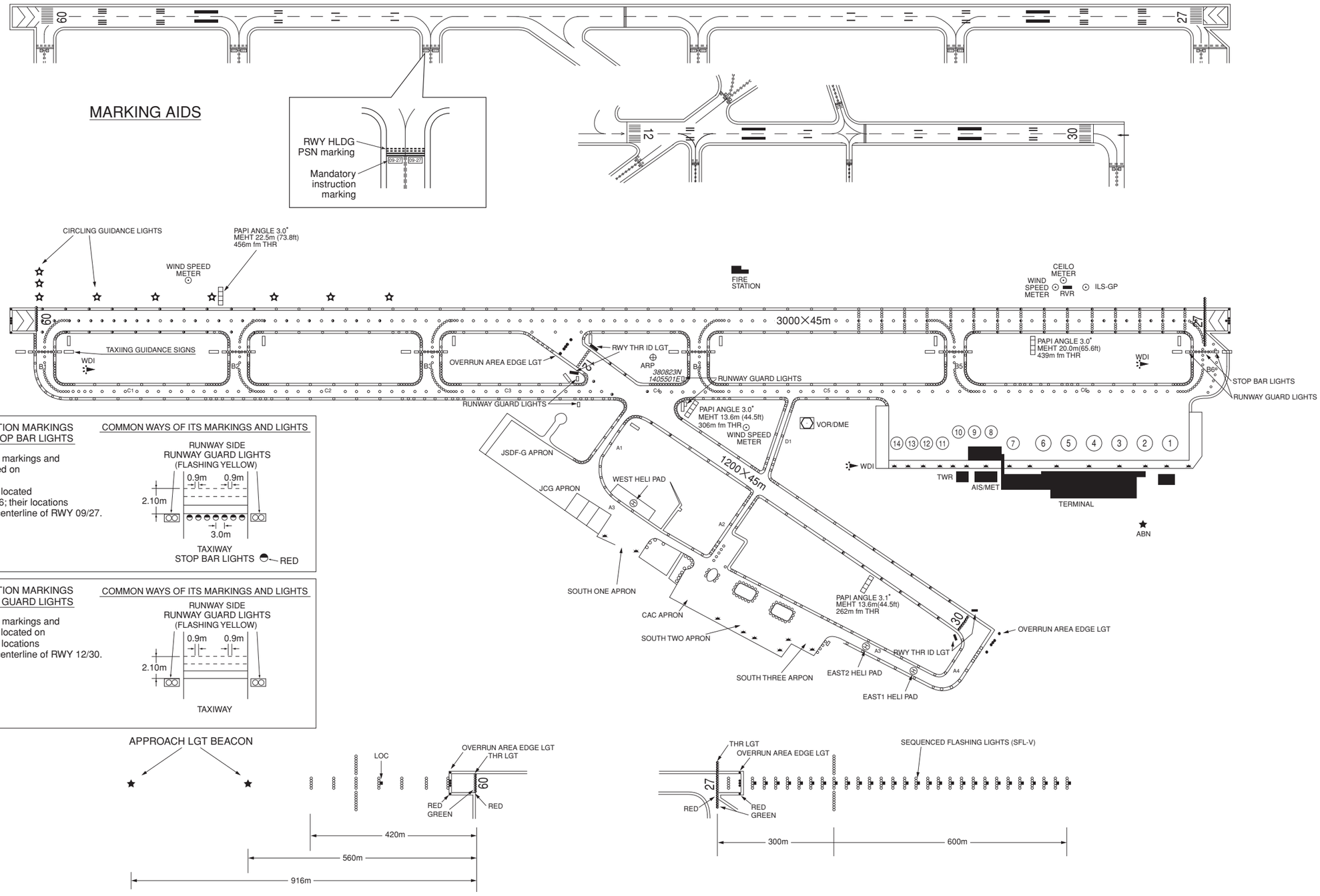
AERODROME CHART

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.

