Contact

Post:
AERONAUTICAL
INFORMATION SERVICES
Civil Aviation Authority of
Singapore,
Singapore Changi Airport,
P. O. Box 1
Singapore 918141
Tel: (65) 65956051
Fax: (65) 64410221
Email: caas_singaporeais@caas.gov.sg

eAIP

AMDT
03/2019
Effective date
25 APR 2019
Publication date
25 APR 2019

wp-AMDT-2019-03

1. Significant information and changes

1.1 Seletar Airport

a. Instrument Approach Procedure for SEL ILS RWY 21 withdrawn with effect from 05 April 2019 1559UTC. Chart AD-2-WSSL-IAC-1 deleted.

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 This amendment incorporates information contained in the listed NOTAMs and AIP Supplement which are hereby superseded:

NOTAM:
A0817/19 dated 05/03/2019
A1317/19 dated 05/04/2019

AIP Supplement:
015/2019 dated 12/02/2019

Amended Pages

GEN 0.2-1/2:	*: replace.*
GEN 0.3-1/2:	*: replace.*
GEN 0.3-3/4:	*: replace.*
GEN 0.3-5:	*: insert.*
GEN 0.4-1/2:	*: replace.*
GEN 0.4-3:	*: replace.*
GEN 0.6-1/2:	*: replace.*
GEN 1.1-1/2:	*: replace.*
GEN 1.3-1/2:	*: replace.*
GEN 1.3-3/4:	*: replace.*
GEN 1.3-5:	*: insert.*
GEN-1.3/ARR PAX FLOW:	*: insert.*
GEN-1.3/DEP PAX FLOW 1:	*: insert.*
GEN-1.3/DEP PAX FLOW 2:	*: insert.*
GEN-1.3-5:	*: remove.*
GEN-1.3-7:	*: remove.*
GEN 1.4-1/2:	*: replace.*
GEN 1.4-3:	*: replace.*
GEN 2.4-1:	*: replace.*
GEN 2.7-1:	*: replace.*
GEN 3.2-3/4:	*: replace.*
GEN 3.2-5/6:	*: replace.*
GEN 3.5-1/2:	*: replace.*
GEN 3.5-3/4:	*: replace.*
GEN 3.5-7/8:	*: replace.*
ENR 1.1-1/2:	*: replace.*
ENR 2.1-3/4:	*: replace.*

ENR 4.5-1:	*: replace.*
AD 0.6-3/4:	*: replace.*
AD 0.6-5/6:	*: replace.*
AD 2.WSSS-3/4:	*: replace.*
AD 2.WSSS-13/14:	*: replace.*
AD 2.WSSS-23/24:	*: replace.*
AD 2.WSSS-25/26:	*: replace.*
AD 2.WSSS-33/34:	*: replace.*
AD 2.WSSS-35/36:	*: replace.*
AD-2-WSSS-ADC-2:	*: replace.*
AD 2.WSSL-17/18:	*: replace.*
AD 2.WSSL-21/22:	*: replace.*
AD-2-WSSL-IAC-1:	*: remove.*
AD 2.WSAP-7/8:	*: replace.*
AD 2.WSAP-9/10:	*: replace.*
AD 2.WSAP-11:	*: replace.*
AD-2-WSAP-IAC-1:	*: replace.*
AD-2-WSAP-IAC-2:	*: replace.*
AD-2-WSAP-IAC-3:	*: replace.*
AD-2-WSAP-IAC-4:	*: replace.*
AD-2-WSAP-IAC-5:	*: replace.*
AD-2-WSAP-IAC-6:	*: replace.*
AD 2.WSAT-1/2:	*: replace.*
AD 2.WSAT-3/4:	*: replace.*
AD 2.WSAT-5/6:	*: 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	

GEN 0.3 RECORD OF CURRENT AIP SUPPLEMENTS

NR/Year	*Subject*	*AIP section(s) affected*	*Period of validity (from/to)*	*Cancellation record*
004/2016	Singapore Changi Airport - Shortening of Runway 02C Approach Lighting System to 810M to Facilitate southern End-Round-Taxiway Construction	AD	*01 JUN 2016 / 30 APR 2020*	
068/2016	Paya Lebar Airport - Topless Cranes and Luffer Cranes	AD	*04 AUG 2016 / 01 JUN 2019*	
069/2016	Paya Lebar Airport - Saddle Cranes	AD	*04 AUG 2016 / 30 JUN 2019*	
070/2016	Paya Lebar Airport - Luffer Cranes and Topless Cranes	AD	*04 AUG 2016 / 31 DEC 2019*	
025/2017	Paya Lebar Airport - Topless Cranes	AD	*10 JAN 2017 / 21 NOV 2019*	
026/2017	Paya Lebar Airport - Luffer Crane	AD	*10 JAN 2017 / 08 DEC 2019*	
056/2017	Paya Lebar Airport - Topless Cranes	AD	*13 APR 2017 / 30 APR 2019*	
057/2017	Paya Lebar Airport - Luffer Cranes	AD	*13 APR 2017 / 14 JAN 2020*	
058/2017	Paya Lebar Airport - Topless Cranes	AD	*13 APR 2017 / 26 OCT 2020*	
067/2017	Sembawang Aerodrome - Topless Crane	AD	*27 APR 2017 / 01 FEB 2020*	
068/2017	Paya Lebar Airport - Obstacles	AD	*27 APR 2017 / 26 OCT 2020*	
079/2017	Paya Lebar Airport - Topless Crane	AD	*11 JUL 2017 / 28 APR 2019*	
080/2017	Paya Lebar Airport - Topless Cranes	AD	*11 JUL 2017 / 29 APR 2019*	
081/2017	Paya Lebar Airport - Luffer Crane	AD	*11 JUL 2017 / 01 MAY 2019*	
082/2017	Paya Lebar Airport - Topless Cranes	AD	*11 JUL 2017 / 31 DEC 2019*	
083/2017	Paya Lebar Airport - Topless Cranes	AD	*11 JUL 2017 / 31 DEC 2019*	
084/2017	Paya Lebar Airport - Luffer Cranes	AD	*11 JUL 2017 / 31 DEC 2019*	
085/2017	Paya Lebar Airport - Topless Cranes	AD	*11 JUL 2017 / 01 JUN 2020*	
095/2017	Paya Lebar Airport - Topless Crane and Luffer Cranes	AD	*26 SEP 2017 / 31 DEC 2019*	
098/2017	Paya Lebar Airport - Topless Cranes	AD	*26 SEP 2017 / 31 DEC 2019*	
108/2017	Paya Lebar Airport - Topless Crane and Luffer Cranes	AD	*30 SEP 2017 / 06 JUL 2020*	
113/2017	Paya Lebar Airport - Topless Cranes	AD	*24 OCT 2017 / 18 OCT 2019*	
114/2017	Paya Lebar Airport - Luffer Crane	AD	*24 OCT 2017 / 20 OCT 2019*	
115/2017	Paya Lebar Airport - Topless Cranes	AD	*24 OCT 2017 / 24 OCT 2019*	
120/2017	Paya Lebar Airport - Flat Top Cranes	AD	*10 DEC 2017 / 30 JUN 2019*	
121/2017	Paya Lebar Airport - Topless Cranes and Luffer Cranes	AD	*10 DEC 2017 / 30 SEP 2020*	
122/2017	Paya Lebar Airport - Luffer Cranes	AD	*10 DEC 2017 / 31 DEC 2020*	

NR/Year	Subject	AIP section(s) affected	Period of validity (from/to)	Cancellation record
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*	
125/2017	Paya Lebar Airport - Topless Cranes	AD	*10 DEC 2017 / 18 DEC 2019*	
126/2017	Paya Lebar Airport - Luffer Cranes	AD	*10 DEC 2017 / 19 DEC 2019*	
003/2018	Paya Lebar Airport - Luffer Crane	AD	*22 JAN 2018 / 31 DEC 2019*	
004/2018	Paya Lebar Airport - Crawler Cranes and Boring Rigs	AD	*22 JAN 2018 / 31 DEC 2019*	
005/2018	Paya Lebar Airport - Topless Cranes	AD	*22 JAN 2018 / 29 FEB 2020*	
006/2018	Paya Lebar Airport - Topless Crane and Luffer Crane	AD	*22 JAN 2018 / 28 FEB 2021*	
015/2018	Paya Lebar Airport - Luffer Crane	AD	*06 APR 2018 / 31 DEC 2019*	
016/2018	Paya Lebar Airport - Luffer Crane and Topless Cranes	AD	*06 APR 2018 / 01 JAN 2020*	
017/2018	Paya Lebar Airport - Luffer Crane	AD	*06 APR 2018 / 15 MAR 2020*	
018/2018	Paya Lebar Airport - Topless Cranes and Luffer Crane	AD	*25 APR 2018 / 27 OCT 2020*	
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*	
026/2018	Paya Lebar Airport - Crawler Cranes	AD	*20 JUN 2018 / 30 APR 2020*	
027/2018	Paya Lebar Airport - Mobile Crane	AD	*20 JUN 2018 / 10 MAY 2020*	
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*	
050/2018	Tengah Aerodrome - Vessel	AD	*25 SEP 2018 / 30 APR 2019*	
051/2018	Paya Lebar Airport - Crawler Crane	AD	*25 SEP 2018 / 02 MAY 2019*	
052/2018	Paya Lebar Airport - Topless Cranes	AD	*25 SEP 2018 / 31 AUG 2019*	
053/2018	Sembawang Aerodrome - Saddle Cranes	AD	*25 SEP 2018 / 31 DEC 2021*	
054/2018	Paya Lebar Airport - Luffer Cranes	AD	*25 SEP 2018 / 31 DEC 2019*	
055/2018	Paya Lebar Airport - Topless Cranes	AD	*25 SEP 2018 / 31 DEC 2019*	
056/2018	Paya Lebar Airport - Obstacles	AD	*25 SEP 2018 / 31 DEC 2019*	
057/2018	Paya Lebar Airport - Luffer Cranes	AD	*25 SEP 2018 / 30 MAR 2020*	
058/2018	Paya Lebar Airport - Luffer Crane	AD	*25 SEP 2018 / 14 AUG 2020*	
059/2018	Paya Lebar Airport - Topless Cranes	AD	*25 SEP 2018 / 31 AUG 2020*	

NR/Year	Subject	AIP section(s) affected	Period of validity (from/to)	Cancellation record
060/2018	Paya Lebar Airport - Topless Cranes	AD	*25 SEP 2018 / 01 SEP 2020*	
061/2018	Paya Lebar Airport - Luffer Cranes	AD	*25 SEP 2018 / 10 SEP 2020*	
062/2018	Paya Lebar Airport - Topless Cranes and Luffer Cranes	AD	*25 SEP 2018 / 31 DEC 2020*	
068/2018	Paya Lebar Airport - Topless Cranes	AD	*13 NOV 2018 / 31 OCT 2019*	
069/2018	Paya Lebar Airport - Mobile Crane	AD	*13 NOV 2018 / 10 MAY 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*	
073/2018	Paya Lebar Airport - Obstacles	AD	*28 NOV 2018 / 30 JUN 2019*	
074/2018	Paya Lebar Airport - Mobile Crane	AD	*28 NOV 2018 / 30 JUN 2019*	
075/2018	Paya Lebar Airport - Luffer Crane	AD	*28 NOV 2018 / 31 MAR 2020*	
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*	
080/2018	Paya Lebar Airport - Topless Cranes and Luffer Cranes	AD	*30 DEC 2018 / 30 JUN 2019*	
081/2018	Paya Lebar Airport - Topless Cranes	AD	*30 DEC 2018 / 31 JUL 2019*	
082/2018	Paya Lebar Airport - Crawler Cranes	AD	*20 DEC 2018 / 30 AUG 2019*	
083/2018	Paya Lebar Airport - Mobile Crane	AD	*20 DEC 2018 / 31 AUG 2019*	
084/2018	Paya Lebar Airport - Hammerhead Cranes	AD	*30 DEC 2018 / 30 SEP 2019*	
085/2018	Paya Lebar Airport - Mobile Crane	AD	*20 DEC 2018 / 31 JAN 2020*	
001/2019	Paya Lebar Airport - Crawler Cranes	AD	*30 JAN 2019 / 30 APR 2019*	
002/2019	Paya Lebar Airport - Boring Rigs and Crawler Cranes	AD	*30 JAN 2019 / 31 AUG 2019*	
003/2019	Paya Lebar Airport - Mobile Crane	AD	*30 JAN 2019 / 31 AUG 2019*	
004/2019	Paya Lebar Airport - Luffer Crane	AD	*30 JAN 2019 / 30 NOV 2019*	
005/2019	Paya Lebar Airport - Topless Cranes	AD	*14 FEB 2019 / 30 JUN 2020*	
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*	
012/2019	Sembawang Aerodrome - Mobile Crane	AD	*01 FEB 2019 / 22 DEC 2019*	

NR/Year	Subject	AIP section(s) affected	Period of validity (from/to)	Cancellation record
013/2019	Paya Lebar Airport - Crawler Crane	AD	*01 FEB 2019 / 30 MAY 2019*	
014/2019	Paya Lebar Airport - Topless Cranes	AD	*01 FEB 2019 / 31 JAN 2021*	
016/2019	Singapore Changi Airport - Updated information and data for Runway 02R/20L	AD	*15 FEB 2019* PERM	
019/2019	Paya Lebar Airport - Cranes	AD	*27 MAR 2019 / 21 JUL 2019*	
020/2019	Paya Lebar Airport - Mobile Crane	AD	*27 MAR 2019 / 31 AUG 2019*	
021/2019	Paya Lebar Airport - Mobile Crane	AD	*27 MAR 2019 / 31 AUG 2019*	
022/2019	Paya Lebar Airport - Crawler Cranes	AD	*27 MAR 2019 / 30 OCT 2019*	
023/2019	Sembawang Aerodrome - Mobile Crane	AD	*27 MAR 2019 / 01 NOV 2019*	
024/2019	Sembawang Aerodrome - Topless Cranes	AD	*27 MAR 2019 / 31 DEC 2019*	
025/2019	Paya Lebar Airport - Mobile Cranes	AD	*31 MAR 2019 / 31 DEC 2019*	
026/2019	Paya Lebar Airport - Luffer Crane	AD	*27 MAR 2019 / 31 JAN 2020*	
027/2019	Paya Lebar Airport - Luffer Crane	AD	*27 MAR 2019 / 30 JUN 2020*	
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*	
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*	
036/2019	RSAF Aerial Flypast prior to and on Singapore's National Day, 09th August 2019	AD/ENR	*11 MAY 2019 / 10 AUG 2019*	
037/2019	Paya Lebar Airport - Luffer Crane	AD	*04 APR 2019 / 19 JUL 2019*	
038/2019	Paya Lebar Airport - Mobile Crane	AD	*04 APR 2019 / 07 SEP 2019*	
039/2019	Paya Lebar Airport - Mobile Crane	AD	*04 APR 2019 / 30 SEP 2019*	
040/2019	Paya Lebar Airport - Mobile Crane	AD	*04 APR 2019 / 30 SEP 2019*	
041/2019	Paya Lebar Airport - Crawler Crane	AD	*04 APR 2019 / 29 FEB 2020*	
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*	

NR/Year	*Subject*	*AIP section(s) affected*	*Period of validity (from/to)*	*Cancellation record*
045/2019	Singapore Changi Airport - Works schedule and movement area restrictions pertaining to Changi East development works	AD	*05 APR 2019 / 26 OCT 2019*	
046/2019	Singapore Changi Airport - Re-designation of taxiways and taxilanes (Phase 1)	AD	*04 JUL 2019 / 18 JUL 2019*	

PAGE INTENTIONALLY LEFT BLANK

GEN 0.4 CHECKLIST OF AIP PAGES

Part 1 – General (GEN)

GEN 0

GEN 0.1-1	08 NOV 2018
GEN 0.1-2	08 NOV 2018
GEN-0.1-3	08 NOV 2018
GEN 0.2-1	13 SEP 2018
GEN 0.2-2	25 APR 2019
GEN 0.3-1	25 APR 2019
GEN 0.3-2	25 APR 2019
GEN 0.3-3	25 APR 2019
GEN 0.3-4	25 APR 2019
GEN 0.3-5	25 APR 2019
GEN 0.4-1	25 APR 2019
GEN 0.4-2	25 APR 2019
GEN 0.4-3	25 APR 2019
GEN 0.5-1	05 JAN 2017
GEN 0.6-1	25 APR 2019
GEN 0.6-2	03 JAN 2019
GEN 0.6-3	22 JUN 2017

GEN 1

GEN 1.1-1	25 APR 2019
GEN 1.1-2	25 APR 2019
GEN 1.2-1	15 SEP 2016
GEN 1.2-2	19 JUL 2018
GEN 1.2-3	19 JUL 2018
GEN 1.2-4	19 JUL 2018
GEN 1.2-5	24 MAY 2018
GEN 1.2-6	24 MAY 2018
GEN 1.3-1	25 APR 2019
GEN 1.3-2	25 APR 2019
GEN 1.3-3	25 APR 2019
GEN 1.3-4	25 APR 2019
GEN 1.3-5	25 APR 2019
GEN-1.3/ARR PAX FLOW	25 APR 2019
GEN-1.3/DEP PAX FLOW 1	25 APR 2019
GEN-1.3/DEP PAX FLOW 2	25 APR 2019
GEN 1.4-1	25 APR 2019
GEN 1.4-2	25 APR 2019
GEN 1.4-3	25 APR 2019
GEN 1.5-1	12 NOV 2015
GEN 1.6-1	03 JAN 2019
GEN 1.6-2	03 JAN 2019
GEN 1.6-3	03 JAN 2019
GEN 1.6-4	03 JAN 2019
GEN 1.6-5	03 JAN 2019
GEN 1.7-1	03 JAN 2019
GEN 1.7-2	03 JAN 2019
GEN 1.7-3	03 JAN 2019
GEN 1.7-4	03 JAN 2019
GEN 1.7-5	03 JAN 2019

GEN 2

GEN 2.1-1	12 NOV 2015
GEN 2.1-2	13 SEP 2018
GEN 2.2-1	02 MAR 2017
GEN 2.2-2	02 MAR 2017
GEN 2.2-3	02 MAR 2017
GEN 2.2-4	05 JAN 2017
GEN 2.2-5	10 NOV 2016
GEN 2.3-1	12 NOV 2015
GEN 2.3-2	12 NOV 2015
GEN 2.3-3	12 NOV 2015
GEN 2.4-1	25 APR 2019
GEN 2.5-1	28 FEB 2019
GEN-2.5-3	21 JUL 2016
GEN 2.6-1	12 NOV 2015
GEN 2.6-2	12 NOV 2015
GEN 2.7-1	25 APR 2019

GEN 3

GEN 3.1-1	08 NOV 2018
GEN 3.1-2	08 NOV 2018
GEN 3.1-3	13 SEP 2018
GEN 3.1-4	13 SEP 2018
GEN 3.2-1	21 JUL 2016
GEN 3.2-2	31 MAR 2016
GEN 3.2-3	31 MAR 2016
GEN 3.2-4	25 APR 2019
GEN 3.2-5	25 APR 2019
GEN 3.2-6	31 MAR 2016
GEN 3.3-1	12 NOV 2015
GEN 3.3-2	21 JUL 2016
GEN 3.4-1	12 NOV 2015
GEN 3.4-2	02 MAR 2017
GEN 3.4-3	02 MAR 2017
GEN 3.4-4	02 MAR 2017
GEN 3.4-5	12 NOV 2015
GEN-3.4-7	21 JUL 2016
GEN-3.4-9	21 JUL 2016
GEN 3.5-1	25 APR 2019
GEN 3.5-2	25 APR 2019
GEN 3.5-3	25 APR 2019
GEN 3.5-4	08 NOV 2018
GEN 3.5-5	19 JUL 2018
GEN 3.5-6	12 NOV 2015
GEN 3.5-7	25 APR 2019
GEN 3.5-8	25 APR 2019
GEN 3.5-9	08 NOV 2018
GEN 3.6-1	12 NOV 2015
GEN 3.6-2	12 NOV 2015
GEN 3.6-3	12 NOV 2015
GEN 3.6-4	12 NOV 2015
GEN-3.6-5	21 JUL 2016

GEN 4

GEN 4.1-1	15 SEP 2016
GEN 4.2-1	24 MAY 2018
GEN 4.2-2	12 NOV 2015
GEN 4.2-3	12 NOV 2015
GEN 4.2-4	12 NOV 2015
GEN 4.2-5	12 NOV 2015
GEN 4.2-6	12 NOV 2015

Part 2 – EN-ROUTE (ENR)

ENR 0

ENR 0.6-1	08 NOV 2018
ENR 0.6-2	29 MAR 2018
ENR 0.6-3	29 MAR 2018
ENR 0.6-4	28 FEB 2019
ENR 0.6-5	29 MAR 2018
ENR 0.6-6	03 JAN 2019

ENR 1

ENR 1.1-1	25 APR 2019
ENR 1.1-2	12 NOV 2015
ENR 1.1-3	12 NOV 2015
ENR 1.1-4	12 NOV 2015
ENR 1.1-5	12 NOV 2015
ENR 1.1-6	12 NOV 2015
ENR 1.1-7	12 NOV 2015
ENR 1.1-8	12 NOV 2015
ENR 1.1-9	12 NOV 2015
ENR 1.1-10	08 NOV 2018
ENR 1.1-11	08 NOV 2018
ENR 1.1-12	08 NOV 2018
ENR 1.1-13	08 NOV 2018
ENR 1.1-14	08 NOV 2018
ENR 1.1-15	08 NOV 2018
ENR 1.2-1	21 JUL 2016
ENR 1.3-1	12 NOV 2015
ENR 1.4-1	12 NOV 2015
ENR 1.5-1	12 NOV 2015
ENR 1.5-2	17 AUG 2017
ENR 1.5-3	08 NOV 2018
ENR 1.5-4	08 NOV 2018
ENR 1.6-1	12 NOV 2015
ENR 1.6-2	12 NOV 2015
ENR 1.6-3	12 NOV 2015
ENR 1.6-4	17 AUG 2017
ENR 1.6-5	29 MAR 2018
ENR 1.6-6	29 MAR 2018
ENR 1.6-7	29 MAR 2018
ENR 1.6-8	29 MAR 2018
ENR-1.6-9	21 JUL 2016
ENR-1.6-11	21 JUL 2016
ENR 1.7-1	12 NOV 2015
ENR 1.7-2	12 NOV 2015
ENR 1.7-3	12 NOV 2015
ENR 1.7-4	17 AUG 2017
ENR 1.7-5	12 NOV 2015
ENR 1.7-6	07 DEC 2017
ENR 1.7-7	12 NOV 2015
ENR 1.7-8	12 NOV 2015
ENR 1.7-9	12 NOV 2015
ENR 1.8-1	07 DEC 2017
ENR 1.8-2	29 MAR 2018
ENR 1.8-3	29 MAR 2018
ENR 1.8-4	29 MAR 2018
ENR 1.8-5	29 MAR 2018
ENR 1.8-6	29 MAR 2018
ENR 1.8-7	29 MAR 2018
ENR 1.8-8	29 MAR 2018
ENR 1.8-9	29 MAR 2018
ENR 1.8-10	29 MAR 2018
ENR 1.8-11	29 MAR 2018
ENR 1.8-12	29 MAR 2018
ENR 1.8-13	29 MAR 2018
ENR 1.8-14	29 MAR 2018
ENR 1.8-15	29 MAR 2018
ENR 1.8-16	29 MAR 2018
ENR 1.8-17	29 MAR 2018
ENR 1.8-18	29 MAR 2018
ENR 1.8-19	29 MAR 2018
ENR 1.8-20	13 SEP 2018
ENR 1.8-21	29 MAR 2018
ENR 1.8-22	29 MAR 2018
ENR 1.8-23	24 MAY 2018
ENR 1.8-24	29 MAR 2018
ENR 1.8-25	29 MAR 2018
ENR 1.8-26	29 MAR 2018
ENR 1.8-27	28 FEB 2019
ENR 1.8-28	28 FEB 2019
ENR 1.8-29	28 FEB 2019
ENR 1.8-30	28 FEB 2019
ENR 1.8-31	28 FEB 2019
ENR 1.9-1	07 DEC 2017
ENR 1.9-2	01 FEB 2018
ENR 1.9-3	27 APR 2017
ENR 1.9-4	27 APR 2017
ENR 1.9-5	27 APR 2017
ENR 1.10-1	01 FEB 2018
ENR 1.10-2	29 MAR 2018
ENR 1.10-3	29 MAR 2018
ENR 1.11-1	12 NOV 2015
ENR 1.12-1	12 NOV 2015
ENR 1.12-2	12 NOV 2015
ENR 1.12-3	12 NOV 2015
ENR 1.12-4	12 NOV 2015
ENR 1.13-1	12 NOV 2015
ENR 1.14-1	10 DEC 2015
ENR 1.14-2	15 SEP 2016
ENR-1.14-3 to ENR-1.14-4	15 SEP 2016
ENR-1.14-5 to ENR-1.14-6	15 SEP 2016
ENR-1.14-7 to ENR-1.14-8	15 SEP 2016

ENR 2

ENR 2.1-1	03 JAN 2019
ENR 2.1-2	03 JAN 2019
ENR 2.1-3	03 JAN 2019
ENR 2.1-4	25 APR 2019
ENR-2.1-7	21 JUL 2016
ENR-2.1-9	29 MAR 2018
ENR-2.1-11A	21 JUL 2016
ENR-2.1-11B	21 JUL 2016
ENR-2.1-13	21 JUL 2016
ENR-2.1-15	28 FEB 2019

ENR 3

ENR 4

ENR 5

ENR 6

Part 3 – AERODROMES (AD)

