

AD 2 AERODROMES

RJAF AD 2.1 AERODROME LOCATION INDICATOR AND NAME

RJAF - MATSUMOTO

RJAF AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

| | | |
|---|--|---|
| 1 | ARP coordinates and site at AD | 361000N 1375522E |
| 2 | Direction and distance from (city) | 5nm SW FM Matsumoto station |
| 3 | Elevation/ Reference temperature | 2157ft / - |
| 4 | Geoid undulation at AD ELEV PSN | Nil |
| 5 | MAG VAR/ Annual change | 7° W (2010) / 1' W |
| 6 | AD Administration, address, telephone, telefax, telex, AFS, e-mail and/or Web-site addresses | Nagano Pref. 8909 Kukohigashi Matsumoto-shi Nagano Tel 0263-58-2517 Fax 0263-57-1553 e-mail:matsukuuko@pref.nagano.lg.jp |
| 7 | Types of traffic permitted (IFR/VFR) | IFR/VFR |
| 8 | Remarks | Nil |

RJAF AD 2.3 OPERATIONAL HOURS

| | | |
|----|---------------------------|---|
| 1 | AD Administration | 2330 - 1000 |
| 2 | Customs and immigration | On request Customs: 0266-58-5953 Immigration: 026-232-3317 |
| 3 | Health and sanitation | Quarantine(human): On request(03-3599-1515) Quarantine(animal, plant): Nil |
| 4 | AIS Briefing Office | Nil |
| 5 | ATS Reporting Office(ARO) | Nil |
| 6 | MET Briefing Office | H24 (TOKYO) |
| 7 | ATS | 2330 - 1000 Remarks: AFIS provided by New Chitose Airport Office. |
| 8 | Fuelling | 2330 - 1000 |
| 9 | Handling | 2330 - 1000 |
| 10 | Security | 2330 - 1000 |
| 11 | De-icing | Nil |
| 12 | Remarks | Nil |

RJAF AD 2.4 HANDLING SERVICES AND FACILITIES

| | | |
|---|---|--------------------|
| 1 | Cargo-handling facilities | Nil |
| 2 | Fuel/ oil types | JET A-1 AVGAS100LL |
| 3 | Fuelling facilities/ capacity | Fuel truck |
| 4 | De-icing facilities | Nil |
| 5 | Hangar space for visiting aircraft | Nil |
| 6 | Repair facilities for visiting aircraft | Nil |
| 7 | Remarks | Nil |

RJAF AD 2.5 PASSENGER FACILITIES

| | | |
|---|----------------------|-------------------------------------|
| 1 | Hotels | In Matsumoto city and Shiojiri city |
| 2 | Restaurants | At Airport |
| 3 | Transportation | Buses and Taxi |
| 4 | Medical facilities | First aid treatment |
| 5 | Bank and Post Office | In Matsumoto city and Shiojiri city |
| 6 | Tourist Office | At Airport |
| 7 | Remarks | Nil |

RJAF AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

| | | |
|---|---|-------------------------|
| 1 | AD category for fire fighting | CAT 7 |
| 2 | Rescue equipment | Fire fighting truck x 2 |
| 3 | Capability for removal of disabled aircraft | Nil |
| 4 | Remarks | Nil |

RJAF AD 2.7 SEASONAL AVAILABILITY-CLEARING

| | | |
|---|-----------------------------|--|
| 1 | Types of clearing equipment | Snow remove equipments: Truck x 7, Rotary x 3, Dozer x 1, Sweeper x 2 |
| 2 | Clearance priorities | 1.RWY 2.TWY 3.APRON |
| 3 | Remarks | Nil |

RJAF AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

| | | |
|---|-------------------------------------|---|
| 1 | Apron surface and strength | South Apron: Surface: Concrete Strength: PCN 58/R/B/X/T North Apron: N1-N4 Surface: Asphalt Strength: PCN 51/F/A/Y/T N5-N11 Surface: Asphalt Strength: AUW 5700kg |
| 2 | Taxiway width, surface and strength | S-T : 23m PCN 45/F/B/X/T N-T : 9m AUW 5700kg |
| 3 | ACL and elevation | Not available |
| 4 | VOR checkpoints | Not Available |
| 5 | INS checkpoints | Spot Nr 1: 360953.36N 1375532.62E 2: 360951.91N 1375532.90E 3: 360950.52N 1375533.17E |
| 6 | Remarks | Nil |

RJAF AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

| | | |
|---|--|--|
| 1 | Use of aircraft stand ID signs, TWY guide lines and Visual docking/ parking guidance system of aircraft stands | Nil |
| 2 | RWY and TWY markings and LGT | RWY:RWY 18/36 (Marking) RWY designation ,RWY CL, RWY THR, Aiming point, TDZ, RWY side stripe (LGT) RCLL, REDL, RTHL, RENL, RWY DIST markar LGT TWY: (Marking) TWY CL, TWY side stripe (LGT)TWY edge LGT, TWY CL LGT(for S-T only) |
| 3 | Stop bars | Nil |
| 4 | Remarks | (Marking) Overrun area (LGT) Apron flood LGT |

