AD 2 AERODROMES

RJSY AD 2.1 AERODROME LOCATION INDICATOR AND NAME

RJSY - SHONAI

RJSY AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	*384844N/1394714E* 80°/1.0km from RWY09 THR
2	Direction and distance from (city)	5nm NNW from Tsuruoka city
3	Elevation/ Reference temperature	72ft / 29°C (2003-2007)
4	Geoid undulation at AD ELEV PSN	125ft
5	MAG VAR/ Annual change	8° W(2009)/1' W (2009)
6	AD Administration, address, telephone, telefax, telex, AFS, e-mail and/or Web-site addresses	Shonai Airport Office(Yamagata Pref) 30-3, Aza-Murahigashi, Hamanaka, Sakata-shi, Yamagata Pref. Tel: 0234-92-4123 Fax: 0234-92-4122 e-mail: yshonaikuko@pref.yamagata.jp Web: http://www.pref.yamagata.jp/
7	Types of traffic permitted(IFR/VFR)	IFR/VFR
8	Remarks	Nil

RJSY AD 2.3 OPERATIONAL HOURS

1	AD Administration	2200 - 1300
2	Customs and immigration	On request Customs: 0234-22-1024 Immigration: 0234-22-2746
3	Health and sanitation	On request Quarantine(human): 018-846-8280, 022-367-8101 Quarantine(animal): 025-275-4565 Quarantine(plant): 025-244-4401
4	AIS Briefing Office	Nil
5	ATS Reporting Office(ARO)	Nil
6	MET Briefing Office	H24 (SENDAI)
7	ATS	2200 - 1300 Remarks: Airport Remote Mobile Communication Service provided by Sendai FSC.
8	Fuelling	2200 - 0915
9	Handling	2100 - 1230
10	Security	2115 - 0915
11	De-icing	Nil
12	Remarks	Nil

RJSY AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	AVBL up to B767-300 aircraft
2	Fuel/ oil types	JET A-1
3	Fuelling facilities/ capacity	Fuel truck / Total Max 220kl
4	De-icing facilities	Nil
5	Hangar space for visiting aircraft	Nil
6	Repair facilities for visiting aircraft	Nil
7	Remarks	Nil

RJSY AD 2.5 PASSENGER FACILITIES

1	Hotels	Nil
2	Restaurants	At Airport
3	Transportation	Buses and Taxi
4	Medical facilities	Nil
5	Bank and Post Office	Nil
6	Tourist Office	Nil
7	Remarks	Nil

RJSY AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	CAT 8
2	Rescue equipment	Chemical fire fighting truck x 3 Emergency medical equipments conveyance truck x 1
3	Capability for removal of disabled aircraft	Ask Airline (0234-92-4195)
4	Remarks	Nil

RJSY AD 2.7 SEASONAL AVAILABILITY-CLEARING

1	Types of clearing equipment	Snow remove equipment: Truck x 8,Rotary x 2, Dozer x 1,Sweeper x 2
2	Clearance priorities	1.RWY 2.TWY 3.APRON
3	Remarks	Snow removal will be commenced,if the RWY is covered with a depth of 3cm snow or more.

RJSY AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

1	Apron surface and strength	Surface : Cement concrete and Asphalt concrete Strength : PCN 52/R/C/X/T
2	Taxiway width, surface and strength	Width : 30 m Surface : Asphalt concrete Strength : PCN 58/F/C/X/T
3	ACL and elevation	Not Available
4	VOR checkpoints	Not Available
5	INS checkpoints	Spot NR 1: *384855.57N/1394717.77E* 2: *384855.22N/1394715.32E* 3: *384854.86N/1394712.88E* 5: *384854.53N/1394710.74E*
6	Remarks	Nil

RJSY 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 09/27 (Marking) RWY designation, RWY CL, RWY THR, Aiming point, TDZ, RWY side stripe, RWY turn pad edge, RWY turn pad CL (LGT) RCLL, REDL, RTHL, RENL, RTZL(FOR RWY09), WBAR(FOR RWY 09), Turning point indicator LGT, RWY DIST marker LGT TWY (Marking) TWY CL, RWY HLDG PSN, TWY side stripe (LGT) TWY edge LGT, TWY CL LGT
3	Stop bars	Nil
4	Remarks	(Marking) Overrun area (LGT) Apron flood LGT

180˚turn on RWY

滑走路のターニングパッドは下図のように設置されている。滑走路上での180˚転回の要領は、09及び27方向において以下の通りである。

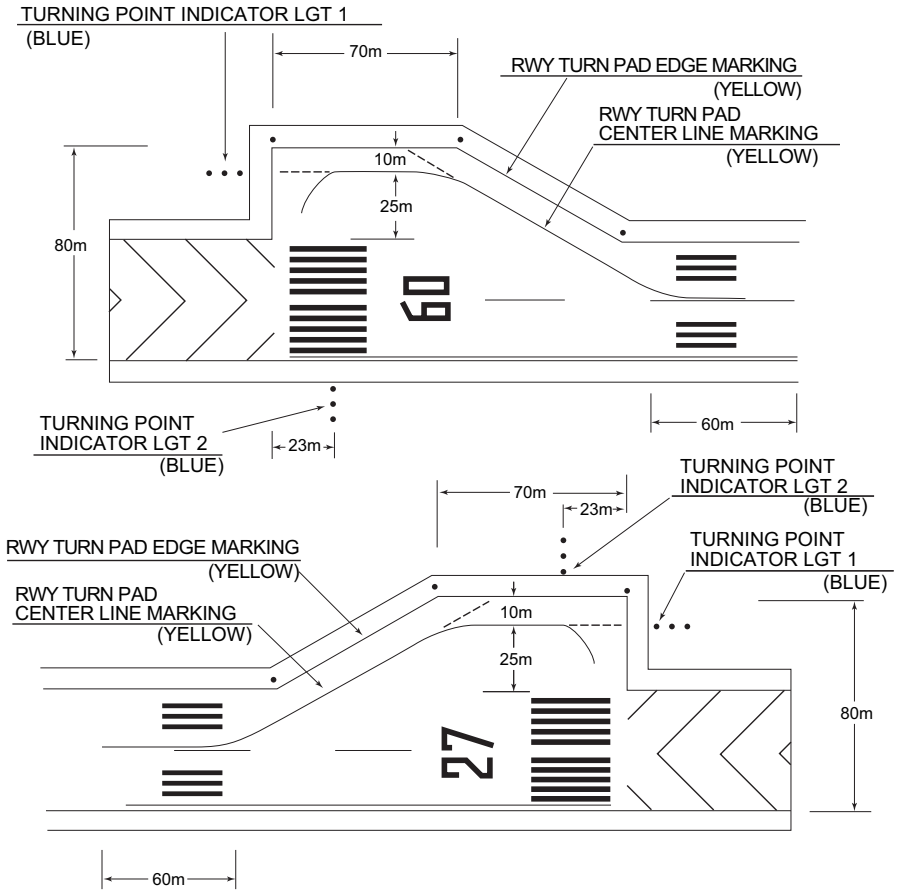
a. 滑走路中心線からターニングパッド中心線標識に従って進行する。

b. 転回灯1が一直線に見えるように進行し、転回灯2が一直線に見えた時転回を開始する。転回時はMAX STEERING ANGLEを使用する。

RWY turn pads are installed as shown in below figure, and procedure for 180˚ turn on RWY is established for RWY09 and 27 as follows ;

a. Proceed along the RWY Center Line to the starting point of the RWY Turn Pad Center Line Marking ; then

b. Proceed along the RWY Turn Pad Center Line Marking to see the Turning Point Indicator Lights 1 on a straight line, then commence turn at the spot where you(pilot) can see the Turning Point Indicator Lights 2 on a straight line at an angle of 9 o'clock. When turning, take MAX STEERING ANGLE.



RJSY AD 2.10 AERODROME OBSTACLES

In approach/TKOF areas

RWY/Area affected	Obstacle type	Coordinates	Elevation	Markings/ LGT	Remarks
Nil					

In circling area and at AD

Obstacle type	Coordinates	Elevation	Markings/ LGT	Remarks
Lighting rod	*384759N/1394720E*	269FT	Nil / LIM	Above the horizontal surface
Lighting rod	*384724N/1394701E*	311FT	Nil / LIM	Above the horizontal surface

RJSY AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	SENDAI
2	Hours of service MET Office outside hours	H24 (SENDAI)
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 SENDAI
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	REMOTE
10	Additional information(limitation of service, etc.)	Nil

RJSY 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
09	079.45°	2000×45	PCN 58/F/C/X/T Asphalt-Concrete	*384838.58N* *1394633.12E*	THR ELEV: 59ft TDZ ELEV:71ft
27	259.45°	2000×45	PCN 58/F/C/X/T Asphalt-Concrete	*384850.46N* *1394754.61E*	THR ELEV: 86ft

Slope of RWY	Strip Dimensions(M)	RESA (Overrun) Dimensions(M)	Remarks
7	10	11	14
See AD2.24 AD chart	2120×300 2120×300	186 × (MNM:153 MAX:300)* *For detail, ask airport administrator 40 × 300	RWY grooving : 2000m×30m

RJSY AD 2.13 DECLARED DISTANCES

RWY Designator	TORA (m)	TODA (m)	ASDA (m)	LDA (m)	Remarks
1	2	3	4	5	6
09	2000	2000	2000	2000	Nil
27	2000	2000	2000	2000	Nil

RJSY 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
09	PALS (CAT I) 810m LIH	Green Green	PAPI 3.0°/LEFT 351m 61ft	900m	2000m 30m Coded color (White/Red) LIH	2000m 60m Coded color (White/Yellow) LIH	Red	Nil (*2)
27	SALS (*1) 420m LIH	Green	PAPI 3.0°/LEFT 400m 61ft	Nil	2000m 30m Coded color (White/Red) LIH	2000m 60m Coded color (White/Yellow) LIH	Red	Nil (*2)
Remarks								
10								
SALS with APCH LGT beacon(600m and 900m FM RWY 27 THR)(*1) Overrun area edge LGT(LEN:60m Color:Red) (*2)								

RJSY AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	ABN: *384902N/1394720E*,White/Green EV4.3sec, HO
2	LDI location and LGT Anemometer location and LGT	LDI: Nil Anemometer: RWY09 : 377.5m from THR, LGTD RWY27 : 339.5m from THR, LGTD
3	TWY edge and center line lighting	TWY edge LGT:Blue TWY CL LGT: ALTN Green/Yellow FM RWY Leaving Report point, other Green
4	Secondary power supply/ switch-over time	Within 1sec : REDL, RCLL, RTHL, RENL, WBAR, Turning point indicator LGT, Overrun area edge LGT Within 15sec : Other LGT
5	Remarks	WDI LGT