AD 0

AD 1

AD 2

AD-2-WSSS-IAC-12	13 SEP 2018
AD-2-WSSS-VAC-1	28 FEB 2019
AD 2.WSSL-1	28 FEB 2019
AD 2.WSSL-2	28 FEB 2019
AD 2.WSSL-3	07 DEC 2017
AD 2.WSSL-4	03 JAN 2019
AD 2.WSSL-5	12 OCT 2017
AD 2.WSSL-6	03 JAN 2019
AD 2.WSSL-7	03 JAN 2019
AD 2.WSSL-8	03 JAN 2019
AD 2.WSSL-9	03 JAN 2019
AD 2.WSSL-10	03 JAN 2019
AD 2.WSSL-11	03 JAN 2019
AD 2.WSSL-12	03 JAN 2019
AD 2.WSSL-13	03 JAN 2019
AD 2.WSSL-14	28 FEB 2019
AD 2.WSSL-15	03 JAN 2019
AD 2.WSSL-16	03 JAN 2019
AD 2.WSSL-17	25 APR 2019
AD 2.WSSL-18	25 APR 2019
AD 2.WSSL-19	03 JAN 2019
AD 2.WSSL-20	03 JAN 2019
AD 2.WSSL-21	03 JAN 2019
AD 2.WSSL-22	25 APR 2019
AD-2-WSSL-ADC-1	28 FEB 2019
AD-2-WSSL-ADC-2	03 JAN 2019
AD-2-WSSL-ADC-3	08 NOV 2018
AD-2-WSSL-AOC-1	17 AUG 2017
AD-2-WSSL-AOC-2	08 NOV 2018
AD-2-WSSL-VAC-1	03 JAN 2019
AD-2-WSSL-VAC-2	03 JAN 2019
AD-2-WSSL-VAC-3	03 JAN 2019
AD-2-WSSL-VAC-4	03 JAN 2019
AD-2-WSSL-VDC-1	03 JAN 2019
AD-2-WSSL-VDC-2	03 JAN 2019
AD-2-WSSL-VFR-1	21 JUL 2016
AD-2-WSSL-IFR-1	21 JUL 2016
AD-2-WSSL-IFR-2	21 JUL 2016
AD 2.WSAP-1	19 JUL 2018
AD 2.WSAP-2	19 JUL 2018
AD 2.WSAP-3	19 JUL 2018
AD 2.WSAP-4	19 JUL 2018
AD 2.WSAP-5	19 JUL 2018
AD 2.WSAP-6	12 OCT 2017
AD 2.WSAP-7	19 JUL 2018
AD 2.WSAP-8	25 APR 2019
AD 2.WSAP-9	25 APR 2019
AD 2.WSAP-10	25 APR 2019
AD 2.WSAP-11	25 APR 2019
AD-2-WSAP-ADC-1	12 NOV 2015
AD-2-WSAP-ADC-2	12 OCT 2017
AD-2-WSAP-AOC-1	10 NOV 2016
AD-2-WSAP-IAC-1	25 APR 2019
AD-2-WSAP-IAC-2	25 APR 2019
AD-2-WSAP-IAC-3	25 APR 2019
AD-2-WSAP-IAC-4	25 APR 2019
AD-2-WSAP-IAC-5	25 APR 2019
AD-2-WSAP-IAC-6	25 APR 2019
AD 2.WSAT-1	25 APR 2019
AD 2.WSAT-2	25 APR 2019
AD 2.WSAT-3	25 APR 2019
AD 2.WSAT-4	25 APR 2019
AD 2.WSAT-5	25 APR 2019
AD 2.WSAT-6	25 APR 2019
AD 2.WSAT-7	12 NOV 2015
AD 2.WSAT-8	12 NOV 2015
AD-2-WSAT-ADC-1	12 NOV 2015
AD 2.WSAG-1	12 NOV 2015
AD 2.WSAG-2	08 NOV 2018
AD 2.WSAG-3	07 DEC 2017
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
AD-2-WIDN-SID-4	12 NOV 2015
AD-2-WIDN-STAR-1	12 NOV 2015
AD-2-WIDN-STAR-2	12 NOV 2015
AD-2-WIDN-STAR-3	21 JUL 2016
AD-2-WIDN-STAR-4	12 NOV 2015

PAGE INTENTIONALLY LEFT BLANK

GEN 0.6 TABLE OF CONTENTS TO PART 1

GEN 1 NATIONAL REGULATIONS AND REQUIREMENTS

GEN 1.1 DESIGNATED AUTHORITIES

The authority responsible for civil aviation in Singapore is the Civil Aviation Authority of Singapore under the Ministry of Transport. The addresses of the designated authorities concerned with facilitation of international air navigation are as follows:

1 CIVIL AVIATION

Post:
CIVIL AVATION AUTHORITY OF SINGAPORE
SINGAPORE CHANGI AIRPORT, P.O. BOX 1
SINGAPORE 918141
Tel: (65) 65421122
Fax: (65) 65421231
AFS: WSSSYAYX
URL: www.caas.gov.sg

2 METEOROLOGY

Post:
DIRECTOR-GENERAL METEOROLOGICAL SERVICE DIVISION
Singapore Changi Airport, P.O. Box 8
SINGAPORE 918141
Tel: (65) 65457190
Fax: (65) 65457192
AFS: WSSSYMYX
URL: www.weather.gov.sg

3 CUSTOMS

Post:
SINGAPORE CUSTOMS
55 Newton Road #10-01, Revenue House
SINGAPORE 307987
Tel: (65) 63552000
Fax: (65) 62508663
URL: www.customs.gov.sg

4 IMMIGRATION

Post:
IMMIGRATION & CHECKPOINTS AUTHORITY
10 Kallang Road, #08-00 ICA Building
SINGAPORE 208718
Tel: (65) 63916100
Fax: (65) 62980837
URL: www.ica.gov.sg

5 HEALTH

Post:
MINISTRY OF HEALTH
16 College Road, College of Medicine Building
SINGAPORE 169854
Tel: (65) 63259220
Fax:
URL: www.moh.gov.sg

6 ENROUTE AND AERODROME CHARGES

Post:
CIVIL AVIATION AUTHORITY OF SINGAPORE
Singapore Changi Airport P.O. Box 1
SINGAPORE 918141
Tel: (65) 65421122
Fax: (65) 65421231
AFS: WSSSYAYX

Post:
CHANGI AIRPORT GROUP (S) PTE LTD
SELETAR AIRPORT
21 Seletar Aerospace Road 1 #02-01
SINGAPORE 797405
Tel: (65)64815077 Airside Operations
Fax: (65)64831754

7 AGRICULTURE QUARANTINE

Post:
Head Office: AGRI FOOD AND VET AUTHORITY
JEM Office Tower, 52 Jurong Gateway Road #14-01
SINGAPORE 608550
Tel: (65) 68052992
Fax: (65) 63341831
URL: www.ava.gov.sg

Post:
CHANGI ANIMAL AND PLANT QUARANTINE STATION
AGRI-FOOD AND VETERINARY AUTHORITY
Gate C7, Airport Cargo Road Changi Airfreight Centre
Changi Animal and Plant Quarantine
SINGAPORE 918104
Tel: (65) 65457522
Fax: (65) 65453023

8 TRANSPORT SAFETY INVESTIGATION BUREAU

Post:
Director (TSIB)
MINISTRY OF TRANSPORT
c/o Changi Airport Post Office P.O. Box 1005
SINGAPORE 918155
Tel: (65) 65412798
Fax: (65) 65422394
URL: www.mot.gov.sg

GEN 1.3 ENTRY, TRANSIT AND DEPARTURE OF PASSENGERS AND CREW

1 CUSTOMS REQUIREMENTS

← 1.1 The Red and Green Channel system is operated at the Airport to expedite customs clearance of arriving air passengers. All arriving passengers shall present themselves personally with their baggage and make oral declarations at the Red Channel if they have any prohibited or controlled goods or goods exceeding their duty-free concession and Goods and Services Tax (GST) import relief. If they do not have any of such goods, they may leave the Arrival Hall through the Green Channel. However, selective checks may be conducted on passengers going through the Green Channel. All crew members shall produce their baggage for clearance at the Red Channel only. Departing passengers are not subject to Customs formalities unless required to do so. Baggage may be examined in such manner as deemed necessary and it shall be the duty of the person in charge of the baggage to produce, open, unpack and repack such baggage.

← 1.2 **Dutiable Goods**. All dutiable goods brought into Singapore are subject to customs duty and/or excise duty and GST. There are 4 categories of dutiable goods: Intoxicating liquors; tobacco products; motor vehicles; and motor fuel. Please refer to the Singapore Customs' website for the latest list of dutiable goods and their respective duty rates. There is no customs duty on goods exported from Singapore.

1.3 **Duty-Free Allowance**. Travellers are entitled to duty-free concession for liquors if they meet all the following conditions:

- Is 18 years of age and above;
- Have spent 48 hours or more outside Singapore immediately before arrival;
- Not arriving from Malaysia;
- The liquor is for personal consumption; and
- The liquor is not prohibited from import into Singapore.

Travellers will be given duty-free concession for liquors on one of the following options:

Option	Spirits	Wine	Beer
A	1 Litre	1 Litre	-
B	1 Litre	-	1 Litre
C	-	1 Litre	1 Litre
D	-	2 Litres	-
E	-	-	2 Litres

Bona-fide crew members are granted duty-free concession on 0.25 litre of spirits and 1 litre of wine or 1 litre of beer.

1.4 **GST Taxable Goods**. All goods brought into Singapore are subject to GST, at the prevailing rate of 7 percent. GST is levied on the value of goods, which may include the cost, insurance and freight (CIF) plus other chargeable costs and the duty payable (if applicable).

← 1.5 **GST Import Relief**. Travellers (excluding crew members and holders of a work permit, employment pass, ← student pass, dependent pass or long-term pass issued by the Singapore Government), are granted GST import relief on new articles, souvenirs, gifts and food preparations brought into Singapore. These goods must be ← intended for traveller's personal use or consumption and not for sale. The GST import relief amount is based ← on the number of hours the traveller has spent outside Singapore, as specified in the table below:

Time spent outside Singapore	Value of goods granted GST relief
48 hours and above	S$500
Less than 48 hours	S$100

There is no GST import relief and duty-free concession on intoxicating liquor and tobacco products, as well as goods imported for commercial purposes.

For more information on duty-free concession and GST import relief, please visit Singapore Customs' website.

1.6 **Declaration and Payment of Duty and/or GST**. Arriving travellers are required to declare and pay the duty and GST to bring in dutiable and taxable goods exceeding their duty-free concession and GST import relief. For convenience, you are encouraged to make an advance declaration and payment of duties and GST prior to your arrival through our Customs@SG mobile app or web portal. Once tax payment is successful, the app will create an e-receipt in your mobile device and you may exit the Arrival Hall via the Green Channel. If you are stopped for checks, you can show the e-receipt stored in your mobile device as proof of payment to the officers.

Please visit Singapore Customs' website for more information on the Customs@SG mobile app and web portal. Alternatively, you may proceed directly to the Customs Tax Payment Office or the Red Channel upon arrival to declare your goods. Please present supporting documents such as invoices or receipts indicating the value of your goods to facilitate declaration and payment (if necessary).

1.7 **Goods Requiring a Customs Import Permit**. A valid Customs import permit is required for clearance if travellers are carrying (but not limited to):

- More than 0.4 kilogrammes of cigarettes or other tobacco products;
- More than 10 litres of liquor products;
- More than 0.5 kilogrammes of investment precious metals for personal use;
- More than 10 litres of motor fuel;
- Goods for trade or commercial use the GST on which exceeds S$300; or
- Goods clearly marked as trade samples (excluding liquors and tobacco products) the value of which exceeds S$400

1.8 **Prohibited Goods**. The following items are NOT allowed to be imported into Singapore. Some examples of prohibited goods include (but not limited to):

- Chewing gum (except approved oral dental and medicated gum by Singapore's Health Sciences Authority)
- Chewing tobacco and imitation tobacco products (e.g. electronic cigarettes, etc)
- Nasal snuff
- Oral snuff (including snus and dipping tobacco)
- Gutkha, Khaini and Zarda
- Shisha
- Smokeless cigars, smokeless cigarillos or smokeless cigarettes
- Dissolvable tobacco or nicotine. Any product containing nicotine or tobacco that may be used topically for application, by implant or injected into any parts of the body
- Any solution or substance, of which tobacco or nicotine is a constituent, that is intended to be used with an electronic nicotine delivery system or vaporizers
- Cigarette lighters of pistol or revolver shape
- Controlled drugs and psychotropic substances
- Endangered species of wildlife and their by-products
- Firecrackers
- Obscene articles, publications, video tapes/discs and software
- Reproduction of copyright publications, video tapes, video compact discs, laser discs, records or cassettes
- Seditious and treasonable materials

It is an offence to attempt to bring prohibited goods into Singapore.

1.9 **Controlled Goods**. You are required to obtain an import permit or authorisation form from the relevant Competent Authorities before you can bring controlled goods into Singapore. Please produce the goods and the import permit or authorisation form to the checking officer at the Red Channel on your arrival. Some examples of controlled goods include (but not limited to):

- Animals, birds, fish and their products
- CDs, DVDs, films and video games
- Arms and explosives
- Medicines and pharmaceutical products
- Telecommunication and radio communication equipment

Please visit Customs website for more information on controlled and prohibited goods .

← 2 IMMIGRATION REQUIREMENTS

← 2.1 All passengers are required to present themselves with their travel documents for examination, and endorsements (if necessary). Every passenger must fill in a Disembarkation/Embarkation form (including one for each child) except Singaporeans, Permanent Residents and long term pass holders.

2.2 Any person entering Singapore from a place outside Singapore, or is leaving Singapore for a place outside Singapore (including aircrew entering or leaving Singapore on test flights) shall present to an immigration officer at an authorised airport, a valid passport or a valid travel document recognised by the Government of Singapore (in the case of an alien, a visa for Singapore where such a visa is required) with the exception of the following persons:

a. A member of the Singapore Armed Forces travelling on duty;
b. A member of such Visiting Forces as the Minister may determine;
← c. Any child or person who is included in the passport or other travel document of a parent of the child, or of a spouse or other relative of the person and is accompanying that parent, spouse or relative (as the case may be) when travelling to and leaving from Singapore.

← 2.3 Nationals of the following countries require visas for the purpose of social visits in Singapore (with exception of an aircrew who is an airline crew member that, in the course of a journey on duty from a place outside Singapore to Singapore, or from a place outside Singapore to a place outside Singapore, calls at an authorised airport):

- Afghanistan
- Algeria
- Bangladesh* ←
- Commonwealth of Independent States i.e. Armenia+, Azerbaijan*, Belarus+, Kazakhstan*, Kyrgyzstan*, Moldova*, Russia*, Tajikistan*, and Uzbekistan~ ←
- Democratic People's Republic of Korea
- Egypt
- Georgia+
- India* ←
- Iran
- Iraq
- Jordan* ←
- Kosovo
- Lebanon
- Libya
- Mali
- Morocco~
- Nigeria*
- People's Republic of China^ ←
- Pakistan
- Saudi Arabia~ ←
- Somalia
- Sudan
- Syria
- Tunisia* ←
- Turkmenistan*
- Ukraine*
- Yemen

← Visitors holding Hong Kong Document of Identity, Macao Special Administrative Region (MSAR) Travel Permit, Palestinian Authority Passport, Refugee Travel Document** issued by the Middle-East countries and Temporary Passport issued by United Arab Emirates will also require a visa to enter Singapore.

* Holders of diplomatic, official and service passports do not need a visa for entry.

^ Holders of diplomatic, public affairs and service passports do not need a visa for entry.

+ Holders of diplomatic and official passports do not need a visa for entry

~ Holders of diplomatic passports do not need a visa for entry

** These travel documents are subjected to assessment of recognition for entry into Singapore

← Nationals of Commonwealth of Independent States (Armenia, Azerbaijan, Belarus, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, and Uzbekistan), Georgia, Turkmenistan, and Ukraine may qualify for the 96-hour visa free transit facility (VFTF) provided that:

a. the person is in transit to a third country;
b. the person holds a valid passport, confirmed onward air-ticket, entry facilities (including visa) to the third country and have sufficient funds for the period of stay in Singapore;
c. the person continues his journey to the third country within 96 hours visa free period granted; and
d. the person satisfies Singapore's entry requirements.

Nationals of India and the PRC may qualify for the 96-hour VFTF provided that:

a. the person is in transit to or from a third country via Singapore by any mode of transport and will depart via air or sea;

b. the person holds a valid passport and confirmed onward air/ferry/cruise ticket for departure from Singapore within 96 hours;

c. the person has a valid visa*/long-term pass (with a validity of at least 1 month from the date of entry into Singapore under the VFTF) issued by any of the following countries:

- Australia
- Canada
- Germany
- Japan
- New Zealand
- Switzerland
- United Kingdom
- United States of America

* A visa is considered valid so long as it is good for entry into one of the eight countries listed above. Travellers with Single Journey Visas (SJV) may still be granted VFTF on the return leg of their journey (i.e. after the SJV is used and no longer valid), but:

- the person must travel directly from the country that issued the SJV, en route through Singapore, back to their home country
- the person must not have returned to their home country since they last used the SJV.

2.4 Visitors must satisfy the following basic entry requirements before they are allowed to enter Singapore:

a. They are in possession of valid passports with at least 6 months' validity with assurance of their re-entry into their countries of residence or origin;
b. They have sufficient funds to last for the intended period of stay in Singapore;
c. They hold confirmed onward/return tickets and entry facilities (including visas) to their onward destinations; and
d. They have a Yellow Fever Vaccination Certificate, if applicable.

The granting of social visit passes to all visitors is determined by the Immigration & Checkpoints Authority (ICA) officers at the point of entry.

3 PUBLIC HEALTH REQUIREMENTS

3.1 Strict compliance with the provisions of the International Health Regulations, 2005, of the World Health Organisation, and Singapore's Infectious Diseases Act is required.

3.2 The pilot-in-command of an aircraft landing at Airports in Singapore shall furnish the Airport Health Officer with one copy of the General Declaration form (see ICAO Annex 9 Appendix 1) and one copy of the Passenger Manifest (see ICAO Annex 9 Appendix 2) signed by the pilot-in-command.

3.3 Vaccination Certificate Requirements for entry into Singapore are as follows:

A valid International Certificate of Vaccination for yellow fever is required from travellers above one year of age who have been in or have passed through any country with risk of yellow fever transmission in the six days before arriving in Singapore. The certificate is valid for life, beginning from 10 days after the date of vaccination (this applies to existing and new certificates). An exemption letter, signed by a medical practitioner, is required for individuals who are exempted from being vaccinated before entry into Singapore. Please refer to Singapore's Immigration & Checkpoints Authority website for the updated list of countries with risk of yellow fever transmission.

← 4 FLYING LICENCES AND RATINGS

4.1 VISITING PILOTS - HOLDERS OF NON-SINGAPORE PILOT LICENCES

4.1.1 When a holder of a non-Singapore pilot's licence wishes to fly on a Singapore registered aircraft in a private capacity in Singapore, he will be required to apply for a Certificate of Validation for his foreign licence. The Certificate of Validation, if approved, will be issued for this purpose only and for a limited period. The applicant would also be required to fulfil certain conditions. Pilots who wish to apply for a Certificate of Validation should contact the Personnel Licensing Section of the Civil Aviation Authority of Singapore (see address in paragraph 4.2.2 below)

4.2 CONVERSION OF FOREIGN LICENCE TO SINGAPORE LICENCE

4.2.1 Pilots holding valid licences, including an instrument rating and/or flying instructor's rating issued by ICAO Contracting States, may be considered for the conversion of their licences under the following conditions:

← a. The pilot must demonstrate formal prospective employment by a Singapore air operator, approved training organisation or flying club to operate on Singapore registered aircraft.
(This requirement will not be applicable for the conversion of a foreign licence to a Singapore PPL.)

← b. The pilot's foreign licence and its associated ratings must be valid from the time of application to the time of issue of a Singapore licence and its associated ratings.

← c. The pilot must fulfil all conversion terms as specified by CAAS within a period of 6 months preceding the issue of a Singapore licence and its associated ratings.

4.2.2 Further details on the conversion of a foreign licence can be obtained from:

←
Safety Policy and Planning Division
Personnel Licensing Section
Civil Aviation Authority of Singapore
Singapore Changi Airport Terminal 2
South Finger Pier Level 3
Unit No. 038-039
Singapore 819643

TEL: (65) 65412482
FAX: (65) 65434941

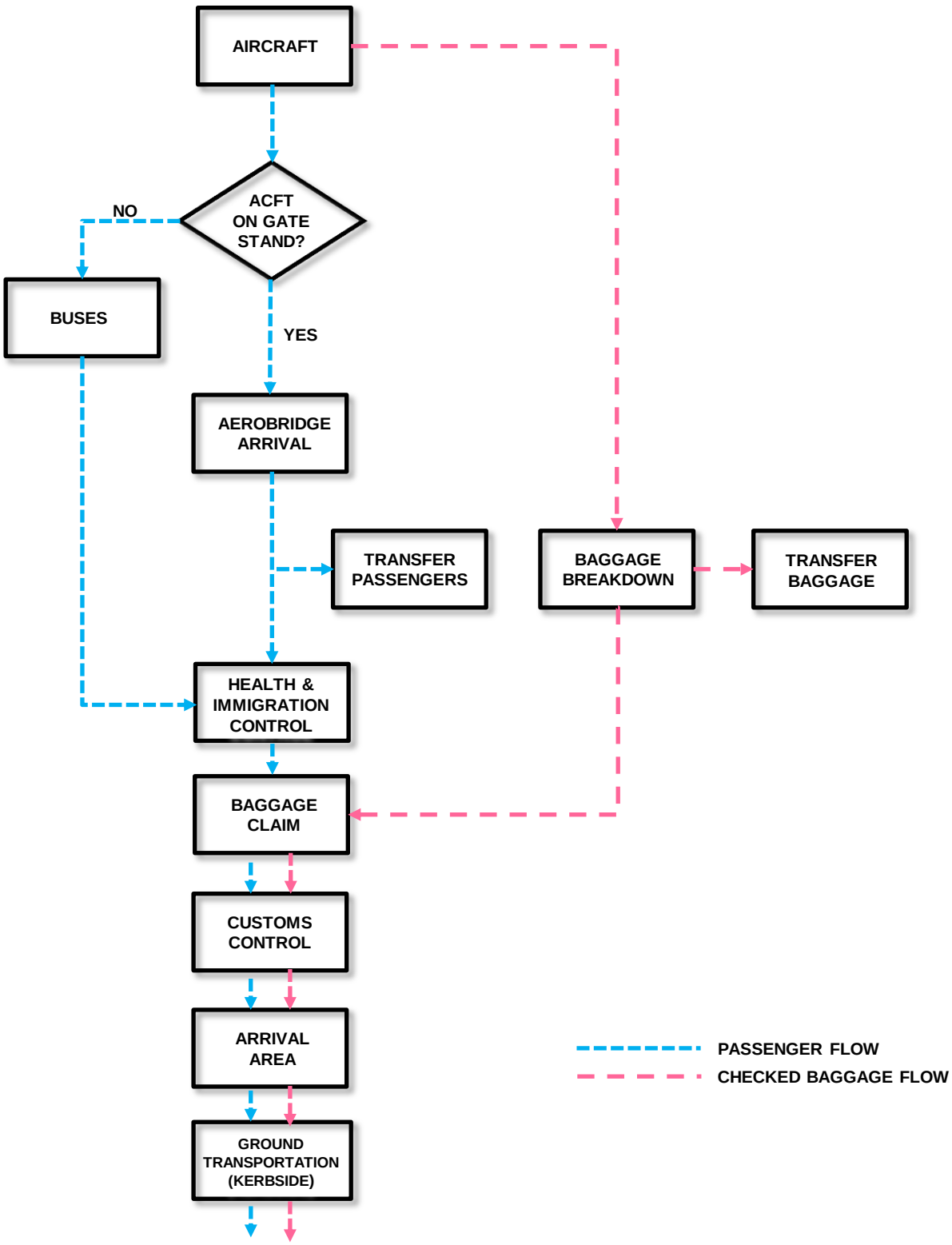
4.3 PILOTS WHO HAVE ATTAINED THE AGE OF 65

4.3.1 Any pilot who has attained his 65th birthday shall not be permitted to act as pilot-in-command or co-pilot of an aircraft engaged in scheduled or non-scheduled international commercial air transport operations within Singapore airspace.

