AD 2 AERODROMES

RJSS AD 2.1 AERODROME LOCATION INDICATOR AND NAME

RJSS - SENDAI

RJSS AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	*380823N/1405501E* 283° / 0.9km from TWR
2	Direction and distance from (city)	13.6km (7.3NM) SSE of Sendai JR Station
3	Elevation/ Reference temperature	5.6FT / 27°C (2002-2006)
4	Geoid undulation at AD ELEV PSN	137FT
5	MAG VAR/ Annual change	8° W (2009) / 1'E
6	AD Administration, address, telephone, telefax, telex, AFS, e-mail and/or Web-site addresses	Sendai International Airport Co., Ltd. Sendai Airport, Minamihara, Shimomasuda, Natori City, Miyagi Pref. Tel: 022-382-4057, Fax: 022-382-4068 Web-site: https://www.sendai-airport.co.jp/
7	Types of traffic permitted(IFR/VFR)	IFR/VFR
8	Remarks	Sendai Airport Office(CAB) Sendai Airport, Minamihara, Shimomasuda, Natori City, Miyagi Pref. Tel: 022-383-1211 (2330-0815UTC EXC 2330UTC on FRI - 0815UTC on SUN) Tel: 022-383-1301(AIS) AFS: RJSSYFYX

RJSS AD 2.3 OPERATIONAL HOURS

1	AD Administration	2230 - 1230
2	Customs and immigration	Customs: 2330-0800 Immigration: 0140-1125
3	Health and sanitation	Quarantine(human): (MON,TUE,FRI)2330-1000 (WED)2330-0815 (THU)2330-1100 (SAT)0030-0915 (SUN)0030-1100 Quarantine(animal): 2230-1230 Quarantine(plant): 2330-0800
4	AIS Briefing Office	H24
5	ATS Reporting Office(ARO)	Nil
6	MET Briefing Office	H24
7	ATS	2230 - 1230 (Flight Information Service (except ATIS) and Alerting Service: H24)
8	Fuelling	2230 - 1230
9	Handling	2230 - 1230
10	Security	2230 - 1230
11	De-icing	Nil
12	Remarks	Nil

RJSS AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	All the modern institutions that deal with the weight thing to boeing747 Type freighter
2	Fuel/ oil types	Fuel Grades : 100, JET A-1 Oil grades : W80, 100, ASTO 500, MJO-II
3	Fuelling facilities/ capacity	Truck refueling, No limitation
4	De-icing facilities	Nil
5	Hangar space for visiting aircraft	Nil
6	Repair facilities for visiting aircraft	Nil
7	Remarks	Nil

RJSS AD 2.5 PASSENGER FACILITIES

1	Hotels	Hotels in the Sendai city
2	Restaurants	At Airport
3	Transportation	Railways, Busses and Taxis
4	Medical facilities	Hospitals in the iwanuma city 9km
5	Bank and Post Office	At Airport
6	Tourist Office	At Airport
7	Remarks	Nil

RJSS AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	Fire protection : Scale of protection, ICAO required : CAT 9 Available : CAT 9
2	Rescue equipment	Chemical fire fighting truck x 3 Water-supply truck Lighting power supply truck Emergency medical equipments conveyance truck
3	Capability for removal of disabled aircraft	Nil
4	Remarks	Nil

RJSS AD 2.7 SEASONAL AVAILABILITY-CLEARING

1	Types of clearing equipment	Snow removal available
2	Clearance priorities	Snow removal priority: RWY09/27, TWY A1, B1, B3, B6, C1-C6, APRON
3	Remarks	Seasonal availability : All seasons

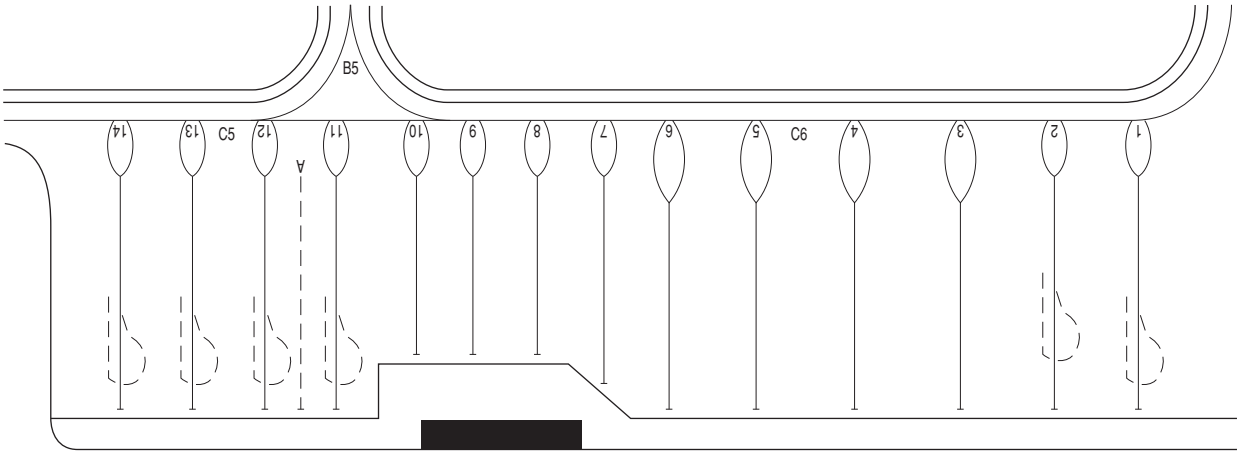
RJSS AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

1	Apron surface and strength	Surface : Asphalt Concrete and Concrete Strength : SPOT NR 1-14 : PCN 74/R/B/X/T SOUTH ONE APRON : PCN 22/F/B/Y/T SOUTH TWO APRON : PCN 20/F/B/Y/T SOUTH THREE APRON : PCN 23/F/C/Y/T WEST HELI PAD : AUW 5700kg/0.28Mpa
2	Taxiway width, surface and strength	Surface - Asphalt Concrete A1-A3 : 18m PCN 14/F/C/Y/T A4 : 45m PCN 14/F/C/Y/T B1 : 28.5m PCN 80/F/B/X/T B2 - B5 : 34m PCN 63/F/A/X/T B6 : 28.5m PCN 80/F/B/X/T C1 : 23m PCN 80/F/B/X/T C2 : 23m PCN 63/F/A/X/T C3 - C5 : 23m PCN 80/F/B/X/T C6 : 23m PCN 74/R/B/X/T D1 : 18m PCN 14/F/C/Y/T TWY(BTN RWY09/27 AND RWY12 THR) : 45m PCN 49/F/B/X/T
3	ACL and elevation	Not available
4	VOR checkpoints	Not available
5	INS checkpoints	Spot NR 1 : *380820.42N/1405556.64E* 2 : *380820.17N/1405554.20E* 3 : *380819.95N/1405551.44E* 4 : *380819.64N/1405548.39E* 5 : *380819.34N/1405545.43E* 6 : *380819.04N/1405542.58E* 7 : *380818.70N/1405539.94E* 8 : *380819.64N/1405538.75E* 9 : *380819.45N/1405536.92E* 10 : *380819.26N/1405535.09E* 11 : *380817.91N/1405533.18E* 12 : *380817.70N/1405531.10E* 13 : *380817.48N/1405529.02E* 14 : *380817.27N/1405526.95E*
6	Remarks	Nil

RJSS 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	Aircraft stand identification sign :NR2 - 6, 10
2	RWY and TWY markings and LGT	RWY:09/27, 12/30 (Marking) RWY designation, RWY CL, RWY THR, RWY middle point, Aiming point, TDZ, RWY side stripe (LGT) RCLL(RWY09/27), REDL, RTHL, RENL, RTZL(RWY27), WBAR(RWY27) TWY: (Marking) TWY CL, RWY HLDG PSN, TWY side stripe, Mandatory instruction marking (A1, A2, A4, B1-B6, C3, C4, D1) (LGT) TWY edge LGT, TWY CL LGT(B1-B6,C1-C6), Stop bar LGT(B1-B6), RWY guard LGT(B1-B6,C3,C4), Taxiing guidance sign(B1-B6)
3	Stop bars	Stop Bar Lights: B1-B6 Stop Bar Lights operations 1) Stop Bar Lights are installed at each taxi holding position associated with Runway 09/27. 2) Stop Bar Lights will be operated when the visibility or the lowest RVR of Runway 09/27 is at or less than 600m. 3) Stop Bar Lights on Taxiway B1 and B6 are controlled individually by ATC. 4) Stop Bar Lights on Taxiways B2 through B5 are not controlled individually by ATC. 5) During the period Stop Bar Lights operated, Taxiways B2 through B5 are not available for departure aircraft.
4	Remarks	(Marking) Overrun area (LGT) Apron flood LGT

Marking Aids and Parking Area



RJSS AD 2.10 AERODROME OBSTACLES

See AD2.24 Aerodrome Obstacle Chart

In circling area and at AD

Obstacle type	Coordinates	Elevation	Markings/LGT	Remarks
Lightning rod	*380938.4N/1405504.8E*	171ft	- /LGTD	Above the horizontal surface
Lightning rod	*380957.2N/1405342.1E*	161ft	- /LGTD	Above the horizontal surface

RJSS AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

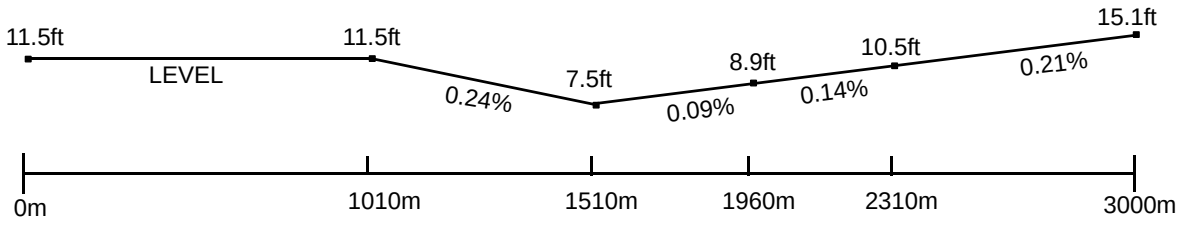
1	Associated MET Office	SENDAI
2	Hours of service MET Office outside hours	H24
3	Office responsible for TAF preparation Periods of validity	SENDAI 30 Hours
4	Trend forecast Interval of issuance	Nil
5	Briefing/ consultation provided	P, Ja ,En
6	Flight documentation Language(s) used	C En
7	Charts and other 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	TWR, APP, ATIS
10	Additional information (limitation of service, etc.)	Nil

RJSS AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

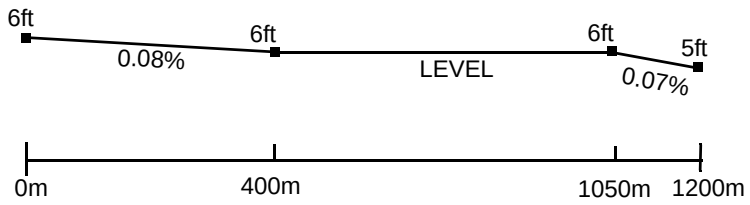
Designations RWY NR	TRUE BRG	Dimensions of RWY(M)	Strength(PCN) and surface of RWY	THR coordinates THR geoid undulation	THR elevation and highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
09	82.56°	3000×45	PCN 80/F/B/X/T Asphalt Concrete	*380819.58N* *1405355.40E* 136.8ft	THR ELEV:11.5ft
27	262.56°	3000×45	PCN 80/F/B/X/T Asphalt Concrete	*380832.18N* *1405557.56E* 136.8ft	THR ELEV:15.1ft TDZ ELEV:15.1ft
12	117.70°	1200×45	PCN 34/F/C/Y/T(*) Asphalt Concrete	*380822.05N* *1405453.09E* 137ft	THR ELEV:6ft
30	297.70°	1200×45	PCN 34/F/C/Y/T(*) Asphalt Concrete	*380803.96N* *1405536.72E* 137ft	THR ELEV:5ft

Slope of RWY	Strip Dimensions(M)	RESA(Overrun) Dimensions(M)	Remarks
7	10	11	14
See below chart	3120x300 3120x300	90x(MNM:90 MAX:300)* 191x(MNM:130 MAX:300)* *For detail, ask airport administrator	09/27 grooving:3000mx30m
See below chart	1320x150 1320x150	90x150 240x150	(*)RWY12/30(BTN RWY09/27 AND TWY C3-C4) : PCN 58/F/B/X/T RWY12/30(INT OF TWY C3-C4) : PCN 80/F/B/X/T

RWY 09 **RWY 27**



RWY 12 **RWY 30**



RJSS AD 2.13 DECLARED DISTANCES

RWY Designator	TORA (m)	TODA (m)	ASDA (m)	LDA (m)	Remarks
1	2	3	4	5	6
09	3000	3000	3000	3000	Nil
27	3000	3000	3000	3000	Nil
12	1200	1200	1200	1200	Nil
30	1200	1200	1200	1200	Nil

RJSS 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	SALS 420m (*1)	Green Nil	PAPI 3.0° 456m 73.8ft		3000m 30m Coded Color (White/Red) LIH	3000m 60m Coded Color (White/Yellow) LIH	Red	Nil (*2)
27	PALS (CAT I) 900m	Green Green	PAPI 3.0° 439m 65.6ft	900m	3000m 30m Coded Color (White/Red) LIH	3000m 60m Coded Color (White/Yellow) LIH	Red	Nil (*2)
12		Green Nil	PAPI 3.0° 306m 44.5ft			1200m 60m Coded Color (White/Yellow) LIH	Red	Nil (*2)
30		Green Nil	PAPI 3.1° 262m 44.5ft			1200m 60m Coded Color (White/Yellow) LIH	Red	Nil (*2)

Remarks
10
SALS with APCH LGT beacon(560m and 916m FM RWY 09 THR)(*1) Overrun area edge LGT(Color:Red)(*2) CGL for RWY 09 RWY THR ID LGT for RWY 12/30 THR (Color: White)

RJSS AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	ABN: *380816N/1405552E*, White/Green EV4.3sec, HO
2	LDI location and LGT Anemometer location and LGT	LDI:Nil Anemometer: RWY12:440M FROM RWY12 THR, LGTD RWY09:400M FROM RWY09 THR, LGTD RWY27:385M FROM RWY27 THR, LGTD
3	TWY edge and center line lighting	TWY edge and center line lights installed, see AD2.9
4	Secondary power supply/ switch-over time	Within 1 sec : RCLL, REDL(RWY09/27), RTHL(RWY09/27), RENL(RWY09/27), WBAR, Stop bar LGT, Overrun area edge LGT(RWY09/27) Within 15 sec : Other lights
5	Remarks	Nil

RJSS AD 2.16 HELICOPTER LANDING AREA

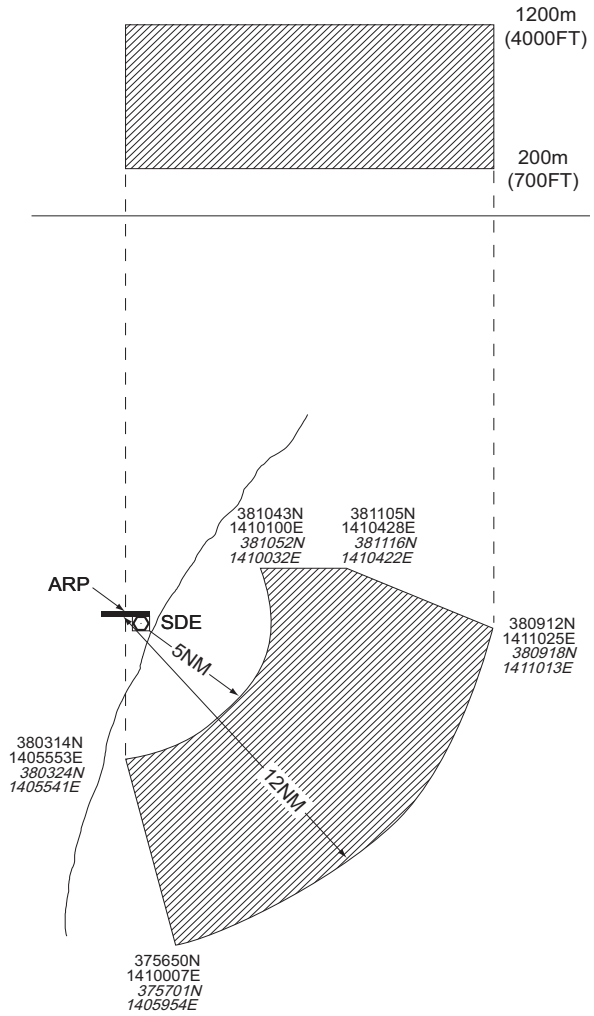
Nil

RJSS AD 2.17 ATS AIRSPACE

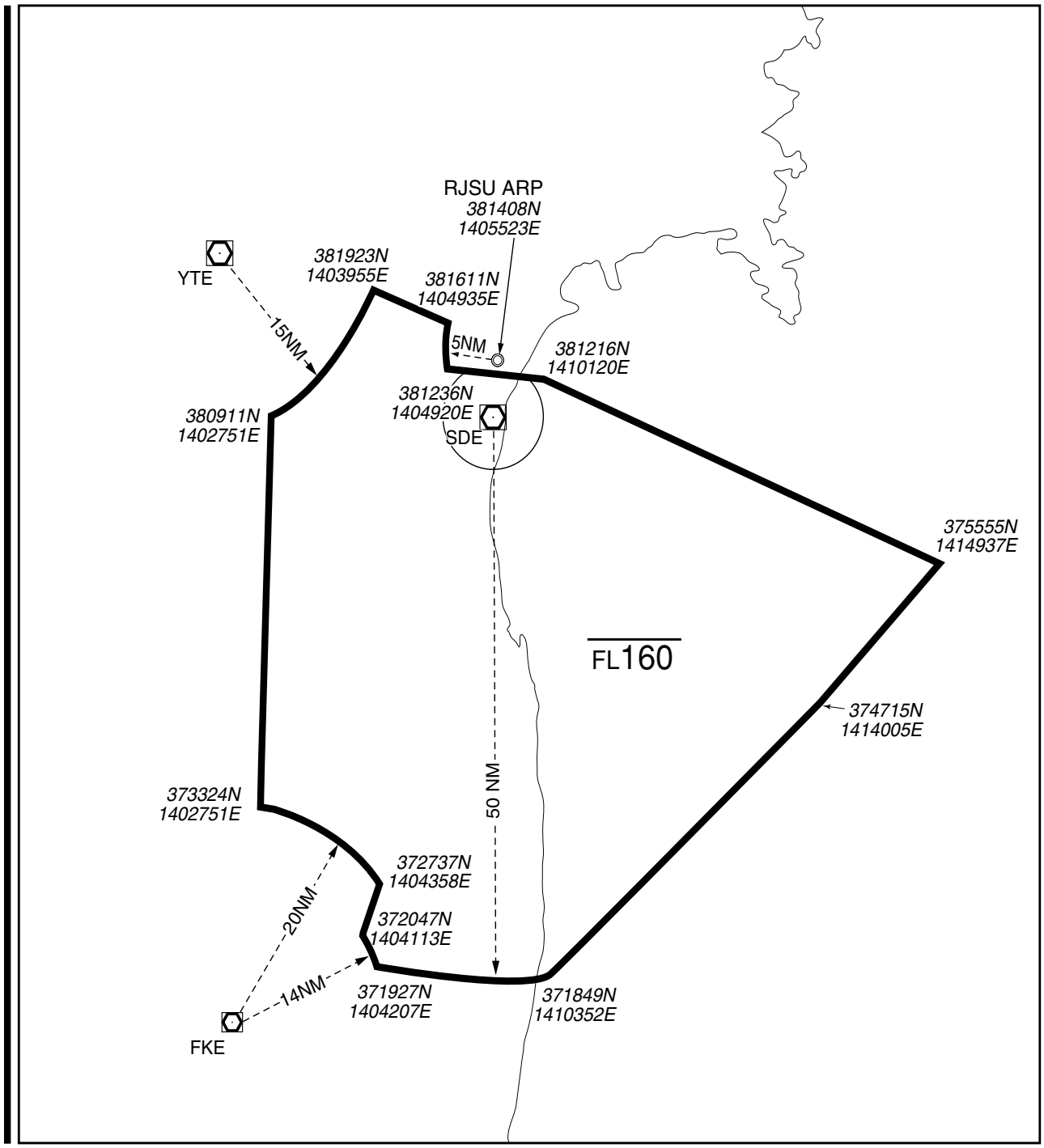
Designation and lateral limits		Vertical limits (ft)	Airspace classification	ATS unit call sign Language	Remarks
1		2	3	4	6
SENDAI CTR	Area within a radius of 5nm of SENDAI ARP (*38° 08'N 140° 55'E*) exclude KASUMINOME control zone	3 000 or below	D	SENDAI TOWER En	
SENDAI PCA	SEE RJSS ATTACHED CHART		C	SENDAI APP SENDAI TOWER En	
SENDAI ACA	SEE RJSS ATTACHED CHART		E	SENDAI APP SENDAI DEP SENDAI RADAR En	
SENDAI TCA	SEE RJSS ATTACHED CHART		E	SENDAI TCA En	