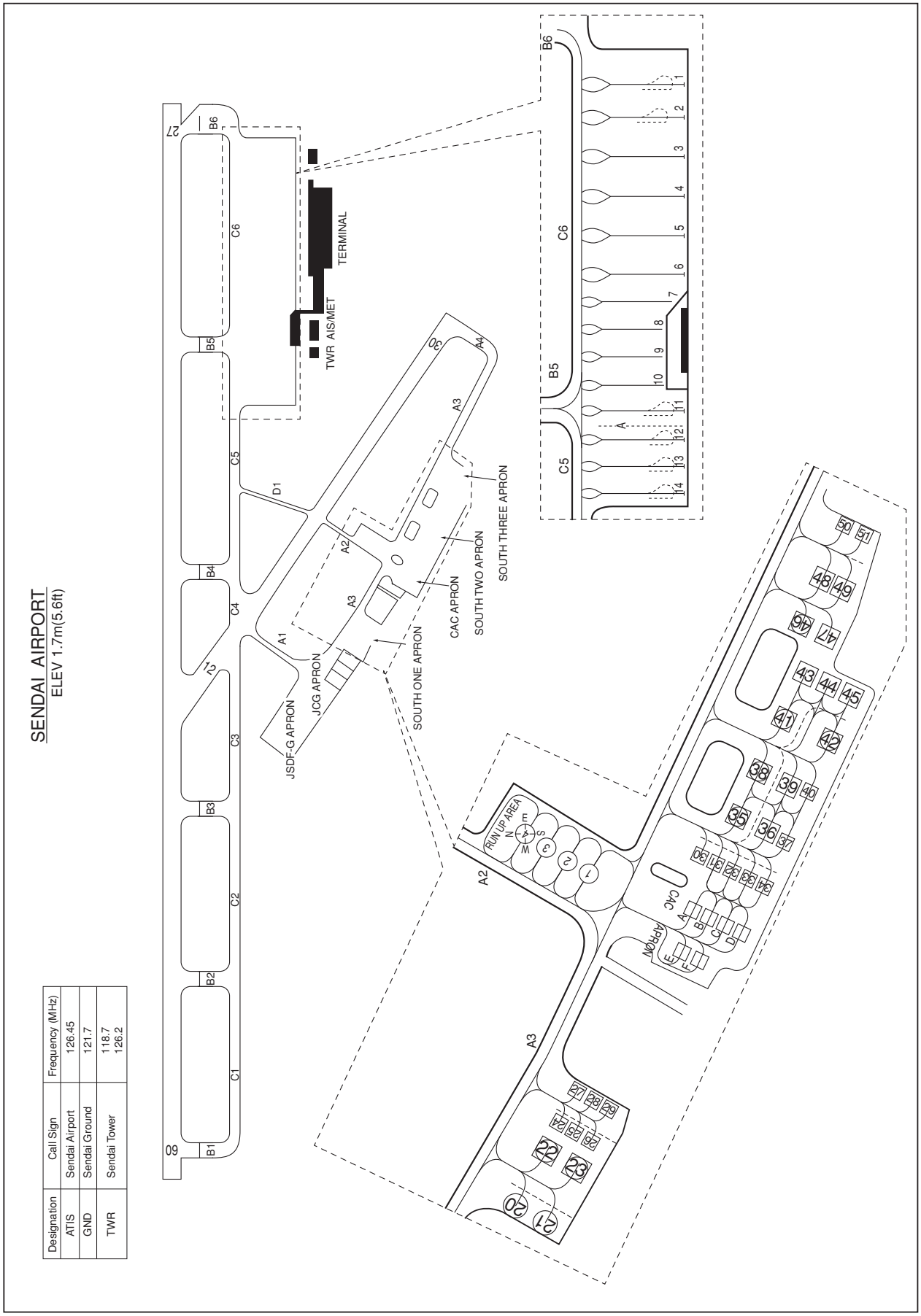
COMMON WAYS OF ITS MARKINGS AND LIGHTS

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

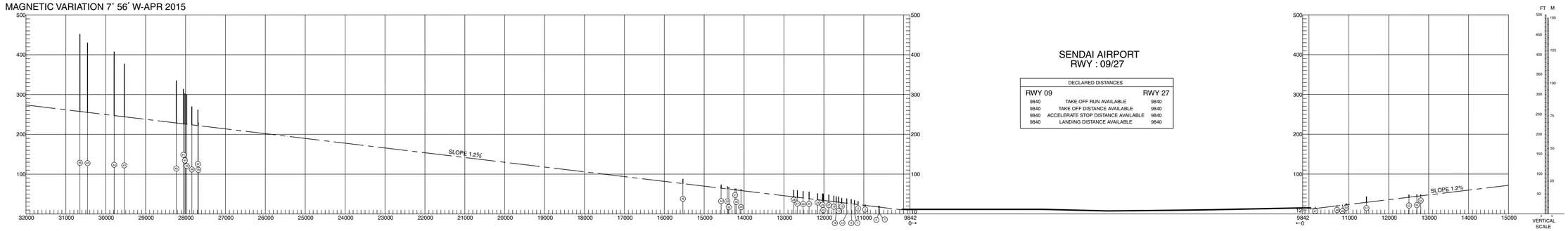
APPROACH LGT BEACON


