WSSS

Singapore Changi Intl. Airport

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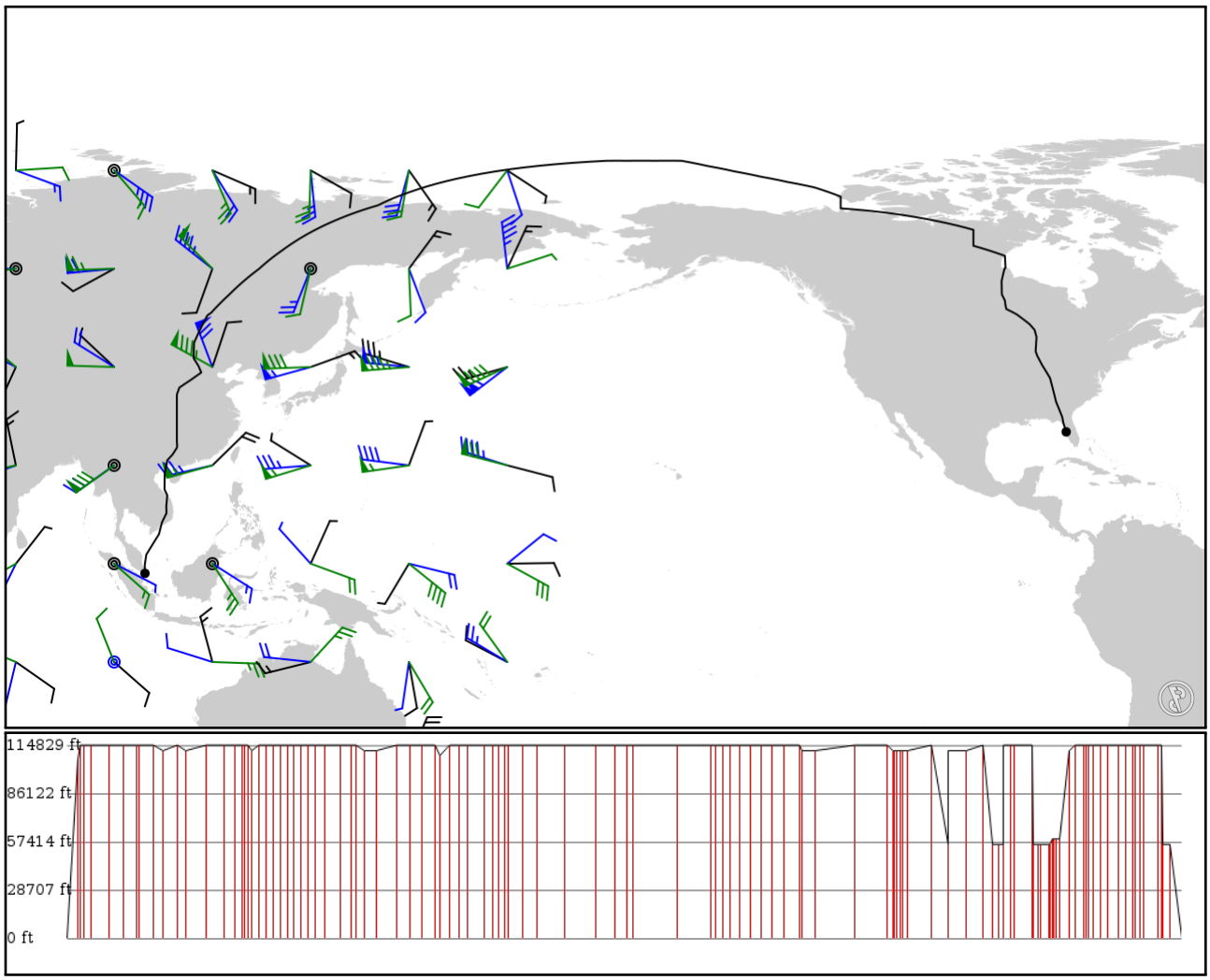
KTPA