仙台特別管制区
Sendai Positive Control Area

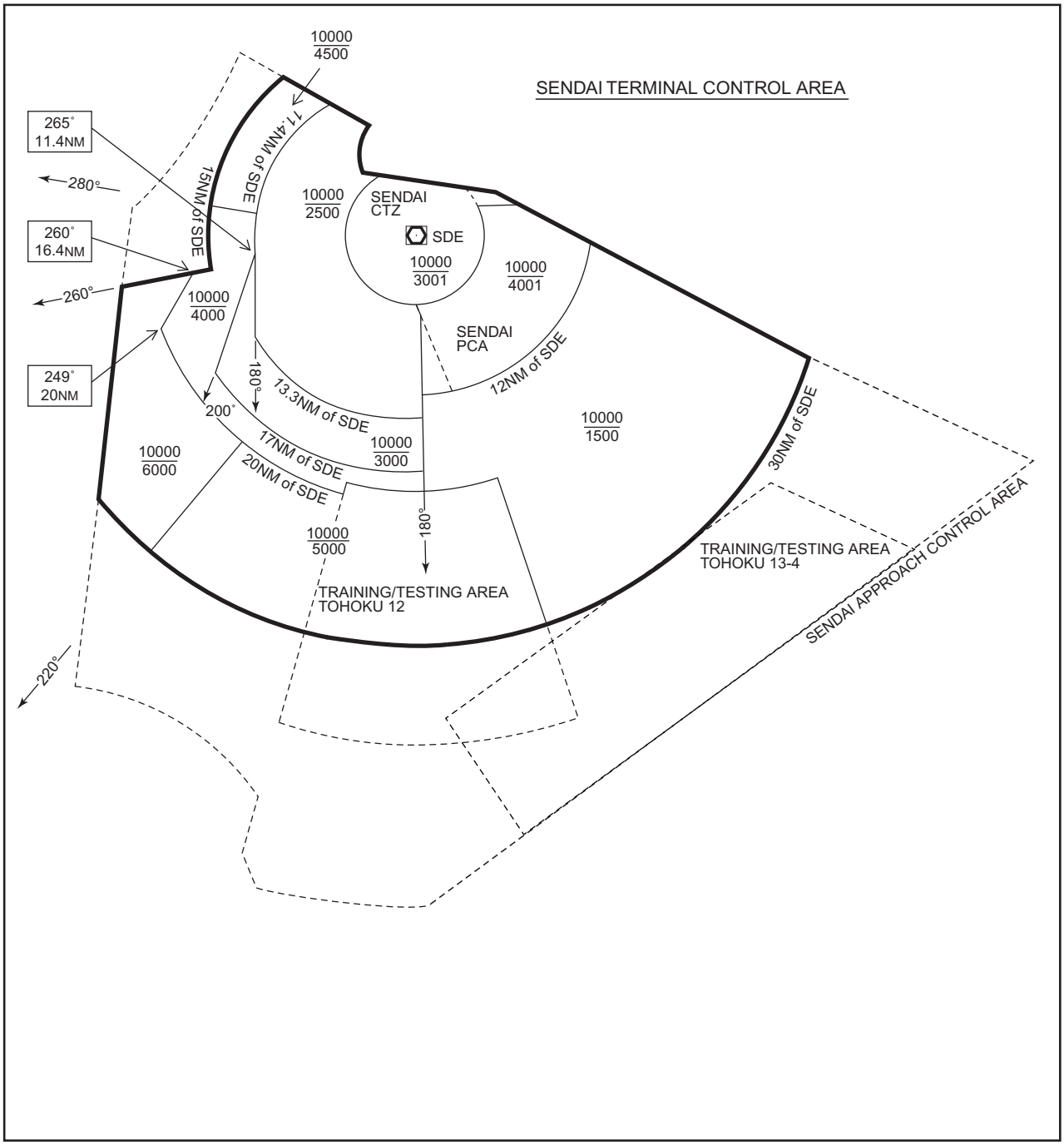
NAME	LATERAL LIMITS	UPPER LIMIT (AMSL) / LOWER LIMIT (AMSL) M(ft)	UNIT PROVIDING SERVICE	REMARKS
1	2	3	4	5
仙台 Sendai	下記に示される区域 The area shown below		Primary Sendai APP 120.4-261.2 Secondary Sendai TWR 126.2	当該空域を飛行しようとする航空機は、仙台アプローチ又は仙台タワーに連絡し、コールサイン、現在位置、高度及び意図を通報し指示を受けること。 Pilot of aircraft operating in this area shall contact Sendai Approach or Sendai Tower for ATC instructions giving in-formations on aircraft identification, positions, altitude and pilot's intentions.



仙台進入管制区
Sendai Approach Control Area



仙台ターミナルコントロールエリア
Sendai Terminal Control Area



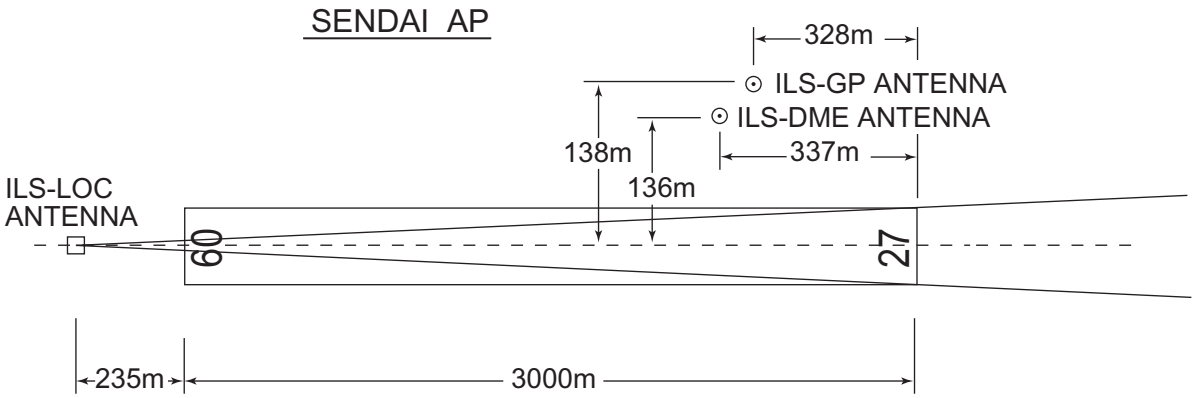
RJSS AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	Call sign	Frequency	Hours of operation	Remarks
1	2	3	4	5
APP	Sendai Approach	120.4MHz 261.2MHz 121.5MHz(E) 243.0MHz(E)	2230 - 1230	(1)Primary
ASR	Sendai Radar	121.2MHz 121.5MHz(E) 243.0MHz(E)	2230 - 1230	
DEP	Sendai Departure	120.0MHz 121.5MHz(E) 243.0MHz(E)	2230 - 1230	
TCA	Sendai TCA	121.025MHz 225.2MHz	2300 - 1030	
TWR	Sendai Tower	118.7MHz(1) 126.2MHz 121.5MHz(E) 243.0MHz(E)	2230 - 1230	
GND	Sendai Ground	121.7MHz	2230 - 1230	
ATIS	Sendai Airport	126.45MHz	2230 - 1230	

RJSS 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/2010)	SDE	116.3MHz	H24	*380818.86N/ 1405517.34E*		VOR unusable: 271° BTN 20 - 22nm
DME	SDE	1197MHz (CH-110X)	H24	*380818.86N/ 1405517.34E*	54ft	
ILS-LOC 27	ISD	111.7MHz	2230 - 1230	*380818.56N/ 1405345.94E*		LOC:235m(771ft) away FM RWY 09 THR, BRG (MAG) 270°.
ILS-GP 27	-	333.5MHz	2230 - 1230	*380835.20N/ 1405543.58E*		GP:328m(1076ft) inside FM RWY 27 THR, 138m(453ft) N of RCL. HGT of ILS Ref datum 16.4m(54ft) GP angle 3.0°.
ILS-DME 27	ISD	1015MHz	2230 - 1230	*380835.09N/ 1405543.23E*	24ft	DME:337m(1106ft) inside FM RWY 27 THR, 136m(446ft) N of RCL.
MSAS		1575.42MHz	H24			Transmitting antennas are satellite based

ILS



REMARKS :
1 LOC beam BRG(MAG) 270°
2 ILS-GP Angle 3.0°
3 HGT of ILS REF datum 16.4m(54ft)
4 ELEV of ILS-DME 7.4m(24ft)

RJSS AD 2.20 LOCAL TRAFFIC REGULATIONS

1. Airport regulations

1. Aircraft operations, other than scheduled or in emergency.

When using this airport, aircraft operators are required to obtain prior permission of the airport administrator in order to allocate appropriate parking area.

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

1. Wing tip clearance at the TWY intersection (REF AD1.1.6.8)

Wing tip clearance at the TWY intersection between the aircraft holding at the stop marking on the TWY and the other aircraft taxiing behind it are as follows.

When B773 holding at the stop marking on TWY B2, B3, B4 or B5

Wing Span (WS) of aircraft taxiing on TWY C1-C6	WS =< 30.2m	WS > 30.2m
Wing tip clearance	*B	*C

Legend:
*A : wing tip clearance >= 15m
*B : 6.5m =< wing tip clearance < 15m
*C : wing tip clearance < 6.5m

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

RJSS AD 2.21 NOISE ABATEMENT PROCEDURES

(See AIP AD 1.1.6.5)

1　騒音軽減運航方式

すべてのジェット機に対して、空港周辺における航空機騒音軽減のため、運航の安全に支障のない範囲で、以下の方式が適用される。ただし、これらの方式によることができない航空機は実効的にこれらと同等と認められる代替方式を実施するものとする。

1) 離陸について（滑走路 27）
　急上昇方式
2) 着陸について（滑走路 09）
　ディレイド･フラップ進入方式及び低フラップ角着陸方式
3) リバース･スラストについて
　なし

2 優先滑走路方式

すべてのジェット機及び証明された最大離陸重量が 5,700kg (12,500lbs) を超えるプロペラ機を対象とし、離陸は滑走路 09、着陸は滑走路 27 により優先的に行うこととする。ただし、航行の安全確保などに万全を期すため、以下に示す条件等にあっては、本方式は適用されない。

1) 機長が航行の安全を考慮して、反対側滑走路に離着陸を行う必要があると判断した場合

2) 滑走路面の状況が適当でない場合

3) 突風を含め追風成分が 5knot を超える場合

4) 突風を含め横風成分が 15knot を超える場合

5) 秩序ある航空交通流が乱される恐れがある場合

6) 特別な訓練、航行援助施設の検査のために反対側滑走路に離着陸を行うことが特に必要であると認められる場合

３．優先飛行経路

1) 滑走路 27 からの離陸
　滑走路 27 から離陸する航空機にあっては、空港の西南西 4 海里付近の住居地区（別添図参照）上空を可能な限り避けて飛行すること。
2) 滑走路 09 への着陸
　滑走路 09 へ着陸する航空機にあっては、空港の西北西 2.5 海里付近の住居地区（別添図参照）上空を可能な限り避けて飛行すること。

1 Noise Abatement Operating Procedures

For all jet aircraft, in order to reduce aircraft noise in the vicinity of airport, the following procedures shall be applied unless compliance of the procedures adversely affects the safety of aircraft operations. In case that the aircraft is unable to take these procedures, pilots should execute alternative procedures which are considered to be practically equivalent.

1) For take-off from RWY27
　Steepest Climb Procedure
2) For landing to RWY09
　Delayed Flap Approach Procedure and Reduced Flap Setting Procedure
3) Reverse Thrust
　Nil

2 Preferential Runways Procedures

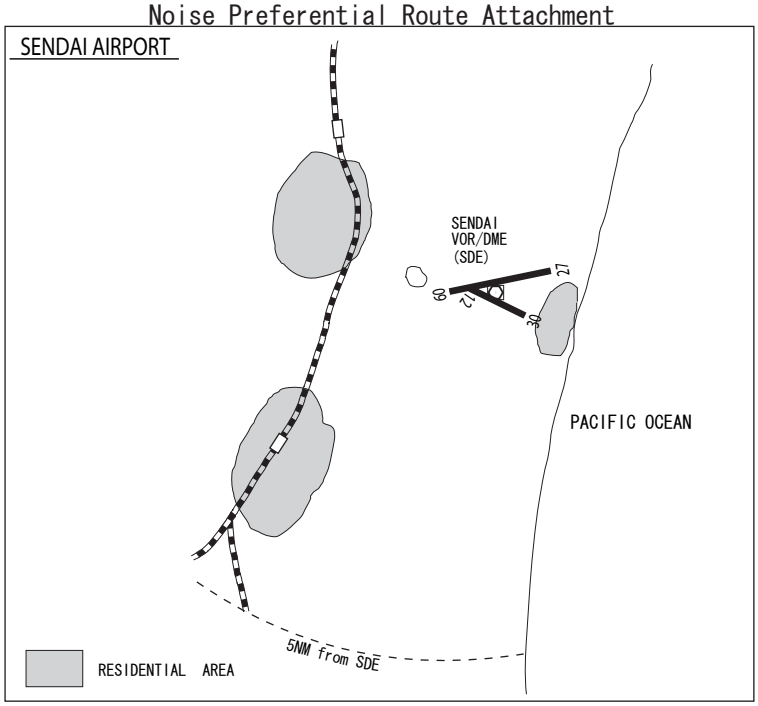
For all jet aircraft and propeller-driven aircraft having a maximum certificated take-off weight of more than 5,700kg (12,500lbs), in principle, RWY09 for take-off and RWY27 for landing are preferentially to be used. However, in order to achieve maximum flight safety, this procedure is not applied under the following circumstances.

1) When a pilot-in-command determines that the use of other runway is necessary in consideration of safety of the aircraft operation.
2) When the condition of the specified runway is not suitable for landing or take-off.
3) When the tail wind component, including gusts, exceeds 5 knots.
4) When the cross wind component, including gusts, exceeds 15 knots.
5) When the possibility exists that orderly flow of traffic may be impeded.
6) When the use of other runways is considered especially necessary for the purpose of special training, inspection of navigational facilities, etc.

3 Noise Preferential Routes

1) Take-off from RWY27
　All aircraft departing from RWY27 are urged to avoid, as far as practicable, flying over the residential area located about 4NM WSW of the airport. (See the attached chart.)
2) Landing on RWY09
　All aircraft arriving on RWY09 are urged to avoid, as far as practicable, flying over the residential area located about 2.5NM WNW of the airport.
　(See the attached chart.)

Noise Preferential Route Attachment



RJSS AD 2.22 FLIGHT PROCEDURES

1. TAKE OFF MINIMA

	RWY	ACFT CAT	REDL & RCLL		REDL or RCLL or RCL Marking		NIL (DAYTIME ONLY)	
			CEIL-RVR	CEIL-VIS	CEIL-RVR	CEIL-VIS	CEIL-RVR	CEIL-VIS
Multi-Engine ACFT with TKOF ALTN AP FILED	09	A,B,C,D	-	0′-400m	-	0′-400m	-	0′-500m
	27		0′-400m	0′-400m	0′-400m	0′-400m	-	0′-500m
	12	A,B,C	-	-	-	200′-1600m	-	200′-1600m
	30		-	-	-	0′-400m	-	0′-500m
OTHER	09	A,B,C,D	AVBL LDG MINIMA					
	27							
	12	A,B,C						
	30							

2. Lost communication procedures for arrival aircraft under radar navigational guidance

If radio communications with Sendai Approach/Radar are lost for 1 minute, squawk Mode A/3 Code 7600 and :

(I) 1. Contact Sendai Tower.
2. If unable, proceed in accordance with Visual Flight Rules.
3. If unable, proceed to Sendai VOR/DME at last assigned altitude or 3,000 feet whichever is higher, and execute instrument approach.

(II) Procedures other than above will be issued when situation required.

3. Terminal Radar Alphanumeric Display System (TRAD)

Aircraft flying in Sendai approach control area under its contol will be instructed to reply with discrete code on Mode A/3 and Mode C.

If an aircraft has no capability of replying with discrete code, the pilot shall report ATC if so instructed.

仙台アプローチの指示のもとに、当該進入管制区を飛行する航空機は、モード A/3 の二次レーダー個別コード及びモード C による応答を指示される。

二次レーダー個別コードを搭載していない航空機が個別コードによる応答を指示された場合は、管制官に対しその旨通報すること。

4. Traffic pattern

(1) In order to avoid congestion of arriving aircraft and to make orderly flow on traffic pattern, aircraft are desirable to fly at the altitude.
However, in case it is difficult to fly at the altitude due to weather and so on, aircraft shall report it to "SENDAI TWR" with your proposed altitude.
Traffic pattern altitude as follows.

i) Fixed wing ACFT

a) JET 1,500ft

b) PROPELLER
Single engine 800ft
Multi engine 1,000ft

ii) Rotor craft 600ft

(2) Aircraft using north traffic pattern should pay enough attention to keep out of KASUMINOME CTR.

(1) 到着機が輻輳することを避け、かつ秩序ある飛行場周辺の航空交通の流れを促進するために、場周経路において航空機は以下の高度で飛行することが望ましい。
ただし、天候等により以下の高度により飛行できない場合は“仙台タワー”に希望飛行高度とともにその旨を通報すること。
場周経路を飛行する際の高度は以下のとおり

i) 固定翼航空機

a）ジェット 1,500ft

b）プロペラ
単発機 800ft
多発機 1,000ft

ii) 回転翼航空機 600ft

(2) 北側の場周経路を使用する場合は霞目管制圏に入域しないように留意すること。

RJSS AD 2.23 ADDITIONAL INFORMATION

Experimental Radio Facilities

Experimental radio facilities of Iwanuma Branch of Aeronautical Safety College at Sendai Airport as follows. These radio facilities are not to be used as Naviaids.

