

RJSI / HANAMAKI SID

## NIIGATA FOUR DEPARTURE

RWY 02: Climb RWY HDG to HPE 3.5 DME, turn right... RWY 20: Climb RWY HDG to HPE 3.5 DME, turn left...

...proceed to HPE VOR/DME, via HPE R236 to GTC VORTAC.

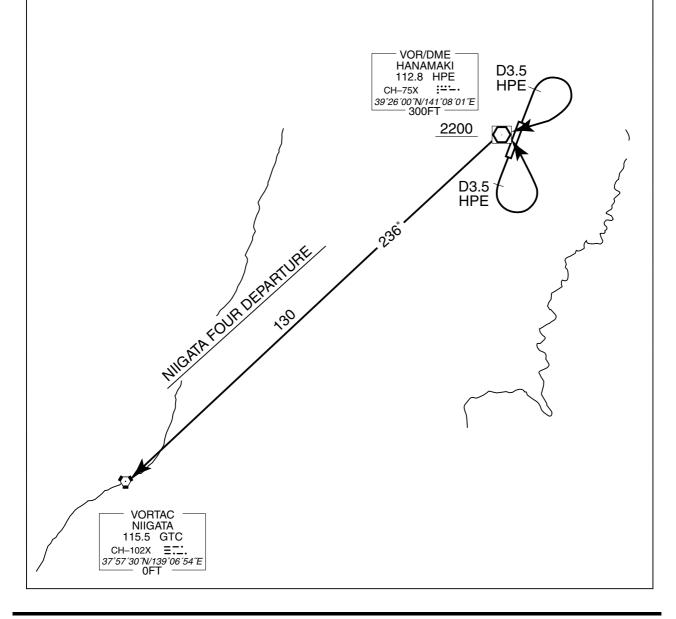
Cross HPE VOR/DME at or above 2200 FT.

Note RWY02: 4.5% climb gradient required up to 2400FT.

OBST ALT 1641FT located at 4.1NM 091° FM end of RWY02.

RWY20: 3.9% climb gradient required up to 1100FT.

OBST ALT 722FT located at 2.8NM 166° FM end of RWY20.



RJSI / HANAMAKI SID

# HANAMAKI REVERSAL TWO DEPARTURE

RWY 02 : Climb RWY HDG to 700FT, via HPE R022 to 6.0 DME, turn right...

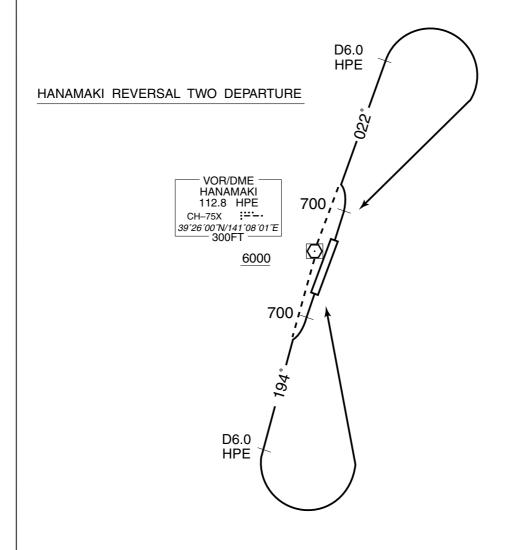
RWY 20: Climb RWY HDG to 700FT, via HPE R194 to 6.0 DME, turn left...

...proceed to HPE VOR/DME.

Cross HPE VOR/DME at or above 6000FT.

Note RWY02: 5.0% climb gradient required up to 3200FT.

OBST ALT 2691FT located at 9.1NM 058° FM end of RWY02.



RJSI / HANAMAKI **RNAV SID** SAMBO ONE DEPARTURE Basic RNP1 Note GNSS required. VAR 9°W (2019) SAMBO 401115.9N 1405701.4E DASCO 395109.2N 1410826.4E AKARI 394317.5N 1410818.3E SAMBO ONE DEPARTURE <u>700</u> SI010 019° 392659.4N 1410155.6E

# SAMBO ONE DEPARTURE

RWY02 : Climb on HDG 019° at or above 700FT, direct to AKARI, to DASCO to SAMBO.

