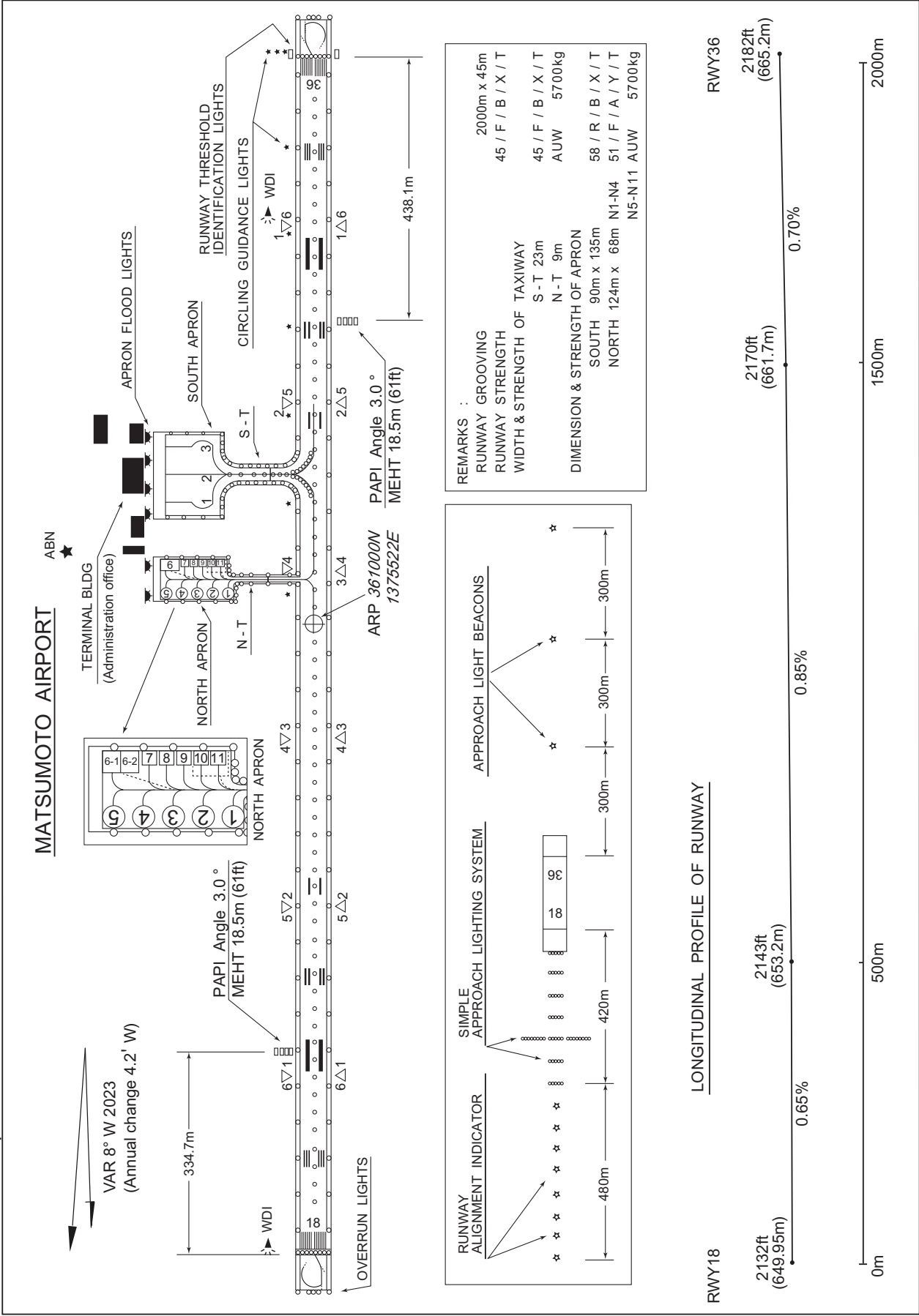


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AD CHART

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



INTENTIONALLY LEFT BLANK

STANDARD DEPARTURE CHART-INSTRUMENT

RJAF / MATSUMOTO

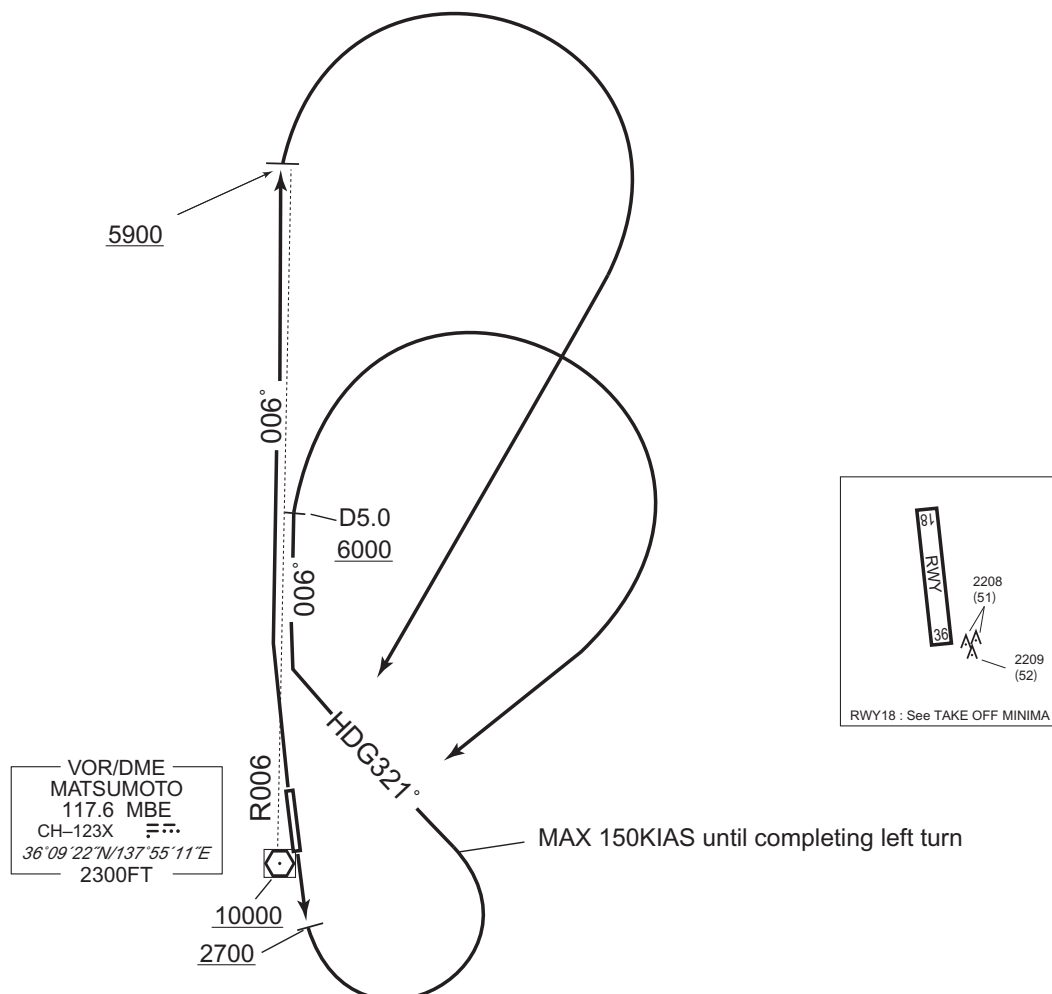
SID

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

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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.

