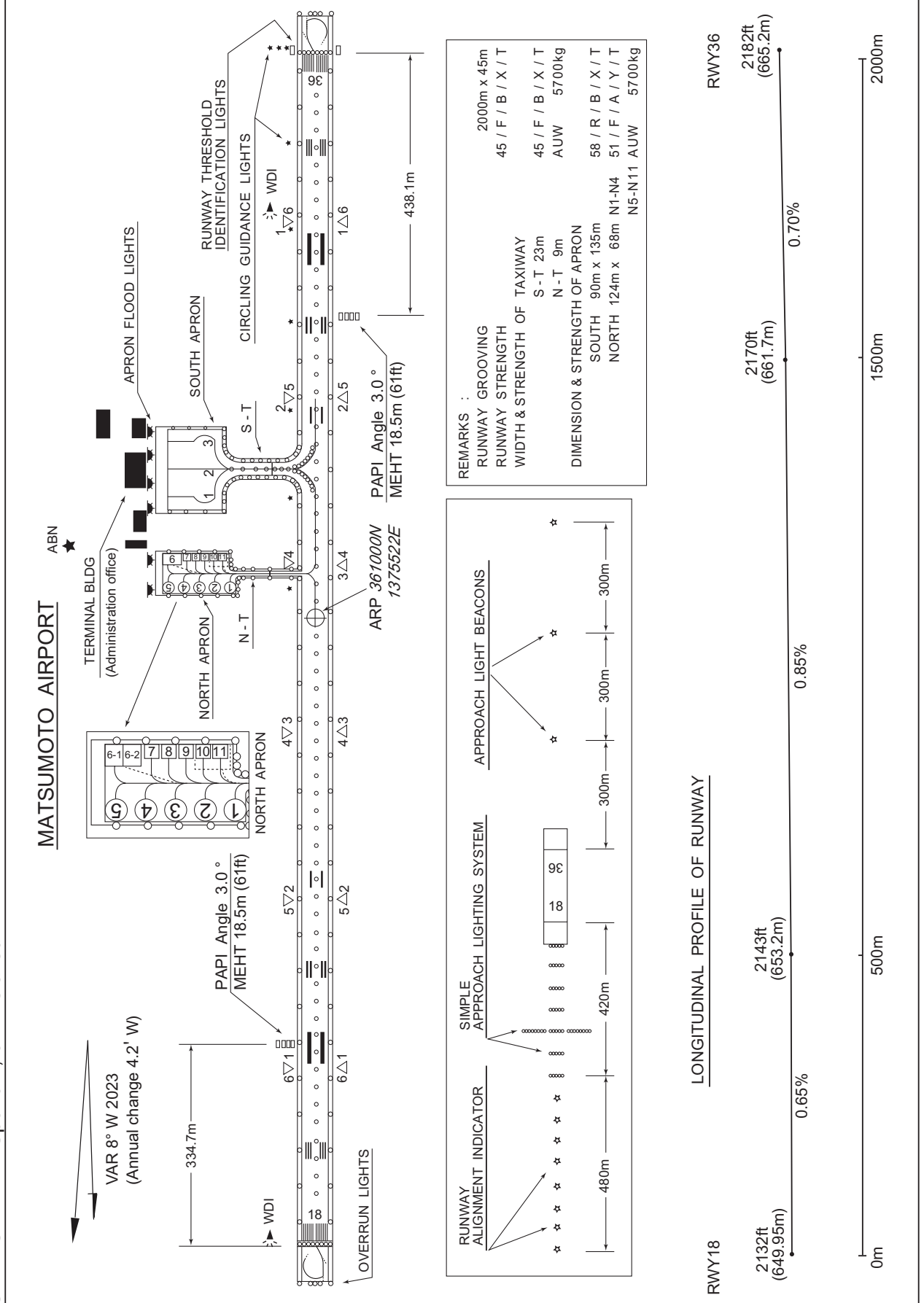


RJAF / MATSUMOTO

AD CHART

CHANGE: VAR. Spot 6-1, 6-2 installed.



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STANDARD DEPARTURE CHART-INSTRUMENT

RJAF / MATSUMOTO

SID

MATSUMOTO REVERSAL ONE DEPARTURE

RWY 18 : Climb RWY HDG to 2700FT, turn left HDG321° to intercept and proceed via MBE R006 to 5.0DME, turn right direct to MBE VOR/DME. Cross MBE R006/5.0DME at or above 6000FT, cross MBE VOR/DME at or above 10000FT.

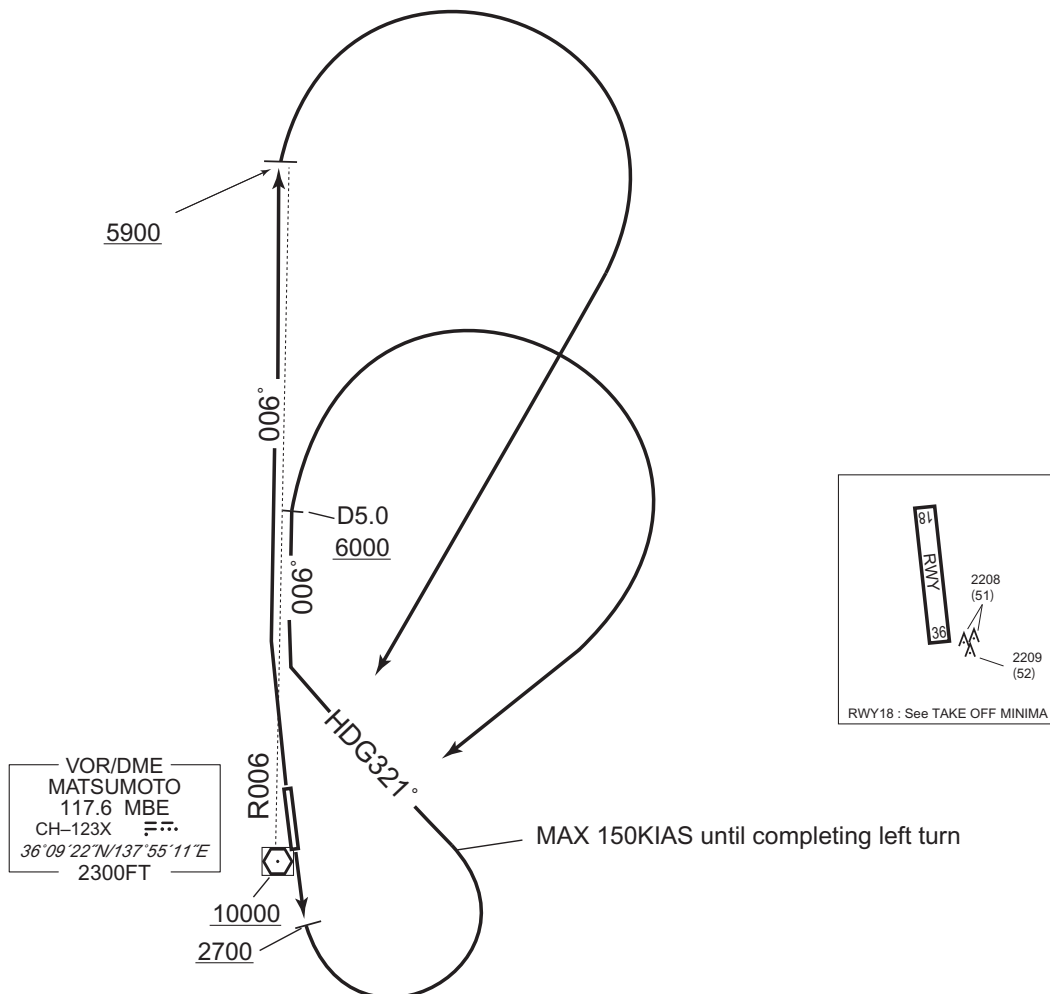
RWY 36 : Climb via MBE R006 to 5900FT, turn right direct to MBE VOR/DME. Cross MBE VOR/DME at or above 10000FT.

