

WSSS AD 2.19 RADIO NAVIGATION AND LANDING AIDS					
Type of aid and Variation	Ident	Frequency	Opr Hr	Coordinates	DME Elevation / Remarks
1	2	3	4	5	6 & 7
SINJON DVOR/DME	SJ	113.5MHz CH82X	H24	011321.54N 1035115.74E	201° Mag 14.5km fm THR RWY 02 (Paya Lebar). Antenna Hgt: 194ft AMSL. Coverage 200NM. EM: F1. Maint Period: 3rd Thu of ev month btn 0200-0600
TEKONG DVOR/DME	VTK	116.5MHz CH112X	H24	012455.36N 1040120.17E	023° Mag 6.4km fm THR RWY 20C (Singapore Changi). Antenna Hgt: 150ft AMSL. Coverage 200NM. EM: F1 Maint Period: 3rd Fri of ev month btn 0200-0600
BEDOK NDB	BED	232KHz	H24	011858.39N 1035749.07E	203° Mag 3.9km fm THR RWY 02L (Singapore Changi). Coverage 25NM. EM: A0/A2
RWY 20C ILS LLZ	ICC	109.7MHz	H24	011935.97N 1035902.64E	Loc 250m (820ft) fm THR RWY 02C, along RWY centreline. Course width 3°. EM: A0/A2. Maint Period: May-Oct - 2nd Fri of ev mth btn 1600-2300 Nov-Apr - 2nd Fri of ev mth btn 0200-0900
RWY 20C ILS GP	-	333.2MHz	H24	012131.32N 1035956.57E	Loc 338m (1109ft) fm THR RWY 20C on left side of RWY, 148m (486ft) fm RWY centreline. GP angle 3°. Hgt of ILS ref datum: 18m (58ft) EM: A0/A2
RWY 20C ILS DME	ICC	CH34X	H24	012131.32N 1035956.57E	DME co-located with GP. EM: P9
RWY 20C ILS MM	-	75MHz	H24	012211.94N 1040008.52E	Loc 955m (3133ft) fm THR RWY 20C along extended centreline of RWY. No back beam.
RWY 02C ILS LLZ	ICE	108.3MHz	H24	012150.84N 1035959.58E	Loc 250m (820ft) fm THR RWY 20C, along RWY centreline. Course width 3°. EM: A0/A2. Maint Period: May-Oct - 2nd Fri of ev mth btn 0200-0900 Nov-Apr - 2nd Sat of ev mth btn 0200-0900
RWY 02C ILS GP	-	334.1MHz	H24	011951.64N 1035914.70E	Loc 338m (1109ft) fm THR RWY 02C on right side of RWY, 154m (505ft) fm RWY centreline. GP angle 3°. Hgt of ILS ref datum: 18m (58ft) EM: A0/A2
RWY 02C ILS DME	ICE	CH20X	H24	011951.64N 1035914.70E	DME co-located with GP. EM: P9
RWY 02C ILS MM	-	75MHz	H24	011915.15N 1035853.88E	Loc 945m (3100ft) fm THR RWY 02C along extended centreline of RWY. No back beam.

WSSS AD 2.19 RADIO NAVIGATION AND LANDING AIDS						
Type of aid and Variation	Ident	Frequency	Opr Hr	Coordinates	DME Elevation / Remarks	
1	2	3	4	5	6 & 7	
RWY 20R ILS LLZ	ICH	108.9MHz	H24	012049.20N 1035835.90E	Loc 236m (774ft) fm THR RWY 02L, along centreline of the RWY. Course width 3.5°. EM: A0/A2. Maint Period: May-Oct - 1st Sat of ev month btn 0200-0900 Nov-Apr - 1st Fri of ev month btn 0200-0900	
RWY 20R ILS GP	-	329.3MHz	H24	012225.66N 1035912.19E	Loc 330m (1083ft) fm disp THR RWY 20R on right side of the RWY, 125m (410ft) fm RWY centreline. GP angle 3° . Hgt of ILS ref datum: 17m (56ft) EM: A0/A2	
RWY 20R ILS DME	ICH	CH26X	H24	012225.66N 1035912.19E	DME co-located with GP. EM: P9	
RWY 20R ILS MM	-	75MHz	H24	012305.96N 1035933.60E	Loc 1061m (3481ft) fm displaced THR RWY 20R, along centreline of the RWY.	
RWY 02L ILS LLZ	ICW	110.9MHz	H24	012304.09N 1035932.84E	Loc 1006m (3301ft) fm displaced THR RWY 20R, along centreline of RWY. Course width 3° EM:A0/A2 Maint Period: May-Oct - First Fri of ev month btn 0200-0900 Nov-Apr - First Sat of ev month btn 0200-0900	
RWY 02L ILS GP	-	330.8MHz	H24	012108.35N 1035838.74E	Loc 343m (1125ft) fm THR RWY 02L on left side of RWY, 148m (486ft) fm RWY centreline. GP angle 3° Hgt of ILS ref datum: 18m (58ft) EM:A0/A2	
RWY 02L ILS DME	ICW	CH46X	H24	012108.35N 1035838.74E	DME co-located with GP EM:P9	
RWY 02L ILS MM	-	75MHz	H24	012027.89N 1035826.92E	Loc 942m (3089ft) fm THR RWY 02L along extended centreline of RWY. No back beam.	

