

RJSY / SHONAI

AD CHART



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STANDARD DEPARTURE CHART - INSTRUMENT

RJSY / SHONAI

SID

SHONAI REVERSAL THREE DEPARTURE

RWY 09 : Climb RWY HDG to 600FT, turn left HDG 285° to intercept and proceed via YSE R330 to YSE R330/8.5DME, turn left,...

RWY 27 : Climb via YSE R278 to YSE R278/7.0DME, turn right,...
...direct to YSE VOR/DME.
Cross YSE VOR/DME at or above 6000FT.



SHONAI REVERSAL THREE DEPARTURE

STANDARD DEPARTURE CHART - INSTRUMENT

RJSY / SHONAI

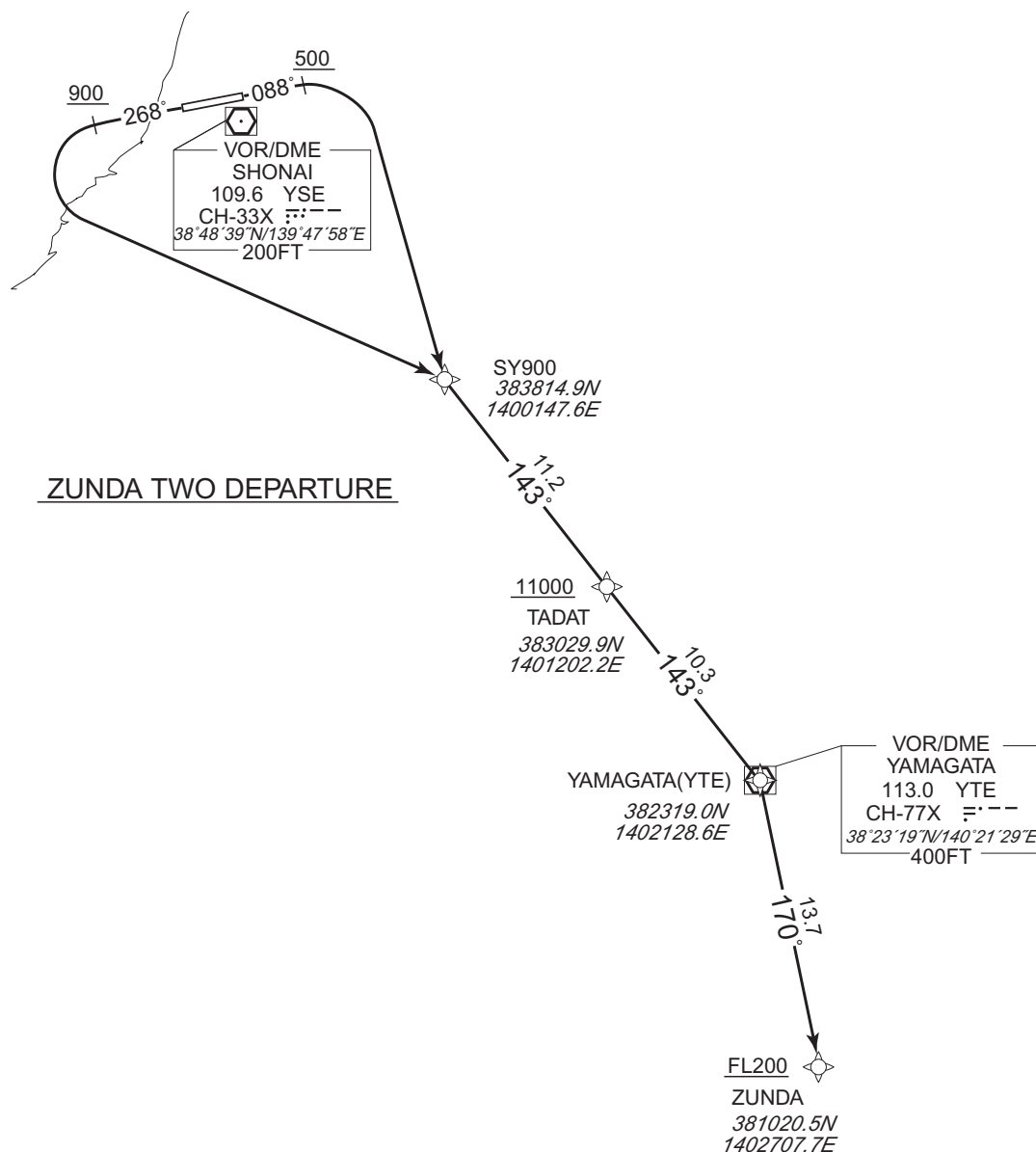
RNAV SID

ZUNDA TWO DEPARTURE

Basic RNP1

Note GNSS required.

