#### **AD 2 AERODROMES**

## **RJCH AD 2.1 AERODROME LOCATION INDICATOR AND NAME**

## **RJCH - HAKODATE**

#### RJCH AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	414612N/1404919E			
2	Direction and distance from (city)	7.6KM (4.1NM), BRG 095° from Hakodate JR Station			
3	Elevation/ Reference temperature	111.9ft / 25°C (2004-2008)			
4	Geoid undulation at AD ELEV PSN	112.5FT			
5	MAG VAR/ Annual change	9°W (2009) / 1.2'E			
6	AD Administration, address, tele- phone, telefax, telex, AFS, e-mail and/or Web-site addresses	Hokkaido Airports Co.,Ltd. Hakodate Airport Office 511, Takamatsu-cho, Hakodate, Hokkaido TEL: 0138-57-1620 FAX:0138-57-1621			
7	Types of traffic permitted (IFR/VFR)	IFR/VFR			
8	Remarks	Hakodate Airport Office(Civil Aviation Bureau) 511, Takamatsu-cho, Hakodate, Hokkaido TEL:0138-57-1737, 0138-57-1738(OPS) FAX:0138-59-4745 AFS:RJCHYFYX e-mail and web-site:Nil			

### **RJCH AD 2.3 OPERATIONAL HOURS**

1	AD Administration	2230 - 1130			
2	Customs and immigration	INTL SKED FLT hours only			
3	Health and sanitation	Quarantine(human): 2330-0815 Quarantine(animal): 2330-0800 Quarantine(plant): INTL SKED FLT hours only			
4	AIS Briefing Office	2230 - 1130			
5	ATS Reporting Office(ARO)	Nil			
6	MET Briefing Office	H24 (NEW CHITOSE)			
7	ATS	2230 - 1130			
8	Fuelling	2230 - 1130			
9	Handling	2230 - 1130			
10	Security	2230 - 1130			
11	De-icing	Nil			
12	Remarks	Nil			

## **RJCH AD 2.4 HANDLING SERVICES AND FACILITIES**

1	Cargo-handling facilities	All the modern institutions that deal with the weight thing to a Boeing747 type freighter
2	Fuel/ oil types	Fuel grades: JET A-1 Oil grades: W80, MJO-2
3	Fuelling facilities/ capacity	Fuel Truck Refuelling
4	De-icing facilities	Nil
5	Hangar space for visiting aircraft	Nil
6	Repair facilities for visiting aircraft	Nil
7	Remarks	Nil

#### **RJCH AD 2.5 PASSENGER FACILITIES**

1	Hotels	Hotels in Hakodate city			
2	Restaurants	Available , Not continuous			
3	Transportation	Busses and Taxis			
4	Medical facilities	Hospitals in Hakodate city			
5	Bank and Post Office	Bank in Hakodate city, Post office in Hakodate city			
6	Tourist Office	Tourist office in Hakodate city			
7	Remarks	Nil			

## **RJCH AD 2.6 RESCUE AND FIRE FIGHTING SERVICES**

1	AD category for fire fighting	CAT 9
2	Rescue equipment	Fire engines
3	Capability for removal of disabled aircraft	Nil
4	Remarks	Nil

### **RJCH AD 2.7 SEASONAL AVAILABILITY-CLEARING**

1	Types of clearing equipment	Snow removed equipment: a)rotatry x 3 b)snow plows x 4 c)snow sweeper x 4 d)urea sprinkler equipment x 1		
2	Clearance priorities	1.RWY, 2.TWY, 3.APRON		
3	Remarks	Seasonal availability: All seasons.		

## **RJCH AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA**

1	Apron surface and strength	Surface: Concrete Strength: PCN 74/F/B/X/T			
2	Taxiway width, surface and strength	Width: P1 - P6 : 23m T1, T7 : 28.5m T2 - T6 : 34m Surface: All TWY(except P2 and P3 behind SPOT1-10) : Asphalt Concrete TWY P2 and P3 behind SPOT1-10 : Concrete Strength: All TWY(except P2 and P3 behind SPOT1-10) : PCN 98/F/C/X/T TWY P2 and P3 behind SPOT1-10 : PCN 74/F/B/X/T			
3	ACL and elevation	Not available			
4	VOR checkpoints	Not available			
5	INS checkpoints	Spot NR  1			
6	Remarks	Nil			

#### RJCH AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

ACFT stand ID signs:NR.3, NR.4 and NR.5

	TWY guide lines and Visual docking/ parking guidance system of aircraft stands	ACFT stand taxi lane:Nil Visual docking guidance system :Nil
2	RWY and TWY markings and LGT	RWY: RWY12/30 (Marking) RWY designation, RWY CL, RWY THR,
3	Stop bars	Nil
4	Remarks	(Marking) Overrun area (LGT) Apron flood LGT

1 Use of aircraft stand ID signs,

#### **RJCH AD 2.10 AERODROME OBSTACLES**

## SEE ATTACHED CHARTS

In approach/TKOF areas

RWY/Area affected	Obstacle type	Coordinates	Elevation	Markings/ LGT	Remarks
RWY30 Light Facility 414557.2N/140		414557.2N/1405024.8E	152FT		
RWY30 Light Facility		414556.5N/1405027.3E	152FT		
RWY30 Antenna		414556.0N/1405028.2E	160FT		
RWY30	LOC	414555.3N/1405032.1E	165FT		
RWY30	Building	414556.7N/1405033.0E	164FT		
RWY30	Fence	414555.5N/1405033.5E	161FT		
RWY30	Tree	414551.5N/1405033.2E	171FT		
RWY30	Tree	414550.4N/1405035.0E	169FT		
RWY30	Light Facility	414554.0N/1405037.1E	162FT		
RWY30	Light Facility	414553.4N/1405039.6E	165FT		
RWY30	Light Facility	414552.8N/1405042.1E	168FT		
RWY30	Light Facility	414552.1N/1405044.5E	171FT		
RWY30	Post	414551.9N/1405045.7E	176FT		
RWY30	Light Facility	414551.6N/1405046.9E	174FT		
RWY30	Light Facility	414551.0N/1405049.3E	177FT		
RWY30	Tree	414549.6N/1405049.2E	181FT		
RWY30	Light Facility	414550.4N/1405052.0E	180FT		
RWY30	Light Facility	414549.8N/1405054.4E	183FT		
RWY30	Light Facility	414549.2N/1405056.9E	186FT		
RWY30	Light Facility	414548.6N/1405059.4E	189FT		
RWY12	Light Facility	414628.2N/1404816.4E	93FT		
RWY12	Fence	414628.7N/1404814.0E	95FT		
RWY12	Post	414633.5N/1404809.4E	104FT		
RWY12	Post	414633.1N/1404807.6E	101FT		
RWY12	Post	414632.3N/1404804.9E	105FT		
RWY12	Post	414634.8N/1404805.3E	106FT		
RWY12	Post	414633.5N/1404804.3E	106FT		
RWY12	Tree	414630.0N/1404801.3E	102FT		
RWY12	Rod	414640.3N/1404736.1E	132FT		
RWY12	Rod	414645.2N/1404734.8E	162FT		
RWY12	Rod	414646.0N/1404733.7E	164FT		
RWY12	Rod	414646.8N/1404732.0E	164FT		
RWY12	Rod	414643.6N/1404658.5E	171FT		
RWY12	Post	414633.8N/1404811.5E	100FT		
RWY12	Building	414635.5N/1404807.7E	100FT		
RWY12	Post	414635.9N/1404806.7E	111FT		
RWY12	Post	414635.7N/1404805.2E	105FT		
RWY12	Antenna	414637.3N/1404805.9E	103FT		
RWY12	Post	414636.5N/1404805.5E	110FT		
RWY12	Chimney	414637.3N/1404804.9E	111FT		
RWY12	Lamppost	414626.9N/1404759.8E	97FT		
RWY12	Building	414628.1N/1404750.0E	125FT		