RJSY AD 2.16 HELICOPTER LANDING AREA

Nil

RJSY AD 2.17 ATS AIRSPACE

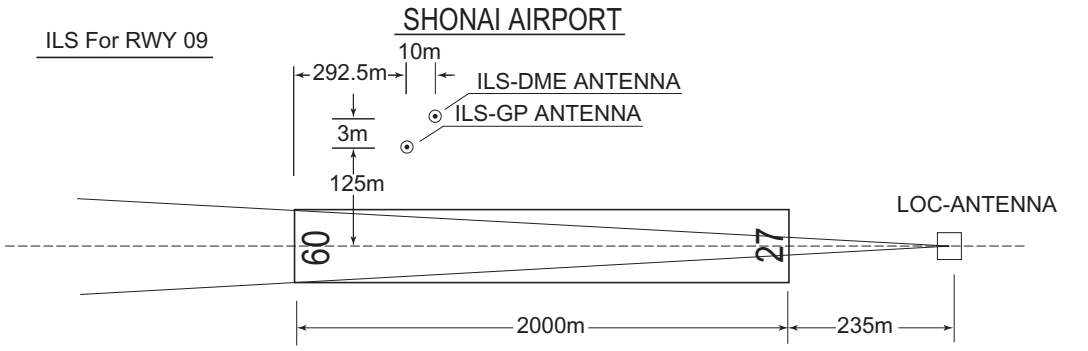
Designation and lateral limits		Vertical limits (ft)	Airspace classification	ATS unit call sign Language	Remarks
1		2	3	4	6
Shonai Information Zone	Area within a radius of 5nm(9km) of Shonai ARP	3,000 or below	E	Shonai Remote En	

RJSY AD 2.18 ATS COMMUNICATION FACILITIES

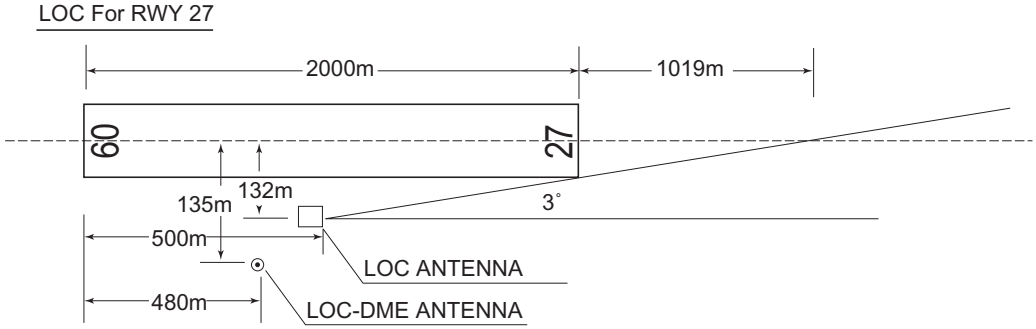
Service designation	Call sign	Frequency	Hours of operation	Remarks
1	2	3	4	5
A/G	Shonai Remote	118.8MHz(1) 126.2MHz	2200 - 1300	Remote air-ground facilities controlled by Sendai FSC. (1)Primary

RJSY 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 (8°W/2008)	YSE	109.6MHz	2200 - 1300	*384838.81N/ 1394757.51E*		VOR unusable: 067°BTN 13-15nm
DME	YSE	994MHz (CH-33X)	2200 - 1300	*384838.81N/ 1394757.51E*	162ft	
ILS-LOC 09	IYS	110.9MHz	2200 - 1300	*384851.86N/ 1394804.20E*		For RWY 09 LOC:(IYS) 235m away FM RWY 27 THR. BRG(MAG) 088.02°
ILS-GP 09	-	330.8MHz	2200 - 1300	*384844.27N/ 1394644.09E*		GP: 292.5m inside FM RWY 09 THR. 125m N of RCL. HGT of ILS Ref datum 55ft GP angle 3.0°
ILS-DME 09	IYS	1007MHz (CH-46X)	2200 - 1300	*384844.43N/ 1394644.47E*	76ft	DME: 302.5m inside FM RWY 09 THR. 128m N of RCL.
LOC 27	ISN	111.5MHz	2200 - 1300	*384837.31N/ 1394654.51E*		For RWY 27 LOC: 500m(1641ft) inside FM RWY 09 THR, 132m(433ft) S of RCL. Off set angle 3° BRG (MAG) 265°
LOC-DME 27	ISN	1013MHz (CH-52X)	2200 - 1300	*384837.11N/ 1394653.70E*	72ft	DME: 480m(1575ft) inside FM RWY 09 THR, 135m(443ft) S of RCL.



REMARKS : 1. LOC Beam BRG (MAG) 088.02°
2. GP Angle 3.0°
3. ELEV of ILS-DME 23.0m (76 ft)
4. ILS REF datum 55ft



REMARKS : 1. LOC OFF SET Angle 3°
2. LOC Beam BRG(MAG) 265°
3. ELEV of LOC-DME 21.9m (72 ft)

RJSY AD 2.20 LOCAL TRAFFIC REGULATIONS

1. Airport regulations

Nil

2. Taxiing to and from stands

Nil

3. Parking area for small aircraft(General aviation)

AD Administrator’s prior permission is required.

4. Parking area for helicopters

AD Administrator’s prior permission is required.

5. Apron - taxiing during winter conditions

Nil

6. Taxiing - limitations

Nil

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

AD Administrator’s prior permission is required.

8. Helicopter traffic - limitation

Nil

9. Removal of disabled aircraft from runways

Nil

RJSY AD 2.21 NOISE ABATEMENT PROCEDURES

Nil

RJSY AD 2.22 FLIGHT PROCEDURES

TAKE OFF MINIMA

	RWY	ACFT CAT	REDL & RCLL		REDL or RCLL or RCL Marking		NIL (DAYTIME ONLY)	
			RVR	VIS	RVR	VIS	RVR	VIS
Multi-Engine ACFT with TKOF ALTN AP FILED	09	A,B,C,D	400m	400m	400m	400m	-	500m
	27	A,B,C,D	-	400m	-	400m	-	500m
OTHER	09	A,B,C,D	AVBL LDG MINIMA					
	27	A,B,C,D						

RJSY AD 2.23 ADDITIONAL INFORMATION

Nil

RJSY AD 2.24 CHARTS RELATED TO AN AERODROME

Aerodrome/Heliport Chart Standard Departure Chart - Instrument (SHONAI REVERSAL) Standard Departure Chart - Instrument (ZUNDA-RNAV) Standard Arrival Chart - Instrument (MOKKE, SHONAI-RNAV) Standard Arrival Chart - Instrument (YURAH-RNAV) Instrument Approach Chart (ILS Z or LOC Z RWY09) Instrument Approach Chart (ILS Y or LOC Y RWY09) Instrument Approach Chart (LOC RWY27) Instrument Approach Chart (VOR RWY09) Instrument Approach Chart (RNAV(RNP) RWY09) Instrument Approach Chart (RNAV(GNSS) Z RWY27) Instrument Approach Chart (RNAV(RNP) Y RWY27) Other Chart (Visual REP) Other Chart (LDG CHART) Other Chart (MVA CHART)

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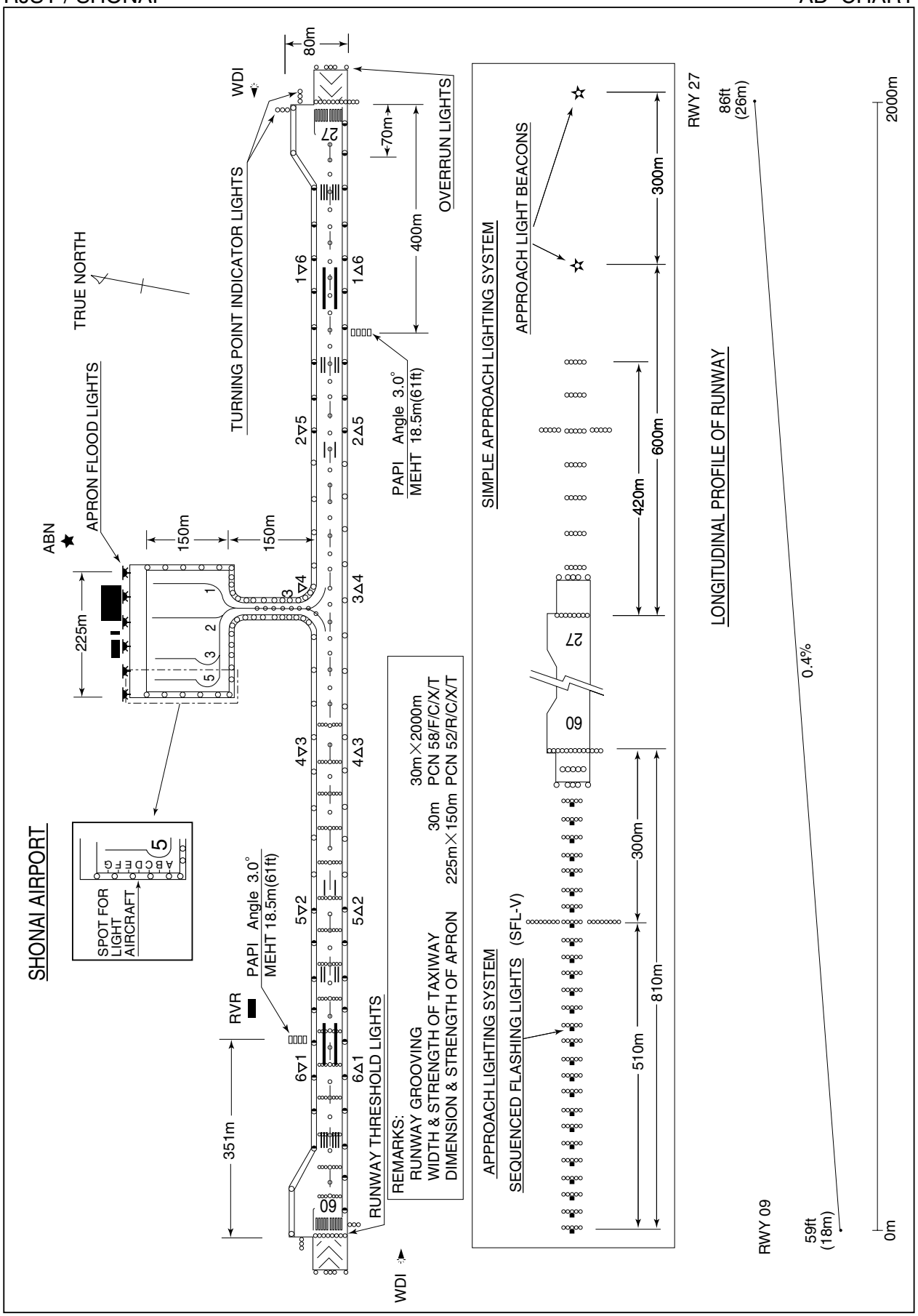
RJSY / SHONAI AD CHART



