

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

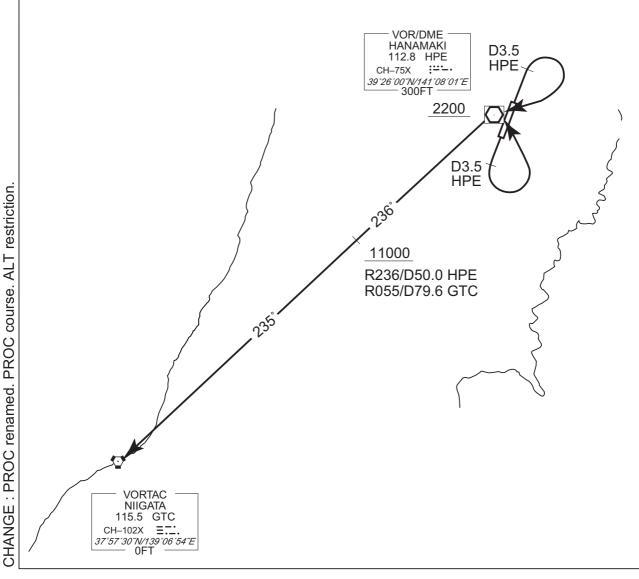
(GTC R055/79.6DME) at or above 11000 FT.

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.



Civil Aviation Bureau, Japan (EFF:7 SEP 2023)

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HANAMAKI REVERSAL TWO DEPARTURE

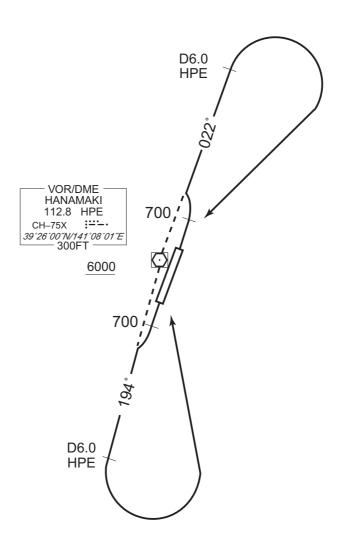
RWY 02: Climb RWY HDG to 700FT, via HPE R022 to 6.0 DME, turn right... RWY 20: Climb RWY HDG to 700FT, via HPE R194 to 6.0 DME, turn left...

...proceed to HPE VOR/DME.

Cross HPE VOR/DME at or above 6000FT.

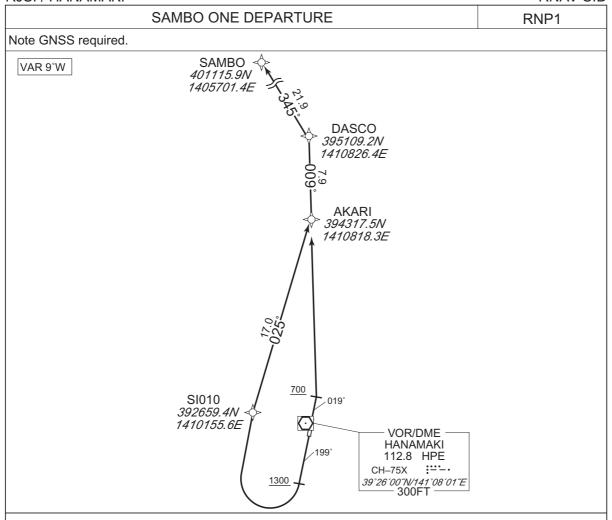
Note RWY02: 5.0% climb gradient required up to 3200FT.

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



CHANGE: Description of PROC name.

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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.

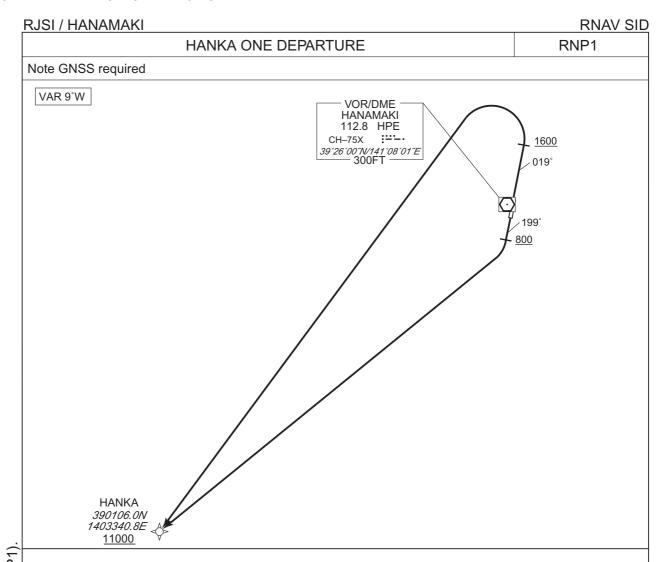
OBST ALT 3117FT located at 10.7NM 351° FM end of RWY20.