RWY/Area affected	Obstacle type	Coordinates	Elevation	Markings/ LGT	Remarks
RWY12	Rod	414633.0N/1404720.2E	170FT		
	Spire	414805.6N/1405049.0E	464FT		
	Spire	414811.5N/1404802.8E	293FT		
	Spire	414812.6N/1405042.4E	540FT		
	Rod	414713.0N/1405202.5E	338FT		
	Spire	414817.5N/1404804.3E	292FT		
	Spire	414819.4N/1405035.8E	562FT		
	Antenna	414834.3N/1404848.9E	424FT		
	Spire	414826.4N/1405033.8E	559FT		
	Spire	414822.2N/1404741.2E	344FT		
	chimney	414824.9N/1404743.9E	327FT		
	Spire	414830.4N/1404756.8E	362FT		
	Building	414830.1N/1404752.9E	340FT		
	Spire	414826.1N/1404740.3E	369FT		
	Spire	414842.2N/1405026.8E	541FT		
	·				
	Antenna	414849.6N/1404847.6E	438FT		
	Spire	414843.6N/1404747.0E	416FT		
	Spire	414858.3N/1405002.8E	595FT		
	Spire	414905.8N/1404952.3E	618FT		
	Spire	414851.8N/1404739.5E	453FT		
	Spire	414912.0N/1404943.6E	702FT		
	Spire	414915.6N/1404932.4E	570FT		
	Spire	414900.2N/1404736.9E	488FT		
	Spire	414917.8N/1404920.0E	530FT		
	Spire	414919.5N/1404906.0E	654FT		
	Spire	414921.4N/1404850.7E	629FT		
	Spire	414905.9N/1404735.2E	491FT		
RWY 12	Rod	414643.3N/1404704.1E	174FT		
	Building	414825.4N/1405040.2E	573FT		
_	Antenna	414854.4N/1404843.5E	437FT		
	Post	414835.0N/1404917.1E	413FT		
	Tree	414839.8N/1404912.7E	446FT		
	Building	414847.3N/1404850.0E	407FT		Above the conical surface
	Building	414847.8N/1404833.6E	403FT		Above the conical surface
	Building	414854.4N/1404856.4E	427FT		Above the conical surface
	Building	414820.0N/1405000.0E	427FT 423FT	- / LIL	Above the conical surface
		414830.7N/1405000.0E		- / LIL - / -	
	Building		398FT		Above the conical surface
	Spire	414820.2N/1404852.4E	414FT	Marking / LIL	Above the conical surface
	Spire	414829.1N/1404859.3E	406FT	Marking / -	Above the conical surface
	Spire	414830.4N/1404906.0E	394FT	-/-	Above the conical surface
	Spire	414833.4N/1404854.2E	388FT	Marking / -	Above the conical surface
	Spire	414841.1N/1404851.4E	391FT		Above the conical surface
	Spire	414830.9N/1404919.9E	387FT	Marking / LIL	Above the conical surface
	Spire	414822.3N/1405031.8E	480FT	-/-	Above the conical surface
	Spire	414820.4N/1405036.0E	524FT	-/-	Above the conical surface
	Spire	414815.0N/1405041.3E	545FT	Marking / -	Above the conical surface
				-	

RWY/Area affected	Obstacle type	Coordinates	Elevation	Markings/ LGT	Remarks
	Spire	414807.6N/1405048.9E	476FT	Marking / -	Above the conical surface
	Spire	414800.5N/1405055.3E	406FT	Marking / -	Above the conical surface
	Spire	414811.5N/1404803.2E	350FT	Marking / -	Above the conical surface
	Building	414831.3N/1405009.2E	398FT	-/-	Above the conical surface
	Spire	414826.3N/1404757.7E	363FT	Marking / -	Above the conical surface
	Spire	414818.6N/1404807.1E	378FT	Marking / LIL	Above the conical surface

## In circling area and at AD

Obstacle type	Coordinates	Elevation	Markings/ LGT	Remarks
Building	414632.7N/1404818.4E	102FT		
Post	414634.3N/1404815.8E	114FT		
Post	414637.4N/1404807.7E	106FT		
Building	414602.1N/1405028.7E	161FT		
Lamppost	414637.9N/1404808.9E	117FT		
Post	414635.4N/1404816.0E	126FT		
Post	414635.0N/1404819.8E	123FT		
Post	414636.1N/1404816.0E	126FT		
Post	414634.4N/1404822.6E	117FT		
Fence	414604.3N/1405030.7E	182FT		
Equipment	414616.2N/1404941.6E	168FT		
Post	414637.4N/1404816.0E	128FT		
ITV	414623.9N/1404914.3E	139FT		
ABN	414633.3N/1404844.6E	185FT		
Light Pole	414628.3N/1404907.9E	192FT		
Light Pole	414630.8N/1404857.0E	191FT		
Light Pole	414629.8N/1404902.2E	192FT		
Light Pole	414631.7N/1404854.6E	190FT		
Light Pole	414627.4N/1404913.1E	192FT		
Light Pole	414627.9N/1404911.0E	192FT		
Fence	414612.8N/1405014.8E	241FT		
Fence	414615.3N/1405004.4E	246FT		
Rod	414630.3N/1404903.8E	219FT		
Tree	414618.6N/1404830.4E	116FT		
Tree	414616.0N/1404840.9E	139FT		

Obstacle type	Coordinates	Elevation	Markings/ LGT	Remarks
Tree	414603.3N/1404932.7E	142FT		
Building	414629.9N/1404711.2E	182FT		
Antenna	414603.2N/1404929.2E	147FT		
Rod	414621.0N/1404757.2E	166FT		
Signboard	414618.8N/1404810.9E	136FT		
Antenna	414559.6N/1404919.4E	166FT		
Equipment	414631.8N/1404909.0E	227FT		
Antenna	414549.6N/1404937.0E	226FT		
Equipment	414626.5N/1404957.2E	292FT		
Post	414633.2N/1404959.4E	260FT		
Signboard	414632.8N/1405000.6E	261FT		
Building	414633.9N/1405001.9E	270FT		
Building	414619.2N/1405010.5E	288FT		
Post	414623.4N/1405014.3E	298FT		
Antenna	414539.0N/1405005.7E	206FT		
Antenna	414816.0N/1404947.4E	407FT		
Rod	414815.4N/1404958.4E	438FT		
Spire	414754.3N/1405100.0E	370FT		
Antenna	414819.1N/1404905.8E	401FT		
chimney	414818.4N/1405001.7E	458FT		
Antenna	414820.0N/1404905.0E	401FT		Above the horizontal surface
Post	414622.7N/1405024.0E	273FT		
Antenna	414622.1N/1405025.0E	314FT		
Post	414620.7N/1405026.7E	262FT		
Post	414629.5N/1405029.6E	292FT		
Tree	414647.6N/1405024.0E	302FT		
Building	414716.9N/1404921.4E	280FT		
Spire	414632.5N/1405043.2E	298FT		
Spire	414644.0N/1405039.6E	317FT		
Spire	414703.0N/1405031.9E	326FT		
Post	414653.9N/1405043.5E	322FT		
Building	414629.4N/1405102.3E	255FT		
Tree	414729.4N/1404959.6E	334FT		
Spire	414733.3N/1405000.6E	321FT		
Antenna	414737.0N/1404959.0E	377FT		
Spire	414740.1N/1404946.4E	378FT		
Spire	414614.6N/1405121.2E	257FT		
Spire	414742.9N/1404935.0E	400FT		
Spire	414606.3N/1405123.6E	253FT		
Building	414737.9N/1405011.4E	313FT		
Spire	414743.6N/1404952.0E	377FT		
Rod	414747.6N/1404928.6E	350FT		
Lamppost	414731.4N/1405037.0E	315FT		
Building	414751.4N/1404952.6E	348FT		
Spire	414754.7N/1404843.8E	351FT		
Spire	414722.9N/1405108.6E	318FT		

