

## MARKING AIDS

Mandatory  
instruction  
marking



## SIMPLE APPROACH LIGHTING SYSTEM



CHANGE:STOP BAR LGT abolished

AIRCRAFT PARKING/DOCKING CHART

RJCH / HAKODATE

AD CHART



AERODROME OBSTACLE CHART - ICAO  
TYPE A (OPERATING LIMITATIONS)

DIMENSIONS AND ELEVATIONS IN FEET, BEARINGS ARE MAGNETIC



AERODROME OBSTACLE CHART - ICAO  
TYPE A (OPERATING LIMITATIONS)

DIMENSIONS AND ELEVATIONS IN FEET, BEARINGS ARE MAGNETIC

MAGNETIC VARIATION 9° W-APR 2018



DECLARED DISTANCES	
RWY 12	RWY 30
3000m TAKE OFF RUN AVAILABLE	3000m
3000m TAKE OFF DISTANCE AVAILABLE	3000m
3000m ACCELERATE STOP DISTANCE AVAILABLE	3000m
3000m LANDING DISTANCE AVAILABLE	3000m



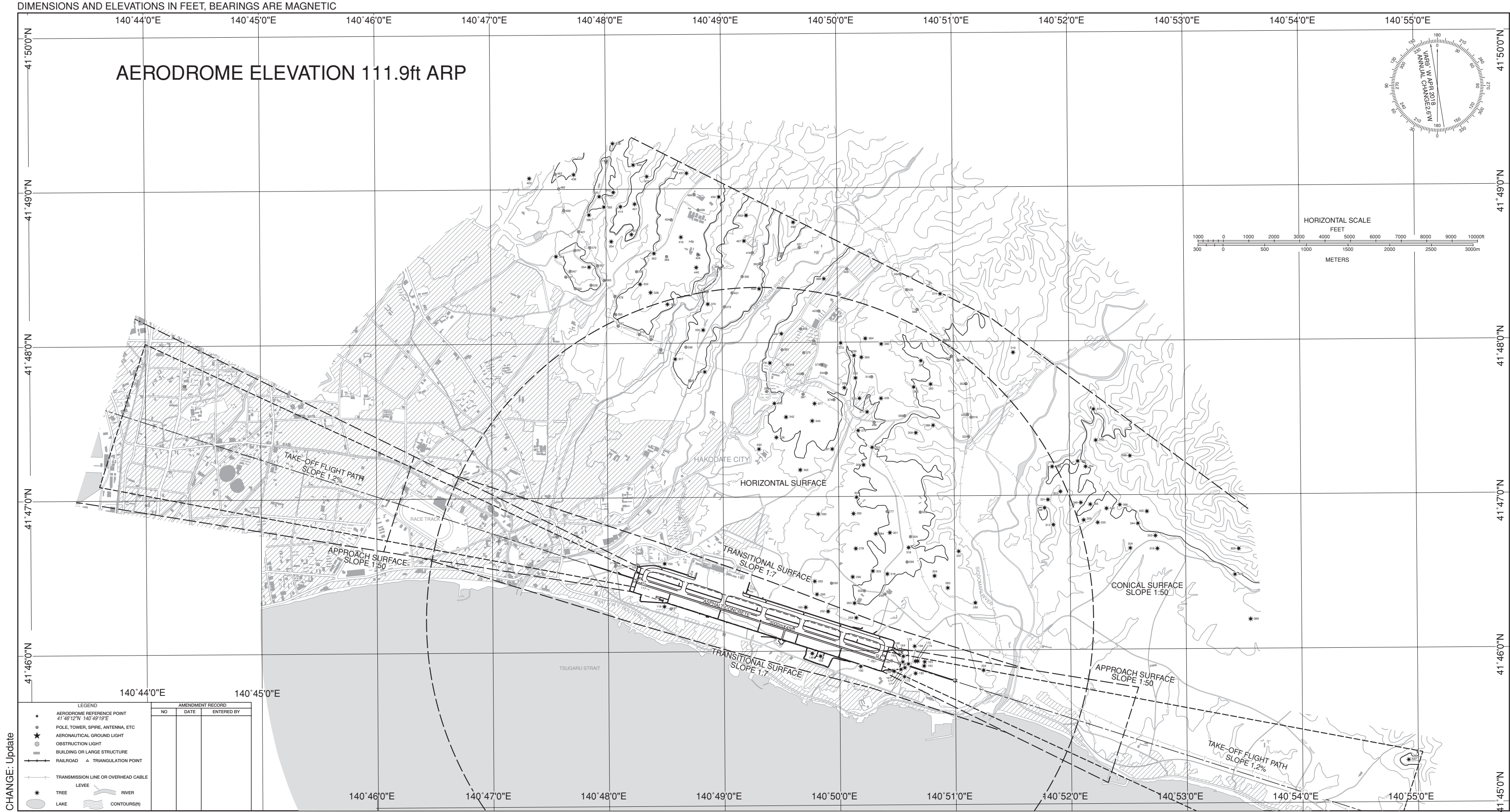
LEGEND	
①	IDENTIFICATION NUMBER
●	POLE, TOWER, SPIRE, ANTENNA, ETC
✱	TREE
▨	LEVEE
—+—	TRANSMISSION LINE OR OVERHEAD CABLE
△	TRIANGULATION POINT
☆	AERONAUTICAL GROUND LIGHT
—	RIVER

AMENDMENT RECORD		
Nr	DATE	ENTERED BY

CHANGE: Update



AERODROME OBSTACLE CHART - ICAO  
TYPE B



STANDARD DEPARTURE CHART - INSTRUMENT

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 FIVE 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.

