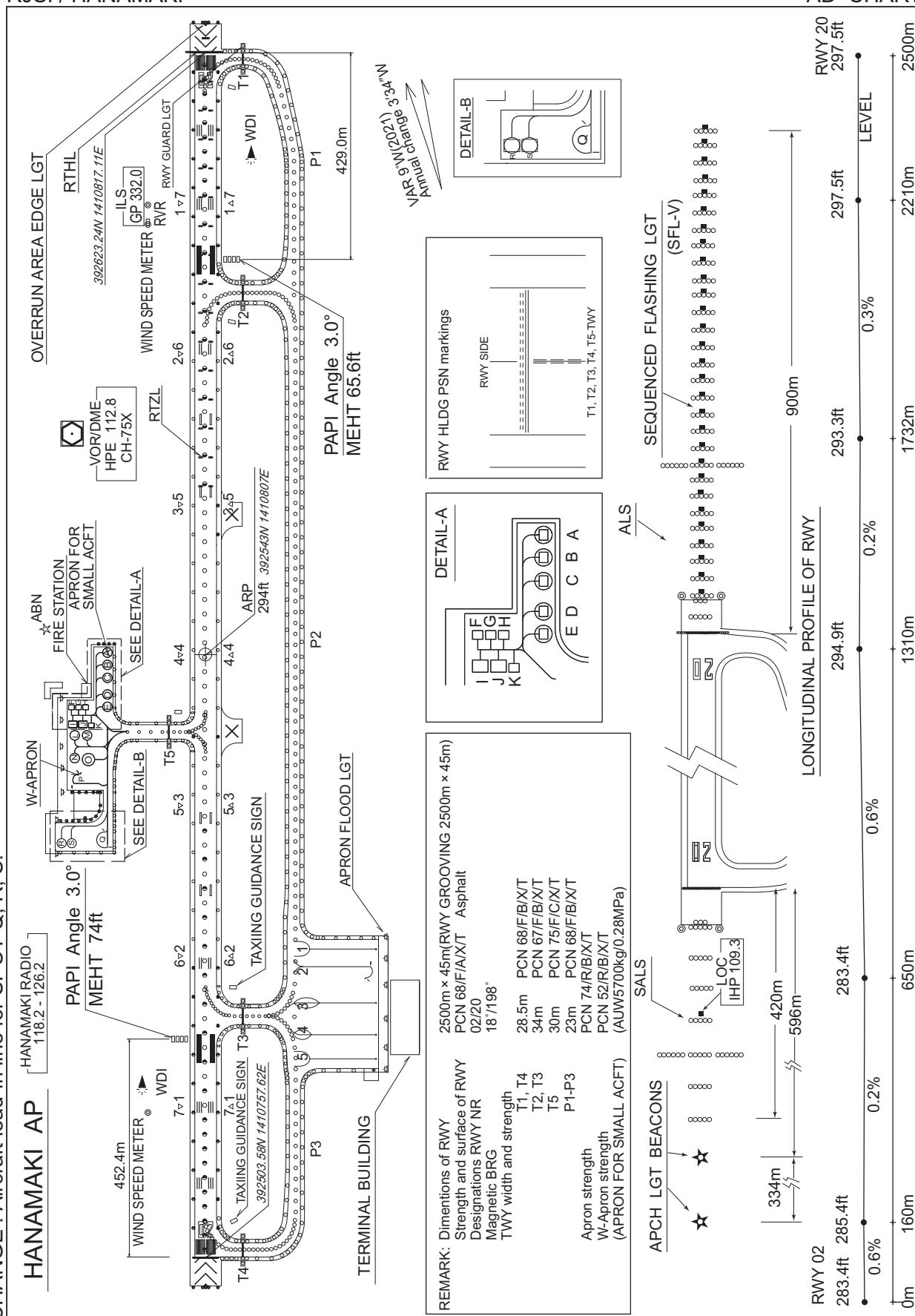


RJSI / HANAMAKI

AD CHART



STANDARD DEPARTURE CHART -INSTRUMENT

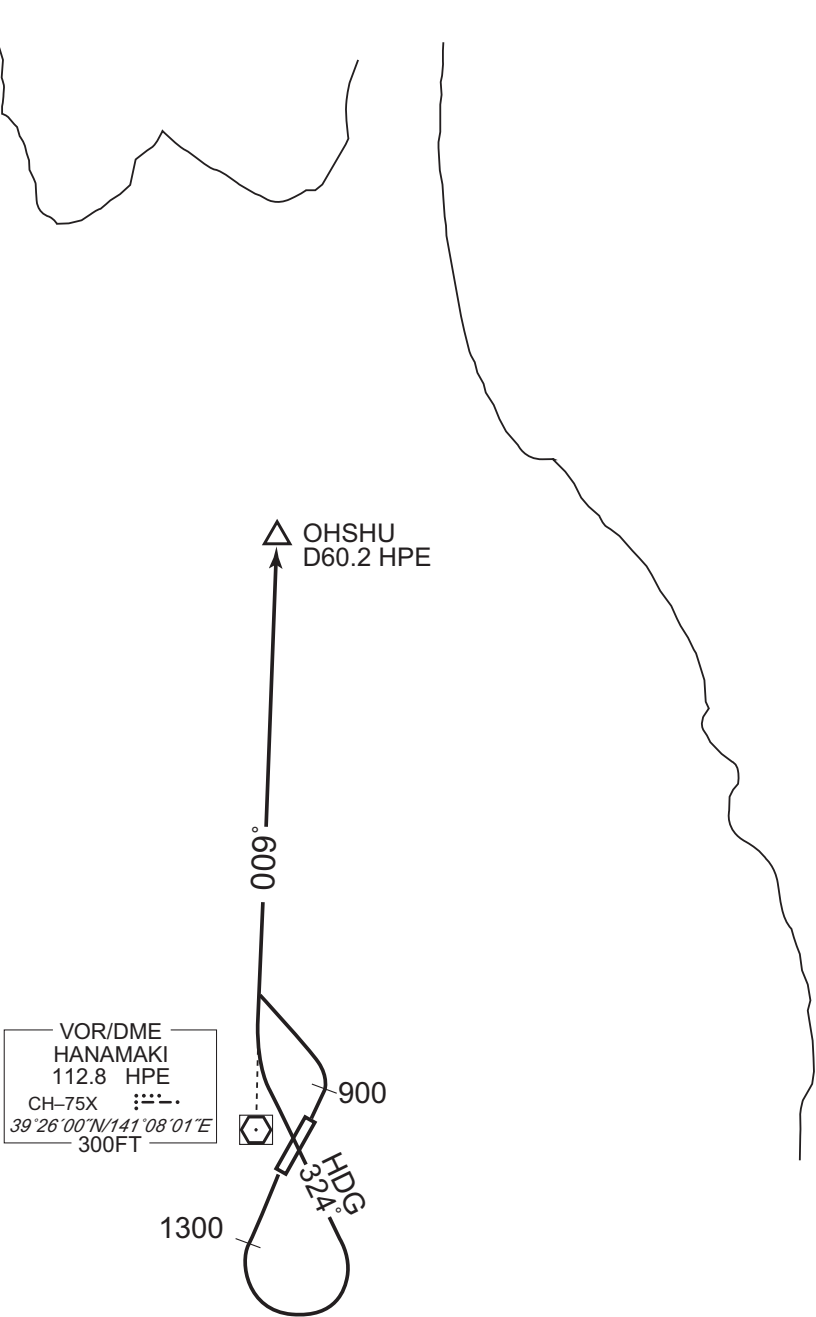
RJSI / HANAMAKI

SID

OHSU ONE DEPARTURE

RWY 02 : Climb RWY HDG to 900FT, turn left...
RWY 20 : Climb RWY HDG to 1300FT, turn left HDG 324°...
...to intercept and proceed via HPE R009 to OHSU.

CHANGE : Description of PROC name.



STANDARD DEPARTURE CHART -INSTRUMENT

RJSI / HANAMAKI

SID

NIIGATA FIVE 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 HPE 50.0DME(GTC 79.6DME),
via GTC R055 to GTC.Cross HPE VOR/DME at or above 2200 FT, cross HPE R236/50.0DME
(GTC R055/79.6DME) at or above 11000 FT.

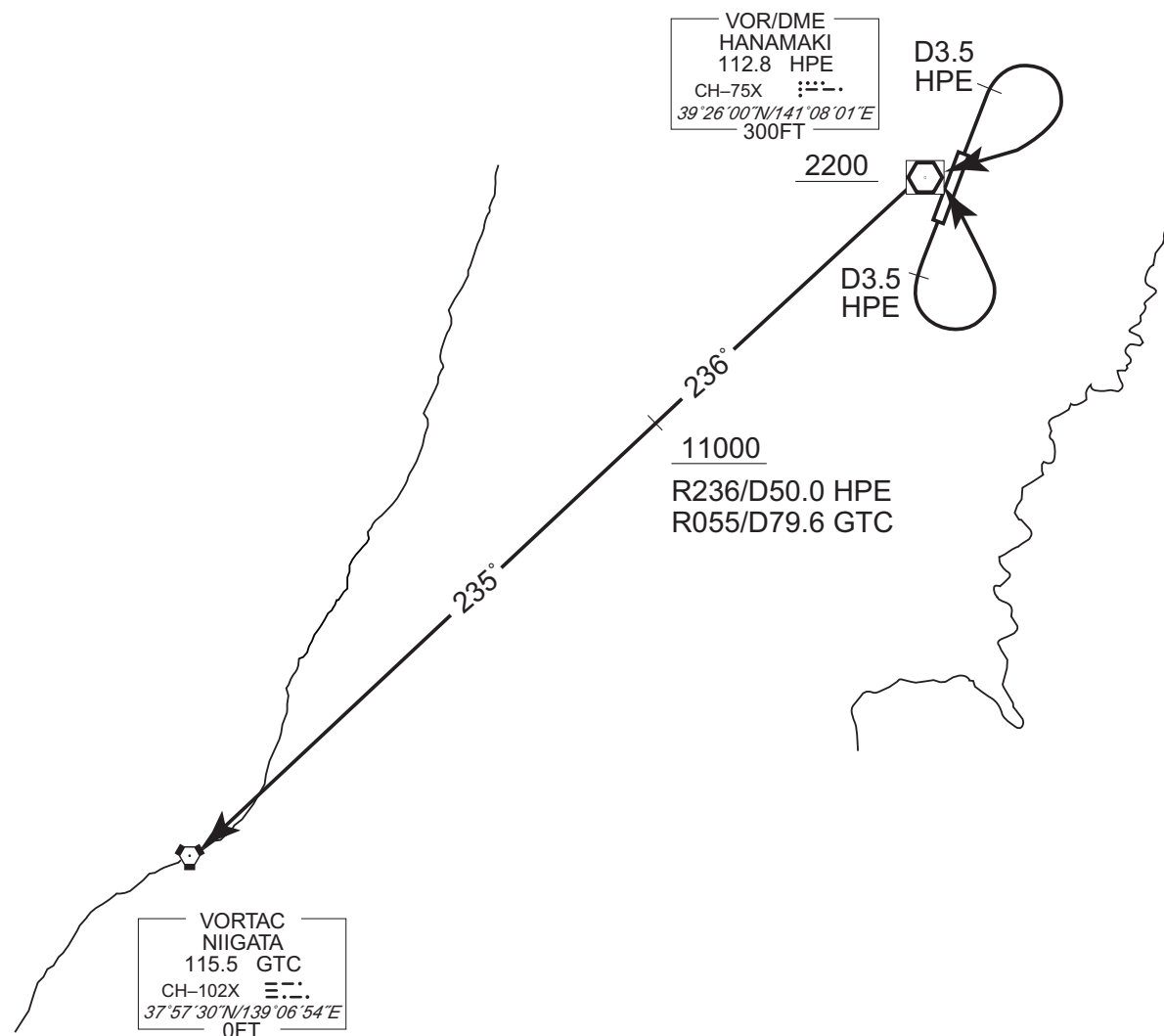
Note RWY02 : 4.5% climb gradient required up to 2400FT.