Obstacle type	Coordinates	Elevation	Markings/ LGT	Remarks
Antenna	414802.1N/1404939.9E	411FT		
Spire	414743.6N/1405107.5E	301FT		
Post	414619.7N/1405050.8E	269FT		
Rod	414742.2N/1404927.7E	328FT		
Post	414627.4N/1405044.8E	267FT		
Spire	414700.7N/1405033.4E	327FT		
Spire	414731.5N/1405108.2E	323FT		
Rod	414803.5N/1404947.0E	430FT		
Antenna	414740.0N/1404942.0E	383FT		Above the horizontal surface
Building	414804.3N/1404943.2E	381FT	-/-	Above the horizontal surface
Spire	414811.3N/1404845.5E	341FT	Marking / -	Above the horizontal surface
Spire	414752.8N/1405102.4E	304FT	-/-	Above the horizontal surface
Spire	414743.8N/1405108.2E	298FT	Marking / -	Above the horizontal surface
Spire	414730.6N/1405109.1E	309FT	-/-	Above the horizontal surface
Spire	414807.0N/1404806.1E	309FT	-/-	Above the horizontal surface
Spire	414803.6N/1404816.9E	313FT	Marking / -	Above the horizontal surface
Spire	414801.7N/1404823.0E	314FT	Marking / LIL	Above the horizontal surface
Antenna	414748.6N/1404929.7E	341FT	-/-	Above the horizontal surface
Antenna	414806.3N/1404945.3E	407FT	-/-	Above the horizontal surface
Building	414804.1N/1404943.8E	372FT	-/-	Above the horizontal surface
Spire	414826.6N/1405028.7E	549FT	-/-	Above the conical surface
Spire	414833.7N/1404931.0E	386FT	Marking / -	Above the conical surface
Spire	414837.1N/1404940.3E	340FT	Marking / LIL	Above the conical surface
Antenna	414851.9N/1404847.9E	460FT	Marking / -	Above the conical surface
Antenna	414827.7N/1405012.4E	406FT	-/-	Above the conical surface
Antenna	414748.1N/1404930.3E	311FT	-/-	Above the horizontal surface
Building	414834.4N/1405013.5E	418FT	-/-	Above the conical surface
Building	414828.7N/1405010.1E	408FT	-/-	Above the conical surface
Antenna	414822.4N/1404742.7E	330FT	-/-	Above the conical surface
Antenna	414817.2N/1404950.9E	392FT	-/-	Above the horizontal surface
Antenna	414821.6N/1404743.9E	349FT	-/-	Above the conical surface
Antenna	414821.5N/1404744.0E	349FT	-/-	Above the conical surface
Antenna	414816.0N/1404948.0E	400FT	-/-	Above the horizontal surface
Antenna	414904.0N/1404847.0E	479FT	-/-	Above the conical surface
Building	414902.0N/1404854.0E	465FT	-/-	Above the conical surface
Solar power plant	414835.3N/1404833.6E	375FT	-/-	Above the conical surface
Rod	414818N1404807E	303FT	-/-	Above the conical surface
Rod	414818N1404808E	306FT	-/-	Above the conical surface
Rod	414819N1404809E	308FT	-/-	Above the conical surface
Rod	414819N1404810E	314FT	-/-	Above the conical surface

## **RJCH AD 2.11 METEOROLOGICAL INFORMATION PROVIDED**

1	Associated MET Office	NEW CHITOSE
2	Hours of service MET Office outside hours	H24 (NEW CHITOSE)
3	Office responsible for TAF preparation Periods of validity	NEW CHITOSE 30 Hours
4	Trend forecast Interval of issuance	Nil
5	Briefing/consultation provided	Briefing is available upon inquiry at NEW CHITOSE
6	Flight documentation Language(s) used	C En
7	Charts and other information available for briefing or consultation	$ \begin{aligned} &S_6, U_{85}, U_7, U_5 U_3, U_{25}, U_2/Tr, P_S, P_5, P_3, P_{25}, P_{SWE}, P_{SWF}, P_{SWG}, P_{SWI},\\ &P_{SWM}, P_{SW}(\text{domestic}),\;\; E, C, W_E, W_F, W_G, W_I, W, N \end{aligned} $
8	Supplementary equipment available for providing information	Nil
9	ATS units provided with information	TWR, APP, ATIS
10	Additional information(limitation of service, etc.)	Nil

#### **RJCH AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS**

Designations RWY NR	TRUE BRG	Dimensions of RWY(M)	Strength(PCN) and surface of RWY	THR coordinates THR geoid undulatio	THR elevation and highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
12	107.98°	3000×45	PCN 98/F/C/X/T Asphalt Concrete	414627.62N 1404817.61E 112.6FT	THR ELEV 92.2ft TDZ ELEV 103ft
30	287.98°	3000×45	PCN 98/F/C/X/T Asphalt Concrete	414557.54N 1405021.00E 112.5FT	THR ELEV 151ft
Slope	of RWY	Strip Dimensions(M)	RESA (C Dimensi		Remarks
7 10		10	11		14
see attached figure		3120×300	192 × (MNM:102 MAX:300)*		RWY grooving 3000X45m
		3120×300	47 × (MNM:21 *For detail, ask airp		
					RWY 30
RWY 12					150.9ft
92.2ft 0.38	98.4ft 3% 0.3	99.4ft	J.39 <sup>70</sup>	0.76%	0.80%
0m	500m	600m	1300m	1500m 1750m	3000m

#### **RJCH AD 2.13 DECLARED DISTANCES**

RWY Designator	TORA (m)	TODA (m)	ASDA (m)	LDA (m)	Remarks
1	2	3	4	5	6
12	3000	3000	3000	3000	Nil
30	3000	3000	3000	3000	Nil

## **RJCH AD 2.14 APPROACH AND RUNWAY LIGHTING**

RWY Designator	APCH LGT type LEN INTST	RTHL Color WBAR	PAPI (VASIS) Angle DIST FM THR MEHT	RTZL LEN	RCLL LEN Spacing Color INTST	REDL LEN Spacing Color INTST	RENL Color WBAR	STWL LEN Color
1	2	3	4	5	6	7	8	9
12	PALS (CAT I) 640m LIH	Green Green	PAPI 3.0°/Left 384m 65ft	900m	3000m 30m Coded Color (White/Red) LIH	3000m 60m Coded Color (White/Yellow) LIH	Red	Nil (*2)
30	SALS (*1) 420m LIH	Green -	PAPI 3.0°/Left 538m 74ft	-	3000m 30m Coded Color (White/Red) LIH	3000m 60m Coded Color (White/Yellow) LIH	Red	Nil (*2)
				Remarks				
				10				

### **RJCH AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY**

1	ABN/IBN location, characteristics and hours of operation	ABN: 414633N/1404843E, ALTN FLG(2)WG EV 4.3sec , HO
2	LDI location and LGT Anemometer location and LGT	LDI : Nil Anemometer: RWY12 400m WSW from ABN, LGTD RWY30 2350m ESE from ABN, LGTD
3	TWY edge and center line lighting	TWY edge and center line lights installed, see AD2.9
4	Secondary power supply/ switch-over time	Within 1sec: REDL, RENL, RTHL, WBAR, RCLL, Overrun area edge LGT Within 15sec: Other lights
5	Remarks	WDI LGT

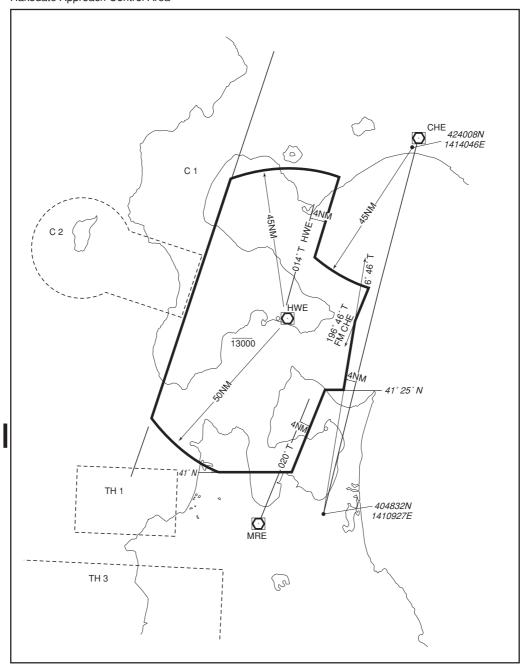
#### **RJCH AD 2.16 HELICOPTER LANDING AREA**