Facility	Frequency	Power	ID	Coordinate of antenna	Hour of OPS
LOC	109.9	10W	EKD	*380748N/1405558E*	H24 (Intermittent transmissions)
GP	333.8	2W	-	*380757N/1405520E*	
Marker	75.0	0.5W	-	*380747N/1405558E*	
VOR/TACAN	112.4/1158	100W/1KW	EIW	*380747N/1405522E*	
ASR/SSR	2720/1030	350KW/500W	-	*380747N/1405518E*	
DME	997.0	100W	EKD	*380756N/1405522E*	
VOR	117.9	50W	ECV	*380752N/1405509E*	

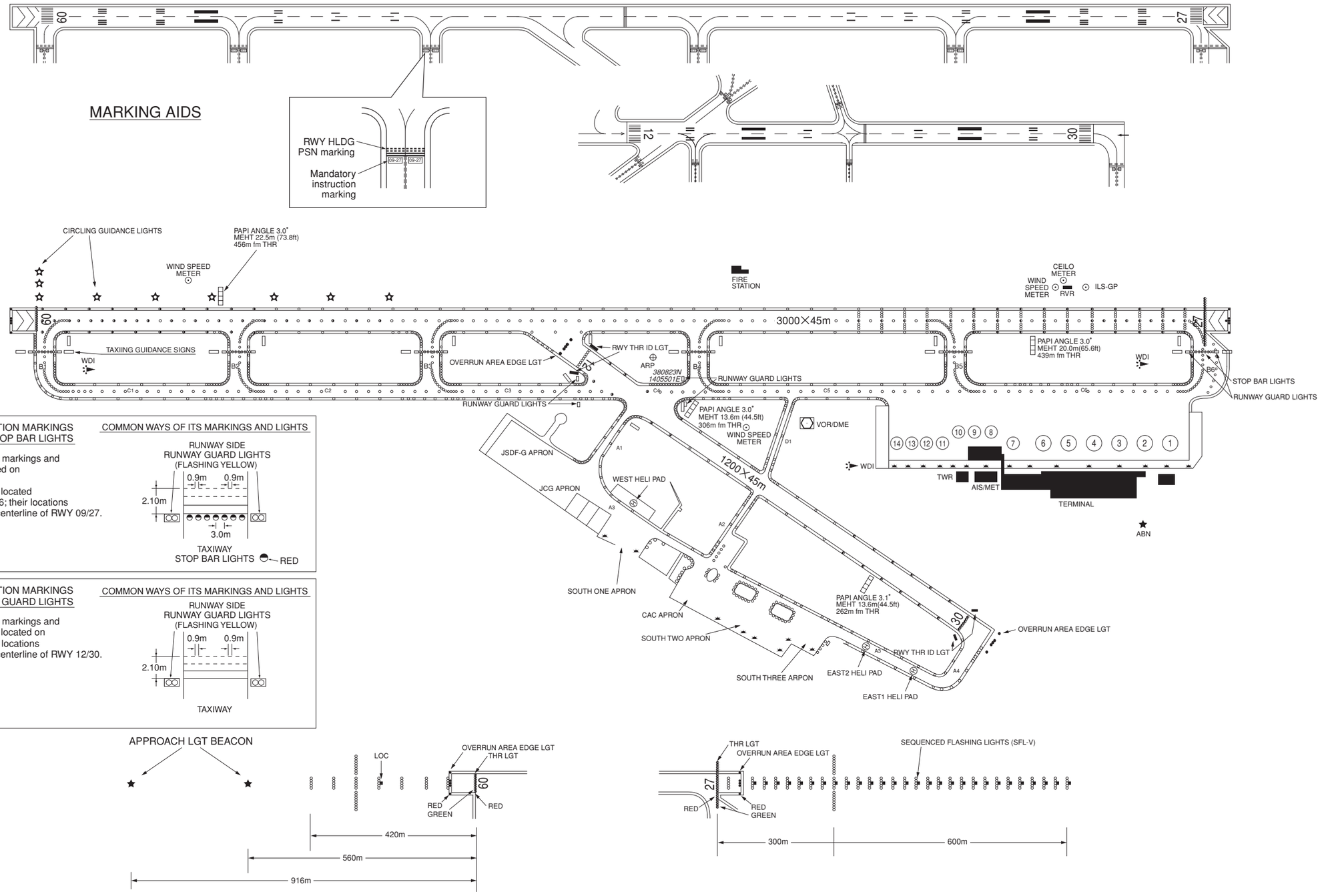
RJSS AD 2.24 CHARTS RELATED TO AN AERODROME

Aerodrome Chart -1
Aerodrome Chart -2
Aerodrome Obstacle Chart-ICAO type A (RWY09/27)
Aerodrome Obstacle Chart-ICAO type B
Standard Departure Chart - Instrument (IWAKI)
Standard Departure Chart - Instrument (SENDAI)
Standard Departure Chart - Instrument (DERBY-RNAV)
Standard Departure Chart - Instrument (STEED-RNAV)
Standard Departure Chart - Instrument (CUBIC-RNAV)
Standard Arrival Chart - Instrument (PERID)
Standard Arrival Chart - Instrument (LANCE WEST-RNAV)
Standard Arrival Chart - Instrument (OWLET WEST-RNAV)
Standard Arrival Chart - Instrument (LANCE EAST ALFA-RNAV)
Standard Arrival Chart - Instrument (LANCE EAST BRAVO-RNAV)
Standard Arrival Chart - Instrument (OWLET EAST ALFA-RNAV)
Standard Arrival Chart - Instrument (OWLET EAST BRAVO-RNAV)
Instrument Approach Chart (ILS Z or LOC Z RWY27)
Instrument Approach Chart (ILS Y or LOC Y RWY27)
Instrument Approach Chart (VOR RWY27)
Instrument Approach Chart (VOR RWY30)
Instrument Approach Chart (RNAV(GNSS) Z RWY09)
Instrument Approach Chart (RNAV(RNP) Y RWY09)
Instrument Approach Chart (RNAV(RNP) RWY27)
Other Chart (Visual REP)
Other Chart (LDG CHART)
Other Chart (MVA CHART)

AERODROME CHART

SENDAI AIRPORT

ELEV 1.7m(5.6ft)



RUNWAY-HOLDING POSITION MARKINGS and STOP BAR LIGHTS

Runway-holding position markings and Stop bar lights are located on taxiway B1 through B6
Runway guard lights are located on taxiway B1 through B6; their locations are 75m off the runway centerline of RWY 09/27.

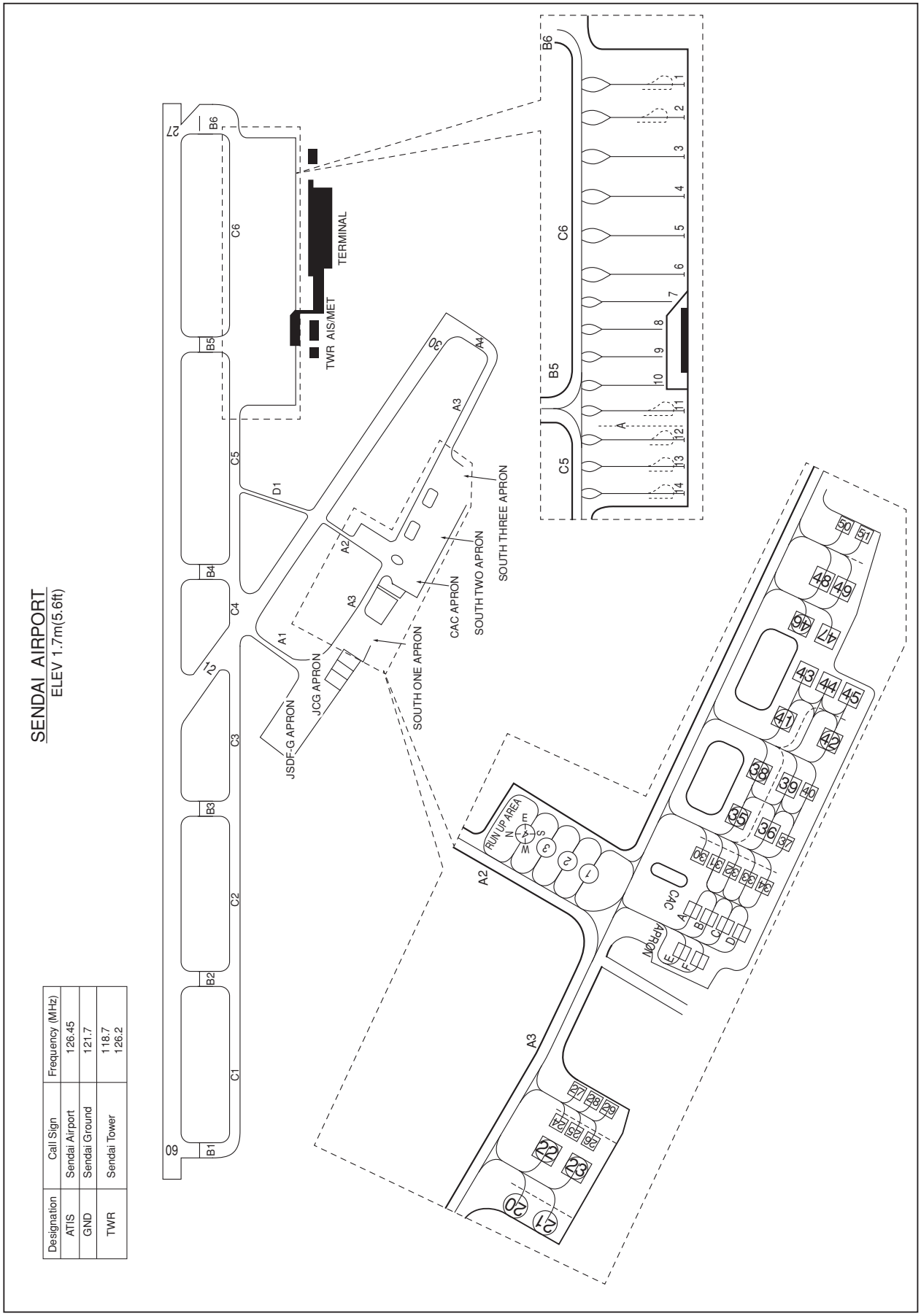
COMMON WAYS OF ITS MARKINGS AND LIGHTS

RUNWAY-HOLDING POSITION MARKINGS and RUNWAY GUARD LIGHTS

Runway-holding position markings and Runway guard lights are located on taxiway C3 and C4; their locations are 75m off the runway centerline of RWY 12/30.

COMMON WAYS OF ITS MARKINGS AND LIGHTS

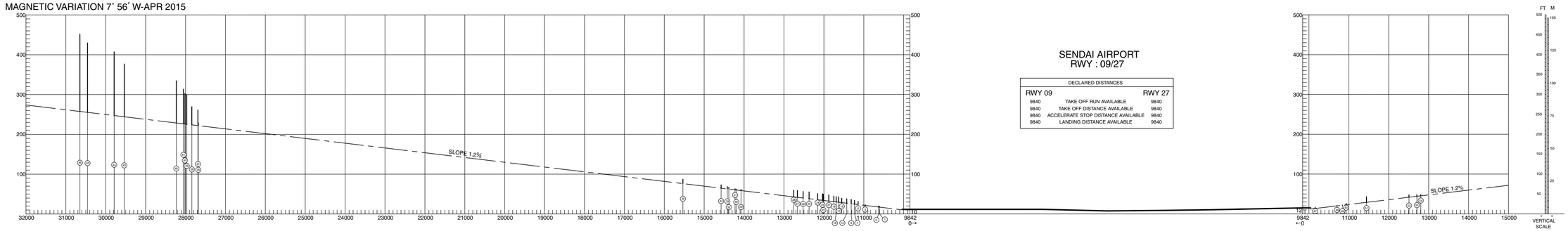
APPROACH LGT BEACON


SENDAI AIRPORT
ELEV 1.7m(5.6ft)
TERMINAL
TWR AIS/MET
JSDF-G APRON
JCG APRON
SOUTH ONE APRON
CAC APRON
SOUTH TWO APRON
SOUTH THREE APRON
RUN UP AREA
CAC APRON
09
27
30
12
Designation
Call Sign
Frequency (MHz)
ATIS
Sendai Airport
126.45
GND
Sendai Ground
121.7
TWR
Sendai Tower
118.7
126.2

DIMENSIONS AND ELEVATIONS IN FEET BEARINGS ARE MAGNETIC

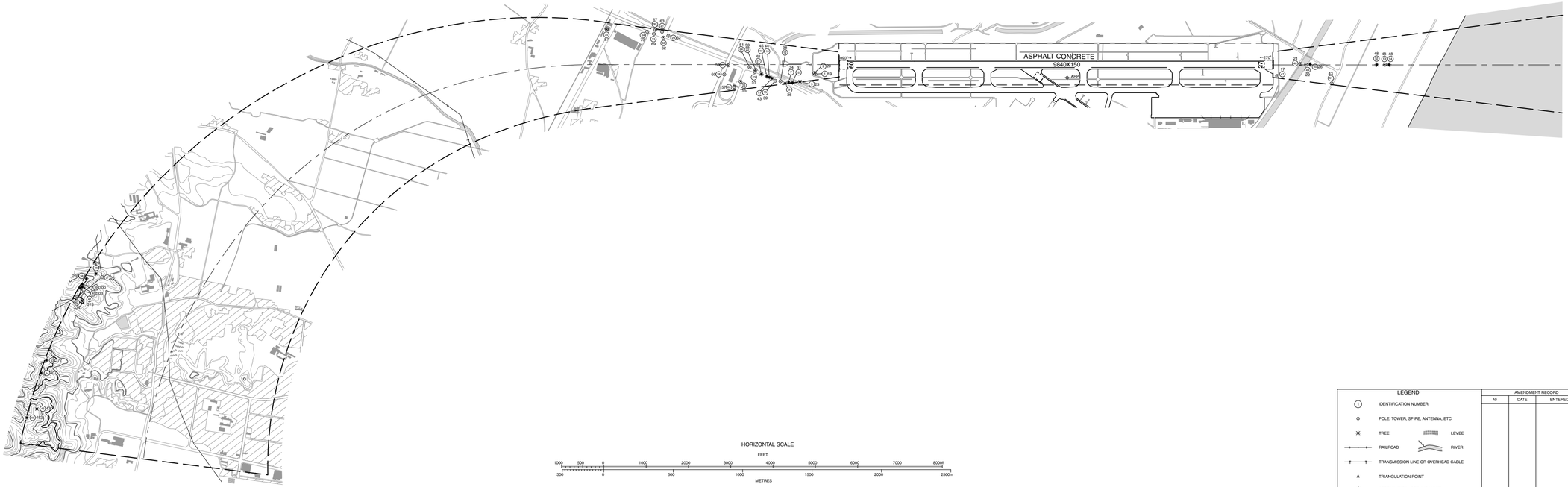
AERODROME OBSTACLE CHART-ICAO
TYPE A (OPERATING LIMITATIONS)

MAGNETIC VARIATION 7˚ 56′ W-APR 2015



SENDAI AIRPORT
RWY : 09/27

DECLARED DISTANCES		
RWY 09		RWY 27
9840	TAKE OFF RUN AVAILABLE	9840
9840	TAKE OFF DISTANCE AVAILABLE	9840
9840	ACCELERATE STOP DISTANCE AVAILABLE	9840
9840	LANDING DISTANCE AVAILABLE	9840



LEGEND

- IDENTIFICATION NUMBER
- POLE, TOWER, SPIRE, ANTENNA, ETC
- TREE
- LEVEE
- RAILROAD
- RIVER
- TRANSMISSION LINE OR OVERHEAD CABLE
- TRIANGULATION POINT
- AERONAUTICAL GROUND LIGHT

AMENDMENT RECORD		
Nr	DATE	ENTERED BY

AERODROME OBSTACLE CHART-ICAO
TYPE B

DIMENSIONS AND ELEVATIONS IN FEET BEARINGS ARE MAGNETIC

AERODROME ELEVATION 5.6ft ARP

VAR 7°56' W APR 2015
ANNUAL CHANGE 5'W

140° 50' E | 140° 51' E | 140° 52' E | 140° 53' E | 140° 54' E | 140° 55' E | 140° 56' E | 140° 57' E | 140° 58' E | 140° 59' E | 141° 00' E

38° 11' N
38° 10' N
38° 09' N
38° 08' N
38° 07' N
38° 06' N
38° 05' N

NATORI RIVER
H ROURA
SENDAI-TOBU ROAD
MASUDA RIVER
NATORI CITY
HORIZONTAL SURFACE
APPROACH SURFACE SLOPE 1:30
TRANSITIONAL SURFACE SLOPE 1:7
TRANSITIONAL SURFACE SLOPE 1:7
TRANSITIONAL SURFACE SLOPE 1:7
TRANSITIONAL SURFACE SLOPE 1:7
TRANSITIONAL SURFACE SLOPE 1:7
TAKE-OFF FLIGHT PATH SLOPE 1.2%
APPROACH SURFACE SLOPE 1:50
APPROACH SURFACE SLOPE 1:50
TAKE-OFF FLIGHT PATH SLOPE 1.2%
APPROACH SURFACE SLOPE 1:30
ASPHALT/CONCRETE
APRON
ASPHALT/CONCRETE
APRON
ABN
PACIFIC OCEAN
TOHOKU LINE
IWANUMA CITY
ITUMA MOAT
SADAYAMA MOAT

LEGEND

- AERODROME REFERENCE POINT 38°08'23"N 140°55'01"E
- POLE, TOWER, SPIRE, ANTENNA, ETC
- AERONAUTICAL GROUND LIGHT
- OBSTRUCTION LIGHT
- BUILDING OR LARGE STRUCTURE
- RAILROAD
- TRIANGULATION POINT
- TRANSMISSION LINE OR OVERHEAD CABLE
- LEVEE
- TREE
- RIVER
- LAKE
- CONTOURS(ft)

AMENDMENT RECORD

Nr	DATE	ENTERED BY

HORIZONTAL SCALE

FEET: 1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000ft

METRES: 300 0 500 1000 1500 2000 2500 3000m

STANDARD DEPARTURE CHART-INSTRUMENT

RJSS / SENDAI SID

IWAKI EIGHT DEPARTURE

RWY 09 : Climb RWY HDG to SDE 3.4DME (2.8NM FM DER), turn right to intercept and proceed...

RWY 12 : Climb ...

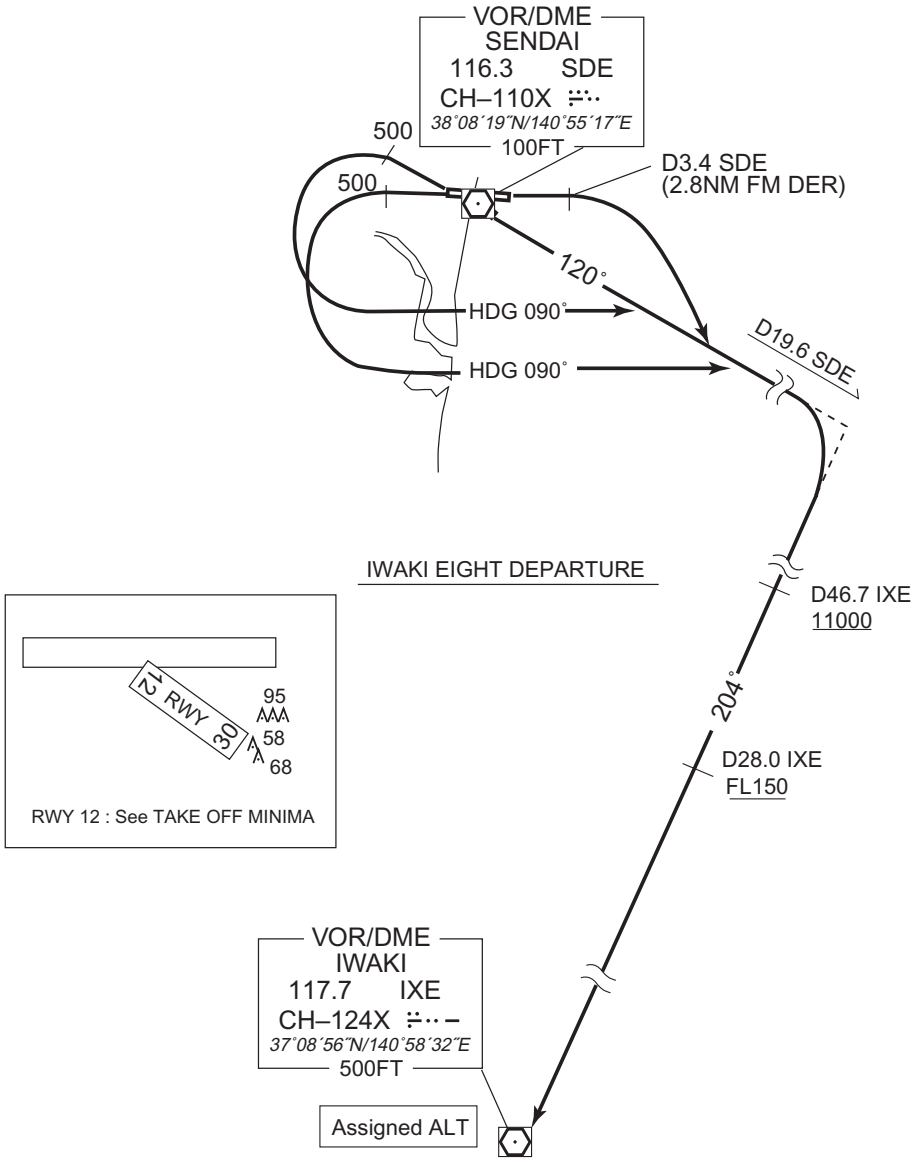
RWY 27 : Climb RWY HDG to 500FT, turn left HDG 090˚ to intercept and proceed...

RWY 30 : Climb RWY HDG to 500FT, turn left HDG 090˚ to intercept and proceed...
...via SDE R120, via IXE R024 to IXE VOR/DME.
Cross IXE R024/46.7DME at or above 11000FT, cross IXE R024/28.0DME at or above FL150, cross IXE VOR/DME at assigned altitude.

Note RWY 09 : 5.0% climb gradient required up to 500FT.
OBST ALT 62FT located at 0.2NM 102˚ FM end of RWY09.

RWY 27 : 5.0% climb gradient required up to 1000FT.
OBST ALT 919FT located at 4.1NM 269˚ FM end of RWY27.

RWY 30 : 5.0% climb gradient required up to 1200FT.
OBST ALT 1181FT located at 5.3NM 283˚ FM end of RWY30.