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.

CHANGE : PROC renamed. PROC course. ALT restriction.



STANDARD DEPARTURE CHART -INSTRUMENT

RJSI / HANAMAKI

SID

HANAMAKI REVERSAL TWO DEPARTURE

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

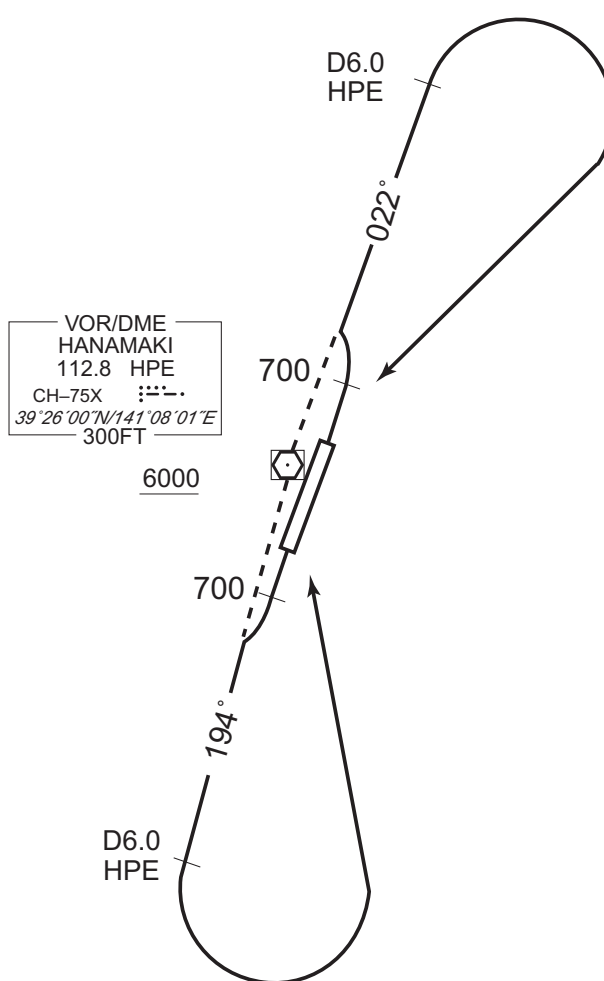
RWY 20 : Climb RWY HDG to 700FT, via HPE R194 to 6.0 DME, turn left...

...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.

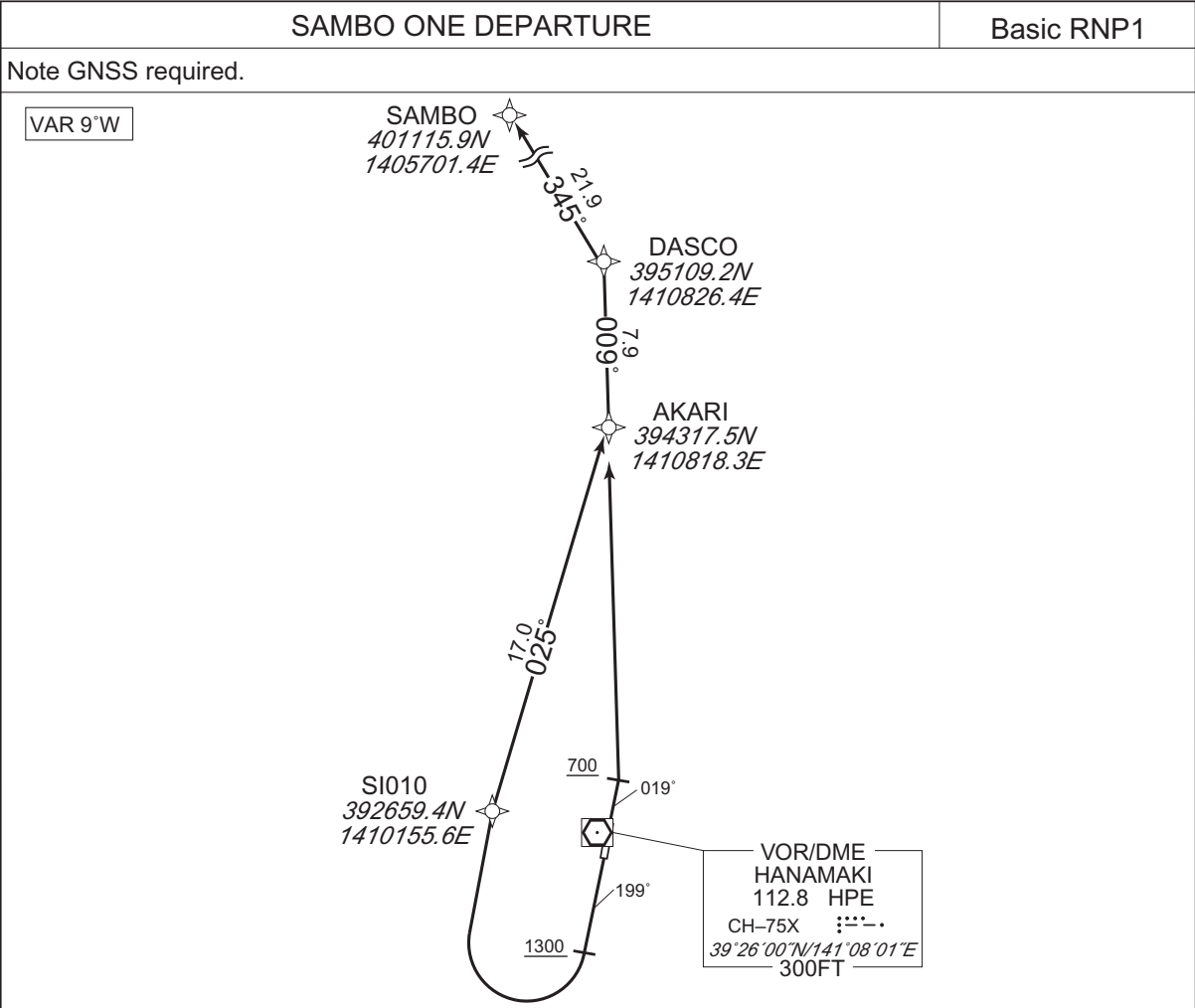


CHANGE : Description of PROC name.

STANDARD DEPARTURE CHART -INSTRUMENT

RJSI / HANAMAKI

RNAV SID



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 .
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 351° FM end of RWY20.

RWY02

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	-	-	019 (010.7)	-8.7	-	-	+700	-	-	Basic RNP1
002	DF	AKARI	-	-	-8.7	-	-	-	-	-	Basic RNP1
003	TF	DASCO	-	009 (000.8)	-8.7	7.9	-	-	-	-	Basic RNP1
004	TF	SAMBO	-	345 (336.6)	-8.7	21.9	-	-	-	-	Basic RNP1

RWY20

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	-	-	199 (190.7)	-8.7	-	-	+1300	-	-	Basic RNP1
002	DF	SI010	-	-	-8.7	-	R	-	-	-	Basic RNP1
003	TF	AKARI	-	025 (016.7)	-8.7	17.0	-	-	-	-	Basic RNP1
004	TF	DASCO	-	009 (000.8)	-8.7	7.9	-	-	-	-	Basic RNP1
005	TF	SAMBO	-	345 (336.6)	-8.7	21.9	-	-	-	-	Basic RNP1

STANDARD DEPARTURE CHART -INSTRUMENT

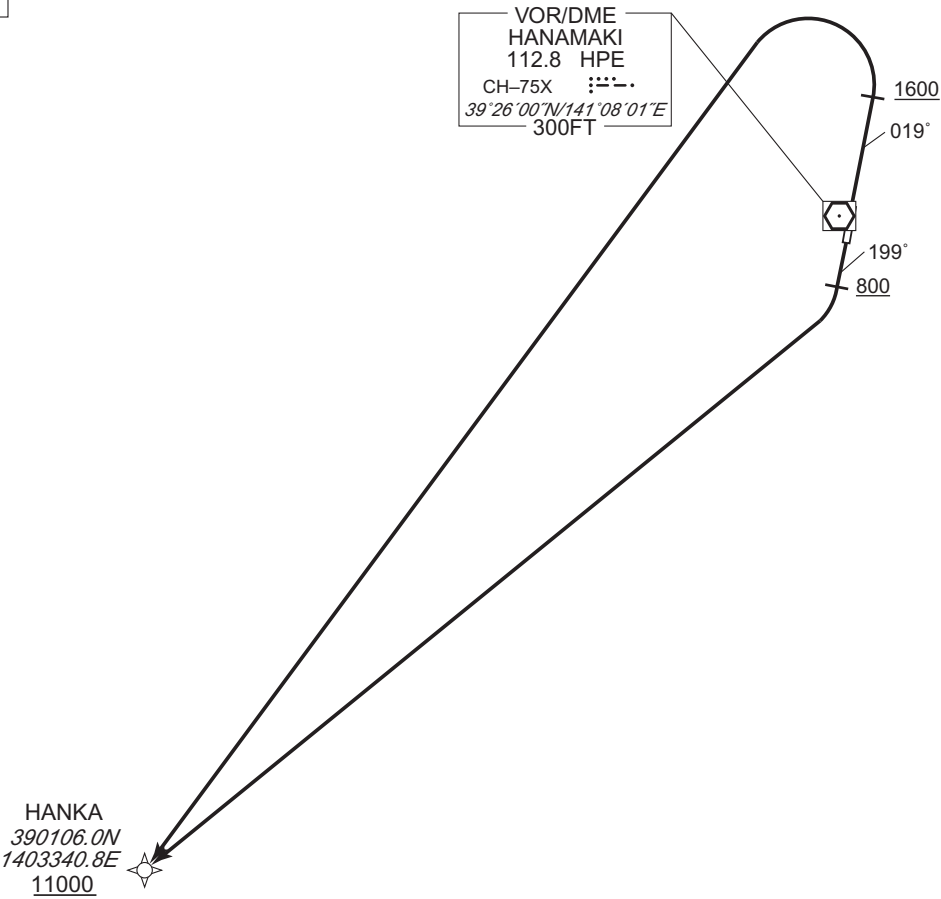
RJSI / HANAMAKI

RNAV SID

HANKA ONE DEPARTURE	Basic RNP1
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Note GNSS required

VAR 9°W



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 232° FM end of RWY20.