Nil	

## **RJCH AD 2.17 ATS AIRSPACE**

	Designation and lateral limits	Vertical limits (ft)	Airspace classification	ATS unit call sign Language	Remarks
	1	2	3	4	6
HAKODATE CTR	Area within a radius of 5 nm of HAKODATE ARP (41°46'N140°49'E)	3000	D	HAKODATE TWR En	
HAKODATE ACA	SEE RJCH ATTACHED CHART		E	HAKODATE APP HAKODATE DEP HAKODATE RADAR En	

函館進入管制区 Hakodate Approach Control Area



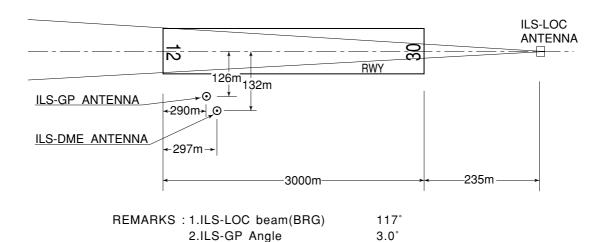
## **RJCH AD 2.18 ATS COMMUNICATION FACILITIES**

Service designation	Call sign	Frequency	Hours of operation	Remarks
1	2	3	4	5
TWR	Hakodate Tower	118.35MHz(1)	2230 - 1130	(1)Primary (2)Secondary
		126.2MHz(2)		,
		121.5 MHz(É)		
		243.0 MHz(E)		
		,		
APP/ASR	Hakodate	119.0 MHz	2230 - 1130	
	Approach/Radar	121.0 MHz		
		121.5MHz(E)		
		243.0MHz(E)		
		, ,		
DEP	Hakodate Departure	127.9 MHz	2230 - 1130	
	., ., ., .,	121.0 MHz		
		121.5MHz(E)		
		243.0MHz(E)		
		. ,		
ATIS	Hakodate Airport	126.6MHz	2230 - 1130	
7113	riakodale Aliport	120.01011 12	2230 - 1130	

#### **RJCH AD 2.19 RADIO NAVIGATION AND LANDING AIDS**

Type of aid (VOR declination)	ID	Frequency	Hours of operation	Position of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
VOR (9°W/2014)	HWE	112.3MHz	H24	414626.51N/ 1404955.98E		VOR unusable: 020°-030° beyond 30nm BLW 6000ft. 030°-040° beyond 35nm BLW 5000ft. 070°-090° beyond 25nm BLW 5000ft. 090°-100° beyond 35nm BLW 5000ft. 100°-110° beyond 20nm BLW 4000ft. 200°-240° beyond 35nm BLW 5000ft. 340°-350° beyond 35nm BLW 6000ft. 350°-010° beyond 15nm BLW 6000ft.
DME	HWE	1157MHz (CH-70X)	H24	414626.51N/ 1404955.98E	300ft	DME unusable: 000°-020° beyond 25nm BLW 6000ft. 100°-110° beyond 35nm BLW 4000ft. 340°-360° beyond 30nm BLW 6000ft.
ILS-LOC 12	IHL	109.3MHz	2230 - 1130	414555.24N/ 1405030.81E		LOC:235m (771ft) away FM RWY 30 THR, BRG (MAG) 117°
ILS-GP 12	-	332.0MHz	2230 - 1130	414620.82N/ 1404827.84E		GP: 290m (951ft) FM inside RWY 12 THR, 126m (413ft) S of RCL. GP 3.0° HGT of ILS Ref datum 15.5m(51ft).
ILS-DME 12	IHL	991MHz (CH-30X)	2230 - 1130	414620.53N/ 1404828.07E	111ft	DME:297m(974ft) inside FM RWY 12 THR, 132m(433ft) S of RCL.
MSAS		1575.42MHz	H24			Transmitting antennas are satellite based.

## ILS for RWY12



15.5m(51.0ft)

33.9m(111ft)

3.HGT of ILS REF datum

4.ELEV of ILS-DME

AIP Japan HAKODATE

## **RJCH AD 2.20 LOCAL TRAFFIC REGULATIONS**

<ol> <li>Airport regulations</li> </ol>	1	ı. A	Nirport	regu	lations
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	PPR Prior permission is required for all tra except scheduled and/or emergency Tel: Hokkaido Airports Co.,Ltd. Hako	/ flight.		-	
. Tax	kiing to and from stands				
			Nil		
. Pai	rking area for small aircraft(General a	viation)			
			Nil		
. Paı	rking area for helicopters				
Ī			Nil		
. Apı	ron - taxiing during winter conditions				
			Nil		
	Wing tip clearance at the TWY inte Wing tip clearance at the TWY inte aircraft taxiing behind it are as follows When B772 holding at the stop mar	rsection betwee	n the aircraft ho	olding at the sto	p marking on the TWY and the other
	Wing Span (WS) of aircraft taxiing on TWY P1-P2 or P5-P6	WS=<35.4m	35.4m <ws =&lt;52.4m</ws 	WS >52.4m	Legend: *A : wing tip clearance >= 15m
	Wing tip clearance	*A	*B	*C	*B : 6.5m =< wing tip clearance < 15m *C : wing tip clearance < 6.5m
. Sch	nool and training flights - technical tes	t flights - use of	runways		
			Nil		
. Hel	licopter traffic - limitation				
			Nil		
. Rei	moval of disabled aircraft from runway	/S			
ſ			Nil		
L					

#### **RJCH AD 2.21 NOISE ABATEMENT PROCEDURES**

#### 1.Noise abatement Operating Procedures

For all jet aircraft, in order to reduce aircraft noise in the vicinity of airport, the following procedures shall be applied unless compliance of the procedures adversely affects the safety of aircraft operations. In case that the aircraft is unable to take these procedures, pilots should execute alternative procedures which are considered to be practically equivalent.

- (1) For take-off from RWY30: Steepest Climb Procedure
- (2) For landing to RWY12: Delayed Flap Approach Procedure and Reduced Flap Setting Procedure
- (3) Reverse Thrust: Nil
- 2. Preferential Runways Procedures: Nil
- 3. Noise Preferential Routes: Nil

#### 1. 騒音軽減運航方式

すべてのジェット機に対して、空港周辺における航空機騒音軽減のため、運航の安全に支障のない範囲で、以下の方式が適用される。ただし、これらの方式によることができない航空機は実効的にこれらと同等と認められる代替方式を実施するものとする。

(1)離陸について(滑走路30)

急上昇方式

(2) 着陸について (滑走路 12)

ディレイド・フラップ進入方式及び低フラップ角着陸方式

(3) リバース・スラストについて

なし

#### 2. 優先滑走路方式

なし

#### 3. 優先飛行経路

なし

#### **RJCH AD 2.22 FLIGHT PROCEDURES**

#### 1. TAKE OFF MINIMA

	RWY ACF		REDL 8	& RCLL	_	RCLL or narking	NIL (DAYTIME ONLY)		
		CAI	RVR	VIS	RVR	VIS	RVR	VIS	
Multi-Engine ACFT with	12	A,B, C,D	400m	400m	400m	400m	-	500m	
TKOF ALTN AP Filed	30	A,B, C,D	-	400m	-	400m	-	500m	
OTHER	12 30	A,B, C,D							

ı

#### 2. Trajectorized Airport Traffic Data Processing System (TAPS)

Aircraft flying under control of Hakodate approach control in the approach control area will be instructed to reply with discrete code on Mode A/3 and Mode C

If an aircraft with non-discrete capability be instructed to reply with the discrete code, it shall report a controller accordingly. 函館アプローチの指示のもとに、当該進入管制区を飛行する航空機は、モード A/3 の二次レーダー個別コード及びモード C による応答を指示される。

二次レーダー個別コードを搭載していない航空機が当該コードによる応答を指示された場合は、管制官に対してその旨 通報すること。

#### 3. Lost communication procedures for arrival aircraft under radar navigational guidance

If radio communications with HAKODATE Approach/Radar are lost for 1 minute, squawk Mode A/3 Code 7600 and;

- (I) 1. Contact HAKODATE Tower.
  - 2. If unable, proceed in accordance with visual flight rules.
  - 3. If unable, proceed to HAKODATE VOR/DME at last assigned altitude or 5,000 feet whichever is higher, and execute instrument approach
- (II) Procedures other than above will be issued when situation required.