CHANGE : PROC renamed.Restriction added (IXE R024/46.7DME).

STANDARD DEPARTURE CHART-INSTRUMENT

RJSS / SENDAI SID

SENDAI REVERSAL SIX DEPARTURE

RWY 09 : Climb RWY HDG to SDE 3.4DME (2.8NM fm DER), turn right to intercept and proceed...

RWY 12 : Climb ...

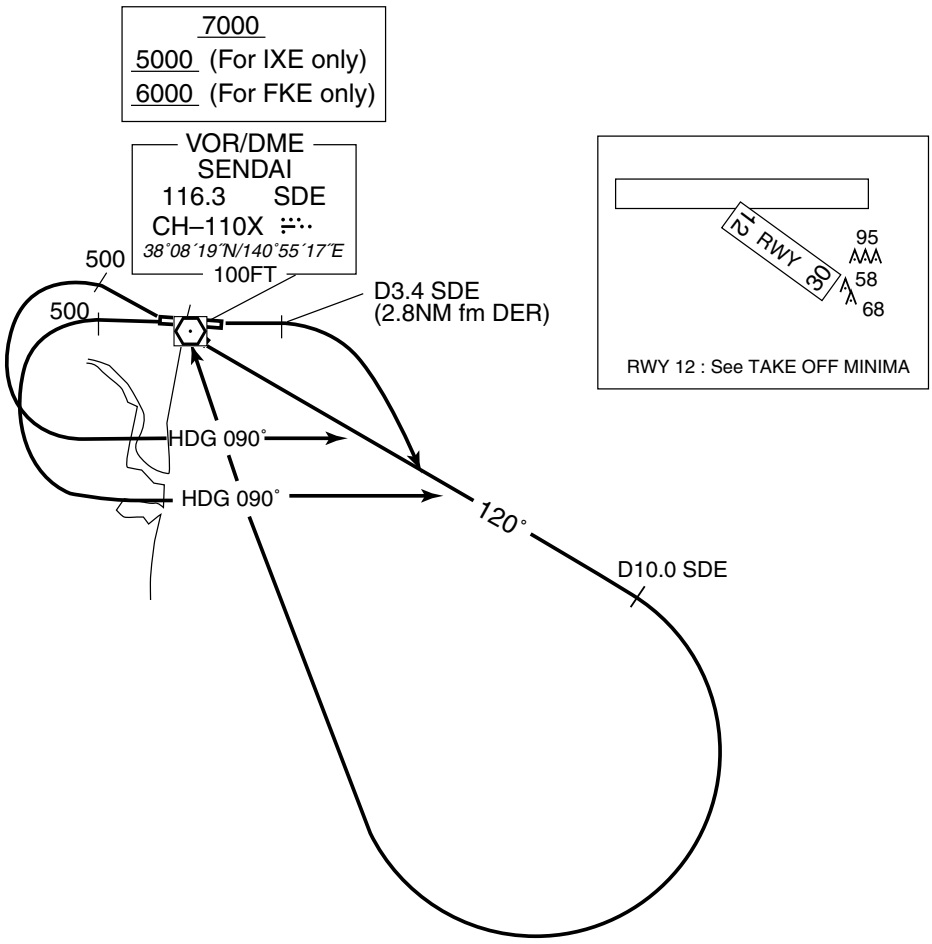
RWY 27 : Climb RWY HDG to 500FT, turn left HDG 090˚ to intercept and proceed...

RWY 30 : Climb RWY HDG to 500FT, turn left HDG 090˚ to intercept and proceed...
...via SDE R120 to 10.0DME, turn right, direct to SDE VOR/DME.
Cross SDE VOR/DME at or above 7000FT(*).

* In case of proceeding to IXE VOR/DME : Cross SDE VOR/DME at or above 5000FT.
In case of proceeding to FKE VOR/DME : Cross SDE VOR/DME at or above 6000FT.

Note RWY 09 : 5.0% climb gradient required up to 500FT.
OBST ALT 62FT located at 0.2NM 102˚ FM end of RWY09.
RWY 27 : 5.0% climb gradient required up to 1000FT.
OBST ALT 919FT located at 4.1NM 269˚ FM end of RWY27.
RWY 30 : 5.0% climb gradient required up to 1200FT.
OBST ALT 1181FT located at 5.3NM 283˚ FM end of RWY30.

SENDAI REVERSAL SIX DEPARTURE



STANDARD DEPARTURE CHART - INSTRUMENT

RJSS / SENDAI — RNAV SID and TRANSITION

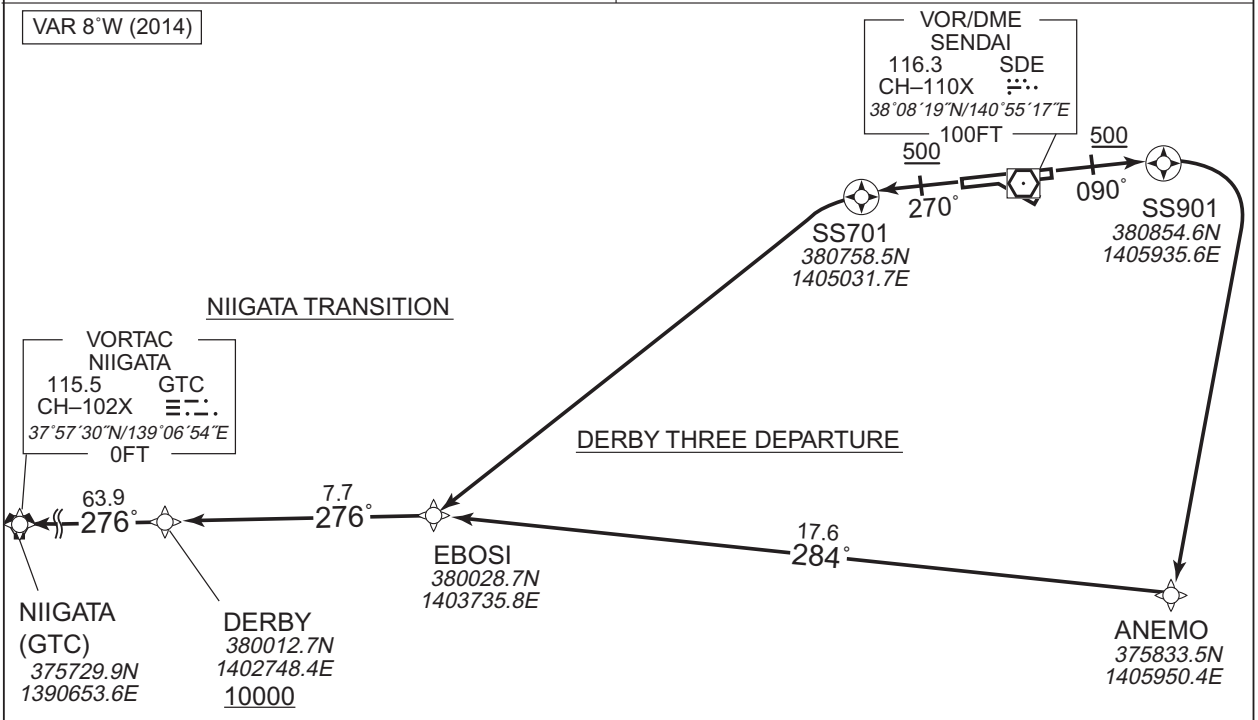
DERBY THREE DEPARTURE / NIIGATA TRANSITION — RNAV 1

Note 1) DME/DME/IRU or GNSS required.
※The aircraft equipped with only DME/DME/IRU must be able to update its position without delay at the starting point of take-off roll.
2) RADAR service required.

DME GAP
RWY09 09DER – 8.0NM to ANEMO
3.0NM to ANEMO – 5.0NM to EBOSI
RWY27 27DER – 5.0NM to EBOSI
NIIGATA TRANSITION
4.0NM to GTC – GTC

Inappropriate Navaids
See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1.

Critical DME
RWY09 SDE : 8.0NM to ANEMO – 3.0NM to ANEMO
5.0NM to EBOSI – EBOSI
IXE : 8.0NM to ANEMO – 3.0NM to ANEMO
HPE : 5.0NM to EBOSI – 2.0NM to EBOSI
RWY27 SDE : 5.0NM to EBOSI – EBOSI
HPE : 5.0NM to EBOSI – EBOSI
NIIGATA TRANSITION
SDE : DERBY – 58.0NM to GTC
YTE : DERBY – 18.0NM to GTC
YSE : 18.0NM to GTC – 4.0NM to GTC
GTC : 40.0NM to GTC – 18.0NM to GTC
14.0NM to GTC – 4.0NM to GTC



DERBY THREE DEPARTURE

RWY09 : Climb on HDG090° at or above 500FT, direct to SS901, turn right direct to ANEMO, to EBOSI, to DERBY at or above 10000FT.

RWY27 : Climb on HDG270° at or above 500FT, direct to SS701, turn left direct to EBOSI, to DERBY at or above 10000FT.

NOTE RWY09: 5.0% climb gradient required up to 500FT.
OBST ALT 62FT located at 0.2NM 102° FM end of RWY09.
RWY27: 5.9% climb gradient required up to 1300FT.
OBST ALT 1181FT located at 4.6NM 284° FM end of RWY27.

NIIGATA TRANSITION

From DERBY at or above 10000FT, to GTC.

STANDARD DEPARTURE CHART - INSTRUMENT

RJSS / SENDAI RNAV SID and TRANSITION

DERBY THREE 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	—	—	090 (082.5)	-7.8	—	—	+500	—	—	RNAV1
002	DF	SS901	Y	—	-7.8	—	—	—	—	—	RNAV1
003	DF	ANEMO	—	—	-7.8	—	R	—	—	—	RNAV1
004	TF	EBOSI	—	284 (276.4)	-7.8	17.6	—	—	—	—	RNAV1
005	TF	DERBY	—	276 (268.1)	-7.8	7.7	—	+10000	—	—	RNAV1

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	—	—	270 (262.5)	-7.8	—	—	+500	—	—	RNAV1
002	DF	SS701	Y	—	-7.8	—	—	—	—	—	RNAV1
003	DF	EBOSI	—	—	-7.8	—	L	—	—	—	RNAV1
004	TF	DERBY	—	276 (268.1)	-7.8	7.7	—	+10000	—	—	RNAV1

NIIGATA TRANSITION

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	DERBY	—	—	-7.8	—	—	+10000	—	—	RNAV1
002	TF	GTC	—	276 (268.0)	-7.8	63.9	—	—	—	—	RNAV1

STANDARD DEPARTURE CHART - INSTRUMENT

RJSS / SENDAI — RNAV SID and TRANSITION

STEED THREE DEPARTURE / RIKYU TRANSITION — RNAV 1

Note 1) DME/DME/IRU or GNSS required.
※The aircraft equipped with only DME/DME/IRU must be able to update its position without delay at the starting point of take-off rolling.
2) RADAR service required.

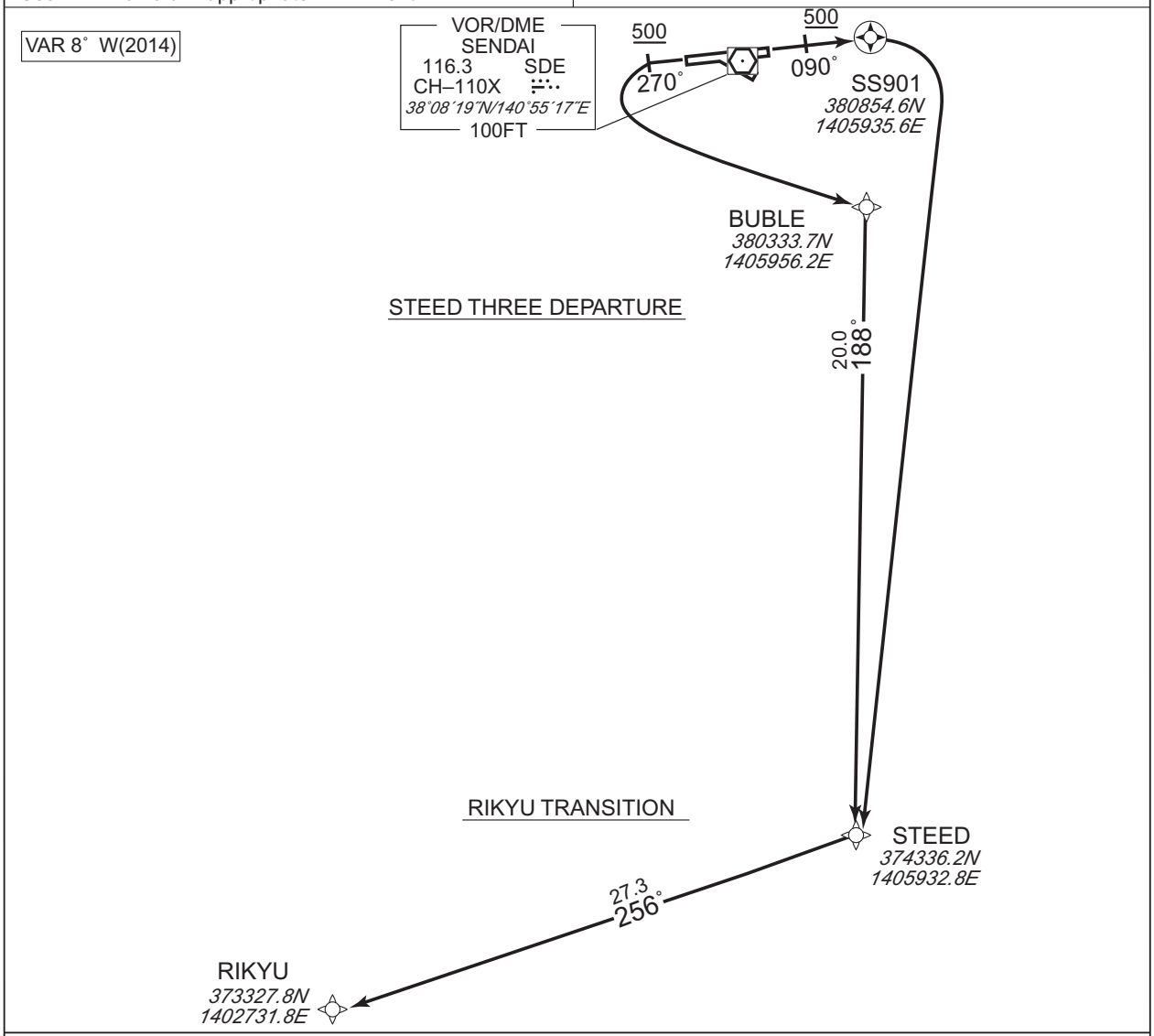
DME GAP
RWY09 09DER – 23.0NM to STEED
8.0NM to STEED – STEED
RWY27 27DER – 4.0NM to BUBLE
8.0NM to STEED – STEED

Inappropriate Navaids
See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1.

Critical DME
RWY09 SDE : 23.0NM to STEED – 8.0NM to STEED
MXT : 18.0NM to STEED – 8.0NM to STEED

RWY27 SDE : 2.0NM to BUBLE – 8.0NM to STEED
MXT : 4.0NM to BUBLE – 2.0NM to BUBLE
18.0NM to STEED – 8.0NM to STEED

RIKYU TRANSITION
YTE : 25.0NM to RIKYU – 23.0NM to RIKYU



STEED THREE DEPARTURE
RWY09 : Climb on HDG090° at or above 500FT, direct to SS901, turn right direct to STEED.
RWY27 : Climb on HDG270° at or above 500FT, turn left direct to BUBLE, to STEED.
NOTE RWY09: 5.0% climb gradient required up to 500FT.
OBST ALT 62FT located at 0.2NM 102° FM end of RWY09.
RWY27: 5.0% climb gradient required up to 1000FT.
OBST ALT 919FT located at 4.1NM 269° FM end of RWY27.

RIKYU TRANSITION
From STEED, to RIKYU.

STANDARD DEPARTURE CHART - INSTRUMENT

RJSS / SENDAI RNAV SID and TRANSITION

STEED THREE 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	—	—	090 (082.5)	-7.8	—	—	+500	—	—	RNAV1
002	DF	SS901	Y	—	-7.8	—	—	—	—	—	RNAV1
003	DF	STEED	—	—	-7.8	—	R	—	—	—	RNAV1

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	—	—	270 (262.5)	-7.8	—	—	+500	—	—	RNAV1
002	DF	BUBLE	—	—	-7.8	—	L	—	—	—	RNAV1
003	TF	STEED	—	188 (180.9)	-7.8	20.0	—	—	—	—	RNAV1

RIKYU TRANSITION

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	STEED	—	—	-7.8	—	—	—	—	—	RNAV1
002	TF	RIKYU	—	256 (248.4)	-7.8	27.3	—	—	—	—	RNAV1

STANDARD DEPARTURE CHART - INSTRUMENT

RJSS / SENDAI RNAV SID

CUBIC THREE DEPARTURE	RNAV 1

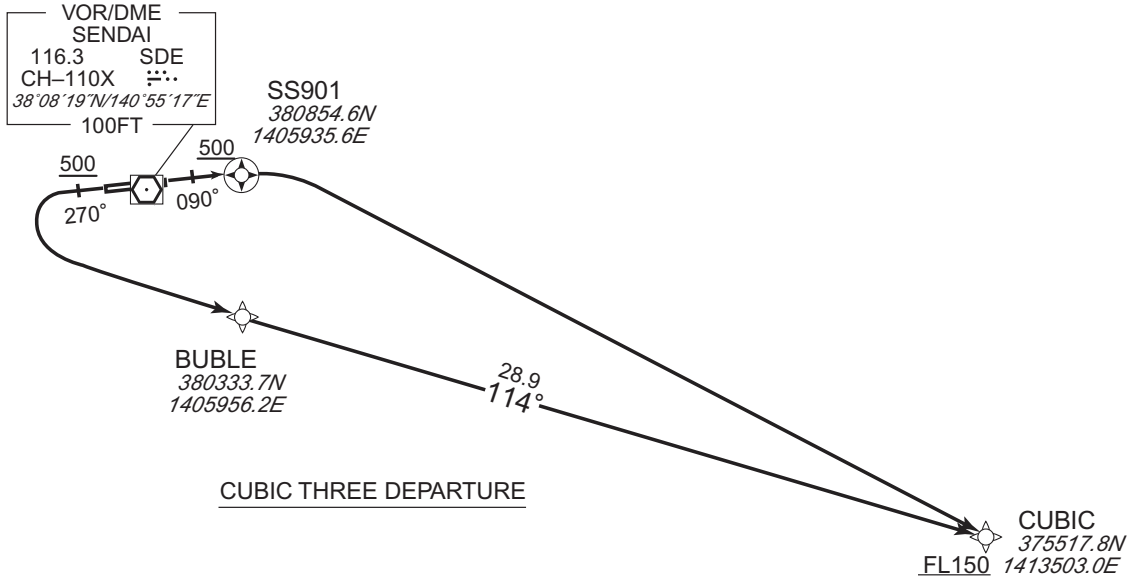
Note 1) DME/DME/IRU or GNSS required.
※The aircraft equipped with only DME/DME/IRU must be able to update its position without delay at the starting point of take-off roll.
2) RADAR service required.

DME GAP
RWY09 09DER – 29.0NM to CUBIC
RWY27 27DER – 4.0NM to BUBLE

Inappropriate Navaids
See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1.

Critical DME
RWY09 SDE, IXE : 29.0NM to CUBIC – CUBIC
RWY27 MXT : 4.0NM to BUBLE – 2.0NM to CUBIC
SDE : 2.0NM to BUBLE – 12.0NM to CUBIC

VAR 8° W(2014)



CUBIC THREE DEPARTURE

RWY09 : Climb on HDG090° at or above 500FT, direct to SS901, turn right direct to CUBIC at or above FL150.

RWY27 : Climb on HDG270° at or above 500FT, turn left direct to BUBLE, to CUBIC at or above FL150.

NOTE RWY09: 5.0% climb gradient required up to 500FT.
OBST ALT 62FT located at 0.2NM 102° FM end of RWY09.
RWY27: 5.0% climb gradient required up to 1000FT.
OBST ALT 919FT located at 4.1NM 269° FM end of RWY27.