RWY02

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	—	—	019 (010.7)	-8.7	—	—	+1600	—	—	Basic RNP1
002	DF	HANKA	—	—	-8.7	—	L	+11000	—	—	Basic RNP1

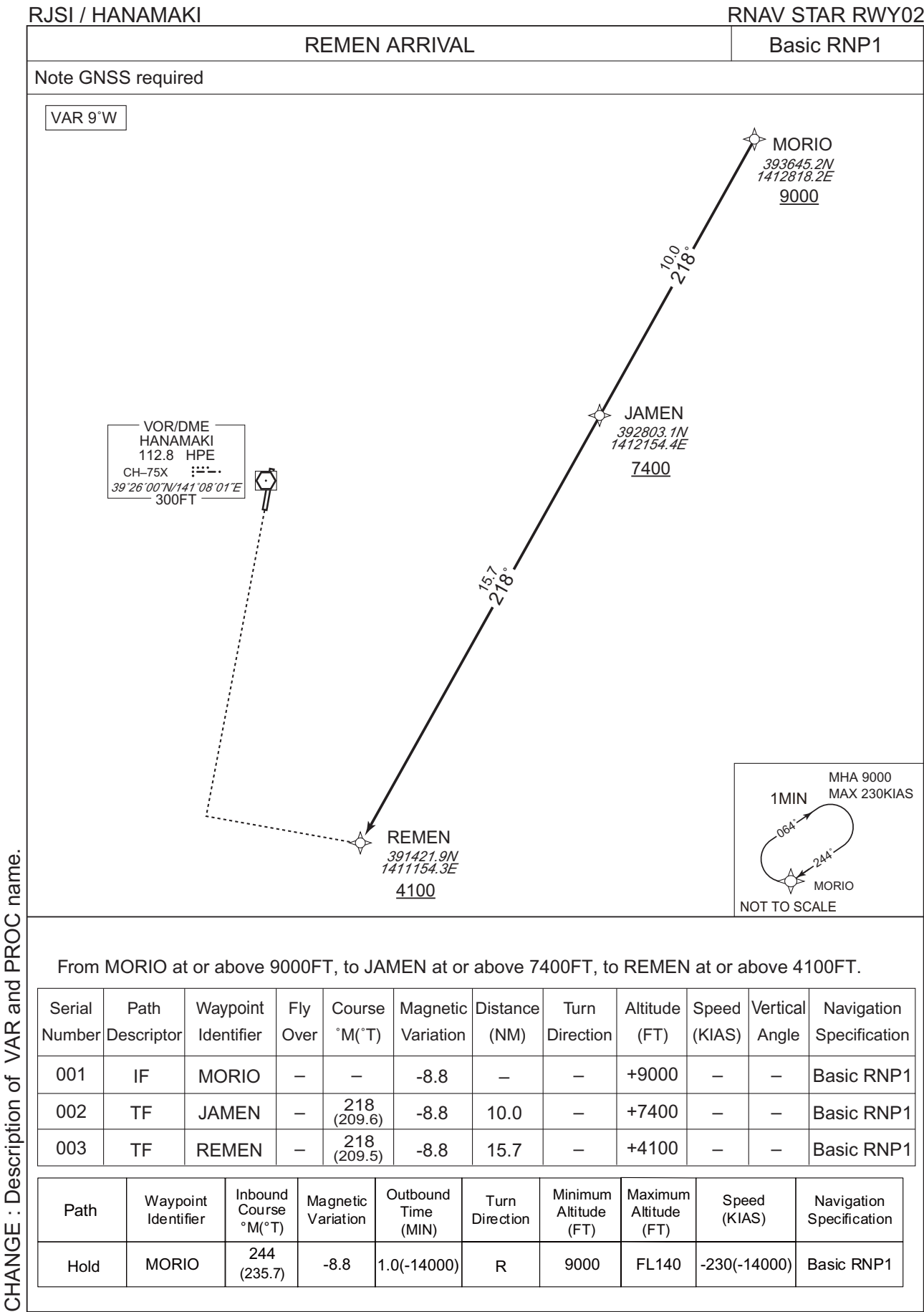
RWY20

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	—	—	199 (190.7)	-8.7	—	—	+800	—	—	Basic RNP1
002	DF	HANKA	—	—	-8.7	—	R	+11000	—	—	Basic RNP1

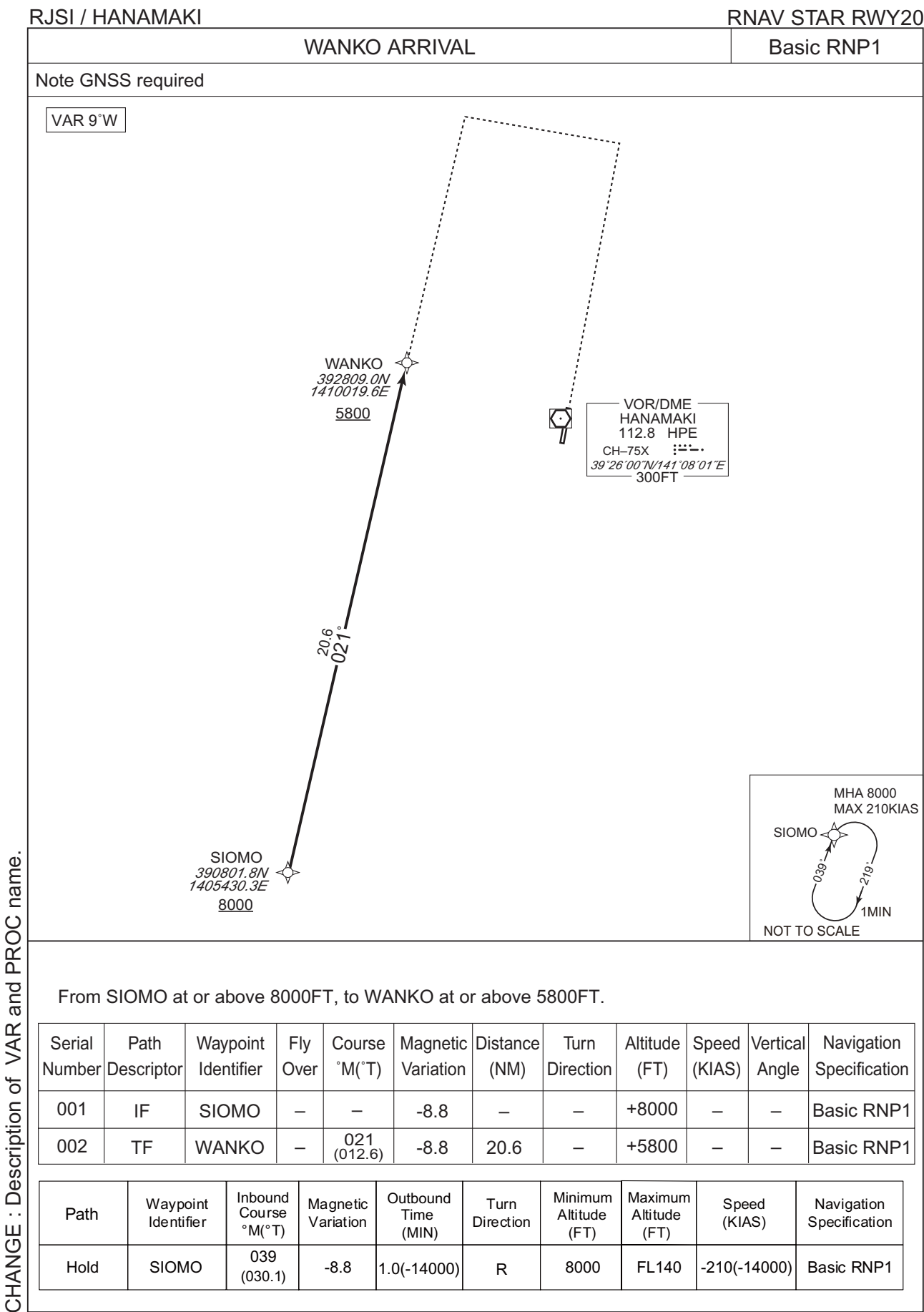
CHANGE : Description of VAR and PROC name.