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Serial	Path	Waypoint	Fly	Course	Magnetic		Turn	Altitude	Speed	Vertical	Navigation
Number	Descriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	Specification
001	VA	_	_	019 (010.7)	-8.7	_	1	+700	_	_	RNP1
002	DF	AKARI	_	_	-8.7	_	_	_	_	_	RNP1
003	TF	DASCO	_	009 (000.8)	-8.7	7.9	ı	_	_	_	RNP1
004	TF	SAMBO	_	345 (336.6)	-8.7	21.9	_	_	_	_	RNP1

RWY20

	Serial	Path	Waypoint	Fly	Course	Magnetic		Turn	Altitude	Speed	Vertical	Navigation
l	Number	Descriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	Specification
	001	VA	_	_	199 (190.7)	-8.7	_	ı	+1300	_	_	RNP1
	002	DF	SI010	_	_	-8.7	_	R	ı	-	_	RNP1
	003	TF	AKARI	_	025 (016.7)	-8.7	17.0	I	-	_	_	RNP1
	004	TF	DASCO	_	009 (000.8)	-8.7	7.9	_	_	_	_	RNP1
	005	TF	SAMBO	_	345 (336.6)	-8.7	21.9	ı	-	_	_	RNP1



RWY02 : Climb on HDG 019 $^\circ$ at or above 1600FT, turn left direct to HANKA, at or above 11000FT. RWY20 : Climb on HDG 199 $^\circ$ 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.