PAGE INTENTIONALLY LEFT BLANK

SINGAPORE CHANGI AIRPORT
PASSENGER FACILITATION FLOW

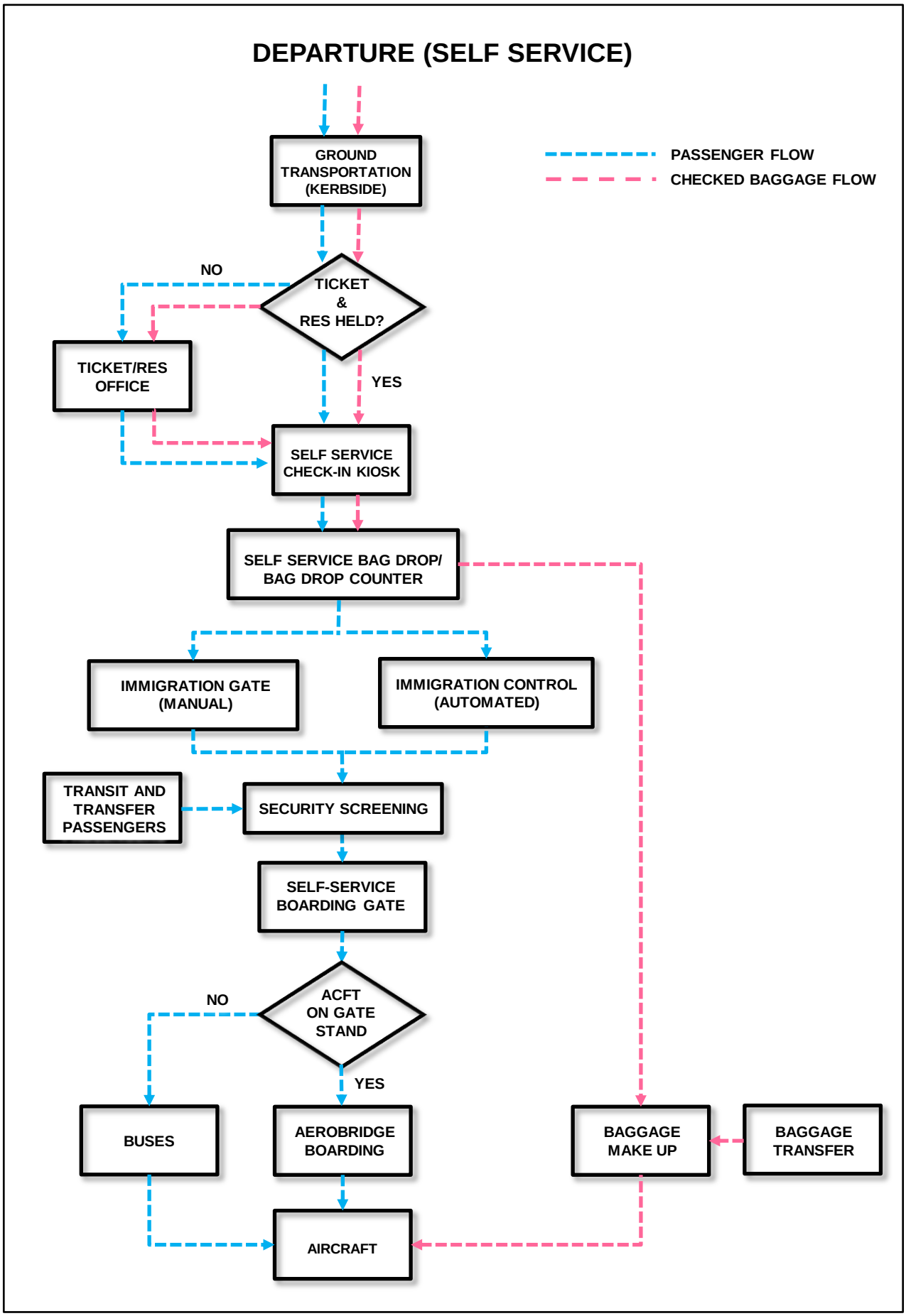
ARRIVAL



PAGE INTENTIONALLY LEFT BLANK

SINGAPORE CHANGI AIRPORT
PASSENGER FACILITATION FLOW

DEPARTURE (SELF SERVICE)

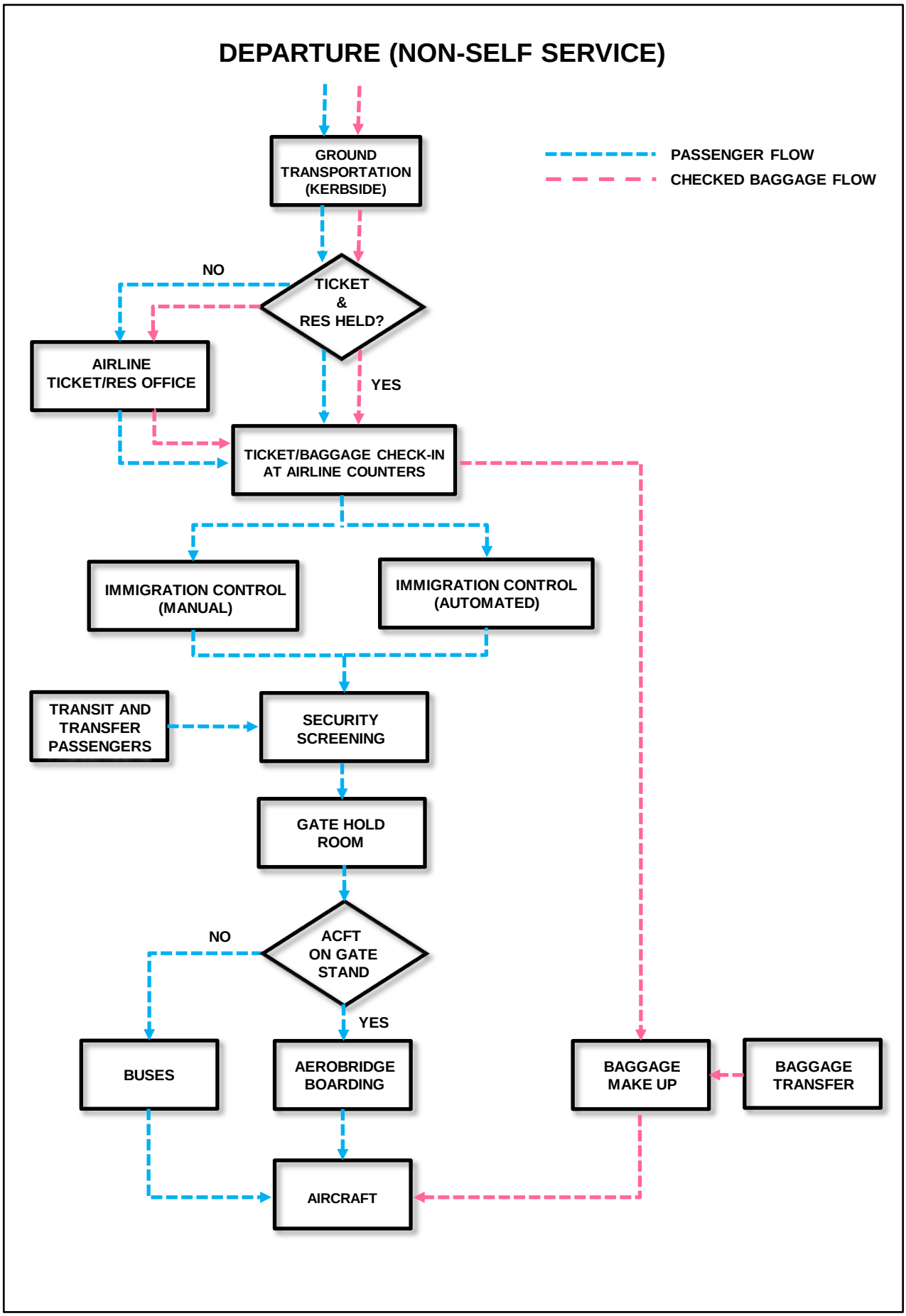


CHANGES : New self-service passenger processes at check-in and boarding.

PAGE INTENTIONALLY LEFT BLANK

SINGAPORE CHANGI AIRPORT
PASSENGER FACILITATION FLOW

DEPARTURE (NON-SELF SERVICE)



CHANGES : New Chart.

PAGE INTENTIONALLY LEFT BLANK

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):

← a. Transhipment 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);

b. Transhipment of controlled goods within the same FTZ (In Through Airway Bill cases), a transshipment (Through transshipment within the same FTZ) permit is required; and

← c. 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 transhipment or transit are subject to controls under the full control list. No clearance documents are required for strategic goods in transhipment 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 transhipment 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 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.

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:

← a. Animals, birds, eggs, meat and meat products(including canned or processed meat), animal products, veterinary biological, fertilizers containing animal products;

← b. Fish (for human consumption as well as for aquaria), fisheries products (in all forms), aquatic animals (alive or dead).

← c. 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 The import, export and transhipment of all arms, explosives, component parts, munitions and weapons including swords, sword-sticks, kukris, parangs, daggers, spears, spear-heads, toy pistols, airguns, etc. are strictly controlled. Permits must be obtained and applications should be made to the Arms and Explosives Branch, Commissioner of Singapore Police, Block J, Kinloss Complex, No 3 Ladyhill Road, Singapore 258672 (Fax: 65-67340531) at least 2 weeks before the intended date of air carriage. Severe penalties are provided for non-compliance of requirements.

4 REQUIREMENTS FOR THE CARRIAGE OF DANGEROUS GOODS AND MUNITIONS OF WAR (INCLUDING ARMS AND EXPLOSIVES) IN AIRCRAFT

4.1 DANGEROUS GOODS

4.1.1 Paragraph 50D of the Air Navigation Order provides that dangerous goods shall not be carried in civil air transport aircraft except (inter alia) with the written permission of the Minister and in accordance with any conditions which may be imposed. This provision applies to all civil aircraft flying to, from or over the Republic of Singapore, and to Singapore registered aircraft wherever they may be.

4.1.2 Written permission, if given, 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:

Airworthiness / Flight Operations 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 Airworthiness / Flight Operations Division, CAAS (TEL: 65-65413487 or FAX: 65-65456519). These applications should be submitted at least 7 working days before the intended date of carriage.

4.2 MUNITIONS OF WAR

4.2.1 Operators who wish to carry Munitions of War on board aircraft should apply for permit from paragraph 50C of the Air Navigation Order which prohibits the carriage of Munitions of War on board aircraft. Applications for such permit under paragraph 84 of the Air Navigation Order should be submitted to the Director-General of Civil Aviation at least 7 working days before the intended date of carriage to the address indicated in paragraph 4.1.3 above. Application forms can be obtained from Airworthiness / Flight Operations Division, CAAS (Tel: 65-65413487 or Fax: 65-65456519).

4.2.2 Each application for permit to carry Munitions of War to, from and/or through Singapore, should be in the prescribed form and supported by an airway bill, commercial invoice, import/export and/or end-user certificate from the final destination. In Singapore, only licensed dealers are allowed to engage in the import, export and transhipment of Munitions of War in Singapore.

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:

a. date of the occurrence;
b. State of the operator;
c. State of origin;
d. State of registry;
e. location of the occurrence, flight number and flight date;
f. description of the goods and the reference number of the airway bill, pouch, baggage tag and ticket;

g. proper shipping name (including the technical name, if applicable);
h. UN or ID number, whichever is applicable;
i. class or division of the goods in accordance with the Technical Instructions and any subsidiary risk;
j. type of packaging and the packaging specification marking;
k. quantity of the munitions of war or dangerous goods;
l. name and address of the shipper or passenger;
m. suspected cause of the occurrence;
n. action taken upon discovery of the occurrence, including any mitigation measures;
o. any serious injury, death or damage of property caused by the occurrence;
p. any other reporting action taken;
q. name, title, address and contact number of the reporter;
r. 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.

PAGE INTENTIONALLY LEFT BLANK

GEN 2.4 LOCATION INDICATORS

The location indicators marked with an asterisk (*) cannot be used in the address component of AFS messages.

1. ENCODE		*2. DECODE*	
Location	***Indicator***	***Indicator***	***Location***
AIR OPERATIONS CENTRE (RSAF)	WSAH	WIDD	BATAM/HANG NADIM (INDONESIA)
BATAM/HANG NADIM (INDONESIA)	WIDD	WIDN	TANJUNG PINANG/RAJA HAJI FISABILILLAH (INDONESIA)
JOHOR BAHRU	WMKJ		
PAYA LEBAR	WSAP	WMKJ	JOHOR BAHRU
SATCC (RSAF)	WSAR	WSAG	SEMBAWANG
SEMBAWANG	WSAG	WSAH	AIR OPERATIONS CENTRE (RSAF)
SINGAPORE / SELETAR	WSSL	WSAP	PAYA LEBAR
SINGAPORE / SINGAPORE CHANGI INTL	WSSS	WSAR	SATCC (RSAF)
SINGAPORE ACC/FIC	WSJC	WSAT	TENGAH
TANJUNG PINANG/RAJA HAJI FISABILILLAH (INDONESIA)	WIDN	WSJC	SINGAPORE ACC/FIC
		WSSL	SINGAPORE / SELETAR
TENGAH	WSAT	WSSS	SINGAPORE / SINGAPORE CHANGI INTL

PAGE INTENTIONALLY LEFT BLANK

GEN 2.7 SUNRISE/SUNSET TABLES

← 1 The sunrise/sunset table is prepared by the Meteorological Service Singapore of the National Environment Agency and is reproduced here with their permission. The table includes all the airports and aerodromes being served by the Singapore air traffic services.

1.1 The times, in UTC, for sunrise (SR) and sunset (SS) for Year 2015 to Year 2019 are given in the table.

1.2 The table is calculated for the year 2017 which is used as an “average year” for the years from 2015 to 2019. In this period, the times on an arbitrary date and place will deviate less than 2 minutes from the times on the same date and place in the “average year”.

2 SUNRISE-SUNSET TABLES

Latitude : (012200N) Longitude: (1035900E)											
MONTH/DAY		**SR**	**SS**	**MONTH/DAY**		**SR**	**SS**	**MONTH/DAY**		**SR**	**SS**
JAN	1-4	2307	1109	**MAY**	1-31	2255	1106	**SEP**	1-5	2259	1107
	5-8	2308	1111						6-12	2257	1105
	9-14	2310	1113						13-18	2255	1103
	15-21	2312	1115						19-24	2253	1100
	22-31	2314	1118						25-30	2251	1058
FEB	1-18	2316	1120	**JUN**	1-10	2256	1108	**OCT**	1-5	2250	1056
	19-28	2314	1119		11-20	2258	1110		6-13	2248	1053
					21-30	2300	1112		14-31	2246	1050
MAR	1-5	2313	1118	**JUL**	1-10	2302	1114	**NOV**	1-13	2246	1050
	6-12	2311	1117		11-31	2304	1116		14-22	2248	1051
	13-18	2309	1115						23-30	2250	1053
	19-24	2307	1114								
	25-31	2305	1112								
APR	1-5	2303	1111	**AUG**	1-15	2304	1114	**DEC**	1-5	2252	1055
	6-12	2301	1109		16-25	2302	1111		6-10	2255	1057
	13-19	2259	1108		26-31	2300	1109		11-18	2257	1059
	20-30	2257	1106						19-22	2300	1102
									23-28	2302	1104
									29-31	2305	1107

PAGE INTENTIONALLY LEFT BLANK

k. **Visual Approach Chart - ICAO**

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

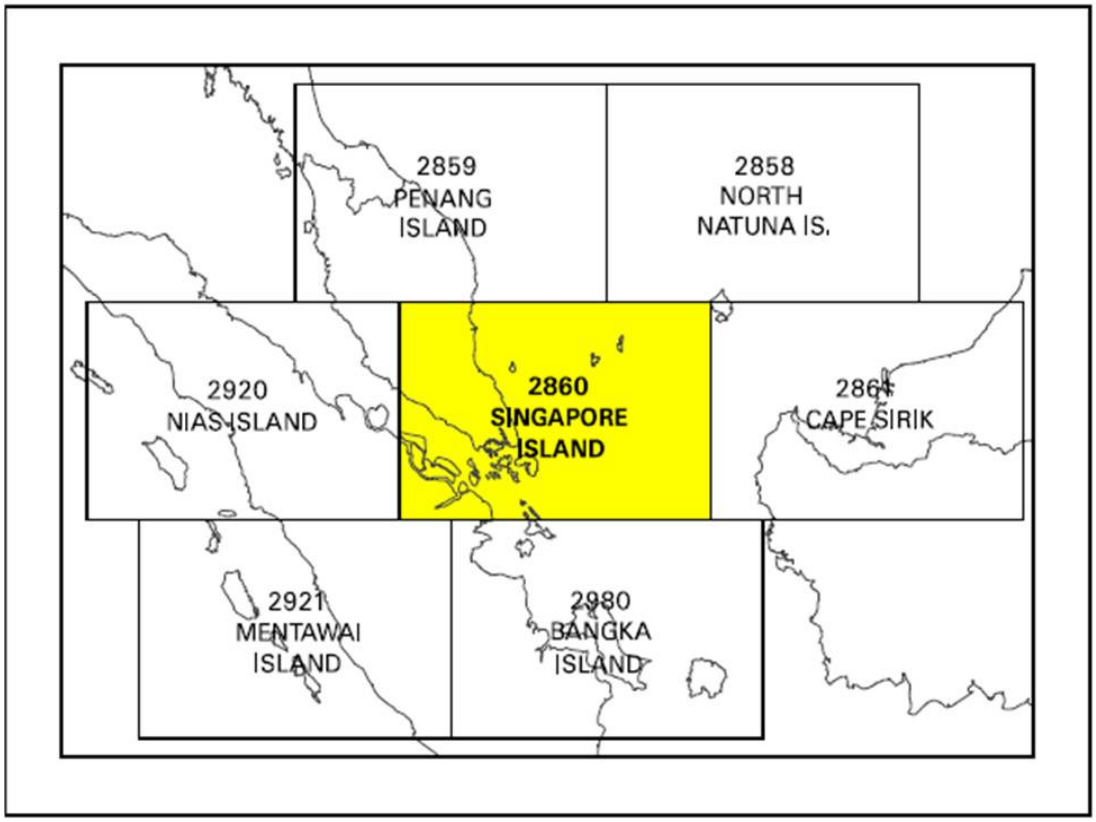
* only limited navigation facilities are available; or
* radio communication facilities are not available; or
* no adequate aeronautical charts of the aerodrome and its surroundings at 1:500 000 or greater scale are available; or
* visual approach procedures have been established

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					
Title of Chart Series	*Scale*	*Name and/or number*		*Price ($)*	*Date*
World Aeronautical Chart ICAO (WAC)	1:1 000 000		WAC 2860	In AIP	17 AUG 17
Enroute Chart ICAO (ENRC)			ERC 6-1	In AIP	13 SEP 18
Instrument Approach Chart ICAO (IAC)		***Singapore Changi***			
	1:400 000	RWY 02L - ICW ILS/DME	AD-2-WSSS-IAC-1	In AIP	13 SEP 18
	1:400 000	RWY 02C - ICE ILS/DME	AD-2-WSSS-IAC-2	In AIP	13 SEP 18
	1:400 000	RWY 20R - ICH ILS/DME	AD-2-WSSS-IAC-5	In AIP	13 SEP 18
	1:400 000	RWY 20C - ICC ILS/DME	AD-2-WSSS-IAC-6	In AIP	13 SEP 18
	1:400 000	RWY 20C - VTK DVOR/DME	AD-2-WSSS-IAC-7	In AIP	13 SEP 18
	1:400 000	RWY 02L - RNAV(GNSS)	AD-2-WSSS-IAC-9	In AIP	13 SEP 18
	1:400 000	RWY 02C - RNAV(GNSS)	AD-2-WSSS-IAC-10	In AIP	13 SEP 18
	1:400 000	RWY 20R - RNAV(GNSS)	AD-2-WSSS-IAC-11	In AIP	03 JAN 19
	1:400 000	RWY 20C - RNAV(GNSS)	AD-2-WSSS-IAC-12	In AIP	13 SEP 18
←		***Paya Lebar***			
←	1:400 000	RWY 20 - PU DVOR/DME	AD-2-WSAP IAC-1	In AIP	25 APR 19
←	1:400 000	RWY 02 - PU DVOR/DME	AD-2-WSAP IAC-2	In AIP	25 APR 19
←	1:400 000	RWY 20 - IPS ILS/DME	AD-2-WSAP IAC-3	In AIP	25 APR 19
←	1:400 000	RWY 02 - IPN ILS/DME	AD-2-WSAP IAC-4	In AIP	25 APR 19
←	1:400 000	RWY 02 - RNAV(GNSS)	AD-2-WSAP-IAC-5	In AIP	25 APR 19
←	1:400 000	RWY 20 - RNAV(GNSS)	AD-2-WSAP-IAC-6	In AIP	25 APR 19
Visual Approach Chart ICAO (VAC)	1:400 000	***Singapore Changi***	AD-2-WSSS-VAC-1	In AIP	28 FEB 19
		Seletar			
	1:100 000	RWY 03	AD-2-WSSL-VAC-1	In AIP	03 JAN 19
	1:100 000	RWY 21	AD-2-WSSL-VAC-2	In AIP	03 JAN 19
	1:100 000	RWY 03	AD-2-WSSL-VAC-3	In AIP	03 JAN 19
	1:100 000	RWY 21	AD-2-WSSL-VAC-4	In AIP	03 JAN 19
Visual Departure Chart		***Seletar***			
	1:100 000	RWY 03	AD-2-WSSL-VDC-1	In AIP	03 JAN 19
	1:100 000	RWY 21	AD-2-WSSL-VDC-2	In AIP	03 JAN 19
← **Aerodrome Chart** ICAO (AC)		***Singapore Changi***	AD-2-WSSS-ADC-2	In AIP	25 APR 19
		Seletar	AD-2-WSSL-ADC-1	In AIP	28 FEB 19
		Paya Lebar	AD-2-WSAP-ADC-1	In AIP	12 NOV 15
Aerodrome Obstacle Chart ICAO TYPE A (AOC)		***Singapore Changi***			
	1:10 000	RWY 20R/02L	AD-2-WSSS-AOC-1	In AIP	07 DEC 17
	1:10 000	RWY 20C/02C	AD-2-WSSS-AOC-2	In AIP	29 MAR 18
		Seletar			
	1:10 000	RWY 03/21	AD-2-WSSL-AOC-1	In AIP	17 AUG 17
		Paya Lebar			
	1:20 000	RWY 20/02	AD-2-WSAP-AOC-1	In AIP	10 NOV 16
Aerodrome Obstacle Chart ICAO TYPE B (AOC)		***Singapore Changi***			
	1:20 000	RWY 02L/20R and 02C/20C	AD-2-WSSS-AOC-3	In AIP	13 SEP 18
		Seletar			
	1:20 000	RWY 03/21	AD-2-WSSL-AOC-2	In AIP	08 NOV 18
Precision Approach Terrain Chart ICAO (PATC)		***Singapore Changi***			
	1:2 500	RWY 02L	AD-2-WSSS-PATC-1	In AIP	01 FEB 18
	1:2 500	RWY 20C	AD-2-WSSS-PATC-2	In AIP	01 FEB 18

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



7 CORRECTIONS TO CHARTS NOT CONTAINED IN THE AIP

Identification of charts	Location on the chart where the correction has to be made	Precise details of the corrections to be made
NIL	NIL	NIL

GEN 3.5 METEOROLOGICAL SERVICES

1 RESPONSIBLE SERVICE

← 1.1 The meteorological services for civil aviation are provided by the Meteorological Service Singapore of the National Environment Agency.

Post:
THE DIRECTOR-GENERAL
Meteorological Service Singapore
Singapore Changi Airport,
P.O. Box 8
SINGAPORE 918141
Tel: (65) 65457190(HQ)
(65) 65425059 / (65) 65422837 (MET Office)
Fax: (65) 65457192 (HQ)
(65) 65425026 (MET Office)
AFS: WSSSYMYX
URL: www.weather.gov.sg

1.2 The service is provided in accordance with the provisions contained in the following ICAO documents:

Annex 3 – *Meteorological Service for International Air Navigation*
Doc 7030 – *Regional Supplementary Procedures Part 3 - Meteorology*

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

2 AREA OF RESPONSIBILITY

2.1 Area meteorological watch is provided for the Singapore FIR.

3 METEOROLOGICAL OBSERVATIONS AND REPORTS

TABLE GEN 3.5.3 Meteorological Observations and Reports

Name of Station/ Location Indicator	*Type & Frequency of Observation/ Automatic Observing Equipment*	*Types of MET Reports & Supplementary Information included*	*Observation System & Sites (s)*	*Hours of Operation*	*Climatological Information*
1	2	3	4	5	6
SINGAPORE/ Singapore Changi WSSS	Half hourly plus special observations	METAR SPECI TREND WS	a. Ultrasonic Wind Sensor at MET station situated 345m west of centre of RWY 02L/20R. (wind report in METAR and SPECI taken from this measurement). b. Cup anemometers and wind vanes at ends and middle of both runways. c. Windsocks at ends of both runways. d. Transmissometers at both ends and in the middle of both runways. e. Low level wind shear observations made continuously by system of 13 surface wind sensors located in the airport and its vicinity. f. MET Doppler Weather Radar detecting windshear within 20km and monitoring storms up to 480km.	H24	Climatological Summaries available at Meteorological Service Singapore of the National Environment Agency.
SINGAPORE/ Seletar WSSL	Hourly plus special observations	METAR SPECI	a. Ultrasonic wind sensors at the ends of runway (surface wind report in METAR and SPECI is taken from measurements of the ultrasonic wind sensor at RWY 03). b. Windsocks at ends of RWY 03/21.	H24	NIL
SINGAPORE/ Paya Lebar WSAP	Hourly plus special observations	METAR SPECI	a. Cup anemometers and wind vanes at both ends of RWY 02/20 (wind report in METAR and SPECI taken from the measurement associated with the RWY in use).	H24	NIL

4 TYPES OF SERVICES

4.1 The Meteorological Office and Meteorological Watch Office at Singapore Changi Airport operate H24 and provide the following services for civil aviation:

a. Full meteorological documentation and briefing for current operational planning for all flights operating out of Singapore Changi Airport;

b. Area meteorological watch over the Singapore FIR with the supply of meteorological information including SIGMET information to aircraft in flight through the Singapore ATS radio channels (see subsection AD 2.11);

c. HF RTF VOLMET broadcasts of meteorological information (see page GEN 3.5-7), Aviation weather report with trend statement, strong low level vertical wind shear report and aerodrome warnings are also included in VHF ATIS broadcasts for Singapore Changi Airport (see page GEN 3.4-3);

d. Meteorological information for ATS

← 4.2 Weather briefing by a forecaster is available H24 to qualified flight operations personnel at the Meteorological Office at Singapore Changi Airport or via telephone at (65)65425059 / (65)65422837. Weather information is available online via our Aviation Weather Services Portal at URL http://www.weather.gov.sg/ (see paragraph 9.2 for further details).

4.3 The Meteorological Office at Seletar Aerodrome operates H24 and provides meteorological documentation without briefing for international and general aviation flights operating out of Seletar Aerodrome.

4.4 Details of documentation supplied for each flight are determined by arrangement between the operator and the Meteorological Office. In general, the pilot-in-command is provided with documentation comprising one or more fixed-time prognostic streamline/istotach/spot temperature charts of standard isobaric surfaces appropriate to the cruising level (ICAO model IS), one of fixed-time prognostic significant weather chart code form and appropriate aerodrome forecasts in TAF code form.

4.5 Routine aerodrome forecasts received from other Meteorological Offices are normally included in meteorological documentation without modification. When a required aerodrome forecast is not received, a provisional forecast may be issued by the Meteorological Office providing the documentation.

4.6 After documentation has been issued and until take-off (i.e. the latest ETD notified to the Meteorological Office), the Meteorological Office at Singapore Changi Airport makes available amendments to the documentation. It is the responsibility of the operator's local representative or the pilot-in-command to obtain any pre-departure amendment(s) from the Meteorological Office at Singapore Changi Airport. The pilot-in-command may request pre-departure amendment(s) through the Singapore Changi Airport Control Tower.

4.7 Climatological Summaries for Singapore Changi (WSSS-48698) are available from the Meteorological Service Singapore.

4.8 OBSERVING SYSTEMS AND OPERATING PROCEDURES AT SINGAPORE CHANGI AIRPORT AND SELETAR AERODROME

4.8.1 SINGAPORE CHANGI AIRPORT

4.8.1.1 RWY 02L/20R (Runway 1)

4.8.1.1.1 Surface wind is measured by three cup anemometers and wind vanes located as follows:

	DIST FROM END OF RWY	DIST FROM RWY CENTRELINE
(i) One set at	470 metres north of RWY 02L	130 metres
(ii) One set at	middle of runway	130 metres
(iii) One set at	470 metres south of RWY 20R	130 metres

4.8.1.1.2 RVR observations are made by means of three sets of transmissometers, located as follows:

	DIST FROM END OF RWY	DIST FROM RWY CENTRELINE
1st set	370 metres north of RWY 02L	110 metres
2nd set	Middle of runway	110 metres
3rd set	360 metres south of RWY 20R	110 metres

RVR is reported in steps of 25 metres between 0 and 400 metres, 50 metres between 400 and 800 metres and 100 metres between 800 and 1,500 metres.

4.8.1.2 RWY 02C/20C (Runway II)

4.8.1.2.1 Surface wind is measured by three cup anemometers and wind vanes located as follows:

	DIST FROM END OF RWY	DIST FROM RWY CENTRELINE
(i) One set at	450 metres north of RWY 02C	130 metres
(ii) One set at	middle of runway	130 metres
(iii) One set at	450 metres south of RWY 20C	130 metres

4.8.1.2.2 RVR observations are made by means of three sets of transmissometers, located as follows:

	DIST FROM END OF RWY	DIST FROM RWY CENTRELINE
1st set	400 metres north of RWY 02C	110 metres
2nd set	Middle of runway	110 metres
3rd set	400 metres south of RWY 20C	110 metres

RVR is reported in steps of 25 metres between 0 and 400 metres, 50 metres between 400 and 800 metres and 100 metres between 800 and 1,500 metres.

4.8.1.2.3 Surface wind is also measured by an ultrasonic wind sensor located at the meteorological station, which is situated at 345 metres west of middle of RWY 02L/20R. Surface wind report in METAR and SPECI is taken from this measurement.