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STANDARD ARRIVAL CHART - INSTRUMENT

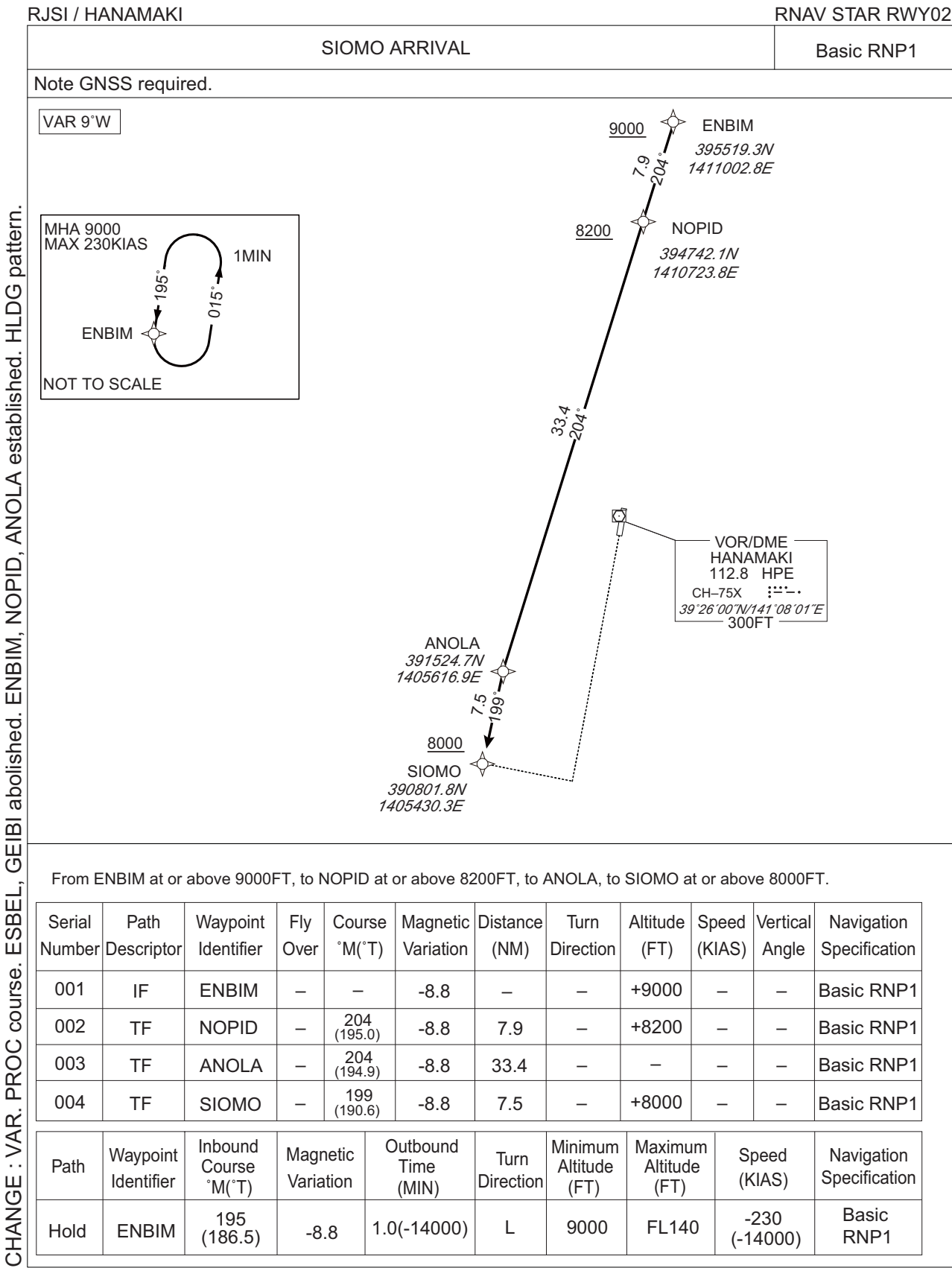


STANDARD ARRIVAL CHART - INSTRUMENT



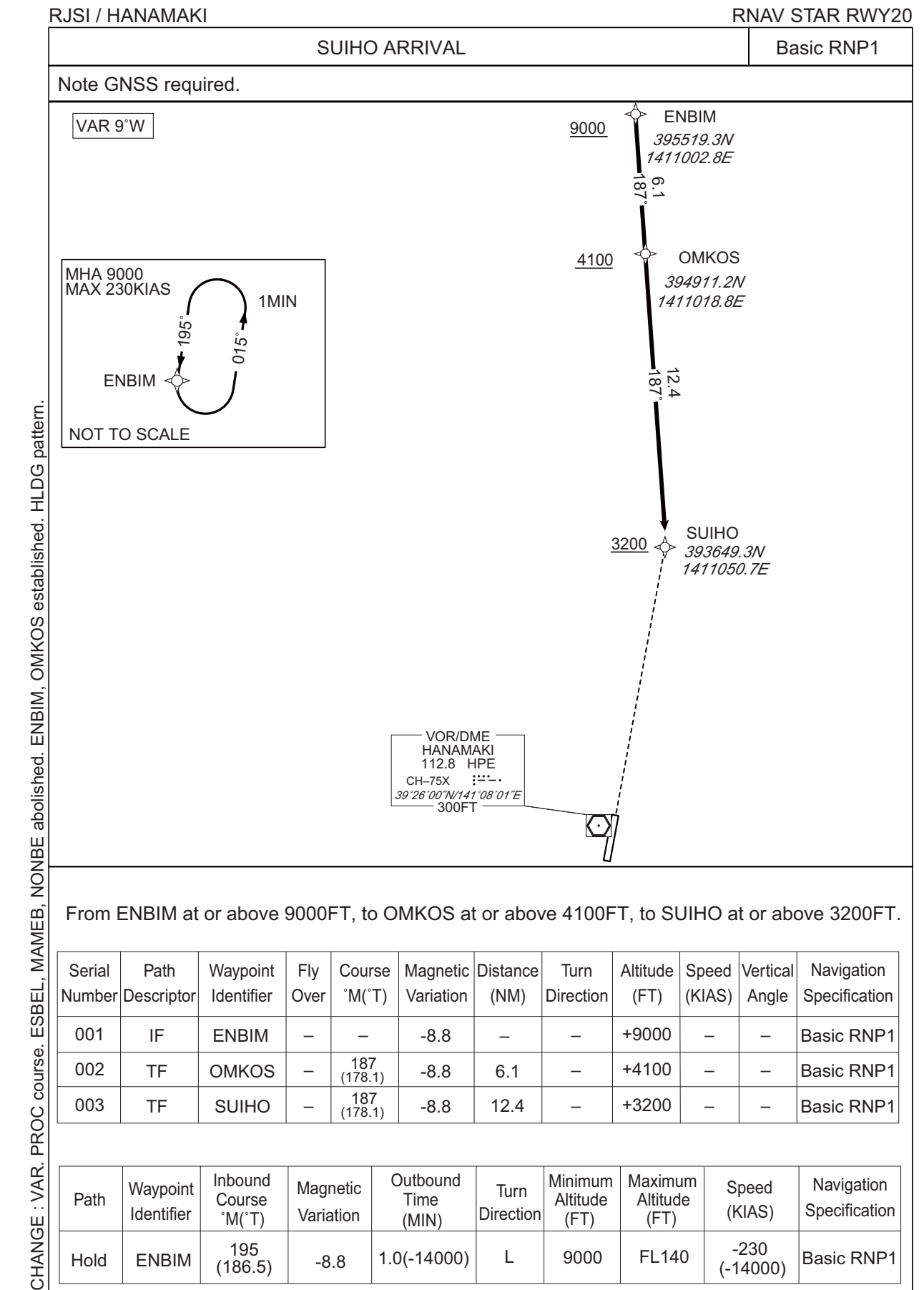
CHANGE : Description of VAR and PROC name.

STANDARD ARRIVAL CHART - INSTRUMENT



CHANGE : VAR. PROC course. ESBEL, GEIBI abolished. ENBIM, NOPID, ANOLA established. HLDG pattern.

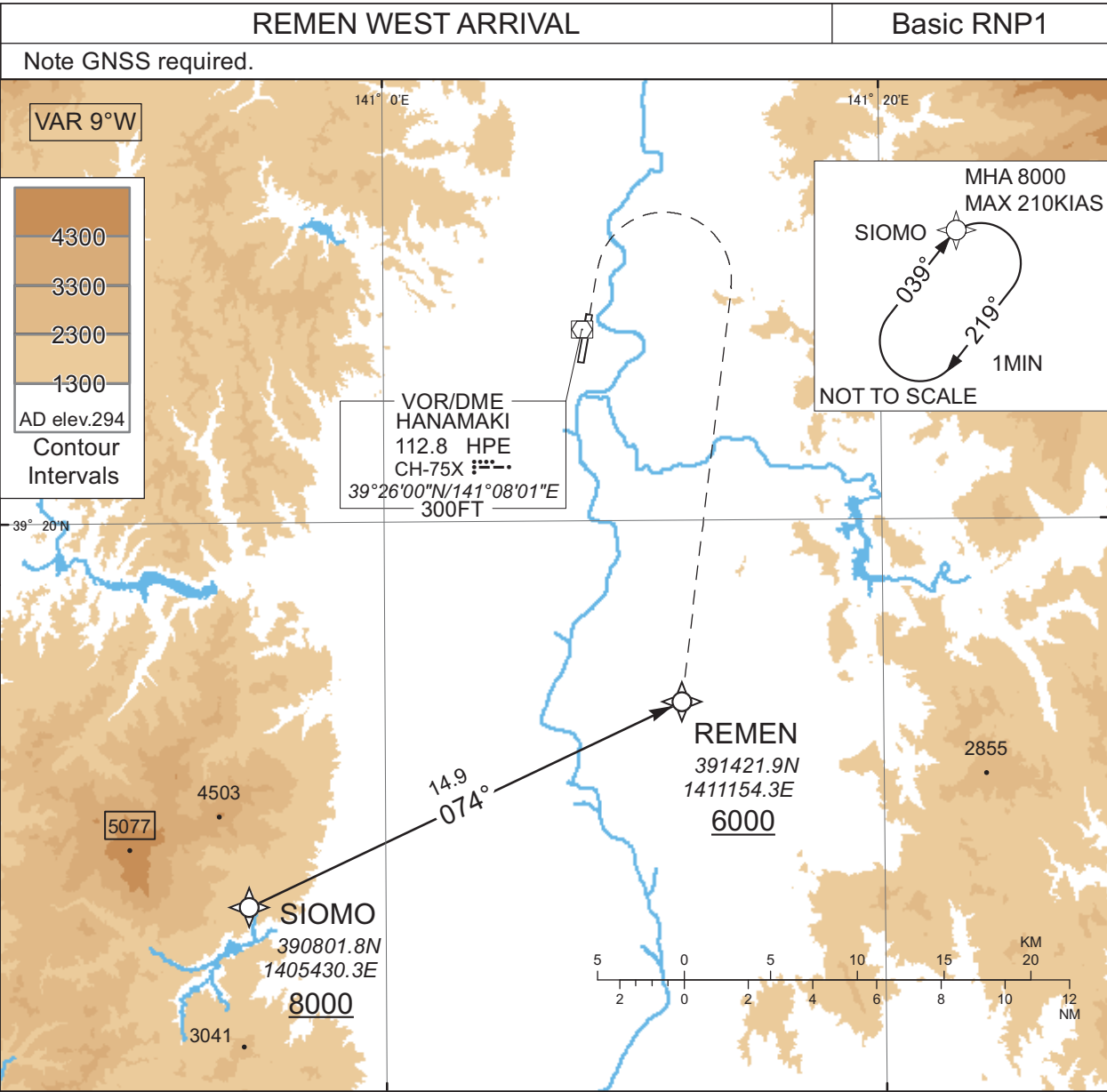
STANDARD ARRIVAL CHART - INSTRUMENT



STANDARD ARRIVAL CHART - INSTRUMENT

RJSI / HANAMAKI

RNAV STAR RWY20



CHANGE : Description of VAR and PROC name.

