots should have the runway in sight.

- 1.5.3 From SJ
Cross SJ at 4,000ft or as cleared by ATC. On passing SJ, descend to 3,000ft for PONJO. On passing PONJO, descend in VMC to 2,000ft or altitude cleared by ATC and join downwind RWY 21 via RECHI-SETHI. (RECHI is located at 012033N 1034908E or Radial 235 PU and SETHI is located at 012439N 1035006E or Radial 263 PU)
- i. **Straight-in-Approach**
Join downwind RWY 21 via SETHI at 2,000ft (keeping clear of Sembawang ATZ) at a speed of not more than 170kt. When downwind, descend from 2,000ft for visual approach, or as cleared by ATC. Pilots should have the runway in sight.
 - ii. **Circling Approach**
Join downwind RWY 21 via SETHI at 2,000ft (keeping clear of Sembawang ATZ) at a speed of not more than 160kt. At end of downwind, turn right and overfly the runway. When passing over south-end of the runway (THR RWY 03), descend from 2,000ft to 1,500ft and turn right for downwind RWY 21. At downwind, descend for visual approach or as cleared by ATC. Pilots should have the runway in sight.
- 1.5.4 Procedures are illustrated in the following charts:
- AD-2-WSSL-VAC-4 : Visual Approach Chart - RWY 21
 - AD-2-WSSL-IFR-2 : Seletar Aerodrome Joining Procedures (IFR flights) from JB, KK and SJ - RWY 21

1.6 **Holding Procedure**

- 1.6.1 A low level holding procedure is established at SJ DVOR/DME. Suitably equipped aircraft bound for Seletar which may wish to hold for weather improvement may use this procedure (ENR 3.6-3 refers)

1.7 **Approaches to Seletar Aerodrome**

- 1.7.1 A deep-water shipping channel approximately 1525m from the northern threshold cuts across the extended centreline of Seletar RWY 21.
- 1.7.2 Information on the mast heights of tall vessels is relayed to ATC by Maritime and Port Authority of Singapore. ATC shall inform pilots of landing and departing aircraft of such information if the reported mast height of the vessel is above 30m.
- 1.7.3 At night ATC shall not permit landing on RWY 21 when vessels of mast height above 30m are reported.
- 1.7.4 Aircraft making approaches into Seletar are required to keep clear of Sembawang ATZ and any Prohibited/Restricted/Danger Areas (e.g. WSR38 and WSD4) within the vicinity.
- 1.7.5 Aircraft are restricted from overflying built-up residential areas around Seletar Airport (charts AD-2-WSSL-VAC-1 to AD-2-WSSL-VAC-4 refer) 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 Airport.

2 **DEPARTURES FROM SELETAR AERODROME**

- ← 2.1 Aircraft departing Seletar on RWY 03 to SETHI - RECHI - PONJO - SJ or on RWY 21 to KK are required to keep clear of Sembawang ATZ and any Prohibited/Restricted/Danger Areas (e.g. WSR38 and WSD4) within the vicinity.
- 2.2 The pilot-in-command or the operator of IFR flight operating out of Seletar is required to file via KK or RECHI - PONJO - SJ under item 15 of the flight plan. All departure clearances subject to ATC coordination.

WSSL AD 2.23 ADDITIONAL INFORMATION

1 BIRD CONCENTRATION IN THE VICINITY OF THE AIRPORT

- 1.1 A number of varieties of birds are found in Singapore throughout the year. The larger birds commonly found in Seletar Airport includes the following:
- Cattle egrets (weighing approximately 300g each)
 - Brahminy kites (weighing approximately 600g each)
- 1.2 There could be an increase in bird activities during the usual migratory months of September to April. During this period, migratory birds may use the airport as their feeding ground.
- 1.3 Handheld laser device, long range acoustic device and alternating amplified bird cries of distress are used for bird dispersal within Seletar Airport.

2 HELICOPTER CROSSING SELETAR NORTHERN EXTENDED CENTRELINE

- 2.1 Due to flying activities in Seletar Control Zone, all helicopters flying on Heli-route Alpha and intending to cross the northern extended centreline of Seletar Aerodrome shall obtain a positive clearance from Seletar Tower on 118.45MHz prior to crossing (see chart below).
- 2.2 For eastbound crossing, all helicopters are to hold over the western tip of Seletar Island until a clearance has been issued by Seletar Tower.
- 2.3 For westbound crossing, all helicopters are to hold on Heli-route Alpha abeam the coastal mast until a clearance has been issued by Seletar Tower.
- 2.4 The holding altitude is 200 feet or otherwise instructed by ATC.