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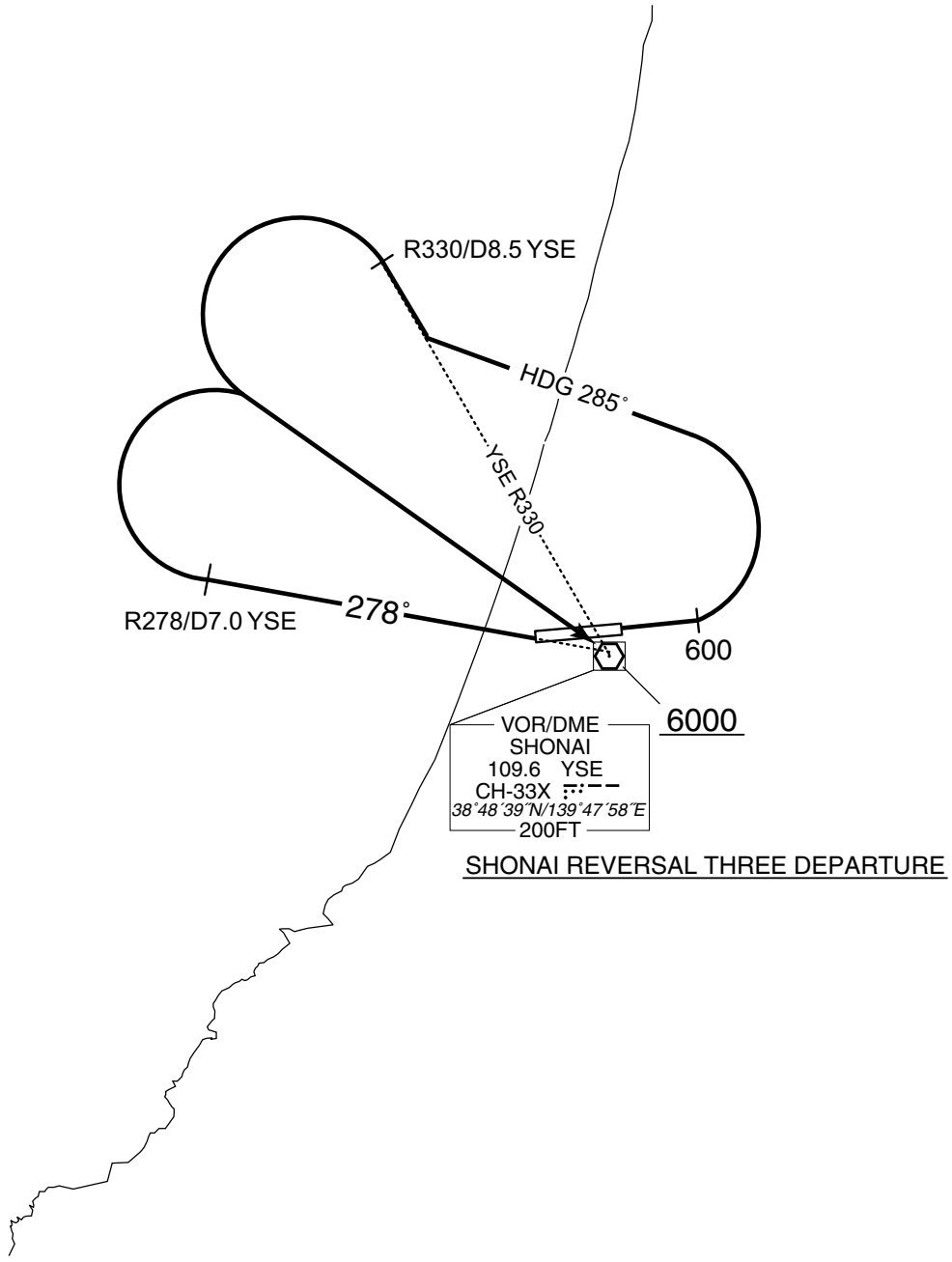
STANDARD DEPARTURE CHART - INSTRUMENT

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.

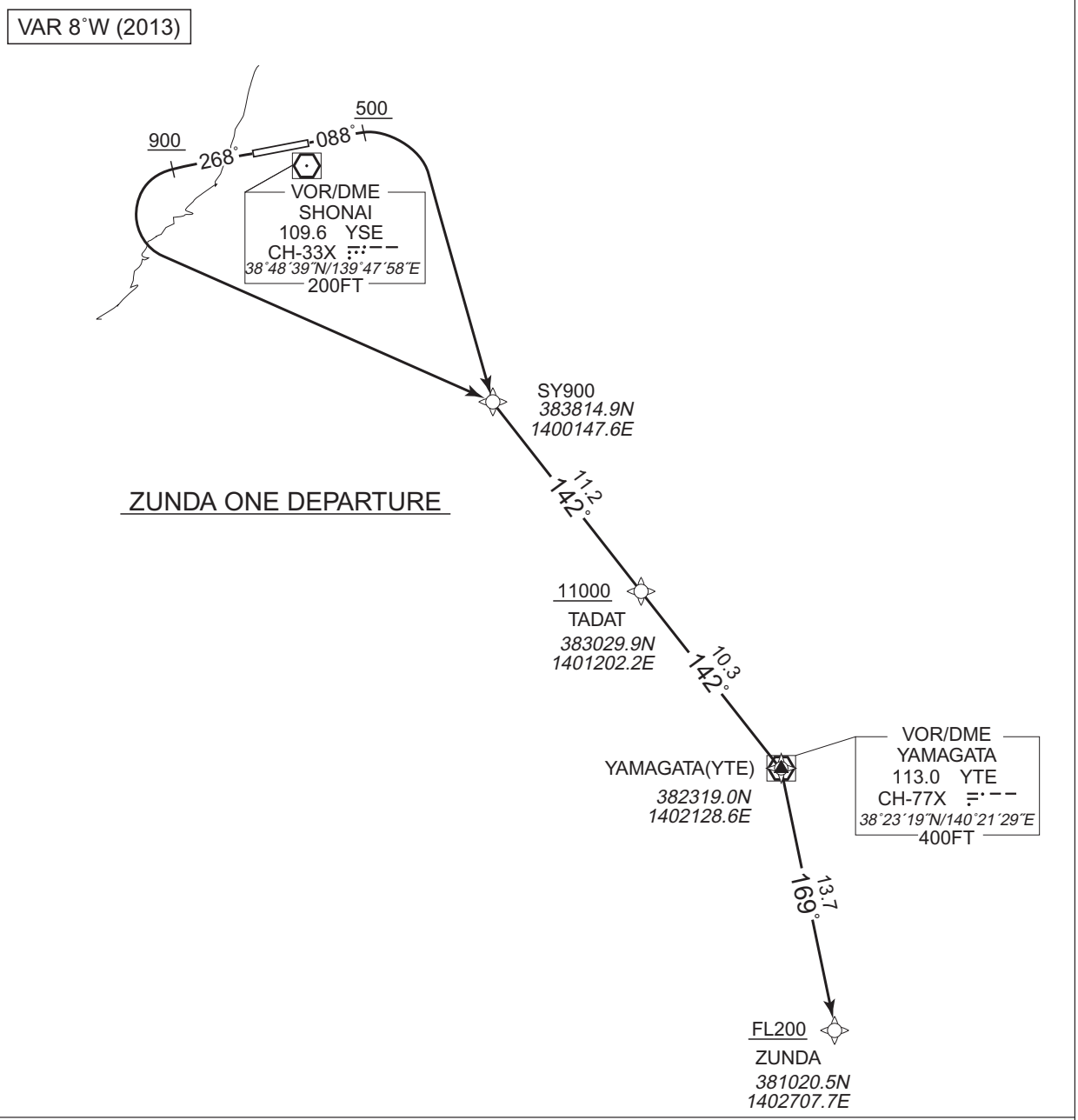


STANDARD DEPARTURE CHART - INSTRUMENT

RJSY / SHONAI RNAV SID

ZUNDA ONE DEPARTURE	Basic RNP1

Note GNSS required.



ZUNDA ONE 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 ONE 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)	-8.1	—	—	+500	—	—	Basic RNP1
002	DF	SY900	—	—	-8.1	—	R	—	—	—	Basic RNP1
003	TF	TADAT	—	142 (134.0)	-8.1	11.2	—	+11000	—	—	Basic RNP1
004	TF	YTE	—	142 (134.1)	-8.1	10.3	—	—	—	—	Basic RNP1
005	TF	ZUNDA	—	169 (161.1)	-8.1	13.7	—	+FL200	—	—	Basic RNP1

RWY27

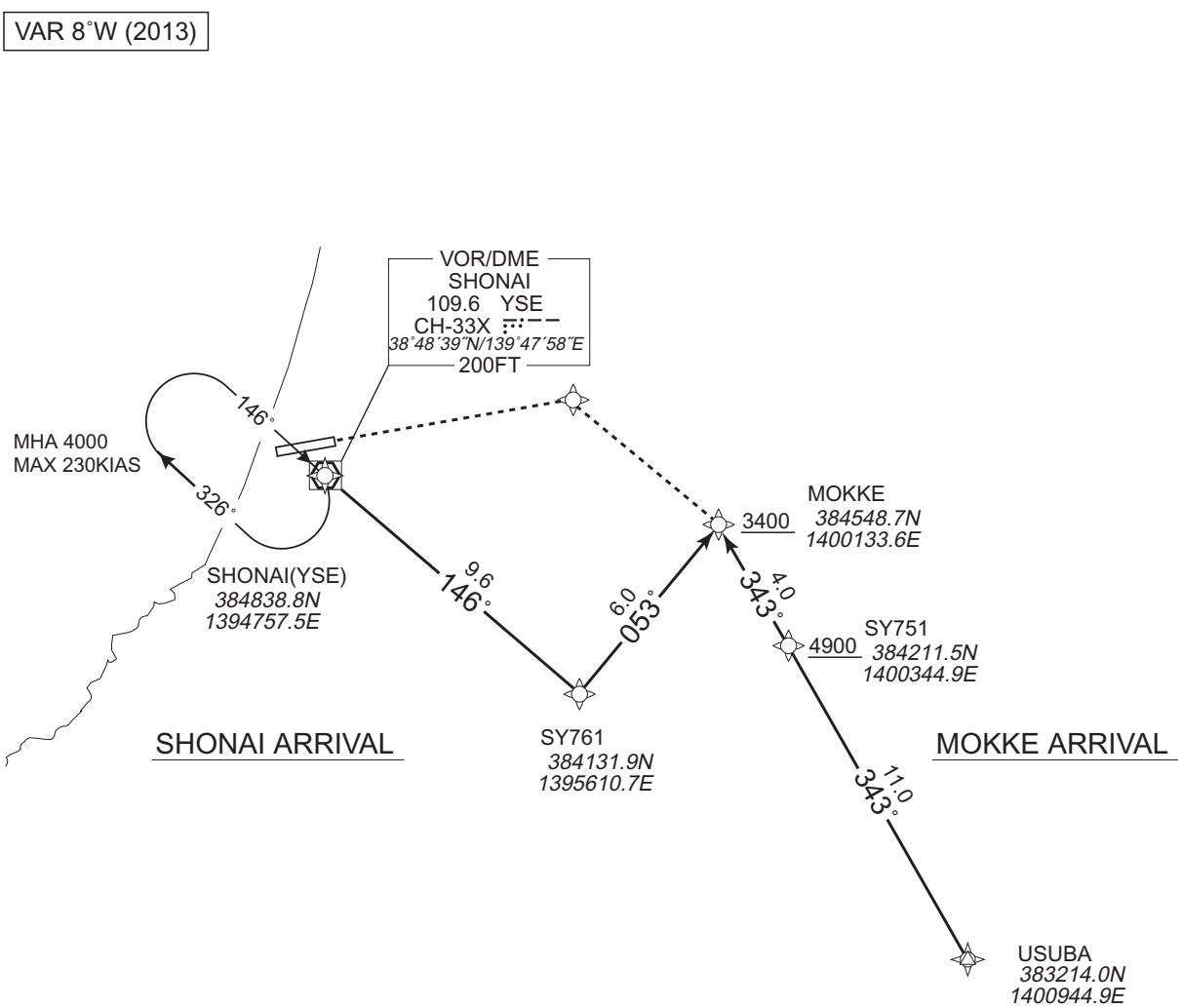
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	VA	—	—	268 (259.5)	-8.1	—	—	+900	—	—	Basic RNP1
002	DF	SY900	—	—	-8.1	—	L	—	—	—	Basic RNP1
003	TF	TADAT	—	142 (134.0)	-8.1	11.2	—	+11000	—	—	Basic RNP1
004	TF	YTE	—	142 (134.1)	-8.1	10.3	—	—	—	—	Basic RNP1
005	TF	ZUNDA	—	169 (161.1)	-8.1	13.7	—	+FL200	—	—	Basic RNP1

STANDARD ARRIVAL CHART -INSTRUMENT

RJSY / SHONAI — RNAV STAR RWY27

MOKKE ARRIVAL SHONAI ARRIVAL	Basic RNP1

Note GNSS required.