From SIOMO at or above 8000FT, to REMEN at or above 6000FT.

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	SIOMO	-	-	-8.8	-	-	+8000	-	-	Basic RNP1
002	TF	REMEN	-	074 (064.7)	-8.8	14.9	-	+6000	-	-	Basic RNP1

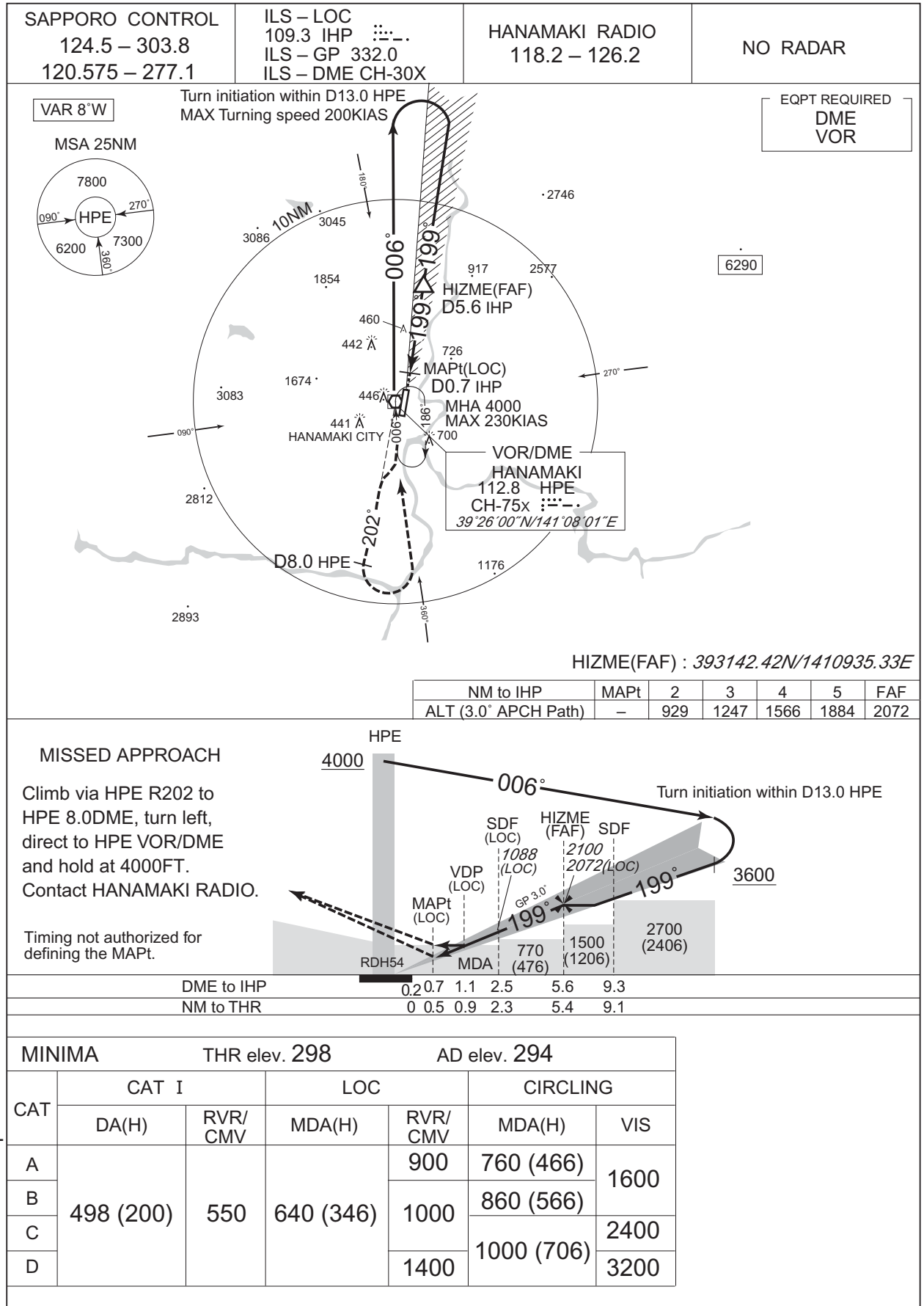
Path	Waypoint Identifier	Inbound Course °M(°T)	Magnetic Variation	Outbound Time (MIN)	Turn Direction	Minimum Altitude (FT)	Maximum Altitude (FT)	Speed (KIAS)	Navigation Specification
Hold	SIOMO	039 (030.1)	-8.8	1.0(-14000)	R	8000	FL140	-210(-14000)	Basic RNP1

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INSTRUMENT APPROACH CHART

RJSI / HANAMAKI

ILS Z or LOC Z RWY20

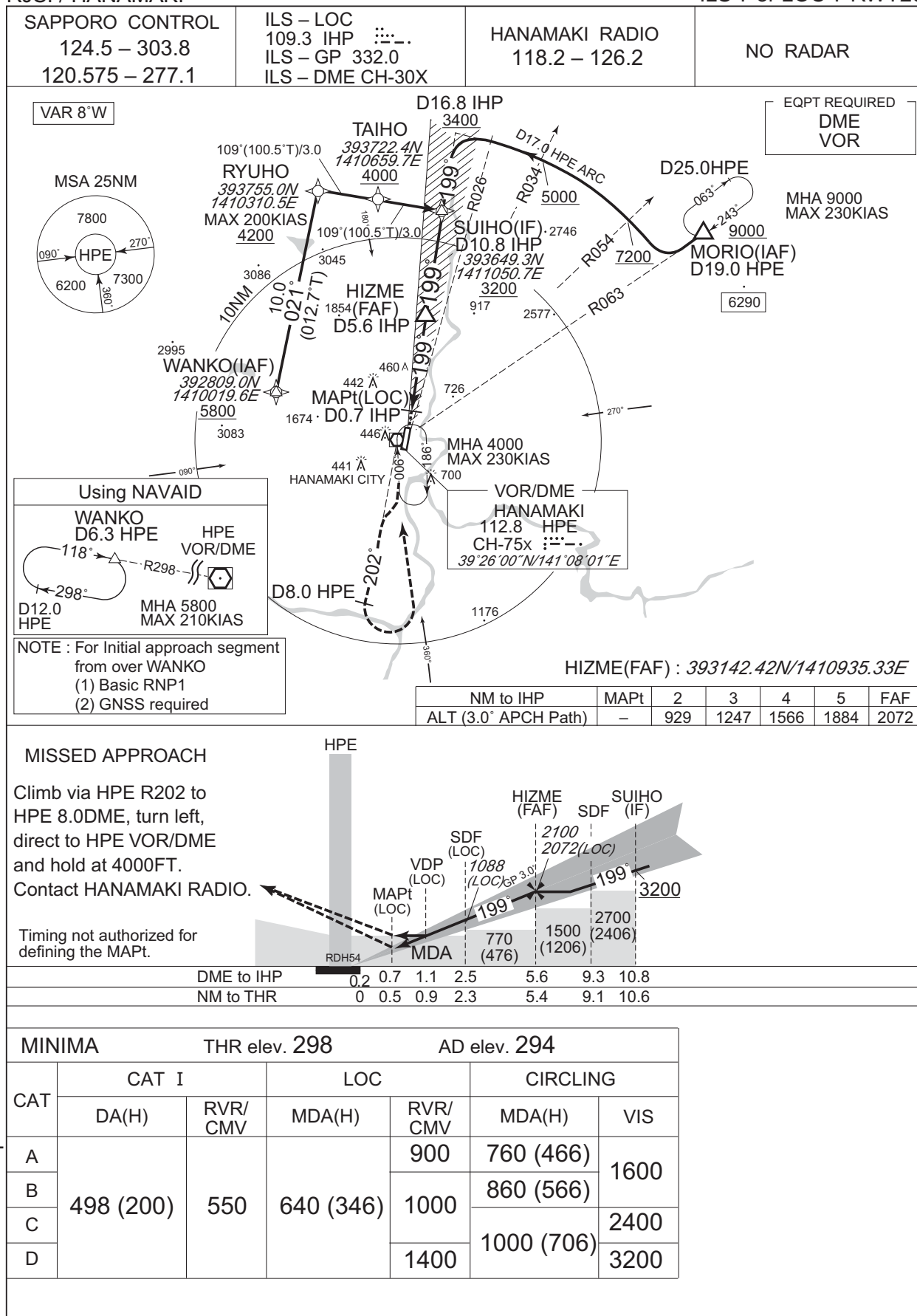


CHANGE : Description of VAR.

INSTRUMENT APPROACH CHART

RJSI / HANAMAKI

ILS Y or LOC Y RWY20



CHANGE : Description of VAR.