#### **RJCH AD 2.23 ADDITIONAL INFORMATION**

Nil

#### **RJCH AD 2.24 CHARTS RELATED TO AN AERODROME**

Aerodrome Chart

Aircraft Parking/Docking Chart

Aerodrome Obstacle Chart-ICAO type A (RWY12)

Aerodrome Obstacle Chart-ICAO type A (RWY30)

Aerodrome Obstacle Chart-ICAO type B

Standard Departure Chart-Instrument (HAKODATE SOUTH, HAKODATE REVERSAL, TAPPI, ESASI, TIKYU)

Standard Departure Chart-Instrument (TSUGARU-RNAV)

Standard Arrival Chart-Instrument (YAKEI-RNAV)

Standard Arrival Chart-Instrument (PATRA-RNAV)

Instrument Approach Chart (ILS Z or LOC Z RWY12)

Instrument Approach Chart (ILS Y or LOC Y RWY12)

Instrument Approach Chart (VOR RWY30)

Instrument Approach Chart (VOR RWY12)

Instrument Approach Chart (RNAV(GNSS) Z RWY30)

Instrument Approach Chart (RNAV(RNP) Y RWY30)

Instrument Approach Chart (RNAV(RNP) RWY12)

Other Chart (Visual REP)

Other Chart (LDG CHART)

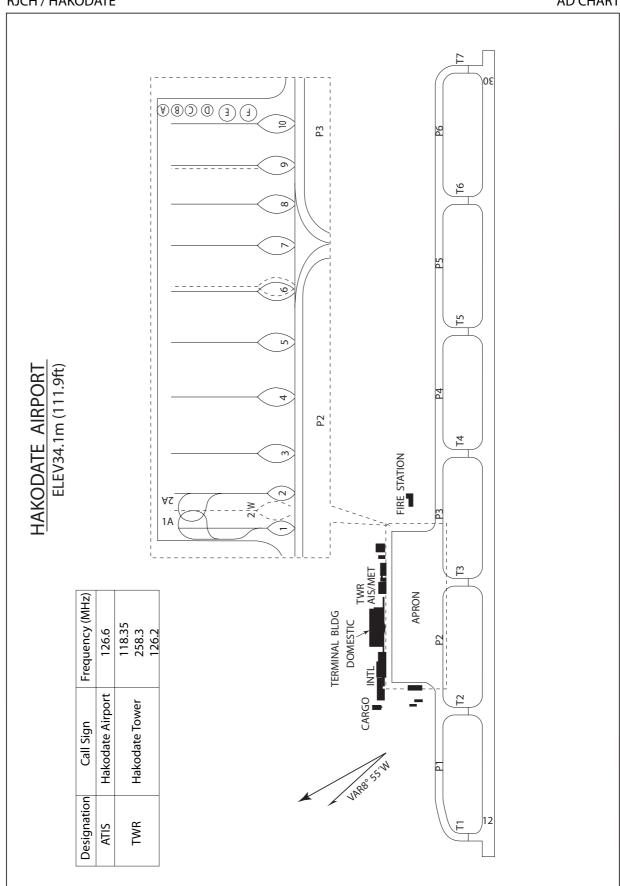
Other Chart (MVA CHART)

#### **AERODROME CHART**



#### AIRCRAFT PARKING/DOCKING CHART

RJCH / HAKODATE **AD CHART** 



#### AIP Japan HAKODATE

# AERODROME OBSTACLE CHART - ICAO TYPE A (OPERATING LIMITATIONS)

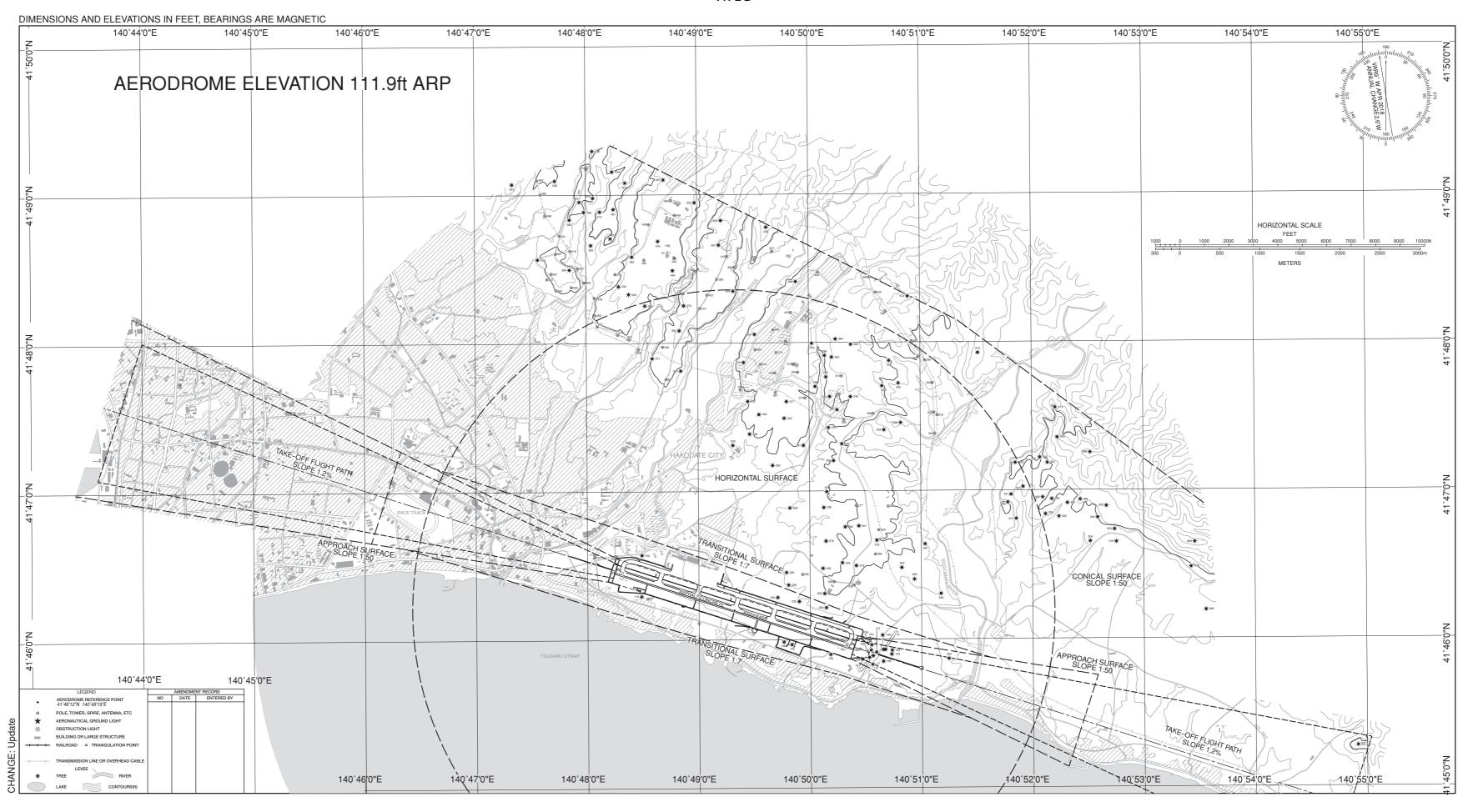


# AERODROME OBSTACLE CHART - ICAO TYPE A (OPERATING LIMITATIONS)

DIMENSIONS AND ELEVATIONS IN FEET, BEARINGS ARE MAGNETIC



# AERODROME OBSTACLE CHART - ICAO



#### RJCH / HAKODATE

SID and TRANSITION

## HAKODATE SOUTH SEVEN DEPARTURE

RWY 12: Climb RWY HDG until 600FT, turn right HDG239°...

RWY 30: Climb RWY HDG until 500FT, turn left HDG149°...

...to intercept and proceed via HWE R194 to MRE VOR/DME.

Cross HWE R194/30.0DME at or above 6000FT.

Note RWY12: 4.0% climb gradient required up to 1300FT.

OBST ALT 919FT located at 3.43NM 105° FM end of RWY12.