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	—	—	-8.1	—	—	—	—	—	Basic RNP1
002	TF	SY751	—	343 (334.8)	-8.1	11.0	—	+4900	—	—	Basic RNP1
003	TF	MOKKE	—	343 (334.8)	-8.1	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	—	—	-8.1	—	—	—	—	—	Basic RNP1
002	TF	SY761	—	146 (137.9)	-8.1	9.6	—	—	—	—	Basic RNP1
003	TF	MOKKE	—	053 (044.4)	-8.1	6.0	—	+3400	—	—	Basic RNP1

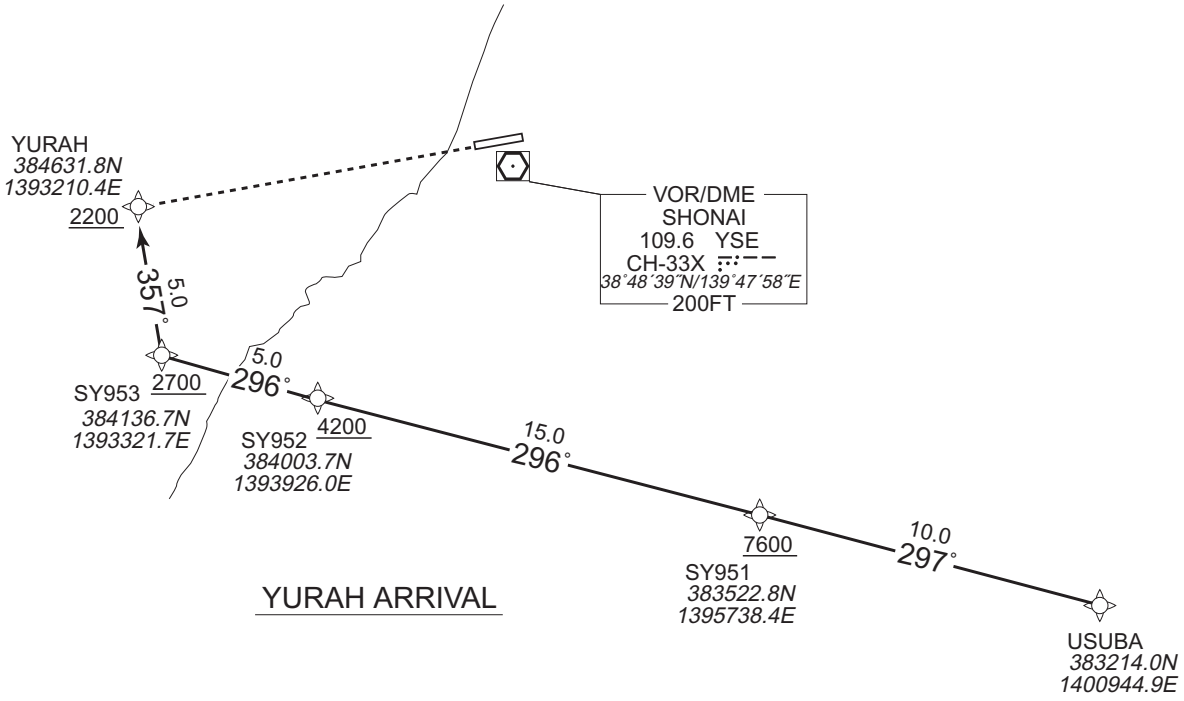
STANDARD ARRIVAL CHART -INSTRUMENT

RJSY / SHONAI RNAV STAR RWY09

YURAH ARRIVAL	Basic RNP1

Note GNSS required.

VAR 8˚W (2013)



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.

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	—	—	-8.1	—	—	—	—	—	Basic RNP1
002	TF	SY951	—	297 (288.4)	-8.1	10.0	—	+7600	—	—	Basic RNP1
003	TF	SY952	—	296 (288.3)	-8.1	15.0	—	+4200	—	—	Basic RNP1
004	TF	SY953	—	296 (288.1)	-8.1	5.0	—	+2700	—	—	Basic RNP1
005	TF	YURAH	—	357 (349.3)	-8.1	5.0	—	+2200	—	—	Basic RNP1

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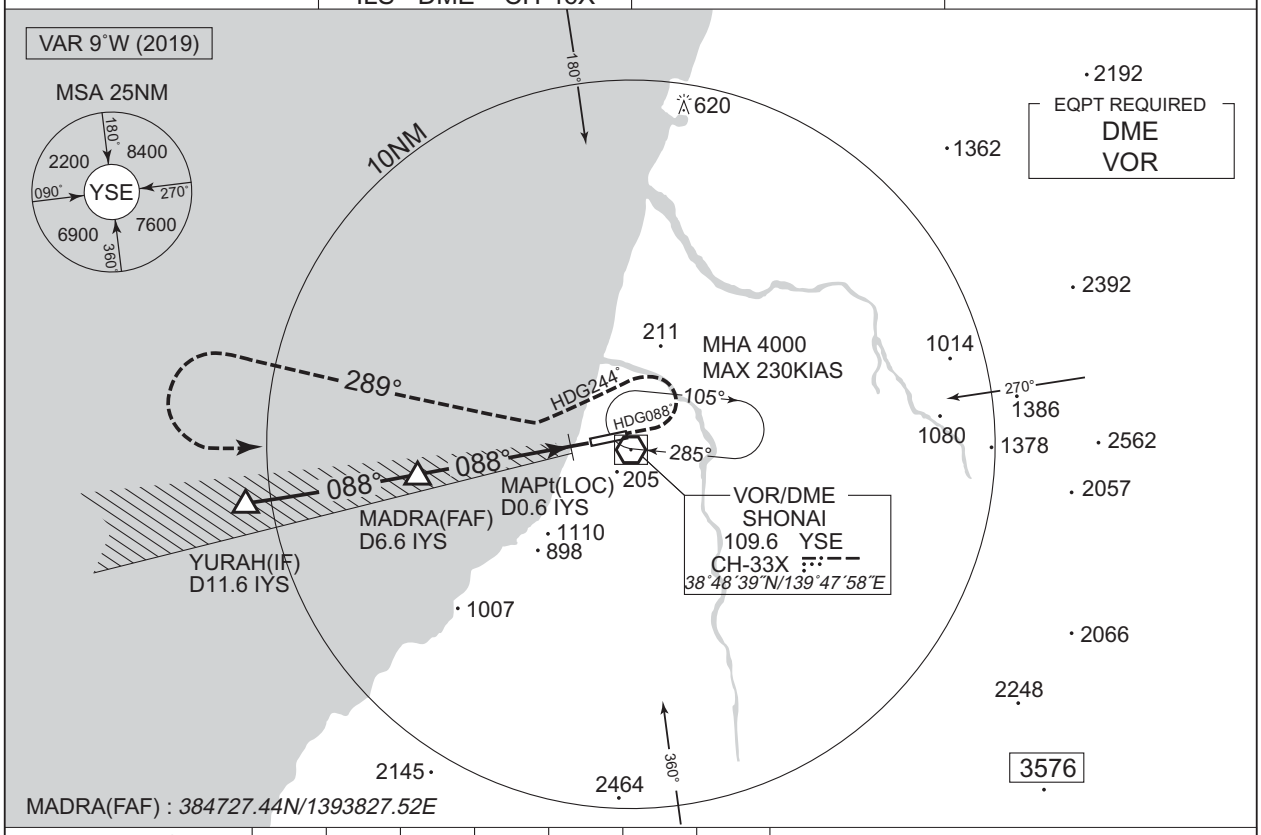
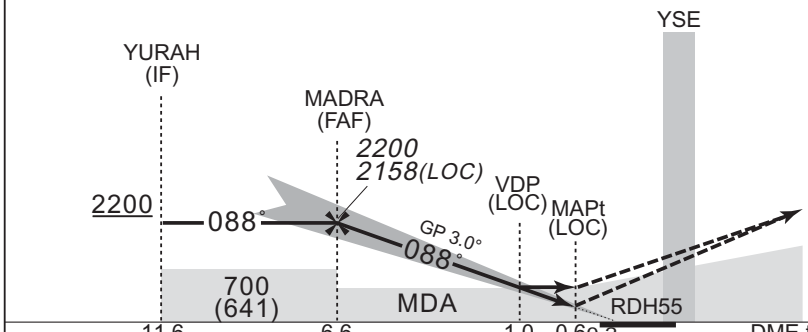
INSTRUMENT APPROACH CHART

RJSY / SHONAI — ILS Z or LOC Z RWY09

TOKYO CONTROL	ILS - LOC	SHONAI REMOTE	NO RADAR
132.3 - 300.2 135.9 - 230.6	110.9 IYS ILS - GP 330.8 ILS - DME CH-46X	118.8 - 126.2	



NM to IYS	FAF	6	5	4	3	2	MAPt
ALT (3.0° APCH Path)	2158	1967	1648	1330	1011	693	–



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 REMOTE.

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						2400
D				1400	700 (628)	3200

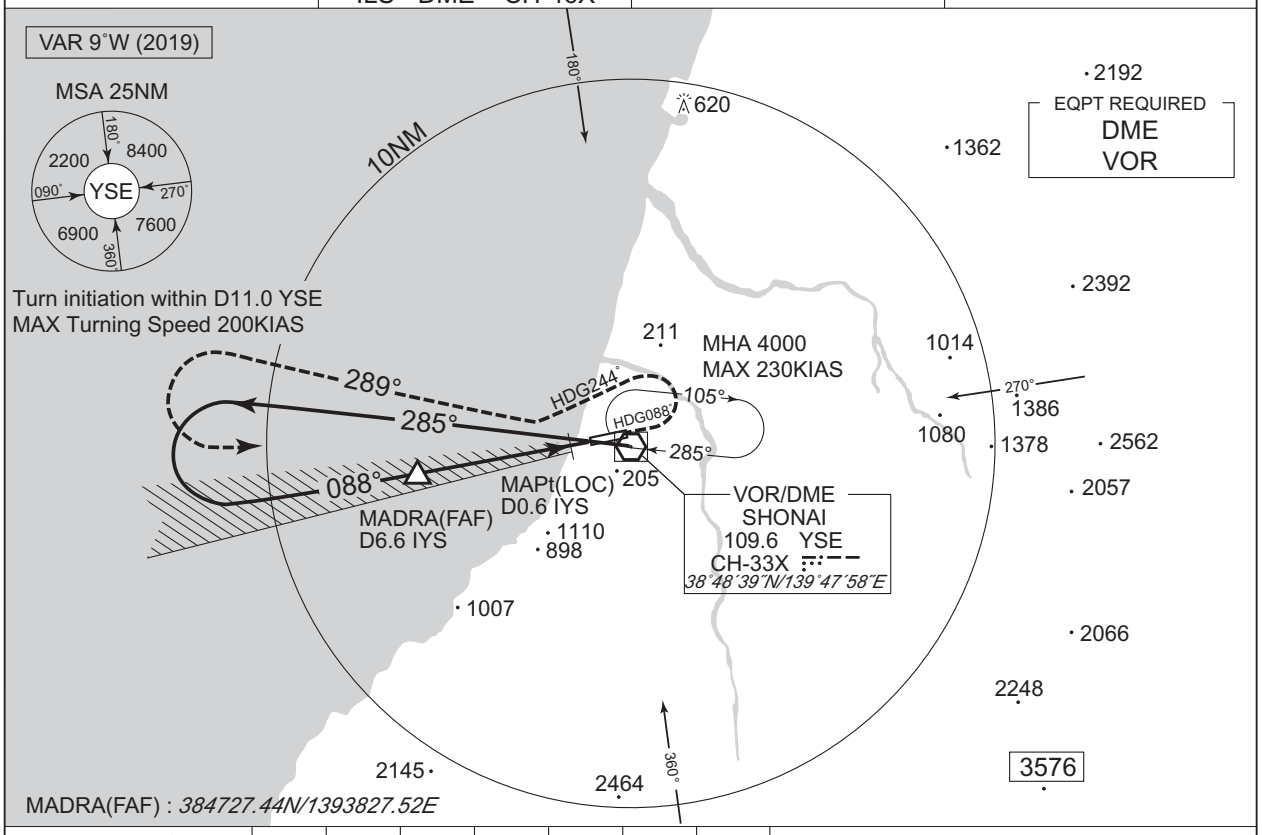
MINIMA with Missed APCH climb gradient of 2.5% are not established.
Circling to NORTH side of RWY only.