NOTE RWY18 : 1) 6.6% climb gradient required up to 4200FT.

OBST ALT 3740FT located at 111°/4.40NM FM end of RWY18.

2) Departure turn limited to 150KIAS maximum until completing left turn.

CHANGE : OBST chart.



STANDARD DEPARTURE CHART-INSTRUMENT

RJAF / MATSUMOTO

SID

HAPPO ONE DEPARTURE

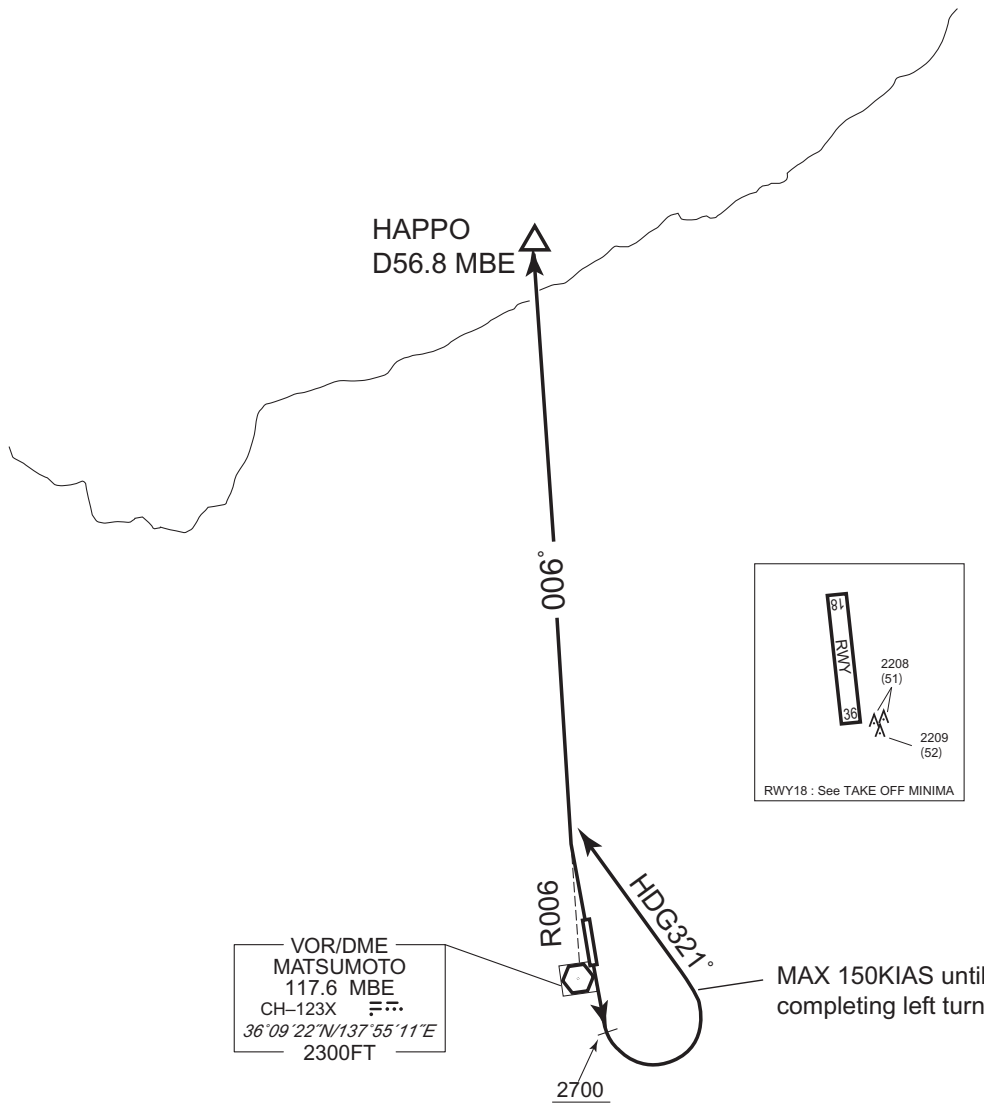
RWY 18 : Climb RWY HDG to 2700FT, turn left HDG321° to intercept and proceed via MBE R006 to HAPPO.

RWY 36 : Climb via MBE R006 to HAPPO.

NOTE RWY18 : 1) 6.6% climb gradient required up to 4200FT.

OBST ALT 3740FT located at 111°/4.40NM FM end of RWY18.

2) Departure turn limited to 150KIAS maximum until completing left turn.



CHANGE : OBST chart.

STANDARD DEPARTURE CHART-INSTRUMENT


RJAF / MATSUMOTO

RNAV SID

NIIGATA ONE DEPARTURE MATSUMOTO ONE DEPARTURE	RNP1
--	------

Note GNSS required.

VAR 8°W

VORTAC  
NIIGATA  
115.5 GTC  
CH-102X   
37°57'30"N/139°06'54"E  
0FT

NIIGATA (GTC)  
375729.9N  
1390653.6E


NIIGATA ONE DEPARTURE

HOKUE  
370644.7N  
1382502.2E  
9000

AZUMI  
362850.2N  
1375432.9E

AF600  
362034.4N  
1375449.2E

MATSUMOTO ONE DEPARTURE

VOR/DME  
MATSUMOTO  
117.6 MBE  
CH-123X   
36°09'22"N/137°55'11"E  
2300FT

MATSUMOTO (MBE)  
360921.5N  
1375511.3E  
10000

CHANGE : Navigation Specification(Basic RNP1 → RNP1).

NIIGATA ONE DEPARTURE

- RWY18 : (Not established)
- RWY36 : Climb on HDG359° at or above 2600FT, direct to AZUMI, to HOKUE at or above 9000FT, to GTC.

MATSUMOTO ONE DEPARTURE

- RWY18 : (Not established)
- RWY36 : Climb on HDG359° at or above 2600FT, direct to AF600, turn right direct to MBE at or above 10000FT.

Note RWY36 : 5.0% climb gradient required up to 5600FT.  
OBST ALT 5315FT located at 8.9NM 048° FM end of RWY36.