*4.8.1.3 **Wind Shear Observations (Singapore Changi Airport)***

4.8.1.3.1 Horizontal low level wind shear observations are measured continuously by a system of 13 wind sensors located in Singapore Changi airport and its vicinity.

4.8.1.3.2 ATC will pass to all aircraft taking off or landing for the next 1/2 hour from the time of report whenever microburst or wind shear of intensity 15 knots or greater is observed/reported.

4.8.1.3.3 The phraseology used by ATC to warn pilots of the presence of wind shear of intensity between 15 and 30 knots is:

> "..... (callsign) WIND SHEAR WARNING
> STRONG LOW LEVEL WIND SHEAR OBSERVED IN THE VICINITY OF
> CHANGI AIRPORT AT ..... (time)"

4.8.1.3.4 The phraseology used by ATC to warn pilots of the presence of wind shear of intensity greater than 30 knots is:

> ".....(callsign) WIND SHEAR WARNING
> SEVERE LOW LEVEL WIND SHEAR OBSERVED IN THE VICINITY OF
> CHANGI AIRPORT AT .....(time)"

4.8.1.3.5 The presence of wind shear will also be broadcast in the ATIS for the next half an hour.

4.8.2 SELETAR AERODROME

4.8.2.1 Surface wind is measured by ultrasonic wind sensors at ends of runway. Surface wind report in METAR and SPECI is taken from measurements of the ultrasonic wind sensor at RWY 03.

4.8.2.2 Wind Shear Observations (Seletar Aerodrome)

4.8.2.2.1 ATC will pass to all aircraft taking off or landing for the next 1/2 hour from the time of report whenever microburst or windshear of intensity 15 knots or greater is observed/reported.

4.8.2.2.2 The phraseology used by ATC to warn pilots of the presence of wind shear of intensity between 15 and 30 knots is:

> ".....(callsign) WIND SHEAR WARNING
> STRONG LOW LEVEL WIND SHEAR OBSERVED IN THE VICINITY OF
> SELETAR AIRPORT AT .....(time)"

4.8.2.2.3 The phraseology used by ATC to warn pilots of the presence of wind shear of intensity greater than 30 knots is:

> ".....(callsign) WIND SHEAR WARNING
> SEVERE LOW LEVEL WIND SHEAR OBSERVED IN THE VICINITY OF
> SELETAR AIRPORT AT .....(time)"

TABLE GEN 3.5.7 VOLMET SERVICE						
Name of station	*CALLSIGN IDENT (EM)*	*Frequency*	*Broadcast period*	*HR of SER*	*Aerodromes included*	*Contents and format of REP and FCST*
1	2	3	4	5	6	7
SINGAPORE	SINGAPORE VOLMET	D-VOLMET	as required	H24	SINGAPORE KUALA LUMPUR SOEKARNO-HATTA SINGAPORE KUALA LUMPUR SUBANG AIRPORT SOEKARNO-HATTA KUCHING BRUNEI KOTA KINABALU DEN PASAR PENANG SINGAPORE KUALA lUMPUR SOEKARNO-HATTA	SIGMET SIGMET SIGMET METAR METAR METAR METAR METAR METAR METAR METAR METAR TAF TAF TAF
	Data Link VOLMET (D-VOLMET) service available H24. AP Ident WSSS. Messages comply with ARINC 623 standards.					

8 SIGMET SERVICE

TABLE GEN 3.5.8 SIGMET SERVICE						
Name of MWO/ location indicators	*Hours of Operation*	*FIR or CTA served*	*Type of SIGMET / validity*	*Specific procedures*	*ATS unit served*	*Additional Information*
1	2	3	4	5	6	7
SINGAPORE	H24	Singapore FIR	SIGMET / 4-6HR	Nil	Singapore ACC	Nil

8.1 General

8.1.1 For the safety of air traffic, the Meteorological Authority maintains an area meteorological watch and warning service. This service consists partly of a continuous weather watch within the lower and upper FIR and issuance of appropriate information (SIGMET) by Meteorological Watch Office and partly of the issuing of warnings for Changi Airport.

8.2 Area Meteorological Watch Service

← 8.2.1 The area meteorological watch service is performed by the Meteorological Service Singapore.

← 8.2.2 The Meteorological Service Singapore issues information in the form of SIGMET messages about the occurrence or expected occurrence of one or several of the following significant meteorological phenomena:

- thunderstorms *
- severe turbulence
- severe icing
- severe mountain waves
- heavy sand storm/dust storm
- volcanic ash cloud
- tropical cyclone

* Area of widespread cumulonimbus clouds or cumulonimbus along a line (squall line) with little or no space between individual clouds, or cumulonimbus embedded in cloud layers or obscured by haze.

8.2.3 The SIGMETs are issued in abbreviated plain language using ICAO abbreviations and are respectively numbered consecutively for each day commencing at 0001. Their period of validity is generally not more than 4 hours and less than 6 hours from the time of transmission.

← 8.2.4 SIGMETs issued by the Meteorological Service Singapore are transmitted to adjacent MWOs in accordance with regional air navigation agreements and inserted in the MET page of LORADS (Long Range Radar and Display System) for use by the Singapore Air Traffic Control Centre.

8.3 Warning Service

← 8.3.1 Aerodrome warnings for Changi Airport are issued by Meteorological Service Singapore if one or several of the following phenomena are expected to occur at the airport:

- squall
- thunderstorm
- hail
- tornado
- horizontal visibility and/or RVR of 800 metres or less
- mean surface wind speed of 25 knots or more
- wind gusts of 35 knots or more
- cloud of BKN or OVC amount with base 500 ft or less

8.3.2 The warnings are:

- for the protection of parked and moored aircraft,
- for the protection of equipment at the airport, and
- for the safety of arriving and departing aircraft.

8.3.3 The warnings are issued in English and are distributed in accordance with a distribution list which has to be agreed upon locally. In order to guarantee rapid dissemination of the warnings, the distribution list to be used shall, as far as possible, contain only one recipient for an interested group; this recipient will be responsible for the further dissemination of the warning within the group.

8.3.4 SIGMET is disseminated by directed transmissions to aircraft through general calls by the Area Control Centre, Singapore for Singapore FIR.

ENR 1 GENERAL RULES AND PROCEDURES

ENR 1.1 GENERAL RULES

1 INTRODUCTION

1.1 Aircraft in flight or operating on the manoeuvring area of an aerodrome shall comply with the general flight rules applicable to the operation of aircraft (Annex 2). Additionally, aircraft in flight shall comply with the instrument flight rules (IFR) or the visual flight rules (VFR). An aircraft operating between the hours of sunset and sunrise, irrespective of weather conditions shall comply with IFR requirements or, if in a control zone during these hours, shall require special authorisation from ATC. Aircraft operating in controlled airspace shall comply with any instruction, clearance or request issued by ATC, or shall immediately advise ATC if unable to comply. Aircraft operating on ATS routes are to maintain track centreline.

2 FLIGHTS ON AIRWAYS (AREA CONTROL)

2.1 INTRODUCTION

2.1.1 Areas of responsibility for the control of flights on airways and the units providing this service are shown in subsection ENR 2.1.

2.1.2 Separation is based on:

a. Estimated and actual times over position reporting points;
b. Reports of visual sighting; and
c. Radar identification.

← *Note:* As position reports are most commonly used it is important for estimates to be revised and notified to the ACC if more than 2 minutes in error.

2.1.3 To preserve standard vertical separation from aircraft operating above and below controlled airspace in the Singapore/Johor Airspace Complex, aircraft shall not be flown within 500ft of the upper and lower limits. Similarly, an encroachment on the horizontal limits of these airspaces should be avoided because of the proximity of restricted and danger areas.

2.2 COMMUNICATIONS AND RADIO NAVIGATION REQUIREMENTS

2.2.1 All aircraft operating under IFR or VFR within controlled airspaces shall be equipped with appropriate communications and navigation equipment enabling them:

a. To maintain two-way communication with the appropriate ATC unit. The minimum requirement is VHF RTF equipment suitable for communicating on ATC frequencies and HF RTF beyond the range of VHF.
b. To maintain track within the lateral limits of the airway and to navigate in accordance with ATC instructions. The minimum requirement is one radio compass.

2.2.2 The pilot-in-command shall maintain a continuous listening watch on the appropriate air/ground frequency.

2.3 AIR TRAFFIC CONTROL CLEARANCE

2.3.1 An air traffic control clearance is an authorisation by ATC for an aircraft to proceed under specified traffic conditions within controlled airspaces. If for any reason an air traffic control clearance is not acceptable to the pilot-in-command, he may request an alternative clearance.

2.3.2 The pilot-in-command shall obtain an air traffic control clearance prior to operating in a controlled airspace.

2.3.3 An air traffic control clearance will contain the following items:

a. Aircraft identification;
b. Clearance limit and route instruction;
c. Level assignment;
d. Departure instruction when necessary;
e. Approach instruction when necessary;
f. Clearance expiry time when necessary; and
g. Any special instructions and information.

2.3.4 **Request for Amended Clearance**. If the amended clearance is requested at a time a position report is made, the information contained in that report shall be given on the assumption that the aircraft is proceeding in accordance with the current clearance, and not with that which is being requested.

2.3.5 The contents of an air traffic control clearance or any revisions thereto shall apply only to those portions of the flight conducted within controlled airspaces.

2.3.6 An air traffic control clearance may be issued direct to an aircraft by an ACC or through an aerodrome control unit or an air/ground HF RTF communications unit.

2.3.7 Phrases used in air traffic clearances will have the following meanings:

a. “Clearance expires at ..... (time)”.
If the aircraft is not airborne by the time stated, a fresh clearance shall be obtained.

b. “Depart not before ..... (time)”.
An aircraft will not be cleared for departure until the time specified.

c. “Unable to approve ..... (flight planned level)’.
When ATC is unable to approve the flight planned level, an alternative level will be offered whenever possible, to avoid or reduce delay.

2.3.8 A pilot-in-command operating under VFR in controlled airspaces shall not enter instrument meteorological conditions without first obtaining an ATC clearance in accordance with the procedure laid down for flights joining airways. Until such clearance is received, the aircraft must remain in VMC.

2.3.9 Where a flight plan specifies IFR for the first portion of a flight and VFR for the latter portion, the aircraft will normally be cleared to the point where IFR terminates. (Clearance is not necessary beyond that point unless within the Singapore-Johor Airspace Complex and CTR).

2.3.10 If an ATC clearance stipulates VFR climb or descent and it becomes evident to the pilot-in-command that VMC cannot be maintained, he shall hold in VMC and request an alternative clearance.

2.3.11 The pilot-in-command having acknowledged an air traffic control clearance shall not deviate from the provisions of the clearance unless an amended clearance has been obtained.

2.3.12 Subsection ENR 1.6 provides guidance to pilot-in-command compelled to deviate from the provisions of an air traffic control clearance because of communications failure.

2.3.13 A flight shall normally be cleared to the aerodrome of first intended landing and the point of leaving controlled airspace or, in the case of a flight where prior co-ordination with an adjacent unit cannot be established, the FIR boundary. This is known as the clearance limit.

2.3.14 An aircraft which has been cleared to an intermediate point en-route to await further ATC clearance will whenever possible, be issued the required ATC clearance at least 5 minutes before the aircraft arrives at the clearance limit, unless the pilot is instructed to hold over the intermediate holding point until a specified time.

Name Lateral limits Upper limit/Lower limit Class of airspace	*Unit providing service*	*Call sign Languages Area and conditions of use Hr of ser*	*Frequency /Purpose*	*Remarks*
1	2	3	4	5
SINGAPORE /JOHOR AIRSPACE COMPLEX All controlled airspace within 022600N 1025605E 022600N 1043400E 004300N 1043400E 004300N 1025605E. *FL250 2 000ft ALT	SINGAPORE ACC	SINGAPORE RADAR English H24	Primary 123.7 MHz 133.8 MHz Secondary 127.3 MHz	*Upper limit FL450 from HOSBA [34 DME SJ R-079 (24 DME VTK R-103)] Lower limit varies from 2 000ft to 3 500ft ALT.
ALL AIRWAYS WITHIN THE SINGAPORE FIR, KUALA LUMPUR FIR AND ITS TRANSFER AREAS AND KOTA KINABALU FIR (see subsection ENR 3.1)	SINGAPORE ACC	SINGAPORE RADAR English H24	Primary 133.25MHz 123.7 MHz 133.8 MHz Secondary 135.8MHz 127.3 MHz	Airspaces within the Kuala Lumpur FIR under the control of Singapore ACC are depicted in diagrams in AIP pages: ENR 2.1-11 for AWY A464 ENR 2.1-13 for AWY B469
OCEANIC CONTROL AREA WITHIN SINGAPORE FIR (CTA) 011800N 1035330E 011138N 1040740E 011510N 1042610E 011525N 1042950E 010235N 1043405E 002500N 1074200E Equator 1083600E to Equator 1080000E to 005000S 1060000E and thence along the Singapore/Jakarta FIR boundary to intersect the western boundary of G579 drawn on a 7.5° deg tolerance from SJ DVOR/DME FL460 6 000ft ALT	SINGAPORE ACC	SINGAPORE RADAR English H24	134.4MHz (PRI) 128.1MHz (SRY) 255.4MHz	Portion of Airways A464, A576, B469, B470 and G579 are within these lateral limits.

Name *Lateral limits* *Upper limit/Lower limit* *Class of airspace*	*Unit providing service*	*Call sign* *Languages* *Area and conditions of use* *Hr of ser*	*Frequency /Purpose*	*Remarks*
1	2	3	4	5
TANJUNG PINANG TMA 002448N 1043700E follow the circle radius 30NM from TI NDB (0055.0N 10432.0E) anti-clockwise until 010342N 1050018E 005612N 1053200E thence along the circle with radius 60NM from TI NDB (0055.0N 10432.0E) clockwise until 000224N 1050206E 002448N 1043700E 10 000ft 3000 FT **TANJUNG PINANG NORTH CONTROL ZONE (CTR)** 012000N 1041224E 011305N 1042029E 010942N 1043500E thence along the circle radius 27NM from BTM VOR/DME clockwise until 004236N 1041654E 005315N 1040335E 010018N 1035530E 012000N 1041224E 3 000ft GND/MSL **TANJUNG PINANG SOUTH CONTROL ZONE (CTR)** 004236N 1041654E follow the circle radius 27NM from BTM VOR/DME anti-clockwise until 010942N 1043500E 010342N 1050018E thence along the circle radius 30NM from TI NDB clockwise until 002448N 1043700E 004236N 1041654E 6 000ft GND/MSL	TANJUNG PINANG APPROACH CONTROL OFFICE (APP)	TANJUNG PINANG APPROACH English H24	130.2MHz	Tanjung Pinang Approach Control Office (APP) shall be responsible for the provision of Air Traffic Control Service to controlled flights within Tanjung Pinang TMA/CTR. Position Reporting Procedures Aircraft operating within or about to enter Tanjung Pinang CTR shall report position: a. Over Tanjung Pinang TMA boundary. b. Over any other point or time as instructed by ATC. VFR Flights 1. Flight Information and alerting service shall only be provided to VFR flight operating within Tanjung Pinang CTR/TMA on request. VFR flight requesting this service shall report intended action and comply with the position or as required by ATC. 2. No aircraft shall operate under VFR within Tanjung Pinang TMA/CTR until prior authorization has been obtained from Tanjung Pinang Approach. Altimeter Setting Procedures The ICAO Standard Altimeter Setting Procedures shall be used by aircraft operating within Tanjung Pinang CTR: Transition Level: FL130 Transition Altitude: 11 000ft

ENR 4.5 AERONAUTICAL GROUND LIGHTS - ENROUTE

Name Ident (Coordinates)	*Type and Intensity (1,000 Candelas)*	*Characteristics*	*Operating Hours*	*Remarks*
1	2	3	4	5
BEDOK LIGHTHOUSE 011833N 1035558E	Marine 369	FLG W EV 5 SEC	HN	
HORSBURGH LIGHTHOUSE 011949N 1042420E	Marine 266	FLG W EV 10 SEC	HN	
PAYA LEBAR 012100N 1035354E	IBN †	FLG R 'PL' EV 12 SEC	HN + IMC	† 3KW
PULAU PISANG LIGHTHOUSE 012810N 1031521E	Marine 291	FLG W EV 10 SEC	HN	-
RAFFLES LIGHTHOUSE 010936N 1034427E	Marine 240	GP FLG (3) W EV 20 SEC	HN	-
SAKIJANG BEACON 011318N 1035116E	Marine 15.95	FLG W EV 2.5 SEC	HN	-
← SELETAR 012509.94N 1035152.14E	IBN	FLG G 'SL' EV 7 SEC	HN + IMC	-
← SELETAR 012448.00N 1035207.96E	ABN	ALTN FLG W G EV 2.5 SEC	HN + IMC	-
SEMBAWANG 012500N 1034854E	IBN 2.1 #	FLG R 'AG' EV 20 SEC	HN + IMC	# 0.7KW
SINGAPORE CHANGI 012301.27N 1035959.49E	IBN	FLG G 'CH' EV 7 SEC	HN + IMC	-
SINGAPORE CHANGI 012209.20N 1035858.43E	ABN W 10.8 G 2.2	ALTN FLG W G EV 4 SEC	HN + IMC	-
SULTAN SHOAL LIGHTHOUSE 011423N 1033853E	Marine 260	GP FLG (2) W EV 15 SEC	HN	-
TENGAH 012400N 1034254E	IBN	FLG R 'TN'	HN	-

PAGE INTENTIONALLY LEFT BLANK

WSSS AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA

1	*Apron surface and strength*	*RWY 02L/20R* *RWY 02C/20C*	*Surface:* *Strength:*	Concrete PCN 85/R/B/W/U
2	*Taxiway width, surface and strength*	*RWY 02L/20R* *RWY 02C/20C*	*Width:*	Minimum width of 23m for all taxiways
			Surface:	Cement Concrete - Taxiways W1, W9, E1, E3, E11 and EP (between E10 and E11); Bituminous Concrete - All other Taxiways
			Strength:	PCN 85/R/B/W/U - Taxiways W1, W9, E1, E3, E11 and EP (between E10 and E11); PCN 72/F/B/W/U - All other Taxiways
3	*ACL location and elevation*	See AD-2.WSSS-ADC-2/Chart (flip side) for coordinates and elevations of aircraft stands.		
4	*INS checkpoints*			
5	*Remarks*	NIL		

WSSS AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	*Use of aircraft stand ID signs, TWY guidelines and visual docking/parking guidance system of aircraft stands.*
	Taxiing guidance signs at all intersections with TWY and RWY at all holding positions. Guidelines at apron. Nose-in guidance at aircraft stands. For information on Safegate Aircraft Docking Guidance System, Taxiing Guidance System at Singapore Changi Airport, refer to WSSS AD 2.9. Aircraft stand manoeuvring guidance lights are provided at aircraft stands at Terminal 3, Terminal 4 and South Aprons.
2	*RWY and TWY markings and LGT*
	RWY 02L/02C and RWY 20C RWY LGT: refer to WSSS AD 2.14 and WSSS AD 2.15. TWY LGT: Blue LGT on TWY curved edges, selected straight TWY edge sections and apron TWY edges only. Blue TWY edge markers along selected straight TWY edge sections. Red stop bar at TWY INT controllable on/off. Red stop bar LGT at TWY HLDG PSN entrances to RWY are controllable on/off and are supplemented with elevated RWY guard LGT at the sides. Internally/externally lighted mandatory or information TWY signboards. Yellow TWY centre line markings, supplemented by green centre line LGT with selective control along rapid exit TWY, taxi-routes to and from main RWY and aprons. MARKING AIDS: THR, touchdown zone, centre line, side stripe, RWY designations, aiming point markings, TWY centre line, taxi holding positions - all taxiways, apron guide lines. For positions of aircraft nosewheel in relation to stopbar and description of the Safegate Aircraft Docking Guidance System - refer to WSSS AD 2.9.
	RWY 20R RWY LGT: refer to WSSS AD 2.14 and WSSS AD 2.15. TWY LGT: same as for RWY 02L/02C and RWY 20C. MARKING AIDS: Pre-threshold centre-line, transverse stripe for displaced THR, RWY designations, THR, touchdown zone, aiming point marking, RWY centre-line and stripe marking aids.
3	*Stop bars:* Stop bars where appropriate.
4	*Remarks:* Where Red stop bar is not present at the TWY INT, Yellow INTERMEDIATE HLDG PSN LGT will be used at TWY INT and switched on between sunset and sunrise or during periods of poor visibility.

WSSS AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

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

WSSS AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations RWY NR	TRUE BRG	Dimensions of RWY	Strength (PCN) and surface of RWY and SWY	THR coordinates (THR Geoid Undulation)	THR elevation and highest elevation of TDZ of precision APCH RWY
1	2	3	4	5	6
02L	023.02°	4000 M x 60 M	72/F/B/W/U Grooved Bituminous concrete	012056.27N 1035838.82E (10.24 M)	6.66 M 6.23 M
20R (Threshold displaced by 740m southwards)	203.02°	4000 M x 60 M	72/F/B/W/U Grooved Bituminous concrete	012233.95N 1035920.06E (10.25 M)	4.01 M 4.31 M
02C	023.03°	4000 M x 60 M	72/F/B/W/U Bituminous concrete	011943.51N 1035905.86E (10.27 M)	4.22 M 4.52 M
20C	203.03°	4000 M x 60 M	72/F/B/W/U Bituminous concrete	012143.37N 1035956.46E (10.30 M)	4.48 M 4.56 M

Slope of RWY-SWY Transverse / Longitudinal	SWY Dimensions (m)	CWY Dimensions (m)	STRIP dimensions (m)	OFZ	Remarks
7	8	9	10	11	12
RWY 02L 1.10 / 0.07%	60 X 60	270 X 150	4240 X 300	Yes	Scheduled closure of runways (see below)
RWY 20R 1.10 / 0.07%	60 X 60	270 X 150	4240 X 300		
RWY 02C 1.33 / 0.01%	60 X 60	60 X 150	4240 X 300		
RWY 20C 1.33 / 0.01%	60 X 60	60 X 150	4240 X 300		

Remarks (continued from above)	
Scheduled Closure of RWY 02L/20R	
1a)	BTN 1630-2200 on every MON and THU of the month (*preventive maintenance work*). In the event of an emergency, RWY will be re-opened within 30 minutes.
1b)	BTN 0225-0240 0630-0635 1000-1005 2300-2305 daily (*inspection*). In the event of an emergency, RWY will be re-opened within 5 minutes.
Scheduled Closure of RWY 02C/20C	
2a)	BTN 1630-2200 every SUN and WED (*preventive maintenance work*). In the event of an emergency, RWY will be re-opened within 30 minutes.
2b)	BTN 0300-0315 0650-0655 1020-1025 2320-2325 daily (*inspection*). In the event of emergency, RWY will be re-opened within 5 minutes.

AD-2-WSSS-IAC-1 to AD-2-WSSS-IAC-11 and the Precision Approach Terrain Charts for RWY 02L and RWY 20C at AD-2-WSSS-PATC-1 and AD-2-WSSS-PATC-2 respectively.

1.4 Initiation of Category II ILS Operations

1.4.1 Preparations will be made to implement LVP for Category II ILS operations at Singapore Changi Airport during prolonged period of low visibility, except during thunderstorms, when the RVR drops below 800 metres.

1.4.2 Availability of the Category II ILS approaches will be made known through NOTAM and ATIS broadcasts as well as air traffic control radio communications.

1.4.3 During LVP operations, aircraft will not be cleared for Category II ILS approach if any of the ILS or approach/runway lights fall below Category II requirements. Aircraft will not be cleared for landing if the Touchdown Zone RVR is unserviceable.

1.5 ILS Sensitive Areas

1.5.1 Upon landing, pilots shall report to Changi Tower once the aircraft has cleared the runway and has passed the ILS sensitive areas demarcated by alternate yellow and green lights along the centrelines of Rapid Exit Taxiways and Cross Taxiways.

1.6 Termination of LVP for Category II ILS Operations

1.6.1 LVP for Category II ILS operations will be terminated when RVR has improved above 800 metres. Termination of LVP for Category II ILS operations will be made known through NOTAM and ATIS broadcasts as well as air traffic control radio communications.

1.7 Operations of flights Not Authorised for Category II ILS Operations

1.7.1 During Category II ILS operations, if the RVR is 550 metres or above, flights not authorised for Category II ILS operations may continue to make approaches and land. Airlines planning to operate flights not authorised for Category II ILS operations into Changi shall monitor the METAR to ascertain the RVR values when launching their flights and be prepared to divert if the RVR is below 550 metres.

2 RUNWAY UTILISATION

2.1 Runway-in-use

2.1.1 The runway-in-use (Departure/Arrival) is selected by Aerodrome Control as the optimum for general purposes and to maximise runway utilisation. If the assigned runway is unsuitable for a particular operation, the pilot can obtain permission from ATC to use another runway but should anticipate delay.

2.2 Departures

2.2.1 Pilots should arrange their taxi such that they are ready to depart without delay on reaching the runway holding point. As standard ICAO wake turbulence separation is being applied, pilots are to advise ATC early if more time is needed for the aircraft to be ready for departure. When informed, ATC will be able to make changes in the departure sequence, if necessary, to minimise delays to other succeeding departures.

2.2.2 Pilots should complete cockpit checks prior to line-up for departure and keep any checks on the runway to a minimum.

2.2.3 Conditional line-up clearance may be used by ATC to facilitate an expeditious flow of traffic. On receipt of line-up clearance, pilots should taxi into position promptly without delay. Unless given instructions to line-up and wait, pilots should be ready and prepared to depart without stopping. On receipt of take-off clearance, pilots to commence take-off roll without delay.

2.3 Clearance for Immediate Take-Off

2.3.1 A pilot receiving the ATC instruction ‘cleared for immediate take-off’ is required to act as follows:

a. if waiting clear of the runway, taxi immediately on to it and begin take-off run immediately without stopping the aircraft;
b. if already lined-up on the runway, take-off without delay;
c. if unable to comply with the instruction, inform ATC immediately.

2.4 Arrivals - Minimum Runway Occupancy Time (ROT)

2.4.1 Arriving aircraft upon landing are reminded that it is imperative to vacate the runway as quickly as practicable to enable ATC to apply minimum spacing on final approach and minimise the occurrence of “go-arounds”.

2.4.2 To achieve minimum ROT and reduce missed approaches due to occupied runway, pilots should vacate the runway via the first available exit taxiway corresponding to operational requirements, or as instructed by ATC. If an exit taxiway other than the first available exit taxiway is required, pilots shall advise the Tower Controller on first contact.

