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Email: caas_singaporeais@caas.gov.sgURL: www.caas.gov.sgURL: <https://fpl-1.caasaim.gov.sg>**AIP Supplement for
Singapore****AIP SUP****031/2018****Effective from 31 JUL 2018****PERM****Published on 22 JUN 2018****SINGAPORE CHANGI AIRPORT – UPDATED INFORMATION AND DATA FOR
RUNWAY 02R/20L****1 INTRODUCTION**

1.1 This AIP Supplement informs aircraft operators of the updated information and data for Runway 02R/20L.

1.2 With effect from 31 July 2018 2300 UTC, Runway 02R/20L will re-open for operations, solely for use by the Republic of Singapore Air Force (RSAF) unless with prior coordination. Please see Annex A for the location of Runway 02R/20L.

2 RUNWAY 02R/20L INFORMATION AND DATA

2.1 The updated information and data for Runway 02R/20L will be incorporated into AIP Singapore Part 3 – AERODROMES (AD), section AD 2 AERODROMES – WSSS as follows:

WSSS AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

6	AD Administration, address, telephone, telefax, AFS	
	For RWY 02R/20L Republic of Singapore Air Force Headquarters, Changi Air Base 508A, Cranwell Road Singapore 509863 Tel: (65) 65864033 (Base Operations)	
8	Remarks	
	g. RWY 02R/20L is solely for use by the Republic of Singapore Air Force (RSAF) aircraft, unless with prior coordination.	

WSSS AD 2.3 OPERATIONAL HOURS

1	Aerodrome Administration:	For RWY 02R/20L 2300- 1700 SUN/MON to TUE/WED. 2300-1100 WED/THU to THU/FRI. Prior permission required from RSAF Headquarters via Changi Base Operations for all flights.
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WSSS AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	CAT 8 (No facilities for foaming of runways).
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WSSS AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA				
1	Apron surface and strength	RWY 02R/20L	Surface: Strength:	Concrete and Asphalt PCN 74/R/C/W/T (Concrete) and 45/F/B/W/T (Asphalt).
2	Taxiway width, surface and strength	RWY 02R/20L	Width:	23m (75.5ft) for MY TWY and RETs MY2, MY3, MY4, MY5, MY6 and MY8. 50m (164.0ft) for perpendicular TWYs MY1, MY7, MY9 and MY10. TWY and accesses to the west of RWY 02R/20L are closed.
			Surface:	Asphalt.
			Strength:	PCN 63/F/B/W/T

WSSS AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS	
2	RWY and TWY markings and LGT
RWY 02R/20L	
RWY LGT: refer to WSSS AD 2.14 and WSSS AD 2.15.	
TWY LGT: Elevated and inset blue LGT on TWY edge. Red stopbar LGT at TWY accesses leading to RWY 02R/20L. Internally lighted mandatory or information TWY signboards. Yellow TWY centreline markings along RETs, taxi-routes to and from the main RWY and aprons.	
MARKING AIDS: THR, touchdown zone, centreline, side stripe, RWY designations, aiming point markings, TWY centreline. The yellow hookwire markings on the RWY are done in accordance with the North Atlantic Treaty Organisation (NATO) Standardisation Agreement (STANAG) requirements. The eastern edge Distance-To-Go marker boards are done with reference to the Federal Aviation Administration (FAA) specifications.	

WSSS AD 2.10 AERODROME OBSTACLES					
IN APPROACH / TKOF AREAS			IN CIRCLING AREA AND AT AD		
RWY/Area affected	OBST type, ELEV, Markings/LGT	Coordinates	OBST type, ELEV, Markings/LGT	Coordinates	
1	2	3	1	2	
a) RWY 20L APCH RWY 02R TKOF	Mast HGT ranging from 98ft AMSL and above.	Shipping channel approximately 1600m from THR RWY 20L.	a) Surface wind direction sleeves	Located at each end of RWY adjacent to GP hut	
			b) PAR Installation. HGT 9.1m (30 ft).	012029N 1040033E	

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 (Geoid Undulation)	THR elevation and the highest elevation TDZ of precision APCH RWY
1	2	3	4	5	6
02R	023.01 °	4000m X 60m	82F/B/X/T Bituminous concrete	011920.59N 1035959.45E (10.323 M)	4.8m 4.8m
20L	203.01 °	4000m X 60m	82F/B/X/T Bituminous concrete	012120.45N 1040050.05E (10.359 M)	4.8m 4.8m

Slope of RWY-SWY Transverse / Longitudinal	SWY Dimensions (m)	CWY Dimensions (m)	STRIP Dimensions (m)	OFZ	Remarks
7	8	9	10	11	12
RWY 02R 1.29 / 0%	60 X 60	60 X 150	4240 X 300	Yes	-
RWY 20L 1.24 / 0.24%	60 X 60	60 X 150	4240 X 300		