RJSI / HANAMAKI

VOR RWY20

VAR 8°W

MSA 25NM

7800
HPE
6200
7300
360°
090°
270°

10NM

3045
3086
1854
442
1674
3083
2812
2893

MAPt
446
441
HANAMAKI CITY

MASA(HAF)
D5.0 HPE

460
726
700
MHA 4000
MAX 230KIAS

D8.0 HPE

1176
1049

2746
2577
917

007°
202°
270°
090°
360°

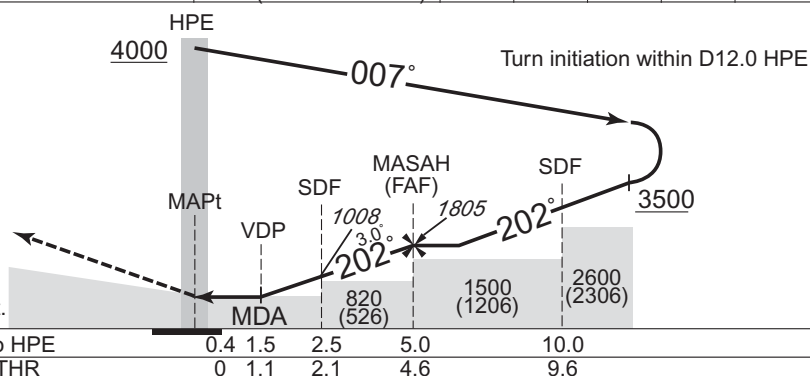
EQPT REQUIRED
DME

6290

MASA(HAF) : 393052.04N/1410931.09E

NM to HPE	MAPt	2	3	4	FAF
ALT (3.0° APCH Path)	—	849	1168	1486	1805

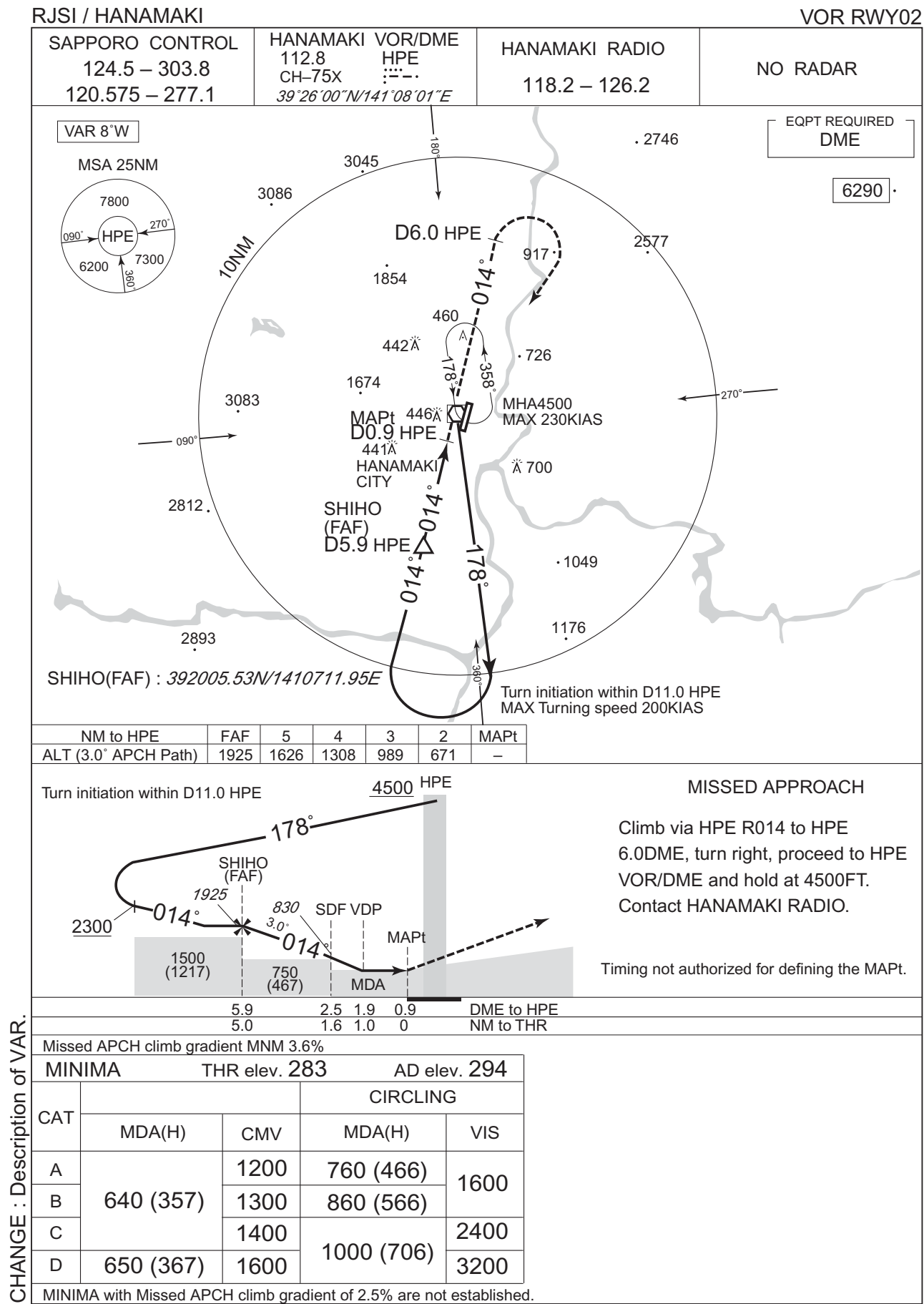
Timing not authorized for defining the MAPt.



MINIMA					THR elev. 298	AD elev. 294
CAT			CIRCLING			
	MDA(H)	RVR/ CMV	MDA(H)	VIS		
A	690 (396)	900	760 (466)	1600		
B		1000	860 (566)			
C			1000 (706)	2400		
D				1400	3200	

CHANGE : Description of VAR.

INSTRUMENT APPROACH CHART

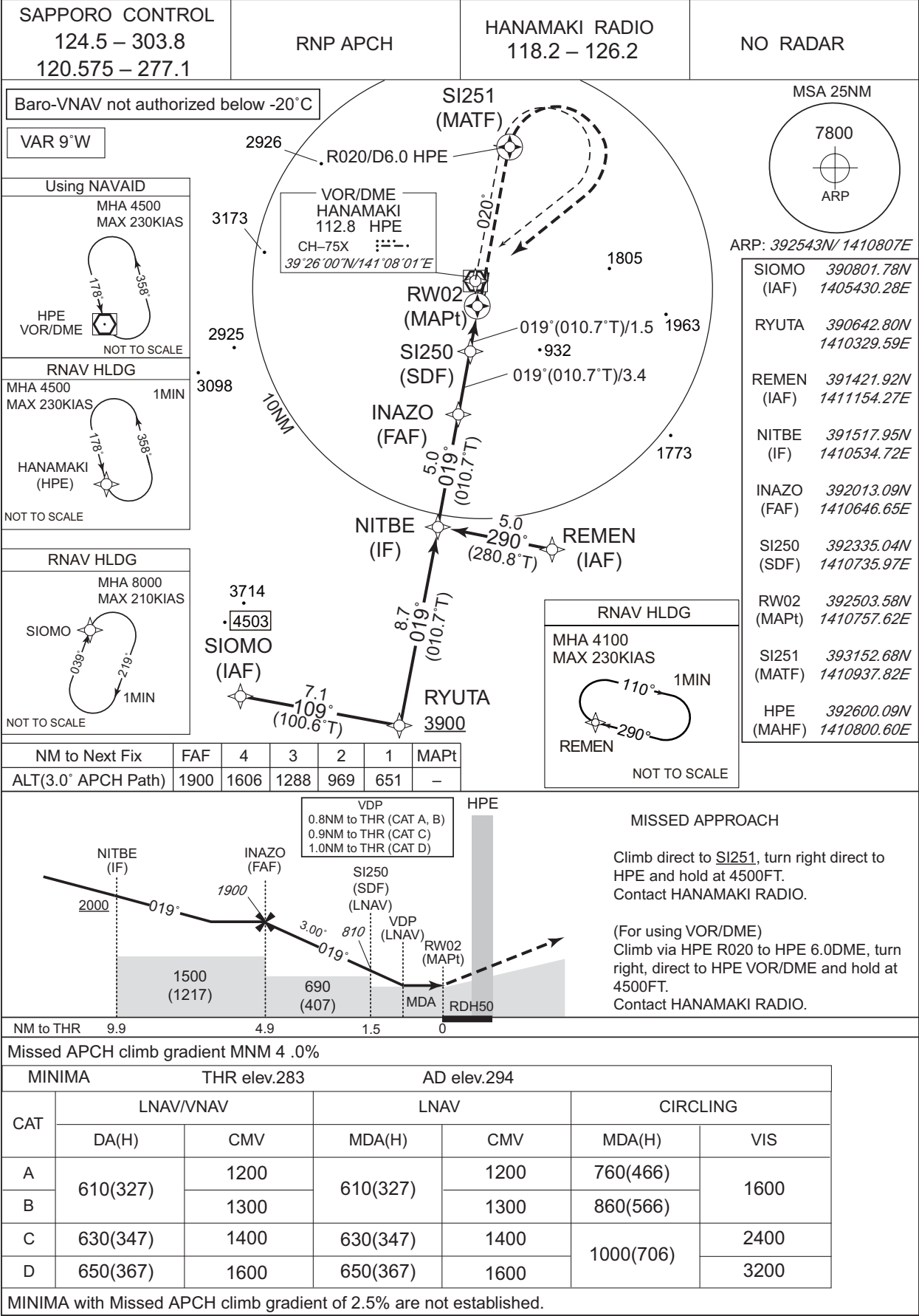


CHANGE : Description of VAR.