VAR 9°W (2022)

ZUNDA TWO DEPARTURE

RWY09 : Climb on HDG 088° at or above 500FT, turn right direct to SY900, to TADAT at or above 11000FT, to YTE, to ZUNDA at or above FL200.

RWY27 : Climb on HDG 268° at or above 900FT, turn left direct to SY900, to TADAT at or above 11000FT, to YTE, to ZUNDA at or above FL200.

NOTE RWY09 : 4.8% climb gradient required up to 5000FT.
OBST ALT 4758FT located at 17.2NM 150°FM end of RWY09.

RWY27 : 4.4% climb gradient required up to 3500FT.
OBST ALT 1117FT located at 3.1NM 212°FM end of RWY27.

STANDARD DEPARTURE CHART - INSTRUMENT

RJSY / SHONAI

RNAV SID

ZUNDA TWO DEPARTURE

RWY09

| 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 | — | — | 088 (079.5) | -8.8 | — | — | +500 | — | — | Basic RNP1 |
| 002 | DF | SY900 | — | — | -8.8 | — | R | — | — | — | Basic RNP1 |
| 003 | TF | TADAT | — | 143 (134.0) | -8.8 | 11.2 | — | +11000 | — | — | Basic RNP1 |
| 004 | TF | YTE | — | 143 (134.1) | -8.8 | 10.3 | — | — | — | — | Basic RNP1 |
| 005 | TF | ZUNDA | — | 170 (161.1) | -8.8 | 13.7 | — | +FL200 | — | — | Basic RNP1 |

RWY27

| 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 | — | — | 268 (259.5) | -8.8 | — | — | +900 | — | — | Basic RNP1 |
| 002 | DF | SY900 | — | — | -8.8 | — | L | — | — | — | Basic RNP1 |
| 003 | TF | TADAT | — | 143 (134.0) | -8.8 | 11.2 | — | +11000 | — | — | Basic RNP1 |
| 004 | TF | YTE | — | 143 (134.1) | -8.8 | 10.3 | — | — | — | — | Basic RNP1 |
| 005 | TF | ZUNDA | — | 170 (161.1) | -8.8 | 13.7 | — | +FL200 | — | — | Basic RNP1 |

CHANGE : VAR. PROC renamed. PROC course.

STANDARD ARRIVAL CHART -INSTRUMENT



STANDARD ARRIVAL CHART -INSTRUMENT

RJSY / SHONAI

RNAV STAR RWY27

MOKKE ARRIVAL

From USUBA, to SY751 at or above 4900FT, to MOKKE at or above 3400FT.

| 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 | USUBA | — | — | -8.8 | — | — | — | — | — | Basic RNP1 |
| 002 | TF | SY751 | — | 344 (334.8) | -8.8 | 11.0 | — | +4900 | — | — | Basic RNP1 |
| 003 | TF | MOKKE | — | 344 (334.8) | -8.8 | 4.0 | — | +3400 | — | — | Basic RNP1 |

SHONAI ARRIVAL

From YSE, to SY761, to MOKKE at or above 3400FT.

| 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 | YSE | — | — | -8.8 | — | — | — | — | — | Basic RNP1 |
| 002 | TF | SY761 | — | 147 (137.9) | -8.8 | 9.6 | — | — | — | — | Basic RNP1 |
| 003 | TF | MOKKE | — | 053 (044.4) | -8.8 | 6.0 | — | +3400 | — | — | 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 | YSE | 147 (137.9) | -8.8 | 1.0(-14000) | R | 4000 | FL140 | -230(-14000) | Basic RNP1 |

CHANGE : VAR. PROC course(MOKKE ARRIVAL, SHONAI ARRIVAL). RNAV HLDG established(YSE).