RWY20: Climb on HDG 199° at or above 1300FT, turn right direct to SI010, to AKARI, to DASCO to SAMBO.

1300

199

VOR/DME HANAMAKI

39°26′00″N/141°08′01″E 300FT

112.8

CH-75X

HPE

<u>:--</u>.

Note RWY02: 4.0% climb gradient required up to 700FT.

OBST ALT 318FT located at 0.2NM 061° FM end of RWY02.

RWY20: 4.0% climb gradient required up to 2700FT.

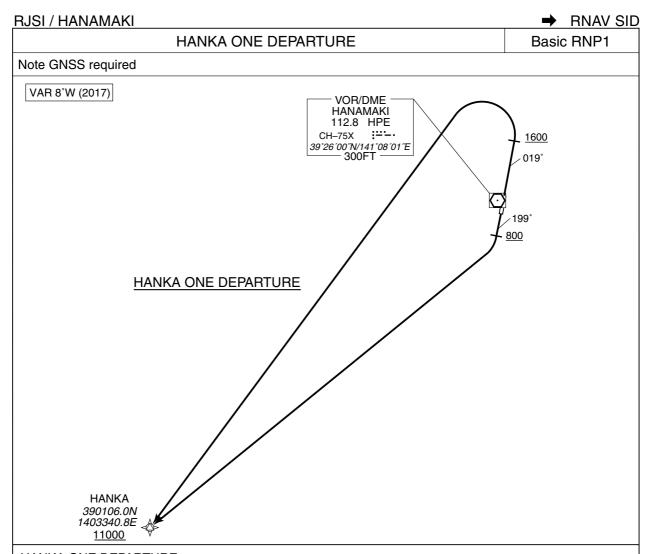
OBST ALT 3117FT located at 10.7NM 350° FM end of RWY20.

## RWY02

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	_	_	019 (010.7)	-8.6	_	_	+700	_	_	Basic RNP1
002	DF	AKARI	_	_	-8.6	_	-	-	_	_	Basic RNP1
003	TF	DASCO	_	009 (000.8)	-8.6	7.9	-	_	_	_	Basic RNP1
004	TF	SAMBO	_	345 (336.6)	-8.6	21.9	_	_	_	_	Basic RNP1

### RWY20

П	TVV I ZU											
	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	_	_	199 (190.7)	-8.6	_	-	+1300	_	_	Basic RNP1
	002	DF	SI010	_	_	-8.6	_	R	-	-	_	Basic RNP1
	003	TF	AKARI	_	025 (016.7)	-8.6	17.0	_	-	-	_	Basic RNP1
	004	TF	DASCO	_	009 (000.8)	-8.6	7.9	-	_	_	_	Basic RNP1
	005	TF	SAMBO	_	345 (336.6)	-8.6	21.9	-	_	_	_	Basic RNP1
1												



## HANKA ONE DEPARTURE

RWY02: Climb on HDG 019° at or above 1600FT, turn left direct to HANKA, at or above 11000FT. RWY20: Climb on HDG 199° at or above 800FT, turn right direct to HANKA, at or above 11000FT.

Note RWY02: 5.0% climb gradient required up to 3600FT.

OBST ALT 1936FT located at 5.5NM 340° FM end of RWY02. OBST ALT 3018FT located at 8.2NM 310° FM end of RWY02.

RWY20: 5.0% climb gradient required up to 5400FT.

OBST ALT 4593FT located at 18.2NM 227° FM end of RWY20. OBST ALT 5151FT located at 20.8NM 231° FM end of RWY20.