STANDARD DEPARTURE CHART - INSTRUMENT

RJSS / SENDAI RNAV SID

CUBIC THREE 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	—	—	090 (082.5)	-7.8	—	—	+500	—	—	RNAV1
002	DF	SS901	Y	—	-7.8	—	—	—	—	—	RNAV1
003	DF	CUBIC	—	—	-7.8	—	R	+FL150	—	—	RNAV1

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	—	—	270 (262.5)	-7.8	—	—	+500	—	—	RNAV1
002	DF	BUBLE	—	—	-7.8	—	L	—	—	—	RNAV1
003	TF	CUBIC	—	114 (106.5)	-7.8	28.9	—	+FL150	—	—	RNAV1

STANDARD DEPARTURE CHART - INSTRUMENT

RJSS / SENDAI RNAV TRANSITION

TOHOKU TRANSITION	RNAV 1

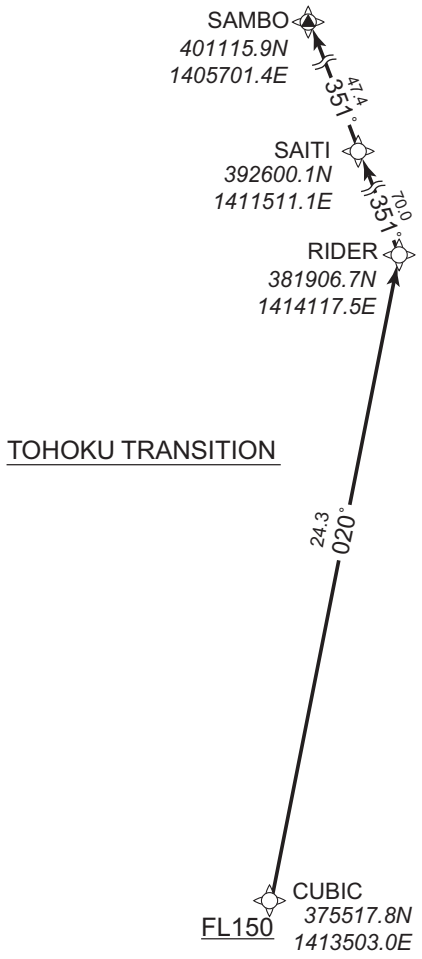
Note 1) DME/DME/IRU or GNSS required.
2) RADAR service required.

Critical DME
HPE : 45.0NM to SAITI - 39.0NM to SAITI
UWE : 31.0NM to SAMBO - 24.0NM to SAMBO

DME GAP
—

Inappropriate Navaids
See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1.

VAR 8° W(2019)



TOHOKU TRANSITION

From CUBIC at or above FL150, to RIDER, to SAITI, to SAMBO.

STANDARD DEPARTURE CHART - INSTRUMENT

RJSS / SENDAI RNAV TRANSITION

TOHOKU TRANSITION

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	CUBIC	—	—	-8.2	—	—	+FL150	—	—	RNAV1
002	TF	RIDER	—	020 (011.6)	-8.2	24.3	—	—	—	—	RNAV1
003	TF	SAITI	—	351 (343.2)	-8.2	70.0	—	—	—	—	RNAV1
004	TF	SAMBO	—	351 (343.0)	-8.2	47.4	—	—	—	—	RNAV1

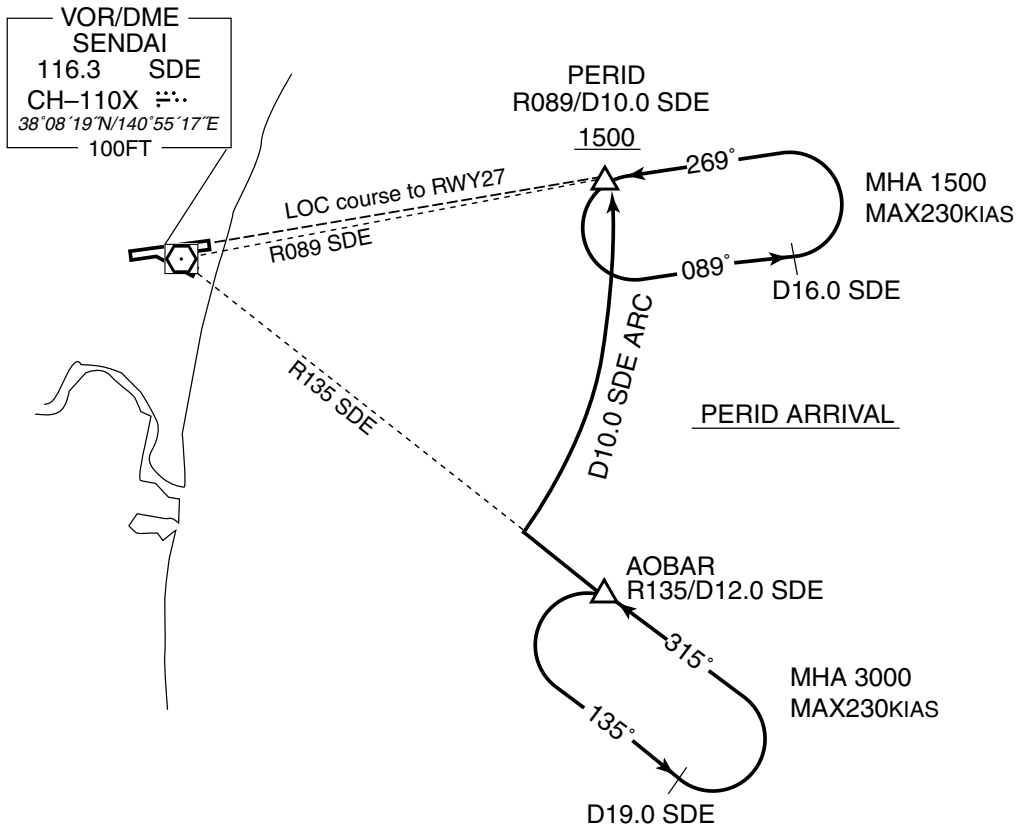
STANDARD ARRIVAL CHART-INSTRUMENT

RJSS / SENDAI STAR

PERID ARRIVAL

From over AOBAR, via SDE R135 to intercept and proceed via SDE 10.0DME counterclockwise ARC to PERID.

Cross PERID at or above 1500FT.

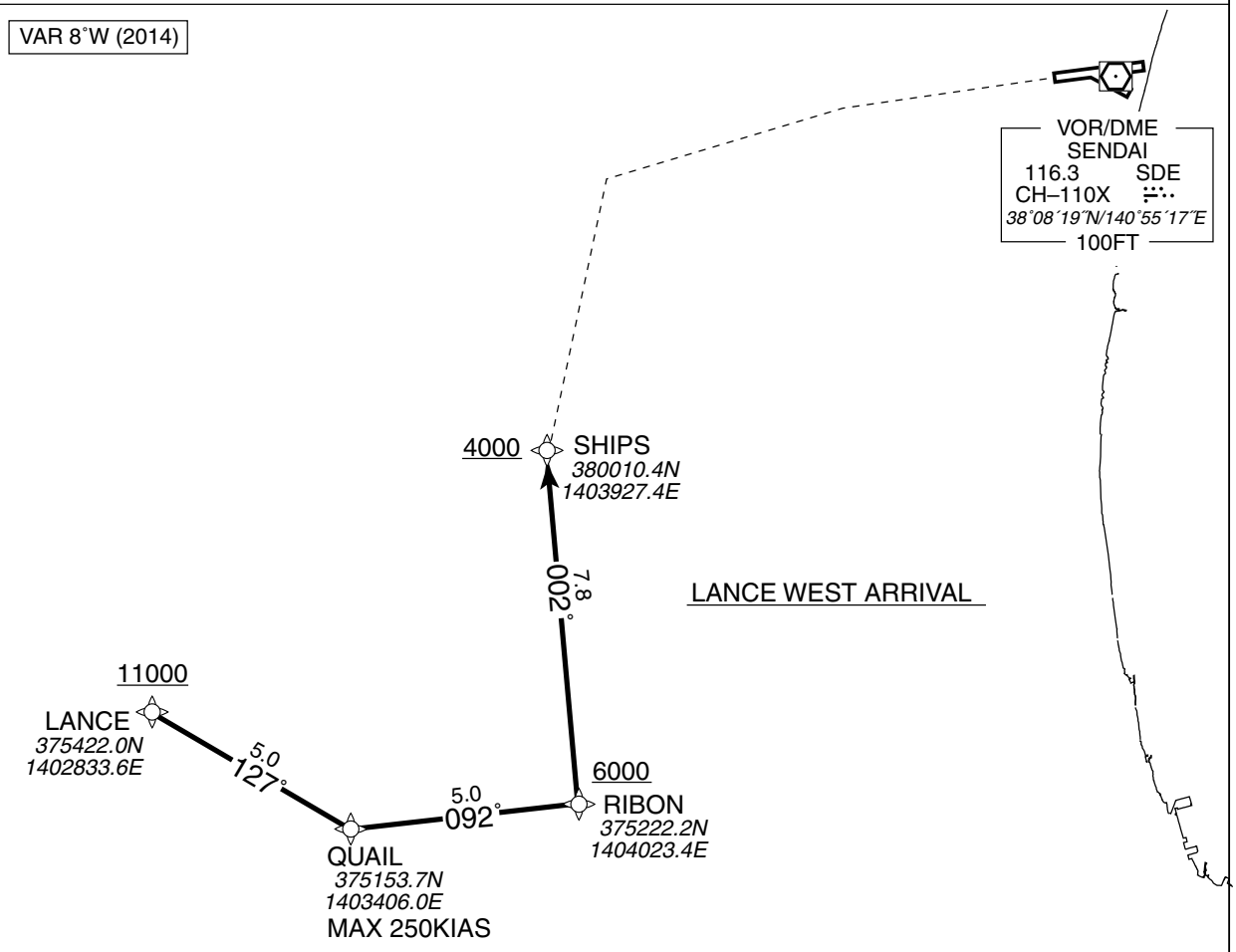


STANDARD ARRIVAL CHART - INSTRUMENT

RJSS / SENDAI — RNAV STAR RWY09

LANCE WEST ARRIVAL	RNAV 1

Note 1) DME/DME/IRU or GNSS required.
2) RADAR service required.



LANCE WEST ARRIVAL

From LANCE at or above 11000FT, to QUAIL, to RIBON at or above 6000FT, to SHIPS at or above 4000FT.

Critical DME	SDE : 5.0NM to QUAIL – 4.0NM to QUAIL 2.0NM to QUAIL – QUAIL HPE : 1.0NM to QUAIL – QUAIL
DME GAP	QUAIL – SHIPS
Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1.

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	LANCE	—	—	-7.8	—	—	+11000	—	—	RNAV1
002	TF	QUAIL	—	127 (119.4)	-7.8	5.0	—	—	-250	—	RNAV1
003	TF	RIBON	—	092 (084.5)	-7.8	5.0	—	+6000	—	—	RNAV1
004	TF	SHIPS	—	002 (354.6)	-7.8	7.8	—	+4000	—	—	RNAV1

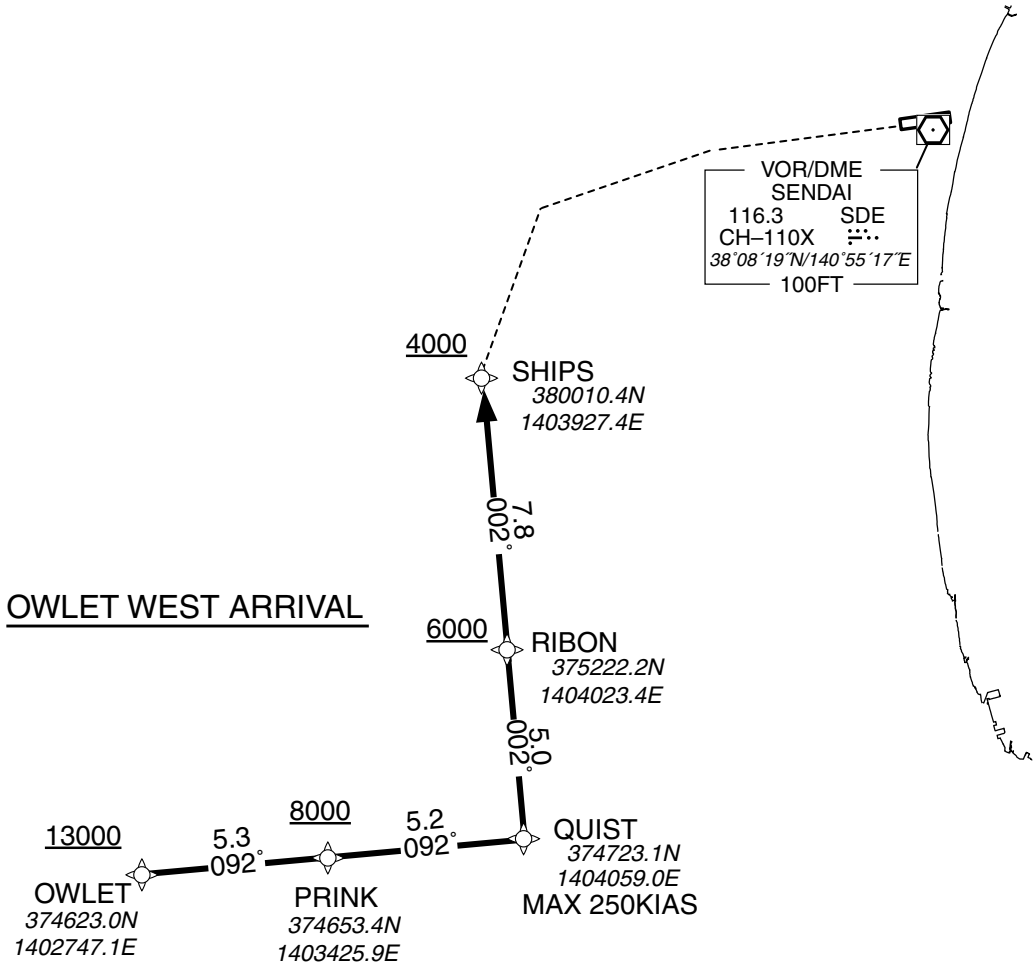
STANDARD ARRIVAL CHART-INSTRUMENT

RJSS / SENDAI RNAV STAR RWY09

OWLET WEST ARRIVAL	Basic RNP1

Note GNSS required.

VAR 8˚W (2014)



OWLET WEST ARRIVAL

From OWLET at or above 13000FT, to PRINK at or above 8000FT, to QUIST, to RIBON at or above 6000FT, to SHIPS at or above 4000FT.

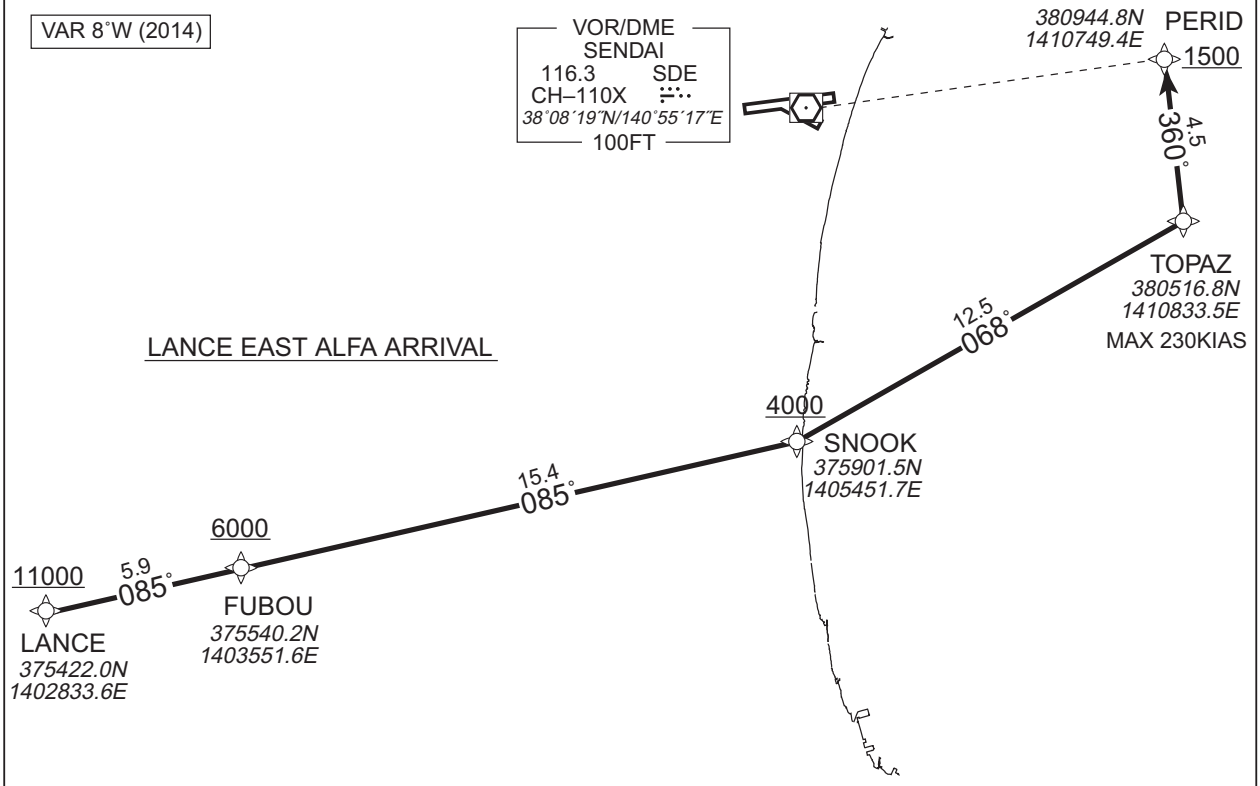
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course ˚M(˚T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	IF	OWLET	—	—	-7.8	—	—	+13000	—	—	Basic RNP1
002	TF	PRINK	—	092 (084.4)	-7.8	5.3	—	+8000	—	—	Basic RNP1
003	TF	QUIST	—	092 (084.5)	-7.8	5.2	—	—	-250	—	Basic RNP1
004	TF	RIBON	—	002 (354.6)	-7.8	5.0	—	+6000	—	—	Basic RNP1
005	TF	SHIPS	—	002 (354.6)	-7.8	7.8	—	+4000	—	—	Basic RNP1

STANDARD ARRIVAL CHART-INSTRUMENT

RJSS / SENDAI RNAV STAR RWY27

LANCE EAST ALFA ARRIVAL	RNAV 1

Note 1) DME/DME/IRU or GNSS required.
2) RADAR service required.



LANCE EAST ALFA ARRIVAL

From LANCE at or above 11000FT, to FUBOU at or above 6000FT, to SNOOK at or above 4000FT, to TOPAZ, to PERID at or above 1500FT.

Critical DME	MXT : 3.0NM to SNOOK - 8.0NM to TOPAZ SDE : 11.0NM to TOPAZ - PERID IXE : 3.0NM to SNOOK - 12.0NM to TOPAZ
DME GAP	LANCE – 3.0NM to SNOOK
Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1.

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	LANCE	—	—	-7.8	—	—	+11000	—	—	RNAV1
002	TF	FUBOU	—	085 (077.2)	-7.8	5.9	—	+6000	—	—	RNAV1
003	TF	SNOOK	—	085 (077.3)	-7.8	15.4	—	+4000	—	—	RNAV1
004	TF	TOPAZ	—	068 (059.8)	-7.8	12.5	—	—	-230	—	RNAV1
005	TF	PERID	—	360 (352.6)	-7.8	4.5	—	+1500	—	—	RNAV1

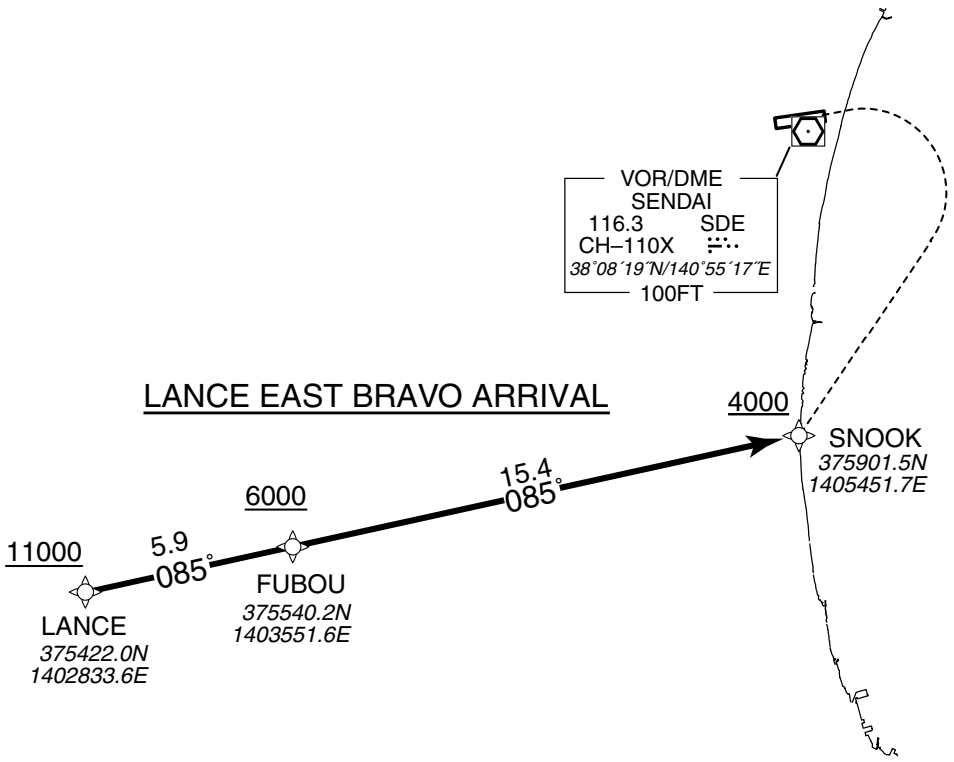
STANDARD ARRIVAL CHART-INSTRUMENT

RJSS / SENDAI RNAV STAR RWY27

LANCE EAST BRAVO ARRIVAL	Basic RNP1

Note GNSS required.