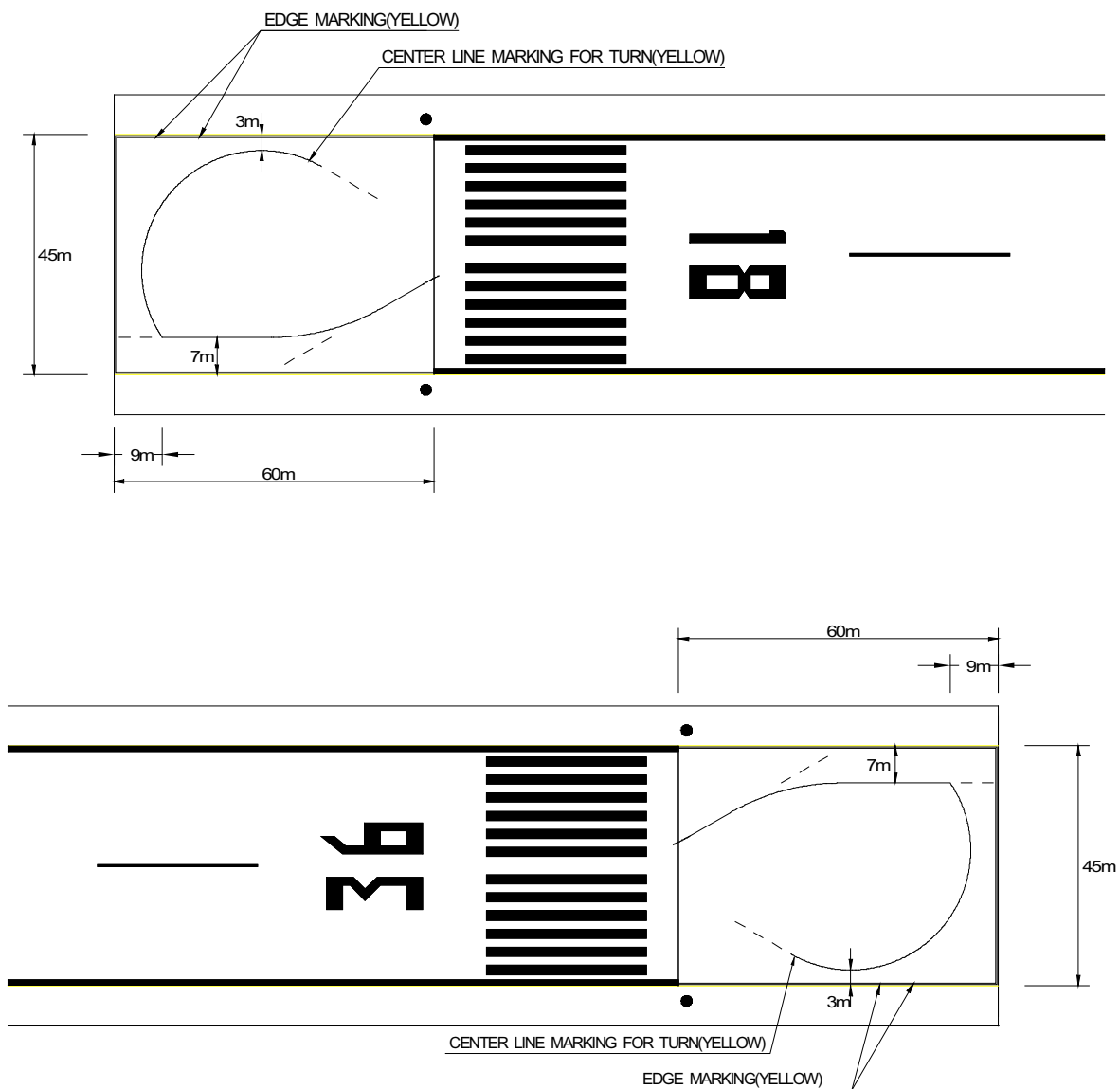
180° Turn on Overrun

B737-800 型機の過走帯 180° 転回実施要領

1. 転回用中心線標識に従って進行する。
2. 転回時の STEERING ANGLE は 48 度以上を使用する。

Procedure of 180° turn on Overrun for B737-800 aircraft.

1. Proceed along the Center Line Marking for turn.
2. When turning, take 48° or more steering angle.



RJAF AD 2.10 AERODROME OBSTACLES

In Area2 See Obstacle data

In Area3 To be developed

RJAF AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

| | | |
|----|--|--|
| 1 | Associated MET Office | TOKYO |
| 2 | Hours of service MET Office outside hours | H24 (TOKYO) |
| 3 | Office responsible for TAF preparation Periods of validity | Nil |
| 4 | Trend forecast Interval of issuance | Nil |
| 5 | Briefing/ consultation provided | Briefing is available upon inquiry at TOKYO |
| 6 | Flight documentation Language(s) used | C En |
| 7 | Charts and other information available for briefing or consultation | S ₆ , U ₈₅ , U ₇ , U ₅ , U ₃ , U ₂₅ , U ₂ /T _r , P _S , P ₅ , P ₃ , P ₂₅ , P _{SWE} , P _{SWF} , P _{SWG} , P _{SWI} , P _{SWM} , P _{SW} (domestic), E, C, W _E , W _F , W _G , W _I , W, N |
| 8 | Supplementary equipment available for providing information | Nil |
| 9 | ATS units provided with information | RADIO |
| 10 | Additional information (limitation of service, etc.) | Nil |

RJAF AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

| Designations RWY NR | TRUE BRG | Dimensions of RWY(M) | Strength(PCN) and surface of RWY | THR coordinates THR geoid undulation | THR elevation and highest elevation of TDZ of precision APP RWY |
|---|----------|-------------------------|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 18 | 171.24° | 2000×45 | PCN 45/F/B/X/T Asphalt Concrete | 361032.37N 1375515.37E | THR ELEV : 2132ft |
| 36 | 351.24° | 2000×45 | PCN 45/F/B/X/T Asphalt Concrete | 360928.29N 1375527.85E | THR ELEV : 2182ft |
| Slope of RWY | | Strip Dimensions(M) | RESA(Overrun) Dimensions(M) | Remarks | |
| 7 | 10 | 11 | 14 | | |
| See below figure | | 2120×150 | 40x(MNM:91 MAX:150)* | RWY Grooving : 2000m×45m | |
| | | 2120×150 | 42x(MNM:135 MAX:150)* *For detail, ask airport administrator | | |
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RJAF AD 2.13 DECLARED DISTANCES

| RWY Designator | TORA (m) | TODA (m) | ASDA (m) | LDA (m) | Remarks |
|-------------------|-------------|-------------|-------------|------------|---------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 18 | 2000 | 2000 | 2000 | 2000 | Nil |
| 36 | 2000 | 2000 | 2000 | 2000 | Nil |