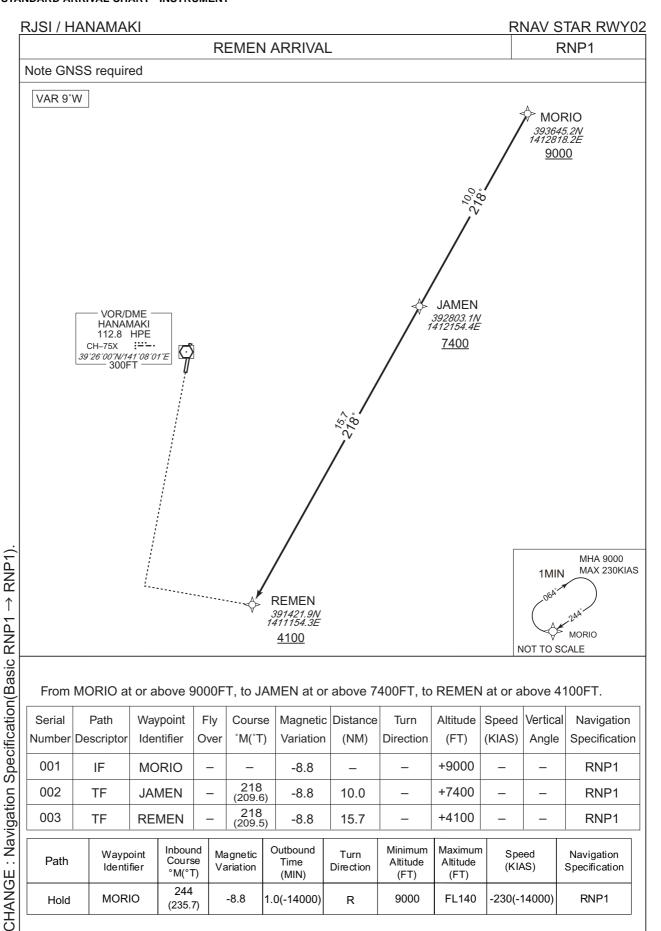
RWY02

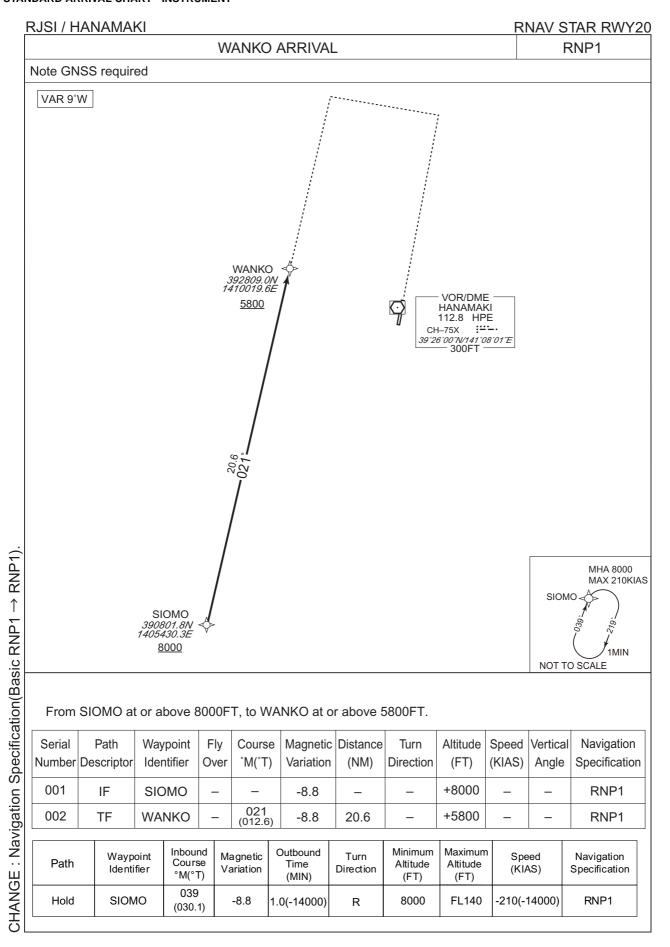
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over		Magnetic Variation	l	Turn Direction		•	l .	Navigation Specification
001	VA	_	_	019 (010.7)	-8.7	_	_	+1600	_	_	RNP1
002	DF	HANKA	_	_	-8.7	_	L	+11000	_	_	RNP1

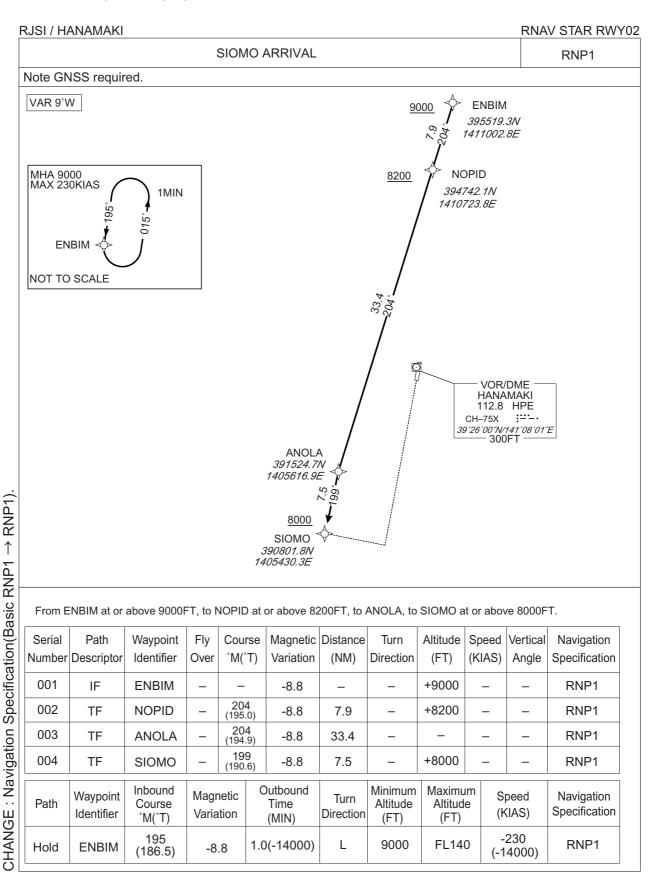
RWY20

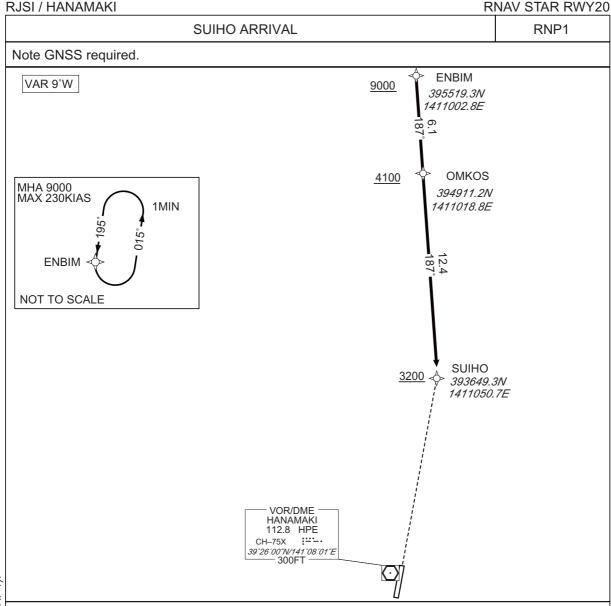
Serial	Path	Waypoint	Fly	Course	Magnetic	Distance	Turn	Altitude	Speed	Vertical	Navigation
Number	Descriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	Specification
001	VA	_	_	199 (190.7)	-8.7	_	_	+800	_	_	RNP1
002	DF	HANKA	_	_	-8.7	_	R	+11000	_	_	RNP1