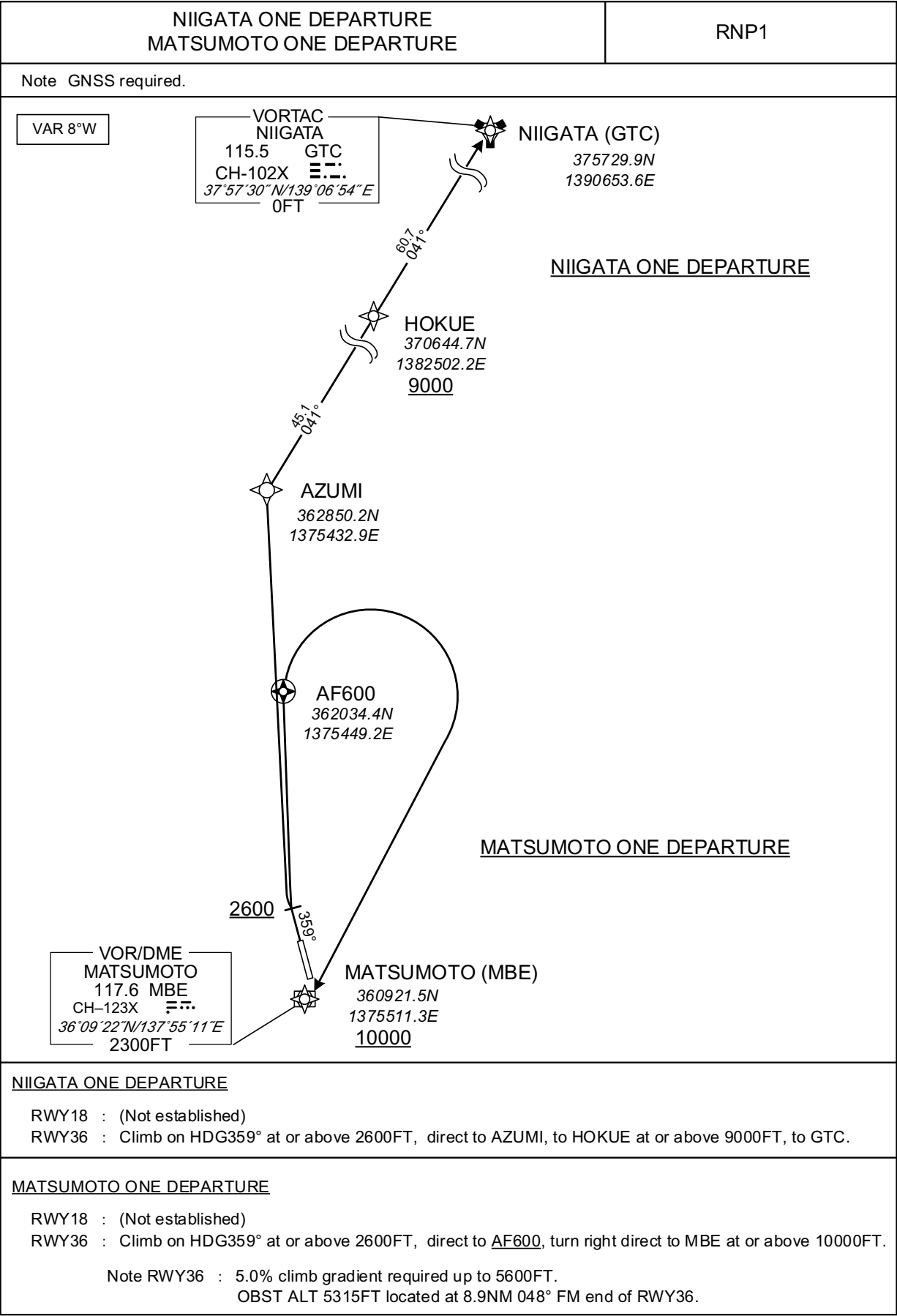
CHANGE : OBST chart.



STANDARD DEPARTURE CHART-INSTRUMENT

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RNAV SID



RJAF / MATSUMOTO

NIIGATA ONE DEPARTURE

| 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 |

| 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 \rightarrow RNP1).

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VOR RWY18

MSA 25NM

11600 9700 11200

090° 180° 270°

MBE

10466

8741 7442 4900

GAKTO (IF) D12.0 MBE

D12.0 ARC MBE

6700

3063 2991 2851 2925 3819 6729 8682 8025 5819 6673 5471 4337 5345

10NM

090°

186° 186° 034° 034° 186° 214°

FKASI (FAF) D6.9 MBE

MAPt D1.9 MBE

MHA10000 MAX 230KIAS 6326

D8.0 MBE

EQPT REQUIRED DME

VAR 7°W

| MAPt | 3 | 4 | 5 | 6 | FAF | NM to MBE |
|------|------|------|------|------|------|---------------------|
| — | 2764 | 3083 | 3401 | 3720 | 4015 | ALT (3.0° APCH Path |