RJAF AD 2.14 APPROACH AND RUNWAY LIGHTING

| RWY Designator | APCH LGT type LEN INTST | RTHL Color WBAR | PAPI (VASIS) Angle DIST FM THR MEHT | RTZL LEN | RCLL LEN Spacing Color INTST | REDL LEN Spacing Color INTST | RENL Color WBAR | STWL LEN Color |
|---|-------------------------------------|-----------------------|---|-------------|---|--|-----------------------|----------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 18 | SALS (*1) 420m | Green - | PAPI 3.0°/Left 334.7m 61ft | Nil | 2000m 30m Coded color (White/Red) LIH | 2000m 60m Coded color (White/Yellow) LIH | Red | Nil (*3) |
| 36 | Nil (*2) | Green - | PAPI 3.0°/Left 438.1m 61ft | Nil | 2000m 30m Coded color (White/Red) LIH | 2000m 60m Coded color (White/Yellow) LIH | Red | Nil (*3) |
| Remarks | | | | | | | | |
| 10 | | | | | | | | |
| SALS with RAI(LEN:480m) (*1) APCH LGT beacon (300m, 600m and 900m FM RWY THR) (*2) Overrun area edge LGT (LEN: 60m, Color: Red) (*3) CGL for RWY 36 RWY THR ID LGT for RWY 36 THR (Color: White) | | | | | | | | |

Usable area of PAPI

滑走路36末端側進入角指示灯の使用範囲は、障害物（山及び送電線）のため滑走路36側末端から3NM以内とする。

Usable area of PAPI for runway 36 is within approx. 3NM from runway 36 threshold due to obstructions (mountain and power line).



RJAF AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

| | | |
|---|--|---|
| 1 | ABN/IBN location, characteristics and hours of operation | ABN: 360957N/1375539E, White/Green EV4.3sec, HO |
| 2 | LDI location and LGT Anemometer location and LGT | LDI: Nil Anemometer: RWY18: 435m from RWY18 THR, LGTD RWY36: 447m from RWY36 THR, LGTD |
| 3 | TWY edge and centerline lighting | TWY edge and center line lights installed, see AD2.9 |
| 4 | Secondary power supply/ switch-over time | Nil |
| 5 | Remarks | WDI LGT |

RJAF AD 2.16 HELICOPTER LANDING AREA

| |
|-----|
| Nil |
|-----|

RJAF AD 2.17 ATS AIRSPACE

| Designation and lateral limits | | Vertical limits (ft) | Airspace classification | ATS unit call sign Language | Remarks |
|--------------------------------|---|----------------------|-------------------------|-----------------------------|---------|
| 1 | | 2 | 3 | 4 | 6 |
| Matsumoto information zone | Area within a radius of 9km(5NM) of ARP | 5,000 ft or below | E | Matsumoto radio En | |

RJAF AD 2.18 ATS COMMUNICATION FACILITIES

| Service designation | Call sign | Frequency | Hours of operation | Remarks |
|---------------------|-----------------|-----------|--------------------|---|
| 1 | 2 | 3 | 4 | 5 |
| AFIS | Matsumoto Radio | 118.65MHz | 2330 - 1000 | Operated by New Chitose Airport Office. |

RJAF AD 2.19 RADIO NAVIGATION AND LANDING AIDS

| Type of aid (VOR declination) | ID | Frequency | Hours of operation | Position of transmitting antenna coordinates | Elevation of DME transmitting antenna | Remarks |
|-------------------------------------|-----|----------------------|-----------------------|---|--|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| VOR (7°W/2009) | MBE | 117.6MHz | H24 | 360921.51N 1375511.34E | | Unusable: 050°-060° beyond 30nm BLW 11,000ft. 060°-070° beyond 25nm BLW 11,000ft. 070°-075° beyond 20nm BLW 11,000ft. 075°-085° beyond 25nm BLW 11,000ft. 085°-095° beyond 15nm BLW 11,000ft. 095°-110° beyond 20nm BLW 11,000ft. 110°-120° beyond 25nm BLW 13,000ft. 120°-130° beyond 30nm BLW 13,000ft. 195°-220° beyond 30nm BLW 13,000ft. 220°-235° beyond 25nm BLW 13,000ft. 235°-275° beyond 20nm BLW 13,000ft. 275°-305° beyond 25nm BLW 13,000ft. 305°-335° beyond 20nm BLW 13,000ft. 335°-345° beyond 30nm BLW 12,000ft. |
| DME | MBE | 1210MHz (CH-123X) | H24 | 360921.51N 1375511.34E | 2260ft | |

RJAF AD 2.20 LOCAL TRAFFIC REGULATIONS

1. Airport regulations

PPR for use tel 0263-58-2517,2518

2. Taxiing to and from stands

Nil

3. Parking area for small aircraft(General aviation)

Nil

4. Parking area for helicopters

Nil

5. Apron - taxiing during winter conditions

Nil

6. Taxiing - limitations

Nil

7. School and training flights - technical test flights - use of runways

Nil

8. Helicopter traffic - limitation

Nil

9. Removal of disabled aircraft from runways

Nil

RJAF AD 2.21 NOISE ABATEMENT PROCEDURES

Nil

RJAF AD 2.22 FLIGHT PROCEDURES

1. TAKE OFF MINIMA

| | RWY | ACFT CAT | REDL & RCLL | | REDL or RCLL or RCL Marking | | NIL (DAYTIME ONLY) | |
|--|-----|-------------|-----------------|------------|--------------------------------|------------|-----------------------|------------|
| | | | RVR | CEIL-VIS | RVR | CEIL-VIS | RVR | CEIL-VIS |
| Multi-Engine ACFT with TKOF ALTN AP FILED | 18 | A,B,C | - | 200'-1600m | - | 200'-1600m | - | 200'-1600m |
| | 36 | | - | 0'-400m | - | 0'-400m | - | 0'-500m |
| OTHER | 18 | | AVBL LDG MINIMA | | | | | |
| | 36 | | | | | | | |

2. Other

当空港に着陸又は空港周辺、特に空港の北側を飛行しようとする VFR 機については、交通情報の入手のため、少なくとも 15NM 以遠からの松本 RADIO との通信設定が推奨される。

VFR aircraft intending to land on or fly around the AP, especially north of the airport is recommended to make initial contact with Matsumoto RADIO to obtain traffic information at least 15nm far from the AP.