STANDARD ARRIVAL CHART -INSTRUMENT

RJSY / SHONAI

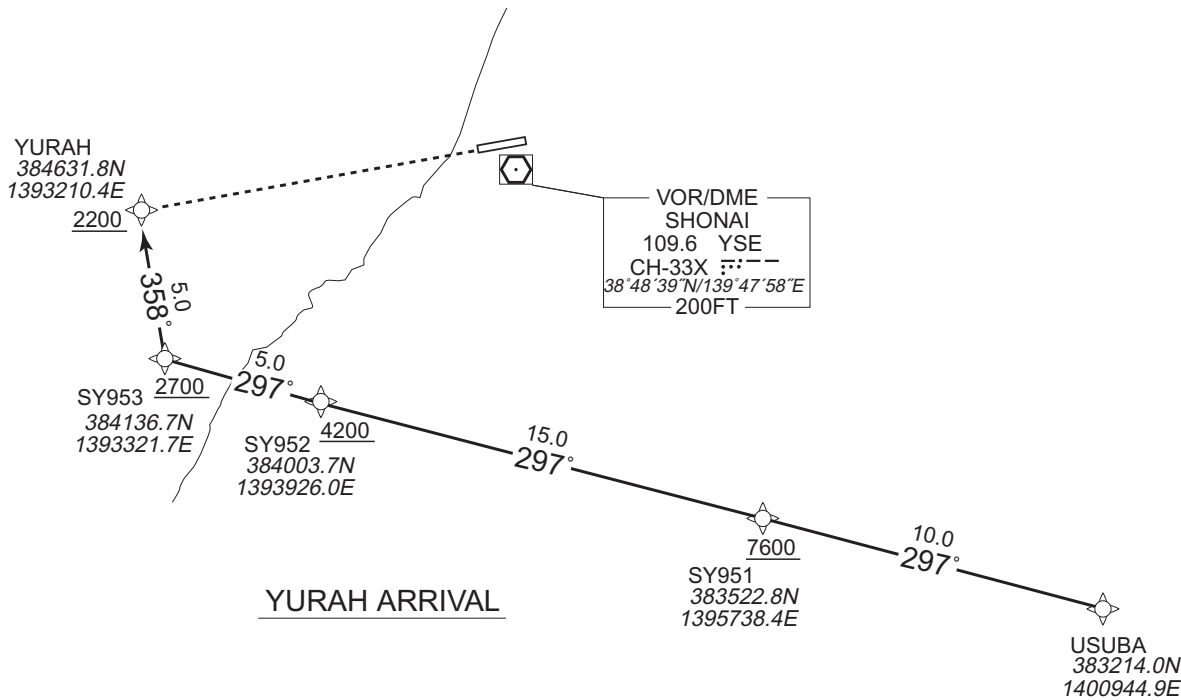
RNAV STAR RWY09

YURAH ARRIVAL

Basic RNP1

Note GNSS required.

VAR 9°W (2022)



YURAH ARRIVAL

From USUBA, to SY951 at or above 7600FT, to SY952 at or above 4200FT, to SY953 at or above 2700FT, to YURAH at or above 2200FT.

CHANGE : VAR. PROC course.

| 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 | USUBA | — | — | -8.8 | — | — | — | — | — | Basic RNP1 |
| 002 | TF | SY951 | — | 297 (288.4) | -8.8 | 10.0 | — | +7600 | — | — | Basic RNP1 |
| 003 | TF | SY952 | — | 297 (288.3) | -8.8 | 15.0 | — | +4200 | — | — | Basic RNP1 |
| 004 | TF | SY953 | — | 297 (288.1) | -8.8 | 5.0 | — | +2700 | — | — | Basic RNP1 |
| 005 | TF | YURAH | — | 358 (349.3) | -8.8 | 5.0 | — | +2200 | — | — | Basic RNP1 |

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INSTRUMENT APPROACH CHART



INSTRUMENT APPROACH CHART

RJSY / SHONAI

ILS Y or LOC Y RWY09



CHANGE : Secondary FREQ abolished(SHONAI RADIO).



MISSED APPROACH

Climb to 500FT on HDG088°, turn left HDG244° to intercept and proceed via YSE R289 to 4000FT, turn left, direct to YSE VOR/DME and hold. Contact SHONAI RADIO.

Timing not authorized for defining the MAPt.