TAMPA INTL

2024/03/19 1028Z

WSSS ROBMO **L642** CS **L644** AC **W1** HAMIN **W10** BALOV NNG **R343** LBN **W2** PA 2600N11000E 2700N11000E 2800N11000E 2900N11000E 3000N11000E 3100N11000E 3200N11000E 3300N11000E 3400N11000E 3500N11000E GUPAD **G212** KR **B458** TMR **G218** SULOK **B161** NAREM **G496** KU **G495** UESO **G494** ORVIT 7900N16500W 7900N16000W 7900N15500W 7800N15000W 7700N14500W 7600N14000W 7500N13500W 7400N13000W N7215 7200N12500W DASPO **NCA31** SEDAG **NCA80** N6510 6500N10000W N6430 6400N10000W N6345 N6300 **NCA28** YEK **BR3** YQ **NCAE** YYQ **J89** YIV **RR10** RL YRL **J513** YQT **V133** CMX **V9** GRB **J101** OBK **J89** OTK **V579** CTY KTPA

9494.76 nm / 17584.30 km



Notes

Basic altitude profile:
- Ascent Rate: 2500ft/min
- Ascent Speed: 250kts
- Cruise Altitude: 35000ft
- Cruise Speed: 420kts
- Descent Rate: 1500ft/min
- Descent Speed: 250kts

Options:
- Use NATs: yes
- Use PACOTS: no
- Use low airways: yes
- Use high airways: yes

Route

Ident Type	Via	Lat Lon	Alt	Dist (nm)	Name
WSSS APT	– –	1.35192 103.99560	0 ft 0 m	–	Singapore Changi Intl. Airport
ROBMO FIX	– –	2.91111 103.95000	32,400 ft 9,876 m	93	–
EGOLO FIX	L642 AWY-HI	3.32667 104.01333	35,000 ft 10,668 m	25	–
VEPLI FIX	L642 AWY-HI	3.87306 104.09500	35,000 ft 10,668 m	33	–
ENREP FIX	L642 AWY-HI	4.87306 104.24500	35,000 ft 10,668 m	60	–
ESPOB FIX	L642 AWY-HI	7.00000 105.55500	35,000 ft 10,668 m	149	–
CS NDB	L642 AWY-HI	8.72972 106.63194	35,000 ft 10,668 m	122	CONSON NDB
LOSON FIX	L644 AWY-HI	10.49333 107.07556	35,000 ft 10,668 m	109	–
AC NDB	L644 AWY-HI	10.93917 107.18833	35,000 ft 10,668 m	27	ANLOC NDB
BU NDB	W1 AWY-HI	12.67028 108.04222	35,000 ft 10,668 m	115	BUON MA THUOT NDB
PK NDB	W1 AWY-HI	14.00667 108.00889	34,000 ft 10,363 m	80	PLEIKU NDB
DAN VOR	W1 AWY-HI	16.05276 108.19823	35,000 ft 10,668 m	123	DANANG VOR-DME
HAMIN FIX	W1 AWY-HI	17.12972 107.67778	34,000 ft 10,363 m	71	–
BALOV FIX	W10 AWY-HI	20.12972 107.70861	35,000 ft 10,668 m	180	–
NNG VOR	– –	22.62500 108.19667	35,000 ft 10,668 m	152	NANNING VOR-DME
LBN VOR	R343 AWY-HI	23.74333 109.21167	35,000 ft 10,668 m	87	LAIBIN VOR-DME
MOTOM FIX	W2 AWY-HI	24.68333 109.80833	35,000 ft 10,668 m	65	–
JW NDB	W2 AWY-HI	25.00667 110.01833	35,000 ft 10,668 m	22	YONGFU NDB
PA NDB	W2 AWY-HI	25.40500 110.06000	35,000 ft 10,668 m	24	WUTONG NDB
2600N11000E LATLON	– –	26.00000 110.00000	34,000 ft 10,363 m	35	–
2700N11000E LATLON	– –	27.00000 110.00000	35,000 ft 10,668 m	60	–
2800N11000E LATLON	– –	28.00000 110.00000	35,000 ft 10,668 m	60	–
2900N11000E LATLON	– –	29.00000 110.00000	35,000 ft 10,668 m	60	–
3000N11000E LATLON	– –	30.00000 110.00000	35,000 ft 10,668 m	60	–
3100N11000E LATLON	– –	31.00000 110.00000	35,000 ft 10,668 m	60	–
3200N11000E LATLON	– –	32.00000 110.00000	35,000 ft 10,668 m	60	–
3300N11000E	–	33.00000	35,000 ft	60	–