RWY30: 5.4% climb gradient required up to 1600FT.

OBST ALT 1296FT located at 4.63NM 267° FM end of RWY30.

#### HAKODATE REVERSAL FIVE DEPARTURE

RWY 12: Climb RWY HDG until 600FT, turn right HDG239°...

RWY 30: Climb RWY HDG until 500FT, turn left HDG149°...

...to intercept and proceed via HWE R194 to 3000FT, turn right direct to HWE VOR/DME.

Cross HWE VOR/DME at or above 5000FT.

Note RWY12: 4.0% climb gradient required up to 1300FT.

OBST ALT 919FT located at 3.43NM 105° FM end of RWY12.

RWY30: 5.4% climb gradient required up to 1600FT.

OBST ALT 1296FT located at 4.63NM 267° FM end of RWY30.

## TAPPI SEVEN DEPARTURE

RWY 12: Climb RWY HDG until 600FT, turn right HDG272°...

RWY 30: Climb RWY HDG until 500FT, turn left HDG182°...

...to intercept and proceed via HWE R227 to TAPPI. Cross TAPPI at or above FL170.

Note RWY12: 4.0% climb gradient required up to 1300FT.

OBST ALT 919FT located at 3.43NM 105° FM end of RWY12.

RWY30: 5.4% climb gradient required up to 1600FT.

OBST ALT 1296FT located at 4.63NM 267° FM end of RWY30.

#### YUWA TRANSITION

From over TAPPI, proceed via UWE R008 to UWE VOR/DME.

Cross UWE R008/21.0DME at assigned altitude.

#### **ESASI SIX DEPARTURE**

RWY 12: Climb RWY HDG until 600FT, turn right HDG340°...

RWY 30: Climb RWY HDG until 700FT, turn right,...

...to intercept and proceed via HWE R295 to ESASI.

Cross ESASI at or above 5000FT.

Note RWY12: 4.9% climb gradient required up to 1300FT.

OBST ALT 919FT located at 3.43NM 105° FM end of RWY12.

#### TIKYU ONE DEPARTURE

RWY 12: Climb RWY HDG until 600FT, turn left,...

RWY 30: Climb RWY HDG until 600FT, turn left HDG073°...

...to intercept and proceed via HWE R118 to TIKYU.

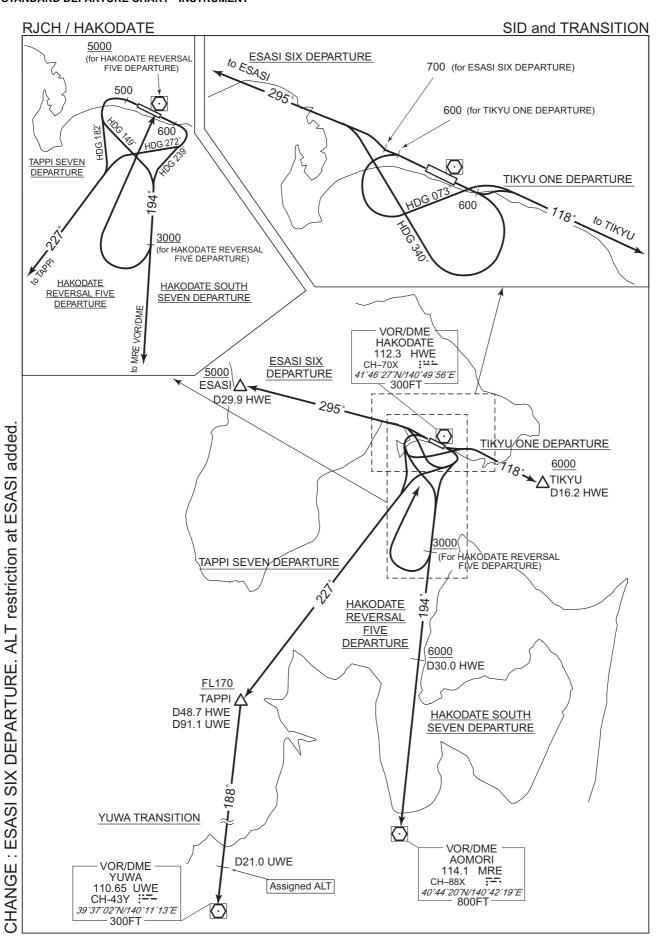
Cross TIKYU at or above 6000FT.

Note RWY12: 6.3% climb gradient required up to 1700FT.

OBST ALT 1302FT located at 4.03NM 101° FM end of RWY12.

RWY30: 5.4% climb gradient required up to 1600FT.

OBST ALT 1296FT located at 4.63NM 267° FM end of RWY30.



RJCH / HAKODATE		RNAV SI	D and TRANSITION
	ONE DEPARTURE I TRANSITION		RNAV1
Note 1 ) DME/DME/IRU or GNSS required.  **The aircraft equipped with only DME/DME/IRU must be able to update its position without delay at the starting point of take-off roll.  2 ) RADAR service required.	Critical DME	RWY12: MRE: 30.0NM to  RWY30: MRE: 47.6NM to  HWE: 47.6NM to  KOMACHI Transition:  MRE: TAPPI - 24.0NM to U'  HWE: TAPPI - 55.0NM to U  UWE: 55.0NM to UWE - 24  HPE: 16.0NM to UWE - UWE	TAPPI – TAPPI TAPPI – 40.0NM to TAPPI WE WE .0NM to UWE
	DME GAP		6NM to TAPPI If to UWE – 22.0NM to UWE If to UWE – 16.0NM to UWE
	Inappropriate Navaids	See AD1.1.6.10.3. Inapprop	riate NAVAIDs for RNAV1
VAR 9°W (2014)  TSUGA	ARU ONE DEPARTURE	297° 500 600 117°	VOR/DME HAKODATE 112.3 HWE CH-70X :::- 41'46'27'N/140'49'56'E 300FT
KOMACHI TRANSITION	TAPPI 410805.5N 1400954.5E		
YUWA(UWE) 393701.7N 1401113.0E	VOR/DME — YUWA 110.65 UWE CH-43Y :=- 39°37′02″N/140°11′13 300FT	VOR/DME AOMORI 114.1 MRE CH-88X : 40°44′20″N/140°42′19″E 800FT	
TSUGARU ONE DEPARTURE			
RWY12 : Climb on HDG117° at RWY30 : Climb on HDG297° at		•	
NOTE RWY12 : 4.0% climb gradient re OBST ALT 919FT loca RWY30 : 5.4% climb gradient re OBST ALT 1296FT loc	ated at 3.43NM 105° equired up to 1600FT	FM end of RWY12.	
KOMACHI TRANSITION From TAPPI, to UWE.			

# RJCH / HAKODATE

# RNAV SID and TRANSITION

## TSUGARU ONE DEPARTURE

#### RWY12

Serial	Path	Waypoint	Fly	Course	Magnetic	Distance	Turn	Altitude	Speed	Vertical	Navigation
Number	Descriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	Specification
001	VA	_	_	117 (108.0)	-8.9	_	_	+600	_	_	RNAV1
002	DF	TAPPI	_	_	-8.9	_	R	_	_	_	RNAV1

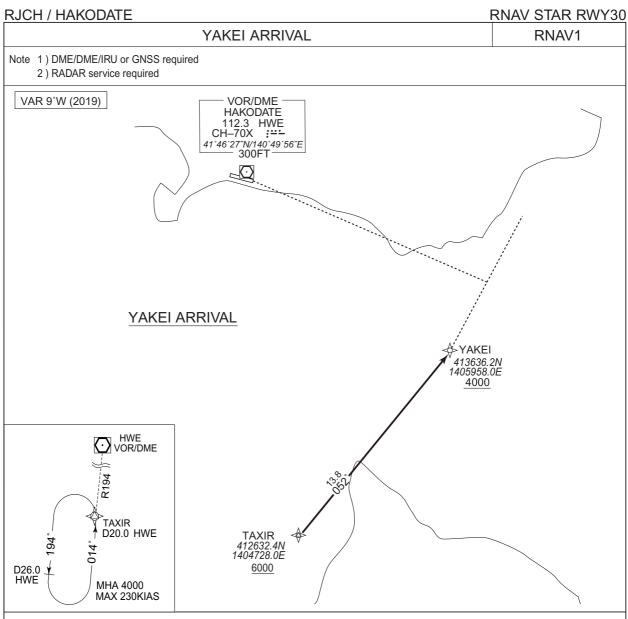
#### RWY30

Serial	Path	Waypoint	Fly	Course	Magnetic	Distance	Turn	Altitude	Speed	Vertical	Navigation
Number	Descriptor	Identifier	Over	$^{\circ}M(^{\circ}T)$	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	Specification
001	VA	_	_	297 (288.1)	-8.9	_	_	+500	_	_	RNAV1
002	DF	TAPPI	_	_	-8.9	_	L	_	_	_	RNAV1