CHANGE : MINIMA.

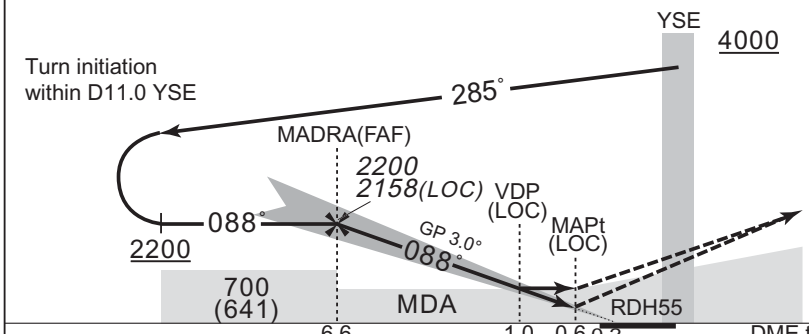
INSTRUMENT APPROACH CHART

RJSY / SHONAI — ILS Y or LOC Y RWY09

TOKYO CONTROL	ILS - LOC	SHONAI REMOTE	NO RADAR
132.3 - 300.2 135.9 - 230.6	110.9 IYS ILS - GP 330.8 ILS - DME CH-46X	118.8 - 126.2	



NM to IYS	FAF	6	5	4	3	2	MAPt
ALT (3.0° APCH Path)	2158	1967	1648	1330	1011	693	–



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 REMOTE.

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						2400
D				1400	700 (628)	3200

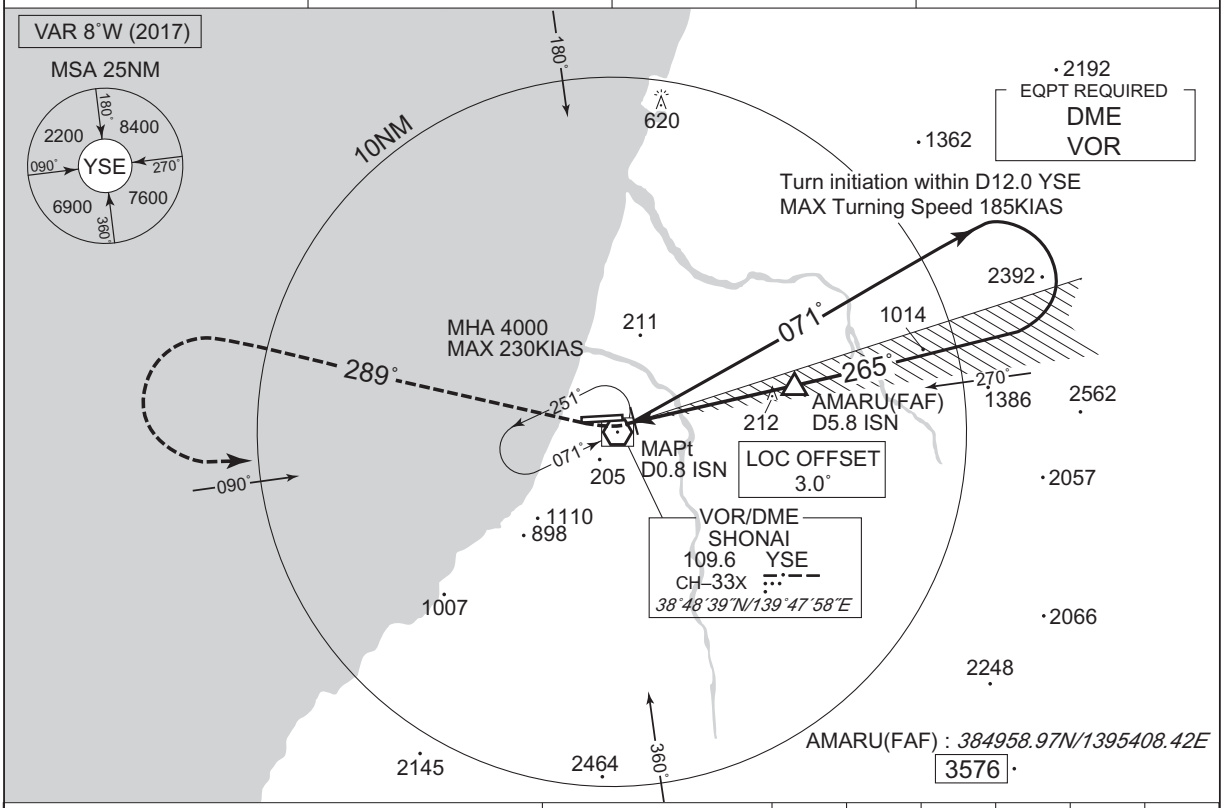
MINIMA with Missed APCH climb gradient of 2.5% are not established.
Circling to NORTH side of RWY only.

CHANGE : MINIMA.

INSTRUMENT APPROACH CHART

RJSY / SHONAI — LOC RWY27

TOKYO CONTROL	LOC	SHONAI REMOTE	NO RADAR
132.3 – 300.2 135.9 – 230.6	111.5 ISN LOC–DME CH–52X	118.8 – 126.2	

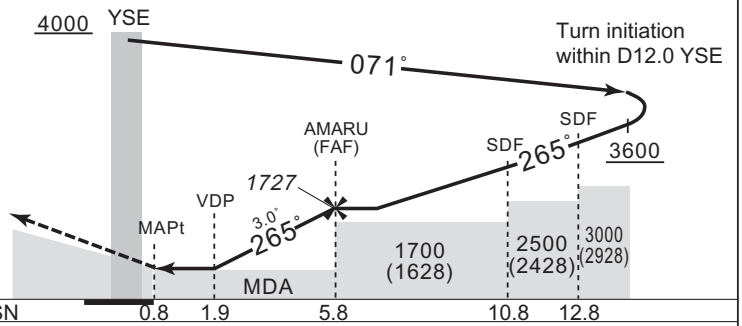


NM to ISN	MAPt	2	3	4	5	FAF
ALT (3.0° APCH Path)	–	511	830	1148	1467	1727

MISSED APPROACH

Turn right, climb to 4000FT
via YSE R289, turn left, direct
to YSE VOR/DME and hold.
Contact SHONAI REMOTE.

Timing not authorized for defining the MAPt.



DME to ISN	0.8	1.9	5.8	10.8	12.8
NM to THR	0	1.0	5.0	10.0	12.0

CHANGE : MINIMA.

MINIMA THR elev. 86 AD elev. 72

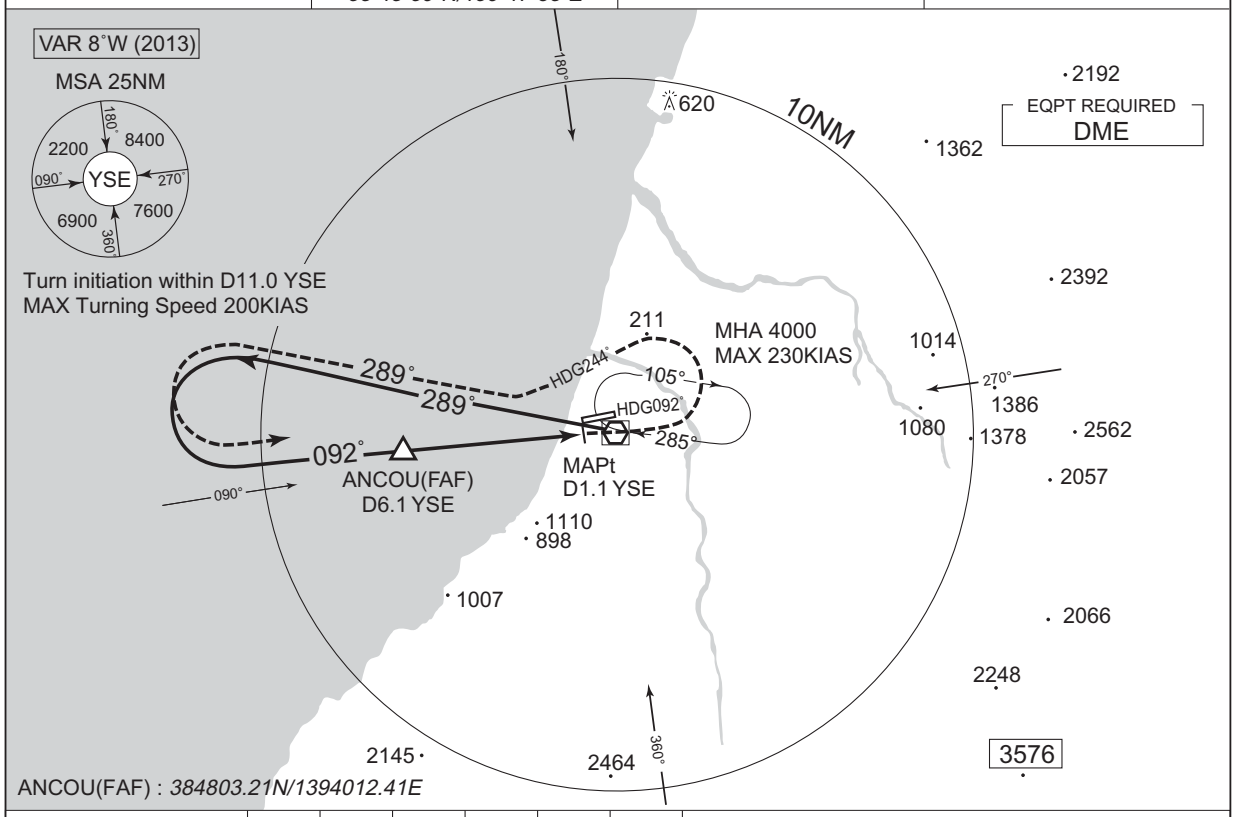
CAT			CIRCLING	
	MDA(H)	CMV	MDA(H)	VIS
A	460 (388)	1200	530 (458)	1600
B		1300		
C		1400		2400
D		1600	700 (628)	3200