Missed APCH climb gradient MNM 5.0%

| MINIMA | | THR elev. 59 | | AD elev. 72 | | |
|--------|-----------|--------------|-----------|-------------|-----------|------|
| CAT | CAT I | | LOC | | CIRCLING | |
| | DA(H) | RVR/ CMV | MDA(H) | RVR/ CMV | MDA(H) | VIS |
| A | 259 (200) | 550 | 380 (321) | 900 | 530 (458) | 1600 |
| B | | | | 1000 | | |
| C | | | | | | |
| D | | | | 1400 | 700 (628) | 3200 |

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

INSTRUMENT APPROACH CHART

RJSY / SHONAI

LOC RWY27



CHANGE : Secondary FREQ abolished(SHONAI RADIO).

INSTRUMENT APPROACH CHART

RJSY / SHONAI

VOR RWY09

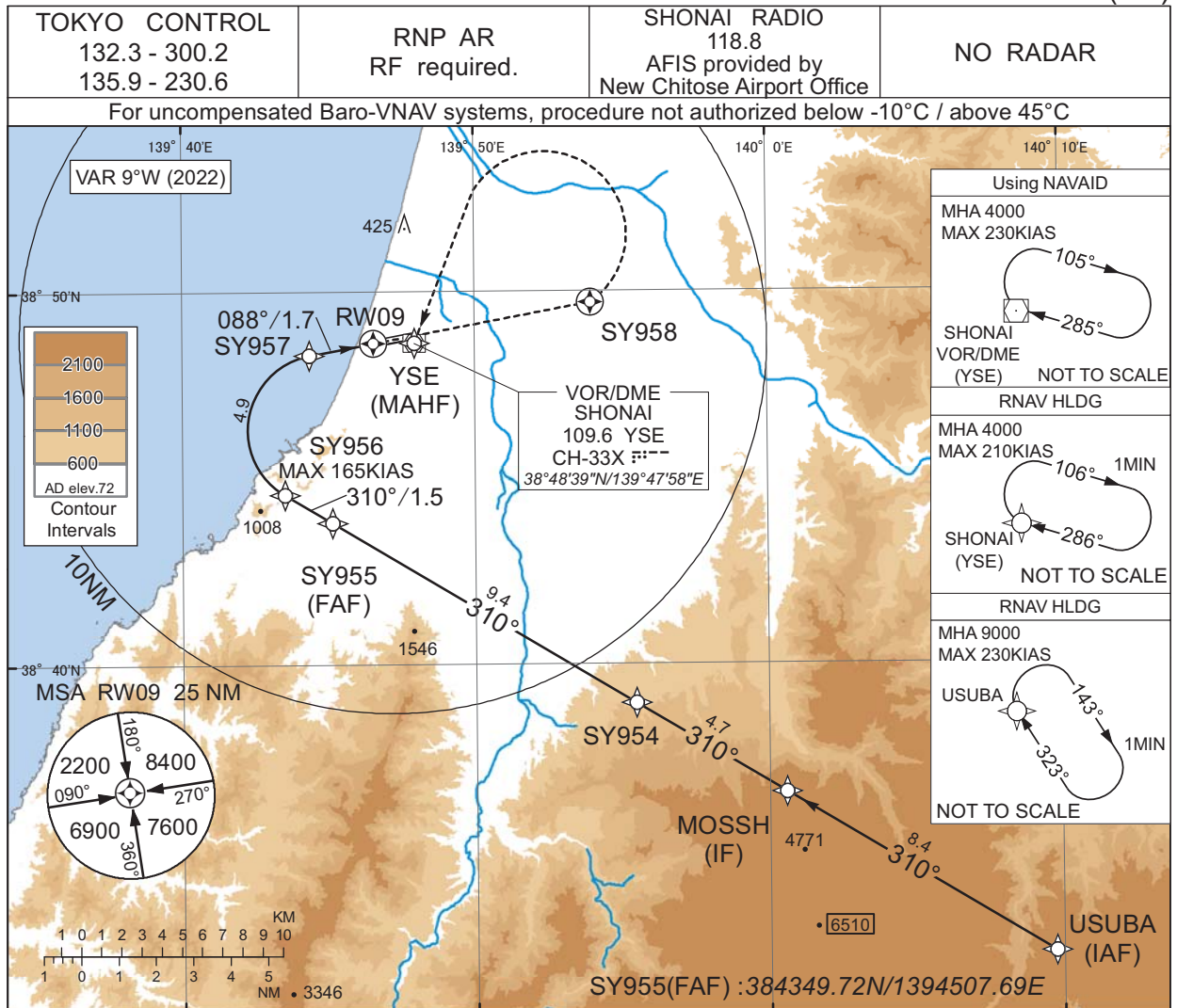


CHANGE : Secondary FREQ abolished(SHONAI RADIO).