Ident Type	Via	Lat Lon	Alt	Dist (nm)	Name
LATLON	-	110.00000	10,668 m		
3400N11000E	-	34.00000	35,000 ft	60	-
LATLON	-	110.00000	10,668 m		
3500N11000E	-	35.00000	35,000 ft	60	-
LATLON	-	110.00000	10,668 m		
GUPAD	-	36.31167	35,000 ft	82	-
FIX	-	110.47333	10,668 m		
TYN	G212	37.75167	35,000 ft	134	TAIYUAN VOR-DME
VOR	AWY-HI	112.62000	10,668 m		
NONIT	G212	38.68000	35,000 ft	83	-
FIX	AWY-HI	113.93333	10,668 m		
KR	G212	39.14500	35,000 ft	41	NANCHENGZI NDB
NDB	AWY-HI	114.60000	10,668 m		
TZH	B458	40.41167	34,000 ft	80	-
VOR	AWY-HI	114.05000	10,363 m		
TMR	B458	41.84500	34,000 ft	95	TUMURTAI VOR-DME
VOR	AWY-HI	113.15000	10,363 m		
POLHO	G218	44.78333	35,000 ft	176	-
FIX	AWY-HI	113.25000	10,668 m		
MENOR	G218	46.49727	35,000 ft	108	-
FIX	AWY-HI	114.03159	10,668 m		
DORUT	G218	48.19919	35,000 ft	107	-
FIX	AWY-HI	114.86087	10,668 m		
SULOK	G218	49.90000	35,000 ft	107	-
FIX	AWY-HI	115.75000	10,668 m		
NAREM	B161	50.38389	33,100 ft	39	-
FIX	AWY-HI	116.45056	10,089 m		
DIBOR	G496	51.60889	35,000 ft	85	-
FIX	AWY-HI	117.59556	10,668 m		
SOVIT	G496	52.80500	35,000 ft	84	-
FIX	AWY-HI	118.78833	10,668 m		
KU	G496	53.72556	35,000 ft	65	MOGOCHA NDB
NDB	AWY-HI	119.76583	10,668 m		
SUDIN	G495	55.82500	35,000 ft	147	-
FIX	AWY-HI	121.98667	10,668 m		
MAKIN	G495	56.81389	35,000 ft	70	-
FIX	AWY-HI	123.13250	10,668 m		
LAGOR	G495	57.48389	35,000 ft	48	-
FIX	AWY-HI	123.95083	10,668 m		
DOKUR	G495	58.23389	35,000 ft	54	-
FIX	AWY-HI	124.91111	10,668 m		
UEEA	G495	58.60430	35,000 ft	27	Aldan
APT	AWY-HI	125.40964	10,668 m		
RUKAN	G495	60.33500	35,000 ft	120	-
FIX	AWY-HI	127.42500	10,668 m		
UEEE	G495	62.09325	35,000 ft	125	Yakutsk
APT	AWY-HI	129.77068	10,668 m		
EDALO	G495	65.27000	35,000 ft	231	-
FIX	AWY-HI	134.70333	10,668 m		
SUKIN	G495	68.67000	35,000 ft	266	-
FIX	AWY-HI	142.03667	10,668 m		
UESO	G495	70.62455	35,000 ft	169	Chokurdah
APT	AWY-HI	147.89789	10,668 m		
UTARO	G494	71.95556	35,000 ft	97	-
FIX	AWY-HI	150.76306	10,668 m		
TURDI	G494	72.60556	35,000 ft	49	-