Circling to NORTH side of RWY only

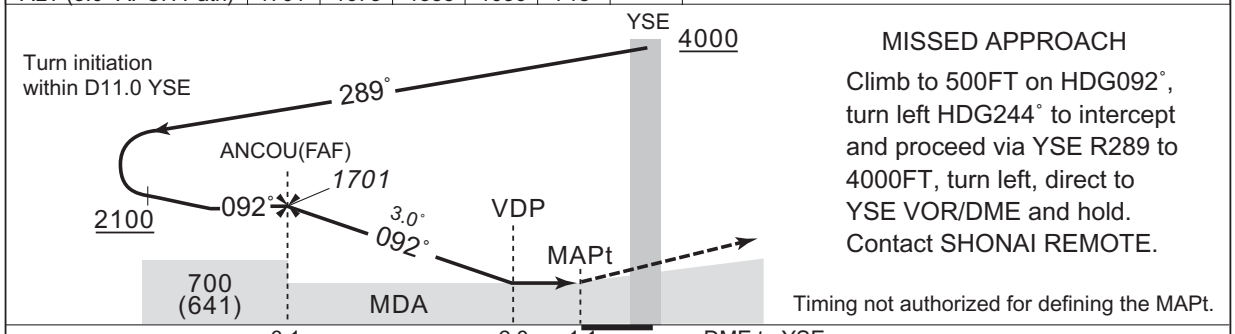
INSTRUMENT APPROACH CHART

RJSY / SHONAI — VOR RWY09

TOKYO CONTROL	SHONAI VOR / DME	SHONAI REMOTE	NO RADAR
132.3 - 300.2 135.9 - 230.6	109.6 YSE CH-33X *38°48′39″N/139°47′58″E*	118.8 - 126.2	



NM to YSE	FAF	6	5	4	3	MAPt
ALT (3.0° APCH Path)	1701	1673	1355	1036	718	–



MISSED APPROACH

Climb to 500FT on HDG092°, turn left HDG244° to intercept and proceed via YSE R289 to 4000FT, turn left, direct to YSE VOR/DME and hold. Contact SHONAI REMOTE.

Timing not authorized for defining the MAPt.

MINIMA — THR elev. 59 — AD elev. 72

CAT			CIRCLING	
	MDA(H)	RVR/ CMV	MDA(H)	VIS
A	470 (411)	900	530 (458)	1600
B		1000		
C				2400
D		1400	700 (628)	3200

Circling to NORTH side of RWY only

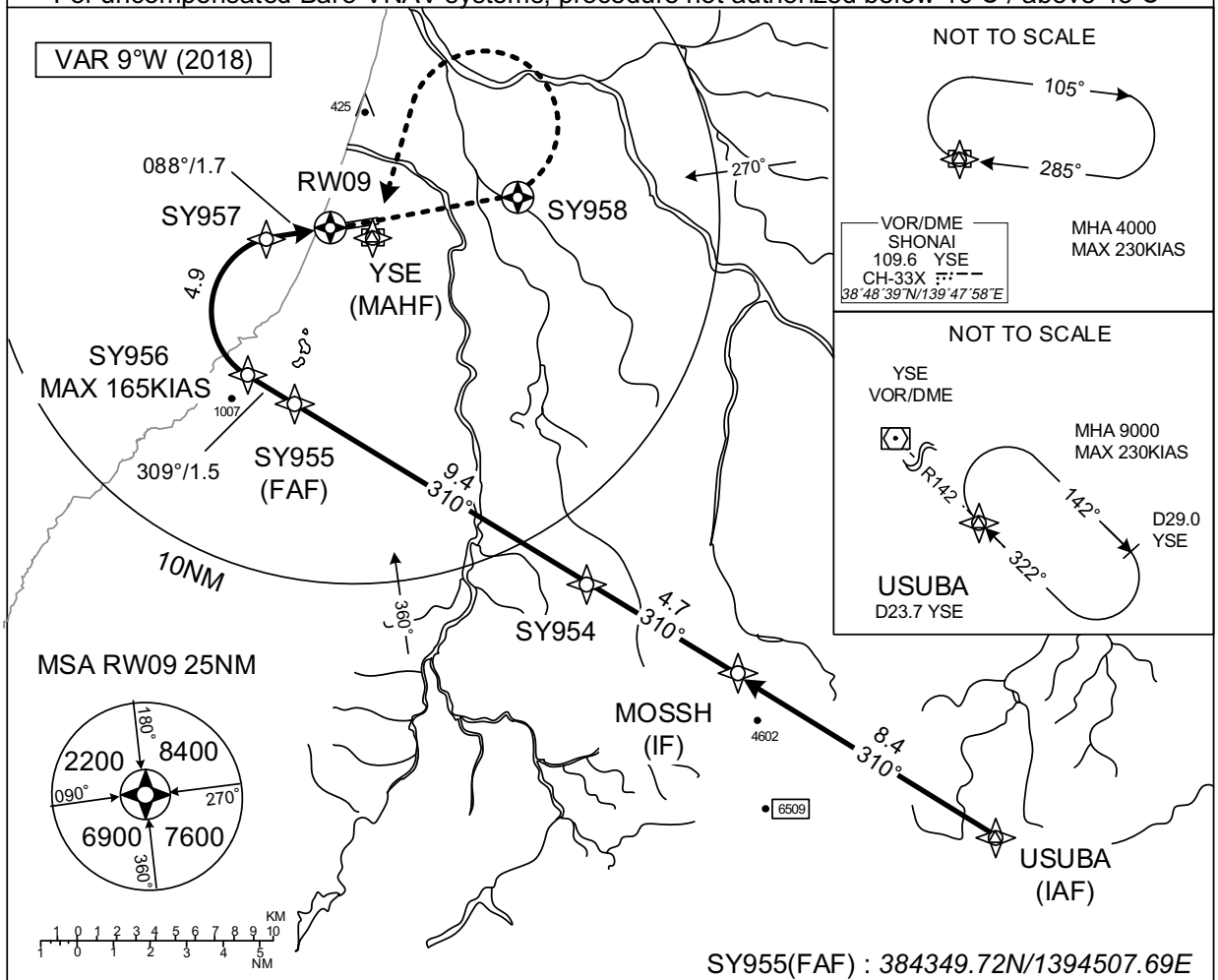
CHANGE : MINIMA.

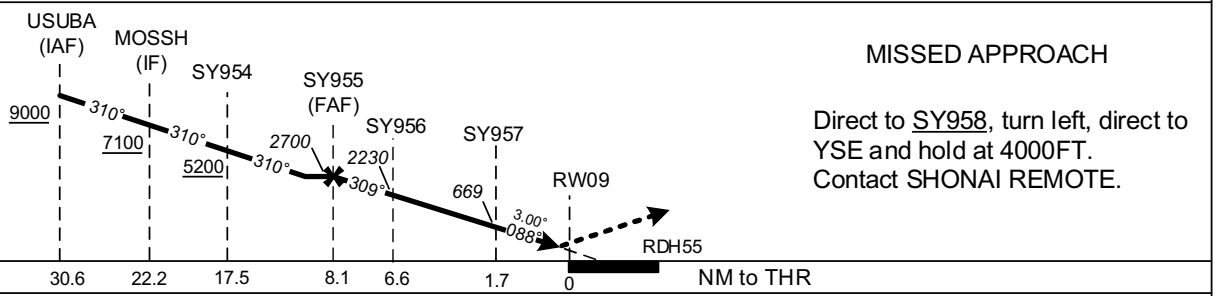
INSTRUMENT APPROACH CHART

RJSY / SHONAI — RNAV(RNP) RWY09

TOKYO CONTROL 132.3 - 300.2 135.9 - 230.6	GNSS and RF required	SHONAI REMOTE 118.8 - 126.2	NO RADAR

For uncompensated Baro-VNAV systems, procedure not authorized below-10℃ / above 45℃





MISSED APPROACH

Direct to SY958, turn left, direct to YSE and hold at 4000FT.
Contact SHONAI REMOTE.

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.

CHANGE : New PROC

RNP AR

Special Authorization Required

INSTRUMENT APPROACH CHART

RJSY / SHONAI RNAV(RNP) RWY09

RNAV(RNP) RWY09

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	-	-	-8.5	-	-	+9000	-	-	-
002	TF	MOSSH	-	310 (301.2)	-8.5	8.4	-	+7100	-	-	1.0
003	TF	SY954	-	310 (301.1)	-8.5	4.7	-	+5200	-	-	1.0
004	TF	SY955	-	310 (301.1)	-8.5	9.4	-	2700	-	-	1.0
005	TF	SY956	-	309 (301.0)	-8.5	1.5	-	2230	-165	-3.00	0.1 0.3
006	RF Center: SYRF1 r=2.03	SY957	-	-	-8.5	4.9	R	669	-	-3.00	0.1 0.3
007	TF	RW09	Y	088 (079.4)	-8.5	1.7	-	114	-	-3.00/55	0.1 0.3
008	DF	SY958	Y	-	-8.5	-	-	-	-	-	1.0
009	DF	YSE	-	-	-8.5	-	L	4000	-	-	1.0

Waypoint Coordinates

Waypoint Identifier	Coordinates
USUBA	*383214.02N / 1400944.88E*
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*

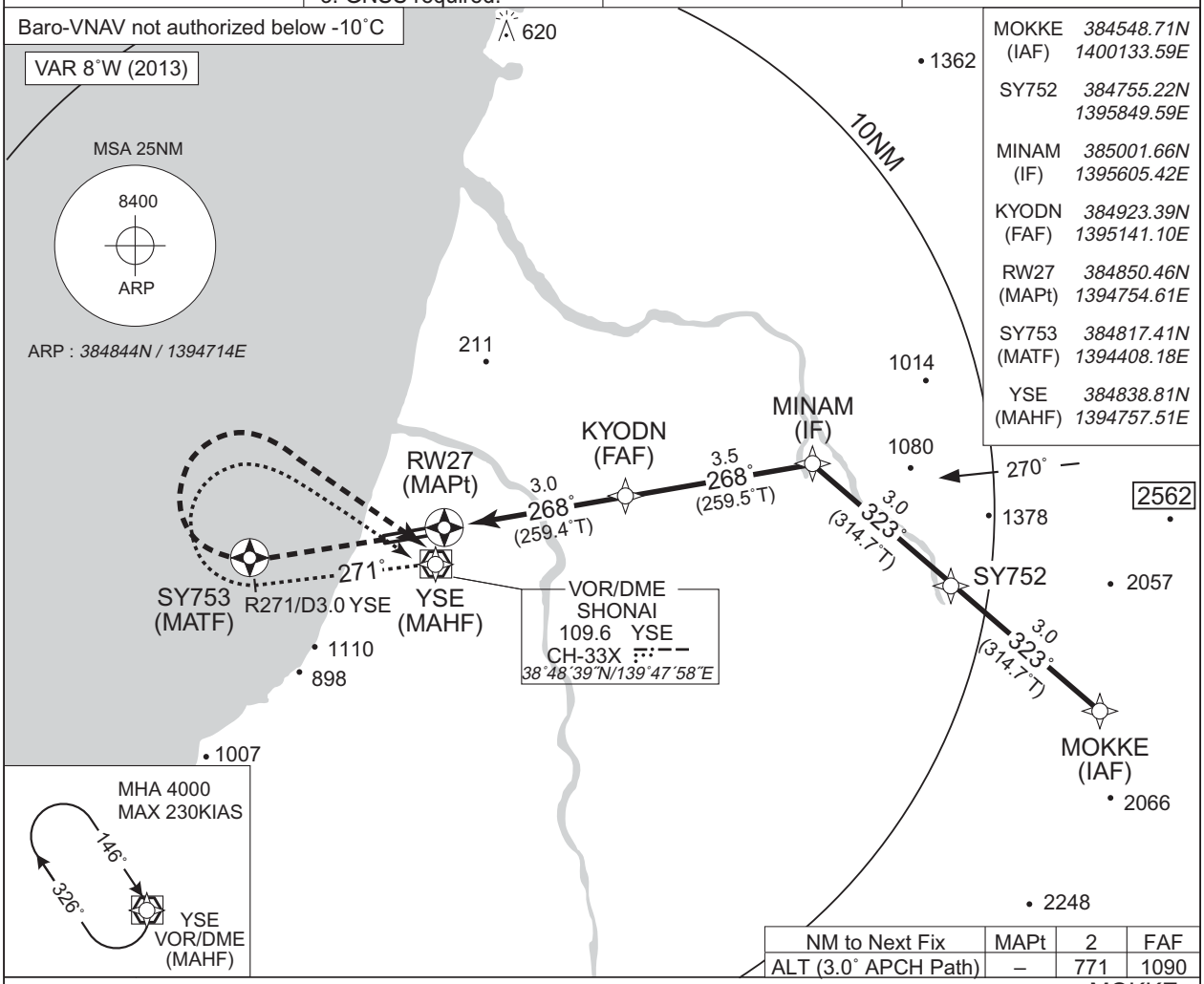
RF Arc Center Identifier	Coordinates
SYRF1	*384619.71N / 1394450.17E*