RJAF AD 2.23 ADDITIONAL INFORMATION

Nil

RJAF AD 2.24 CHARTS RELATED TO AN AERODROME

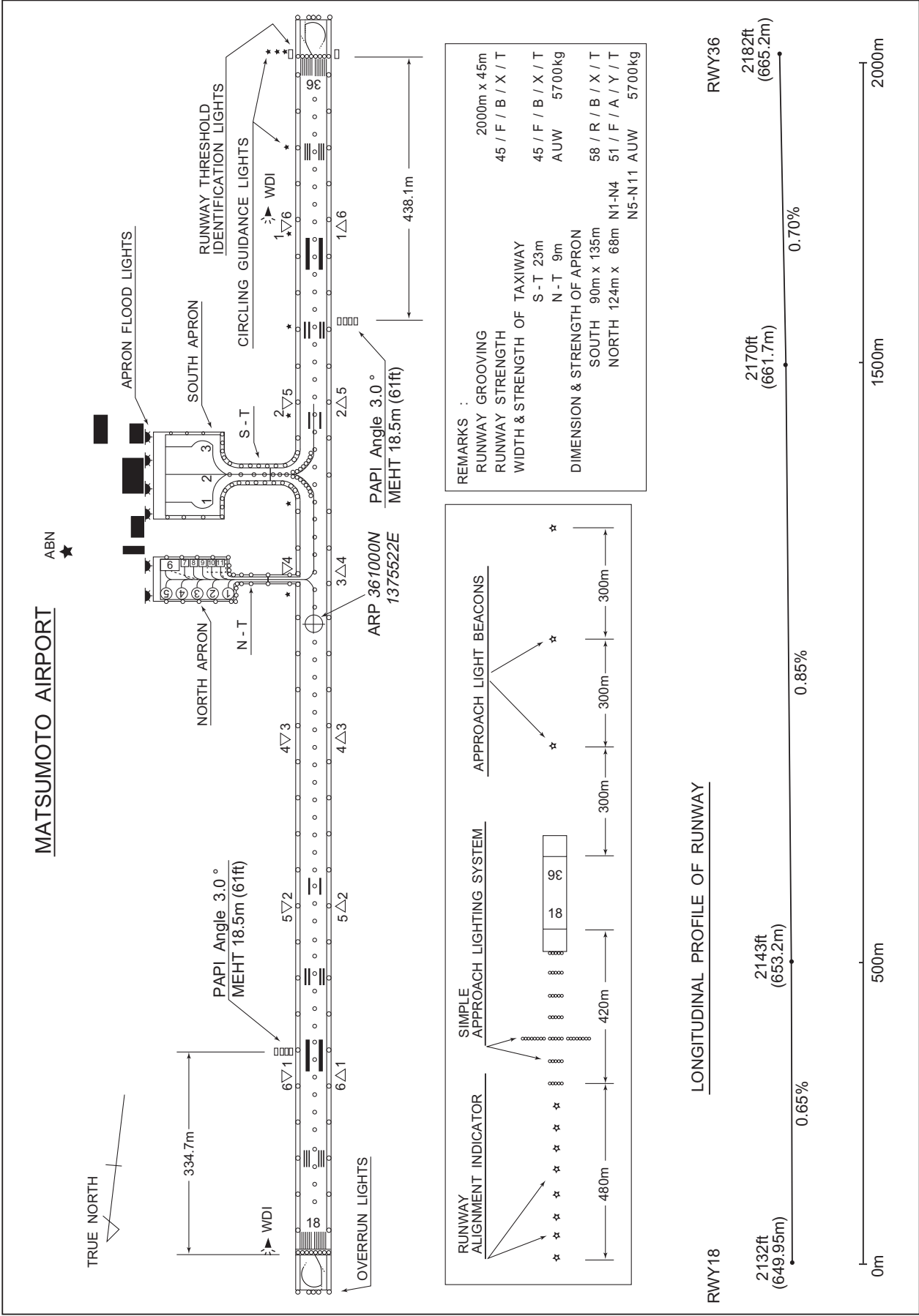
Aerodrome Chart
Standard Departure Chart - Instrument (MATSUMOTO REVERSAL)
Standard Departure Chart - Instrument (HAPPO)
Standard Departure Chart - Instrument (NIIGATA, MATSUMOTO- RNAV)
Instrument Approach Chart (VOR RWY18)
Instrument Approach Chart (RNAV(RNP) Z RWY18)
Instrument Approach Chart (RNAV(RNP) Y RWY18)
Instrument Approach Chart (RNAV(RNP) Z RWY36)
Instrument Approach Chart (RNAV(RNP) Y RWY36)
Other Chart (Visual REP)
Other Chart (LDG CHART)
Other Chart (MVA CHART)

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RJAF / MATSUMOTO

AD CHART

CHANGE: RADIO deleted.



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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.



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.