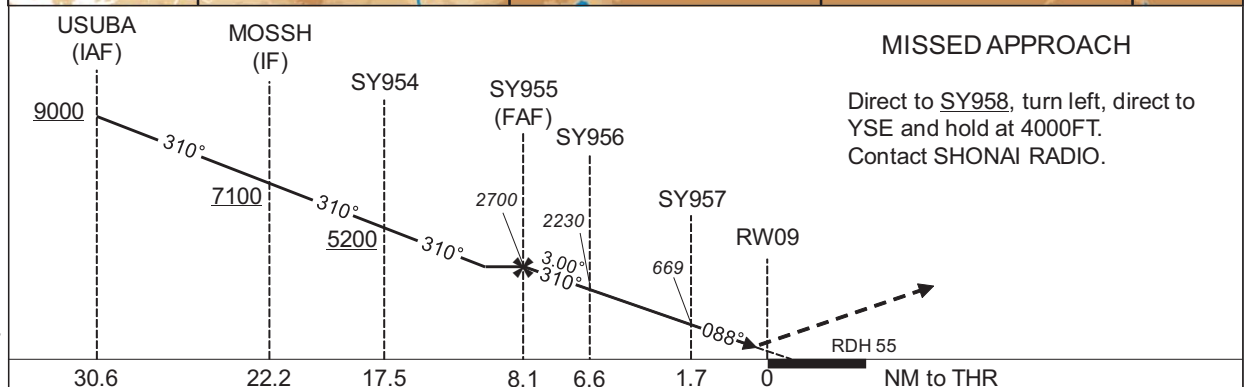
INSTRUMENT APPROACH CHART

RJSY / SHONAI

RNP RWY09(AR)



CHANGE : PROC renamed. Requirement for RNP.



Missed APCH climb gradient MNM 5.0%

| MINIMA | THR elev. 59 | | AD elev. 72 | |
|--------|--------------|---------|-------------|---------|
| CAT | RNP 0.10 | | RNP 0.30 | |
| | DA(H) | RVR/CMV | DA(H) | RVR/CMV |
| A | - | - | - | - |
| B | - | - | - | - |
| C | 372(313) | 1000 | 424(365) | 1000 |
| D | | 1400 | | 1400 |

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

Authorization Required

INSTRUMENT APPROACH CHART

RJSY / SHONAI

RNP RWY09(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 | USUBA | - | - | -8.8 | - | - | +9000 | - | - | - |
| 002 | TF | MOSSH | - | 310 (301.2) | -8.8 | 8.4 | - | +7100 | - | - | 1.0 |
| 003 | TF | SY954 | - | 310 (301.1) | -8.8 | 4.7 | - | +5200 | - | - | 1.0 |
| 004 | TF | SY955 | - | 310 (301.1) | -8.8 | 9.4 | - | 2700 | - | - | 1.0 |
| 005 | TF | SY956 | - | 310 (301.0) | -8.8 | 1.5 | - | 2230 | -165 | -3.00 | 0.1 0.3 |
| 006 | RF Center: SYRF1 r=2.03NM | SY957 | - | - | -8.8 | 4.9 | R | 669 | - | -3.00 | 0.1 0.3 |
| 007 | TF | RW09 | Y | 088 (079.4) | -8.8 | 1.7 | - | 114 | - | -3.00/55 | 0.1 0.3 |
| 008 | DF | SY958 | Y | - | -8.8 | - | - | - | - | - | 1.0 |
| 009 | DF | YSE | - | - | -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 | USUBA | 323 (314.1) | -8.8 | 1.0 (-14000) | R | 9000 | FL140 | -230 (-14000) | 1.0 |
| Hold | YSE | 286 (277.0) | -8.8 | 1.0 (-14000) | R | 4000 | FL140 | -210 (-14000) | 1.0 |

Waypoint Coordinates

| Waypoint Identifier | Coordinates | RF Arc Center Identifier | Coordinates |
|---------------------|--------------------------|--------------------------|--------------------------|
| USUBA | 383214.02N / 1400944.88E | SYRF1 | 384619.71N / 1394450.17E |
| MOSSH | 383634.00N / 1400035.10E | | |
| SY954 | 383858.43N / 1395528.53E | | |
| SY955 | 384349.72N / 1394507.69E | | |
| SY956 | 384435.19N / 1394330.47E | | |
| SY957 | 384819.37N / 1394421.61E | | |
| RW09 | 384838.58N / 1394633.12E | | |
| SY958 | 384943.40N / 1395359.19E | | |
| YSE | 384838.81N / 1394757.51E | | |

CHANGE : PROC renamed.