STANDARD DEPARTURE CHART-INSTRUMENT

RJAF / MATSUMOTO

RNAV SID

NIIGATA ONE DEPARTURE

RWY36

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	-	-	359 (351.1)	-8.2	-	-	+2600	-	-	RNP1
002	DF	AZUMI	-	-	-8.2	-	-	-	-	-	RNP1
003	TF	HOKUE	-	041 (032.6)	-8.2	45.1	-	+9000	-	-	RNP1
004	TF	GTC	-	041 (033.0)	-8.2	60.7	-	-	-	-	RNP1

MATSUMOTO ONE DEPARTURE

RWY36

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	-	-	359 (351.1)	-8.2	-	-	+2600	-	-	RNP1
002	DF	AF600	Y	-	-8.2	-	-	-	-	-	RNP1
003	DF	MBE	-	-	-8.2	-	R	+10000	-	-	RNP1

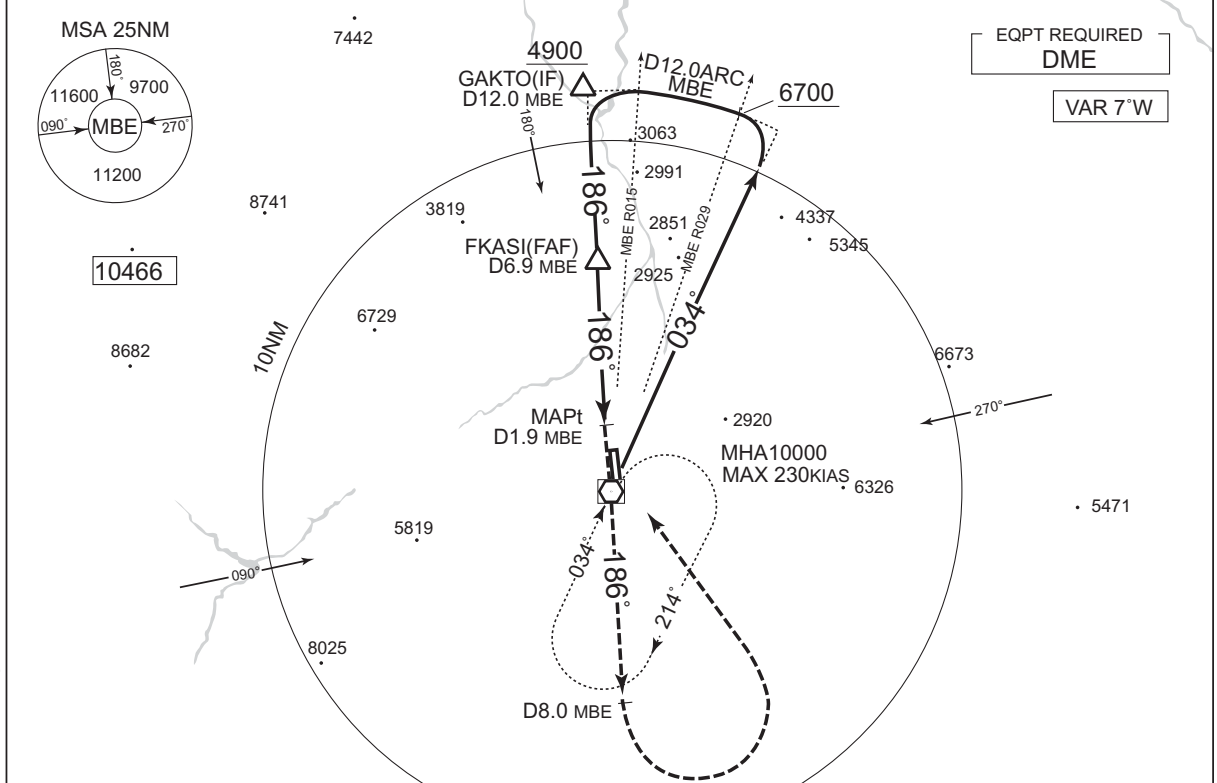
CHANGE : Navigation Specification(Basic RNP1 → RNP1).

INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO

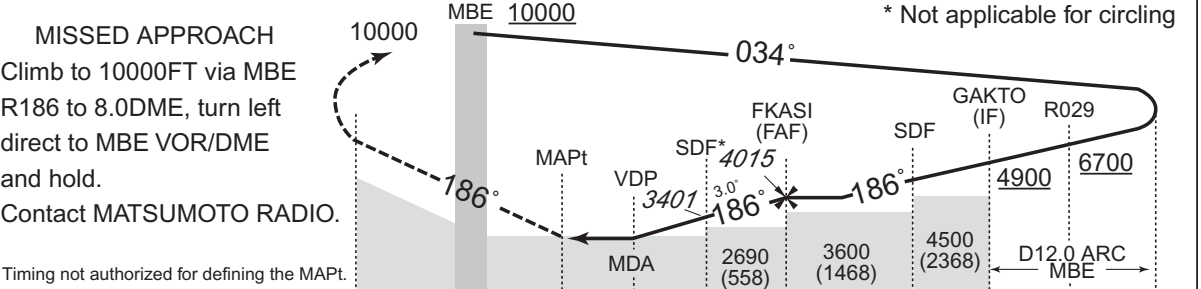
VOR RWY18

KOBE CONTROL 132.45 - 125.6 304.4 - 317.1	MATSUMOTO VOR/DME 117.6 MBE CH-123X 36°09'22"N/137°55'11"E	MATSUMOTO RADIO 118.65 AFIS provided by New Chitose Airport Office	NO RADAR
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CHANGE : ATC call sign(TOKYO CONTROL → KOBE CONTROL).

FKASI(FAF) : 361617.34N/1375454.42E	MAPt	3	4	5	6	FAF	NM to MBE
	-	2764	3083	3401	3720	4015	ALT (3.0° APCH Path)



DME to MBE	8.0	1.9	2.4	5.0	6.9	10.0	12.0
NM to THR		0.7	1.2	3.8	5.7	8.8	10.8

Missed APCH climb gradient MNM 6.0%

CAT	MINIMA		CIRCLING	
	MDA(H)	CMV	MDA(H)	VIS
A	2550 (418)	900	2700 (543)	1600
B		1000		
C			2830 (673)	2400
D	-	-	-	-

MINIMA with Missed APCH climb gradient of 2.5% are not established.  
Circling to EAST side of RWY only.