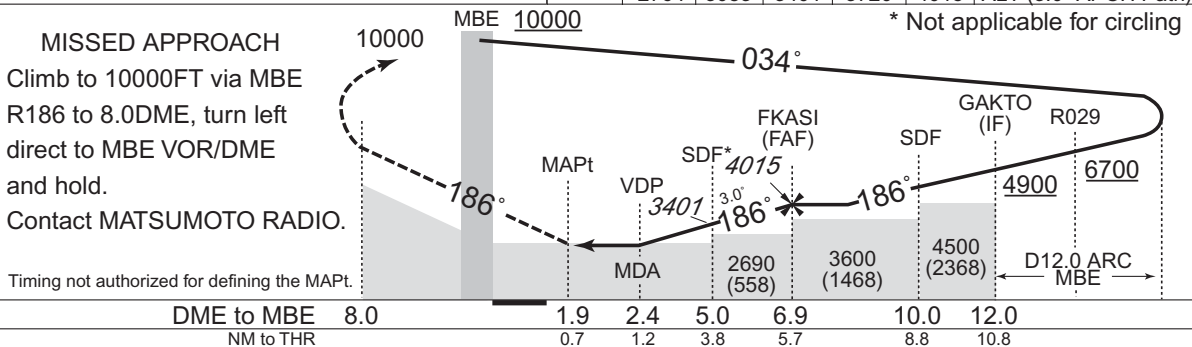
FKASI (FAF) : 361617.34N/1375454.42E

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) |

MISSED APPROACH
Climb to 10000FT via MBE
R186 to 8.0DME, turn left
direct to MBE VOR/DME
and hold.
Contact MATSUMOTO RADIO.

Timing not authorized for defining the MAPt.