-8.4

### RWY02

002

⊓VV I UZ											
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	_	_	019 (010.7)	-8.4	_	_	+1600	_	_	Basic RNP1
002	DF	HANKA	_	-	-8.4	-	L	+11000	_	_	Basic RNP1
RWY20	RWY20										
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	_	_	199 (190.7)	-8.4	_	_	+800	_	_	Basic RNP1

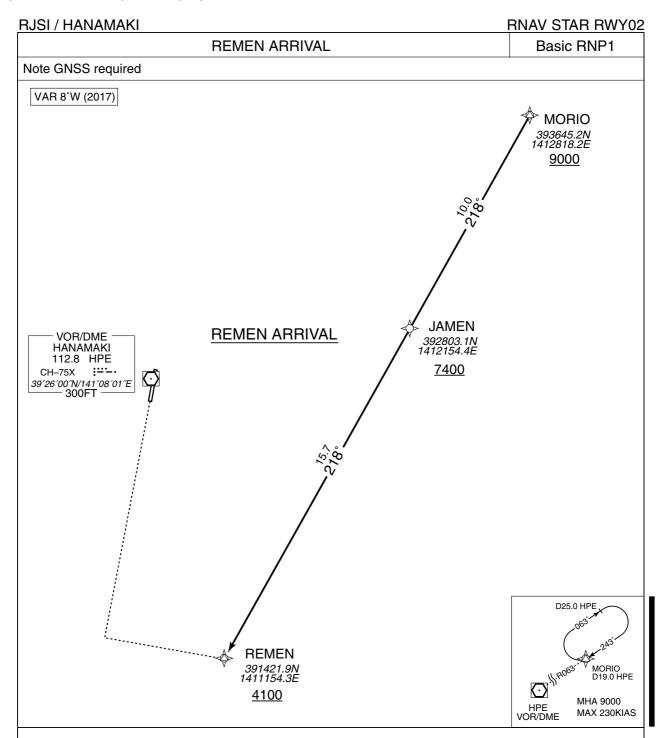
R

+11000

**HANKA** 

DF

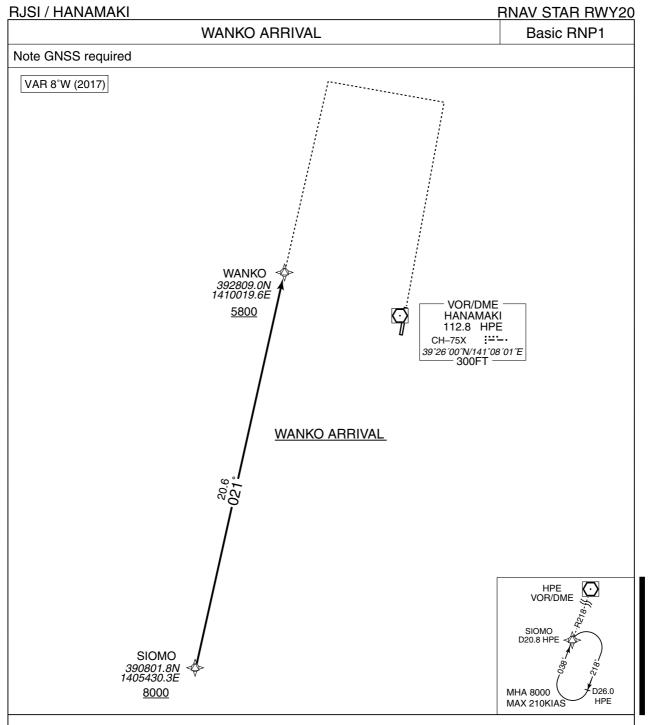
Basic RNP1



## REMEN ARRIVAL

From MORIO at or above 9000FT, to JAMEN at or above 7400FT, to REMEN at or above 4100FT.

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation		Turn Direction	Altitude (FT)	Speed (KIAS)		Navigation Specification
001	IF	MORIO	_	_	-8.4	_	_	+9000	_	_	Basic RNP1
002	TF	JAMEN	_	218 (209.6)	-8.4	10.0	_	+7400	_	_	Basic RNP1
003	TF	REMEN	_	218 (209.5)	-8.4	15.7	_	+4100	_	_	Basic RNP1