2.4.3 To enhance planning, pilots can make reference to the Landing Exit Distance (LED), the distance from threshold to the furthest edge of the exit taxiway:

RWY	Exit Taxiway (LED in metres)	Remarks
20R	**W6*** (**1655**), **W7*** (**2123**) and W8 (3061)	Note 1: Recommended exit taxiways are bold and underlined. Note 2: * Indicates Rapid Exit Taxiway (RET) and maximum design ground speed for the exit taxiway is 50kts.
20C	**E6*** (**1948**), **E7*** (**2391**) and E8 (3152)	
02L	**W5*** (**1966**), **W4*** (**2491**) and W3* (2876)	
02C	**E5*** (**2055**), **E4*** (**2565**) and E3* (3267)	

2.4.4 Pilots can expect initial taxi instructions from the Runway Controller before clearing the exit taxiway. Aircraft vacating the runway-in-use should not stop on the exit taxiway until the entire aircraft has passed the runway holding point.

2.4.5 BTN 0830-1030 daily estimated delays of about 15 minutes can be expected for arrivals into Singapore Changi Airport.

2.5 Reduced Runway Separation Minima

2.5.1 Reduced Runway Separation Minima may be applied between a departing aircraft and a succeeding landing aircraft or between two successive landing aircraft on the same runway provided the following conditions exist:

a. During the hours of daylight from 30 minutes after local sunrise to 30 minutes before local sunset;

b. Visibility of at least 5km;

c. Cloud ceiling shall not be lower than 1,000ft;

d. Tailwind component shall not exceed 5 knots;

e. The second aircraft will be able to see the first aircraft clearly and continuously until the first aircraft is clear of the runway;

f. Traffic information shall be provided to the flight crew of the succeeding aircraft concerned;

g. The braking action shall not be adversely affected by runway contaminants such as water;

h. Wake turbulence separation minima shall be applied; and

i. Responsibility for ensuring adequate separation between the two aircraft rests with the pilot of the second aircraft.

2.5.2 When reduced Runway Separation Minima is applied, the successive landing aircraft may be given a clearance to land before the first aircraft has cleared the runway-in-use after landing or crossed the runway end on departure provided there is reasonable assurance that the following separation distances will exist when the landing aircraft crosses the runway threshold:

	Landing following Landing	Landing following Departure
RWY 02L/20R	The preceding aircraft has landed and has passed a point at least 2500m from the threshold of runway (abeam TWY W4 for RWY 02L or TWY V7 for RWY 20R), is in motion and will vacate the runway without backtracking.	The departing aircraft is/will be airborne and has passed a point at least 2500m from the threshold of the runway (abeam TWY W4 for RWY 02L or TWY V7 for RWY 20R).
RWY 02C/20C	The preceding aircraft has landed and has passed a point at least 2500m from the threshold of the runway (abeam TWY E4 for RWY 02C or TWY E7 for RWY 20C), is in motion and will vacate the runway without backtracking.	The departing aircraft is/will be airborne and has passed a point at least 2500m from the threshold of the runway (abeam TWY E4 for RWY 02C or TWY E7 for RWY 20C).

← *2.6 Phraseology*
←

2.6.1 When issuing a landing clearance following the application of these procedures, ATC will issue the second aircraft with the following instructions:

← **".... (call sign) .... after the landing / departing .... (Aircraft Type) Runway .....(Designator) cleared to land".**

3 AIRPORT COLLABORATIVE DECISION MAKING (A-CDM) MODE OF OPERATIONS

3.1 A-CDM aims to optimise airport operations by having an efficient turnaround process and improving the predictability of operational events. It also helps to improve gate management, flight punctuality, reduce apron taxiway and holding point congestion which is beneficial to all airport partners. A-CDM involves sharing of accurate and timely operational information amongst airport partners through different airport systems and improving work processes by implementing a set of operational procedures.

3.2 The A-CDM procedures apply to all scheduled flights departing Singapore Changi Airport except for VVIP, CASEVAC, SAR and aircraft on special tasks. ATC shall have full discretion in conduct of such operations.

3.3 Definition of commonly used terms in A-CDM

a. Target Off Block Time (TOBT) – The time an aircraft operator (AO) or ground handling agent (GHA) estimates that an aircraft will be ready, all doors closed, boarding bridge removed, pushback vehicle available and ready to start-up / pushback immediately upon receipt of clearance from ATC.
b. Target Start Up Approval Time (TSAT) – The time provided by ATC that an aircraft can expect start-up / push back approval.
c. Calculated Take Off Time (CTOT) – A time calculated as a result of tactical slot allocation, at which a flight is expected to become airborne.

4 A-CDM PRE-DEPARTURE PROCEDURES

4.1 Singapore Changi Airport's A-CDM portal will automatically calculate a system TOBT for each departure flight taking into account the estimated or actual in-block time (EIBT / AIBT), minimum turnaround time (MTT) and scheduled time of departure (STD)

4.2 If the calculated TOBT (EIBT / AIBT + MTT) is earlier than STD, the system will take the STD as TOBT.

4.3 If the calculated TOBT (EIBT / AIBT + MTT) is later than STD, the amount of turnaround delay that system predicts is equal to TOBT – STD.

4.4 AO are required to assess the system generated TOBT at 40 minutes prior to departure and update it if the prediction of departure readiness is different. Thereafter, TOBT needs to be monitored and updated constantly if it is expected to differ by 5 minutes or more until the flight commences pushback. AO can consider delegating the responsibility of TOBT submission to their ground handling agent (GHA) subject to prior internal arrangements between AO and GHA.

4.5 TOBT shall be updated through the following systems:

a. Airport Operations Centre System (AOCS) A-CDM web based portal; or
b. Gate Message Input Display (GMID) at boarding rooms;

4.6 AO/GHA is encouraged to update TOBT through ONLY one of the above systems in order to avoid any chance of a miscommunication.

4.7 TOBT information is available through the following channels:

a. AOCS A-CDM portal;
b. GMID;
c. Aircraft Docking Guidance System (ADGS) at contact stands;
d. Radio communication with GHA or AO.

4.8 The Pre-Departure Sequencer (PDS) will calculate the TSAT automatically by taking into account factors such as TOBT, calculated take-off time (CTOT), variable taxi times (VTT), wake turbulence category, departure separation, etc. A pre-departure sequence is determined from the calculated TSATs, thus the accuracy of TOBT is vital to an optimal TSAT.

4.9 Flights with an invalid or expired TOBT will be instructed by ATC to update TOBT when requesting for clearance. For non-compliant flights, delays can be expected. AO or GHA are strongly encouraged to update TOBT as soon as any expected delay to the aircraft readiness for pushback is made available to avoid unnecessary hold-ups.

4.10 TSAT information is available through the following channels:

a. AOCS A-CDM portal;
b. GMID;
c. ADGS at contact stands;
d. Radio communication with GHA or AO;
e. ATC - Upon issuance of ATC clearance (for flights parked at aircraft stands without ADGS).

5 A-CDM START-UP PROCEDURES

5.1 Pilot shall ensure aircraft is ready for pushback at TOBT.

5.2 Pilot to maintain communication with the AO / GHA as they are responsible for updating the TOBT. Notify the AO / GHA to update the TOBT if it is expected to differ by 5 minutes or more.

5.3 Pilot utilising the DCL service on selected routes shall request for ATC clearance through 'Request for Departure Clearance Downlink' (RCD) message no earlier than 20 minutes before TOBT. Refer to WSSS AD 2.22 paragraph 8.4 on the applicable routes for DCL service and procedures.

5.4 Pilot using voice request to contact Ground Movement Planner (Clearance Delivery) and request for ATC clearance within 5 minutes of TOBT using the following phraseology:

- Callsign
- Destination
- Proposed flight level and alternate level, if any
- Parking position

a. Pilot shall only request for ATC clearance provided aircraft is ready to pushback at TOBT.

5.5 Regardless of clearance through voice or datalink, all departing aircraft must report to Clearance Delivery when ready for push within 5 minutes of TOBT.

5.6 ATC will advise the pilot whether the proposed flight level or other alternate flight level is available and an ATC clearance will be issued accordingly. If pre-departure coordination with an adjacent unit or centre is required, the pilot will be instructed to standby.

5.7 ATC will update TSAT changes if any, during issuance of ATC clearances. Note that TSAT displayed on ADGS may not be final and can be revised due to en-route clearance restrictions, ground congestion or flow measures.

5.8 Pilot shall request for pushback from Ground Movement Control within 5 minutes of TSAT after obtaining ATC clearance, or as directed by ATC.

a. ATC may swap pushback sequence based on real-time readiness of aircrafts to maximise apron and runway capacity and reduce the overall delay to traffic as and when required.
b. At the end of pushback, the departing aircraft must have all engines started and be ready to taxi immediately, unless otherwise instructed by ATC.

Note: The first aircraft to taxi may not necessarily be the first aircraft to take-off as distances between aircraft stands and the departure runway vary.

5.9 If a flight is unable to pushback by TSAT + 5 minutes due to the aircraft being unready, ATC clearance and TSAT will be cancelled. Pilot must notify the AO / GHA to update the TOBT for a new TSAT before requesting for a new ATC clearance. This also applies to aircraft returning back to blocks after pushback.

a. ATC will inform the aircraft when a clearance is cancelled using the phraseology; "(Callsign of aircraft) your ATC clearance and TSAT is cancelled (reason). Update TOBT before requesting for new clearance".
b. Flight may also have its ATC clearance cancelled if it develops a technical problem after pushback and is unable to taxi for prolonged duration.

5.10 Non-compliance of initial TSAT may result in an aircraft losing its existing position in the pre- departure sequence. Delay can be expected as a result of re-sequencing based on new TOBT input.

5.11 If delay in pushback is due to ground traffic movement or ATC clearance restrictions, the ATC clearance and TSAT will remain valid even if it exceeds TSAT + 5 minutes. TOBT need not be updated for such situations.

5.12 In the event that A-CDM mode of operations need to be cancelled due to any reason, the termination will be communicated to relevant parties through email by the airport operator and a NOTAM will be issued by ATC. Pilot shall follow the non-CDM procedures detailed in para 13.

17.3 The taxiway routes to be used by aircraft after landing or when taxiing for departure will be specified by ATC. The issuance by ATC of a taxi route to an aircraft does not relieve the pilot-in-command of the responsibility to maintain separation with other aircraft on the manoeuvring area or to comply with ATC directions intended to regulate aircraft on the manoeuvring area. **Pilots are also advised of the possibility of misjudging the clearance between the aircraft wing tips and other obstacles, especially in areas of hot-spots or during low-light / poor visibility conditions.**

17.4 Pilots are reminded to always use minimum power when starting engines, when manoeuvring within the apron area or when manoeuvring from apron taxiways to other parts of the aerodrome. It is especially critical when commencing to taxi that break-away thrusts are kept to an absolute minimum and then be reduced to idle thrusts as soon as possible.

18 TAKE-OFF AND LANDING

18.1 Departing aircraft will normally be directed by ATC to use the full length of the runway for take-off. On obtaining an ATC clearance the aircraft shall enter the runway via designated taxiways:

RWY 02C - TWY E10 or E11

RWY 02L - TWY W8, W9 or W10

RWY 20C - TWY E1, E2

RWY 20R - TWY W1, W2

18.2 The pilot-in-command shall not take-off or land without a clearance from Aerodrome Control.

18.3 The pilot-in-command shall not run-up on the runway in use unless authorised by Aerodrome Control. Engine run-ups in the holding pan or taxiway holding point clear of the runway in use may be carried out subject to approval by Aerodrome Control.

18.4 After landing, the pilot-in-command shall vacate the runway by the shortest suitable route and to contact Singapore Ground Movement Control who will issue specific taxi route instructions to its assigned aircraft stand.

18.5 Aircraft with radio communication failure shall vacate the runway and stop on the taxiway and watch for light signals from Aerodrome Control.

19 STANDARD INSTRUMENT DEPARTURE (SID) AND STANDARD INSTRUMENT ARRIVAL (STAR)

19.1 INTRODUCTION

19.1.1 The SIDs and STARs for Singapore Changi Airport require aircraft to be GNSS-equipped and approved with navigation systems that meet the ICAO RNAV-1 navigation specification in accordance to the ICAO Performance Based Navigation Manual (Doc 9613).

19.1.2 To avoid proliferation of SIDs and STARs, the basic RNAV SIDs and STARs follow similar tracks as the RNAV-1 (GNSS) SIDs and STARs using the same set of SIDs and STARs identification.

19.1.3 Operators / pilots who are not approved to operate on the RNAV-1 (GNSS) SIDs and STARs shall notify ATC and operate on the alternate basic RNAV SIDs and STARs or expect radar vectors from ATC.

19.2 ARRIVALS

19.2.1 Arriving aircraft from the various ATS routes shall plan for the respective RNAV-1 STARs with the associated flight planning requirement as shown below:

ATS Route	RNAV-1 STAR	Remarks and Flight Planning Requirement
A464 (southbound to Singapore)	ARAMA	Default STAR shall be ARAMA. When traffic permits and WSSS Runway 20 is in use, ATC will offer LELIB STAR.
A576 (southbound to Singapore)	Not applicable	Southbound flight landing at WSSS are not permitted to flight plan via A576.
G579	REPOV	NIL
G580	KARTO	NIL
L504	OBDOS	NIL
L642	ELALO	ESPOB Q801 Q802 ELALO
L762	ASUNA	NIL
M635	SURGA	NIL
M646	KARTO	NIL
M751 / B469	Not applicable	M751 VPK B469 90 DME PU PIBAP PASPU. After PASPU, expect radar vectors.
M753	ELALO	IPRIX Q802 ELALO
M767	KARTO	NIL
M774	OBDOS	NIL
M904	ELALO	UPRON Q803 ELALO
N891	ELALO	N891 ENREP direct ELALO
N892	MABAL	NIL
R469	ASUNA	NIL
Note: The LEBAR STAR serves as a transition option to the STARs listed above. This is to facilitate arrivals joining downwind to the west of Singapore Changi Airport. ATC may clear arrivals to join the LEBAR STAR when air traffic permits.		

19.2.2 All RNAV-1 (GNSS) STARs terminate at the initial approach fix (IAF). Arrivals can expect radar vectors to intercept the localizer for an ILS approach to the respective runways.

19.3 DEPARTURES

19.3.1 All departing aircraft will be cleared on the appropriate RNAV-1 (GNSS) SIDs and shall climb initially to 3,000ft.

19.3.2 RNAV-1 (GNSS) SIDs will be assigned to departures from Singapore Changi Airport that flight plan on the following ATS routes:

ATS Route	RNAV-1 SID	Remarks and Flight Planning Requirements
A457	MASBO	NIL
B470	ANITO	NIL
G580 / M646	TOMAN	NIL
L504	BAVUS	NIL
L625 / N884	TOMAN	NIL
L762	ADMIM	NIL
M635	VENIX	NIL

ATS Route	RNAV-1 SID	Remarks and Flight Planning Requirements
M751	MERSING	NIL
M753	MERSING	VMR L642 ENREP M753 Expect radar vectors or further ATC clearance on approaching VMR.
M771	MERSING	VMR DOLOX M771 Expect radar vectors or further ATC clearance on approaching VMR.
M774	KADAR	NIL
N884	Not applicable	Not available for flight planning between VMR and LUSMO. Flight plan via TOMAN L625 LUSMO N884.
N891	MERSING	VMR ENREP N891 Expect radar vectors or further ATC clearance on approaching VMR.
R469	ADMIM	NIL
Y339	AROSO	Flight planning permitted for flights departing from or overflying Singapore to destinations north of Kuala Lumpur and Subang Airports. For flights operating at FL220 and below, to flight plan on A457.

19.4 VERTICAL AND SPEED RESTRICTIONS

19.4.1 Pilots shall comply with an ATC assigned level. Pilots shall also adhere to the vertical and speed restrictions depicted on the SIDs and STARs. ATC clearance will take precedence when the ATC clearance does not allow the pilots to adhere to the vertical and speed restrictions depicted on the SIDs and STARs.

19.5 OPERATORS' PROCEDURES

19.5.1 The operator shall ensure that in-flight procedures, crew manuals and training programmes are established in accordance with RNAV-1 (GNSS) navigation requirements.

19.5.2 Pilots shall inform ATC when on-board equipment does not meet the RNAV-1 (GNSS) navigation requirements. Pilots can then expect radar vector from ATC.

20 COORDINATES OF SID/STAR WAYPOINTS (WGS84 DATUM)

Name	Latitude	Longitude	Radius/Distance from VTK	Radius/DIstance from SJ
ABVIP	010008N	1035032E	VTK R-203.5/ D27.0	SJ R-183.5 / D13.2
ADMIM	005733N	1033033E	VTK R-228.4/ D41.2	SJ R-232.8 / D26.1
AGROT	010108N	1035808E	VTK R-187.7 / D24.0	SJ R-150.8 / D14.0
AGVAR	014719N	1034145E	VTK R-318.8 / D29.8	SJ R-344.3 / D35.3
AKMET	015355N	1034339E	VTK R-328.6 / D34.0	SJ R-349.3 / D41.3
AKOMA	014522N	1035443E	VTK R-342.0 / D21.4	SJ R-006.2 / D32.0
ALFA	013033N	1034942E	VTK R-295.7 / D12.9	SJ R-354.8 / D17.2
ANITO	001700S	1045200E	VTK R-153.4 / D113.4	SJ R-146.0 / D108.6
ARAMA	013654N	1030712E	VTK R-282.4 / D55.5	SJ R-298.0 / D50.0
AROSO	020846N	1032421E	VTK R-319.9 / D57.4	SJ R-334.0/ D61.7
ASUNA	005948N	1030954E	VTK R-244.1 / D57.3	SJ R-252.0 / D43.6
ATKAX	000512N	1065946E	VTK R-113.9 / D195.5	SJ R-109.7 / D200.6
ATRUM	013256N	1040057E	VTK R-357.3 / D8.0	SJ R-026.1 / D21.8
BAVUS	000000N	1090000E	VTK R-105.9 / D310.5	SJ R-103.4 / D317.3
BETBA	013302N	1035331E	VTK R-316.1/ D11.3	SJ R-006.3 / D19.8
BIBVI	024336N	1040618E	VTK R-003.5 / D78.4	SJ R-009.6 / D91.1
BIDUS	013554N	1035755E	VTK R-326.0 / D13.2	SJ R-006.9 / D22.6
BIPOP	013122N	1041018E	VTK R-054.5 / D11.0	SJ R-046.8 / D26.2
BOBAG	010230N	1032954E	VTK R-234.7 / D38.6	SJ R-243.2 / D24.0
BOKIP	010421N	1034353E	VTK R-220.5 / D27.0	SJ R-219.5 / D11.6
BTM	010813N	1040758E	VTK R-158.2 / D17.9	SJ R-107.0 / D17.5
DIVSA	011105N	1040303E	VTK R-172.9 / D13.9	SJ R-100.8 / D11.9
DOGRA	010525N	1041423E	VTK R-146.2 / D23.5	SJ R-108.9 / D24.4
DOKTA	012606N	1041040E	VTK R-083.0 / D9.4	SJ R-057.0 / D23.2
DONDI	011252N	1035855E	VTK R-191.3/ D12.3	SJ R-093.4 / D7.6

Name	Latitude	Longitude	Radius/Distance from VTK	Radius/DIstance from SJ
DOSNO	004757N	1041409E	VTK R-160.8 / D39.0	SJ R-137.8 / D34.1
DOSPA	011459N	1040441E	VTK R-161.4 / D10.5	SJ R-082.9 / D13.5
DOVAN	011938N	1041249E	VTK R-114.6 / D12.7	SJ R-073.9 / D22.5
ELALO	041240N	1043329E	VTK R-010.6 / D169.9	SJ R-013.4 / D183.3
HOSBA	011948N	1042418E	VTK R-102.5 / D23.6	SJ R-079.0 / D33.7
IBIVA	011351N	1035637E	VTK R-203.1/ D12.0	SJ R-084.3 / D5.3
IBIXU	011621N	1035740E	VTK R-203.2 / D9.3	SJ R-064.4 / D7.0
IBULA	005036N	1043600E	VTK R-134.5 / D48.7	SJ R-116.8 / D50.2
IGNON	010847N	1041257E	VTK R-144.1 / D19.8	SJ R-101.8 / D22.2
IKAGO	003816N	1052931E	VTK R-117.7 / D99.8	SJ R-109.5 / D104.4
IKIMA	004314N	1045500E	VTK R-127.6 / D67.9	SJ R-115.1 / D70.5
JB (JAYBEE)	013000N	1034242E	VTK R-285.1 / D19.3	SJ R-332.6 / D18.6
KADAR	000647S	1074342E	VTK R-112.4 / D240.5	SJ R-109.0/ D245.8
KANLA	034556N	1043606E	VTK R-013.8 / D144.5	SJ R-016.5 / D158.3
KARTO	011124N	1053343E	VTK R-098.3 / D93.5	SJ R-091.1 / D102.6
KEXAS	011019N	1044818E	VTK R-107.2 / D49.2	SJ R-093.0 / D57.2
KILOT	030217N	1044023E	VTK R-022.0 / D104.5	SJ R-024.4 / D119.0
LAVAX	010950N	1042714E	VTK R-120.1 / D30.0	SJ R-095.5 / D36.2
LEDOX	011642N	1035651E	VTK R-208.6 / D9.4	SJ R-058.5 / D6.5
LELIB	012729N	1032450E	VTK R-274.0 / D36.6	SJ R-298.0 / D30.0
LETGO	011411N	1035548E	VTK R-207.3 / D12.1	SJ R-079.1 / D4.6
MABAL	032826N	1051236E	VTK R-030.1 / D142.1	SJ R-031.2 / D157.2
MASBO	020248N	1025251E	VTK R-299.0 / D78.3	SJ R-310.2 / D76.6
MIBEL	012351N	1020816E	VTK R-269.5 / D113.2	SJ R-275.8 / D103.7
NYLON	013657N	1040624E	VTK R-023.0 / D13.0	SJ R-032.9 / D30.0
OBDOS	002503N	1065551E	VTK R-108.9 / D184.5	SJ R-104.7 / D190.7
PALGA	011059N	1034759E	VTK R-223.8 / D19.3	SJ R-235.1 / D4.1
PAMSI	010459N	1034845E	VTK R-212.3 / D23.6	SJ R-197.2 / D8.7
PASPU	015915N	1040618E	VTK R-008.3 / D34.5	SJ R-018.3 / D48.1
PIBAP	023023N	1040618E	VTK R-004.4 / D65.3	SJ R-011.1 / D78.1
POSUB	012725N	1040748E	VTK R-069.0 / D6.9	SJ R-049.8 / D21.7
PU	012524N	1035600E	VTK R-275.2 / D5.4	SJ R-021.1 / D13.0
REMES	004342N	1035735E	VTK R-185.2 / D41.2	SJ R-167.9 / D30.2
REPOV	001623N	1040300E	VTK R-178.6 / D68.2	SJ R-168.3 / D57.9
RUVIK	011422N	1042033E	VTK R-118.8 / D21.9	SJ R-088.0 / D29.2
RWY 02C DER	012152N	1040000E	VTK R-203.5 / D3.3	SJ R-046.0 / D12.2
RWY 02L DER	012305N	1035933E	VTK R-224.1 / D2.5	SJ R-040.6 / D12.8
RWY 20C DER	011935N	1035902E	VTK R-203.3 / D5.8	SJ R-051.5 / D10.0
RWY 20R DER	012047N	1035835E	VTK R-213.7 / D4.9	SJ R-044.8 / D10.4
SABKA	015051N	1031713E	VTK R-300.4/ D51.2	SJ R-317.7 / D50.7
SAMKO	010530N	1035255E	VTK R-203.5 / D21.1	SJ R-168.0 / D8.0
SANAT	010749N	1035930E	VTK R-186.1 / D17.1	SJ R-123.7 / D9.9
SJ (SINJON)	011319N	1035120E	-	-
SURGA	003657S	1063119E	VTK R-129.1 / D193.3	SJ R-124.6 / D194.3
TOKIM	012933N	1040315E	VTK R-022.7 / D5.0	SJ R-036.7 / D20.1
TOMAN	012147N	1054717E	VTK R-091.7 / D106.2	SJ R-085.9 / D116.5
TOPOM	012955N	1040227E	VTK R-012.8 / D5.1	SJ R-034.2 / D20.0
VENIX	002156S	1060521E	VTK R-130.6 / D163.5	SJ R-125.3 / D164.3
VENPA	002141N	1044955E	VTK R-142.3 / D79.6	SJ R-131.2 / D78.1
VMR	022318N	1035218E	VTK R-351.2 / D58.8	SJ R-000.9 / D69.6
VTK (TEKONG)	012455N	1040120E	-	-

AERODROME CHART - ICAO

01° 21' 33"N
103°59' 22"E

AERODROME ELEVATION 6.66m

		RAMP TWR	
TWR	118.6 / 118.25	GND	122.55 (GMC 4 EAST)
GND	124.3 / 121.85 / 121.725		125.65 (GMC 4 WEST)
DELIVERY	121.65		

SINGAPORE/SINGAPORE CHANGI

PAPI 3° (MEHT)*

Pilot's eye height over the threshold when the following PAPI lights come into view.	RUNWAY 02L	20R	02C	20C
2 White lights and 2 red lights	20.0m	20.0m	19.8m	19.8m
3 White lights and 1 red light	24.0m	22.6m	23.7m	23.7m
4 White lights	26.4m	25.0m	26.2m	26.2m

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

RWY	DIRECTION	THR	GEOID UNDULATION	BEARING STRENGTH
02L	023°	01 20 56.27N 103 58 38.82E	10.24m	PCN 72/F/B/W/U
20R (DISP THR)	203°	01 22 33.95N 103 59 20.06E	10.25m	
02C	023°	01 19 43.51N 103 59 05.86E	10.27m	
20C	203°	01 21 43.37N 103 59 56.46E	10.30m	

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

ANNUAL CHANGE NEGLIGIBLE
VAR 26E (2015)

ELEVATIONS AND DIMENSIONS IN METRES

TAXIWAYS 30m WIDE

NOTE :
SEE FLIP SIDE FOR DETAILS OF
I) INS COORDINATES FOR AIRCRAFT STANDS AND PRE-FLIGHT ALTIMETER CHECK LOCATIONS.
II) RESTRICTIONS ON TAXIWAYS.

LEGEND

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

Metres 100 0 100 200 300 400 500 600 700 800 900 1000 Metres

Changes : New Multiple Aircraft Receiving Stands C17L and C17R at Terminal 1 added.
Diversion of fence near Tanah Merah Country Club and realignment of Tanah Merah Coast Road.