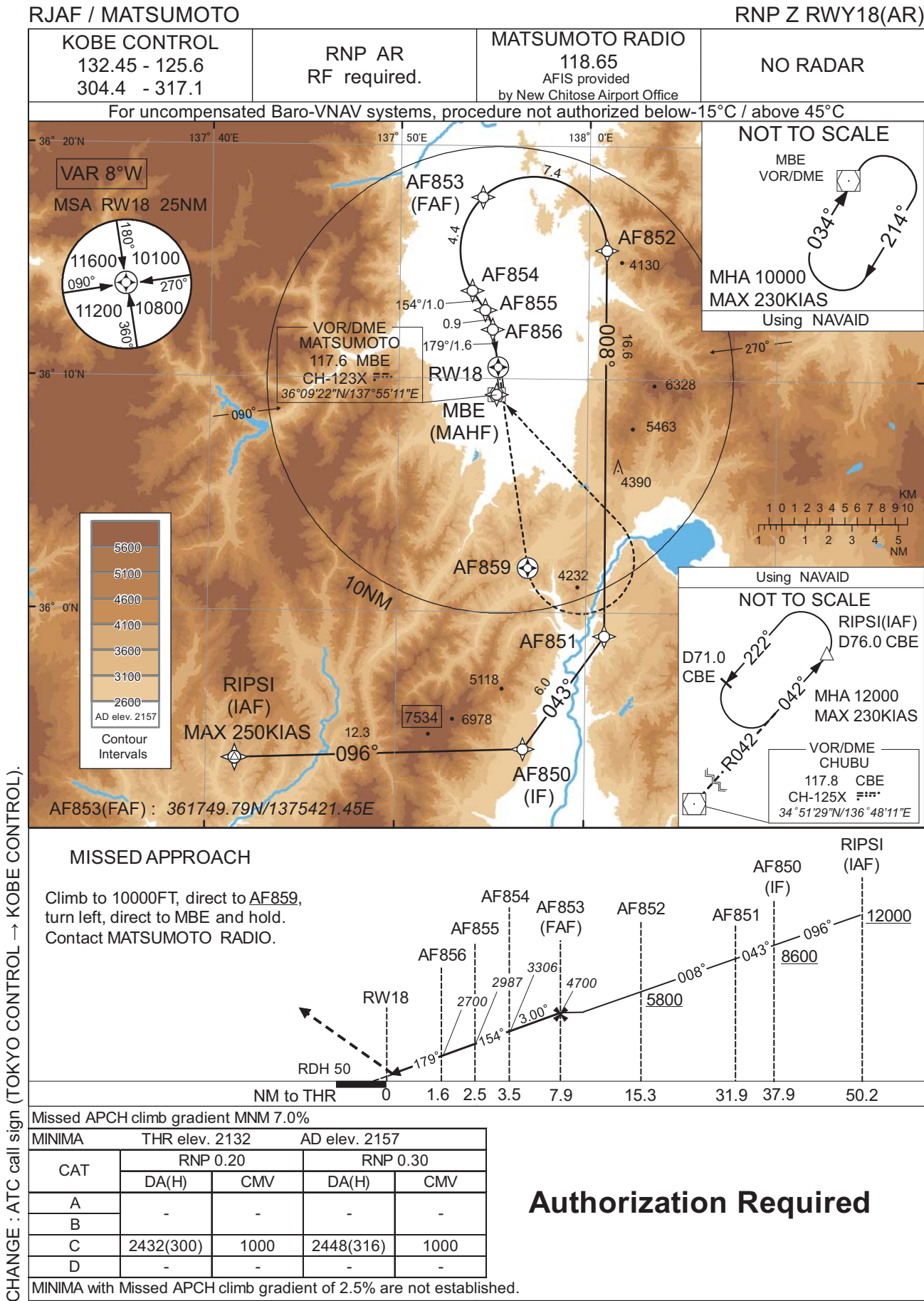
Missed APCH climb gradient MNM 6.0%

| MINIMA | | THR elev. 2132 | AD elev. 2157 | |
|--------|------------|----------------|---------------|------|
| CAT | | | 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



INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO

RNP Z RWY18(AR)

Coding Table

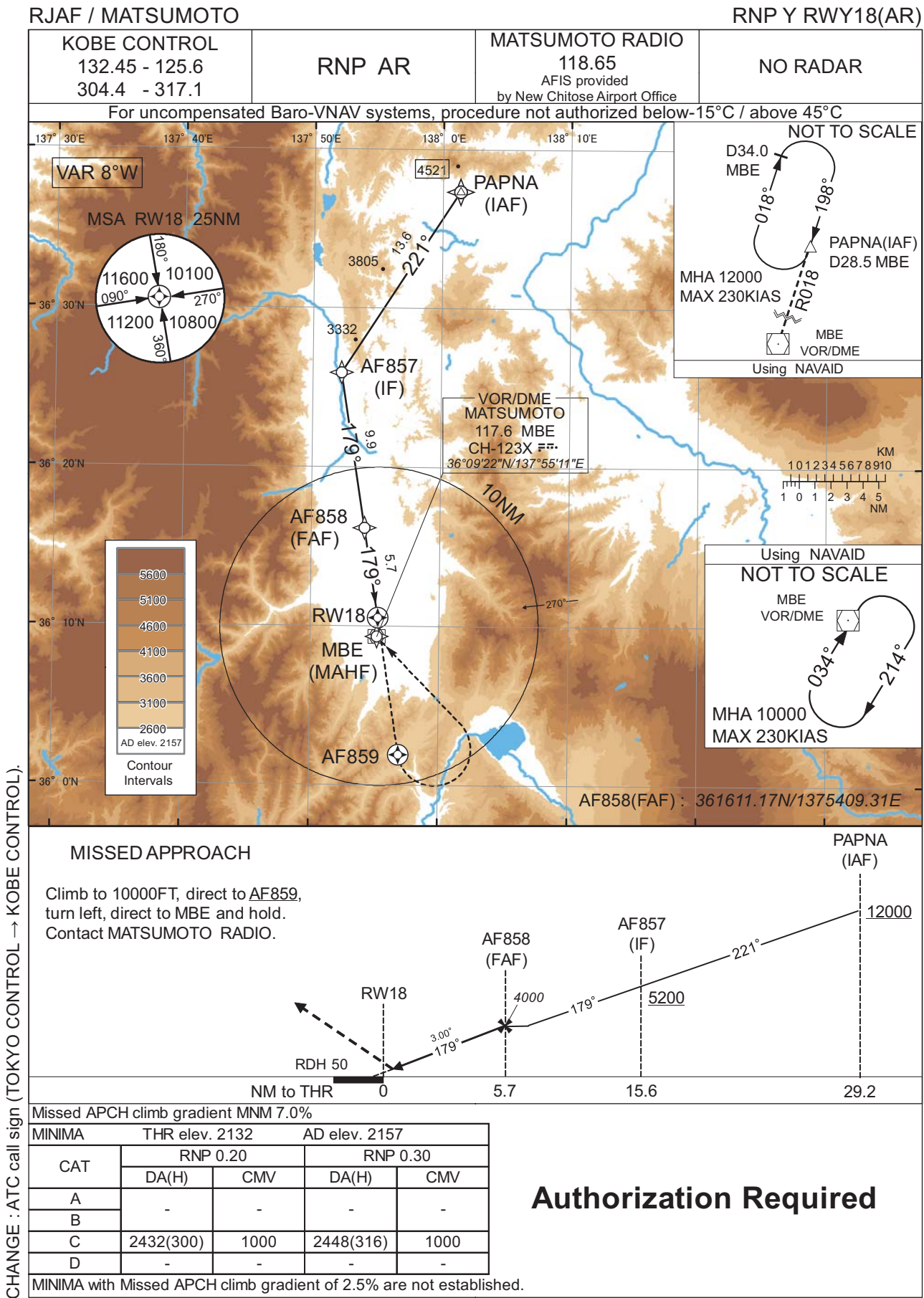
| Serial Number | Path Descriptor | Waypoint Identifier | Fly Over | Course °M(°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (FT) | Speed (KIAS) | VPA/ RDH (°/FT) | RNP Value |
|---------------|------------------------------------|---------------------|----------|----------------|--------------------|---------------|----------------|---------------|--------------|-----------------|------------|
| 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



INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO

RNP Y RWY18(AR)

Coding Table

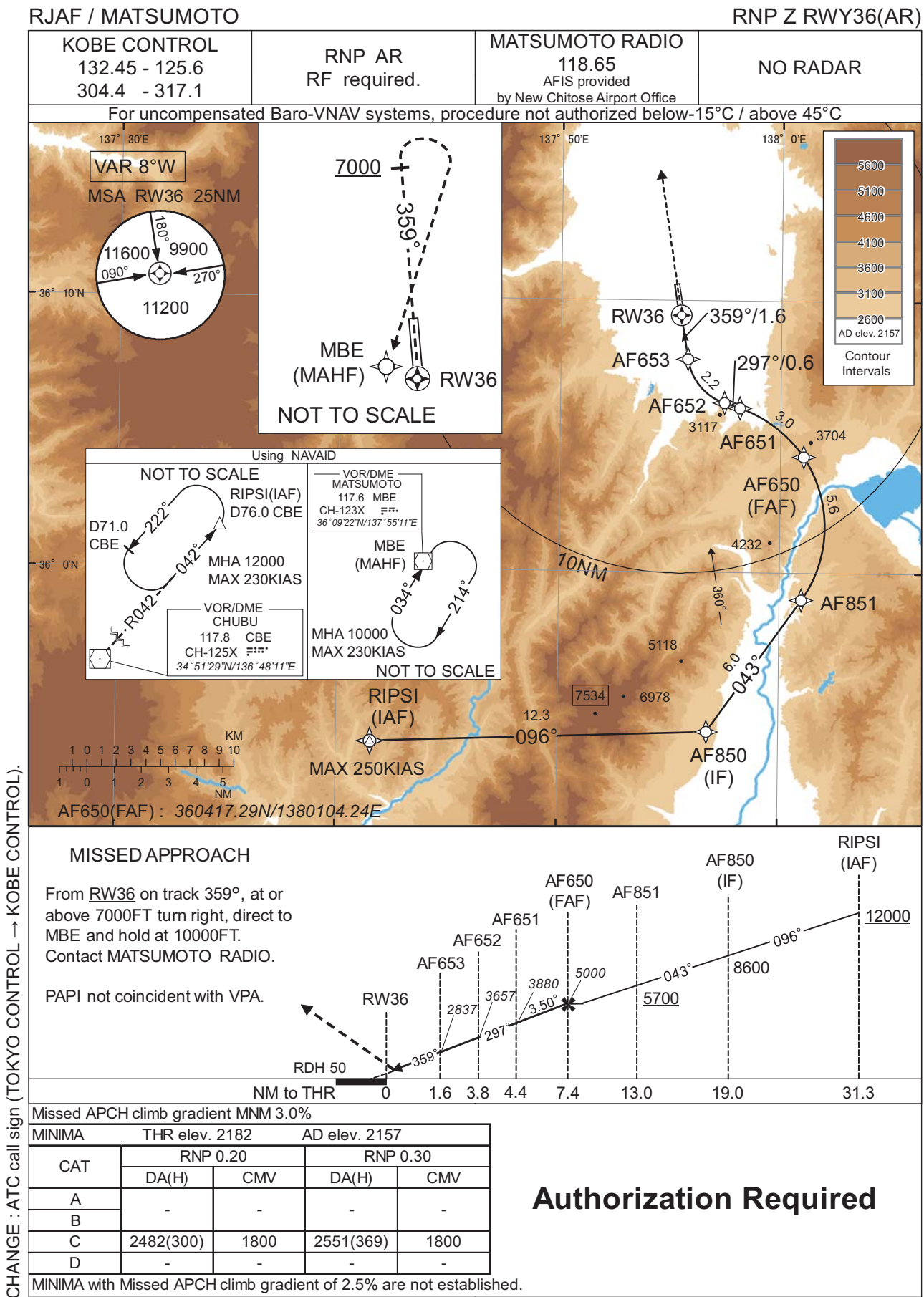
| Serial Number | Path Descriptor | Waypoint Identifier | Fly Over | Course °M(°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (FT) | Speed (KIAS) | VPA/ RDH (°/FT) | RNP Value |
|---------------|-----------------|---------------------|----------|----------------|--------------------|---------------|----------------|---------------|--------------|-----------------|------------|
| 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