VAR 8˚W (2014)



LANCE EAST BRAVO ARRIVAL

From LANCE at or above 11000FT, to FUBOU at or above 6000FT, to SNOOK at or above 4000FT.

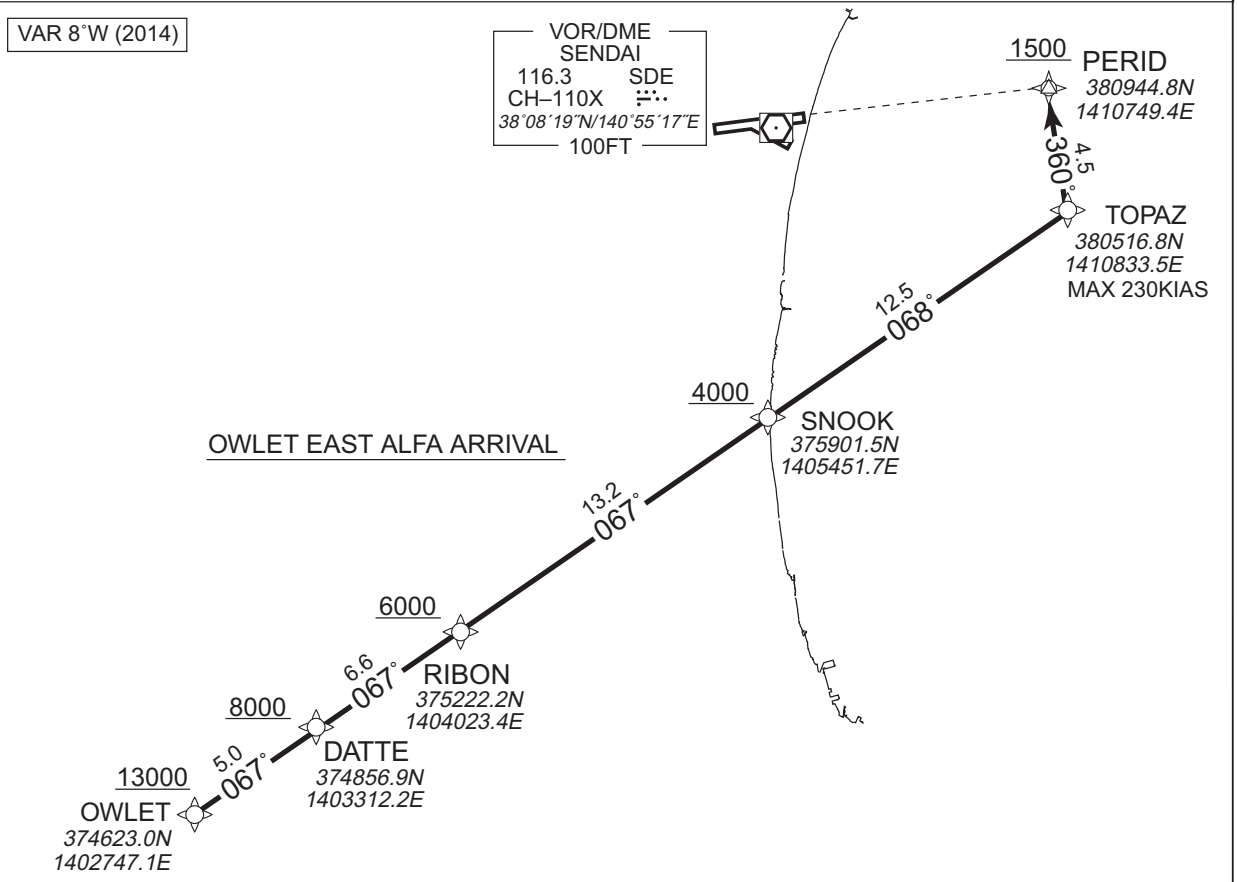
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course ˚M(˚T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	IF	LANCE	—	—	-7.8	—	—	+11000	—	—	Basic RNP1
002	TF	FUBOU	—	085 (077.2)	-7.8	5.9	—	+6000	—	—	Basic RNP1
003	TF	SNOOK	—	085 (077.3)	-7.8	15.4	—	+4000	—	—	Basic RNP1

STANDARD ARRIVAL CHART-INSTRUMENT

RJSS / SENDAI — RNAV STAR RWY27

OWLET EAST ALFA ARRIVAL — RNAV 1

Note 1) DME/DME/IRU or GNSS required.
2) RADAR service required.



OWLET EAST ALFA ARRIVAL

From OWLET at or above 13000FT, to DATTE at or above 8000FT, to RIBON at or above 6000FT, to SNOOK at or above 4000FT, to TOPAZ, to PERID at or above 1500FT.

Critical DME	MXT : 2.0NM to SNOOK – 8.0NM to TOPAZ SDE : 11.0NM to TOPAZ – PERID IXE : 2.0NM to SNOOK – SNOOK
DME GAP	DATTE – 2.0NM to SNOOK
Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1.

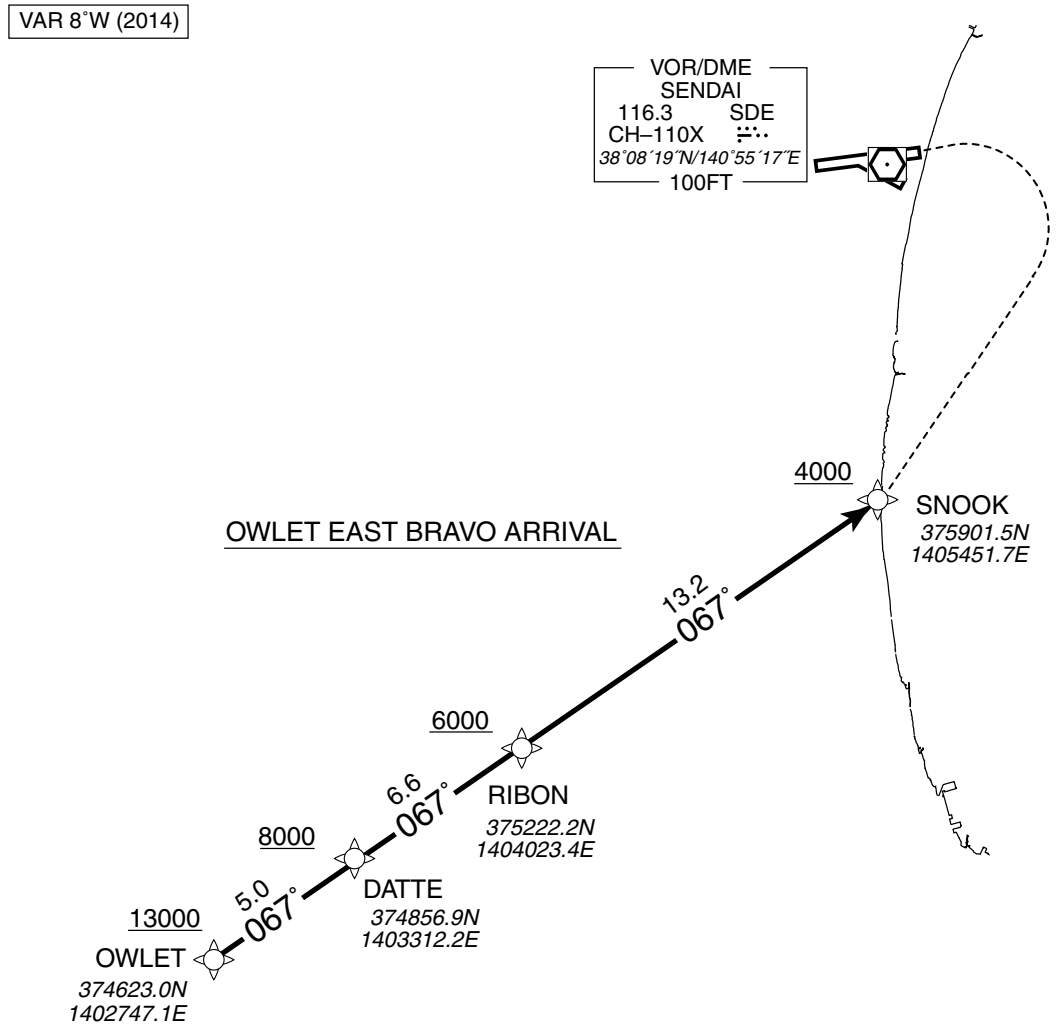
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	IF	OWLET	—	—	-7.8	—	—	+13000	—	—	RNAV1
002	TF	DATTE	—	067 (059.0)	-7.8	5.0	—	+8000	—	—	RNAV1
003	TF	RIBON	—	067 (058.9)	-7.8	6.6	—	+6000	—	—	RNAV1
004	TF	SNOOK	—	067 (059.7)	-7.8	13.2	—	+4000	—	—	RNAV1
005	TF	TOPAZ	—	068 (059.8)	-7.8	12.5	—	—	-230	—	RNAV1
006	TF	PERID	—	360 (352.6)	-7.8	4.5	—	+1500	—	—	RNAV1

STANDARD ARRIVAL CHART-INSTRUMENT

RJSS / SENDAI — RNAV STAR RWY27

OWLET EAST BRAVO ARRIVAL	Basic RNP1

Note GNSS required.



OWLET EAST BRAVO ARRIVAL

From OWLET at or above 13000FT, to DATTE at or above 8000FT, to RIBON at or above 6000FT, to SNOOK at or above 4000FT.

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	OWLET	—	—	-7.8	—	—	+13000	—	—	Basic RNP1
002	TF	DATTE	—	067 (059.0)	-7.8	5.0	—	+8000	—	—	Basic RNP1
003	TF	RIBON	—	067 (058.9)	-7.8	6.6	—	+6000	—	—	Basic RNP1
004	TF	SNOOK	—	067 (059.7)	-7.8	13.2	—	+4000	—	—	Basic RNP1

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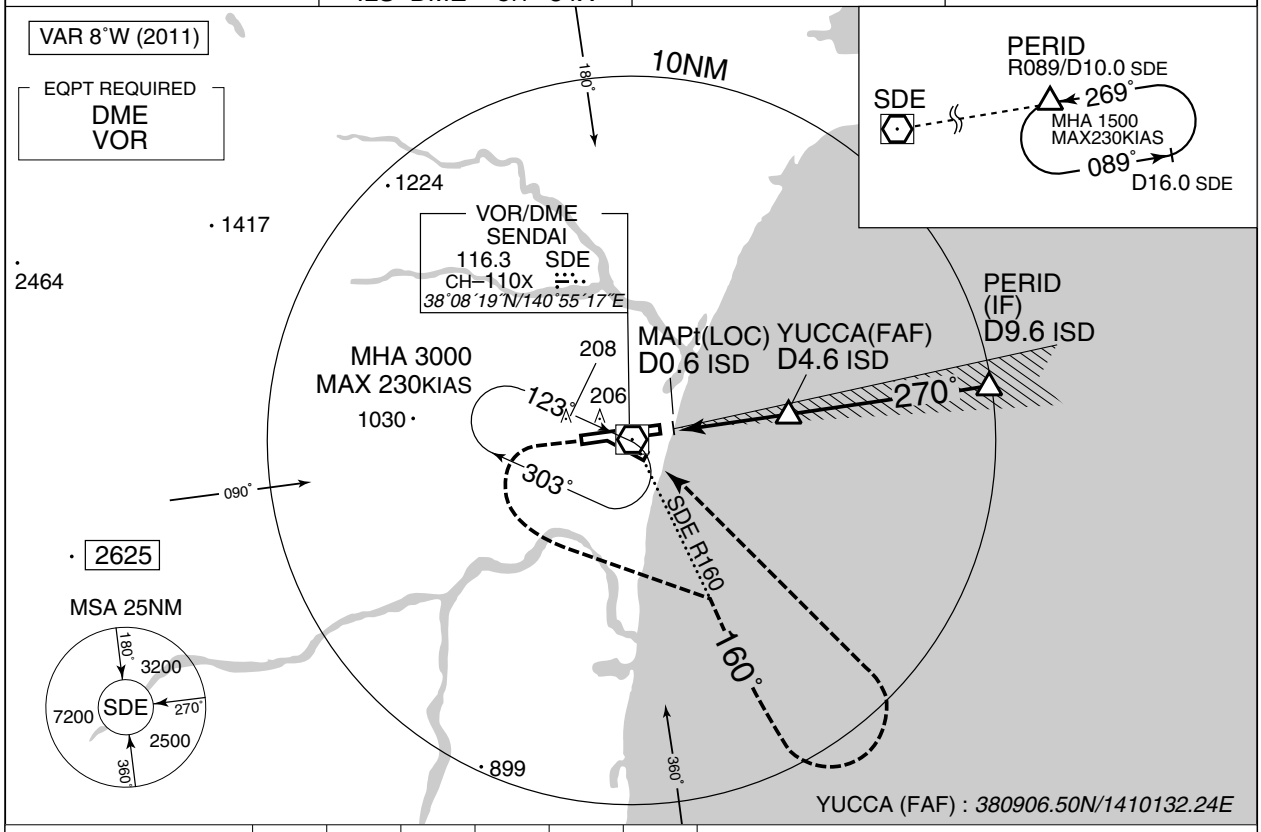
INSTRUMENT APPROACH CHART

RJSS / SENDAI ILS Z or LOC Z RWY27

SENDAI APP	ILS – LOC	SENDAI TWR	RADAR AVBL
120.4 – 261.2	111.7 ISD ILS–GP 333.5 ILS–DME CH –54X	118.7 – 126.2	ATIS 126.45

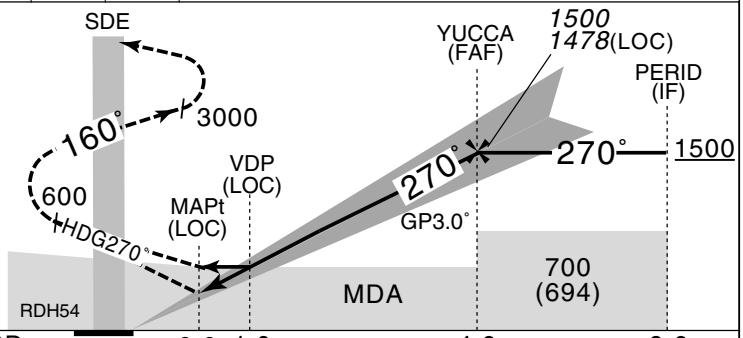


NM to ISD	MAPt	1	2	3	4	FAF
ALT (3.0° APCH Path)	–	326	645	964	1281	1478

MISSED APPROACH

Climb to 600FT on HDG270°,
turn left, via SDE R160 to 3000FT,
turn left, direct to SDE
VOR/DME and hold.
Contact SENDAI APP.

Timing not authorized for defining the MAPt.



DME to ISD		0.6	1.0	4.6	9.6
NM to THR	0	0.5	0.8	4.4	9.4

Missed APCH climb gradient MNM 4.0%.

MINIMA THR elev. 15 AD elev. 6

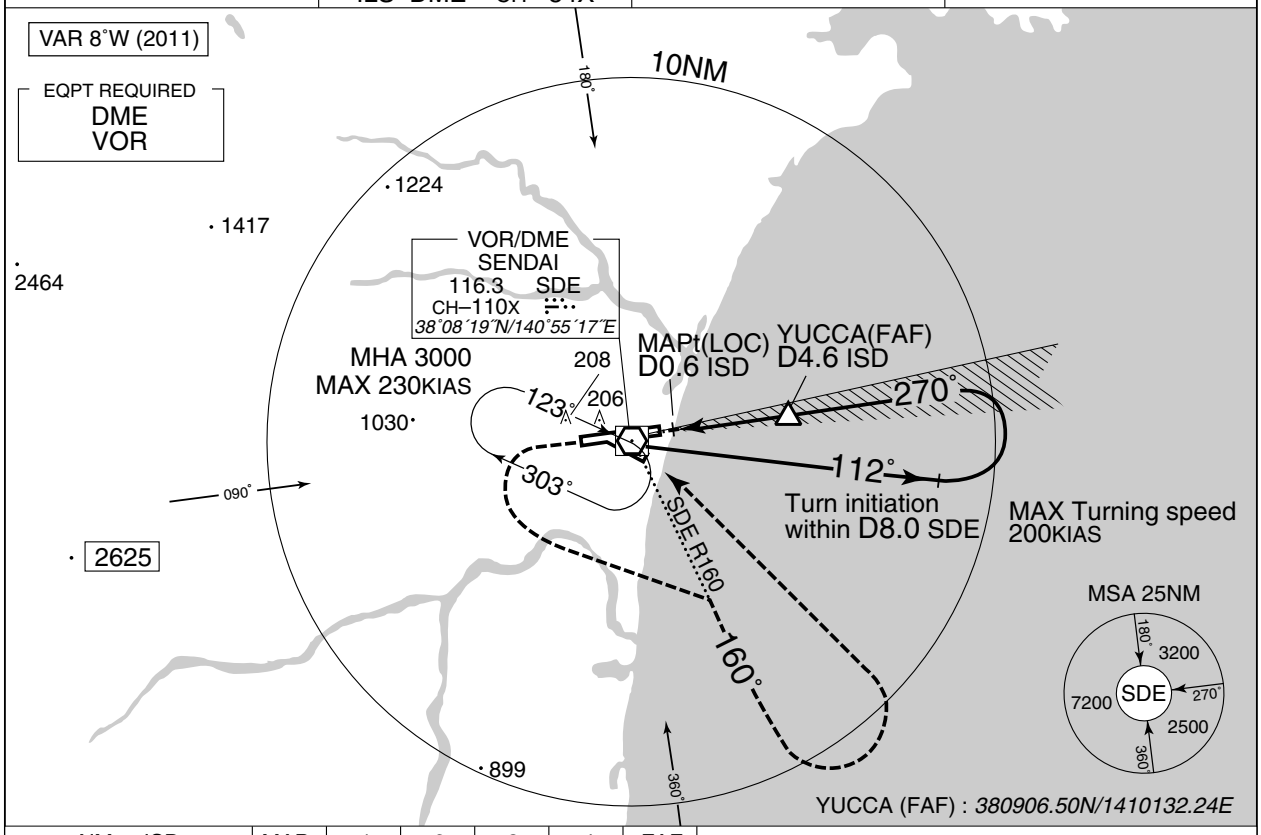
CAT	CAT I		LOC		CIRCLING	
	DA(H)	RVR/CMV	MDA(H)	RVR/CMV	MDA(H)	VIS
A	215 (200)	550	320 (314)	900	530 (524)	1600
B				1000		
C						2400
D				1400	560 (554)	3200

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

INSTRUMENT APPROACH CHART

RJSS / SENDAI ILS Y or LOC Y RWY27

SENDAI APP	ILS – LOC	SENDAI TWR	RADAR AVBL
120.4 – 261.2	111.7 ISD ILS–GP 333.5 ILS–DME CH –54X	118.7 – 126.2	ATIS 126.45

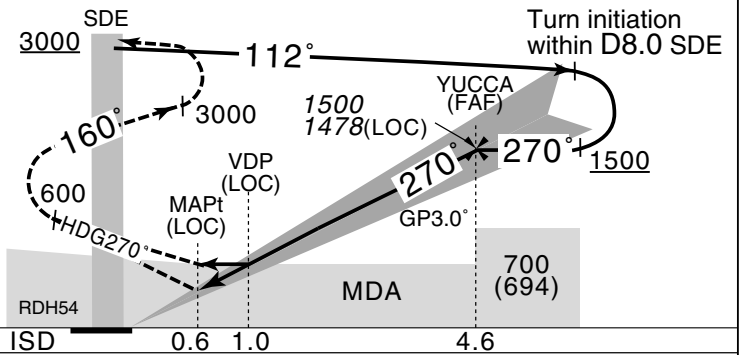


NM to ISD	MAPt	1	2	3	4	FAF
ALT (3.0° APCH Path)	–	326	645	964	1281	1478

MISSED APPROACH

Climb to 600FT on HDG270°,
turn left, via SDE R160 to 3000FT,
turn left, direct to SDE
VOR/DME and hold.
Contact SENDAI APP.