INS COORDINATES FOR AIRCRAFT STANDS AND PRE-FLIGHT ALTIMETER CHECK LOCATIONS

LOCATION	STAND NR	NORTH LAT	EAST LONG	ELEVATION
T3 SOUTH APRON	A1	01 21 21.52	103 59 06.25	4.75m (15.58ft)
	A2	01 21 21.75	103 59 04.00	4.65m (15.26ft)
	A3	01 21 19.86	103 59 02.79	4.66m (15.29ft)
	A4	01 21 17.61	103 59 02.54	4.79m (15.72ft)
	A5	01 21 15.50	103 59 03.62	4.86m (15.94ft)
	A9	01 21 12.56	103 59 03.65	5.02m (16.47ft)
	A10	01 21 10.34	103 59 02.40	5.04m (16.54ft)
	A11	01 21 07.93	103 59 01.41	5.25m (17.22ft)
	A12	01 21 05.76	103 59 00.49	5.38m (17.65ft)
	A13	01 21 03.59	103 58 59.58	5.48m (17.98ft)
	A14	01 21 01.66	103 58 57.59	5.57m (18.27ft)
	A15	01 21 00.77	103 58 55.41	5.46m (17.91ft)
	A16	01 20 59.27	103 58 54.20	5.51m (18.08ft)
	A17	01 20 57.25	103 58 54.06	5.23m (17.16ft)
	A18	01 20 55.87	103 58 55.25	5.37m (17.62ft)
	A19	01 20 55.26	103 58 57.13	5.40m (17.72ft)
	A20	01 20 56.09	103 58 58.83	5.45m (17.88ft)
	A21	01 20 57.10	103 59 00.80	5.49m (18.01ft)
T3 NORTH APRON	B1	01 21 26.86	103 59 08.37	4.82m (15.81ft)
	B2	01 21 28.18	103 59 06.82	4.68m (15.35ft)
	B3	01 21 30.33	103 59 07.30	4.65m (15.26ft)
	B4	01 21 32.03	103 59 08.60	4.75m (15.58ft)
	B5	01 21 32.98	103 59 10.89	4.80m (15.75ft)
	B6	01 21 35.15	103 59 13.16	4.96m (16.27ft)
	B7	01 21 37.65	103 59 13.93	4.97m (16.31ft)
	B8	01 21 39.94	103 59 15.20	5.09m (16.70ft)
	B9	01 21 42.19	103 59 16.16	5.13m (16.83ft)
	B10	01 21 44.47	103 59 17.12	5.10m (16.73ft)
T1 WEST APRON	C1	01 21 46.75	103 59 18.08	5.09m (16.70ft)
	C20	01 21 48.83	103 59 19.23	5.08m (16.67ft)
	C22	01 21 51.00	103 59 20.13	5.15m (16.90ft)
	C23	01 21 53.56	103 59 20.77	5.08m (16.67ft)
	C24	01 21 56.54	103 59 20.97	4.89m (16.04ft)
	C25	01 21 59.12	103 59 20.59	4.99m (16.37ft)
	C26	01 22 01.48	103 59 20.76	5.01m (16.44ft)
T1 CENTRAL APRON	C11	01 21 47.42	103 59 23.82	5.07m (16.63ft)
	C13	01 21 49.64	103 59 24.75	5.05m (16.57ft)
	C15	01 21 51.90	103 59 25.71	5.05m (16.57ft)
	C16	01 21 53.47	103 59 26.62	4.86m (15.94ft)
	C17	01 21 55.50	103 59 26.20	5.01m (16.44ft)
	C17L	01 21 54.75	103 59 26.22	4.96m (16.27ft)
	C17R	01 21 56.01	103 59 25.68	5.12m (16.80ft)
	C18	01 21 57.86	103 59 25.75	4.99m (16.37ft)
	C19	01 21 59.79	103 59 25.63	4.95m (16.24ft)
	D30	01 21 44.54	103 59 30.14	5.09m (16.70ft)
	D32	01 21 46.73	103 59 31.07	5.08m (16.67ft)
	D34	01 21 49.03	103 59 32.04	5.07m (16.63ft)
	D35	01 21 50.87	103 59 32.82	5.02m (16.47ft)
	D36	01 21 51.98	103 59 34.52	5.06m (16.60ft)
	D37	01 21 53.37	103 59 36.28	4.97m (16.31ft)
	D38	01 21 54.58	103 59 37.77	4.99m (16.37ft)
T1 EAST APRON	D40	01 21 38.13	103 59 32.89	5.11m (16.77ft)
	D40L	01 21 37.38	103 59 32.83	5.09m (16.70ft)
	D40R	01 21 38.77	103 59 32.84	5.13m (16.83ft)
	D41	01 21 40.30	103 59 33.81	5.07m (16.63ft)
	D42	01 21 42.77	103 59 34.58	5.15m (16.89ft)
	D42L	01 21 42.00	103 59 34.47	5.12m (16.79ft)
	D42R	01 21 43.45	103 59 34.44	5.21m (17.09ft)
	D44	01 21 44.97	103 59 35.44	5.14m (16.86ft)
	D46	01 21 47.40	103 59 36.72	5.08m (16.67ft)
	D47	01 21 49.19	103 59 38.89	4.93m (16.17ft)
	D48	01 21 50.60	103 59 40.77	4.97m (16.31ft)
	D49	01 21 52.23	103 59 42.35	4.98m (16.34ft)
T2 NORTH APRON	E8	01 21 27.99	103 59 38.45	4.68m (15.35ft)
	E10	01 21 24.15	103 59 32.67	4.71m (15.45ft)
	E11	01 21 25.57	103 59 34.37	4.78m (15.68ft)
	E12	01 21 27.20	103 59 36.42	4.75m (15.58ft)
	E20	01 21 24.36	103 59 27.08	5.04m (16.54ft)
	E22	01 21 26.64	103 59 28.04	5.07m (16.63ft)
	E24	01 21 29.01	103 59 29.06	5.09m (16.70ft)
	E24L	01 21 28.32	103 59 28.77	5.10m (16.73ft)
	E24R	01 21 29.53	103 59 29.28	5.08m (16.67ft)
	E26	01 21 31.19	103 59 29.96	5.08m (16.67ft)
	E27	01 21 33.56	103 59 30.96	5.07m (16.62ft)
	E27L	01 21 32.79	103 59 30.86	5.03m (16.48ft)
	E27R	01 21 34.20	103 59 30.91	5.12m (16.80ft)
	E28	01 21 35.74	103 59 31.89	5.08m (16.67ft)

INS COORDINATES FOR AIRCRAFT STANDS AND PRE-FLIGHT ALTIMETER CHECK LOCATIONS

LOCATION	STAND NR	NORTH LAT	EAST LONG	ELEVATION
T2 CENTRAL APRON	E1	01 21 20.02	103 59 25.58	4.91m (16.11ft)
	E2	01 21 19.28	103 59 27.30	4.90m (16.08ft)
	E3	01 21 18.44	103 59 29.27	4.82m (15.81ft)
	E4	01 21 18.10	103 59 31.70	4.80m (15.75ft)
	E5	01 21 19.56	103 59 33.72	4.90m (16.08ft)
	E6	01 21 21.22	103 59 35.93	4.84m (15.88ft)
	E7	01 21 22.48	103 59 37.46	4.73m (15.52ft)
	F30	01 21 14.71	103 59 23.33	4.92m (16.14ft)
	F31	01 21 13.87	103 59 25.30	4.91m(16.11ft)
	F32	01 21 13.03	103 59 27.26	4.85m (15.91ft)
	F33	01 21 11.30	103 59 28.54	4.91m (16.11ft)
	F34	01 21 08.98	103 59 28.96	4.92m (16.14ft)
	F35	01 21 06.60	103 59 29.55	4.91m (16,11ft)
	F35L	01 21 06.06	103 59 30.13	4.74m (15.55ft)
	F35R	01 21 06.96	103 59 29.05	5.04m (16.54ft)
	F36	01 21 04.34	103 59 29.67	4.82m (15.81ft)
T2 SOUTH APRON	F37	01 20 59.83	103 59 27.87	4.75m (15.58ft)
	F40	01 21 05.62	103 59 25.34	4.85m (15.91ft)
	F41	01 21 03.19	103 59 25.58	4.82m (15.81ft)
	F42	01 21 00.61	103 59 25.96	4.72m (15.49ft)
	F50	01 21 10.69	103 59 21.32	5.03m (16.50ft)
	F52	01 21 08.51	103 59 20.40	5.11m (16.77ft)
	F52L	01 21 07.82	103 59 20.11	5.16m (16.93ft)
	F52R	01 21 09.04	103 59 20.62	5.08m (16.67ft)
	F54	01 21 06.14	103 59 19.40	5.22m (17.13ft)
	F56	01 21 03.96	103 59 18.48	5.30m (17.39ft)
	F56L	01 21 03.27	103 59 18.18	5.42m (17.78ft)
	F56R	01 21 04.49	103 59 18.70	5.34m (17.52ft)
	F58	01 21 01.58	103 59 17.47	5.49m (18.01ft)
	F59	01 20 59.41	103 59 16.55	5.64m (18.50ft)
	F59L	01 20 58.72	103 59 16.26	5.67m (18.60ft)
	F59R	01 20 59.93	103 59 16.78	5.60m (18.37ft)
	F60	01 20 56.91	103 59 15.50	5.77m (18.93ft)
EAST REMOTE APRON	200	01 20 47.83	103 59 11.67	6.23m (20.44ft)
	200L	01 20 46.91	103 59 11.92	6.29m (20.64ft)
	200R	01 20 48.35	103 59 11.89	6.18m (20.28ft)
	201	01 20 49.99	103 59 12.62	5.96m (19.55ft)
	202	01 20 52.34	103 59 13.57	5.94m (19.49ft)
	202L	01 20 51.65	103 59 13.28	5.76m (18.90ft)
	202R	01 20 52.87	103 59 13.79	5.73m (18.80ft)
	203	01 20 54.52	103 59 14.47	5.92m (19.42ft)
SOUTH-EAST REMOTE APRON	205	01 20 43.91	103 59 17.06	4.77m (15.65ft)
	206	01 20 46.08	103 59 17.98	4.76m (15.62ft)
	207	01 20 47.91	103 59 18.88	4.74m (15.55ft)
	208	01 20 49.48	103 59 19.54	4.74m (15.55ft)
	209	01 20 51.06	103 59 20.21	4.75m (15.58ft)
NORTH REMOTE APRON	300	01 22 06.95	103 59 22.67	4.53m (14.86ft)
	301	01 22 06.41	103 59 24.69	4.93m (16.17ft)
	302	01 22 05.21	103 59 26.75	4.97m (16.31ft)
	303	01 22 03.55	103 59 31.40	5.32m (17.45ft)
	304	01 22 02.84	103 59 33.06	5.35m (17.55ft)
	305	01 22 02.14	103 59 34.71	5.30m (17.39ft)
	306	01 22 01.41	103 59 36.42	5.16m (16.93ft)
	307	01 21 59.39	103 59 40.36	5.16m (16.93ft)
	308	01 21 58.96	103 59 41.35	5.10m (16.73ft)
	309	01 21 58.52	103 59 43.17	5.06m (16.60ft)
	310	01 21 57.42	103 59 44.96	4.74m (15.55ft)
NORTH-EAST REMOTE APRON	400	01 21 38.71	103 59 40.14	4.31m (14.14ft)
	401	01 21 40.98	103 59 41.10	4.31m (14.14ft)
	402	01 21 42.85	103 59 41.89	4.30m (14.11ft)
	403	01 21 44.37	103 59 42.53	4.29m (14.07ft)
	404	01 21 45.45	103 59 42.98	4.20m (13.78ft)
WEST CARGO APRON	502	01 22 22.23	103 59 31.62	4.35m (14.27ft)
	503	01 22 24.98	103 59 32.78	4.29m (14.07ft)
	504	01 22 27.26	103 59 33.74	4.29m (14.07ft)
	505	01 22 29.54	103 59 34.70	4.32m (14.17ft)
	506	01 22 31.81	103 59 35.66	4.38m (14.37ft)
	507	01 22 34.11	103 59 36.64	4.36m (14.30ft)
	508	01 22 36.41	103 59 37.61	4.29m (14.07ft)
	509	01 22 39.12	103 59 38.76	4.09m (13.42ft)
	510	01 22 41.37	103 59 40.18	4.19m (13.75ft)
	511	01 22 43.54	103 59 41.09	4.22m (13.85ft)
	512	01 22 45.71	103 59 42.01	4.24m (13.91ft)
	513	01 22 47.89	103 59 42.92	4.26m (13.98ft)
	514	01 22 50.19	103 59 43.54	4.36m (14.30ft)
	515	01 22 52.90	103 59 43.20	4.09m (13.43ft)
	516	01 22 55.39	103 59 43.97	4.04m (13.26ft)
	516L	01 22 56.24	103 59 43.80	3.96m (12.98ft)
	516R	01 22 54.93	103 59 43.25	3.95m (12.97ft)
	517	01 22 58.02	103 59 45.08	4.05m (13.27ft)
	517L	01 22 58.83	103 59 44.99	3.98m (13.05ft)
	517R	01 22 57.55	103 59 44.35	3.96m (12.98ft)

INS COORDINATES FOR AIRCRAFT STANDS AND PRE-FLIGHT ALTIMETER CHECK LOCATIONS

LOCATION	STAND NR	NORTH LAT	EAST LONG	ELEVATION
EAST CARGO APRON	600	01 22 14.12	103 59 48.10	4.25m (13.94ft)
	600L	01 22 13.28	103 59 48.27	4.22m (13.83ft)
	600R	01 22 14.58	103 59 48.81	4.15m (13.60ft)
	601	01 22 16.52	103 59 49.27	4.27m (14.01ft)
	602	01 22 18.80	103 59 50.23	4.30m (14.11ft)
	603	01 22 21.15	103 59 51.02	4.29m (14.07ft)
	604	01 22 23.46	103 59 51.99	4.31m (14.14ft)
	605	01 22 25.19	103 59 52.75	4.27m (14.01ft)
EAST SERVICE APRON	606	01 22 10.00	103 59 52.53	2.43m (7.97ft)
	609	01 22 12.95	103 59 55.04	2.91m (9.55ft)
ACEHUB	611	01 22 22.14	104 00 02.87	4.01m (13.16ft)
	612	01 22 24.50	104 00 02.87	3.91m (12.83ft)
SOUTH APRON	461	01 20 39.67	103 58 52.75	5.28m (17.32ft)
	462	01 20 40.69	103 58 50.37	5.75m (18.86ft)
	462L	01 20 40.41	103 58 51.02	5.48m (17.98ft)
	462R	01 20 40.97	103 58 49.71	5.71m (18.73ft)
	463	01 20 41.80	103 58 47.76	5.97m (19.59ft)
	463L	01 20 41.52	103 58 48.42	5.82m (19.10ft)
	463R	01 20 42.06	103 58 47.17	5.82m (19.10ft)
	464	01 20 32.33	103 58 49.39	4.98m (16.34ft)
	465	01 20 33.81	103 58 47.20	5.01m (16.44ft)
	466	01 20 34.53	103 58 45.05	5.01m (16.44ft)
	467	01 20 27.32	103 58 45.73	5.01m (16.44ft)
	468	01 20 28.34	103 58 43.34	5.00m (16.41ft)
	469	01 20 29.36	103 58 40.96	5.02m (16.47ft)
	481	01 20 25.27	103 58 32.56	5.22m (17.13ft)
	482	01 20 26.62	103 58 33.13	5.22m (17.13ft)
	483	01 20 27.96	103 58 33.70	5.22m (17.13ft)
	484	01 20 29.31	103 58 34.27	5.22m (17.13ft)
	485	01 20 30.66	103 58 34.84	5.22m (17.13ft)
	486	01 20 32.01	103 58 35.41	5.22m (17.13ft)
	487	01 20 33.36	103 58 35.98	5.22m (17.13ft)
T4 APRON	G1	01 20 07.58	103 59 00.97	3.95m (12.96ft)
	G2	01 20 08.88	103 59 01.52	3.95m (12.96ft)
	G3	01 20 10.18	103 59 02.07	3.95m (12.96ft)
	G4	01 20 11.48	103 59 02.07	3.94m (12.93ft)
	G5	01 20 12.77	103 59 03.17	3.94m (12.93ft)
	G6	01 20 14.49	103 59 03.89	3.93m (12.89ft)
	G7	01 20 15.70	103 59 04.57	3.89m (12.76ft)
	G8	01 20 17.01	103 59 05.12	3.85m (12.63ft)
	G9	01 20 18.31	103 59 05.67	3.85m (12.63ft)
	G10	01 20 19.60	103 59 06.22	3.86m (12.66ft)
	G11	01 20 20.90	103 59 06.77	3.84m (12.60ft)
	G12	01 20 22.20	103 59 07.31	3.83m (12.57ft)
	G13	01 20 23.50	103 59 07.86	3.82m (12.53ft)
	G14	01 20 24.79	103 59 08.41	3.83m (12.57ft)
	G15	01 20 26.09	103 59 08.96	3.88m (12.73ft)
	G16	01 20 27.39	103 59 09.50	4.05m (13.29ft)
	G17	01 20 28.69	103 59 10.05	4.00m (13.12ft)
	G18	01 20 31.53	103 59 11.86	4.36m (14.30ft)
	G18L	01 20 32.05	103 59 12.85	4.34m (14.24ft)
	G18R	01 20 31.65	103 59 11.26	4.43m (14.53ft)
	G19	01 20 32.64	103 59 09.25	4.56m (14.96ft)
	G19L	01 20 33.17	103 59 11.26	4.47m (14.67ft)
	G19R	01 20 32.77	103 59 08.66	4.56m (14.96ft)
	G20	01 20 33.75	103 59 06.65	4.52m (14.83ft)
	G20L	01 20 34.13	103 59 07.58	4.44m (14.57ft)
	G20R	01 20 33.99	103 59 06.10	4.52m (14.83ft)
	G21	01 20 34.87	103 59 04.04	4.51m (14.80ft)
	G21L	01 20 35.24	103 59 04.98	4.52m (14.83ft)
	G21R	01 20 35.10	103 59 03.49	4.55m (14.93ft)

RESTRICTIONS ON TAXIWAYS

1) Pilots are advised to apply minimum thrust when
   i) turning into TWY A1, A3, A4 and Taxilane A5 while taxiing either northwards or southwards on Taxilane A6, and
   ii) thereafter when taxiing along TWY A1 up to and including the TWY A7/A1 junction.
   This is in view of apron activities at aircraft stands D40, D41, D47, D48, D49, E22, E24, E27 and E28.

2) TWY SA can only be used by aircraft with maximum wingspan 65m. TWY SA is a one-way live TWY for aircraft taxiing into SASCO hangar via RWY 02L. Only tow-out operation is allowed from SASCO hangar into TWY SA and RWY 02L.

3) TWY NC3 (between TWY WA and TWY A6) can only be used by aircraft with maximum wingspan 65m.

4) Taxiway centreline along TWY EP between TWY B1 and B3 offset eastward by 2.5m away from aircraft stands E7 and F36.

5) Pilots are advised to apply minimum thrust when turning into taxiway WA from taxilane V6.

6) Taxilane U4 (behind aircraft stands A18 to A21) can only be used by aircraft with maximum wingspan 61m.

7) Taxilane N1 (behind aircraft stands C16 to C19 and between TWY NC2 and TWY NC3), Taxilane N2 and Taxilane N3 (behind aircraft stands D35 to D38 and between TWY NC2 and TWY NC3) can only be used by aircraft with maximum wingspan 65m.

8) Taxilane A6 (behind aircraft stands E20 to E24) and Taxilane C6 (behind aircraft stands F50 to F54) can only be used by aircraft with maximum wingspan 65m (towing and pushback exempted).

9) Taxilane L5 can only be used by aircraft with maximum wingspan 36m.

10) TWY L8, L9 and L10 can only be used by aircraft with maximum wingspan 65m.

11) Pilots are advised to exercise caution when taxiing near Taxilane L5, L8, L9 and L10.

12) Pilots are advised to apply speed limit of 20 knots when taxiing along TWY SOUTH CROSS 1 and SOUTH CROSS 2.

13) Pilots turning aircraft into aircraft stand A2 or aircraft stand B2 are advised to wait for any aircraft holding at Taxilane V6, at the inner cul-de-sac portion of the terminal building to vacate this portion before turning into aircraft stand A2 or aircraft stand B2.

14) TWY M, M4, M5, M6 and M7 are solely for use by Republic of Singapore Air Force (RSAF) aircraft.

15) TWY located western side of RWY 02L/20R, between TWY M5 and TWY M6 is solely for use by Republic of Singapore Air Force (RSAF) aircraft.

RADIO ALTIMETER OPERATIONS AREA

A radio altimeter operating area is established in the pre-threshold area of Runway 02L/20R and Runway 02C/20C. The size of the radio altimeter operating area is 300m length and 120m width.

AIRCRAFT STANDS WITH SAFEGATE AIRCRAFT DOCKING GUIDANCE SYSTEM.

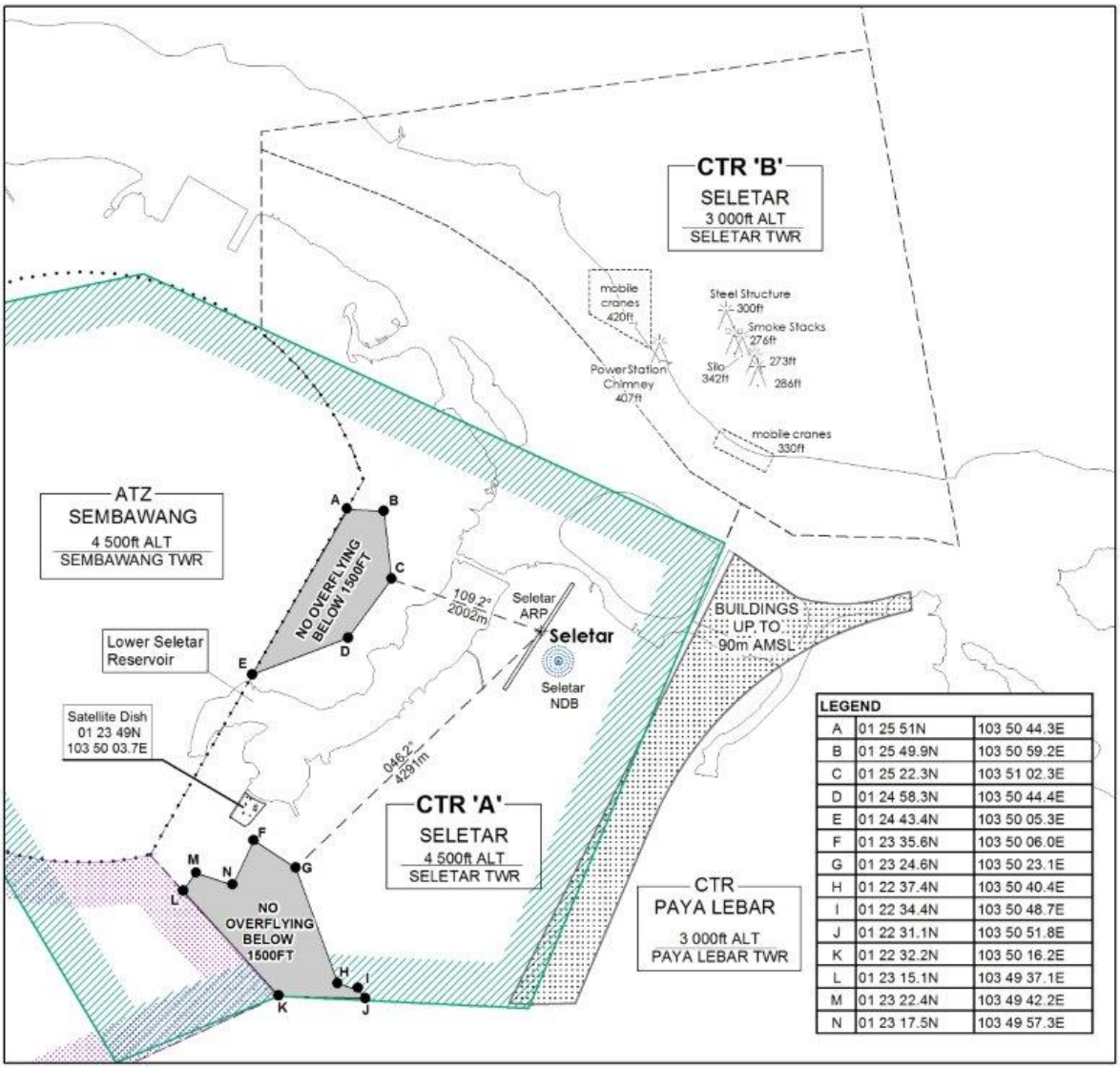
TOTAL AIRCRAFT PARKING POSITIONS : 220

1.2 All aircraft on AWY G579 between SINJON (SJ) and JAYBEE (JB) shall operate at/above 5,000ft.

1.3 Aircraft are restricted from overflying the built-up residential areas around Seletar Airport that are bounded by the following points, at any altitude below 1,500ft (see Charts AD-2-WSSL-VAC-1, AD-2-WSSL-VAC-2, AD-2-WSSL-VAC-3 AND AD-2-WSSL-VAC-4):

POINT	COORDINATES
A	012551.0N 1035044.3E
B	012549.9N 1035059.2E
C	012522.3N 1035102.3E
D	012458.3N 1035044.4E
E	012443.4N 1035005.3E
F	012335.6N 1035006.0E
G	012324.6N 1035023.1E
H	012237.4N 1035040.4E
I	012234.4N 1035048.7E
J	012231.1N 1035051.8E
K	012232.2N 1035016.2E
L	012315.1N 1034937.1E
M	012322.4N 1034942.2E
N	012317.5N 1034957.3E

1.4 The map below shows the location of the satellite dishes as well as the overflight restriction areas west and south of Seletar Control Zone.



←

1.5 Aircraft types which are unable to safely manoeuvre clear of the built-up residential areas are not allowed to operate at Seletar Airport. As a visual reference, pilots may wish to use the satellite dish located south of 012349.0N 1035003.7E (Lower Seletar Reservoir) as a guide when making approaches for Runway 03.

1.6 No engine run up shall be permitted between 1400-2300.

WSSL AD 2.22 FLIGHT PROCEDURES

1 PROCEDURES FOR ARRIVALS INTO SELETAR AERODROME

1.1 Introduction

1.1.1 Aircraft on VFR flight plan, routing via Tebrau City Mall (013259N1034748E) to Seletar shall follow the joining procedures as described in paragraph 1.2 and illustrated in charts AD-2-WSSL-VAC-1, AD-2-WSSL-VAC-2 and AD-2-WSSL-VFR-1.

1.1.2 Aircraft returning from Light Aircraft Training Areas shall follow the joining procedures as described in paragraph 1.3 and illustrated in charts AD-2-WSSL-VAC-1 and AD-2-WSSL-VAC-2.

← 1.1.3 Aircraft on IFR flight plan, routing via JB or KK to Seletar shall be vectored under radar for a visual approach. Seletar Approach shall provide the radar service. When Seletar Approach is closed, Singapore Approach shall provide the service. Unless authorised by ATC, pilots shall follow the joining procedures as described in paragraph 1.4 and 1.5. The joining procedures are illustrated in charts AD-2-WSSL-VAC-3 , AD-2-WSSL-VAC-4, AD-2-WSSL-IFR-1 and AD-2-WSSL-IFR-2.