Ident Type	Via	Lat Lon	Alt	Dist (nm)	Name
FIX	AWY-HI	152.46667	10,668 m		
DILSA	G494	77.00028	35,000 ft	379	-
FIX	AWY-HI	170.00528	10,668 m		
ORVIT	G494	79.00000	35,000 ft	286	-
FIX	AWY-HI	-168.97333	10,668 m		
7900N16500W	-	79.00000	35,000 ft	45	-
LATLON	-	-165.00000	10,668 m		
7900N16000W	-	79.00000	35,000 ft	57	-
LATLON	-	-160.00000	10,668 m		
7900N15500W	-	79.00000	35,000 ft	57	-
LATLON	-	-155.00000	10,668 m		
7800N15000W	-	78.00000	35,000 ft	84	-
LATLON	-	-150.00000	10,668 m		
7700N14500W	-	77.00000	35,000 ft	88	-
LATLON	-	-145.00000	10,668 m		
7600N14000W	-	76.00000	35,000 ft	92	-
LATLON	-	-140.00000	10,668 m		
7500N13500W	-	75.00000	35,000 ft	96	-
LATLON	-	-135.00000	10,668 m		
7400N13000W	-	74.00000	35,000 ft	100	-
LATLON	-	-130.00000	10,668 m		
N7215	-	72.25000	35,000 ft	136	-
FIX	-	-125.00000	10,668 m		
7200N12500W	-	72.00000	34,000 ft	15	-
LATLON	-	-125.00000	10,363 m		
DASPO	-	70.03972	34,000 ft	117	-
FIX	-	-125.00000	10,363 m		
LIDEB	NCA31	68.25000	35,000 ft	337	-
FIX	AWY-HI	-110.00000	10,668 m		
SEDAG	NCA31	66.00000	35,000 ft	269	-
FIX	AWY-HI	-100.00000	10,668 m		
N6510	NCA80	65.16667	34,000 ft	50	-
FIX	AWY-HI	-100.00000	10,363 m		
6500N10000W	-	65.00000	34,000 ft	10	-
LATLON	-	-100.00000	10,363 m		
N6430	-	64.50000	34,000 ft	30	-
FIX	-	-100.00000	10,363 m		
6400N10000W	-	64.00000	34,000 ft	30	-
LATLON	-	-100.00000	10,363 m		
N6345	-	63.75000	34,000 ft	15	-
FIX	-	-100.00000	10,363 m		
N6300	-	63.00000	34,000 ft	45	-
FIX	-	-100.00000	10,363 m		
YEK	NCA28	61.09917	35,000 ft	202	ARVIAT NDB
NDB	AWY-HI	-94.06889	10,668 m		
YQ	BR3	58.76253	17,000 ft	140	CHURCHILL NDB
NDB	AWY-LO	-93.95378	5,182 m		
YYQ	NCAE	58.74175	34,000 ft	5	CHURCHILL VOR-DME
VOR	AWY-HI	-94.13531	10,363 m		
YGX	J89	56.35333	34,000 ft	144	GILLAM NDB
NDB	AWY-HI	-94.70000	10,363 m		
YIV	J89	53.85389	35,000 ft	150	ISLAND LAKE NDB
NDB	AWY-HI	-94.65342	10,668 m		
YVZ	RR10	52.64878	17,000 ft	75	DEER LAKE NDB
NDB	AWY-LO	-94.05706	5,182 m		
YPM	RR10	51.82303	17,000 ft	49	PIKANGIKUM NDB