INSTRUMENT APPROACH CHART

RJSI / HANAMAKI

RNP Z RWY02



INSTRUMENT APPROACH CHART

RJSI / HANAMAKI

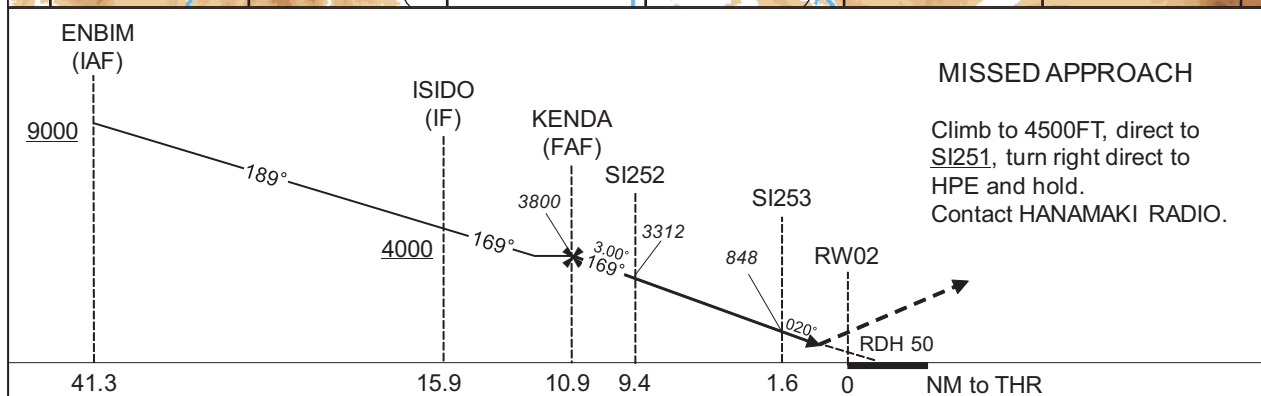
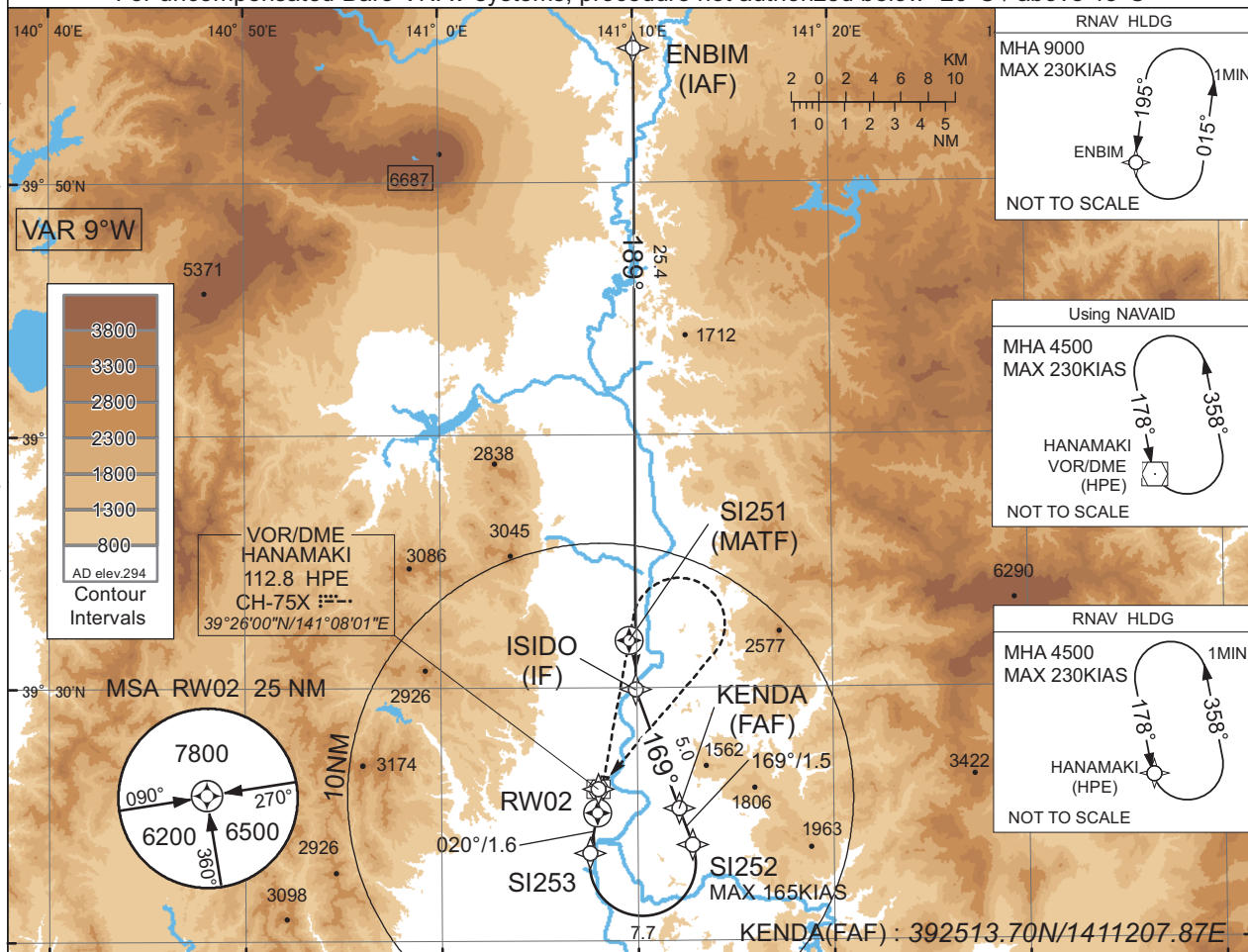
RNP Y RWY02(AR)

SAPPORO CONTROL
124.5 - 303.8
120.575 - 277.1RNP AR
RF required.HANAMAKI RADIO
118.2 - 126.2

NO RADAR

For uncompensated Baro-VNAV systems, procedure not authorized below -20°C / above 45°C

CHANGE : PROC course. ESBEL, NOJYO abolished. ENBIM established. ENBIM HLDG established(ENBIM). RNAV HLDG established(ENBIM). RNAV HLDG abolished(ESBEL). RNAV HLDG established(ENBIM).



Missed APCH climb gradient MNM 4.0%

MINIMA	THR elev. 283	AD elev. 294
CAT	RNP 0.30	
	DA(H)	CMV
A	-	-
B	-	-
C	595(312)	1400
D		1600

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

Authorization Required

INSTRUMENT APPROACH CHART

RJSI / HANAMAKI

RNP Y RWY02(AR)

CHANGE : PROC course. ESBEL,NOJOY abolished. ENBIM established. RNAV HLDG established(ENBIM).

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	ENBIM	-	-	-8.8	-	-	+9000	-	-	-
002	TF	ISIDO	-	189 (180.2)	-8.8	25.4	-	+4000	-	-	1.0
003	TF	KENDA	-	169 (160.3)	-8.8	5.0	-	3800	-	-	1.0
004	TF	SI252	-	169 (160.4)	-8.8	1.5	-	3312	-165	-3.00	0.3
005	RF Center: SIRF1 r=2.10NM	SI253	-	-	-8.8	7.7	R	848	-	-3.00	0.3
006	TF	RW02	Y	020 (010.7)	-8.8	1.6	-	333	-	-3.00/50	0.3
007	DF	SI251	Y	-	-8.8	-	-	-	-	-	1.0
008	DF	HPE	-	-	-8.8	-	R	4500	-	-	1.0

Path	Waypoint Identifier	Inbound Course °M(°T)	Magnetic Variation	Outbound Time (MIN)	Turn Direction	Minimum Altitude (FT)	Maximum Altitude (FT)	Speed (KIAS)	RNP Value
Hold	ENBIM	195 (186.5)	-8.8	1.0 (-14000)	L	9000	FL140	-230 (-14000)	1.0
Hold	HPE	178 (169.7)	-8.8	1.0 (-14000)	L	4500	FL140	-230 (-14000)	1.0

Waypoint Coordinates

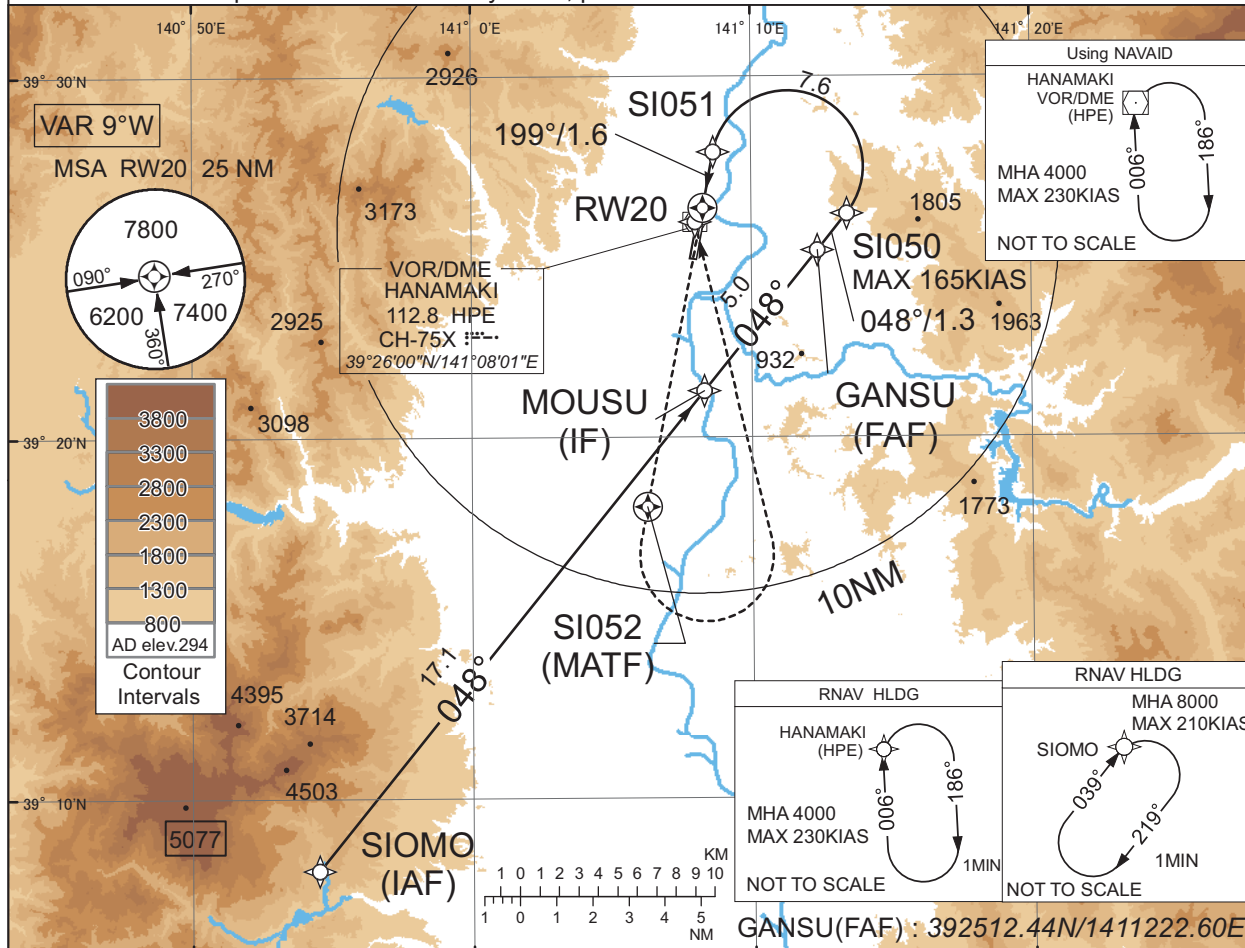
Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
ENBIM	395519.34N / 1411002.82E	SIRF1	392304.37N / 1411014.42E
ISIDO	392956.45N / 1410957.05E		
KENDA	392513.70N / 1411207.87E		
SI252	392347.07N / 1411247.89E		
SI253	392327.97N / 1410734.24E		
RW02	392503.58N / 1410757.62E		
SI251	393152.68N / 1410937.82E		
HPE	392600.09N / 1410800.60E		

RJSI / HANAMAKI

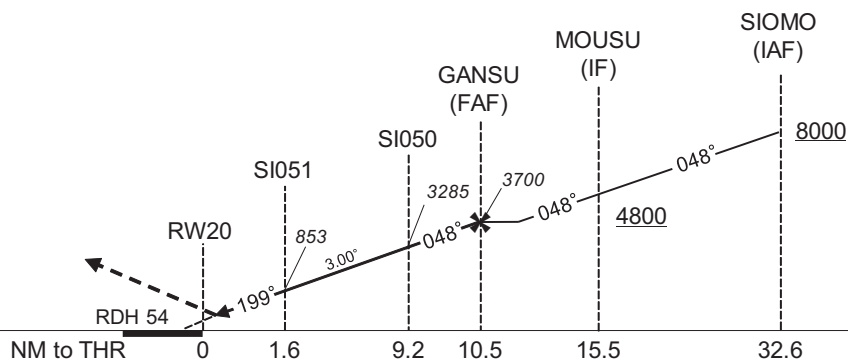
RNP Z RWY20(AR)

SAPPORO CONTROL 124.5 - 303.8 120.575 - 277.1	RNP AR RF required.	HANAMAKI RADIO 118.2 - 126.2	NO RADAR
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For uncompensated Baro-VNAV systems, procedure not authorized below -20°C / above 45°C



Climb to 4000FT, direct to SI052, turn left direct to HPE and hold.
Contact HANAMAKI RADIO.