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.

## STANDARD DEPARTURE CHART - INSTRUMENT

RJCH / HAKODATE

SID and TRANSITION



## STANDARD DEPARTURE CHART - INSTRUMENT

RJCH / HAKODATE

RNAV SID and TRANSITION

TSUGARU ONE DEPARTURE KOMACHI 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 TAPPI – TAPPI  RWY30 : MRE : 47.6NM to TAPPI – TAPPI HWE : 47.6NM to TAPPI – 40.0NM to TAPPI KOMACHI Transition : MRE: TAPPI - 24.0NM to UWE HWE: TAPPI - 55.0NM to UWE UWE: 55.0NM to UWE - 24.0NM to UWE HPE: 16.0NM to UWE - UWE
	DME GAP	RWY12 : RWY12DER – 30.0NM to TAPPI RWY30 : RWY30DER – 47.6NM to TAPPI KOMACHI Transition: 24.0NM to UWE – 22.0NM to UWE 19.0NM to UWE – 16.0NM to UWE
	Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1
<div><div>VAR 9°W (2014)</div><div><p>TSUGARU ONE DEPARTURE</p><p>KOMACHI TRANSITION</p><p>YUWA(UWE) 393701.7N 1401113.0E</p><p>TAPPI 410805.5N 1400954.5E</p><p>VOR/DME HAKODATE 112.3 HWE CH-70X 41°46'27"N/140°49'56"E 300FT</p><p>VOR/DME YUWA 110.65 UWE CH-43Y 39°37'02"N/140°11'13"E 300FT</p><p>VOR/DME AOMORI 114.1 MRE CH-88X 40°44'20"N/140°42'19"E 800FT</p></div></div>		
<p><u>TSUGARU ONE DEPARTURE</u></p> <p>RWY12 : Climb on HDG117° at or above 600FT, turn right direct to TAPPI. RWY30 : Climb on HDG297° at or above 500FT, turn left direct to TAPPI.</p> <p>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.</p>		
<p><u>KOMACHI TRANSITION</u> From TAPPI, to UWE.</p>		