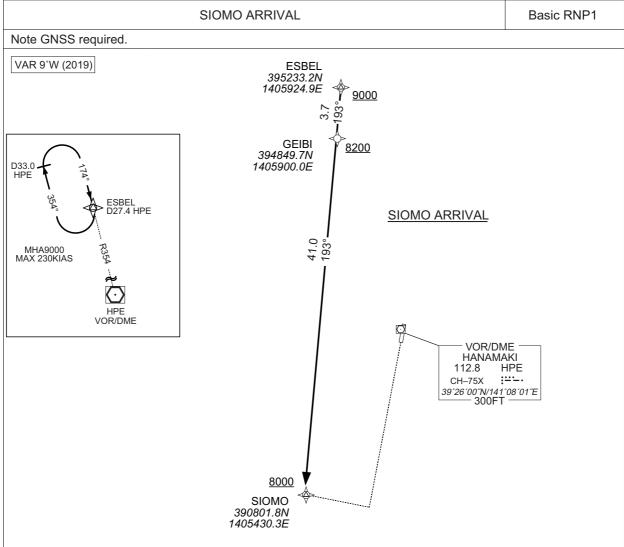


## WANKO ARRIVAL

From SIOMO at or above 8000FT, to WANKO at or above 5800FT.

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation		Turn Direction	Altitude (FT)	•		Navigation Specification
001	IF	SIOMO	_	_	-8.4	-	_	+8000	_	_	Basic RNP1
002	TF	WANKO	_	021 (012.6)	-8.4	20.6	_	+5800	_	_	Basic RNP1

RJSI / HANAMAKI RNAV STAR RWY02

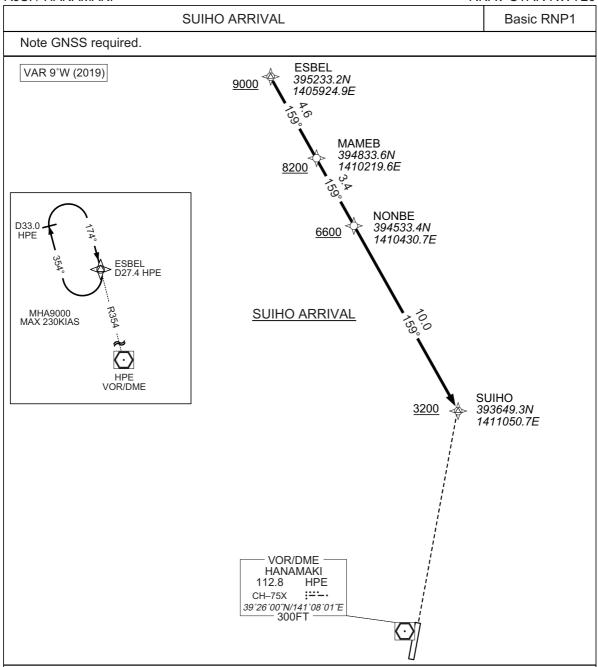


## SIOMO ARRIVAL

From ESBEL at or above 9000FT, to GEIBI at or above 8200FT, to SIOMO at or above 8000FT.

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	ESBEL	_	_	-8.6	_	-	+9000	_	_	Basic RNP1
002	TF	GEIBI	_	193 (184.9)	-8.6	3.7	_	+8200	_	_	Basic RNP1
003	TF	SIOMO	_	193 (184.9)	-8.6	41.0	_	+8000	_	_	Basic RNP1