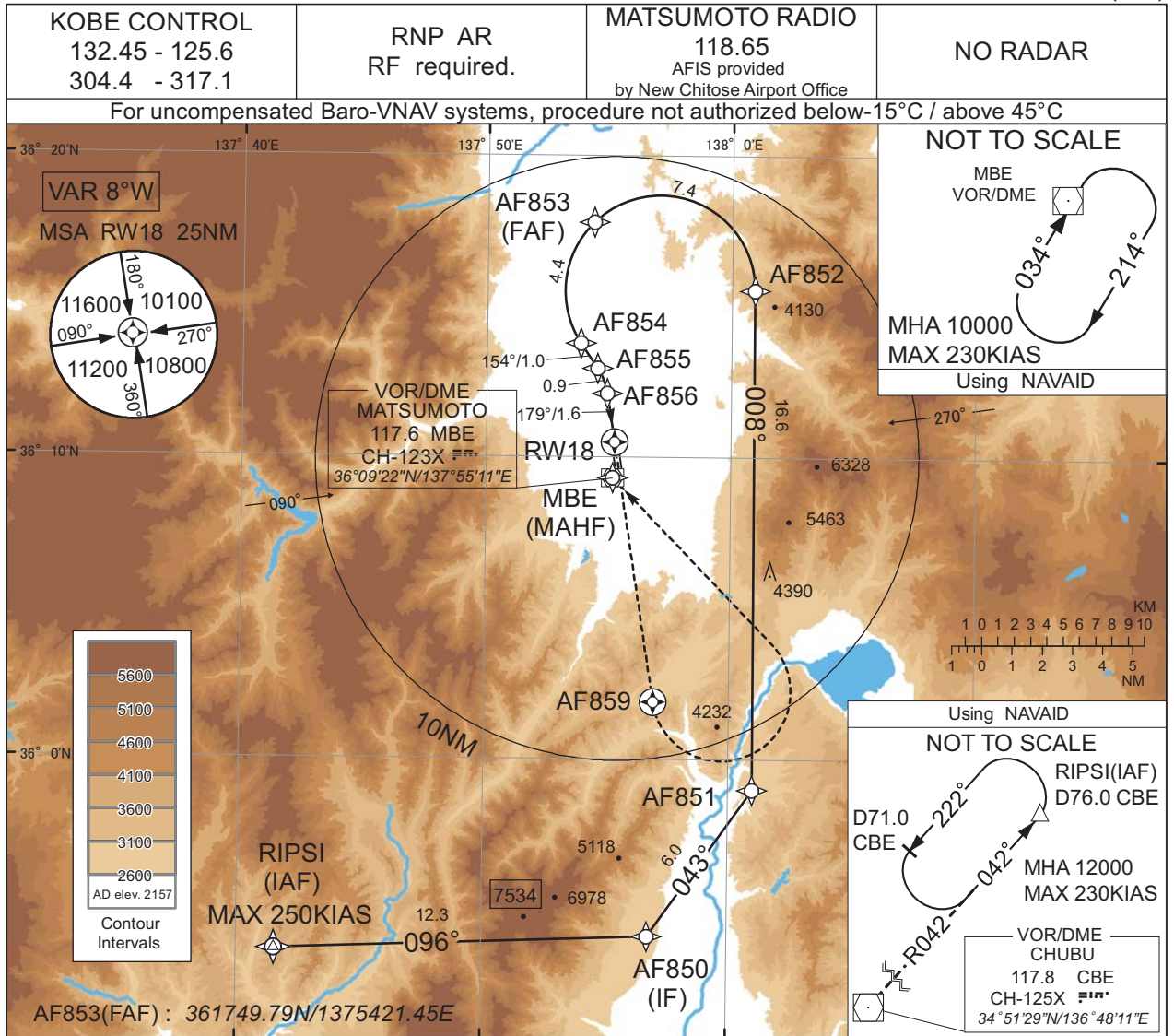
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INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO

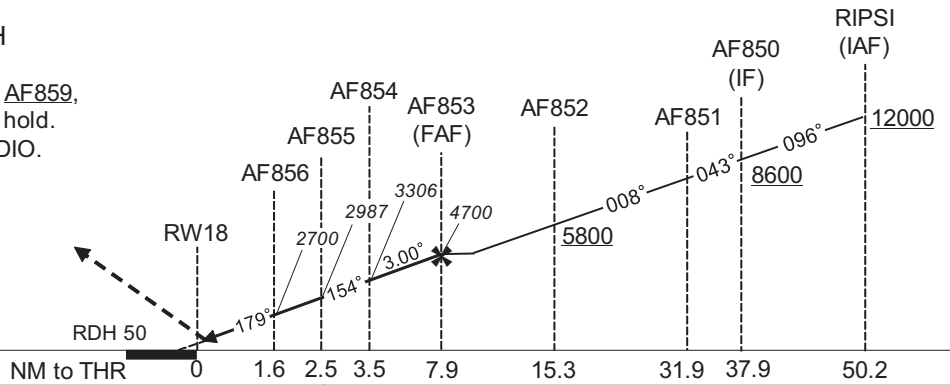
RNP Z RWY18(AR)



CHANGE : ATC call sign (TOKYO CONTROL → KOBE CONTROL).

**MISSED APPROACH**

Climb to 10000FT, direct to AF859, turn left, direct to MBE and hold. Contact MATSUMOTO RADIO.



Missed APCH climb gradient MNM 7.0%

	THR elev. 2132	AD elev. 2157		
CAT	RNP 0.20		RNP 0.30	
	DA(H)	CMV	DA(H)	CMV
A	-	-	-	-
B	-	-	-	-
C	2432(300)	1000	2448(316)	1000
D	-	-	-	-

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

Authorization Required

INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO

RNP Z RWY18(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	RIPSI	-	-	-8.2	-	-	+12000	-250	-	-
002	TF	AF850	-	096 (087.7)	-8.2	12.3	-	+8600	-	-	1.0
003	TF	AF851	-	043 (035.2)	-8.2	6.0	-	-	-	-	0.3
004	TF	AF852	-	008 (359.9)	-8.2	16.6	-	+5800	-	-	0.3
005	RF Center: AFRF5 r=3.15NM	AF853	-	-	-8.2	7.4	L	4700	-	-	0.3
006	RF Center: AFRF5 r=3.15NM	AF854	-	-	-8.2	4.4	L	3306	-	-3.00	0.2 0.3
007	TF	AF855	-	154 (146.1)	-8.2	1.0	-	2987	-	-3.00	0.2 0.3
008	RF Center: AFRF6 r=2.06NM	AF856	-	-	-8.2	0.9	R	2700	-	-3.00	0.2 0.3
009	TF	RW18	Y	179 (171.1)	-8.2	1.6	-	2182	-	-3.00/50	0.2 0.3
010	DF	AF859	Y	-	-8.2	-	-	-	-	-	1.0
011	DF	MBE	-	-	-8.2	-	L	10000	-	-	1.0