## STANDARD DEPARTURE CHART - INSTRUMENT

## RJCH / HAKODATE

## RNAV SID and TRANSITION

TSUGARU ONE DEPARTURE

## RWY12

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

## RWY30

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

KOMACHI TRANSITION

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

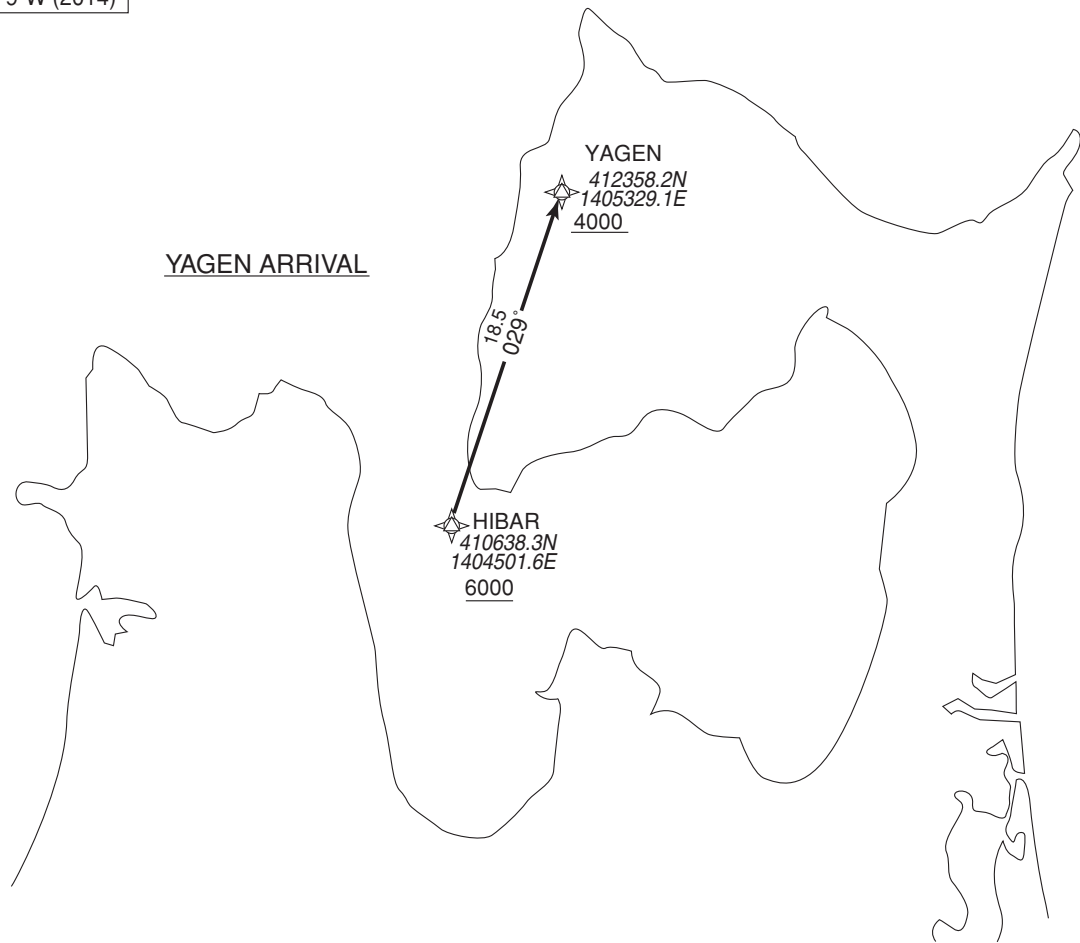
STANDARD ARRIVAL CHART - INSTRUMENT

RJCH / HAKODATE RNAV STAR RWY30

YAGEN ARRIVAL	RNAV1
---------------	-------

Note 1 ) DME/DME/IRU or GNSS required.  
2 ) RADAR service required.

VAR 9°W (2014)



**YAGEN ARRIVAL**  
From HIBAR at or above 6000FT, to YAGEN at or above 4000FT.

Critical DME	HWE : 7.0NM to YAGEN – YAGEN MKE : 7.0NM to YAGEN – YAGEN
DME GAP	HIBAR - 7.0NM to YAGEN
Inappropriate Nav aids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	IF	HIBAR	—	—	-8.9	—	—	+6000	—	—	RNAV1
002	TF	YAGEN	—	029 (020.1)	-8.9	18.5	—	+4000	—	—	RNAV1

## STANDARD ARRIVAL CHART - INSTRUMENT

RJCH / HAKODATE

RNAV STAR RWY30

## EMINA ARRIVAL

RNAV1

Note 1 ) DME/DME/IRU or GNSS required  
2 ) RADAR service required

VAR 9°W (2014)

EMINA ARRIVAL

From HIBAR at or above 6000FT, to EMINA at or above 4000FT.

Critical DME	HWE : 10.0NM to EMINA – EMINA MRE : 10.0NM to EMINA – 9.0NM to EMINA
DME GAP	HIBAR – 10.0NM to EMINA
Inappropriate Nav aids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	IF	HIBAR	—	—	-8.9	—	—	+6000	—	—	RNAV1
002	TF	EMINA	—	039 (029.6)	-8.9	29.1	—	+4000	—	—	RNAV1

STANDARD ARRIVAL CHART - INSTRUMENT

RJCH / HAKODATERNAV STAR RWY12

KURMI ARRIVAL

RNAV1

Note 1 ) DME/DME/IRU or GNSS required  
2 ) RADAR service required

VAR 9°W (2014)

KURMI  
415041.1N  
1403046.9E  
4000

VOR/DME  
HAKODATE  
112.3 HWE  
CH-70X  
41°46'27"N/140°49'56"E  
300FT

KANTA  
414635.2N  
1402901.6E

KURMI ARRIVAL

HIBAR  
410638.3N  
1404501.6E  
6000

VOR/DME  
AOMORI  
114.1 MRE  
CH-88X  
40°44'20"N/140°42'19"E  
800FT

KURMI ARRIVAL

From HIBAR at or above 6000FT, to KANTA, to KURMI at or above 4000FT.

Critical DME	MRE : 22.0NM to KANTA – KANTA HWE : 22.0NM to KANTA – KANTA
DME GAP	HIBAR – 22.0NM to KANTA KANTA – KURMI
Inappropriate NavAids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	IF	HIBAR	—	—	-8.9	—	—	+6000	—	—	RNAV1
002	TF	KANTA	—	352 (343.4)	-8.9	41.7	—	—	—	—	RNAV1
003	TF	KURMI	—	027 (017.7)	-8.9	4.3	—	+4000	—	—	RNAV1

Civil Aviation Bureau,Japan (EFF:11 OCT 2018)