WSSS AD 2.13 DECLARED DISTANCES						
RWY Designator	Intersection Departures	TORA (m)	TODA (m)	ASDA (m)	LDA (m)	Remarks
1	2	3	4	5	6	7
20L	Full Length	4000	4060	4060	4000	NIL
	MY2	3170	3230	3230	3170	
	MY3	2710	2770	2770	2710	
	MY4	2360	2420	2420	2360	
02R	Full Length	4000	4060	4060	4000	NIL
	MY9	3440	3500	3500	3440	
	MY8	2900	2960	2960	2900	
	MY7	2590	2650	2650	2590	
	MY6	2220	2280	2280	2220	
	MY5	1770	1830	1830	1770	

WSSS AD 2.14 APPROACH AND RUNWAY LIGHTING								
RWY	APCH LGT Type, LEN, Intensity	THR LGT colour WBAR	PAPI (MEHT)	TDZ LGT LEN	RWY Centreline LGT, LEN, spacing, colour, INTST	RWY Edge LGT, LEN, spacing, colour, INTST	RWY End LGT colour	SWY LGT colour
1	2	3	4	5	6	7	8	9
02R	900m CAT II High Intensity Approach Light with red side row barrettes, 2 crossbars, 2 Circling Guidance Light and Sequenced Flashing Lights.	Threshold: Green supplemented by green wing-bar and 2 THR ident lights.	MEHT = 19.69m PAPI 3° located 415m up to THR at both left and right of RWY.	White. 900m (from THR) TDZ. Every 60m from THR.	Inset High Intensity Centreline Lights as follow: Every 30m, white from THR to 900m from RWY end; alternate red & white from 900m to 300m; red from 300m to RWY end.	On RWY 02R approach, inset Rwy edge lights installed from THR to 1200m. Entire RWY edge is installed with elevated Rwy edge lights, unless there is RET entering the RWY, then inset Rwy edge lights will be installed.	Red	Elevated Red

WSSS AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY	APCH LGT Type, LEN, Intensity	THR LGT colour WBAR	PAPI (MEHT)	TDZ LGT LEN	RWY Centreline LGT, LEN, spacing, colour, INTST	RWY Edge LGT, LEN, spacing, colour, INTST	RWY End LGT colour	SWY LGT colour
1	2	3	4	5	6	7	8	9
20L	900m CAT II High Intensity Approach Light with red side row barrettes, 2 crossbars, 2 Circling Guidance Light and Sequenced Flashing Lights.	Threshold: Green supplemented by green wing-bar and 2 THR ident lights.	MEHT = 19.69m PAPI 3° located 415m up to THR at both left and right of RWY.	White. 900m (from THR) TDZ. Every 60m from THR.	Inset High Intensity Centreline Lights as follow: Every 30m, white from THR to 900m from RWY end; alternate red & white from 900m to 300m; red from 300m to RWY end.	On RWY 20L approach, inset RWY edge lights installed from THR to 1020m. Entire RWY edge is installed with elevated RWY edge lights, unless there is RET entering the RWY, then inset Rwy edge lights will be installed.	Red	Elevated Red

WSSS AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

3	TWY Edge and Centreline Lighting	RWY 02R/20L: Elevated and inset blue TWY edge lights.
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WSSS AD 2.18 ATS COMMUNICATION FACILITIES

Service Designation	Call Sign	Frequency (P-Pri, S-Sec)	Hours of operation	Remarks
TWR	Changi East Tower	122.25 MHz	2300-1700 SUN/MON to TUE/WED. 2300-1100 WED/THU to THU/FRI.	For TKOF/LDG. For ACFT operating on RWY 02R/ 20L
	Changi East Ground	120.95 MHz	Prior permission required from RSAF Headquarters via Changi Base Operations for all flights.	For start-up / taxiing of all aircraft
ATIS	Changi East Information (02R/ 20L)	139.95 MHz		-

WSSS AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of aid and Variation	Ident	Frequency	OPR Hr	Position of Transmitting Antenna Coordinates	DME Transmitting Antenna Elevation / Remarks
1	2	3	4	5	6 & 7
RWY 20L ILS LLZ	ICZ	108.55MHz	H24	011909.54N 1035954.79E	Located 367m (1204ft) from THR RWY 02R, along RWY centreline. Course width 2.80°. EM: A0/A2
RWY 20L ILS GP	-	329.75MHz	H24	012108.89N 1040049.38E	Located 335m (1099ft) from THR RWY 20L on left side of the RWY, 120m (394ft) from RWY centreline. GP angle 3°. HGT of ILS REF datum: 16.8m (55ft). EM: A0/A2
RWY 20L ILS DME	ICZ	CH22Y	H24	012108.89N 1040049.38E	DME co-located with GP. EM: P9
RWY 20L ILS MM	-	75MHz	H24	012149.37N 1040102.55E	Located 968m (3176ft) from THR RWY 20L, along extended centreline of the RWY.