Waypoint Coordinates

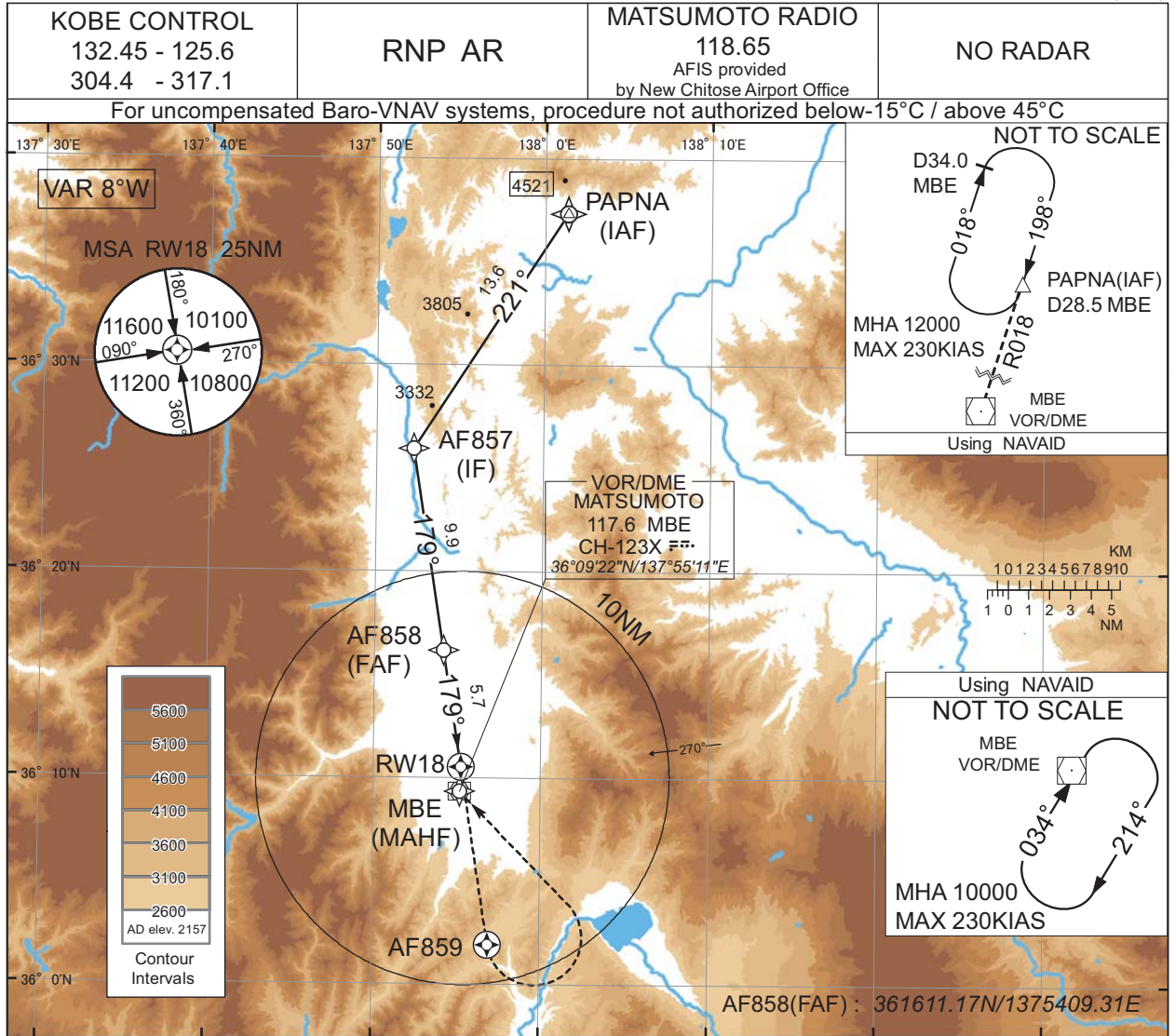
Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
RIPSI	355340.33N / 1374133.41E	AFRF5	361534.43N / 1375704.35E
AF850	355408.74N / 1375645.79E	AFRF6	361149.74N / 1375225.49E
AF851	355901.18N / 1380100.60E		
AF852	361534.92N / 1380057.71E		
AF853	361749.79N / 1375421.45E		
AF854	361348.83N / 1375350.85E		
AF855	361259.03N / 1375432.28E		
AF856	361209.11N / 1375456.52E		
RW18	361032.37N / 1375515.37E		
AF859	360155.80N / 1375655.84E		
MBE	360921.51N / 1375511.34E		

CHANGE : PROC renamed.

INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO

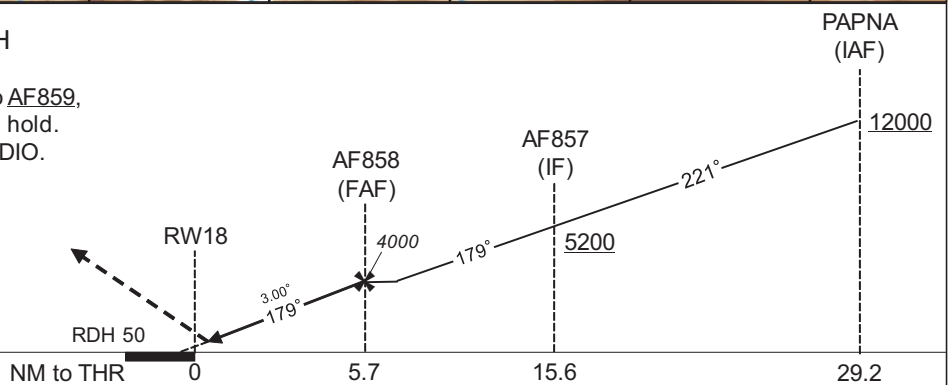
RNP Y RWY18(AR)



CHANGE : ATC call sign (TOKYO CONTROL → KOBE CONTROL).

MISSED APPROACH

Climb to 10000FT, direct to AF859, turn left, direct to MBE and hold. Contact MATSUMOTO RADIO.



Missed APCH climb gradient MNM 7.0%

CAT	THR elev. 2132		AD elev. 2157	
	RNP 0.20		RNP 0.30	
	DA(H)	CMV	DA(H)	CMV
A	-	-	-	-
B	-	-	-	-
C	2432(300)	1000	2448(316)	1000
D	-	-	-	-

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

**Authorization Required**

## INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO

RNP Y RWY18(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	PAPNA	-	-	-8.2	-	-	+12000	-	-	-
002	TF	AF857	-	221 (212.8)	-8.2	13.6	-	+5200	-	-	1.0
003	TF	AF858	-	179 (171.0)	-8.2	9.9	-	4000	-	-	1.0
004	TF	RW18	Y	179 (171.1)	-8.2	5.7	-	2182	-	-3.00/50	0.2 0.3
005	DF	AF859	Y	-	-8.2	-	-	-	-	-	1.0
006	DF	MBE	-	-	-8.2	-	L	10000	-	-	1.0

Waypoint Coordinates

Waypoint Identifier	Coordinates
PAPNA	363721.74N / 1380122.92E
AF857	362557.23N / 1375214.72E
AF858	361611.17N / 1375409.31E
RW18	361032.37N / 1375515.37E
AF859	360155.80N / 1375655.84E
MBE	360921.51N / 1375511.34E

CHANGE : PROC renamed.

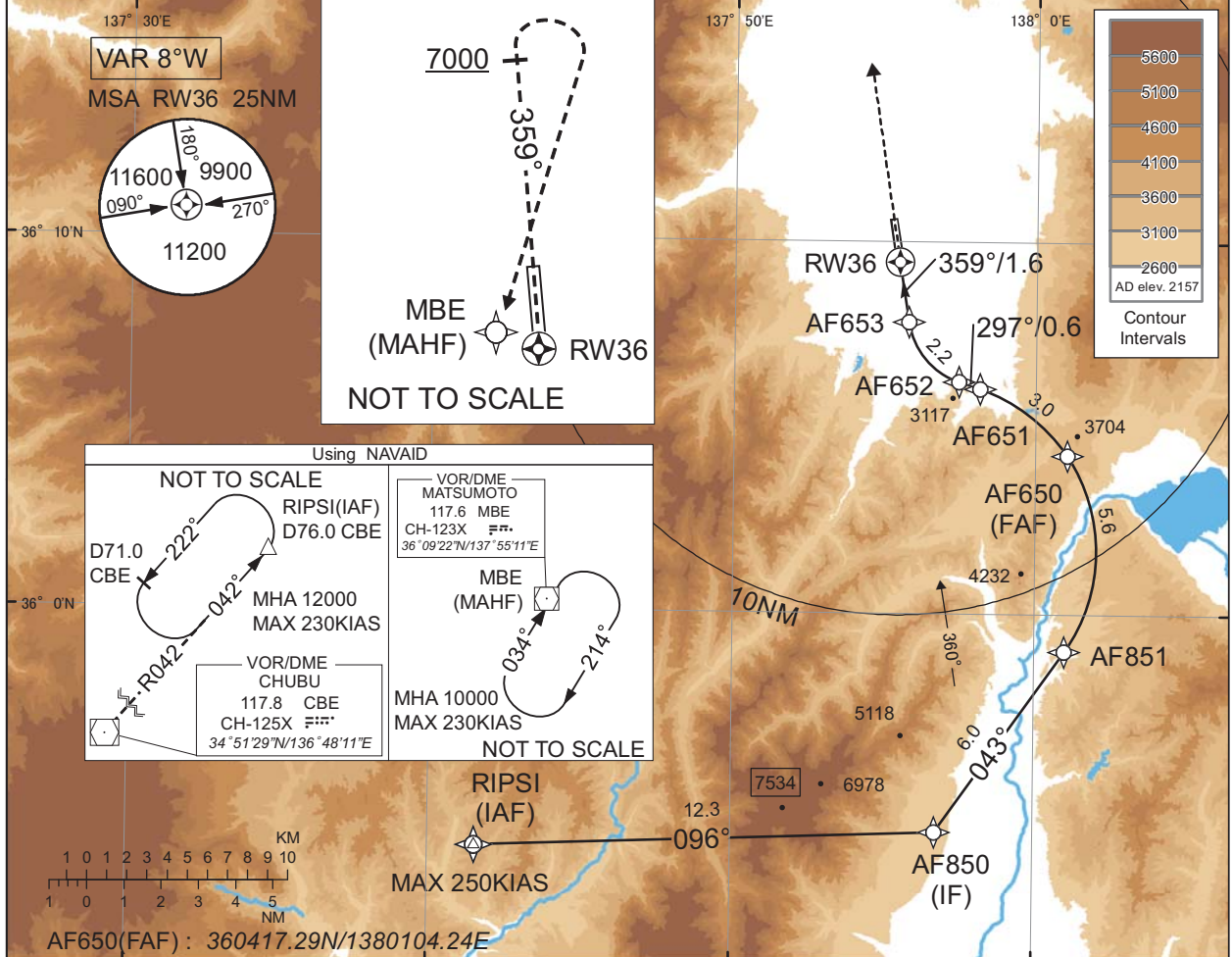
INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO

RNP Z RWY36(AR)

<b>KOBE CONTROL</b> 132.45 - 125.6 304.4 - 317.1	<b>RNP AR</b> RF required.	<b>MATSUMOTO RADIO</b> 118.65 AFIS provided by New Chitose Airport Office	<b>NO RADAR</b>
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For uncompensated Baro-VNAV systems, procedure not authorized below -15°C / above 45°C

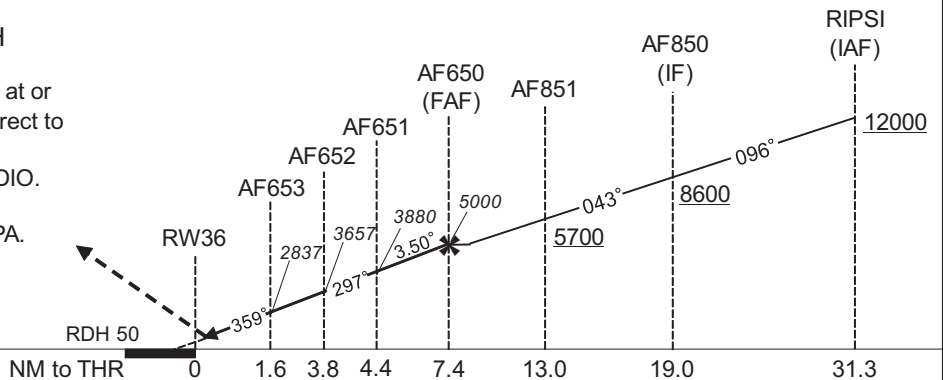


CHANGE : ATC call sign (TOKYO CONTROL → KOBE CONTROL).

**MISSED APPROACH**

From RW36 on track 359°, at or above 7000FT turn right, direct to MBE and hold at 10000FT. Contact MATSUMOTO RADIO.

PAPI not coincident with VPA.



Missed APCH climb gradient MNM 3.0%

MINIMA		THR elev. 2182		AD elev. 2157	
CAT	RNP 0.20		RNP 0.30		
	DA(H)	CMV	DA(H)	CMV	
A	-	-	-	-	
B	-	-	-	-	
C	2482(300)	1800	2551(369)	1800	
D	-	-	-	-	

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

**Authorization Required**

INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO

RNP Z RWY36(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	RIPSI	-	-	-8.2	-	-	+12000	-250	-	-
002	TF	AF850	-	096 (087.7)	-8.2	12.3	-	+8600	-	-	1.0
003	TF	AF851	-	043 (035.2)	-8.2	6.0	-	+5700	-	-	1.0
004	RF Center: AFRF1 r=4.60NM	AF650	-	-	-8.2	5.6	L	5000	-	-	1.0
005	RF Center: AFRF1 r=4.60NM	AF651	-	-	-8.2	3.0	L	3880	-	-3.50	0.2 0.3
006	TF	AF652	-	297 (288.3)	-8.2	0.6	-	3657	-	-3.50	0.2 0.3
007	RF Center: AFRF2 r=2.02NM	AF653	-	-	-8.2	2.2	R	2837	-	-3.50	0.2 0.3
008	TF	RW36	Y	359 (351.1)	-8.2	1.6	-	2232	-	-3.50/50	0.2 0.3
009	FA	-	-	359 (351.1)	-8.2	-	-	+7000	-	-	1.0
010	DF	MBE	-	-	-8.2	-	R	10000	-	-	1.0

Waypoint Coordinates

Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
RIPSI	355340.33N / 1374133.41E	AFRF1	360141.27N / 1375622.53E
AF850	355408.74N / 1375645.79E	AFRF2	360810.39N / 1375813.97E
AF851	355901.18N / 1380100.60E		
AF650	360417.29N / 1380104.24E		
AF651	360604.23N / 1375809.40E		
AF652	360615.53N / 1375727.24E		
AF653	360751.55N / 1375546.68E		
RW36	360928.29N / 1375527.85E		
MBE	360921.51N / 1375511.34E		

CHANGE : PROC renamed.