11/10/18

## STANDARD ARRIVAL CHART - INSTRUMENT

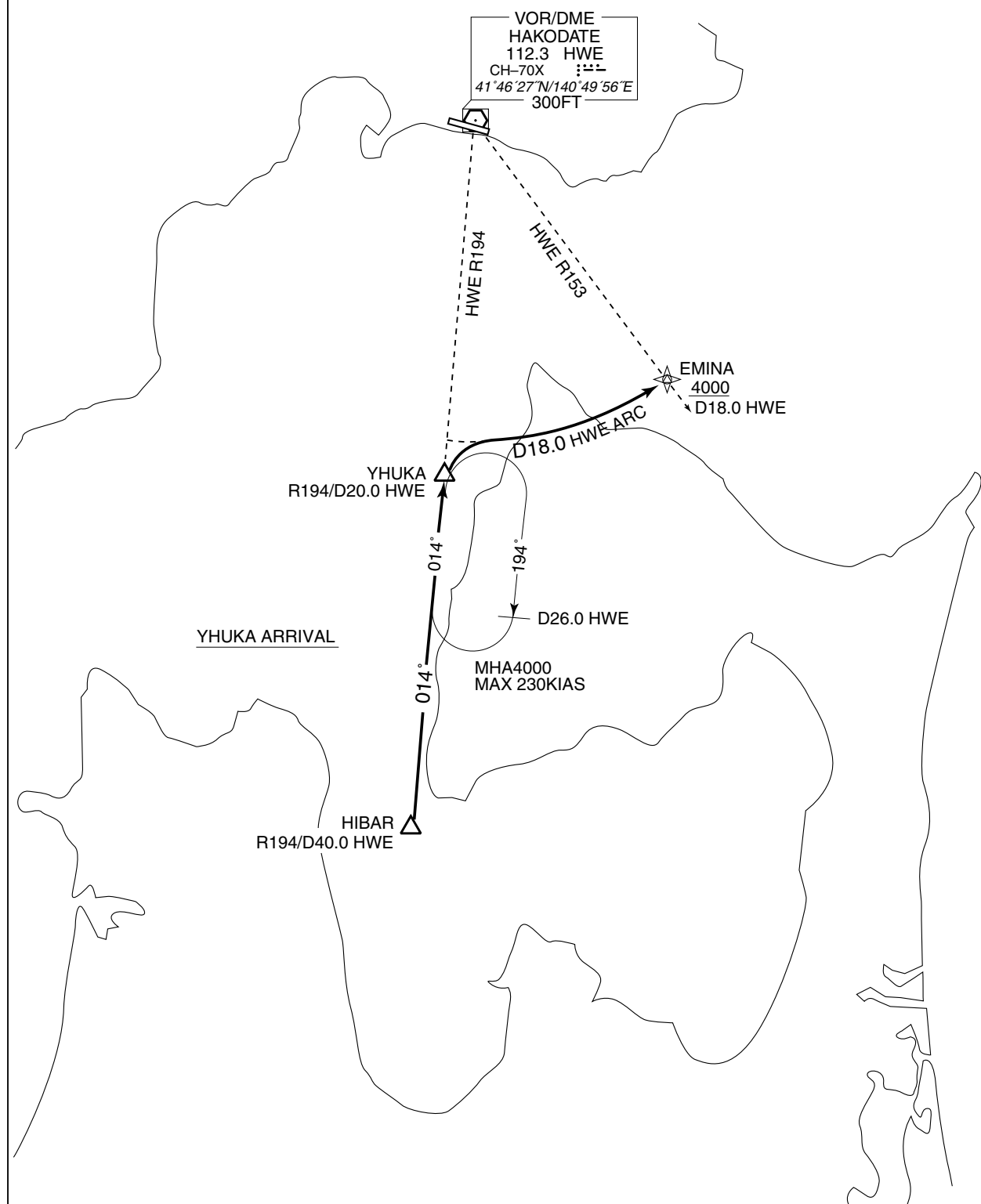
RJCH / HAKODATE

STAR

YHUKA ARRIVAL

From over HIBAR, via HWE R194 to YHUKA, turn right via HWE 18.0DME  
counterclockwise ARC to EMINA.

Cross EMINA at or above 4000FT.