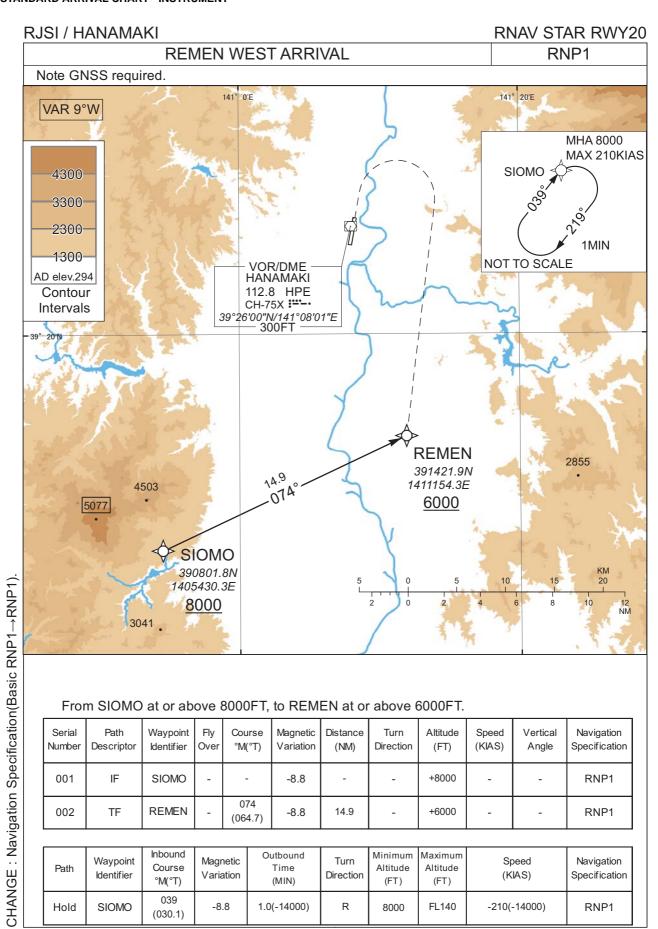




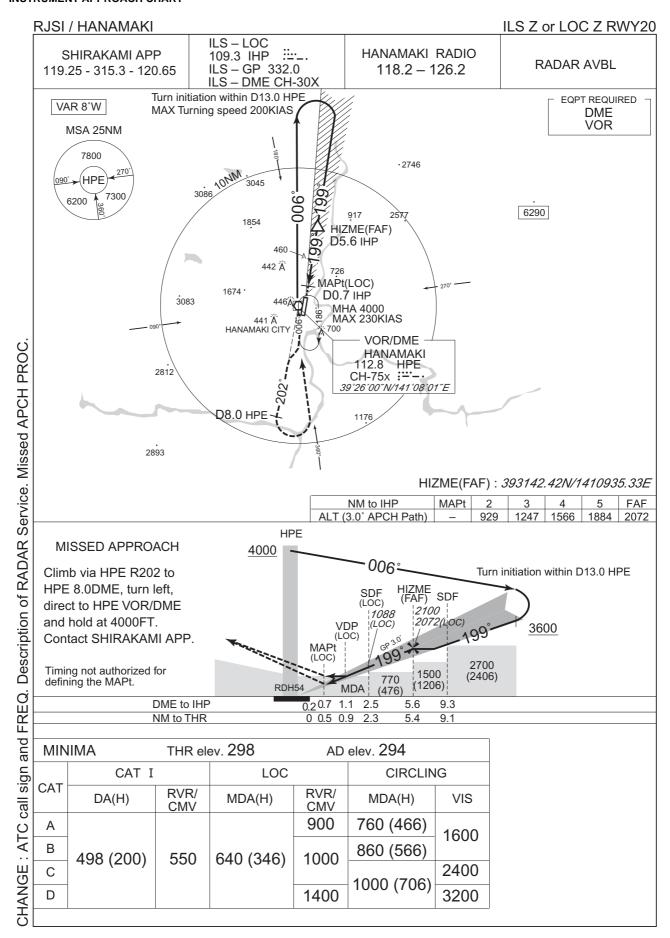
From ENBIM at or above 9000FT, to OMKOS at or above 4100FT, to SUIHO at or above 3200FT.