WSSS AD 2.19 RADIO NAVIGATION AND LANDING AIDS					
Type of aid and Variation	Ident	Frequency	OPR Hr	Position of Transmitting Antenna Coordinates	DME Transmitting Antenna Elevation / Remarks
1	2	3	4	5	6 & 7
RWY 02R ILS LLZ	ICX	110.5MHz	H24	012131.46N 1040054.70E	Located 367m (1204ft) from THR RWY 20L, along RWY centreline. Course width 2.80°. EM: A0/A2
RWY 02R ILS GP	-	329.6MHz	H24	011929.11N 1040007.26E	Located 335m (1099ft) from THR RWY 02R on right side of the RWY, 120m (394ft) from RWY centreline. GP angle 3°. HGT of ILS REF datum: 16.2m (53ft). EM: A0/A2
RWY 02R ILS DME	ICX	CH42X	H24	011929.11N 1040007.26E	DME co-located with GP. EM: P9
RWY 02R ILS MM	-	75MHz	H24	011851.60N 1035947.22E	Located 974m (3196ft) from THR RWY 02R, along extended centreline of the RWY.

3 CANCELLATION

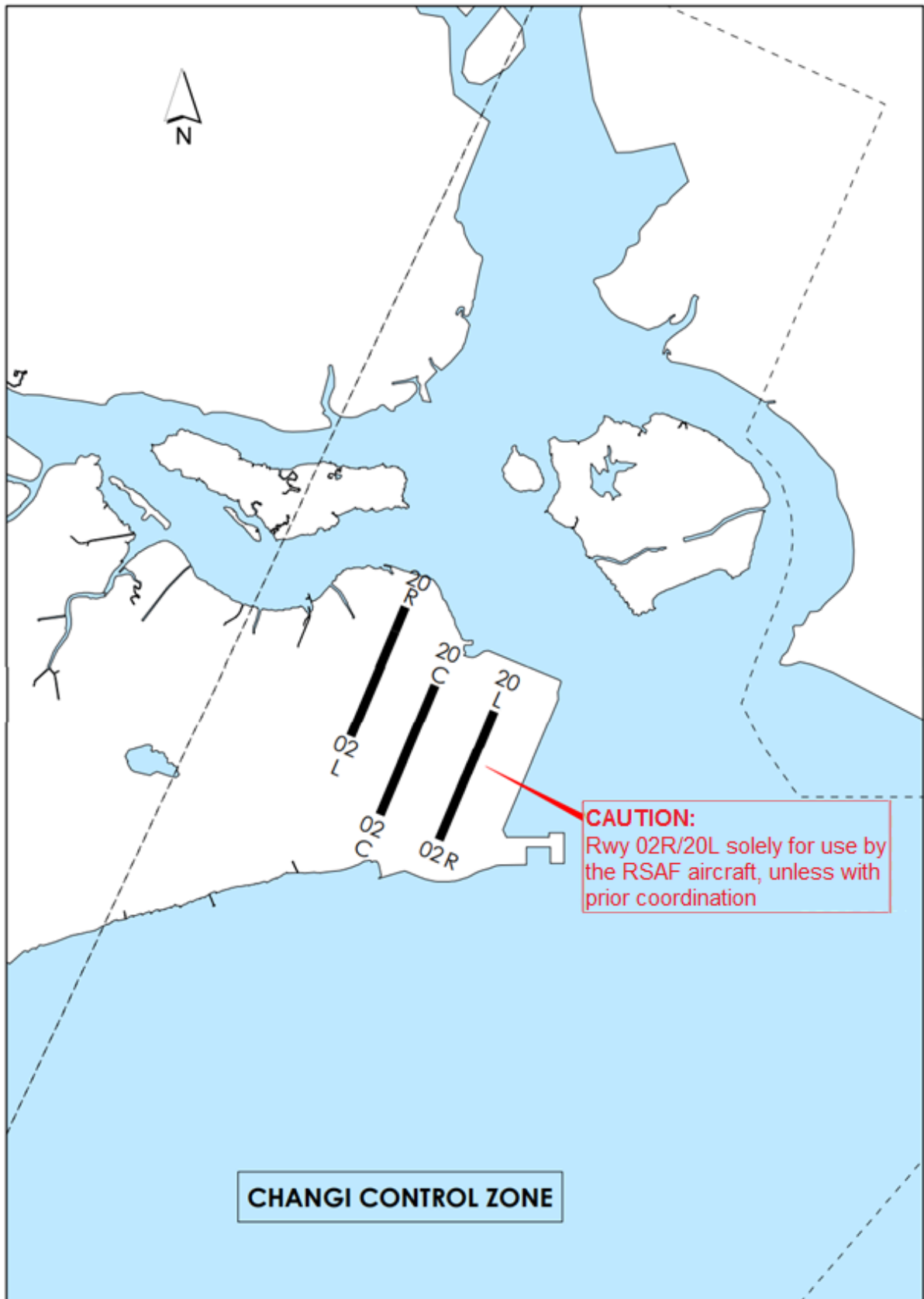
3.1 This AIP supplement will be cancelled when the contents are incorporated into AIP Singapore.

4 CONSULTATIONS

4.1 Please email cab_duty@defence.gov.sg if you have any queries regarding this AIP Supplement.

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LOCATION OF RUNWAY 02R/20L IN RELATION TO
RUNWAY 02L/20R AND RUNWAY 02C/20C



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