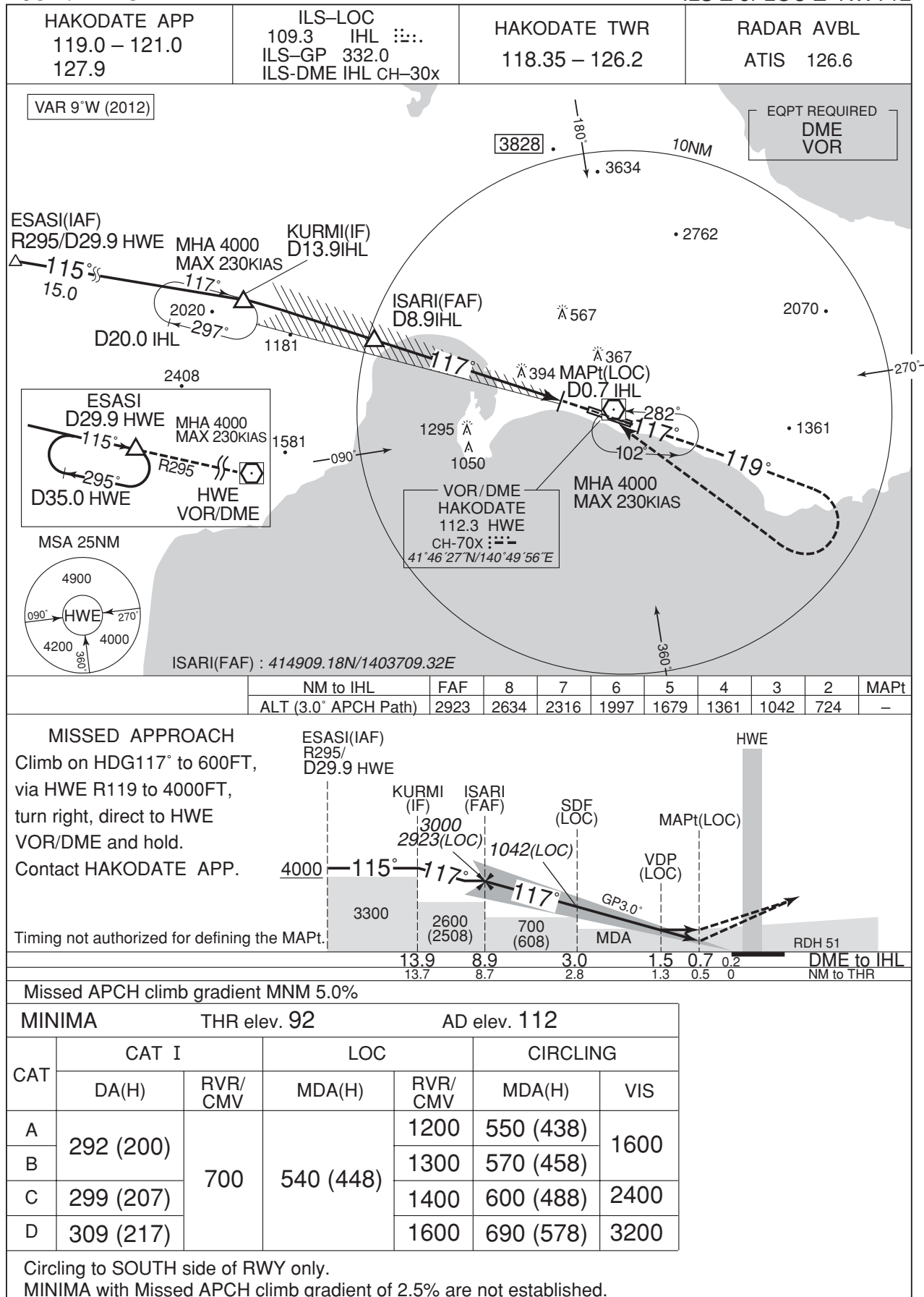




INSTRUMENT APPROACH CHART

RJCH / HAKODATE

ILS Z or LOC Z RWY12



## INSTRUMENT APPROACH CHART

RJCH / HAKODATE

ILS Y or LOC Y RWY12



INSTRUMENT APPROACH CHART

RJCH / HAKODATE

VOR RWY30

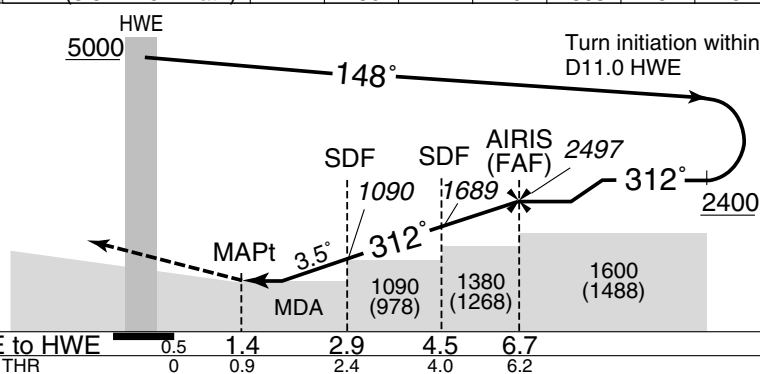
HAKODATE APP 119.0 – 121.0 127.9	HAKODATE VOR/DME 112.3 HWE CH-70X 41°46'27"N/140°49'56"E	HAKODATE TOWER 118.35 – 126.2	RADAR AVBL ATIS 126.6
--	---	----------------------------------	--------------------------



MISSED APPROACH

Turn left HDG135° to intercept  
HWE R180 to 3000FT, turn left  
direct to HWE VOR/DME and  
hold at 5000FT.  
Contact HAKODATE APP.

No Turn before MAPt.  
PAPI and descent angles not coincident.  
Timing not authorized for defining the MAPt.



MINIMA		THR elev. 151	AD elev. 112		
CAT			CIRCLING		
	MDA(H)	CMV	MDA(H)	VIS	
A	730 (618)	1000	730 (618)	1600	
B		1200			
C				1600	2400
D					3200

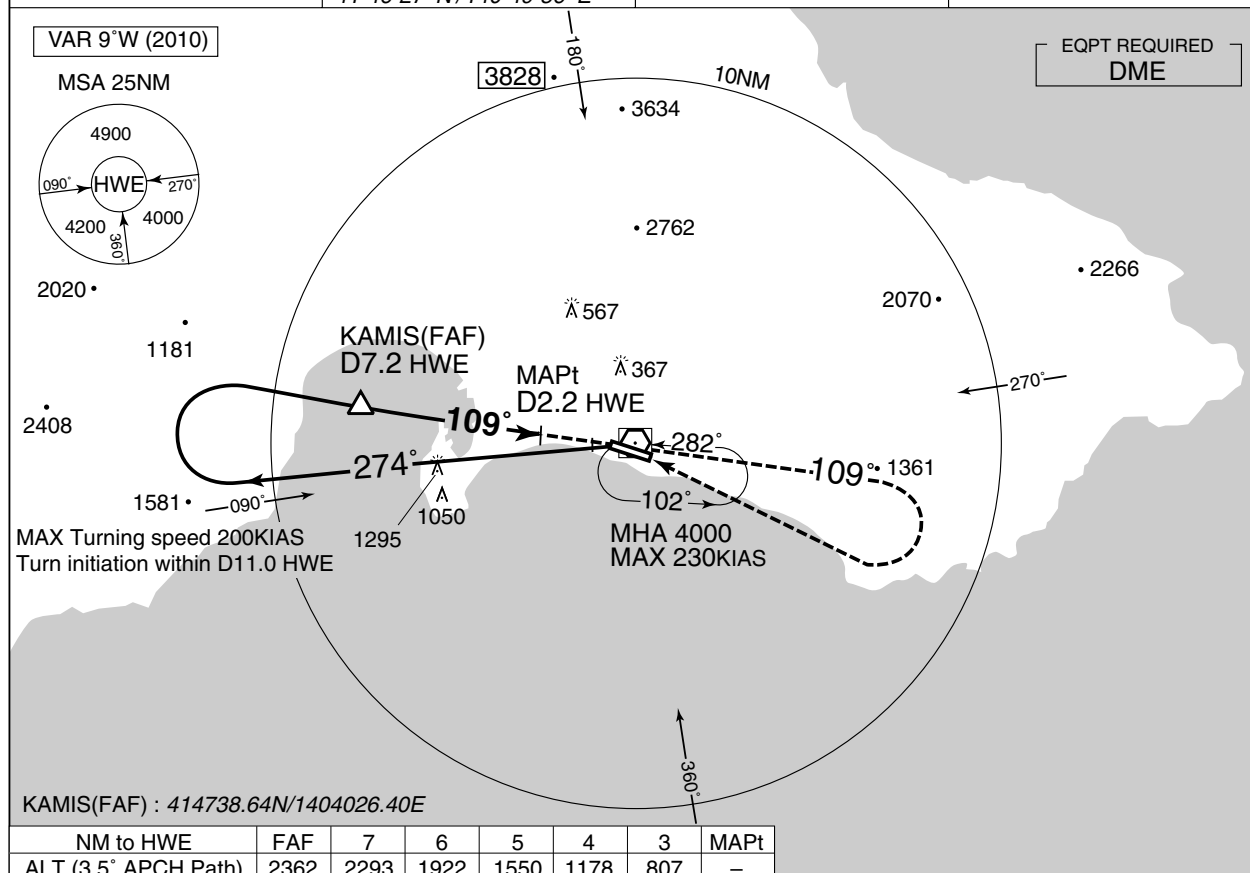
Circling to SOUTH side of RWY only.