1.1.4 When within 5km of the aerodrome reference point, aircraft are to fly; at a manoeuvring speed of not more than 170kt unless otherwise authorised by ATC. All aircraft are required to keep well clear of Sembawang ATZ and Paya Lebar CTR.

1.1.5 Circuit traffic already downwind shall have priority. Arriving aircraft shall position and sequence itself accordingly, unless directed otherwise by ATC.

1.1.6 Pilots shall not fly east of the runway. This is due to tall buildings up to 90m (296ft) AMSL to the east of Seletar CTR (the location is depicted in charts 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 Position 'A'.

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:

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.

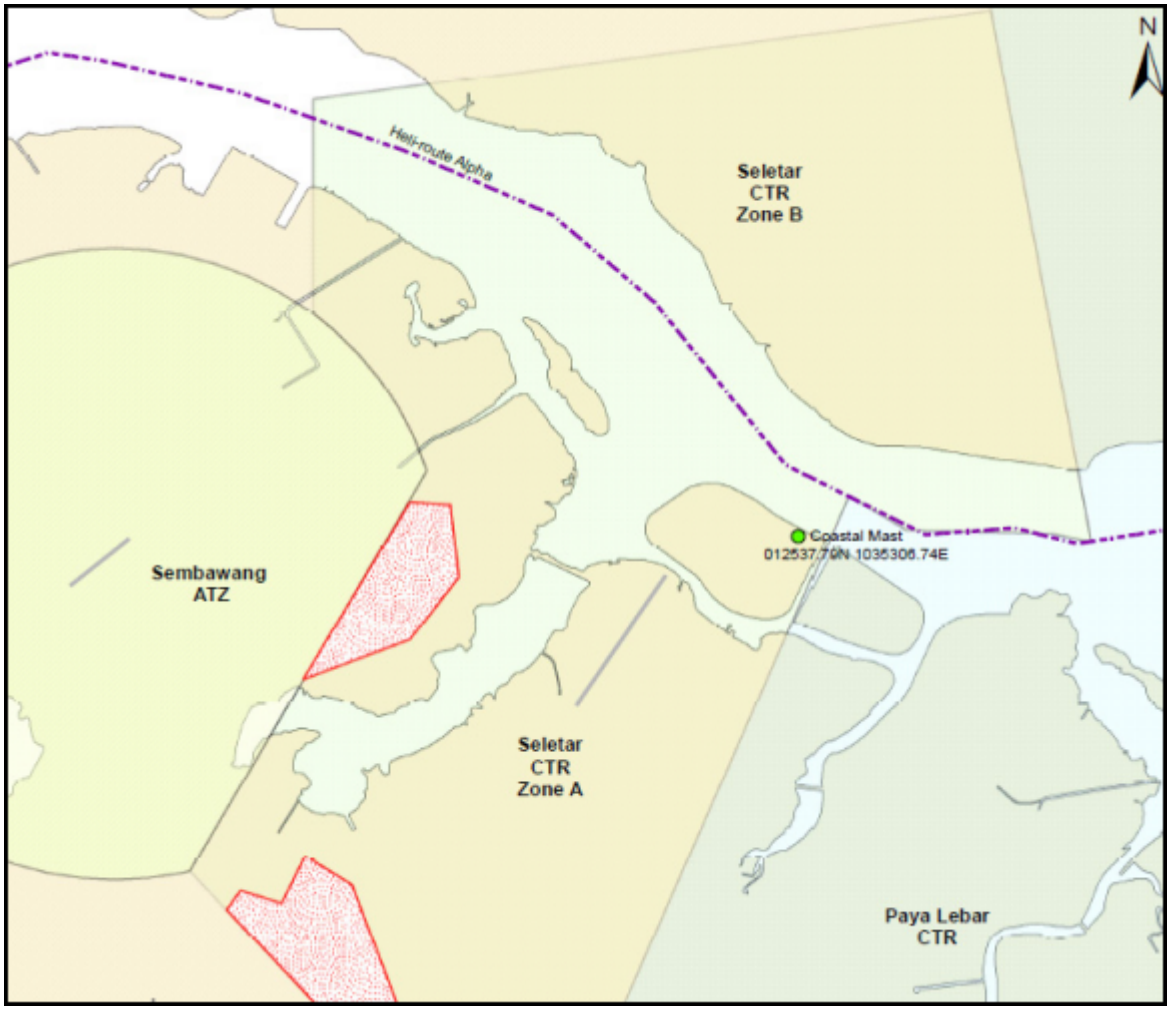
2 HELICOPTER CROSSING SELETAR NORTHERN EXTENDED CENTRELINE

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.



WSSL AD 2.24 CHARTS RELATED TO SELETAR AIRPORT

WSAP AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY Designator	**APCH LGT type LEN INTST**	**THR LGT colour WBAR**	**VASIS (MEHT) PAPI**	**TDZ LGT LEN**	**RWY Centre Line LGT LEN, spacing, colour, INTST**	**RWY edge LGT LEN, spacing colour, INTST**	**RWY END LGT colour WBAR**	**SWY LGT LEN colour**
1	2	3	4	5	6	7	8	9
02/20	Sequenced FLG LGT. Modified Calvert High INTST White LGT with brilliancy control.	Green	PAPI on 3° glide slope	-	NIL	White with Amber	Red	Red

WSAP AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

WDI/Taxiway/Stopway	Lighted
IBN	012120.6N 1035410.0E; Flashing Red 'PL" ; Operating hours HN and IMC

WSAP AD 2.17 ATS AIRSPACE

1	*Designation and Lateral Limits*	**PAYA LEBAR CTR** 011100N 1035134E 013300N 1040149E 013200N 1035344E 012534N 1035454E thence along international BDRY to 012544N 1035320E 012227N 1035158E 012232N 1035016E 012100N 1034654E 012025N 1034539E 011835N 1034459E thence southwards on 180° to 011100N 1034459E and eastwards to join up with 011100N 1035134E.
2	*Vertical Limits*	GND to 3000 FT ALT
3	*Airspace Classification*	D
4	*ATS Unit Call Sign, Language(s)*	PAYA LEBAR TOWER (Singapore APP outside the opr hours of PAYA LEBAR TOWER), English
5	*Transition Altitude*	11000 FT (3,350m)
6	*Remarks*	Northern Transit Corridor: RSAF military aircraft (with the exception of trainer aircraft) using the northern transit corridor will enter the airspace over Johor at or above 5,000ft. RSAF trainer aircraft using the northern corridor will enter the airspace over Johor at or above 2,000ft.

WSAP AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	Call sign	Frequency	Hours of operation	Remarks
APP	SELETAR APPROACH	126.025 MHz	0000 - 1500	NIL
	SINGAPORE APPROACH	120.3 MHz	H24	NIL
	PAYA LEBAR APPROACH	119.9 MHz 298.0 MHz *255.8 MHz #127.7 MHz	BTN 2300-1100 SUN-MON to THU-FRI On SAT-SUN, public holidays and outside the above times PPR from RSAF Headquarters via Paya Lebar Base Command Post.	* for monitoring aircraft operating in Light Aircraft Training Areas. # for monitoring aircraft operating in Light Aircraft Training Areas and Seletar outbound/inbound traffic.
TWR	PAYA LEBAR TOWER	118.05 MHz 263.1 MHz		NIL
GND	PAYA LEBAR GROUND	130.8 MHz 296.0 MHz		
PAR	PAYA LEBAR TALKDOWN	119.9 MHz †269.0 MHz ♦240.5 MHz		† for Talkdown 1,♦for Talkdown 2 Maint Period: BTN 0001-1100 First THU of EV month
SRE	PAYA LEBAR DIRECTOR	283.0 MHz		Maint Period: BTN 0001-1100 Second THU of EV month
Flight Information Service	SINGAPORE RADAR	119.1 MHz	H24	NIL
ACC	SINGAPORE RADAR	P123.7 MHz S127.3 MHz	H24	for AWY B469, G219, G334, R208, L625, L629, L635, L642, M751, M753, M758, M761, M763, M771, N884, N891, N892.
		P133.25 MHz S135.8 MHz		for AWY A457, A464, A576, B466, L762, R325 (all northbound) and R469.
		P134.4 MHz S128.1 MHz 255.4 MHz		for AWY A464, A576, G579, (all southbound), B470, G220, N875 and in area in the immediate vicinity of Singapore.
				Radar Maint Period: Monthly - EV third SAT BTN 1601-2359

WSAP AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of Aid and MAG Variation	IDENT	FREQ	OPR Hour	Position of transmitting Antenna Coordinates	DME transmitting Antenna Elevation / Remarks
TACAN	PLA	CH110X	H24	012224.00N 1035451.00E	030° MAG 2.375km from ARP. Maint Period: BTN 0001-0900 Second SAT of EV month For homing purposes only.
PAPA UNIFORM DVOR/DME	PU	115.1 MHz CH98X	H24	012523.99N 1035559.74E	020° MAG 9km from THR RWY 02 Antenna Hgt: 190ft AMSL. Coverage 200NM. Maint Period: BTN 0200-0600 Third WED of EV month
SINJON DVOR/DME	SJ	113.5 MHz CH82X	H24	011319.28N 1035120.08E	201° MAG 14.5km from THR RWY 02 (Paya Lebar). Antenna HGT: 194ft AMSL Coverage 200NM Maint Period: BTN 0200-0600 Third THU of EV month

Type of Aid and MAG Variation	IDENT	FREQ	OPR Hour	Position of transmitting Antenna Coordinates	DME transmitting Antenna Elevation / Remarks
ILS LLZ RWY 02	IPN	109.3MHz	H24	012246.41N 1035503.64E	LOC 401m from THR RWY 20 along centreline of RWY. Course width 3 DEG. Maint Period: BTN 0001-0900 First SUN of EV month
ILS GP RWY 02	-	332.00MHz	H24	012050.42N 1035410.11E	GP angle 3 DEG.
ILS DME RWY 02	IPN	CH30X	H24	012050.42N 1035410.11E	DME co-located with GP
ILS LLZ RWY 20	IPS	111.5MHz	H24	012027.24N 1035404.48E	LOC 462m from THR RWY 02 along centreline of RWY. Course width 3 deg. Maint Period: BTN 0001-0900 Second SUN of EV month
ILS GP RWY 20	-	332.90MHz	H24	012227.29N 1035451.29E	GP angle 3 deg.
ILS DME RWY 20	IPS	CH52X	H24	012227.29N 1035451.29E	DME co-located with GP

WSAP AD 2.20 LOCAL TRAFFIC REGULATIONS - DESIGNATION OF PAYA LEBAR AIRPORT AS AN ALTERNATE AD FOR SINGAPORE CHANGI AIRPORT

1 INTRODUCTION

1.1 Paya Lebar Airport is designated as an alternate aerodrome to Singapore Changi Airport.

1.2 As Paya Lebar Airport is a joint civil/military aerodrome, its use as a planned alternate aerodrome for Singapore Changi Airport is subjected to certain restrictions and limitations. It also has limited ground, baggage and passenger handling facilities for civilian aircraft operations, such as passenger boarding bridges.

2 MANNING OF PAYA LEBAR AIRPORT

2.1 The airport is open from 2300-1100 on SUN-MON to THU-FRI. It is closed on Saturdays, Sundays and Public Holidays. Outside the stipulated operating hours and during airport closure, Paya Lebar Airport will be opened at 30 minutes' notice to accept diversion flights into the aerodrome.

2.2 Airline operators are requested to inform the Airport Manager and the Duty Tower Controller or SATCC Watch Manager at Singapore Changi Airport as soon as it is known that their service will require the use of Paya Lebar Airport. Revised ETAs and/or ETDs are to be notified as soon as known.

2.3 The airport will hold off all departures and arrivals when the aerodrome visibility falls below 3km, or when the aerodrome prevailing cloud base is lower than 500ft. This is a safety consideration to avoid aircraft from carrying out a missed approach under an adverse weather condition. For maintenance/test flights scheduled to depart and arrive back to the airport, such departures may be held off when the aerodrome visibility falls below 6km, or when the aerodrome prevailing cloud base is lower than 1,000ft.

3 OPERATIONAL SERVICES

3.1 Air-ground-air communications maintained by Paya Lebar Airport for aerodrome/approach control service are listed in page WSAP AD 2-7.

4 PASSENGER CLEARANCE

4.1 All Customs, Health and Immigration clearances will be carried out at Singapore Changi Airport.

4.2 The diverting aircraft Airline's Coordinator and its ground handling agency staff shall be present to provide assistance when an aircraft is required to land at Paya Lebar Airport.

5 SECURITY

5.1 All airline personnel, including ground handlers and support staff who have to proceed to Paya Lebar Airport must wear their Singapore Changi Airport passes at a prominent position for entry to the aircraft parking area. All personnel not in possession of the laminated Singapore Changi Airport pass will be denied entry into Paya

Lebar Airport by the RSAF Security Guard. Entry into the airport by both the airline personnel and service equipment is via the main gate. The Airline Engineering Coordinator shall be responsible for the proper positioning of the ground servicing equipment and vehicles in the Apron Area where arriving aircraft are to be parked.

5.2 The security of civil aircraft parked in the Apron is the responsibility of the aircraft owner and any security service obtained shall first be cleared with the Paya Lebar Airport flight security.

6 AIRCRAFT STAND ALLOCATION

6.1 Nine aircraft parking positions in Apron C and on taxiway fillets are available for civil aircraft. A separation of 40 feet between wing-tips should be maintained.

6.2 Aircraft parking positions will be issued by the Paya Lebar Tower and the Airline Engineering Coordinator shall provide the marshalling services. Close coordination between the Airline Engineering Coordinator and the Tower Controller is essential in regard to aircraft parking and positioning of servicing equipment in and around the parking apron.

7 AIRCRAFT REFUELLING

7.1 ST Airport Services Pte Ltd (STARS) is the assigned aircraft fuelling agency. However, prior arrangement must be made between the airline and STARS for such services. The refuelling rate available is 350 imperial gallons per minute (IGPM).

8 GROUND OPERATIONS

8.1 Singapore Airport Terminal Services (SATS) and DNATA Singapore Pte Ltd (DNATA) will provide all ground services at one hour’s prior notice except engineering services which will be provided by Singapore Airlines.

9 FULL EMERGENCY/CRASH PROCEDURE

9.1 In the event of a Full Emergency being declared on a civil aircraft diverted to Paya Lebar AP, Full Emergency/Crash Procedures applicable to Singapore Changi AP will equally apply to Paya Lebar AP.

9.2 Alerting of all outside organisations such as the Singapore Civil Defence Force, Police, MINDEF and ambulance services shall be carried out by the Singapore Changi AP Tower Controller.

10 METEOROLOGICAL AND AERONAUTICAL INFORMATION SERVICE

10.1 Meteorological service is available 24 hours at the 6th floor of the building where Paya Lebar Air Traffic Control Tower is located.

10.2 Aeronautical Information Service is available at Singapore Changi Airport.

11 ATC SERVICE OUTSIDE STIPULATED OPERATING HOURS

11.1 Radar service will not be available at Paya Lebar Airport outside its stipulated operating hours.

WSAP AD 2.22 FLIGHT AND GROUND PROCEDURES

1 DEPARTURE AND ARRIVAL PROCEDURES

1.1 The designated runway for departures is RWY 02 and for arrivals is RWY 20.

1.2 The airport will hold off all departures and arrivals when the aerodrome visibility falls below 3km, or when the aerodrome prevailing cloud base is lower than 500ft. This is a safety consideration to avoid aircraft from carrying out a missed approach and overflying the populace under an adverse weather condition.

2 STANDARD INSTRUMENT DEPARTURES

← November 1 Departure - Climb to maintain 3,000ft on RWY heading for PU DVOR/DME. At PU DVOR/ DME, turn left heading 010. Contact Seletar APP on 126.025 MHz or as instructed by ATC.

← November 2 Departure - Climb to maintain 3,000ft on RWY heading for PU DVOR/DME. At PU DVOR/ DME, maintain heading 020. Contact Seletar APP on 126.025 MHz or as instructed by ATC.

← November 3 Departure - Climb to maintain 3,000ft on RWY heading for PU DVOR/DME. At PU DVOR/ DME, turn left heading 360. Contact Seletar APP on 126.025 MHz or as instructed by ATC.

3 STANDARD ARRIVALS

When Paya Lebar is VMC - Expect radar vector to RWY 20 for visual straight-in approach.

When Paya Lebar is IMC - Expect radar vector to RWY 20 for ILS or PU DVOR/DME approach.

WSAP AD 2.23 ADDITIONAL INFORMATION

1 OUTDOOR LIGHT AND WATER SHOW

1.1 An outdoor light and water show will take place between 1200-1215, 1300-1315, 1400-1415 Friday to Saturday and 1200-1215, 1300-1315 Sunday to Thursday at 011704N 1035130E (within Paya Lebar Control Zone). GND - UNL.

WSAP AD 2.24 CHARTS RELATED TO PAYA LEBAR AIRPORT

PAGE INTENTIONALLY LEFT BLANK

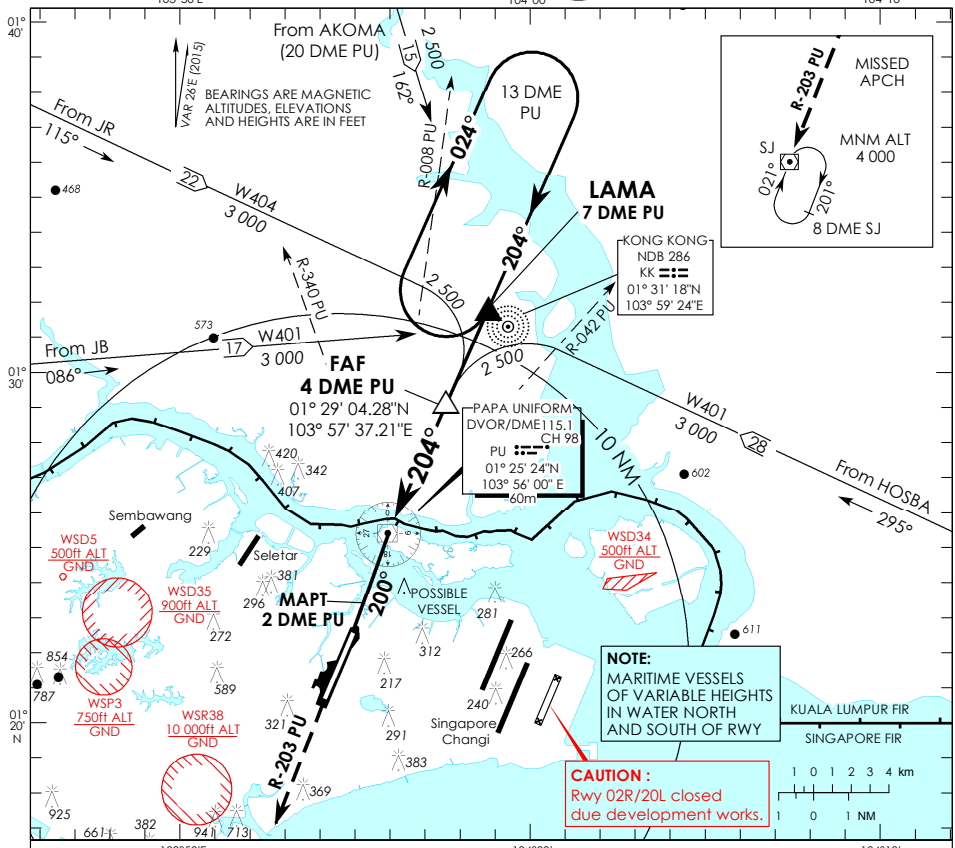
INSTRUMENT APPROACH CHART - ICAO

AERODROME ELEV 65ft
HEIGHT RELATED TO AD ELEV - 65ft

MSA 25 NM from PAPA UNIFORM DVOR
3400' 2900' 2100'

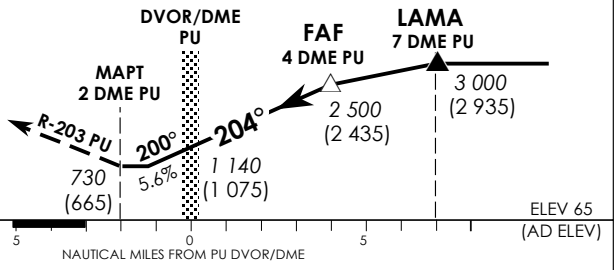
APP	120.3
	119.9
	126.025
TWR	118.05

SINGAPORE/ PAYA LEBAR
PU DVOR/DME RWY 20



Transition Level : FL 130
Transition Alt : 11 000

MISSED APPROACH
Climb to 4 000ft on R-203 PU to SJ DVOR/DME and hold South right turn 021° inbound or AS DIRECTED BY ATC



OCA (OCH)				
Category of Aircraft	A	B	C	D
Straight-in	**730 (665)**			

Distance	3 DME	2 DME	1 DME	PU DVOR/DME	1 DME
Altitude (Height)	**2160 (2095)**	**1820 (1755)**	**1480 (1415)**	**1140 (1075)**	**800 (735)**
Speed	knots	70	120	150	185
FAF - MAPT 6nm	min : s	**5 : 09**	**3 : 00**	**2 : 24**	**1 : 57**
Rate of descent/GS	ft/min	**370**	**635**	**795**	**980**

CHANGES : Seletar Approach frequency 126.025 MHz added.

PAGE INTENTIONALLY LEFT BLANK

INSTRUMENT APPROACH CHART - ICAO

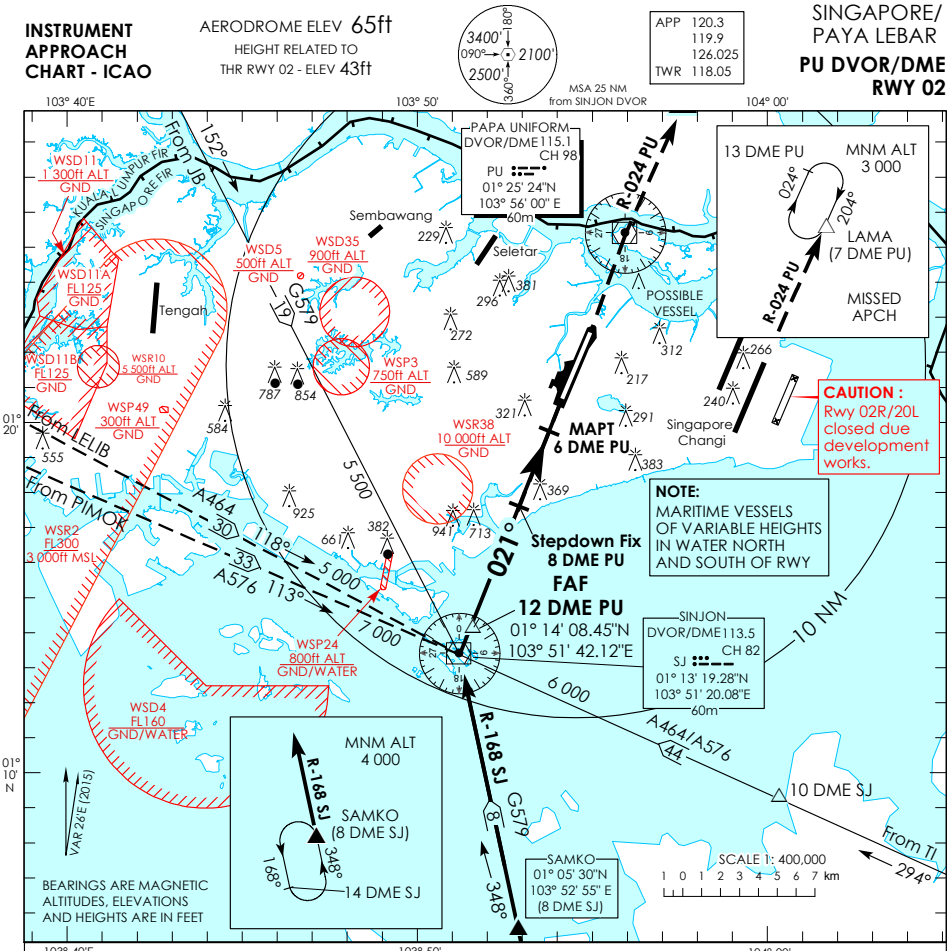
AERODROME ELEV 65ft
HEIGHT RELATED TO
THR RWY 02 - ELEV 43ft

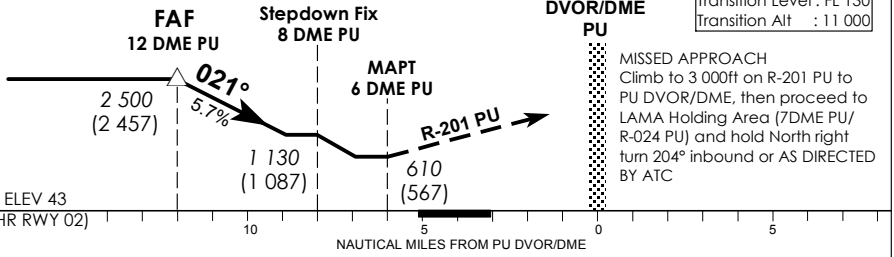
MSA 25 NM from SINJON DVOR
3400' 090°→ 2100' 2500' 180° 360°

APP	120.3
	119.9
	126.025
TWR	118.05

SINGAPORE/ PAYA LEBAR

PU DVOR/DME RWY 02





Transition Level : FL 130
Transition Alt : 11 000

MISSED APPROACH
Climb to 3 000ft on R-201 PU to PU DVOR/DME, then proceed to LAMA Holding Area (7DME PU/ R-024 PU) and hold North right turn 204° inbound or AS DIRECTED BY ATC

OCA (OCH)				
Category of Aircraft	A	B	C	D
Straight-in (with stepdown fix)	**610 (567)**			
Straight-in (without stepdown fix)	**1 130 (1 087)**			

Distance	11 DME	10 DME	9 DME	8 DME	7 DME
Altitude (Height)	**2170 (2127)**	**1820 (1777)**	**1470 (1427)**	**1130 (1087)**	**780 (737)**
Speed	knots	70	120	150	185
FAF - MAPT 6nm	min : s	**5 : 09**	**3 : 00**	**2 : 24**	**1 : 57**
Rate of descent/GS	ft/min	**370**	**635**	**795**	**980**

CHANGES : Seletar Approach frequency 126.025 MHz added.