#### **KOMACHI TRANSITION**

Serial	Path	Waypoint	Fly	Course	Magnetic	Distance	Turn	Altitude	Speed	Vertical	Navigation
Number	Descriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	Specification
001	IF	TAPPI	_	_	-8.9	_	_	_	_	_	RNAV1
002	TF	UWE	_	188 (179.4)	-8.9	91.1	_	_	_	_	RNAV1

#### STANDARD ARRIVAL CHART - INSTRUMENT



#### YAKEI ARRIVAL

From TAXIR at or above 6000FT, to YAKEI at or above 4000FT.

Critical DME	MKE: TAXIR – 10.0NM to YAKEI HWE: 3.0NM to YAKEI – YAKEI
DME GAP	_
Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1

	Serial	Path	Waypoint	Fly	Course	Magnetic	Distance	Turn	Altitude	Speed	Vertical	Navigation
;	Number	Descriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	Specification
	001	IF	TAXIR	_	_	-9.4	_	_	+6000	_	_	RNAV1
	002	TF	YAKEI	_	052 (042.9)	-9.4	13.8	_	+4000	_	_	RNAV1

#### STANDARD ARRIVAL CHART - INSTRUMENT

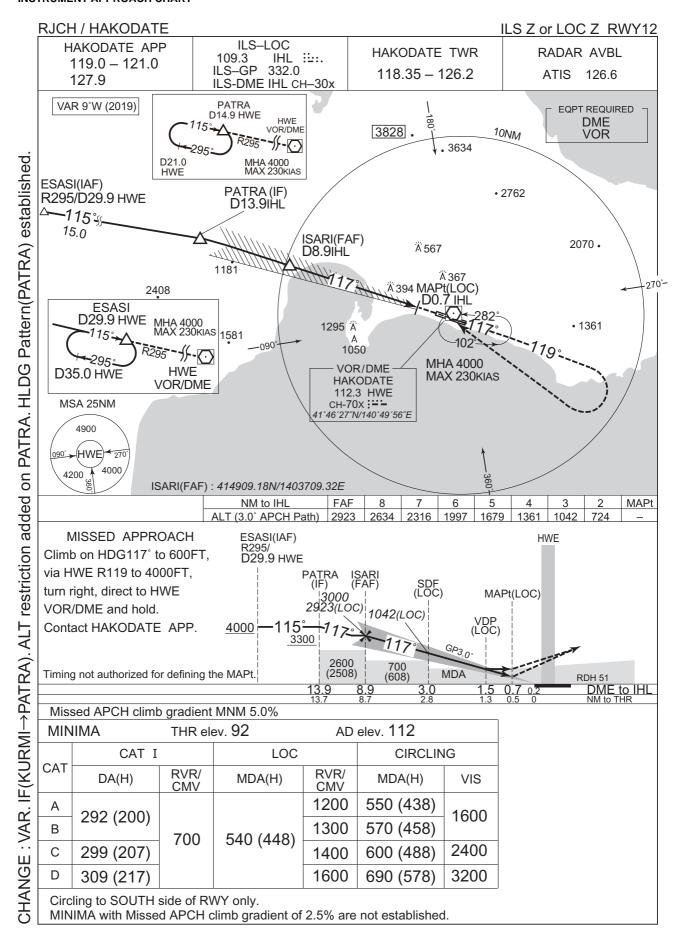
# RJCH / HAKODATE **RNAV STAR RWY12** PATRA ARRIVAL RNAV1 Note 1) DME/DME/IRU or GNSS required 2) RADAR service required VAR 9°W (2019) **PATRA** 415041.1N 1403046.9E VOR/DME 4000 **HAKODATE** 112.3 HWE CH-70X :--41°46′27″N/140°49′56″E 300FT 4.3 KANTA ∜ 414635.2N 1402901.6E PATRA ARRIVAL HWE VOR/DME R194 TAXIR D20.0 HWE TAXIR 412632.4N 1404728.0E 194 D26.0 ¥ HWE MHA 4000 MAX 230KIAS

#### PATRA ARRIVAL

From TAXIR at or above 6000FT, to KANTA, to PATRA at or above 4000FT.

Critical DME	MRE: 18.0NM to KANTA – KANTA HWE: 2.2NM to KANTA – KANTA
DME GAP	KANTA – PATRA
Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1

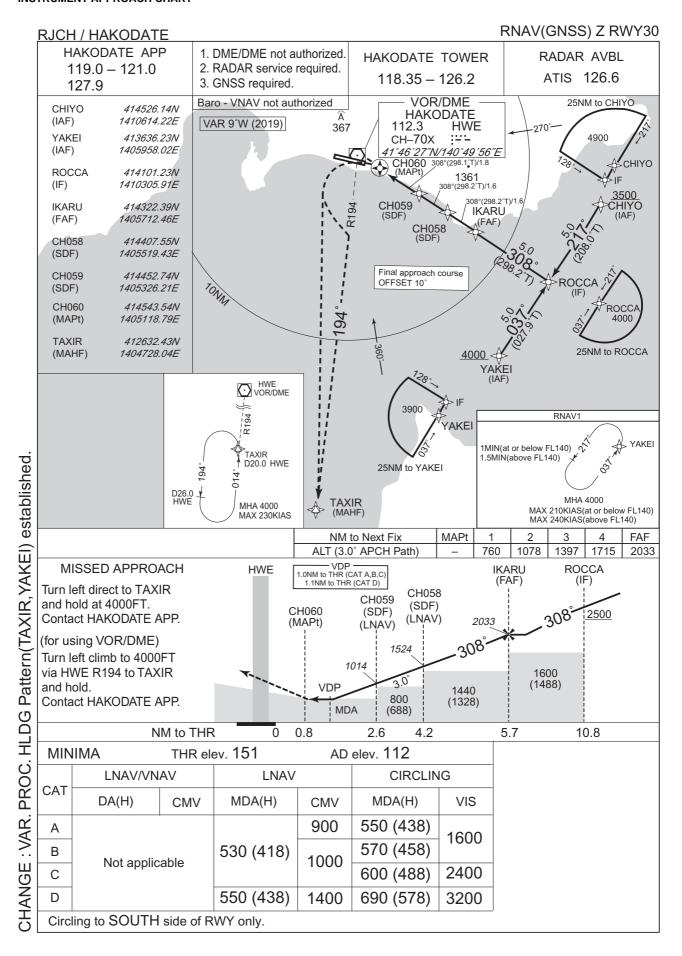
Serial	Path	Waypoint	Fly	Course	Magnetic	Distance	Turn	Altitude	Speed	Vertical	Navigation
Number	Descriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	Specification
001	IF	TAXIR	_	_	-9.4	_	_	+6000	_	_	RNAV1
002	TF	KANTA	_	335 (325.6)	-9.4	24.3	_	_	_	_	RNAV1
003	TF	PATRA	_	027 (017.7)	-9.4	4.3	_	+4000	_	_	RNAV1