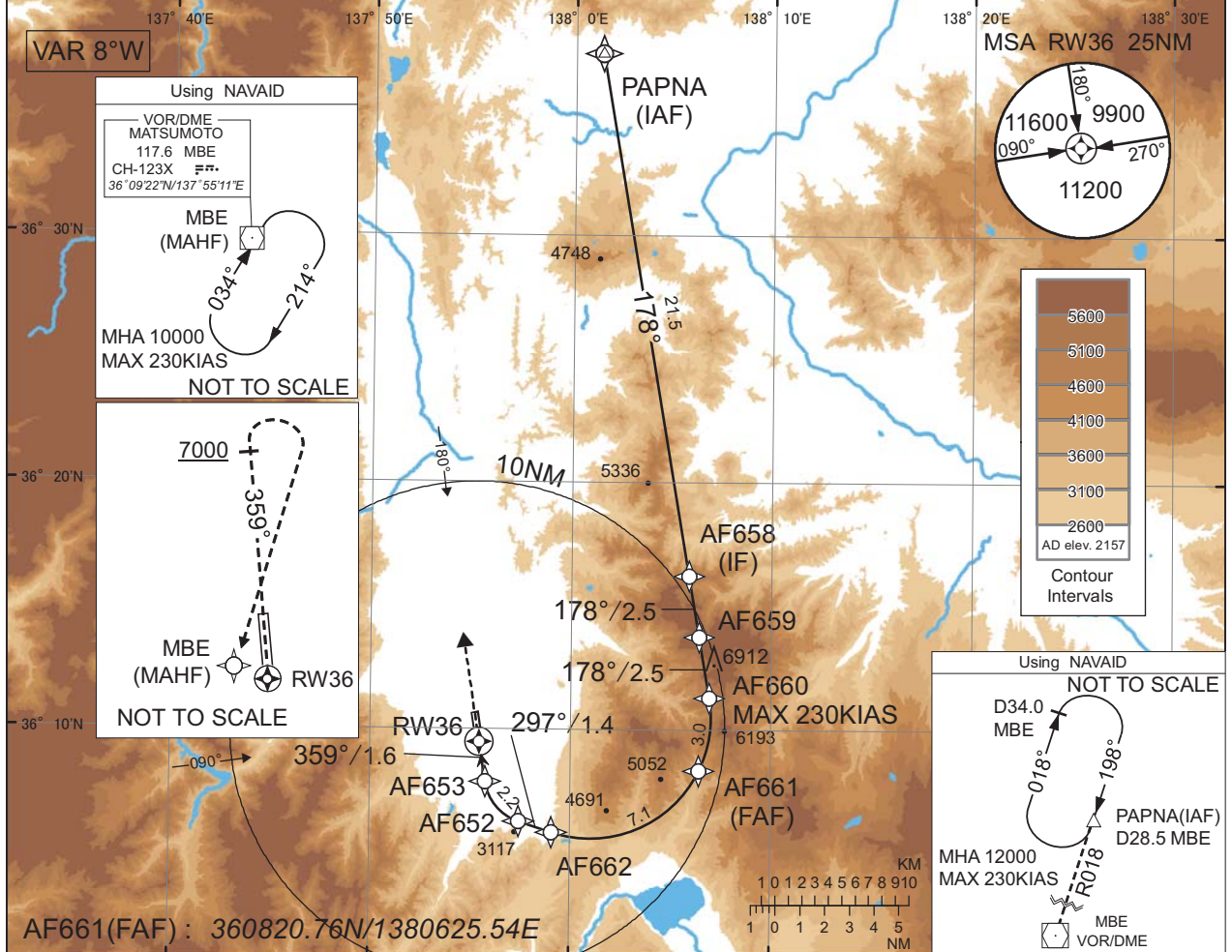
INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO

RNP Y RWY36(AR)

<b>KOBE CONTROL</b> 132.45 - 125.6 304.4 - 317.1	<b>RNP AR</b> RF required.	<b>MATSUMOTO RADIO</b> 118.65 AFIS provided by New Chitose Airport Office	<b>NO RADAR</b>
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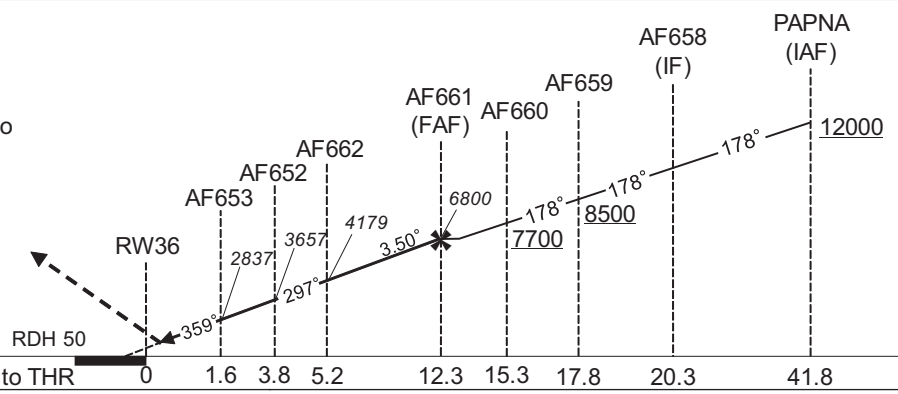
For uncompensated Baro-VNAV systems, procedure not authorized below -15°C / above 45°C



CHANGE : ATC call sign (TOKYO CONTROL → KOBE CONTROL).

**MISSED APPROACH**

From RW36 on track 359°, at or above 7000FT turn right, direct to MBE and hold at 10000FT. Contact MATSUMOTO RADIO.  
PAPI not coincident with VPA.



**Authorization Required**

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

## INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO

RNP Y RWY36(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	PAPNA	-	-	-8.2	-	-	+12000	-	-	-
002	TF	AF658	-	178 (170.2)	-8.2	21.5	-	-	-	-	1.0
003	TF	AF659	-	178 (170.3)	-8.2	2.5	-	+8500	-	-	0.3
004	TF	AF660	-	178 (170.3)	-8.2	2.5	-	+7700	-230	-	0.3
005	RF Center: AFRF4 r=4.89NM	AF661	-	-	-8.2	3.0	R	6800	-	-	0.3
006	RF Center: AFRF4 r=4.89NM	AF662	-	-	-8.2	7.1	R	4179	-	-3.50	0.2 0.3
007	TF	AF652	-	297 (288.4)	-8.2	1.4	-	3657	-	-3.50	0.2 0.3
008	RF Center: AFRF2 r=2.02NM	AF653	-	-	-8.2	2.2	R	2837	-	-3.50	0.2 0.3
009	TF	RW36	Y	359 (351.1)	-8.2	1.6	-	2232	-	-3.50/50	0.2 0.3
010	FA	-	-	359 (351.1)	-8.2	-	-	+7000	-	-	1.0
011	DF	MBE	-	-	-8.2	-	R	10000	-	-	1.0