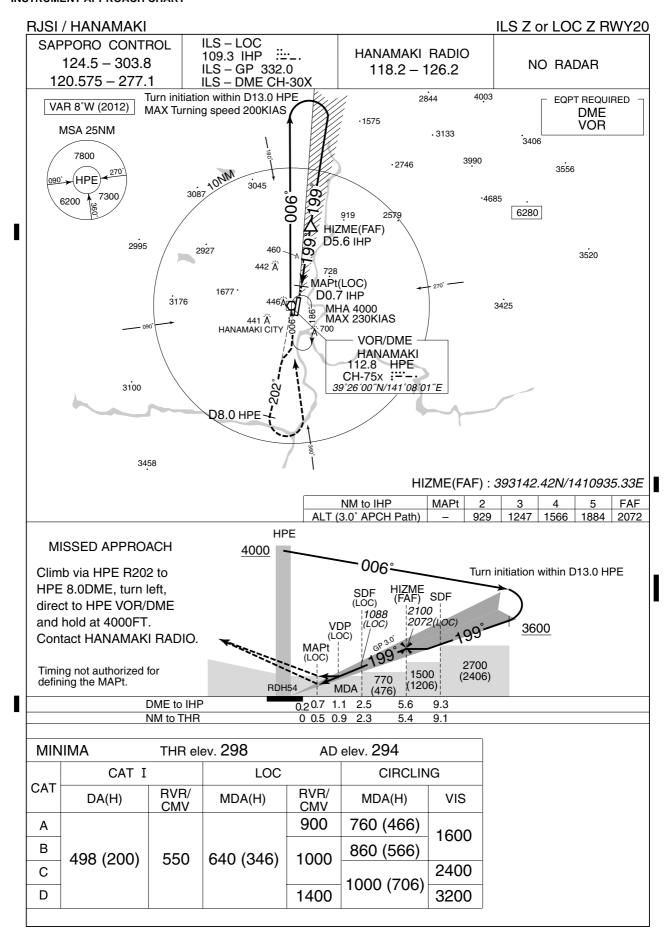
RJSI / HANAMAKI RNAV STAR RWY20

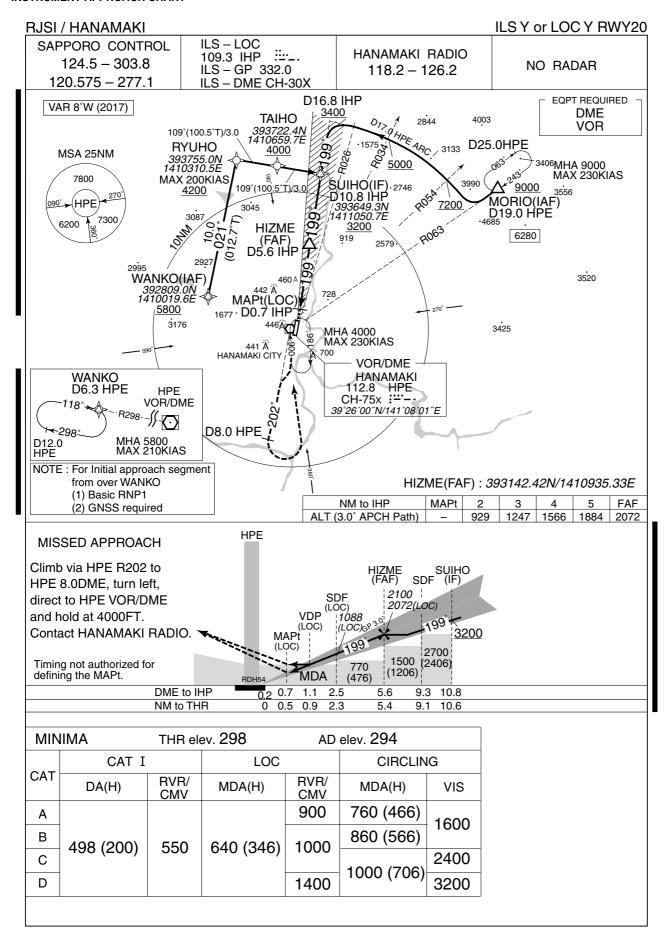


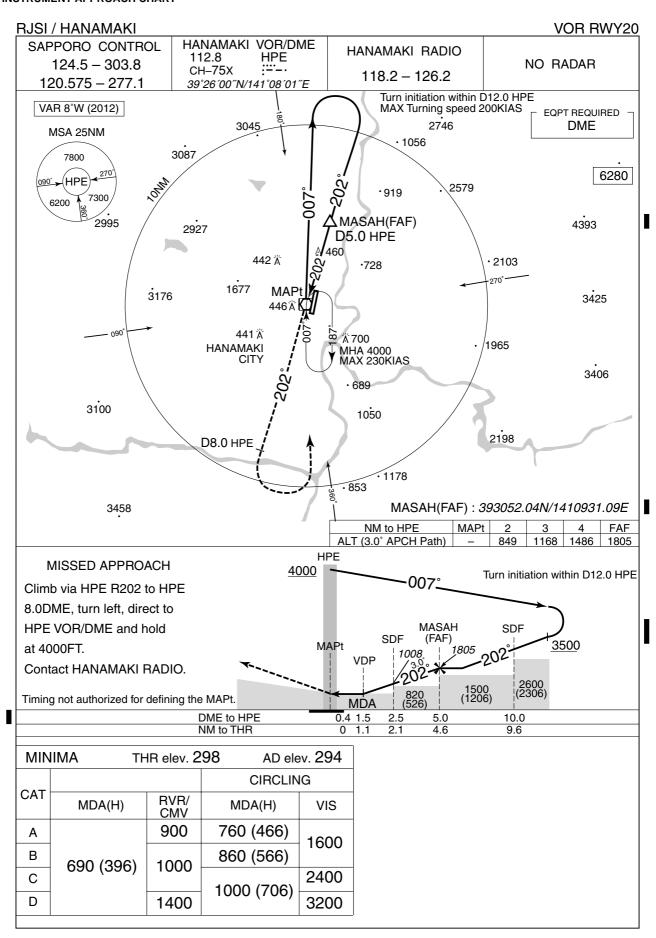