PAGE INTENTIONALLY LEFT BLANK

INSTRUMENT APPROACH CHART - ICAO

AERODROME ELEV 65ft
HEIGHT RELATED TO THR RWY 20 - 65ft

MSA 25 NM from PAPA UNIFORM DVOR
3400' 2900' 2100' 090° 180° 270°

ATIS Paya Lebar	148.9	
Singapore APP	120.3	
Paya Lebar APP	119.9	298.0
Seletar APP	126.025	
Paya Lebar TWR	118.05	263.1
Ground Control	130.8	296.0

RADAR REQUIRED

SINGAPORE/ PAYA LEBAR

IPS ILS/DME RWY 20

103°50'E 104°00' 104°10'

01° 30' 01° 20' N

VAR 2.6°E (2015)

BEARINGS ARE MAGNETIC
ALTITUDES, ELEVATIONS AND HEIGHTS ARE IN FEET

10 NM

PAPA UNIFORM DVOR/DME 115.1 CH 98
PU
01° 25' 24"N
103° 56' 00" E
60m

203°

RADAR VECTORS
FAP
4.6 DME IPS
01° 26' 38.40"N
103° 56' 42.00"E

Sembawang
Seletar
POSSIBLE VESSEL

WSD5 500ft ALT GND
WSD35 900ft ALT GND
WSD34 500ft ALT GND
WSP3 750ft ALT GND
WSR38 10 000ft ALT GND
WSP24 800ft ALT GND/WATER
WSD4 FL 160 GND/WATER

R-203 PU

LLZ 111.5 IPS

Singapore Changi

CAUTION :
Rwy 02R/20L closed due development works.

KUALA LUMPUR FIR
SINGAPORE FIR

NOTE:
MARITIME VESSELS OF VARIABLE HEIGHTS IN WATER NORTH AND SOUTH OF RWY

MISSED APCH
MNM ALT 2 500
SJ
021°
201°
8 DME SJ

SINJON DVOR/DME 113.5 CH 82
SJ
01° 13' 19.28"N
103° 51' 20.08" E
60m

SCALE 1 : 400,000
1 0 1 2 3 4 5 6 7 8 9 km
1 0 1 2 3 4 5 NM

Transition Level : FL 130
Transition Alt : 11 000

ILS/DME co-located with GP

ILS RDH 55

MISSED APPROACH
Climb to 3 000ft on R-203 PU to SJ DVOR/DME and hold South right turn 021° inbound or AS DIRECTED BY ATC

MAPT (GP INOP) 1 DME IPS

Stepdown Fix (GP INOP) 3 DME IPS

FAP 4.6 DME IPS

GP 3°

1 500 (1 435)

1 140 (1 075)

476(411)

ELEV 65 (AD ELEV)

6 5 4 3 2 1 0 1 2 3 4 4.6
NAUTICAL MILES FROM DME IPS

OCA (OCH)					
Category of Aircraft		A	B	C	D
Straight-in	CAT I ILS	**194 (129)**	**204 (139)**	**214 (149)**	**224 (159)**
	GP INOP	**476 (411)**			

Distance	4 DME	3 DME	2 DME
Altitude (Height)	**1300 (1235)**	**1140 (1075)**	**820 (755)**

Speed	knots	70	120	150	185
FAF - MAPT 3.6nm	min : s	**3 : 06**	**1 : 48**	**1 : 27**	**1 : 11**
Rate of descent/GS	ft/min	**370**	**635**	**795**	**980**

CHANGES : Seletar Approach frequency 126.025 MHz added.

PAGE INTENTIONALLY LEFT BLANK

INSTRUMENT APPROACH CHART - ICAO

AERODROME ELEV 65ft
HEIGHT RELATED TO
THR RWY 02 - ELEV 43ft

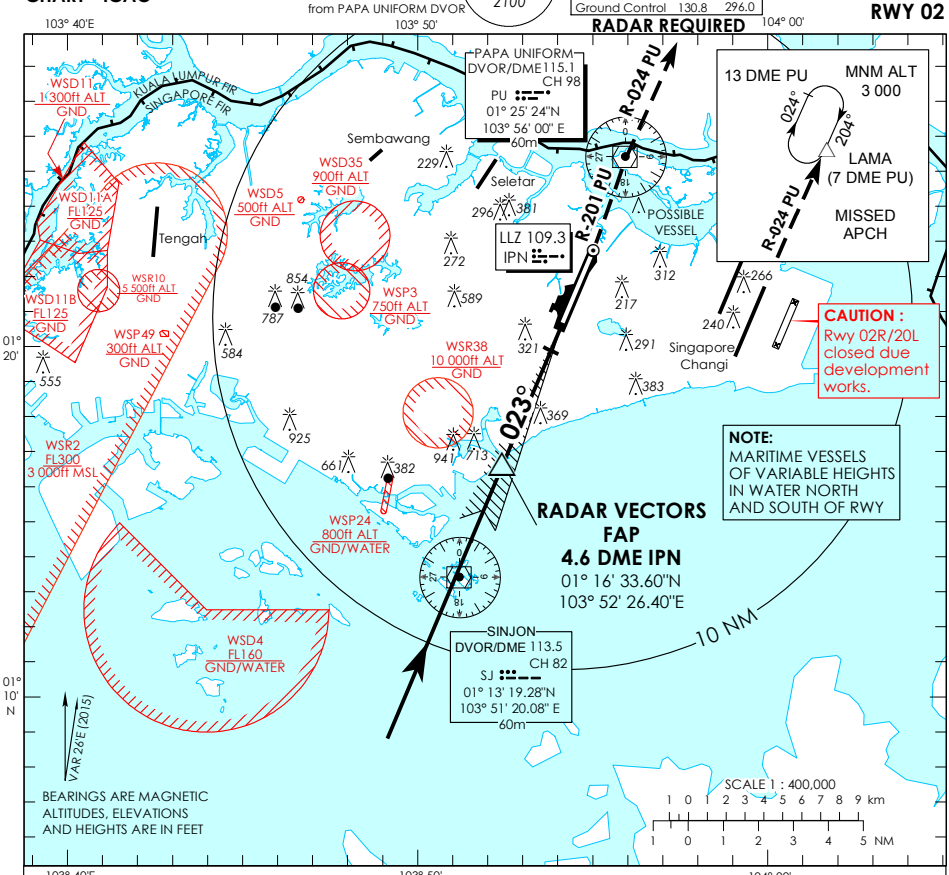
MSA 25 NM
from PAPA UNIFORM DVOR

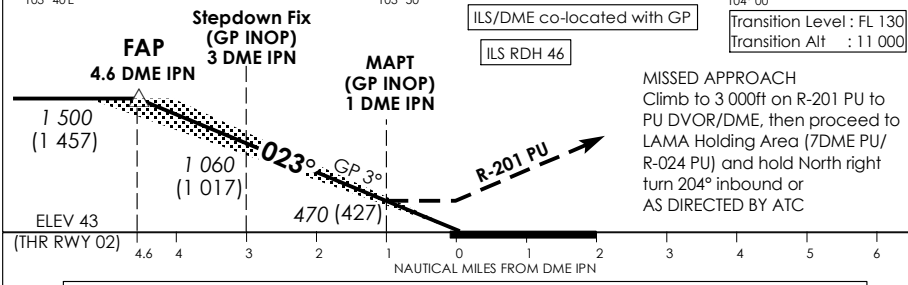
ATIS Paya Lebar	148.9	
Singapore APP	120.3	
Paya Lebar APP	119.9	298.0
Seletar APP	126.025	
Paya Lebar TWR	118.05	263.1
Ground Control	130.8	296.0

SINGAPORE/ PAYA LEBAR

IPN ILS/DME RWY 02

RADAR REQUIRED





ILS/DME co-located with GP

ILS RDH 46

Transition Level : FL 130
Transition Alt : 11 000

MISSED APPROACH
Climb to 3 000ft on R-201 PU to PU DVOR/DME, then proceed to LAMA Holding Area (7DME PU/ R-024 PU) and hold North right turn 204° inbound or AS DIRECTED BY ATC

OCA (OCH)					
Category of Aircraft		A	B	C	D
Straight-in	CAT I ILS	**178 (135)**	**188 (145)**	**198 (155)**	**208 (165)**
	GP INOP	**470 (427)**			

Distance		4 DME	3 DME	2 DME
Altitude (Height)		**1300 (1257)**	**1060 (1017)**	**740 (697)**
Speed	knots	70	120	150	185
FAF - MAPT 3.6nm	min : s	**3 : 06**	**1 : 48**	**1 : 27**	**1 : 11**
Rate of descent/GS	ft/min	**370**	**635**	**795**	**980**

CHANGES : Seletar Approach frequency 126.025 MHz added.

PAGE INTENTIONALLY LEFT BLANK

INSTRUMENT APPROACH CHART - ICAO

AERODROME ELEV 65ft
HEIGHT RELATED TO THR RWY 02 - 43ft

MSA 25 NM from PAYA LEBAR ARP

ATIS Paya Lebar	148.9	
Singapore APP	120.3	
Paya Lebar APP	119.9	298.0
Seletar APP	126.025	
Paya Lebar TWR	118.05	263.1
Ground Control	130.8	296.0

SINGAPORE/ PAYA LEBAR **RNAV (GNSS) RWY 02**

RADAR REQUIRED

BEARINGS ARE MAGNETIC
ALTITUDES, ELEVATIONS AND HEIGHTS ARE IN FEET

VAR 2.6°E (2015)

(MATF) ALDAM
01°27'49.57"N
103°57'12.64"E

022° 4.3 NM 10 NM

023° 7.1 NM

MISSED APCH
MNM ALT 3 000
024°
204°
022°
LAMA
01°31'50.00"N
103°58'50.00"E

WSD5 500ft ALT GND
WSD35 900ft ALT GND
WSD34 500ft ALT GND
WSP3 750ft ALT GND
WSR38 10 000ft ALT GND
WSP24 800ft ALT GND/WATER
WSD4 FL 160 GND/WATER

Sembawang
Seletar
POSSIBLE VESSEL
Singapore Changi

CAUTION : Rwy 02R/20L closed due development works.

KUALA LUMPUR FIR
SINGAPORE FIR

NOTE:
MARITIME VESSELS OF VARIABLE HEIGHTS IN WATER NORTH AND SOUTH OF RWY

023° 4.5 NM

(MAPt) RWY02
01°20'41.08"N
103°54'10.36"E

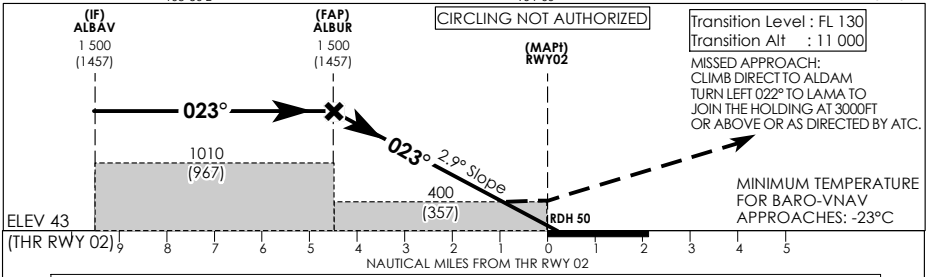
(FAP) ALBUR
01°16'28.90"N
103°52'23.08"E

023° 5.0 NM

RADAR VECTORS (IF) ALBAV
01°11'52.85"N
103°50'25.65"E

SCALE 1 : 400,000

103°50'E 104°00' 104°10' 01° 30' 01° 20' N



Transition Level : FL 130
Transition Alt : 11 000

MISSED APPROACH:
CLIMB DIRECT TO ALDAM
TURN LEFT 022° TO LAMA TO JOIN THE HOLDING AT 3000FT OR ABOVE OR AS DIRECTED BY ATC.

MINIMUM TEMPERATURE FOR BARO-VNAV APPROACHES: -23°C

OCA (OCH)					
Category of Aircraft		A	B	C	D
LNAV/VNAV	2.5%	**400 (357)**			
LNAV	2.5%	**400 (357)**			

Fix		ALBAV	ALBUR	RWY02	ALDAM	LAMA
Altitude (Height)		**1500 (1457)**	**1500 (1457)**	**400 (357)**	**1250 (1207)**	**1910 (1867)**
Speed	knots	80	100	120	140	160	180
FAP - MAPt 4.5 nm	min : s	**3 : 23**	**2 : 42**	**2 : 15**	**1 : 56**	**1 : 41**	**1 : 30**
Rate of descent/GS	ft/min	**410**	**513**	**615**	**718**	**821**	**923**

CHANGES : Seletar Approach frequency 126.025 MHz added.

PAGE INTENTIONALLY LEFT BLANK

INSTRUMENT APPROACH CHART - ICAO

AERODROME ELEV 65ft
HEIGHT RELATED TO THR RWY 20 - 65ft

ATIS Paya Lebar	148.9	
Singapore APP	120.3	
Paya Lebar APP	119.9	298.0
Seletar APP	126.025	
Paya Lebar TWR	118.05	263.1
Ground Control	130.8	296.0

SINGAPORE/ PAYA LEBAR **RNAV (GNSS) RWY 20**

MSA 25 NM from PAYA LEBAR ARP

RADAR REQUIRED

103°50'E 104°00' 104°10'

VAR 2.6°E (2015)

BEARINGS ARE MAGNETIC
ALTITUDES, ELEVATIONS AND HEIGHTS ARE IN FEET

RADAR VECTORS (IF) ROBGU
01°31'18.70"N
103°58'41.60"E

10 NM

(MAPt) RWY20
01°22'34.41"N
103°54'58.53"E

(FAP) REDEN
01°26'42.64"N
103°56'44.17"E

203° 5.0 NM
203° 4.5 NM
203° 6.3 NM
200° 3.6 NM

Sembawang
Seletar
POSSIBLE VESSEL
Singapore Changi
KUALA LUMPUR FIR
SINGAPORE FIR

WSD5 500ft ALT GND
WSD35 900ft ALT GND
WSP3 750ft ALT GND
WSR38 10 000ft ALT GND
WSP24 800ft ALT GND/WATER
WSD4 FL 160 GND/WATER
WSD34 500ft ALT GND

CAUTION : Rwy 02R/20L closed due development works.

NOTE: MARITIME VESSELS OF VARIABLE HEIGHTS IN WATER NORTH AND SOUTH OF RWY

(MATF) RUGVI
01°16'45.71"N
103°52'30.23"E

MISSED APCH
MNM ALT 4 500
200°
168°
348°
SJ
SJ
01°13' 19.28"N
103°51'20.08"E

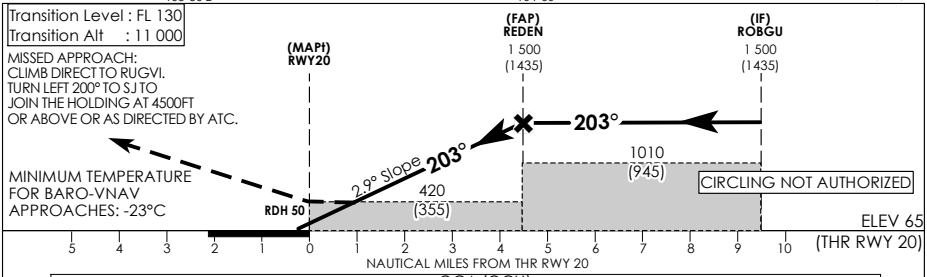
SINJON
DVOR/DME113.5
CH 82
SJ
01° 13' 19.28"N
103° 51' 20.08" E
60m

SCALE 1 : 400,000
1 0 1 2 3 4 5 6 7 8 9 km
1 0 1 2 3 4 5 NM

Transition Level : FL 130
Transition Alt : 11 000

MISSED APPROACH:
CLIMB DIRECT TO RUGVI.
TURN LEFT 200° TO SJ TO
JOIN THE HOLDING AT 4500FT
OR ABOVE OR AS DIRECTED BY ATC.

MINIMUM TEMPERATURE FOR BARO-VNAV APPROACHES: -23°C



OCA (OCH)					
Category of Aircraft		A	B	C	D
LNAV/VNAV	2.5%	**420 (355)**			
LNAV	2.5%	**420 (355)**			

Fix		ROBGU	REDEN	RWY20	RUGVI	SINJON
Altitude (Height)		**1500 (1435)**	**1500 (1435)**	**420 (355)**	**1030 (965)**	**1580 (1515)**
Speed	knots	80	100	120	140	160	180
FAP - MAPt 4.5 nm	min : s	**3 : 23**	**2 : 42**	**2 : 15**	**1 : 56**	**1 : 41**	**1 : 30**
Rate of descent/GS	ft/min	**410**	**513**	**615**	**718**	**821**	**923**

CHANGES : Seletar Approach frequency 126.025 MHz added.

PAGE INTENTIONALLY LEFT BLANK

WSAT — TENGAH

Note: The following sections in this chapter are intentionally left blank:
AD 2.9, AD 2.11, AD 2.16, AD 2.21, AD 2.22, AD 2.23.

WSAT AD 2.1 AERODROME LOCATION INDICATOR AND NAME

WSAT — TENGAH

WSAT AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	*ARP coordinates and site at AD*	012315.40N 1034229.80E
2	*Direction and distance from (city)*	-
3	*Elevation/Reference temperature*	15.24M (50ft) / 31.5°C
4	*MAG VAR*	0°26' E(2015)
5	*AD Administration, address, telephone, telefax, telex, AFS*	RSAF TENGAH AIRBASE CHOA CHU KANG ROAD SINGAPORE 669638 Telephone: (65)67612222 AFS : WSATYWYX
6	*Types of traffic permitted*	IFR
7	*Remarks*	Emergency Diversion Aerodrome for Singapore Changi Airport (see page WSAT AD 2-7)

WSAT AD 2.3 OPERATIONAL HOURS

1	*Aerodrome Administration*	2300-1100 SUN/MON to THU/FRI. Public holidays and outside the above stipulated operating hours, prior permission required from RSAF Headquarters via Tengah Operations. For EMERG diversions AD AVBL at 2 hours notice. Only Aerodrome Control Service provided. No radar service AVBL outside aerodrome OPR hours.
2	*Customs and Immigration*	by prior arrangement
3	*Health and Sanitation*	by prior arrangement
4	*AIS Briefing Office*	-
5	*ATS Reporting Office*	-
6	*MET Briefing Office*	-
7	*Air Traffic Services*	-
8	*Remarks*	-

WSAT AD 2.4 HANDLING SERVICES AND FACILITIES

1	*Cargo Handling Facilities*	-
2	*Fuel / Oil Types*	JET A1, F3
3	*Fuelling Facilities / Capacity*	2300-1100 SUN/MON to THU/FRI; Public holidays & outside OPR HR PPR from RSAF HQ via Tengah Operations.
4	*Hangar space for visiting aircraft*	-
5	*Repair facilities for visiting aircraft*	-
6	*Remarks*	Nil

WSAT AD 2.5 PASSENGER FACILITIES

1	*Hotels*	-
2	*Restaurants*	-
3	*Transportation*	-
4	*Medical Facilities*	-
5	*Bank and Post Office*	-
6	*Tourist Office*	-
7	*Remarks*	Nil

WSAT AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	*AD category for fire fighting*	CAT7
2	*Rescue equipment*	Adequately provided as recommended by ICAO
3	*Capability for removal of disabled aircraft*	Sufficient salvage equipment provided by Airfield Ground Services section at Military bases.
4	*Remarks*	All Airport Emergency Services personnel are trained in rescue and fire-fighting as well as medical first-aid.

WSAT AD 2.7 SEASONAL AVAILABILITY - CLEARING

The aerodrome is available throughout the year.

WSAT AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA

1	*Apron surface and strength*	-
2	*Taxiway width, surface and strength*	Strength : LCN80 (Taxiway E) Surface : Asphalt
3	*Remarks*	Nil

WSAT AD 2.10 AERODROME OBSTACLES

In approach / TKOF areas	*In circling area and at aerodrome*
RWY 18/36 APCH / TKOF Areas ILS LLZ co-located with LLZ antenna, HGT 21m AGL, 004 degrees MAG 260m from THR RWY 18 ILS LLZ co-located with LLZ antenna, HGT 15m AGL,184 degrees MAG 290m from THR RWY 36	2 masts, HGT 6m, located on eastern shoulders of RWY 36, 233m from THR, 100m from RWY centreline and RWY 18, 273m from THR, 100m from RWY centreline. Masts LGTD at NGT. PAR hut co-located with GP antenna mast, HGT 16m AGL, 074 degrees MAG 100m from WSAT ARP. ILS GP huts co-located with GP antenna mast, HGT 19m AGL, at 029 degrees MAG 322m from THR RWY 36 and 123 degrees MAG 303m from THR RWY 18.

WSAT AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designation RWY NR	*TRUE &MAG BRG*	*Dimensions of RWY (m)*	*Strength (PCN) and surface of RWY and SWY*	*THR coordinates*	*THR elevation and highest elevation of TDZ of precision APCH RWY*
1	2	3	4	5	6
18	184.5	2743 x 46	PCN 110 F/A/W/T	-	50 FT
36	004.5	2743 x 46	PCN 110 F/A/W/T	-	50 FT

12	*Remarks*	a.	Intensive fixed wing flying operation east of runway.
		b.	Helizone adjacent east of runway up to 800ft QNH.
		c.	Arrestor Barrier both ends of runway.
		d.	Hookwire cable installed 366m inwards from each end of runway.
		e.	Intense bird activity after rain, and up to 2 hour after dusk and dawn.

WSAT AD 2.13 DECLARED DISTANCES

RWY Designator	*TORA (m)*	*TODA (m)*	*ASDA (m)*	*LDA (m)*	*Remarks*
1	2	3	4	5	6
18	2743	3115	2743	2743	Nil
36	2743	3030	2743	2743	Nil

WSAT AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY	*APCH LGT Type, LEN INTST*	*THR LGT colour WBAR*	*VASIS (MEHT) PAPI*	*TDZ LGT LEN*	*RCL LGT, LEN,spacing, colour, INTST*	*RWY edge LGT, LEN, spacing, colour,INTST*	*RWY End LGT, colour WBAR*	*SWY LGT, LEN colour*	*Remarks*
1	2	3	4	5	6	7	8	9	10
18	High INTST white centre line and two bars, superimposed omni-directional RED 'T' PAPI Sequenced flashing lights	Green	4 units PAPI on each side of RWY at 3.0° Glide Slope	Nil	Nil	High INTST omni-directional white variable INTST	Red	Nil	Distance to run markers illuminated
36	High INTST white centre line and five bars, superimposed omni-directional RED 'T' PAPI Sequenced flashing lights	Green	4 units PAPI on each side of RWY at 3.0° Glide Slope	Nil	Nil	High INTST omni-directional white variable INTST	Red	Nil	Distance to run markers illuminated

WSAT AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

TWY Lighting	blue edge lights
IBN	012400N 1034254E, FLG R 'TN', operating hours HN and IMC.
Remarks	WDI lighted. Dispersal area floodlights

WSAT AD 2.17 ATS AIRSPACE

1	*Designation and Lateral Limits*	**TENGAH ATZ** 010842N 1034336E thence clockwise around the arc of radius 14 NM centred on 012242N 1034203E to 011351N 1033117E thence east along the Singapore - Kuala Lumpur FIR boundary to 012728N 1034302E 012620N 1034544E 012150N 1034524E 011845N 1034414E 010842N 1034336E.
2	*Vertical Limits*	SFC to 3000 FT ALT
3	*Airspace Classification*	D
4	*ATS Unit Callsign* *Language(s)*	TENGAH APPROACH English
5	*Transition altitude*	11000 FT (3,350m)
6	*Remarks*	Controlling Authority: Tengah Approach During Aerodrome operating hours: Contact Tengah APP on 130.0 MHz, 263.4 MHz or 122.0 MHz Outside Aerodrome operating hours: Contact SATCC (RSAF element) on 123.4MHz or 288.2MHz

WSAT AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	*Call sign*	*Frequency P - Primary S - Secondary*	*Hours of operation*	*Remarks*
APP	TENGAH APPROACH	P130.0 MHz P263.4 MHz S122.0 MHz	BTN 2300-1100 SUN/MON to THU/FRI; and On SUN, Public holidays and outside the above times, PPR from RSAF HQ via Tengah Ops.	Nil
TWR	TENGAH TOWER	P122.0 MHz P282.5 MHz S263.4 MHz		
	TENGAH GROUND	122.0 MHz 337.8 MHz		
	TENGAH TALKDOWN	130.0 MHz 290.8 MHz 328.5 MHz		
Flight Information Service	SINGAPORE RADAR	119.1 MHz	H24	Nil
ACC	SINGAPORE RADAR	P123.7 MHz S127.3 MHz	H24	for AWY B469, G219, G334, R208, L625, L629, L635, L642, M751, M753, M758, M761, M763, M771, N884, N891 and N892.
		133.8 MHz	0000-1430	
		P133.25 MHz S135.8 MHz	H24	for AWY A457, A464, A576, B466, L762, R325 (all northbound) and R469.
		P134.4 MHz S128.1 MHz 255.4 MHz		for AWY A464, G579, A576 (all southbound), B470, G220, N875 and in area in the immediate vicinity of Singapore
				Radar Maint Period: Monthly - EV third SAT 1601-2359
	SINGAPORE RADIO	6556 kHz 11297 kHz	H24	SEA 1, SATCOM SER AVBL SSB suppressed carrier
		5655 kHz 8942 kHz 11396 kHz		SEA 2, SATCOM SER AVBL SSB suppressed carrier
		6556 kHz		SEA 3, SATCOM SER AVBL SSB suppressed carrier
APP	SINGAPORE APPROACH	P120.3 MHz S124.6 MHz		TAR - Intermediate approach to Singapore Changi airport and other airports in Singapore - DEP from all airports in Singapore Maint Period: Monthly EV first THU 0000-0900 (ASR I) and EV fourth SAT 1601-2359 (ASR II)

WSAT AD 2.19 RADIO NAVIGATION AND LANDING AIDS

RADIO NAVIGATION AND LANDING AIDS					
Type of Aid	*IDENT*	*FREQ*	*OPR Hour*	*Coordinates*	*Remarks*
TACAN	TNG	CH86X	2300-1100 from SUN/MON to THU/FRI; SUN, Public holidays and outside the above times prior permission required from RSAF HQ via Tengah Operations.	012336.00N 1034242.00E	043° MAG 0.55km from ARP Maint Period: 0001-0900 second SAT of EV month
SINJON DVOR/DME	SJ	113.5 MHz CH82X	H24	011319.28N 1035120.08E	201° MAG 14.5km from THR RWY 02 (Paya Lebar) Antenna HGT: 194ft AMSL. Coverage 200NM Maint Period: 0200-0600 third THU of EV month
ILS LLZ RWY 36	ITN	108.1 MHz	H24	012408.43N 1034234.34E	Located 260m from THR RWY 18 along centreline of RWY. Course width 3°
ILS GP RWY 36	-	334.7 MHz	H24	012240.84N 1034231.01E	GP antenna 3°
ILS DME RWY 36	ITN	CH18X	H24	012241.02N 1034226.67E	DME co-located with GP
ILS LLZ RWY 18	ITS	111.3 MHz	H24	012221.63N 1034224.98E	Located 290m from THR RWY 36 along centreline of RWY. Course width 3°
ILS GP RWY 18	-	332.3 MHz	H24	012351.64N 1034237.33E	GP antenna 3°
ILS DME RWY 18	ITS	CH50X	H24	012350.04N 1034236.38E	DME co-located with GP