Waypoint Coordinates

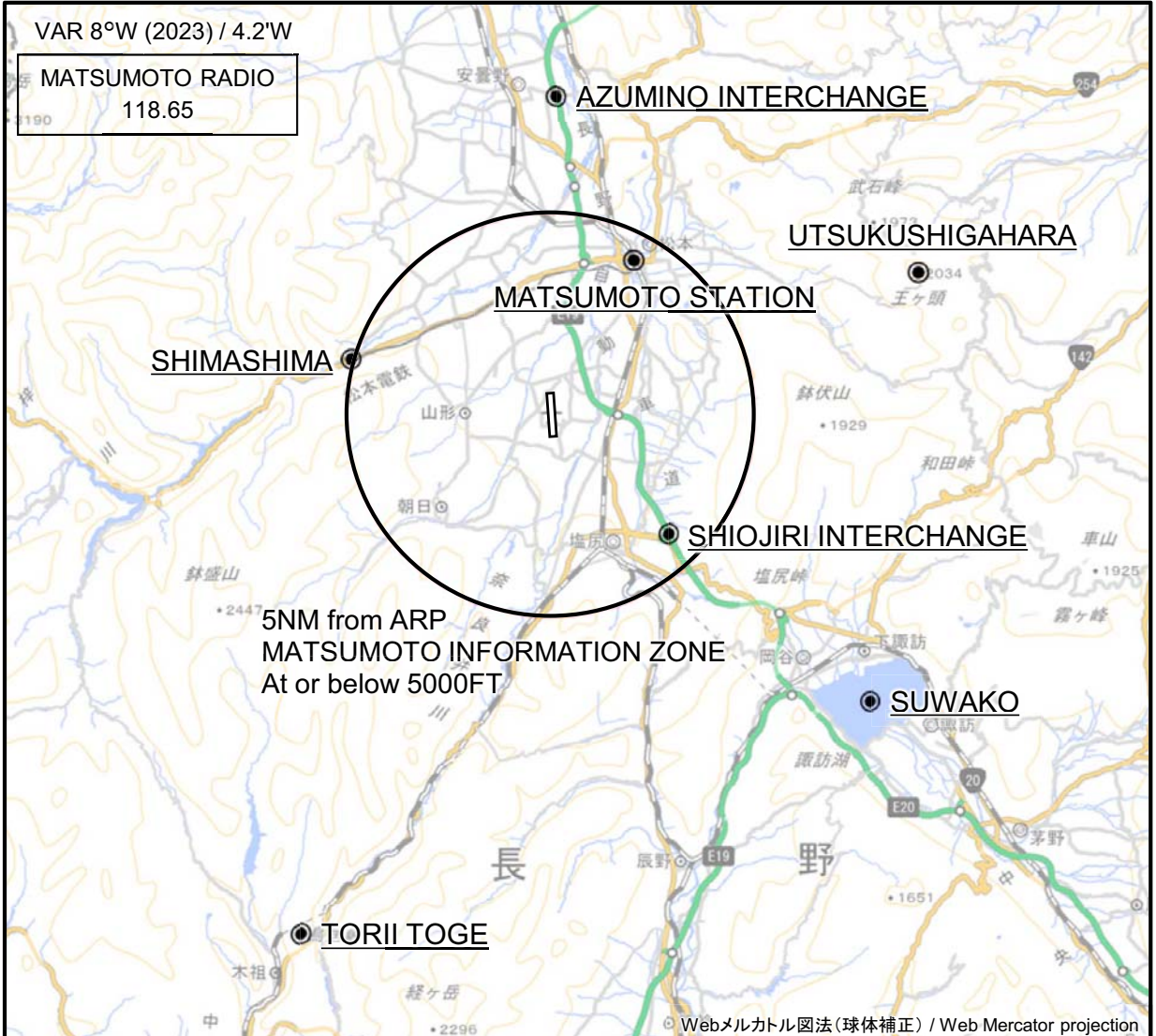
Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
PAPNA	363721.74N / 1380122.92E	AFRF4	361027.73N / 1380059.34E
AF658	361613.48N / 1380553.24E	AFRF2	360810.39N / 1375813.97E
AF659	361345.52N / 1380624.64E		
AF660	361117.56N / 1380656.02E		
AF661	360820.76N / 1380625.54E		
AF662	360549.12N / 1375905.80E		
AF652	360615.53N / 1375727.24E		
AF653	360751.55N / 1375546.68E		
RW36	360928.29N / 1375527.85E		
MBE	360921.51N / 1375511.34E		

CHANGE : PROC renamed.



RJAF / MATSUMOTO

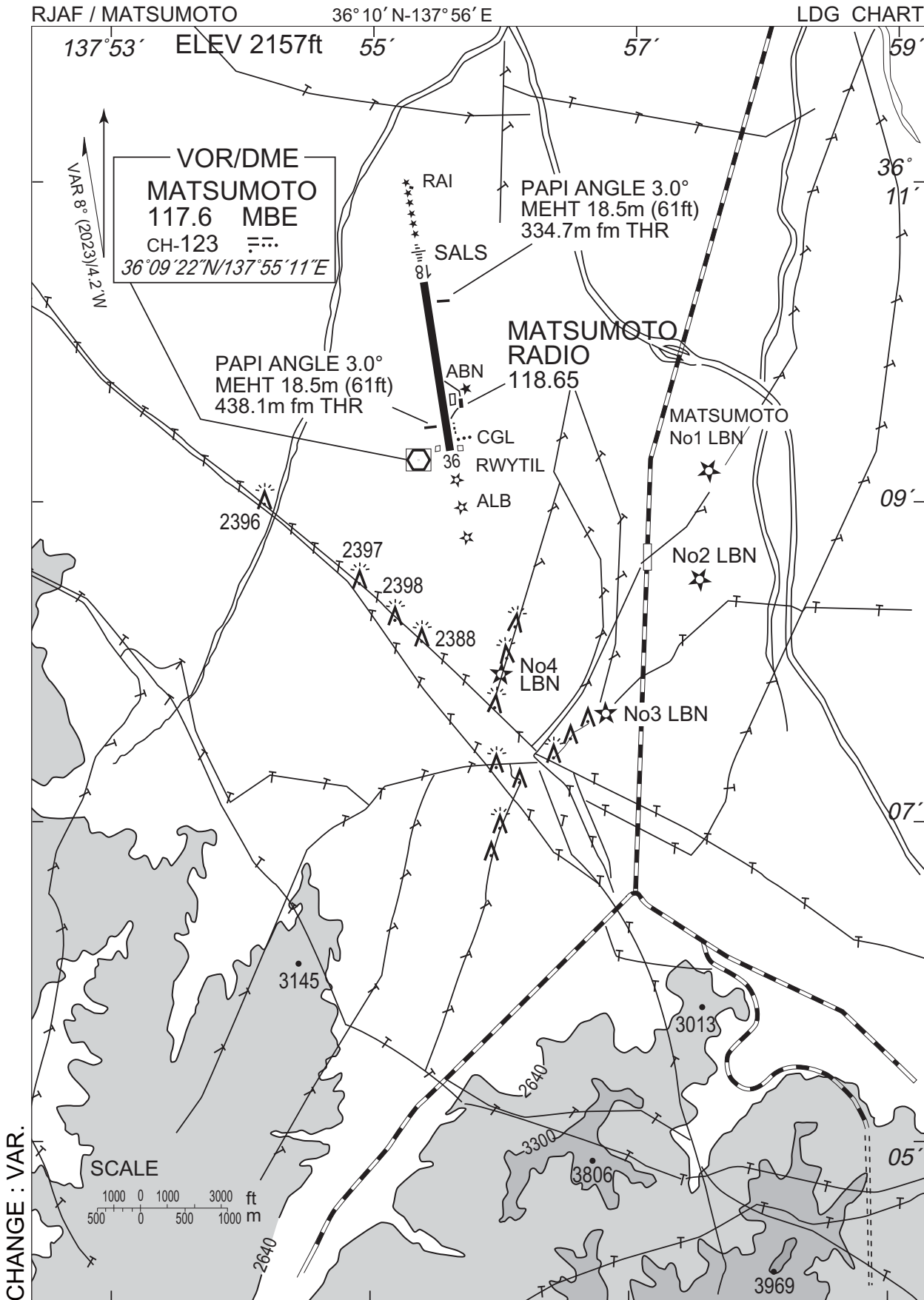
Visual REP



※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 : VAR.

Call sign	BRG / DIST from ARP	Remarks
安曇野インターチェンジ Azumino Interchange	001°T / 7.9NM	長野自動車道 安曇野インターチェンジ Interchange
松本ステーション Matsumoto Station	028°T / 4.3NM	JR駅 Station
美ヶ原 Utsukushigahara	068°T / 9.7NM	美ヶ原王ヶ頭 Peak
島島 Shimashima	286°T / 5.1NM	松本電鉄新島島駅 Station
塩尻インターチェンジ Shiojiri Interchange	136°T / 4.1NM	長野自動車道 塩尻インターチェンジ Interchange
諏訪湖 Suwako	132°T / 10.6NM	諏訪湖上空 Lake
鳥居峠 Torii Toge	205°T / 14.3NM	峠 Mountain Pass



RJAF / MATSUMOTO

Minimum Vectoring Altitude CHART