Timing not authorized for defining the MAPt.



DME to ISD		0.6	1.0	4.6
NM to THR	0	0.5	0.8	4.4

Missed APCH climb gradient MNM 4.0%.

MINIMA THR elev. 15 AD elev. 6

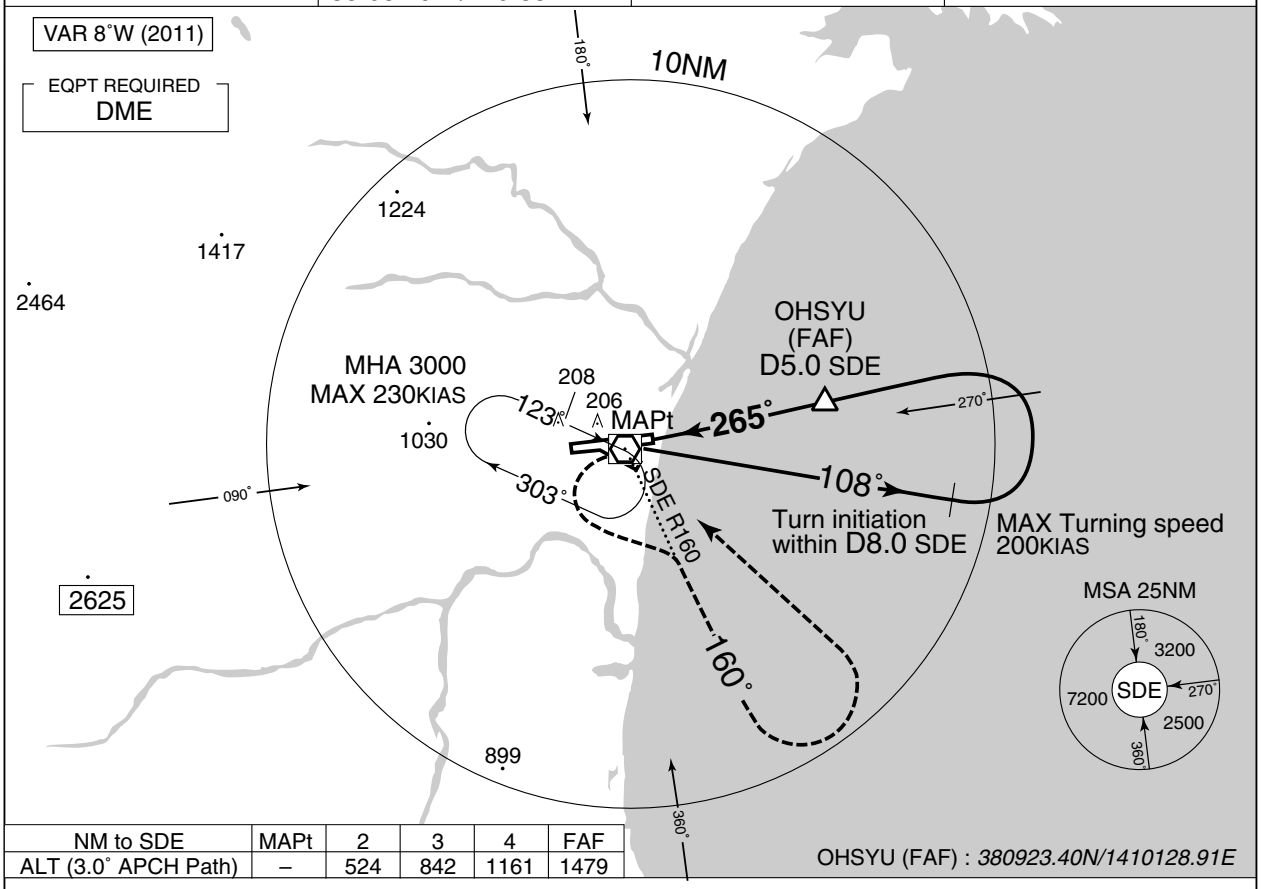
CAT	CAT I		LOC		CIRCLING	
	DA(H)	RVR/ CMV	MDA(H)	RVR/ CMV	MDA(H)	VIS
A	215 (200)	550	320 (314)	900	530 (524)	1600
B				1000		
C						2400
D				1400	560 (554)	3200

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

INSTRUMENT APPROACH CHART

RJSS / SENDAI VOR RWY27

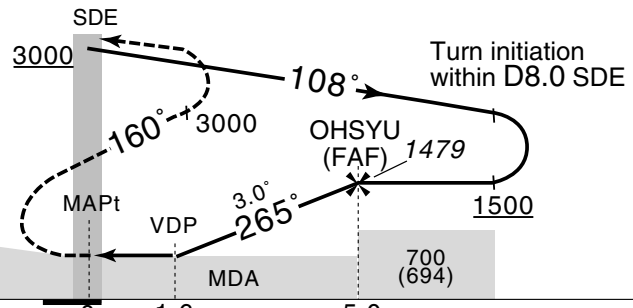
SENDAI APP	SENDAI VOR / DME 116.3 SDE CH–110X *38˚08´19˝N/140˚55´17˝E*	SENDAI TWR	RADAR AVBL
120.4 –261.2		118.7 –126.2	ATIS 126.45



NM to SDE	MAPt	2	3	4	FAF
ALT (3.0˚ APCH Path)	–	524	842	1161	1479

OHSYU (FAF) : *380923.40N/1410128.91E*

MISSED APPROACH
Turn left, climb via SDE R160 to 3000FT,
turn left, direct to SDE VOR/DME
and hold.
Contact SENDAI APP.



Timing not authorized for defining the MAPt.

DME to SDE	0	1.6	5.0
NM to THR	0	1.1	4.4

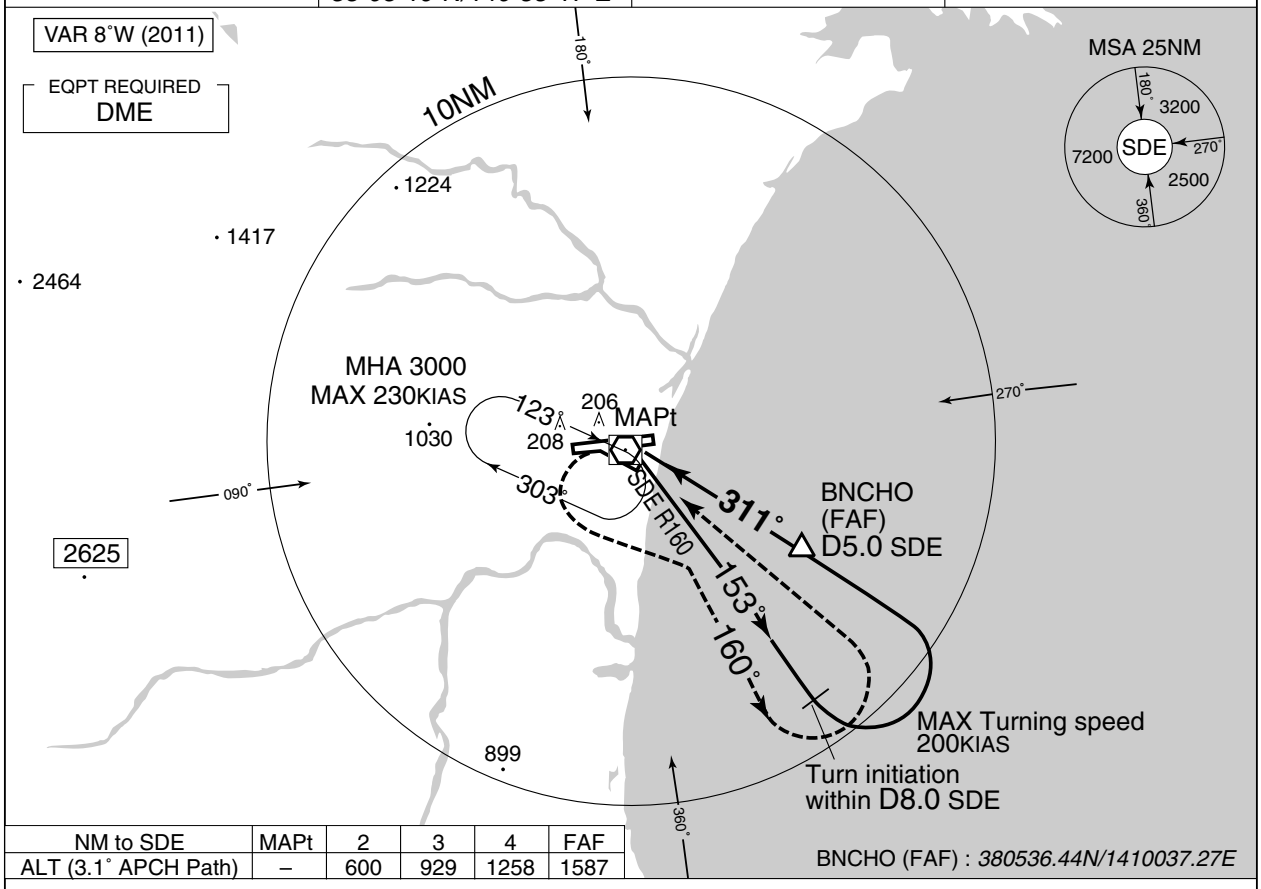
MINIMA THR elev. 15 AD elev. 6

CAT			CIRCLING	
	MDA(H)	RVR/ CMV	MDA(H)	VIS
A	390 (384)	900	530 (524)	1600
B		1000		
C				2400
D		1400	560 (554)	3200

INSTRUMENT APPROACH CHART

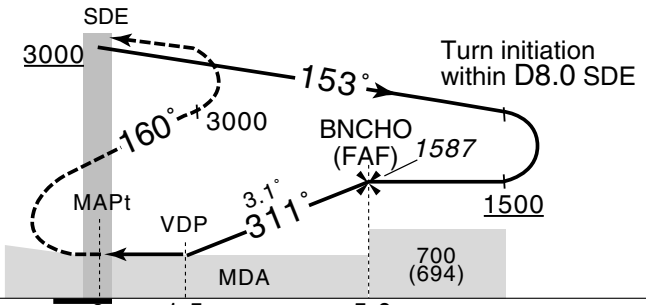
RJSS / SENDAI VOR RWY30

SENDAI APP	SENDAI VOR / DME 116.3 SDE	SENDAI TWR	RADAR AVBL
120.4 –261.2	CH–110X *38°08′19″N/140°55′17″E*	118.7 –126.2	ATIS 126.45



NM to SDE	MAPt	2	3	4	FAF
ALT (3.1° APCH Path)	–	600	929	1258	1587

MISSED APPROACH
Turn left, climb via SDE R160 to 3000FT,
turn left, direct to SDE VOR/DME
and hold.
Contact SENDAI APP.



Timing not authorized for defining the MAPt.

DME to SDE	0	1.5	5.0
NM to THR	0	1.2	4.7

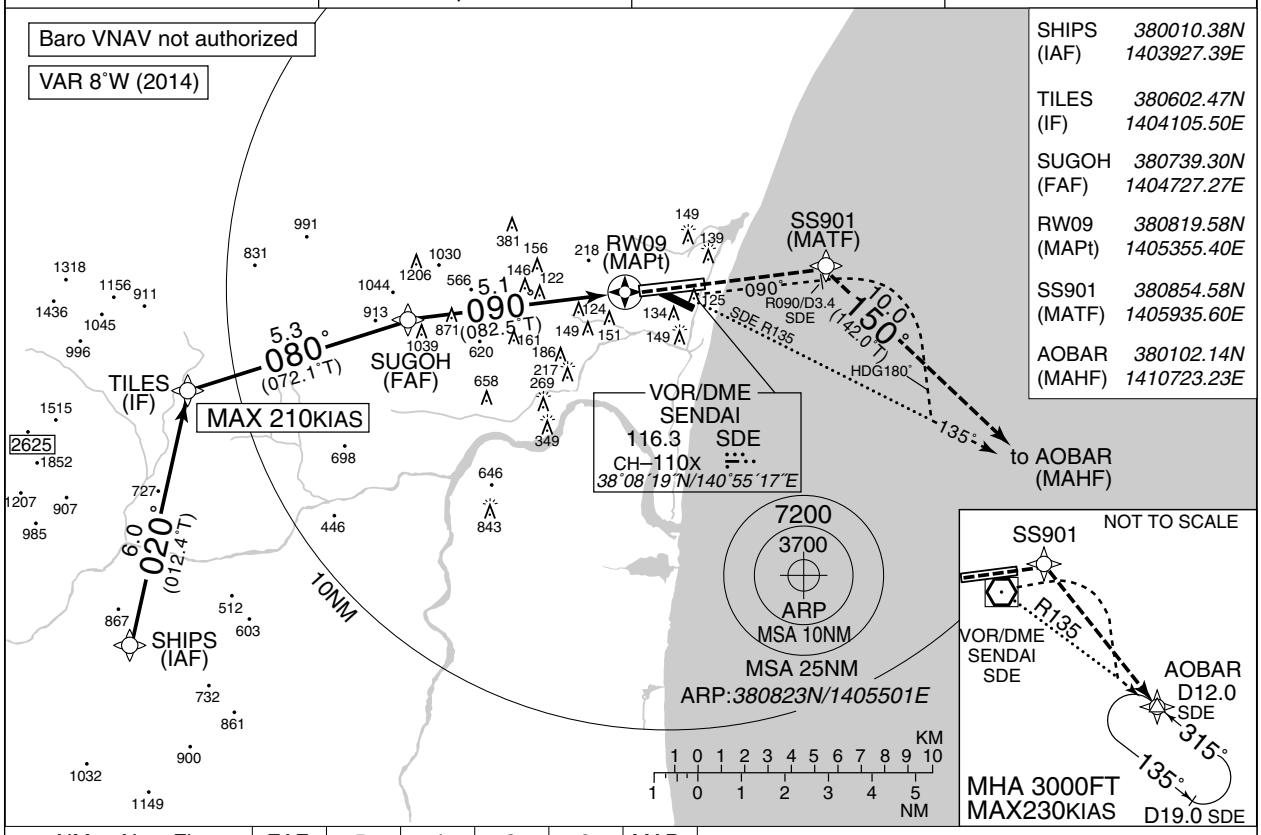
MINIMA THR elev. 5 AD elev. 6

CAT			CIRCLING	
	MDA(H)	CMV	MDA(H)	VIS
A	410 (404)	1500	530 (524)	1600
B				
C		1800		2400
D	–	–	–	–

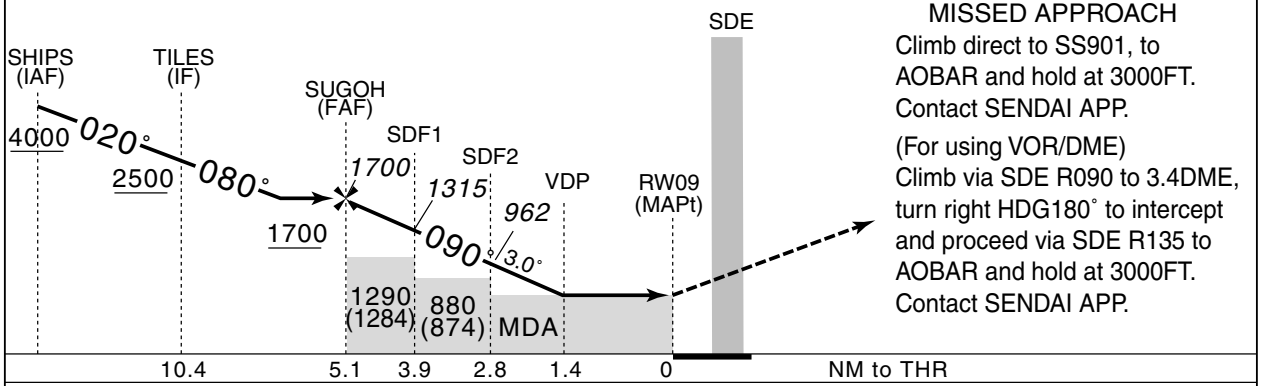
INSTRUMENT APPROACH CHART

RJSS / SENDAI RNAV(GNSS) Z RWY09

SENDAI APP	1. DME/DME not authorized. 2. RADAR service required. 3. GNSS required	SENDAI TWR	RADAR AVBL
120.4 – 261.2		118.7 – 126.2	ATIS 126.45



NM to Next Fix	FAF	5	4	3	2	MAPt
ALT (3.0˚ APCH Path)	1700	1669	1347	1026	705	–



MISSED APPROACH
Climb direct to SS901, to AOBAR and hold at 3000FT.
Contact SENDAI APP.

(For using VOR/DME)
Climb via SDE R090 to 3.4DME, turn right HDG180˚ to intercept and proceed via SDE R135 to AOBAR and hold at 3000FT.
Contact SENDAI APP.

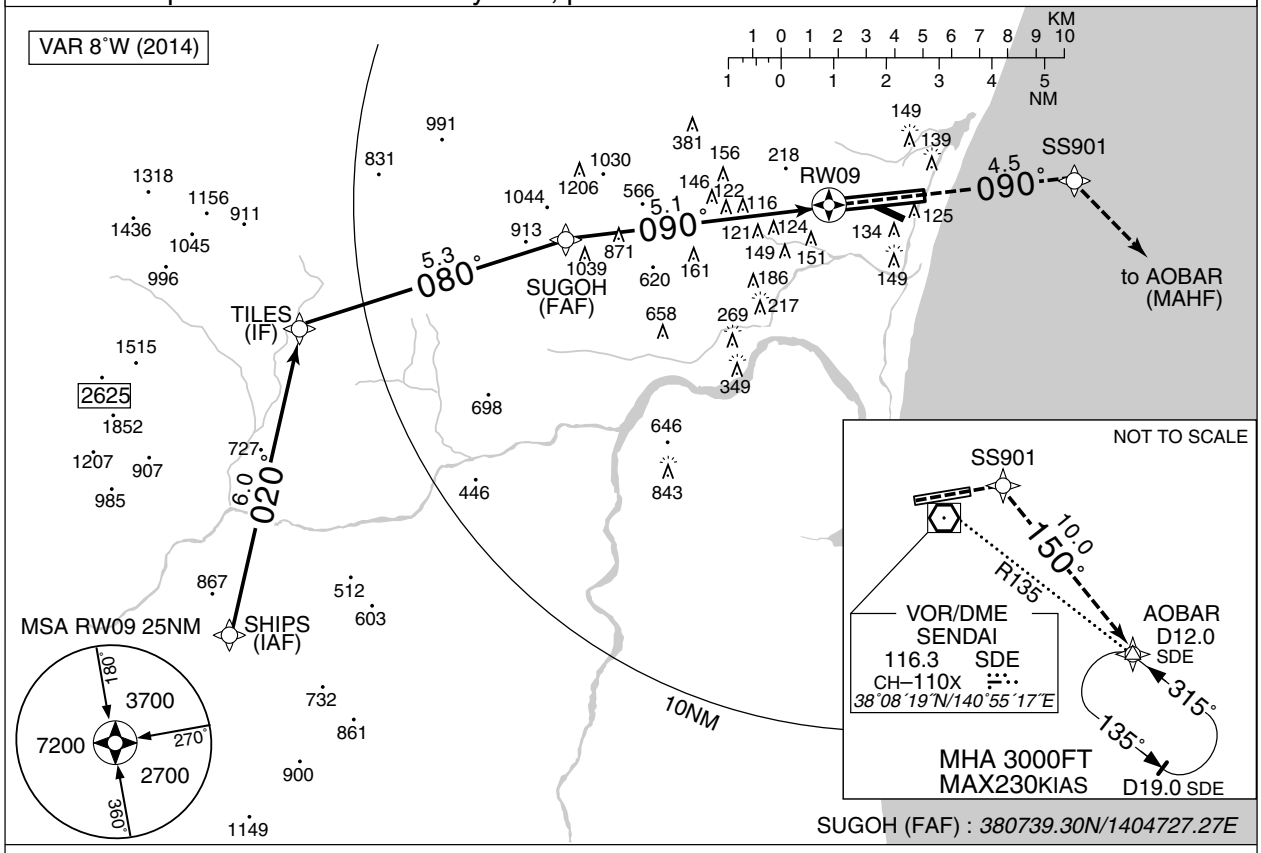
MINIMA	THR elev. 12		AD elev. 6			
CAT	LNAV/VNAV		LNAV		CIRCLING	
	DA(H)	CMV	MDA(H)	CMV	MDA(H)	VIS
A	Not applicable		520 (514)	1400	530 (524)	1600
B				1500		
C				1600		2400
D				1800	560 (554)	3200

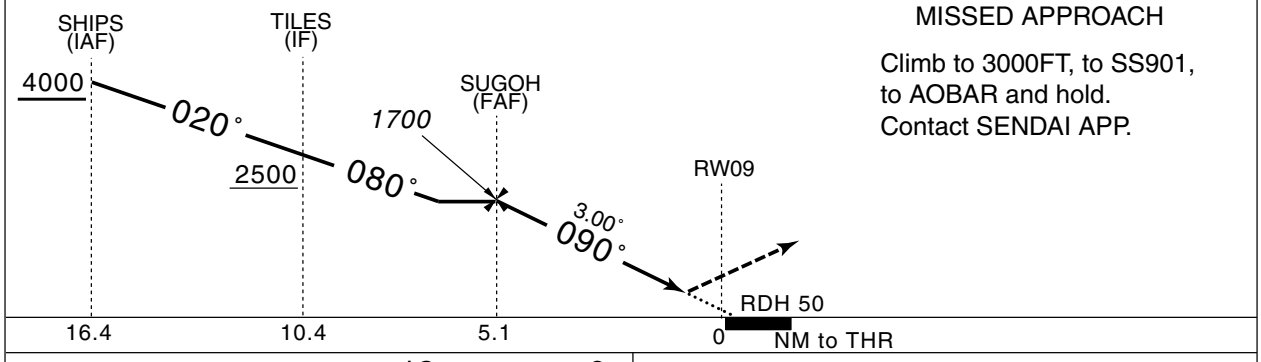
INSTRUMENT APPROACH CHART

RJSS / SENDAI — RNAV(RNP) Y RWY09

SENDAI APP	GNSS required	SENDAI TWR	RADAR AVBL
120.4 – 261.2		118.7 – 126.2	ATIS 126.45

For uncompensated Baro-VNAV system, procedure not authorized below -10˚C / above 45˚C





MISSED APPROACH

Climb to 3000FT, to SS901,
to AOBAR and hold.
Contact SENDAI APP.