## WSSS AD 2.20 LOCAL TRAFFIC REGULATIONS

### 1. DESIGNATION OF PAYA LEBAR AIRPORT AS AN ALTERNATE AERODROME FOR SINGAPORE CHANGI AIRPORT

Please refer to pages WSAP AD 2-7 and WSAP AD 2-8 for details.

### 2. WRONG APPROACHES AND LANDINGS OF AIRCRAFT BOUND FOR SINGAPORE CHANGI AND PAYA LEBAR AIRPORTS

#### 2.1 INTRODUCTION

2.1.1 The attention of all pilots is drawn to the existence of Paya Lebar Airport close to Singapore Changi Airport. The runway at Singapore Changi Airport is orientated in the same true bearing as the runway at Paya Lebar Airport i.e. 023°/203°. Due to the close proximity of these two runways, pilots are cautioned against mistaking Paya Lebar Airport for the runway of Singapore Changi Airport and thus making an inadvertent visual landing or approach to land at Paya Lebar.

2.1.2 Erroneous approaches or landings usually occurred during the hours of darkness. In almost every instance, the weather prevailing at the time of the incident was generally good or fair.

2.1.3 There is intensive local flying at Paya Lebar and Seletar during the day and night. Thus, the risk of collision is very great if a wrong approach is made to any of the above two airports. Likewise, wrong approaches into Singapore Changi Airport can also be disastrous.

#### 2.2 POINTS TO BEAR IN MIND WHEN APPROACHING SINGAPORE CHANGI AIRPORT OR PAYA LEBAR

2.2.1 The following points are highlighted to serve as a guide to assist pilots in making a correct approach into Singapore Changi Airport or Paya Lebar Airport and should be remembered and followed:

- a) The runways at Singapore Changi Airport and Paya Lebar Airport are identically aligned on 02/20. Therefore exercise extreme vigilance when leaving Nylon or Samko Holding Areas inbound and maintain correct tracks to the respective runways as listed below.
- b) Adhere strictly to IFR procedures even in VMC which calls for a procedure turn over Nylon Holding Area or Samko Holding Area as prescribed.
- c) Make full use of all available navigational and landing aids available and positively identify every aid used.
- d) Switch to the correct ILS localizer frequency at Singapore Changi Airport under all conditions.

**2.3 AERODROME CHARACTERISTICS OF SINGAPORE CHANGI AND PAYA LEBAR AIRPORTS**

2.3.1 Tabulated below are details of aerodrome characteristics of Singapore Changi Airport and Paya Lebar Airport which indicate the similarities and significant differences for ease of identification by pilots operating into these two airports.

<b>Aeronautical Service</b>	<b>PAYA LEBAR Airport</b>	<b>SINGAPORE CHANGI Airport</b>	<b>Significant Differences and Remarks</b>
Magnetic heading of RWY	02/20	02L/20R 02C/20C 02R/20L	Exercise caution due to similar RWY alignment
Track/Dist from SAMKO Holding Area (8 DME/DVOR SJ 348°)	Nil	020°/14.3NM to "BED" NDB	Differences in track and distances
Track/Dist from NYLON Holding Area (13 DME/DVOR VTK 203°)	Nil	206°/19.8NM to "BED" NDB	
Approach Lights	RWY 02 Modified Calvert High Intst with centreline and 3 crossbars. High intst white lgt with brilliancy control and sequenced flashing lights.	RWY 02L Precision Apch Lgt Cat II. Extended centreline with red side row barettes, 2 crossbars, 2 apch beacons and sequenced flashing lights.	
	RWY 20 Modified Calvert High Intst with centreline and 3 crossbars. High intst white lgt with brilliancy control and sequenced flashing lights.	RWY 20R Precision Apch Lgt Cat I. Centreline barettes flashing white, 2 apch beacons and sequenced flashing lights. (ref chart WSSS AD 2-31)	
ILS	RWY 20 - Nil	RWY 20R Ident ICH No back beam LLZ 108.9 MHz GP 329.3 MHz	
	RWY 02 - Nil	RWY 02L Ident ICW No back beam LLZ 110.9 MHz GP 330.8 MHz	
IBN	Flashing R 'PL' HN and IMC	Flashing G 'CH' HN and IMC	
ABN	Nil	Altn Flashing W G every 2.3 sec	