# SUIHO ARRIVAL

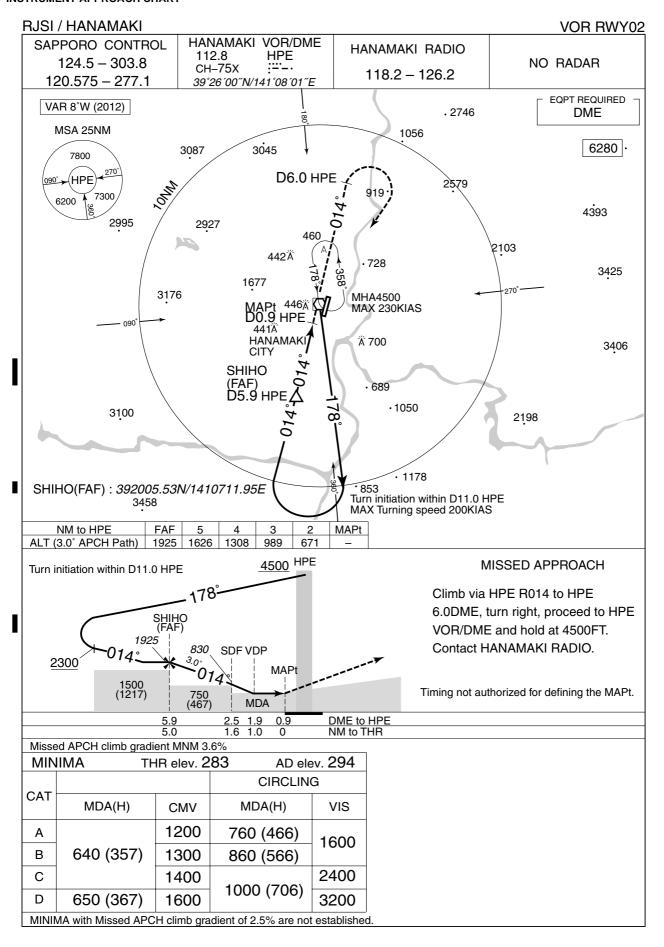
From ESBEL at or above 9000FT, to MAMEB at or above 8200FT, to NONBE at or above 6600FT, to SUIHO at or above 3200FT.