## INSTRUMENT APPROACH CHART

RJCH / HAKODATE

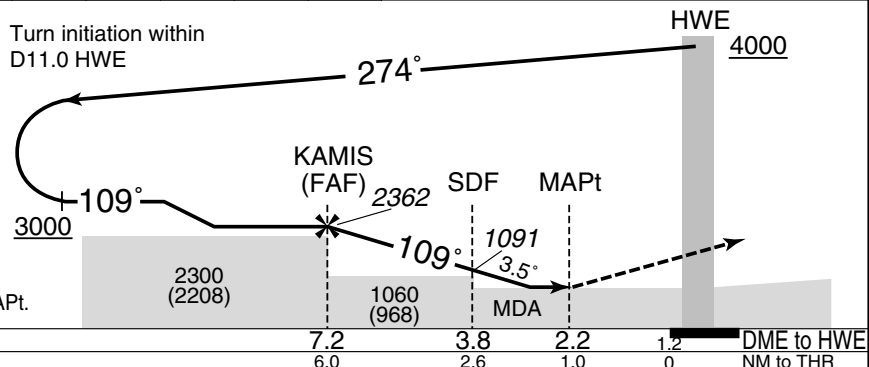
VOR RWY12

HAKODATE APP 119.0 – 121.0 127.9	HAKODATE VOR/DME 112.3 HWE CH-70X 41°46'27"N/140°49'56"E	HAKODATE TOWER 118.35 – 126.2	RADAR AVBL ATIS 126.6
--	---	----------------------------------	--------------------------



**MISSED APPROACH**  
Climb via HWE R109 to 4000FT, turn right direct to HWE VOR/DME and hold.  
Contact HAKODATE APP.

PAPI and descent angles not coincident.  
Timing not authorized for defining the MAPt.



Missed APCH climb gradient MNM 3.6%

**MINIMA** THR elev. 92 AD elev. 112

CAT	CIRCLING		CIRCLING	
	MDA(H)	RVR/CMV	MDA(H)	VIS
A	530 (438)	1200	550 (438)	1600
B		1300	570 (458)	
C		1400	600 (488)	
D		1600	690 (578)	

Circling to SOUTH side of RWY only.

MINIMA with Missed APCH climb gradient of 2.5% are not established.