INSTRUMENT APPROACH CHART

RJSY / SHONAI

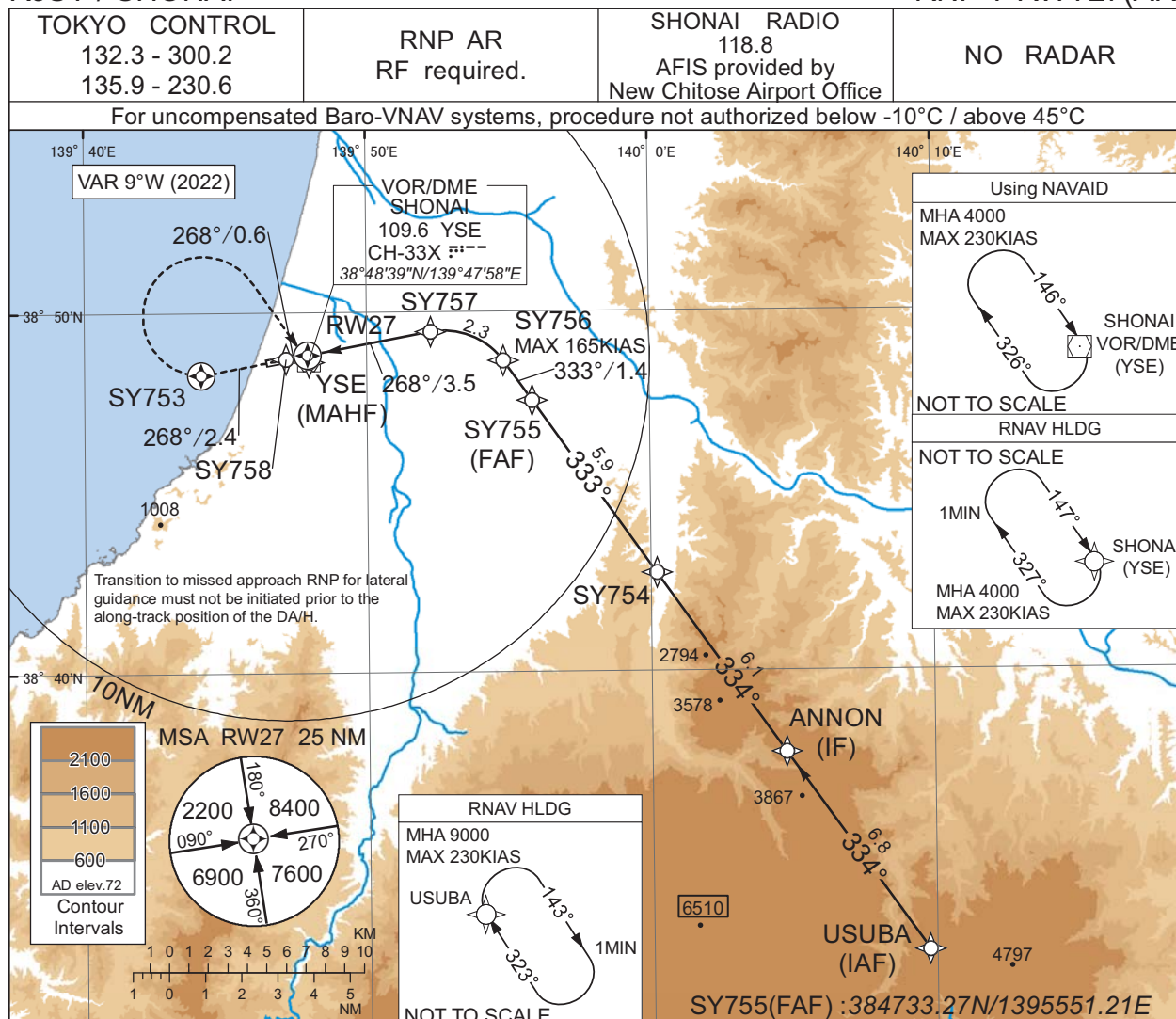
RNP Z RWY27



INSTRUMENT APPROACH CHART

RJSY / SHONAI

RNP Y RWY27(AR)



MISSED APPROACH

Climb to 4000FT, to SY758, to SY753 on track 268°, turn right, direct to YSE and hold.
Contact SHONAI RADIO.