Ident Type	Via	Lat Lon	Alt	Dist (nm)	Name
NDB	AWY-LO	-93.97314	5,182 m		
RL	RR10	51.06103	17,000 ft	46	RED LAKE NDB
NDB	AWY-LO	-93.78492	5,182 m		
YRL	-	51.07139	35,000 ft	1	RED LAKE VOR-DME
DME	-	-93.76194	10,668 m		
RIONA	J513	50.46708	35,000 ft	58	-
FIX	AWY-HI	-92.56450	10,668 m		
YXL	J513	50.11828	35,000 ft	33	SIOUX LOOKOUT NDB
NDB	AWY-HI	-91.89781	10,668 m		
YQT	J513	48.25378	35,000 ft	147	THUNDER BAY VOR-DME
VOR	AWY-HI	-89.43731	10,668 m		
KJDRS	V133	48.01957	17,000 ft	16	-
FIX	AWY-LO	-89.22756	5,182 m		
FEMOK	V133	47.45758	17,000 ft	39	-
FIX	AWY-LO	-88.73338	5,182 m		
CMX	V133	47.17025	17,000 ft	19	HOUGHTON VOR-DME
VOR	AWY-LO	-88.48539	5,182 m		
EMQIF	V9	46.07796	17,000 ft	66	-
FIX	AWY-LO	-88.18285	5,182 m		
IMT	V9	45.81604	17,000 ft	16	IRON MOUNTAIN VOR-DME
DME	AWY-LO	-88.11214	5,182 m		
AMBEG	V9	45.55546	18,000 ft	15	-
FIX	AWY-LO	-88.12950	5,486 m		
CRAZE	V9	45.30867	18,000 ft	14	-
FIX	AWY-LO	-88.14584	5,486 m		
SPRYS	V9	44.96536	18,000 ft	20	-
FIX	AWY-LO	-88.16833	5,486 m		
GRB	V9	44.55516	18,000 ft	24	GREEN BAY VORTAC
DME	AWY-LO	-88.19486	5,486 m		
BAE	J101	43.11686	34,000 ft	86	BADGER VORTAC
VOR	AWY-HI	-88.28433	10,363 m		
OBK	J101	42.22139	35,000 ft	55	NORTHBROOK VOR-DME
VOR	AWY-HI	-87.95161	10,668 m		
CADIZ	J89	41.16778	35,000 ft	68	-
FIX	AWY-HI	-87.38771	10,668 m		
FATOX	J89	40.80121	35,000 ft	23	-
FIX	AWY-HI	-87.19596	10,668 m		
BVT	J89	40.55611	35,000 ft	15	BOILER VORTAC
VOR	AWY-HI	-87.06933	10,668 m		
MACES	J89	40.00368	35,000 ft	36	-
FIX	AWY-HI	-86.72295	10,668 m		
KURTZ	J89	38.97219	35,000 ft	68	-
FIX	AWY-HI	-86.09265	10,668 m		
IIU	J89	38.10347	35,000 ft	57	LOUISVILLE VORTAC
VOR	AWY-HI	-85.57744	10,668 m		
SWAPP	J89	36.61383	35,000 ft	91	-
FIX	AWY-HI	-85.18223	10,668 m		
RESPE	J89	35.59182	35,000 ft	62	-
FIX	AWY-HI	-84.92009	10,668 m		
WUDEE	J89	34.57876	35,000 ft	62	-
FIX	AWY-HI	-84.66634	10,668 m		
NOONE	J89	34.20184	35,000 ft	23	-
FIX	AWY-HI	-84.57418	10,668 m		
ATL	J89	33.62908	35,000 ft	35	ATLANTA VORTAC
VOR	AWY-HI	-84.43508	10,668 m		
SOONE	J89	33.07740	35,000 ft	35	-

Ident Type	Via	Lat Lon	Alt		Dist (nm)	Name
FIX	AWY-HI	-84.20520	10,668 m			
ICBOD	J89	31.26425	35,000 ft	115	-	
FIX	AWY-HI	-83.47061	10,668 m			
OTK	J89	30.78044	35,000 ft	30	VALDOSTA VOR-DME	
VOR	AWY-HI	-83.27972	10,668 m			
HADDE	V579	30.53179	17,000 ft	15	-	
FIX	AWY-LO	-83.23061	5,182 m			
CTY	V579	29.59900	17,000 ft	56	CROSS CITY VORTAC	
DME	AWY-LO	-83.04879	5,182 m			
KTPA	-	27.97489	0 ft	101	TAMPA INTL	
APT	-	-82.53190	0 m			