## RJCH / HAKODATE

RNAV(GNSS) Z RWY30

11/10/18



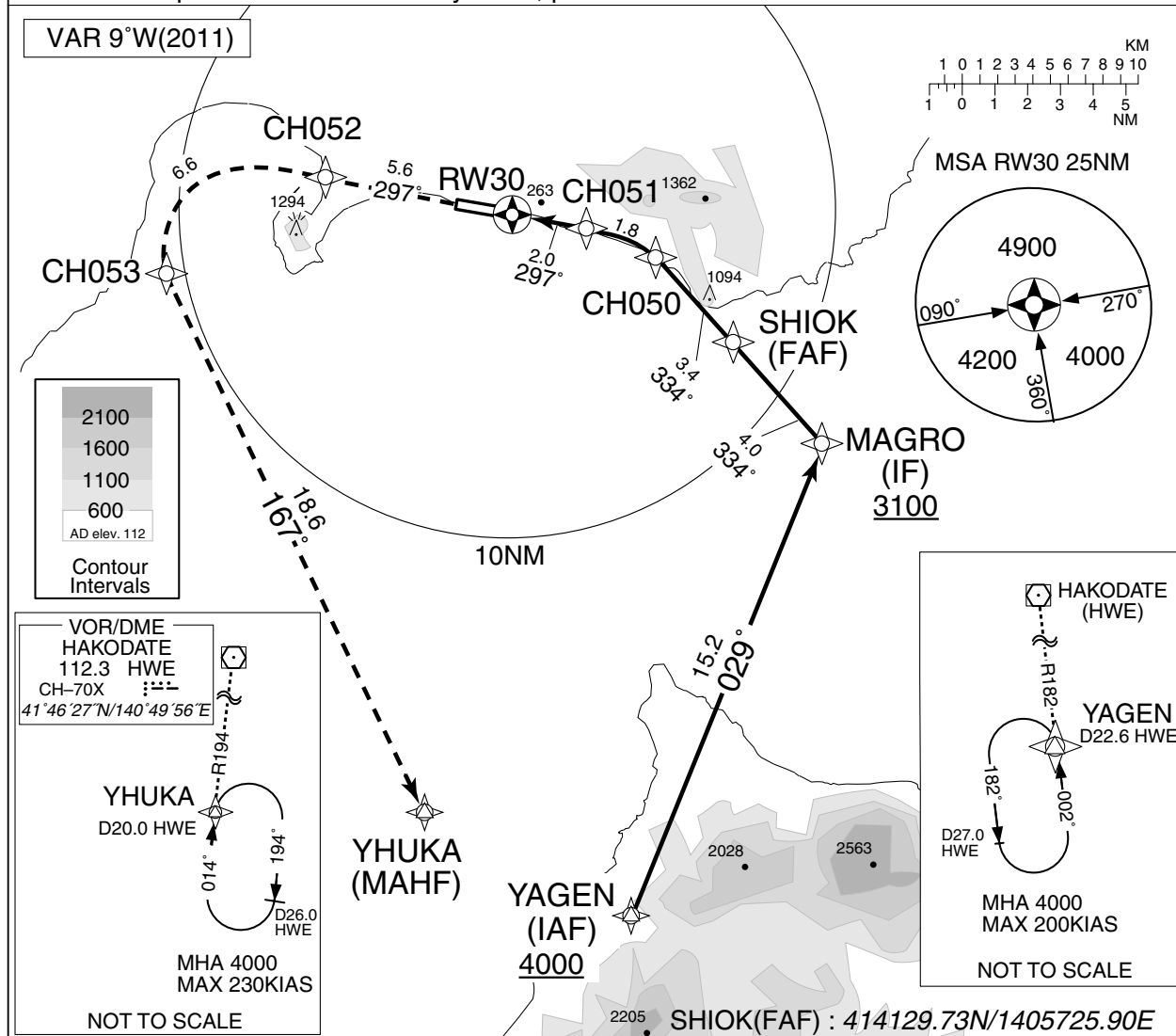
## INSTRUMENT APPROACH CHART

RJCH / HAKODATE

RNAV(RNP) Y RWY30

HAKODATE APP 119.0 – 121.0 127.9	GNSS and RF required	HAKODATE TWR 118.35 – 126.2	RADAR AVBL ATIS 126.6
--	----------------------	--------------------------------	--------------------------

For uncompensated Baro-VNAV systems, procedure not authorized below -15°C / above 45°C



<b>MISSED APPROACH</b> Climb to 4000FT, to CH052, to CH053 via fixed radius turn, to YHUKA and hold. Contact HAKODATE APP.			<b>YAGEN (IAF) 4000</b>	
			<b>MAGRO (IF)</b>	
			<b>SHIOK (FAF)</b>	
			<b>CH050</b>	
			<b>CH051</b>	
			<b>RW30</b>	
			<b>RDH 50</b>	
			<b>NM to THR</b>	
<b>MINIMA</b>	<b>THR elev. 151</b>	<b>AD elev. 112</b>		
<b>CAT</b>	<b>RNP 0.30</b>			
	<b>DA(H)</b>	<b>CMV</b>		
<b>A</b>	—	—		
<b>B</b>	—	—		
<b>C</b>	522 (371)	1000		
<b>D</b>	—	1400		