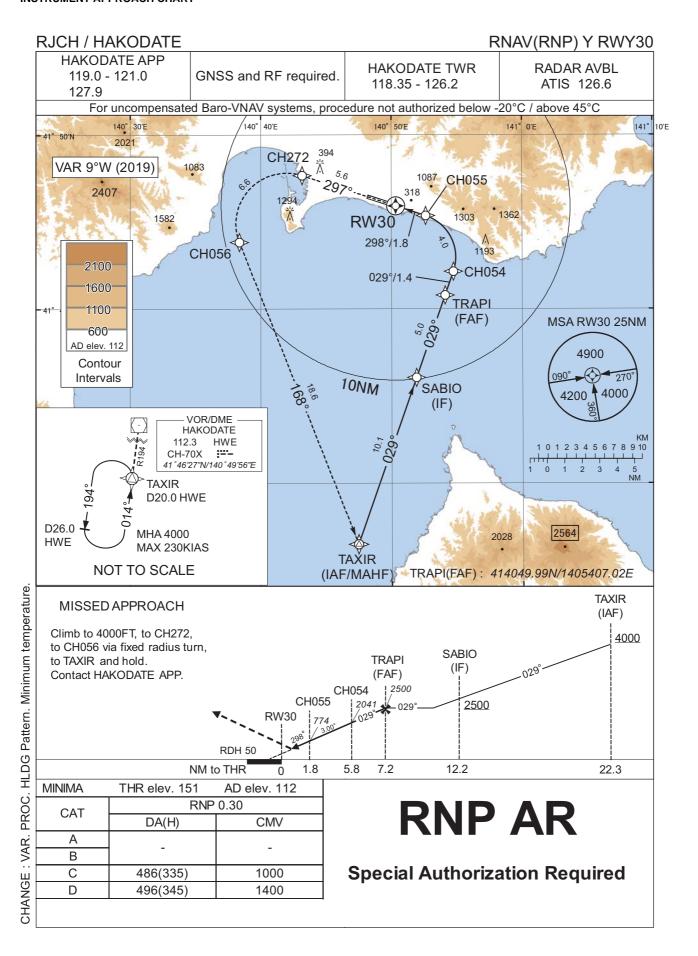












# RJCH / HAKODATE

# RNAV(RNP) Y RWY30

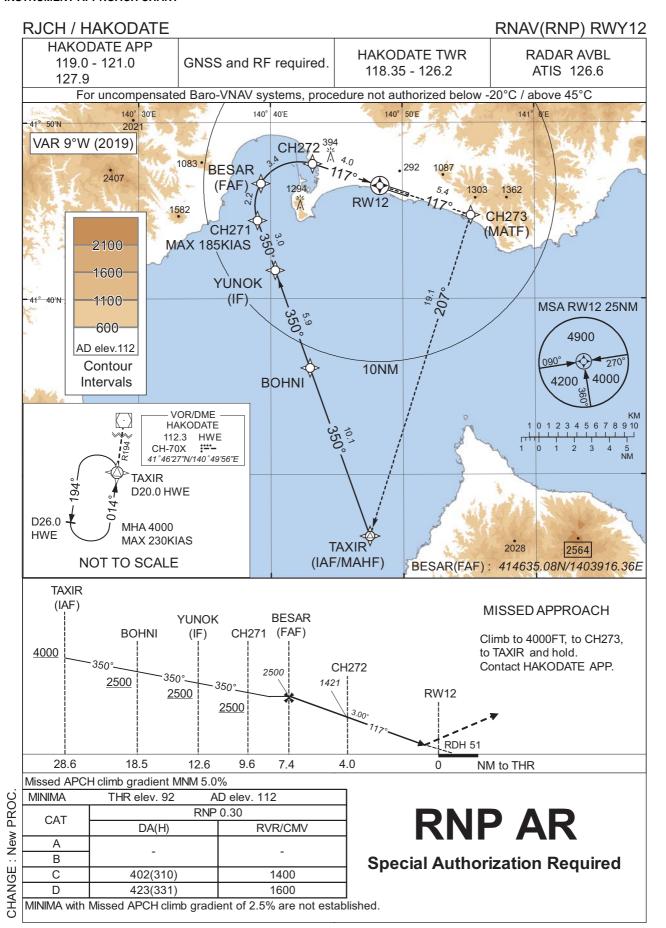
# RNAV(RNP) Y RWY30

# **Coding Table**

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	VPA/ RDH (°/FT)	RNP Value
001	IF	TAXIR	-	-	-9.4	-	-	+4000	-	-	-
002	TF	SABIO	-	029 (019.2)	-9.4	10.1	-	+2500	-	-	1.0
003	TF	TRAPI	-	029 (019.2)	-9.4	5.0	ı	2500	1	1	1.0
004	TF	CH054	-	029 (019.2)	-9.4	1.4	ı	2041	-	-3.00	0.3
005	RF Center: CHRF3 r=2.50NM	CH055	1	-	-9.4	4.0	٦	774	-	-3.00	0.3
006	TF	RW30	Υ	298 (288.1)	-9.4	1.8	-	201	-	-3.00/50	0.3
007	TF	CH272	-	297 (288.1)	-9.4	5.6	-	-	-	-	1.0
008	RF Center: CHRF4 r=2.90NM	CH056	-	-	-9.4	6.6	L	-	-	-	1.0
009	TF	TAXIR	-	168 (158.5)	-9.4	18.6	1	4000	-	-	1.0

## Waypoint Coordinates

Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
TAXIR	412632.43N / 1404728.04E	CHRF3	414301.30N / 1405136.09E
SABIO	413606.58N / 1405154.81E	CHRF4	414456.26N / 1404159.49E
TRAPI	414049.99N / 1405407.02E		
CH054	414211.71N / 1405445.20E		
CH055	414524.03N / 1405238.26E		
RW30	414557.54N / 1405021.00E		
CH272	414742.10N / 1404311.31E		
CH056	414352.33N / 1403822.94E		



# RJCH / HAKODATE

# RNAV(RNP) RWY12

# RNAV(RNP) RWY12

# Coding Table

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	VPA/ RDH (°/FT)	RNP Value
001	IF	TAXIR	-	-	-9.4	-	-	+4000	-	-	-
002	TF	BOHNI	-	350 (340.6)	-9.4	10.1	-	+2500	-	-	1.0
003	TF	YUNOK	-	350 (340.6)	-9.4	5.9	-	+2500	-	-	1.0
004	TF	CH271	-	350 (340.5)	-9.4	3.0	-	+2500	-185	-	1.0
005	RF Center: CHRF5 r=2.50NM	BESAR	-	-	-9.4	2.2	R	2500	-	-	1.0
006	RF Center: CHRF5 r=2.50NM	CH272	-	-	-9.4	3.4	R	1421	-	-3.00	0.3
007	TF	RW12	Υ	117 (108.0)	-9.4	4.0	-	143	-	-3.00/51	0.3
800	TF	CH273	1	117 (108.1)	-9.4	5.4	-	-	-	-	1.0
009	TF	TAXIR	-	207 (197.6)	-9.4	19.1	-	4000	-	-	1.0

## **Waypoint Coordinates**

Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates	
TAXIR	412632.43N / 1404728.04E	CHRF5	414519.29N / 1404209.46E	
BOHNI	413606.23N / 1404258.19E			
YUNOK	414139.34N / 1404020.87E			
CH271	414429.13N / 1403900.50E			
BESAR	414635.08N / 1403916.36E			
CH272	414742.10N / 1404311.31E			
RW12	414627.62N / 1404817.61E			
CH273	414446.88N / 1405510.13E			



※図中に標高を示す数字がある場合、単位はメートル(m)である。The unit of measurement used to express elevation is meter(m).

	Call sign	BRG / DIST from ARP	Remarks	
	大沼 Onuma	330°T / 13.9NM	JR駅 JR Station	
	桔梗 Kikyo	316°T / 6.4NM	JR駅 JR Station	
CHANGE :DIST from ARP(Mihara).	矢別 Yabetsu	043°T / 5.7NM	ダム Dam	
	恵山岬 Esanmisaki	081°T / 16.5NM	灯台 Lighthouse	
	美原 Mihara	310°T / 3.9NM	NHKラジオアンテナ NHK radio antenna	
	立待 Tachimachi	252°T / 4.8NM	岬 Cape	
	当別 Tobetsu	261°T / 11.5NM	トラピスト修道院 Religious house	
	汐首岬 Shiokubimisaki	119°T / 7.3NM	灯台 Lighthouse	
	5NM S	180°T / 5.0NM	海上 Over the sea	
	大間崎 Omazaki	163°T / 14.0NM	岬 Cape	

LDG CHART