STANDARD DEPARTURE CHART-INSTRUMENT

RJAF / MATSUMOTO

RNAV SID



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

MATSUMOTO ONE DEPARTURE

RWY36

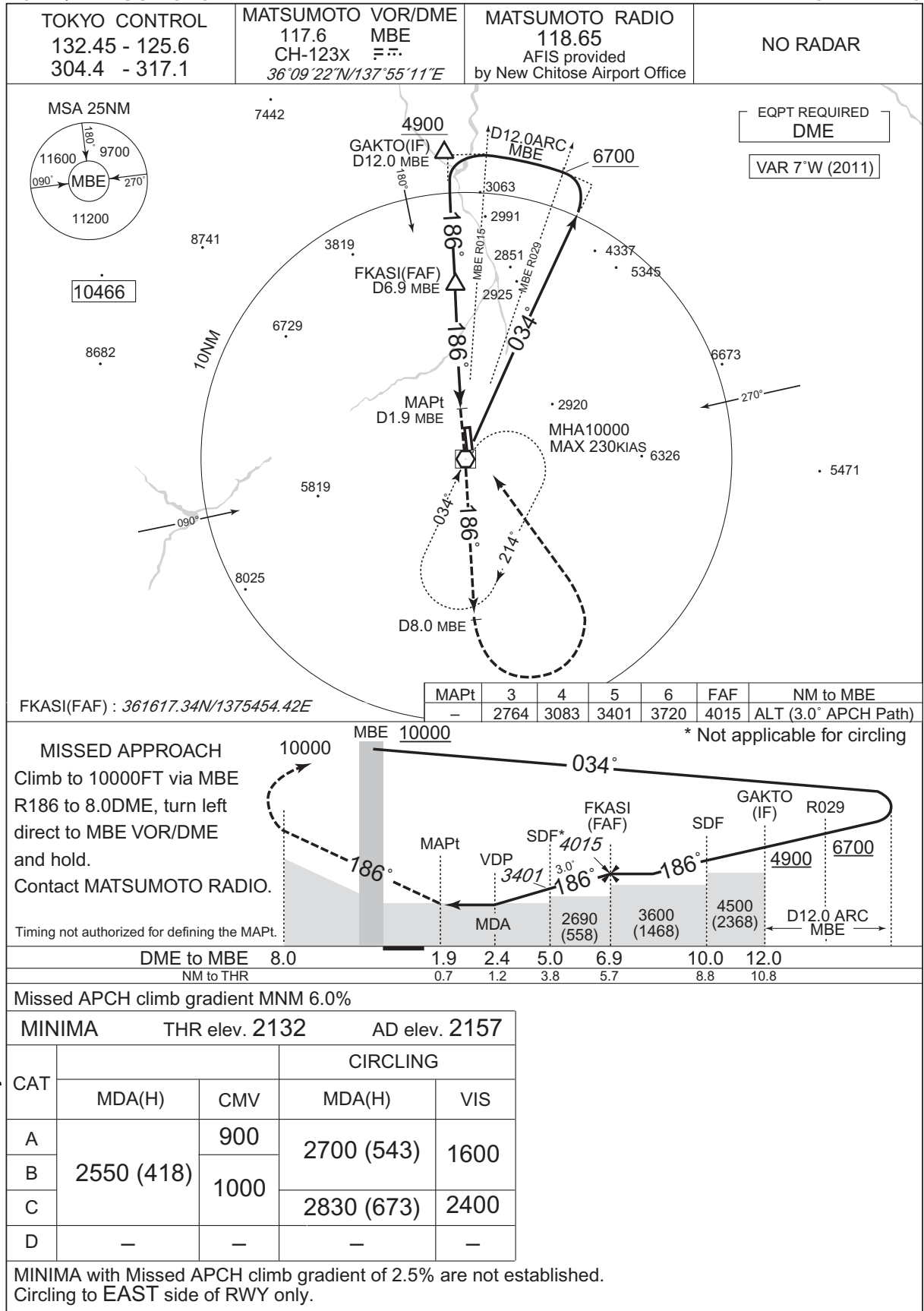
| Serial Number | Path Descriptor | Waypoint Identifier | Fly Over | Course °M(°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (FT) | Speed (KIAS) | Vertical Angle | Navigation Specification |
|---------------|-----------------|---------------------|----------|----------------|--------------------|---------------|----------------|---------------|--------------|----------------|--------------------------|
| 001 | VA | - | - | 359 (351.1) | -8.2 | - | - | +2600 | - | - | Basic RNP1 |
| 002 | DF | AF600 | Y | - | -8.2 | - | - | - | - | - | Basic RNP1 |
| 003 | DF | MBE | - | - | -8.2 | - | R | +10000 | - | - | Basic RNP1 |

CHANGE: VAR. True course(VA).

INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO

VOR RWY18



CHANGE : Secondary FREQ of MATSUMOTO RADIO abolished. AFIS unit added.

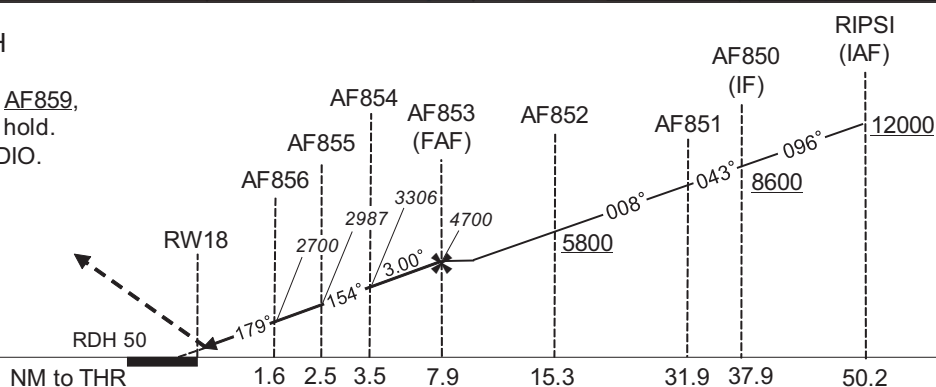
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RJAF / MATSUMOTO

RNAV(RNP) Z RWY18



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



Missed APCH climb gradient MNM 7.0%

| MINIMA | | 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.