Missed APCH climb gradient MNM 5.0%

| CAT | THR elev. 86 | | AD elev. 72 | |
|-----|--------------|------|-------------|------|
| | RNP 0.12 | | RNP 0.30 | |
| | DA(H) | CMV | DA(H) | CMV |
| A | - | - | - | - |
| B | - | - | - | - |
| C | 386(300) | 1400 | 424(338) | 1400 |
| D | | 1600 | | 1600 |

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

Authorization Required

CHANGE : PROC renamed. Requirement for RNP.

INSTRUMENT APPROACH CHART

RJSY / SHONAI

RNP Y RWY27(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 | USUBA | - | - | -8.8 | - | - | +9000 | - | - | - |
| 002 | TF | ANNON | - | 334 (324.8) | -8.8 | 6.8 | - | +5400 | - | - | 1.0 |
| 003 | TF | SY754 | - | 334 (324.7) | -8.8 | 6.1 | - | +4200 | - | - | 1.0 |
| 004 | TF | SY755 | - | 333 (324.7) | -8.8 | 5.9 | - | 2400 | - | - | 1.0 |
| 005 | TF | SY756 | - | 333 (324.6) | -8.8 | 1.4 | - | 1967 | -165 | -3.00 | 0.12 0.30 |
| 006 | RF Center: SYRF2 r=2.01NM | SY757 | - | - | -8.8 | 2.3 | L | 1240 | - | -3.00 | 0.12 0.30 |
| 007 | TF | RW27 | Y | 268 (259.5) | -8.8 | 3.5 | - | 136 | - | -3.00/50 | 0.12 0.30 |
| 008 | TF | SY758 | - | 268 (259.4) | -8.8 | 0.6 | - | - | - | - | 0.12 0.30 |
| 009 | CF | SY753 | Y | 268 (259.4) | -8.8 | 2.4 | - | - | - | - | 1.0 |
| 010 | DF | YSE | - | - | -8.8 | - | R | 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 | USUBA | 323 (314.1) | -8.8 | 1.0 (-14000) | R | 9000 | FL140 | -230 (-14000) | 1.0 |
| Hold | YSE | 147 (137.9) | -8.8 | 1.0 (-14000) | R | 4000 | FL140 | -230 (-14000) | 1.0 |

Waypoint Coordinates

| Waypoint Identifier | Coordinates | RF Arc Center Identifier | Coordinates |
|---------------------|--------------------------|--------------------------|--------------------------|
| USUBA | 383214.02N / 1400944.88E | SYRF2 | 384729.55N / 1395244.67E |
| ANNON | 383745.37N / 1400445.25E | | |
| SY754 | 384245.22N / 1400013.26E | | |
| SY755 | 384733.27N / 1395551.21E | | |
| SY756 | 384839.83N / 1395450.54E | | |
| SY757 | 384928.52N / 1395216.49E | | |
| RW27 | 384850.46N / 1394754.61E | | |
| SY758 | 384843.80N / 1394708.93E | | |
| SY753 | 384817.41N / 1394408.18E | | |
| YSE | 384838.81N / 1394757.51E | | |

CHANGE : PROC renamed.

RJSY / SHONAI

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 abolished.

| Call sign | BRG / DIST from ARP | Remarks |
|------------------------|---------------------|-------------------------------------|
| 吹浦 Fukura | 014°T / 16.0NM | 吹浦港 Harbor |
| 酒田 Sakata | 009°T / 8.1NM | 酒田港 Harbor |
| 最上 Mogami | 089°T / 9.1NM | 最上川橋 Bridge |
| 鶴岡 Tsuruoka | 153°T / 4.9NM | JR駅 Station |
| 波渡崎 Hatozaki | 225°T / 10.6NM | 岬 Cape |
| あさひインター Asahi Inter | 167°T / 11.9NM | 山形自動車道 庄内あさひインターチェンジ Interchange |

RJSY / SHONAI

LDG CHART



RJSY / SHONAI

Minimum Vectoring Altitude CHART