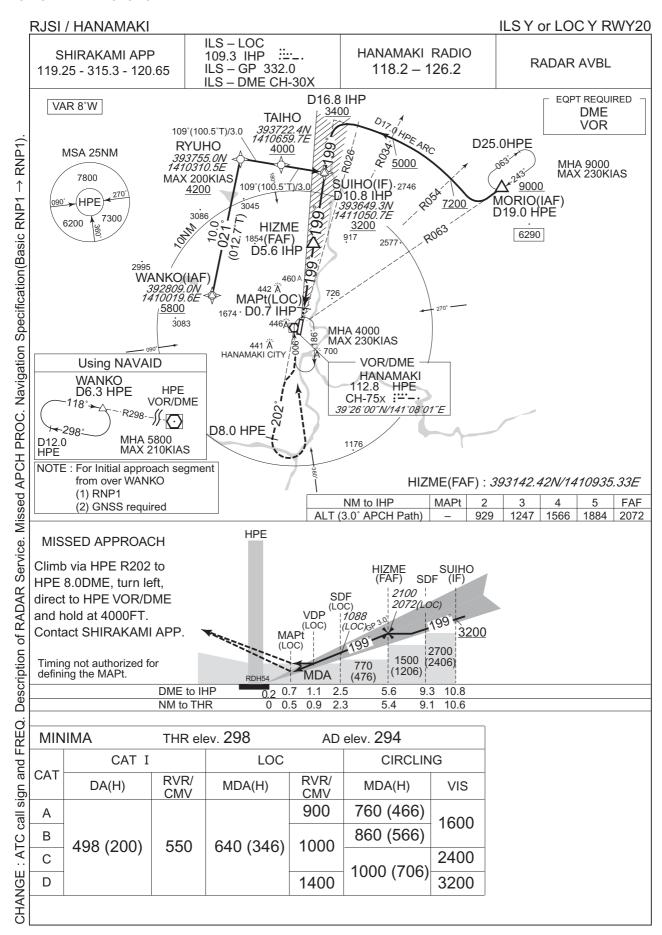
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation		Turn Direction	Altitude (FT)	Speed (KIAS)		
001	IF	ENBIM	_	_	-8.8	_	_	+9000	_	_	RNP1
002	TF	OMKOS	_	187 (178.1)	-8.8	6.1	_	+4100	_	_	RNP1
003	TF	SUIHO	_	187 (178.1)	-8.8	12.4	_	+3200	_	_	RNP1

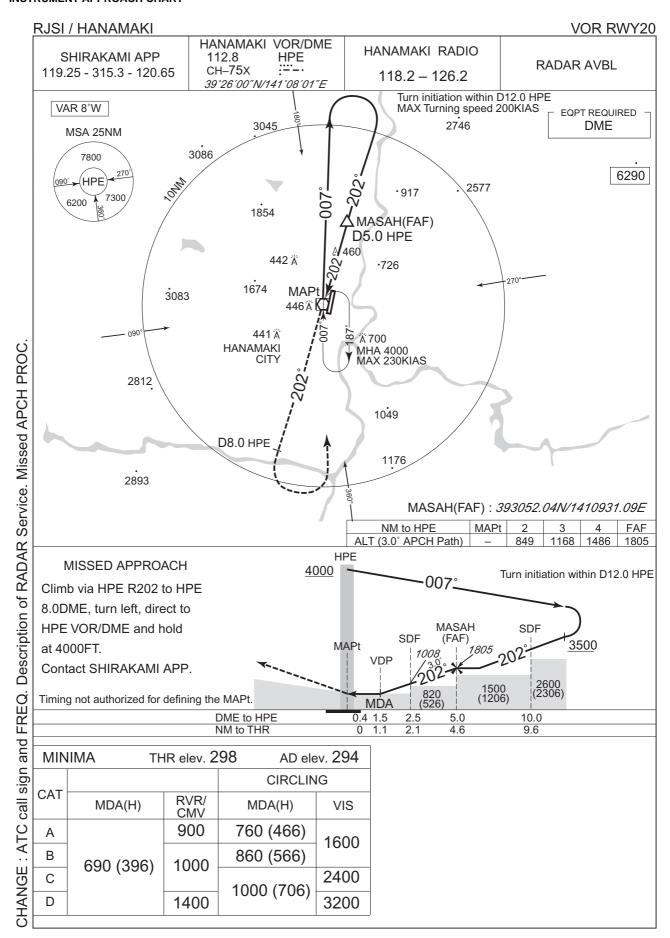
Path	Waypoint Identifier	Inbound Course °M(°T)	Magnetic Variation	Outbound Time (MIN)	Turn Direction	Minimum Altitude (FT)	Maximum Altitude (FT)	Speed (KIAS)	Navigation Specification
Hold	ENBIM	195 (186.5)	-8.8	1.0(-14000)	L	9000	FL140	-230 (-14000)	RNP1