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

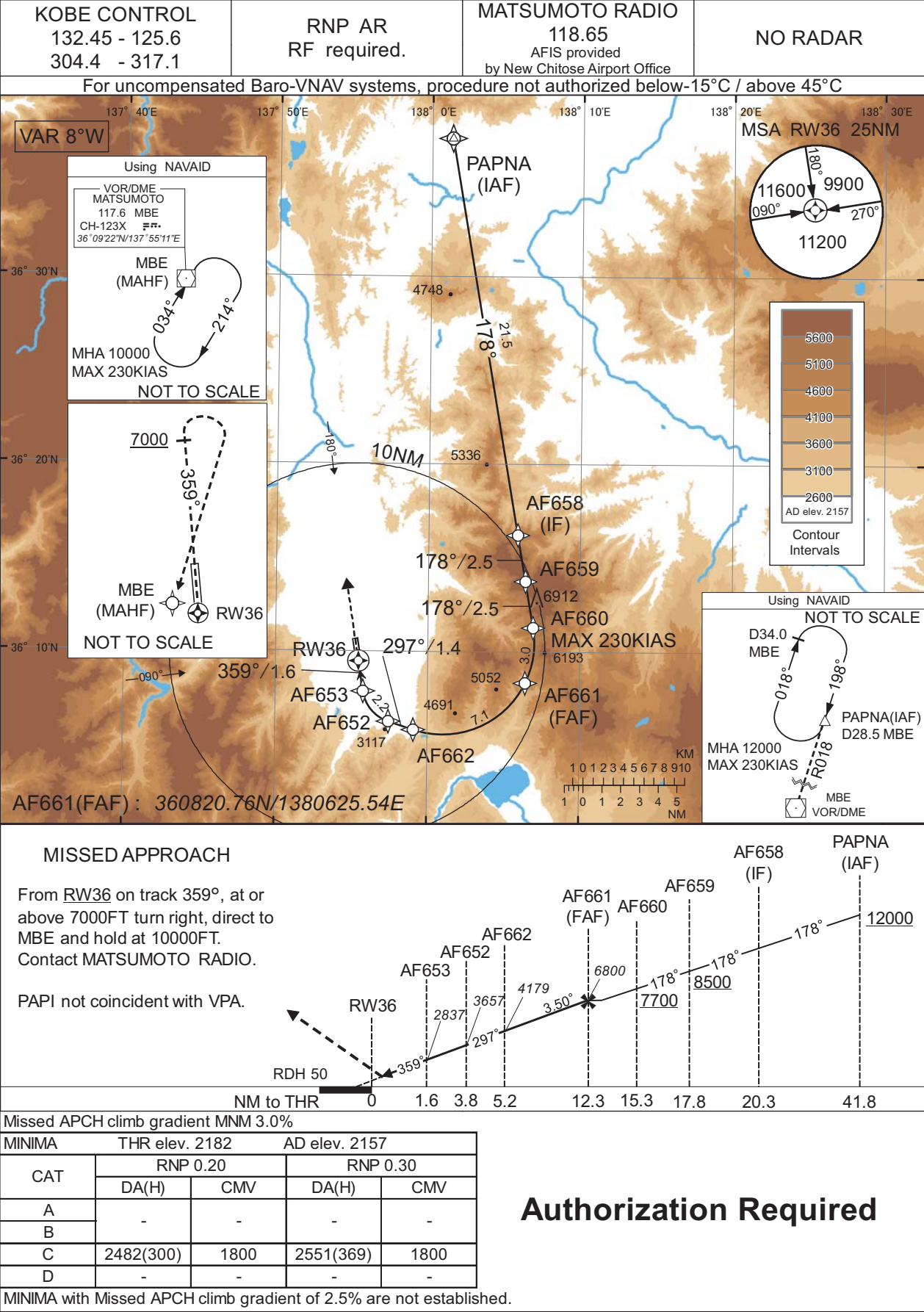
| Waypoint Identifier | Coordinates | RF Arc Center Identifier | Coordinates |
|---------------------|--------------------------|--------------------------|--------------------------|
| RIPSI | 355340.33N / 1374133.41E | AFRF1 | 360141.27N / 1375622.53E |
| AF850 | 355408.74N / 1375645.79E | AFRF2 | 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)