WSSS

Region: SINGAPORE
Timezone: ASIA/SINGAPORE
Runways: 2
Elevation: 20 ft / 6 m
Location: 1.355510 103.988000
Magnetic Var: 0.199 E

METAR

WSSS 191000Z 02012KT 9999 VCSH FEW016 FEW018TCU SCT050 30/24 Q1009 NOSIG

TAF

TAF AMD WSSS 190800Z 1908/2012 01010KT 9999 FEW015 SCT020

Frequencies

DEP - 123.70 MHz - SINGAPORE RADAR
DEP - 133.80 MHz - SINGAPORE RADAR
DEP - 135.80 MHz - SINGAPORE RADAR
DEP - 133.35 MHz - SINGAPORE RADAR
DEP - 128.10 MHz - SINGAPORE RADAR
DEP - 124.05 MHz - SINGAPORE RADAR
APP - 124.60 MHz - SINGAPORE APPROACH
TWR - 118.60 MHz - SINGAPORE TOWER
GND - 124.30 MHz - SINGAPORE GROUND
GND - 121.85 MHz - SINGAPORE GROUND
GND - 122.55 MHz - SINGAPORE GROUND
CLD - 119.60 MHz - SINGAPORE DELIVERY
REC - 128.02 MHz -
CHANGI AIRPORT ARRIVAL INFORMATION
DEP - 127.30 MHz - SINGAPORE RADAR
DEP - 133.25 MHz - SINGAPORE RADAR
DEP - 134.20 MHz - SINGAPORE RADAR
DEP - 134.40 MHz - SINGAPORE RADAR
DEP - 255.40 MHz - SINGAPORE RADAR
APP - 120.30 MHz - SINGAPORE APPROACH
APP - 119.30 MHz - SINGAPORE ARRIVAL
TWR - 118.25 MHz - SINGAPORE TOWER
GND - 121.72 MHz - SINGAPORE GROUND
GND - 121.00 MHz - SINGAPORE GROUND EMERGENCY
CLD - 121.65 MHz - SINGAPORE DELIVERY
REC - 128.60 MHz -
CHANGI AIRPORT INFORMATION (D-ATIS)

Runways

Ident	Width	Length	Bearing (true) (mag)	Surface	Threshold Offset	Overrun Length
02L	197 ft 60 m	13,187 ft 4,020 m	22.88 22.68	ASPHALT	0 ft 0 m	0 ft 0 m
20R	197 ft 60 m	13,187 ft 4,020 m	202.88 202.68	ASPHALT	2,428 ft 740 m	390 ft 119 m
02C	197 ft 60 m	13,187 ft 4,020 m	22.88 22.68	ASPHALT	0 ft 0 m	0 ft 0 m
20C	197 ft 60 m	13,187 ft 4,020 m	202.88 202.68	ASPHALT	0 ft 0 m	0 ft 0 m

Approach Navaids

Runway	Type	Ident	Frequency	Range	Bearing (true) (mag)	Slope	Elevation
02C	DME	ICE	108.30 MHz	18 nm 33 km	- -	-	15 ft 15 m
02L	DME	ICW	110.90 MHz	18 nm 33 km	- -	-	20 ft 20 m
20C	DME	ICC	109.70 MHz	18 nm 33 km	- -	-	15 ft 15 m
20R	DME	ICH	108.90 MHz	18 nm 33 km	- -	-	22 ft 22 m
02C	LOC-ILS	ICE	108.30 MHz	18 nm 33 km	22.88 22.68	-	20 ft 20 m
02L	LOC-ILS	ICW	110.90 MHz	18 nm	22.88	-	20 ft