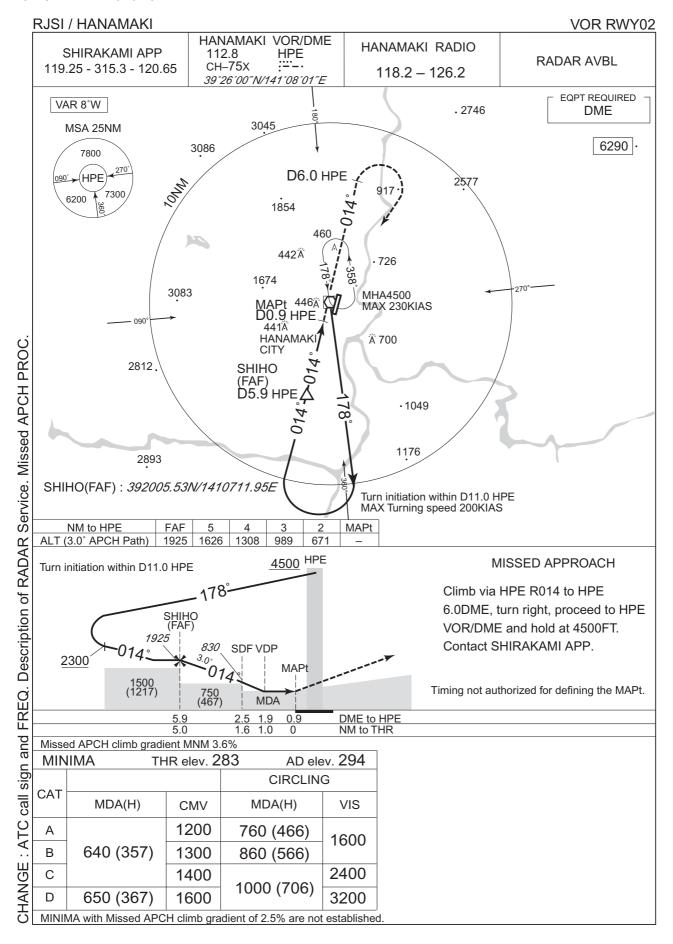


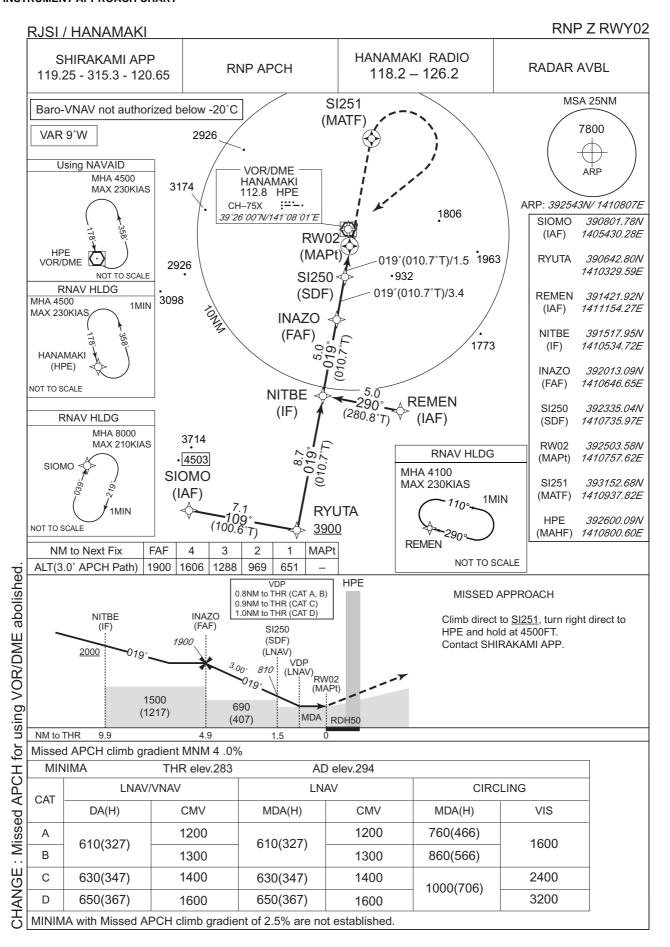


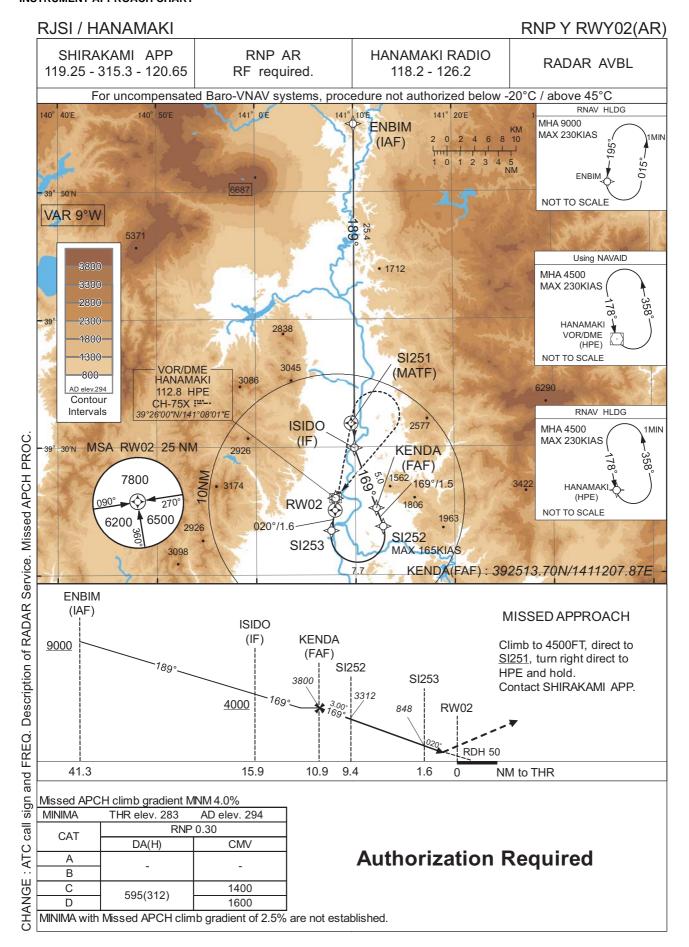












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RNP Y RWY02(AR)

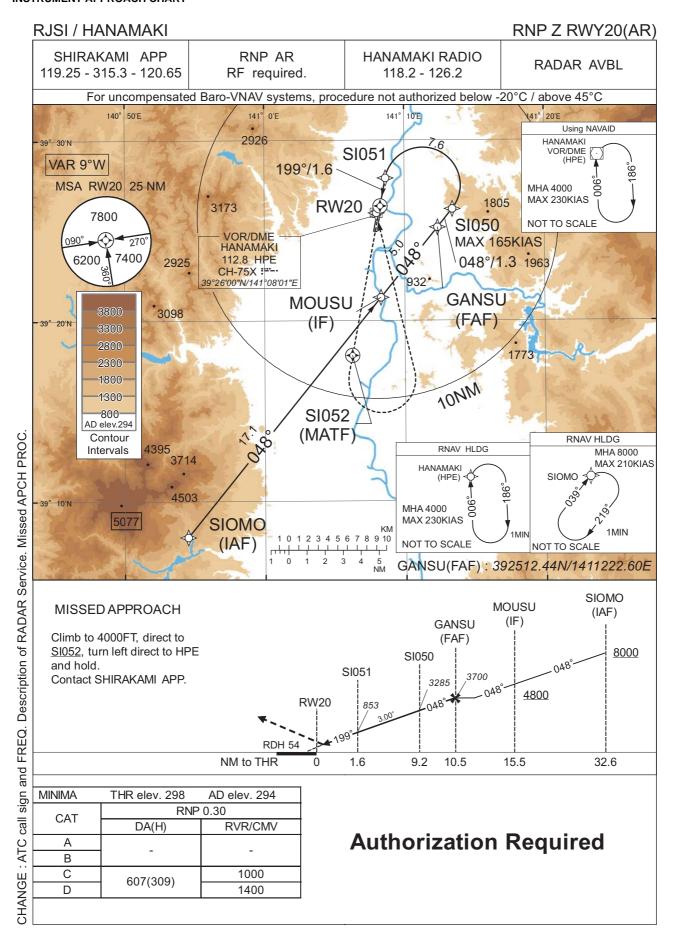
Coding Table

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Seria Numbe		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	ı	ı	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	1	-3.00	0.3
006	TF	RW02	Υ	020 (010.7)	-8.8	1.6	-	333	ı	-3.00/50	0.3
007	DF	SI251	Υ	-	-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