MINIMA — THR elev. 12 — AD elev. 6

CAT	RNP 0.30	
	DA(H)	CMV
A	–	–
B		
C	312 (300)	1400
D		1600

RNP AR

Special Authorization Required

INSTRUMENT APPROACH CHART

RJSS / SENDAI RNAV(RNP) Y RWY09

RNAV(RNP) Y 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	SHIPS	—	—	-7.8	—	—	+4000	—	—	—
002	TF	TILES	—	020 (012.4)	-7.8	6.0	—	+2500	—	—	1.0
003	TF	SUGOH	—	080 (072.1)	-7.8	5.3	—	1700	—	—	1.0
004	TF	RW09	Y	090 (082.5)	-7.8	5.1	—	62	—	-3.00/50	0.3
005	TF	SS901	—	090 (082.5)	-7.8	4.5	—	—	—	—	1.0
006	TF	AOBAR	—	150 (142.0)	-7.8	10.0	—	3000	—	—	1.0

Waypoint Coordinates

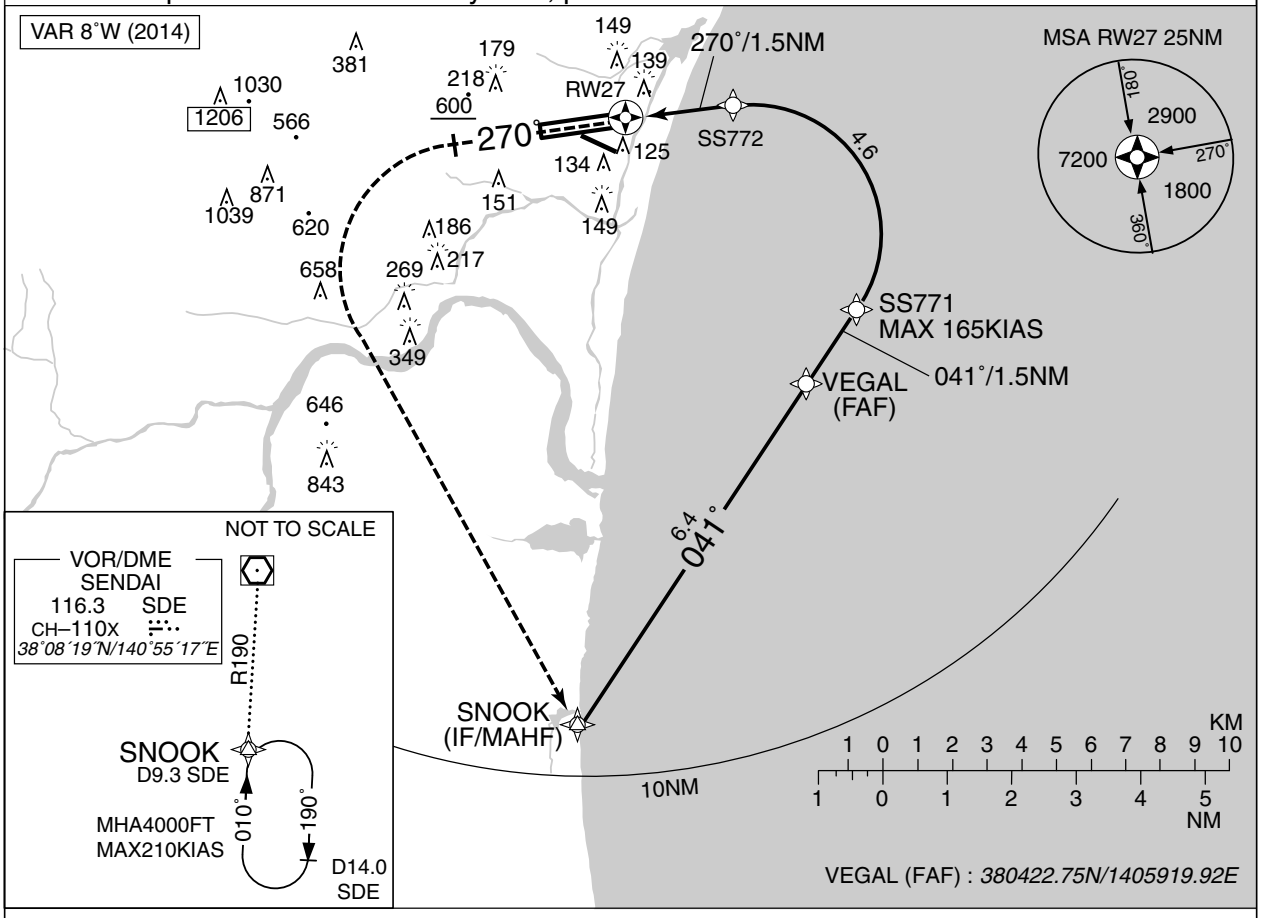
Waypoint Identifier	Coordinates
SHIPS	*380010.38N/1403927.39E*
TILES	*380602.47N/1404105.50E*
SUGOH	*380739.30N/1404727.27E*
RW09	*380819.58N/1405355.40E*
SS901	*380854.58N/1405935.60E*
AOBAR	*380102.14N/1410723.23E*

INSTRUMENT APPROACH CHART

RJSS / SENDAI RNAV(RNP) RWY27

SENDAI APP	GNSS and RF required	SENDAI TWR	RADAR AVBL
120.4 – 261.2		118.7 – 126.2	ATIS 126.45

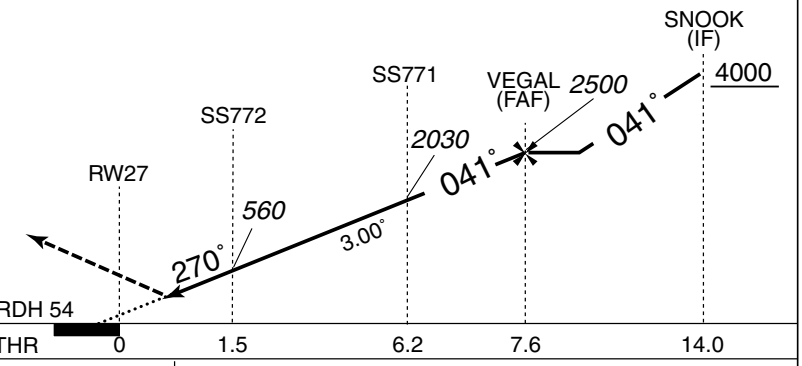
For uncompensated Baro-VNAV system, procedure not authorized below -10˚C / above 45˚C



MISSED APPROACH

From RW27 on track 270˚, at or above 600FT turn left, direct to SNOOK and hold at 4000FT.

Contact SENDAI APP.



MINIMA	THR elev. 15	AD elev. 6
CAT	RNP 0.30	
	DA(H)	RVR/CMV
A	–	–
B		
C	315 (300)	1000
D		1400

RNP AR

Special Authorization Required

* Missed APCH climb gradient MNM 4.0%

INSTRUMENT APPROACH CHART

RJSS / SENDAI RNAV(RNP) RWY27

RNAV(RNP) RWY27

Coding Table

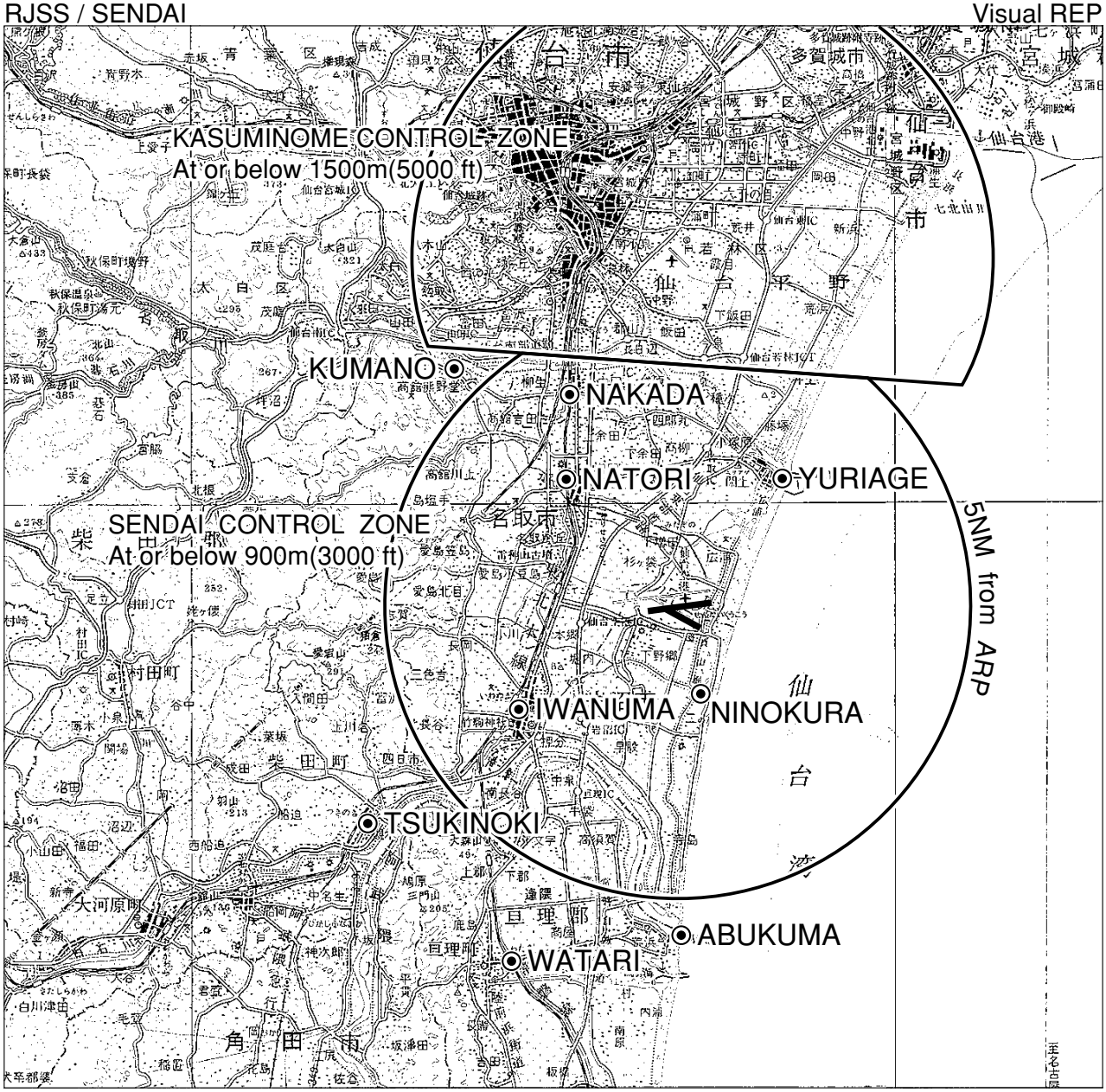
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course ˚M(˚T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	VPA/RDH (˚/FT)	RNP Value
001	IF	SNOOK	—	—	-7.8	—	—	+4000	—	—	—
002	TF	VEGAL	—	041 (033.3)	-7.8	6.4	—	2500	—	—	1.0
003	TF	SS771	—	041 (033.4)	-7.8	1.5	—	2030	-165	-3.00	0.3
004	RF Center: SSRF1 R=2.02NM	SS772	—	—	-7.8	4.6	L	560	—	-3.00	0.3
005	TF	RW27	Y	270 (262.6)	-7.8	1.5	—	69	—	-3.00/54	0.3
006	FA	—	—	270 (262.6)	-7.8	—	—	+600	—	—	1.0
007	DF	SNOOK	—	—	-7.8	—	L	4000	—	—	1.0

Waypoint Coordinates

Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
SNOOK	*375901.53N/1405451.66E*	SSRF1	*380643.74N/1405813.69E*
VEGAL	*380422.75N/1405919.92E*		
SS771	*380536.78N/1410021.86E*		
SS772	*380844.14N/1405753.87E*		
RW27	*380832.18N/1405557.56E*		

RJSS / SENDAI

Visual REP



RJSS / SENDAI Visual REP

Call sign	BRG / DIST from ARP	Remarks
槻木 Tsukinoki	242˚/ 6.2NM	JR槻木駅 Station
岩沼 Iwanuma	244˚/ 3.0NM	JR岩沼駅 Station
亘理 Watari	212˚/ 6.6NM	JR亘理駅 Station
阿武隈 Abukuma	186˚/ 5.6NM	阿武隈川河口 River-mouth of the Abukuma
二の倉 Ninokura	169˚/ 1.7NM	県南浄化センター Sewage disposal center
閖上 Yuriage	054˚/ 3.0NM	名取川河口 River-mouth of the Natori
中田 Nakada	343˚/ 3.8NM	JR南仙台駅 Station
名取 Natori	329˚/ 2.6NM	JR名取駅 Station
熊野 Kumano	327˚/ 5.1NM	熊野神社 the Kumano Shrine

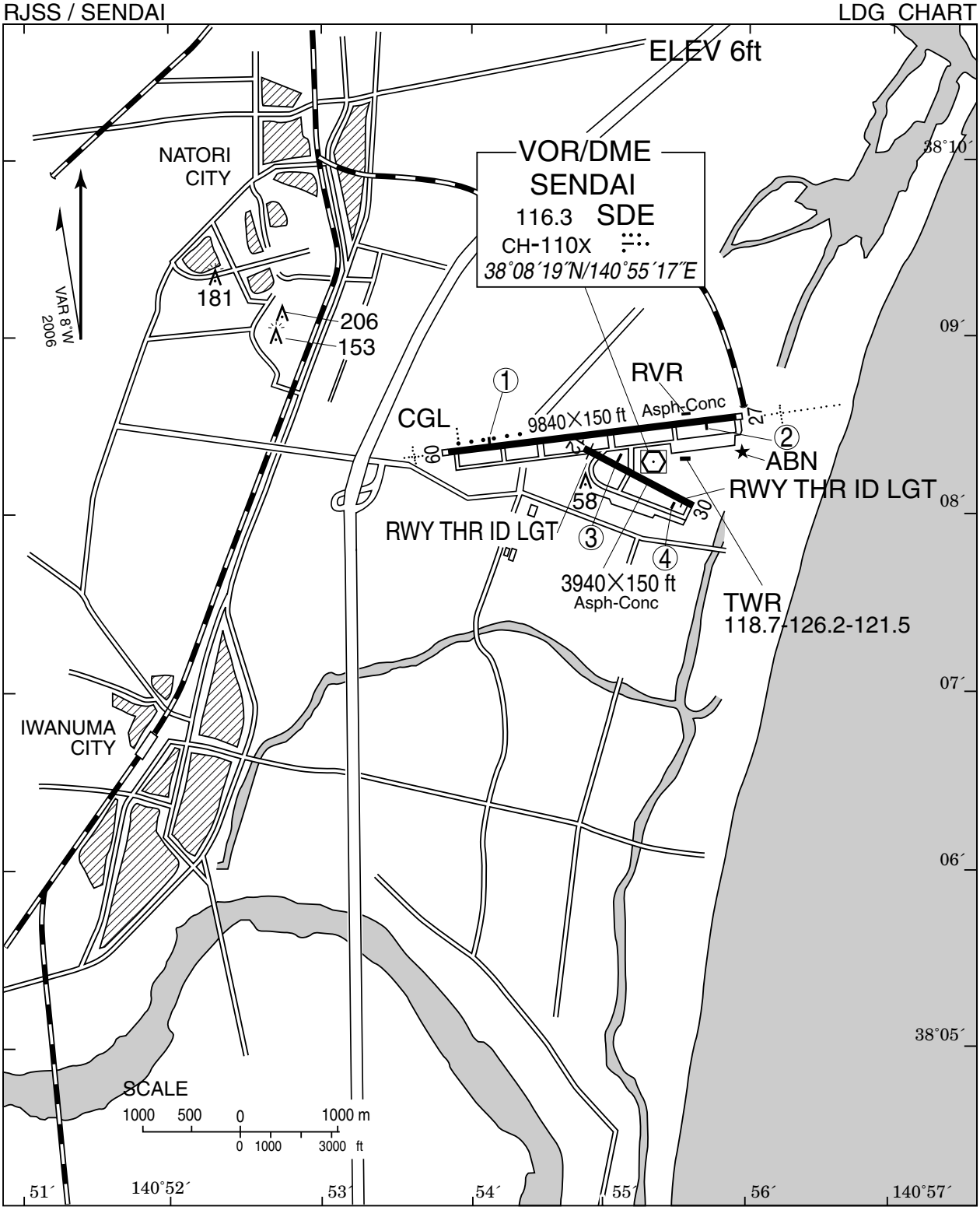
注：有視界飛行方式により霞目管制圏から仙台管制圏へ進入しようとする航空機は、仙台管制圏に入圏する前に仙台タワーへ通報すること。

NOTE：When any VFR flight enters SENDAI CTR directly via KASUMINOME CTR, the pilot shall report to "SENDAI TWR" before entering SENDAI CTR.

注：VFR機とIFR機の航行の安全のため、仙台進入管制区のうち、仙台空港から15NM以内の地域をVFRで航行する場合は、仙台TCAと積極的にコンタクトすること。

NOTE：In order to ensure the safety operations for both VFR and IFR aircraft, VFR aircraft should contact SENDAI TCA positively when the flight includes SENDAI Approach Control Area, within 15 miles from Sendai Airport.

RJSS / SENDAI LDG CHART



①	②	③	④
Angle 3.0°	Angle 3.0°	Angle 3.0°	Angle 3.1°
MEHT 22.5m (73.8 ft)	MEHT 20.0m (65.6 ft)	MEHT 13.6m (44.5 ft)	MEHT 13.6m (44.5 ft)
456m FM THR	439m FM THR	306m FM THR	262m FM THR

RJSS / SENDAI Minimum Vectoring Altitude CHART