**RNP AR****Special Authorization Required**

## INSTRUMENT APPROACH CHART

RJCH / HAKODATE

RNAV(RNP) Y RWY30

RNAV(RNP) Y RWY30Coding Table

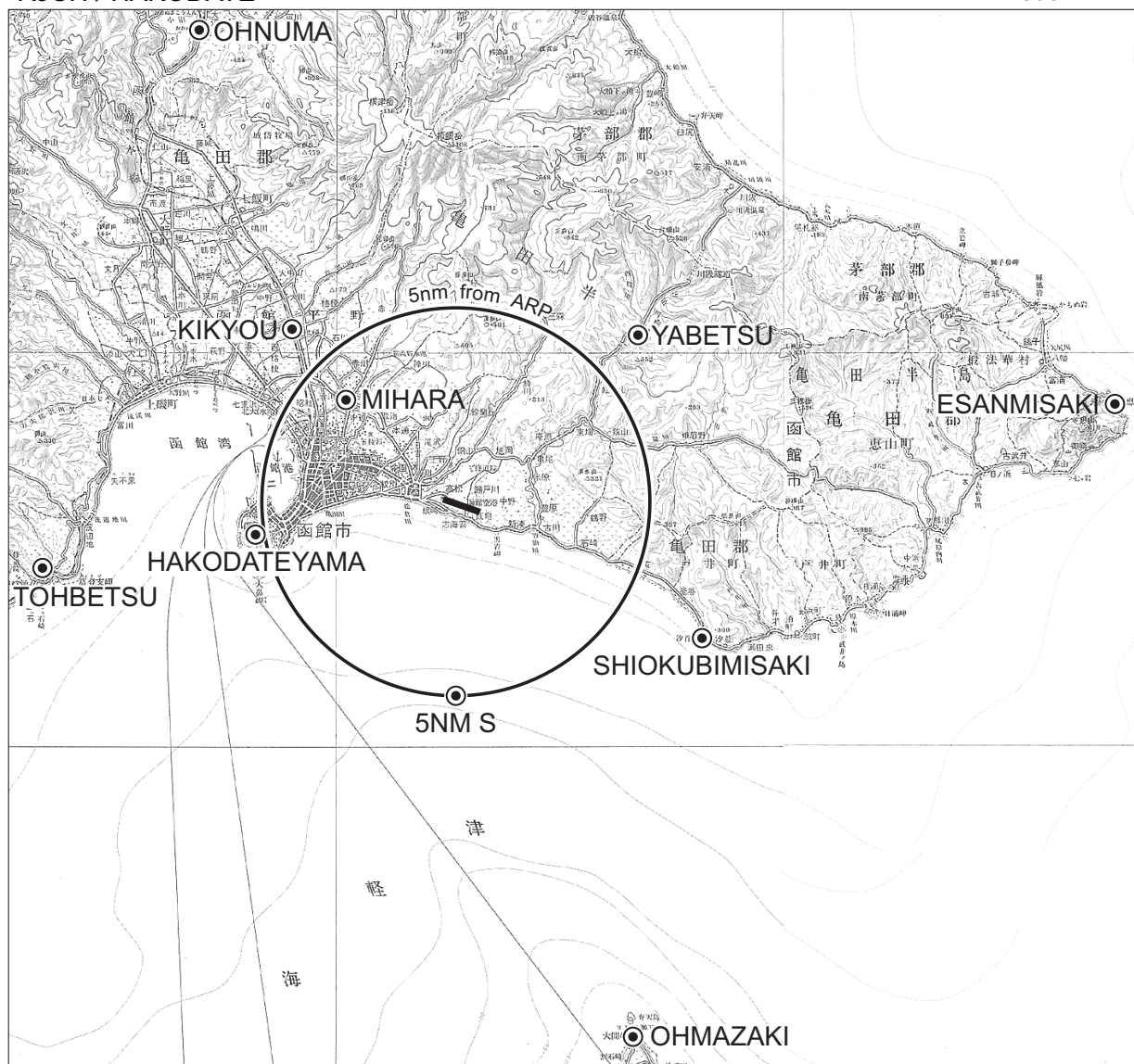
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course [°M(°T)]	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	VPA/RDH (°/FT)	RNP Value
001	IF	YAGEN	—	—	-8.9	—	—	+4000	—	—	—
002	TF	MAGRO	—	029 (020.2)	-8.9	15.2	—	+3100	—	—	1.0
003	TF	SHIOK	—	334 (325.1)	-8.9	4.0	—	2500	—	—	1.0
004	TF	CH050	—	334 (325.0)	-8.9	3.4	—	1410	—	-3.00	0.3
005	RF Center: CHRF1 r=2.74NM	CH051	—	—	-8.9	1.8	L	851	—	-3.00	0.3
006	TF	RW30	Y	297 (288.1)	-8.9	2.0	—	201	—	-3.00/50	0.3
007	TF	CH052	—	297 (288.1)	-8.9	5.6	—	—	—	—	1.0
008	RF Center: CHRF2 r=2.90NM	CH053	—	—	-8.9	6.6	L	—	—	—	1.0
009	TF	YHUKA	—	167 (158.5)	-8.9	18.6	—	4000	—	—	1.0

Waypoint Coordinates

Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
YAGEN	412358.17N/1405329.09E	CHRF1	414243.29N/1405148.88E
MAGRO	413813.12N/1410029.95E	CHRF2	414456.26N/1404159.49E
SHIOK	414129.73N/1405725.90E		
CH050	414417.82N/1405448.22E		
CH051	414519.47N/1405256.91E		
RW30	414557.54N/1405021.00E		
CH052	414742.10N/1404311.31E		
CH053	414352.33N/1403822.94E		
YHUKA	412632.43N/1404728.04E		

RJCH / HAKODATE

Visual REP



Call sign	BRG / DIST from ARP	Remarks
矢 別 Yabetsu	052°/ 5.7NM	ダム Dam
恵 山 岬 Esanmisaki	089°/16.4NM	灯台 Lighthouse
汐 首 岬 Shiokubimisaki	128°/ 7.3NM	灯台 Lighthouse
大 間 崎 Ohmazaki	170°/14.2NM	岬 Cape
5NM S	180°/ 5.0NM	海上 Over the sea
美 原 Mihara	319°/ 4.5NM	ラジオアンテナ Radio antenna
桔 梗 Kikyou	325°/ 5.7NM	JR駅 JR Station
当 別 Tohbetsu	270°/11.5NM	トラビスト修道院 Religious house
函 館 山 Hakodateyama	271°/ 5.3NM	テレビ塔 TV tower
大 沼 Ohnuma	340°/14.4NM	JR駅 JR Station

## LDG CHART