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 |

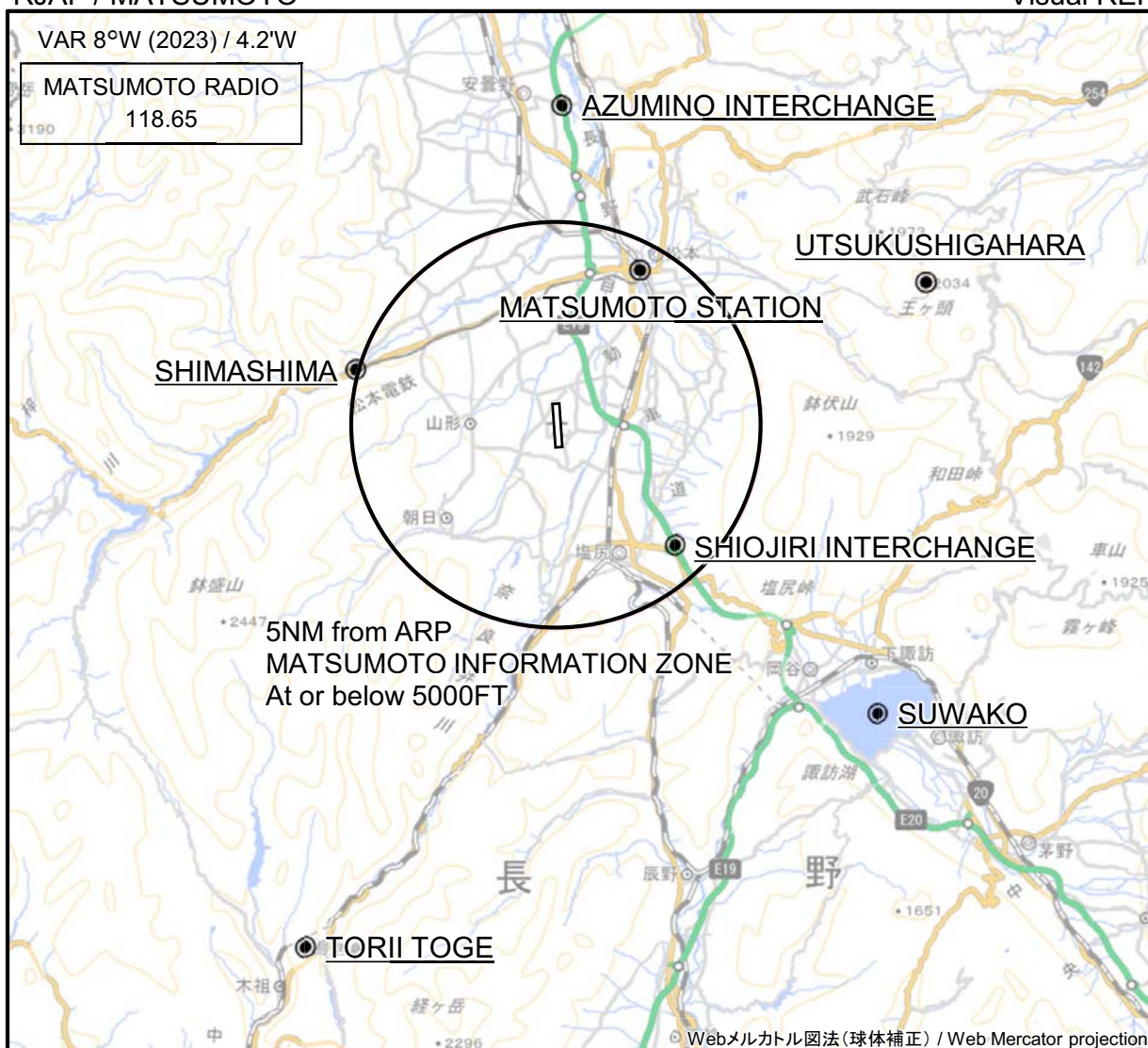
Waypoint Coordinates

| 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.

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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 |



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Minimum Vectoring Altitude CHART