RNP AR

Special Authorization Required

INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO

RNAV(RNP) Z RWY18

RNAV(RNP) Z RWY18Coding 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

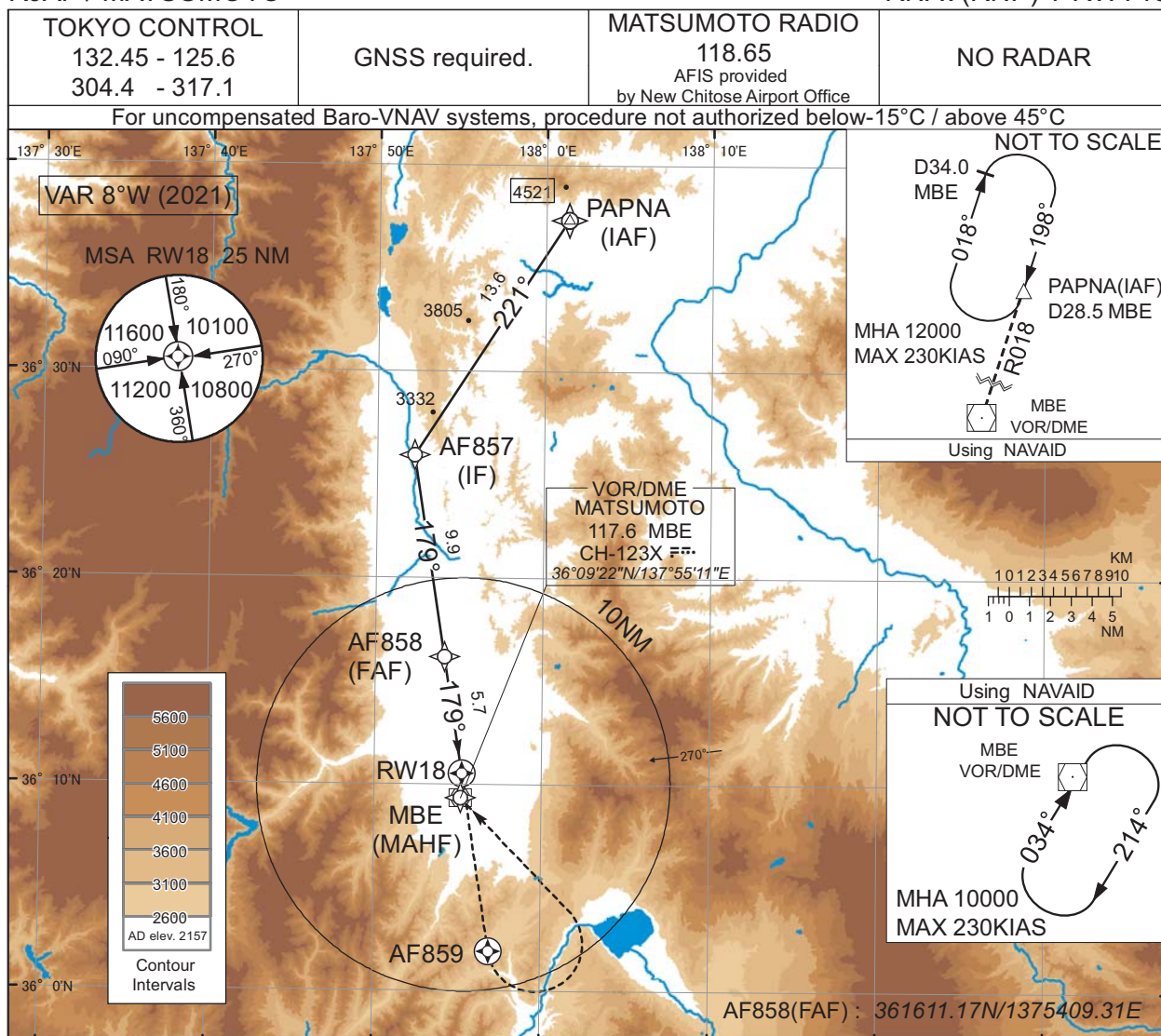
| Waypoint Identifier | Coordinates | RF Arc Center Identifier | Coordinates |
|---------------------|--------------------------|--------------------------|--------------------------|
| RIPSI | 355340.33N / 1374133.41E | AFRF5 | 361534.43N / 1375704.35E |
| AF850 | 355408.74N / 1375645.79E | AFRF6 | 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 : VAR.

INSTRUMENT APPROACH CHART

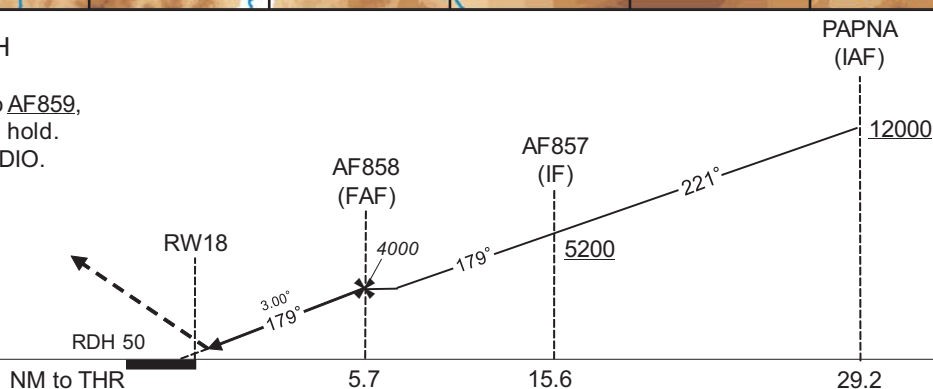
RJAF / MATSUMOTO

RNAV(RNP) Y RWY18



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 | 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.

RNP AR

Special Authorization Required

CHANGE : Secondary FREQ of MATSUMOTO RADIO abolished. AFIS unit added.

INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO

RNAV(RNP) Y RWY18

RNAV(RNP) Y RWY18Coding 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 : VAR.

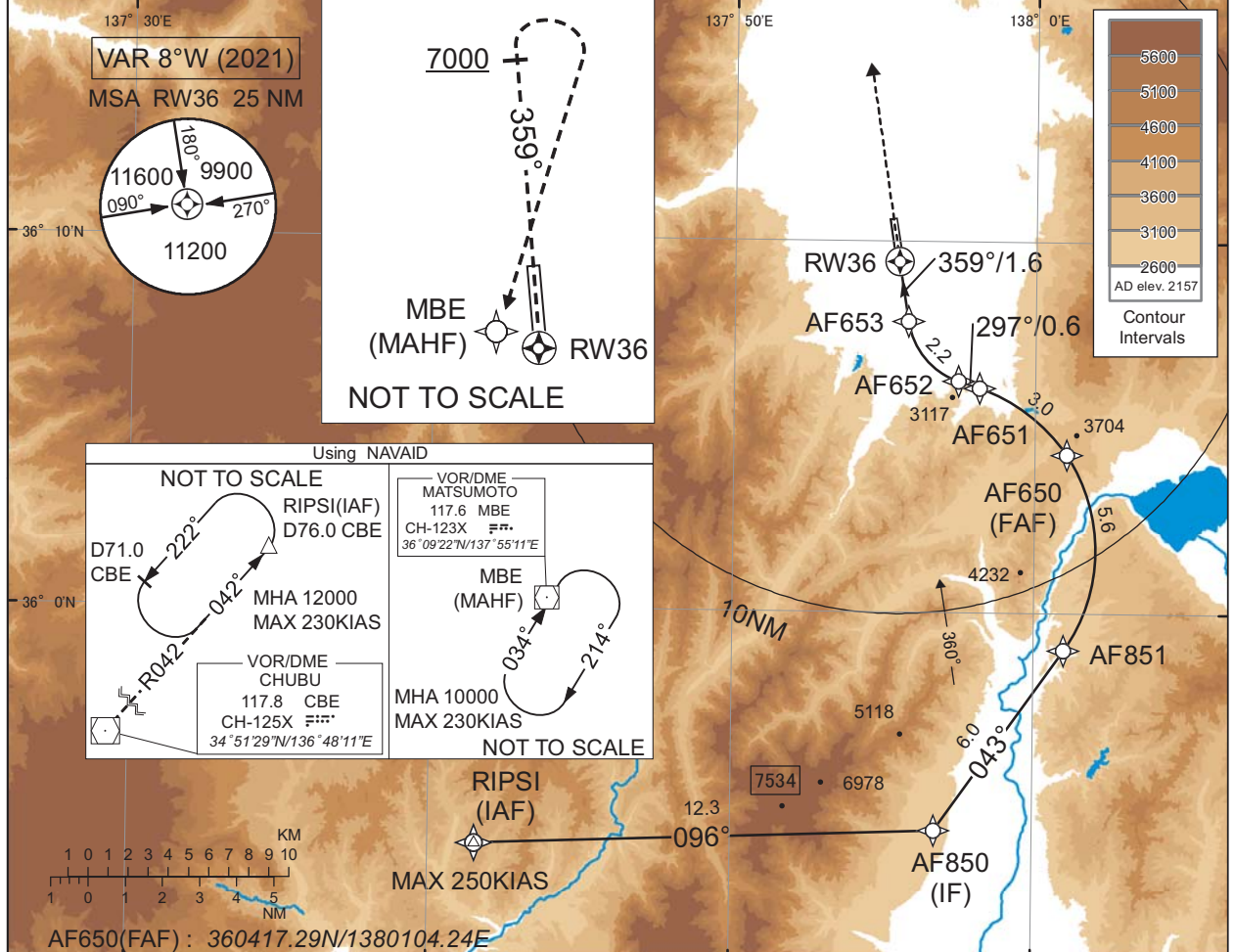
INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO

RNAV(RNP) Z RWY36

| | | | |
|--|-----------------------|---|----------|
| TOKYO CONTROL 132.45 - 125.6 304.4 - 317.1 | GNSS and RF required. | MATSUMOTO RADIO 118.65 AFIS provided by New Chitose Airport Office | NO RADAR |
|--|-----------------------|---|----------|

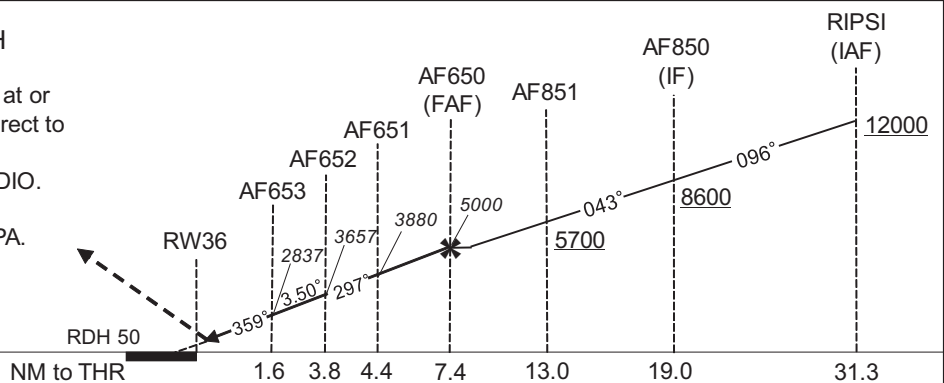
For uncompensated Baro-VNAV systems, procedure not authorized below -15°C / above 45°C



MISSED APPROACH

From RWY36 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% | | | | |
|-------------------------------------|----------------|------|---------------|------|
| CAT | THR elev. 2182 | | AD elev. 2157 | |
| | 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.

RNP AR

Special Authorization Required

CHANGE : Secondary FREQ of MATSUMOTO RADIO abolished. AFIS unit added.

INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO

RNAV(RNP) Z RWY36

RNAV(RNP) Z RWY36Coding 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

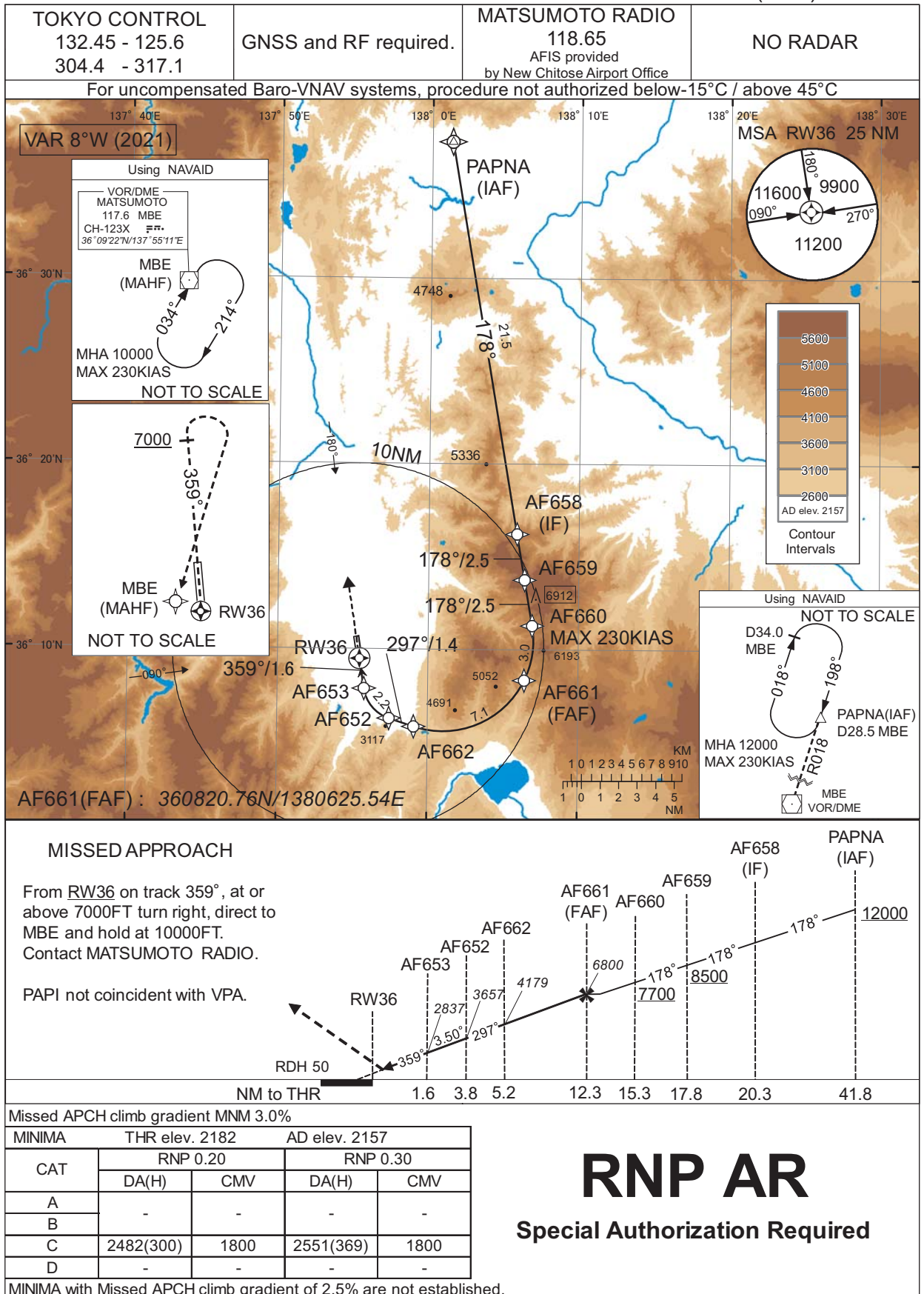
| Waypoint Identifier | Coordinates | RF Arc Center Identifier | Coordinates |
|---------------------|--------------------------|--------------------------|--------------------------|
| RIPSI | 355340.33N / 1374133.41E | AFRF1 | 360141.27N / 1375622.53E |
| AF850 | 355408.74N / 1375645.79E | AFRF2 | 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 : VAR. Course FM AF651 to AF652.

INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO

RNAV(RNP) Y RWY36



INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO

RNAV(RNP) Y RWY36

RNAV(RNP) Y RWY36Coding 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 : VAR. AF659 established. Waypoint renamed(AF654→AF658, AF655→AF660, AF656→AF661, AF657→AF662).
Course FM AF662 to AF652. ALT restriction(AF660). Speed restriction(AF660).

RJAF / MATSUMOTO

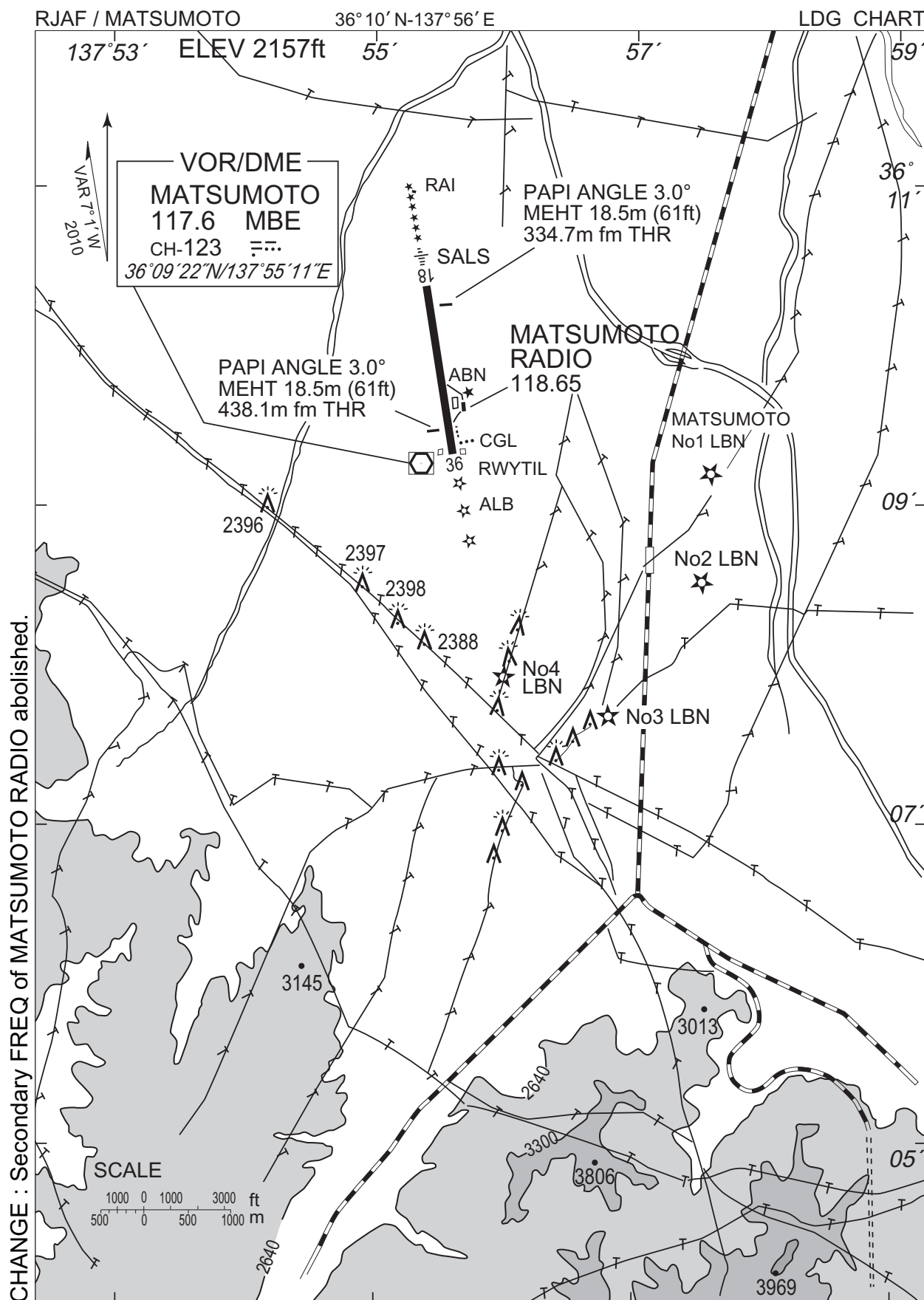
Visual REP



※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 : Secondary FREQ of MATSUMOTO RADIO abolished.

| 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