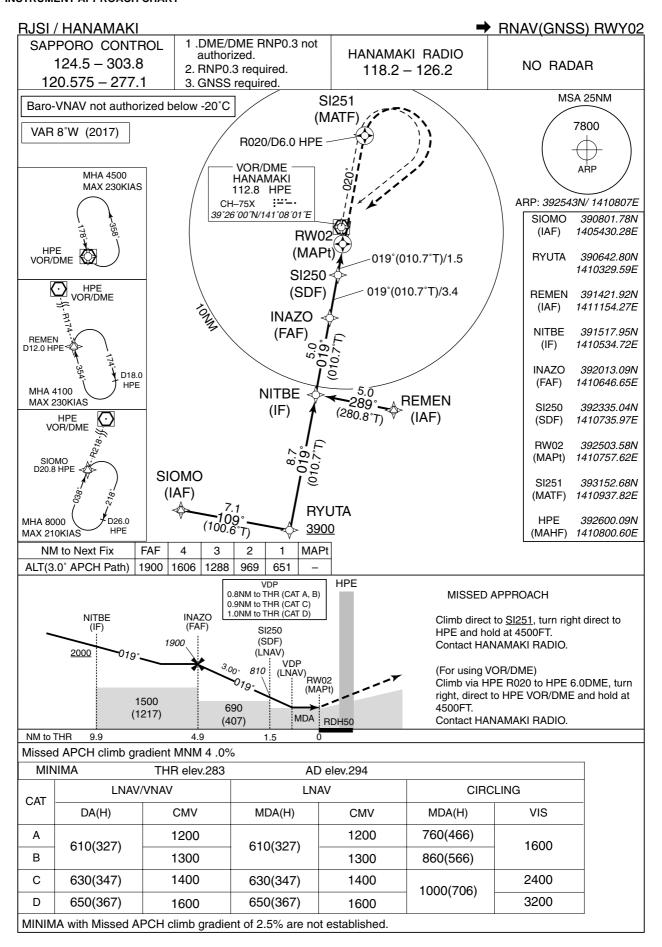
- 1												
)	Serial Number	Path Desc- riptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direc -tion	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
	001	IF	ESBEL	_	_	-8.6	_	_	+9000	-	_	Basic RNP1
2	002	TF	MAMEB	_	159 (150.7)	-8.6	4.6	_	+8200	_	_	Basic RNP1
)	003	TF	NONBE	_	159 (150.8)	-8.6	3.4	_	+6600	_	_	Basic RNP1
	004	TF	SUIHO	_	159 (150.8)	-8.6	10.0	_	+3200	_	_	Basic RNP1
<i>'</i>												

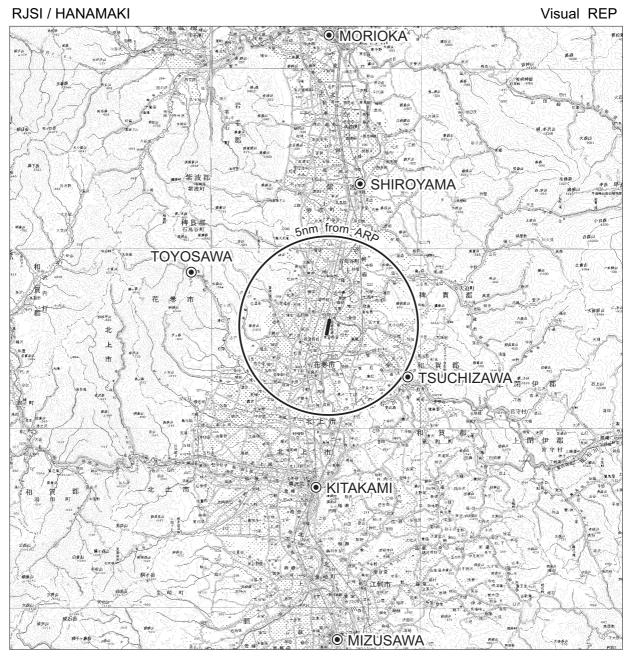












Call sign	BRG / DIST from ARP	Remarks				
盛 岡 Morioka	006°/16.5NM	駅 Station				
城 山 Shiroyama	018°/ 8.4NM	城跡 The site of a castle				
豊 沢 Toyosawa	301°/ 8.0NM	豊沢湖ダム Dam				
土 沢 Tsuchisawa	127°/ 5.1NM	駅 Station				
北 上 Kitakami	192°/ 8.9NM	駅 Station				
水 沢 Mizusawa	186°/17.5NM	駅 Station				