MINIMA	THR elev. 298	AD elev. 294
CAT	RNP 0.30	
	DA(H)	RVR/CMV
A	-	-
B		
C	607(309)	1000
D		1400

Authorization Required

CHANGE : Description of VAR.

INSTRUMENT APPROACH CHART

RJSI / HANAMAKI

RNP Z RWY20(AR)

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	SIOMO	-	-	-8.8	-	-	+8000	-	-	-
002	TF	MOUSU	-	048 (038.8)	-8.8	17.1	-	+4800	-	-	1.0
003	TF	GANSU	-	048 (038.9)	-8.8	5.0	-	3700	-	-	1.0
004	TF	SI050	-	048 (038.9)	-8.8	1.3	-	3285	-165	-3.00	0.3
005	RF Center: SIRF2 r=2.10NM	SI051	-	-	-8.8	7.6	L	853	-	-3.00	0.3
006	TF	RW20	Y	199 (190.7)	-8.8	1.6	-	352	-	-3.00/54	0.3
007	DF	SI052	Y	-	-8.8	-	-	-	-	-	1.0
008	DF	HPE	-	-	-8.8	-	L	4000	-	-	1.0

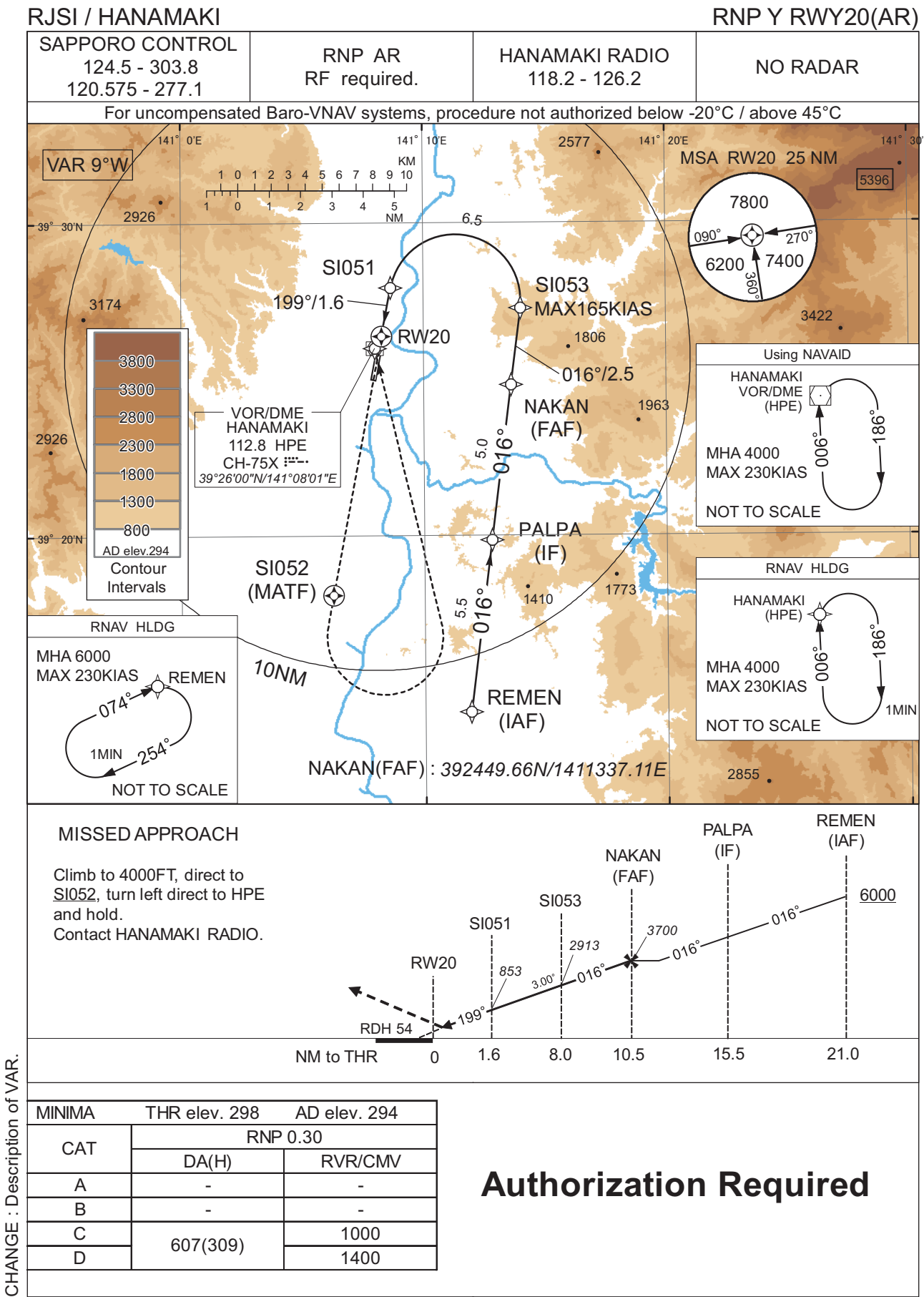
Path	Waypoint Identifier	Inbound Course °M(°T)	Magnetic Variation	Outbound Time (MIN)	Turn Direction	Minimum Altitude (FT)	Maximum Altitude (FT)	Speed (KIAS)	RNP Value
Hold	SIOMO	039 (030.1)	-8.8	1.0 (-14000)	R	8000	FL140	-210 (-14000)	1.0
Hold	HPE	006 (357.5)	-8.8	1.0 (-14000)	R	4000	FL140	-230 (-14000)	1.0

Waypoint Coordinates

Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
SIOMO	390801.78N / 1405430.28E	SIRF2	392732.73N / 1411119.82E
MOUSU	392119.11N / 1410818.81E		
GANSU	392512.44N / 1411222.60E		
SI050	392613.23N / 1411326.21E		
SI051	392756.30N / 1410839.89E		
RW20	392623.24N / 1410817.11E		
SI052	391806.42N / 1410615.76E		
HPE	392600.09N / 1410800.60E		

CHANGE : PROC renamed.

INSTRUMENT APPROACH CHART



MINIMA

THR elev. 298

AD elev. 294

CAT	RNP 0.30	
	DA(H)	RVR/CMV
A	-	-
B	-	-
C	607(309)	1000
D		1400

Authorization Required

CHANGE : Description of VAR.

INSTRUMENT APPROACH CHART

RJSI / HANAMAKI

RNP Y RWY20(AR)

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	REMEN	-	-	-8.8	-	-	+6000	-	-	-
002	TF	PALPA	-	016 (007.2)	-8.8	5.5	-	-	-	-	1.0
003	TF	NAKAN	-	016 (007.2)	-8.8	5.0	-	3700	-	-	1.0
004	TF	SI053	-	016 (007.2)	-8.8	2.5	-	2913	-165	-3.00	0.3
005	RF Center: SIRF2 r=2.10NM	SI051	-	-	-8.8	6.5	L	853	-	-3.00	0.3
006	TF	RW20	Y	199 (190.7)	-8.8	1.6	-	352	-	-3.00/54	0.3
007	DF	SI052	Y	-	-8.8	-	-	-	-	-	1.0
008	DF	HPE	-	-	-8.8	-	L	4000	-	-	1.0

Path	Waypoint Identifier	Inbound Course °M(°T)	Magnetic Variation	Outbound Time (MIN)	Turn Direction	Minimum Altitude (FT)	Maximum Altitude (FT)	Speed (KIAS)	RNP Value
Hold	REMEN	074 (065.0)	-8.8	1.0 (-14000)	R	6000	FL140	-230 (-14000)	1.0
Hold	HPE	006 (357.5)	-8.8	1.0 (-14000)	R	4000	FL140	-230 (-14000)	1.0

Waypoint Coordinates

Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
REMEN	391421.92N / 1411154.27E	SIRF2	392732.73N / 1411119.82E
PALPA	391951.68N / 1411248.23E		
NAKAN	392449.66N / 1411337.11E		
SI053	392716.81N / 1411401.29E		
SI051	392756.30N / 1410839.89E		
RW20	392623.24N / 1410817.11E		
SI052	391806.42N / 1410615.76E		
HPE	392600.09N / 1410800.60E		

CHANGE : PROC renamed.

RJSI / HANAMAKI

Visual REP



※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).

CHANGE : Map updated. BRG/DIST from ARP. Taseko established. Tsuchisawa abolished.

Call sign	BRG / DIST from ARP	Remarks
盛岡 Morioka	360°T / 16.4NM	JR駅 JR Station
城山 Shiroyama	012°T / 8.4NM	城跡 The site of a castle
豊沢 Toyosawa	293°T / 8.1NM	豊沢ダム Dam
田瀬湖 Taseko	121°T / 10.0NM	田瀬ダム Dam
北上 Kitakami	184°T / 8.9NM	JR駅 JR Station
水沢 Mizusawa	178°T / 17.4NM	JR駅 JR Station



RJSI / HANAMAKI

Minimum Vectoring Altitude CHART