Runway	Type	Ident	Frequency	Range	Bearing (true) (mag)	Slope	Elevation
				33 km	22.68		20 m
20C	LOC-ILS	ICC	109.70 MHz	18 nm	202.88	–	20 ft
				33 km	202.68		20 m
20R	LOC-ILS	ICH	108.90 MHz	18 nm	202.88	–	20 ft
				33 km	202.68		20 m
02C	GS	ICE	108.30 MHz	10 nm	22.88	3.00	20 ft
				19 km	22.68		20 m
02L	GS	ICW	110.90 MHz	10 nm	22.88	3.00	20 ft
				19 km	22.68		20 m
20C	GS	ICC	109.70 MHz	10 nm	202.88	3.00	20 ft
				19 km	202.68		20 m
20R	GS	ICH	108.90 MHz	10 nm	202.88	3.00	20 ft
				19 km	202.68		20 m

KTPA

Region: UNITED STATES
Timezone: AMERICA/NEW_YORK
Runways: 3

Elevation: 26 ft / 8 m
Location: 27.974900 -82.531900
Magnetic Var: 6.181 W

METAR

KTPA 190953Z 01011KT 10SM FEW250 15/03 A3001 RMK AO2 SLP161 T01500028

TAF

TAF AMD KTPA 190902Z 1909/2012 34013G22KT P6SM BKN080 BKN250 FM191100 02012G22KT P6SM FEW250 FM191500 01009KT P6S

Frequencies

REC - 126.45 MHz - D-ATIS
COM - 122.95 MHz - UNICOM
GND - 121.70 MHz - TAMPA GROUND
TWR - 119.50 MHz - TAMPA TOWER
APP - 118.15 MHz - TAMPA APPROACH
APP - 119.65 MHz - TAMPA APPROACH
APP - 118.80 MHz - TAMPA APPROACH

REC - 128.47 MHz - D-ATIS
CLD - 133.60 MHz - CLEARANCE DELIVERY
GND - 121.35 MHz - TAMPA GROUND
TWR - 119.05 MHz - TAMPA TOWER
DEP - 118.15 MHz - TAMPA DEPARTURE
DEP - 119.65 MHz - TAMPA DEPARTURE
DEP - 118.80 MHz - TAMPA DEPARTURE

Runways

Ident	Width	Length	Bearing (true) (mag)	Surface	Threshold Offset	Overrun Length
01L	151 ft 46 m	11,011 ft 3,356 m	1.72 7.90	CONCRETE	0 ft 0 m	417 ft 127 m
19R	151 ft 46 m	11,011 ft 3,356 m	181.72 187.90	CONCRETE	0 ft 0 m	417 ft 127 m
01R	151 ft 46 m	8,308 ft 2,532 m	1.72 7.90	CONCRETE	0 ft 0 m	410 ft 125 m
19L	151 ft 46 m	8,308 ft 2,532 m	181.72 187.90	CONCRETE	0 ft 0 m	410 ft 125 m
10	151 ft 46 m	7,005 ft 2,135 m	91.74 97.92	ASPHALT	505 ft 154 m	187 ft 57 m
28	151 ft 46 m	7,005 ft 2,135 m	271.75 277.93	ASPHALT	0 ft 0 m	141 ft 43 m

Approach Navaids

Runway	Type	Ident	Frequency	Range	Bearing (true) (mag)	Slope	Elevation
19R	DME	IJRT	108.50 MHz	18 nm 33 km	- -	-	12 ft 12 m
01L	LOC-ILS	IAMP	108.90 MHz	18 nm 33 km	1.72 7.90	-	22 ft 22 m
19L	LOC-ILS	ITPA	110.30 MHz	18 nm 33 km	181.72 187.90	-	26 ft 26 m
19R	LOC-ILS	IJRT	108.50 MHz	18 nm 33 km	181.72 187.90	-	26 ft 26 m
01R	LOC-LOC	ITWJ	111.95 MHz	18 nm 33 km	1.72 7.90	-	26 ft 26 m
01L	GS	IAMP	108.90 MHz	10 nm 19 km	1.72 7.90	3.00	26 ft 26 m
19L	GS	ITPA	110.30 MHz	10 nm 19 km	181.72 187.90	3.00	26 ft 26 m

Runway	Type	Ident	Frequency	Range	Bearing (true) (mag)	Slope	Elevation
19R	GS	IJRT	108.50 MHz	10 nm 19 km	181.72 187.90	3.00	26 ft 26 m