CHANGE : Correction of misdescription (9Y957 → SY957)

INSTRUMENT APPROACH CHART

RJSY / SHONAI — RNAV(GNSS) Z RWY27

TOKYO CONTROL	1. DME/DME RNP0.3 not authorized.	SHONAI REMOTE	NO RADAR
132.3 - 300.2 135.9 - 230.6	2. RNP 0.3 required. 3. GNSS required.	118.8 - 126.2	

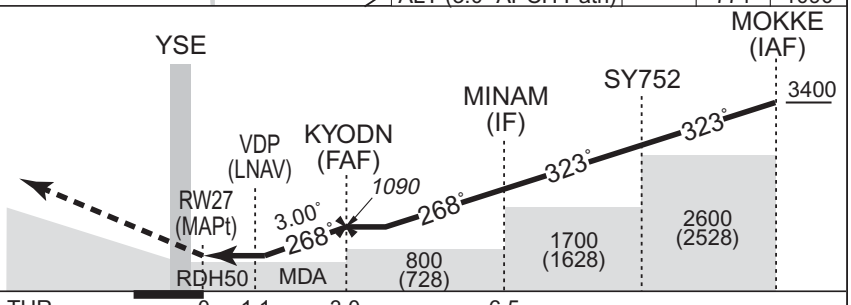


NM to Next Fix	MAPt	2	FAF
ALT (3.0˚ APCH Path)	–	771	1090

MISSED APPROACH

Climb direct to SY753, turn right, direct to YSE and hold at 4000FT. Contact SHONAI REMOTE.

(For using VOR/DME)
Climb via YSE R271 to YSE 3.0DME, turn right, direct to YSE VOR/DME and hold at 4000FT. Contact SHONAI REMOTE.



Missed APCH climb gradient MNM 3.0%

MINIMA THR elev. 86 AD elev. 72

CAT	LNAV/VNAV		LNAV		CIRCLING	
	DA(H)	CMV	MDA(H)	CMV	MDA(H)	VIS
A	480 (394)	1200	480 (408)	1200	530 (458)	1600
B		1300		1300		
C		1400		1400		2400
D		1600		1600	700 (628)	3200

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

CHANGE : MINIMA.

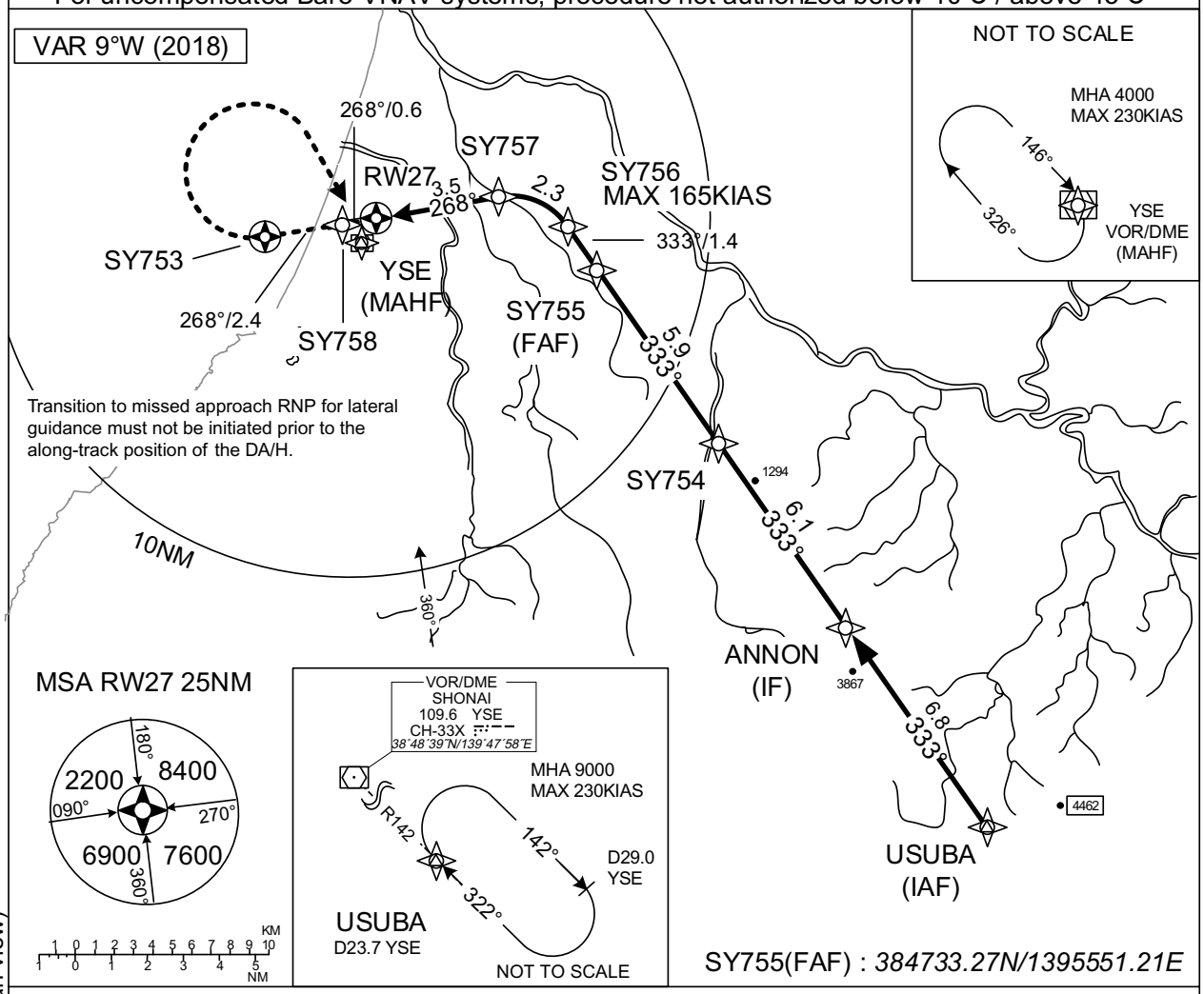
INSTRUMENT APPROACH CHART

RJSY / SHONAI

RNAV(RNP) Y RWY27

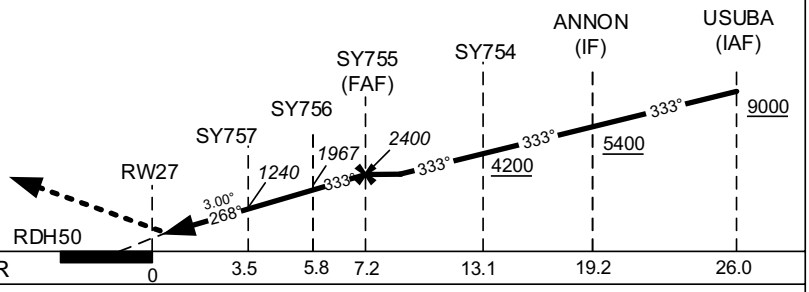
TOKYO CONTROL 132.3 - 300.2 135.9 - 230.6	GNSS and RF required	SHONAI REMOTE 118.8 - 126.2	NO RADAR

For uncompensated Baro-VNAV systems, procedure not authorized below-10℃ / above 45℃



MISSED APPROACH

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



Missed APCH climb gradient MNM 5.0%

MINIMA	THR elev. 86		AD elev. 72	
CAT	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.

RNP AR

Special Authorization Required

CHANGE : Correction of misdescription (Notes on plan view)