I / 1411002.82E I / 1410957.05E I / 1411207.87E	SIRF1	392304.37N / 1411014.42E
I / 1411207.87E		
I / 1411247.89E		
I / 1410734.24E	1	
I / 1410757.62E	1	
I / 1410937.82E	1	
I / 1410800.60E	1	
	I/1410734.24E I/1410757.62E I/1410937.82E I/1410800.60E	I / 1410757.62E I / 1410937.82E



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RNP Z RWY20(AR)

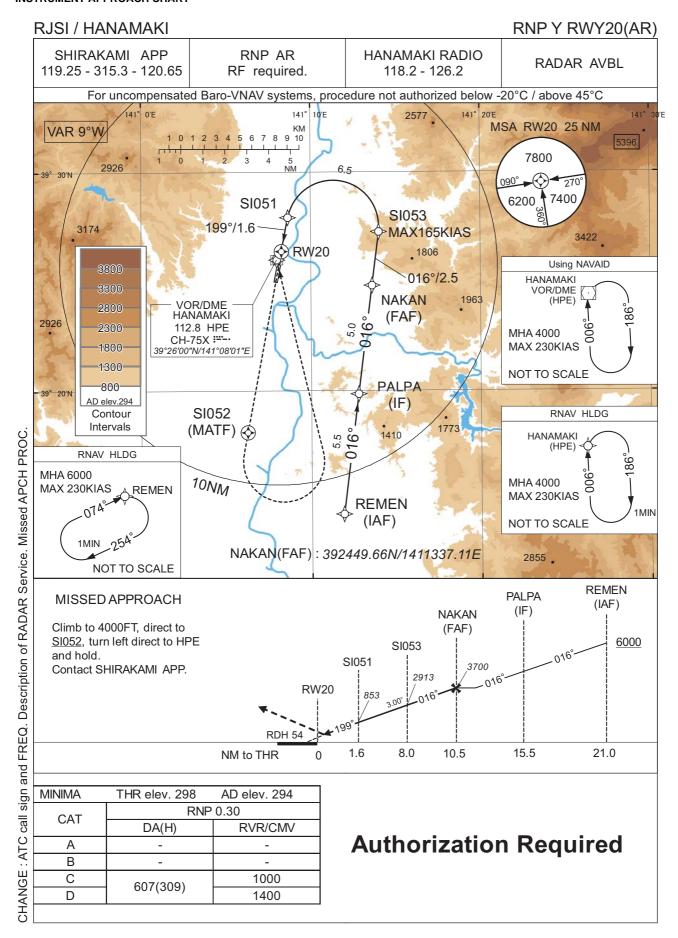
Coding Table

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	1	-	-8.8	-	-	+8000	-	-	-
002	TF	MOUSU	-	048 (038.8)	-8.8	17.1	-	+4800	1	-	1.0
003	TF	GANSU	1	048 (038.9)	-8.8	5.0	ı	3700	ı	-	1.0
004	TF	SI050	1	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	ı	-3.00	0.3
006	TF	RW20	Υ	199 (190.7)	-8.8	1.6	ı	352	-	-3.00/54	0.3
007	DF	SI052	Υ	-	-8.8	-	ı	1	-	-	1.0
008	DF	HPE	1	-	-8.8	-	L	4000	-	-	1.0

Path	Waypoint Identifier	Inbound Course °M(°T)	Magnetic Variation	Time	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		
5	GANSU	392512.44N / 1411222.60E		
5	SI050	392613.23N / 1411326.21E		
5	SI051	392756.30N / 1410839.89E		
)	RW20	392623.24N / 1410817.11E		
	SI052	391806.42N / 1410615.76E		
1	HPE	392600.09N / 1410800.60E		
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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	1	-	-8.8	-	1	+6000	1	-	-
002	TF	PALPA	-	016 (007.2)	-8.8	5.5	-	ı	1	-	1.0
003	TF	NAKAN	1	016 (007.2)	-8.8	5.0	ı	3700	ı	ı	1.0
004	TF	SI053	1	016 (007.2)	-8.8	2.5	1	2913	-165	-3.00	0.3
005	RF Center: SIRF2 r=2.10NM	SI051	1	-	-8.8	6.5	L	853	-	-3.00	0.3
006	TF	RW20	Υ	199 (190.7)	-8.8	1.6	-	352	-	-3.00/54	0.3
007	DF	SI052	Υ	ı	-8.8	ı		-		ı	1.0
800	DF	HPE	-	-	-8.8	-	L	4000	-	-	1.0

Path	Waypoint Identifier	Inbound Course °M(°T)	Magnetic Variation	lime	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		



※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
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