INSTRUMENT APPROACH CHART

RJSY / SHONAI RNAV(RNP) Y RWY27

RNAV(RNP) Y RWY27

Coding Table

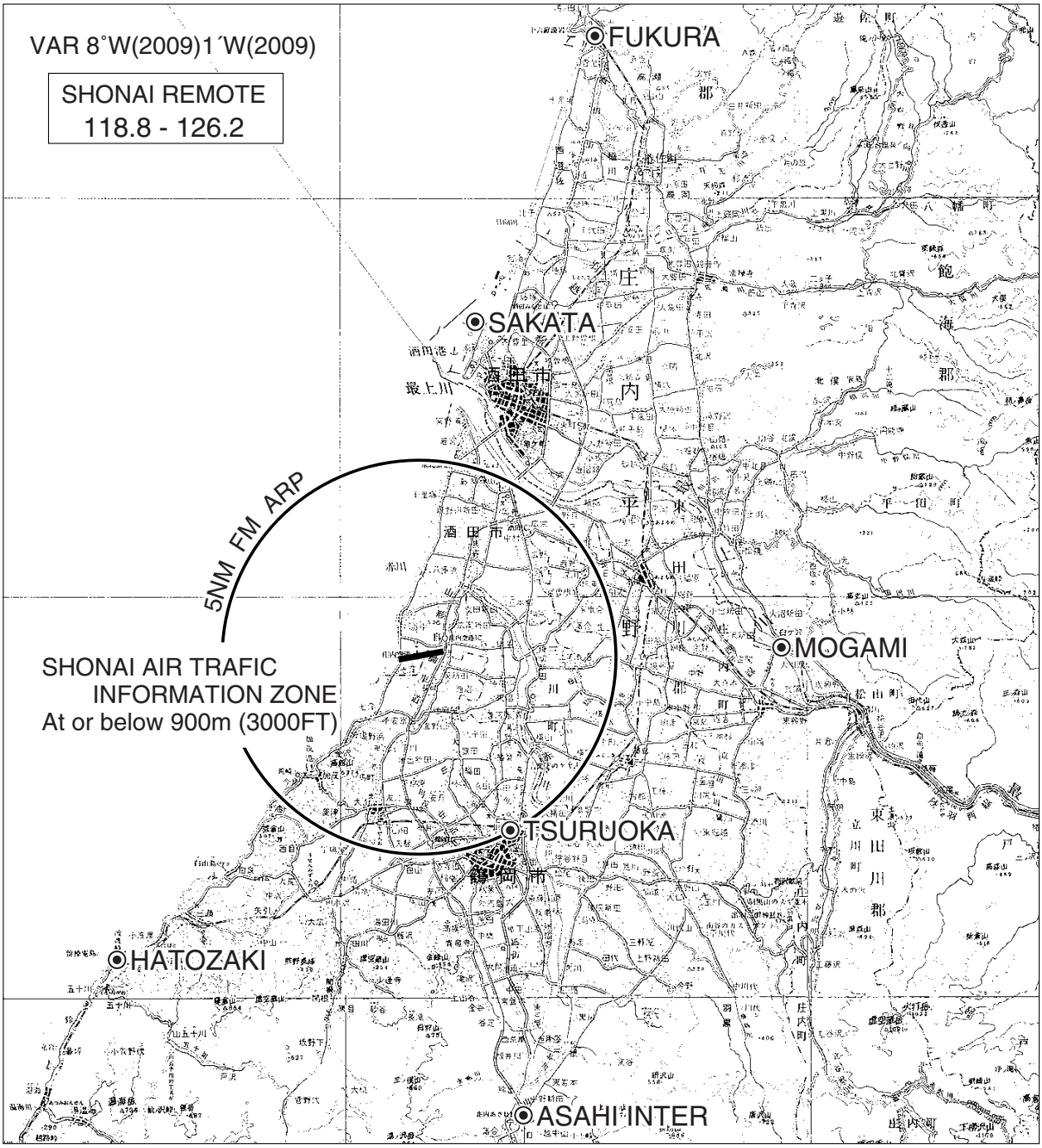
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	VPA/ RDH (°/FT)	RNP Value
001	IF	USUBA	-	-	-8.5	-	-	+9000	-	-	-
002	TF	ANNON	-	333 (324.8)	-8.5	6.8	-	+5400	-	-	1.0
003	TF	SY754	-	333 (324.7)	-8.5	6.1	-	+4200	-	-	1.0
004	TF	SY755	-	333 (324.7)	-8.5	5.9	-	2400	-	-	1.0
005	TF	SY756	-	333 (324.6)	-8.5	1.4	-	1967	-165	-3.00	0.12 0.30
006	RF Center: SYRF2 r=2.01	SY757	-	-	-8.5	2.3	L	1240	-	-3.00	0.12 0.30
007	TF	RW27	Y	268 (259.5)	-8.5	3.5	-	136	-	-3.00/50	0.12 0.30
008	TF	SY758	-	268 (259.4)	-8.5	0.6	-	-	-	-	0.12 0.30
009	CF	SY753	Y	268 (259.4)	-8.5	2.4	-	-	-	-	1.0
010	DF	YSE	-	-	-8.5	-	R	4000	-	-	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*		

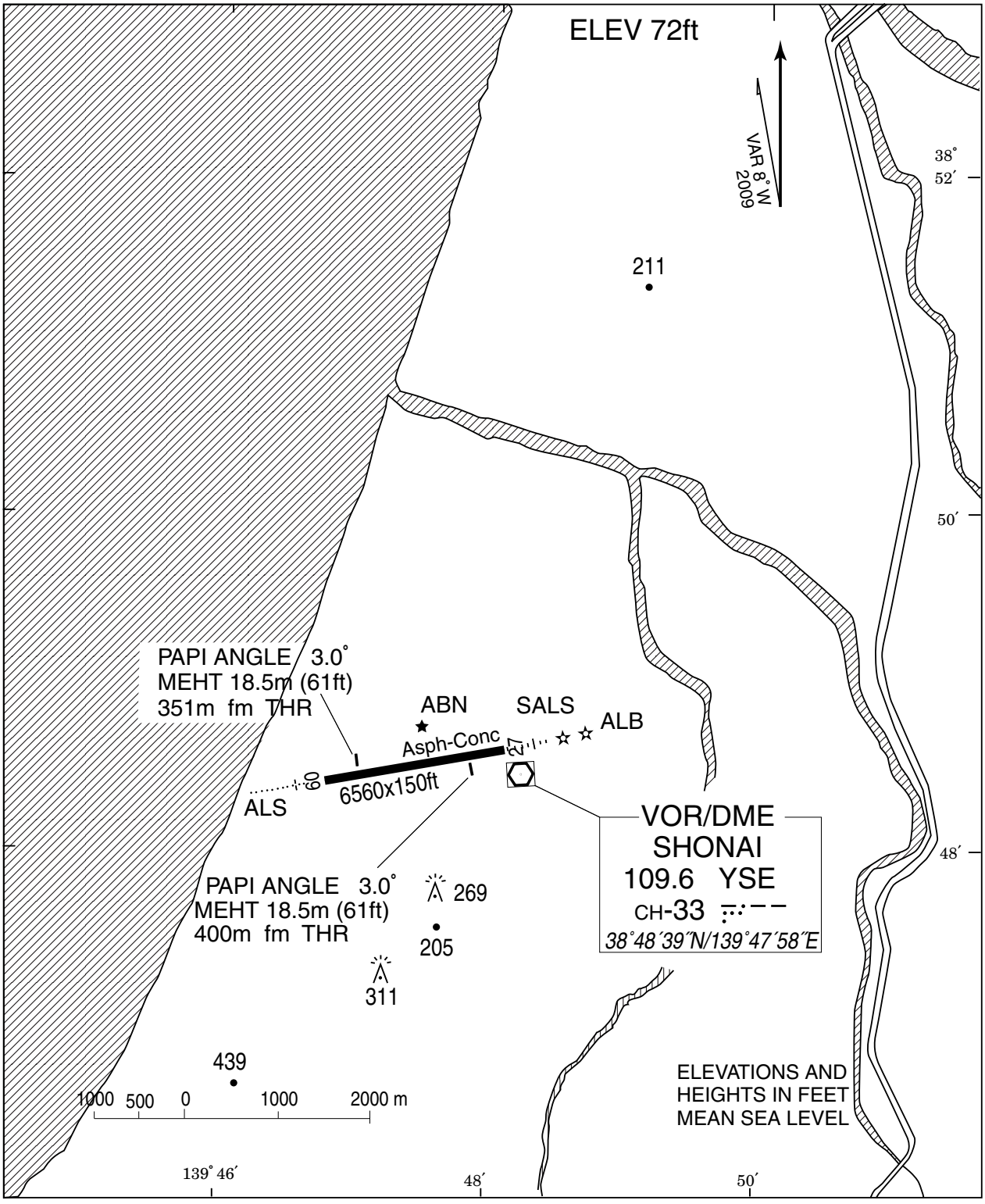
CHANGE : New PROC

RJSY / SHONAI Visual REP

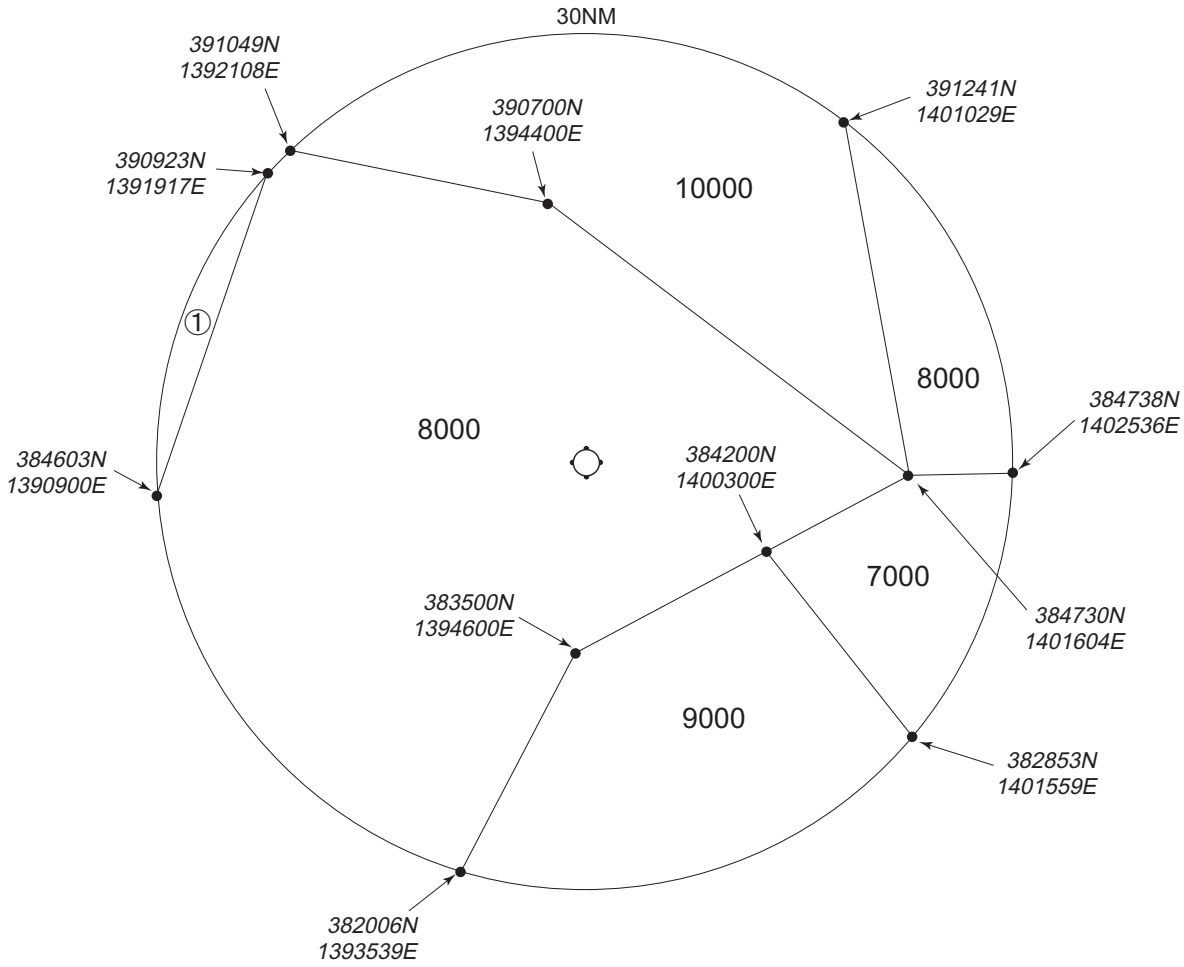


Call sign	BRG / DIST from ARP	Remarks
吹　　浦 Fukura	023˚T /16.1NM	吹浦港 Harbor
酒　　田 Sakata	015˚T / 8.0NM	酒田港 Harbor
最　　上 Mogami	097˚T / 9.0NM	最上川橋 Bridge
鶴　　岡 Tsuruoka	161˚T / 4.9NM	JR駅 Station
波 渡 崎 Hatozaki	233˚T /10.6NM	岬 Cape
あさひインター Asahi Inter	167˚T /11.9NM	山形自動車道 庄内あさひインターチェンジ Interchange

RJSY / SHONAI LDG CHART



RJSY / SHONAI Minimum Vectoring Altitude CHART



① 10000

CENTER：*384844N/1394714E* (ARP)