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

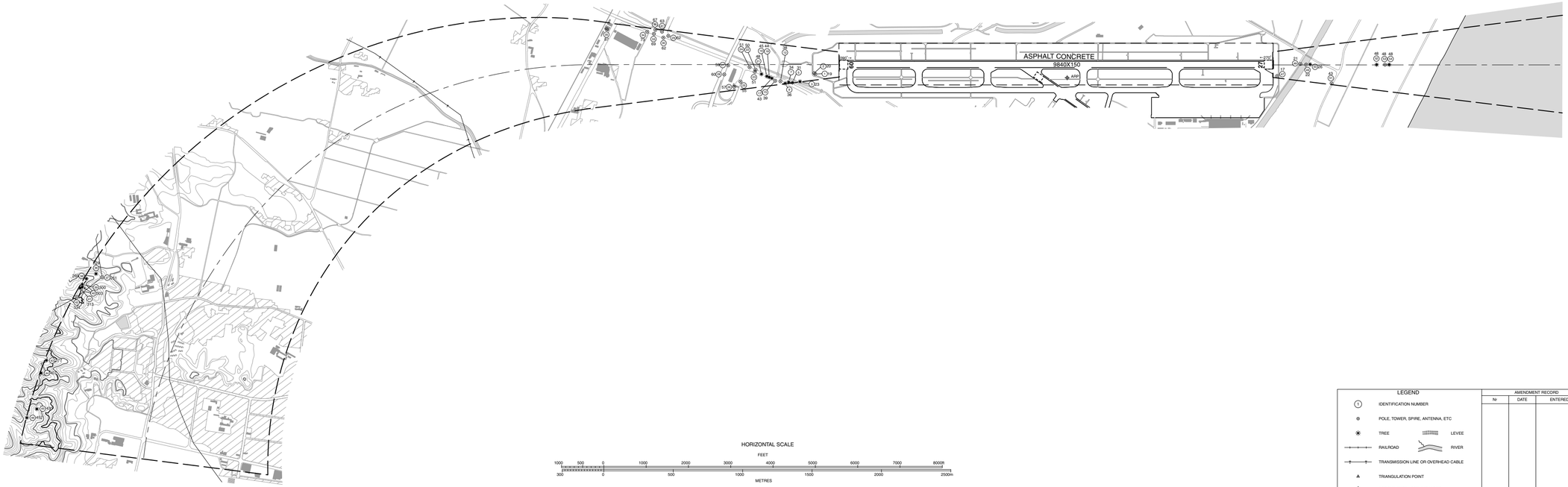
AERODROME OBSTACLE CHART-ICAO
TYPE A (OPERATING LIMITATIONS)

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 ...

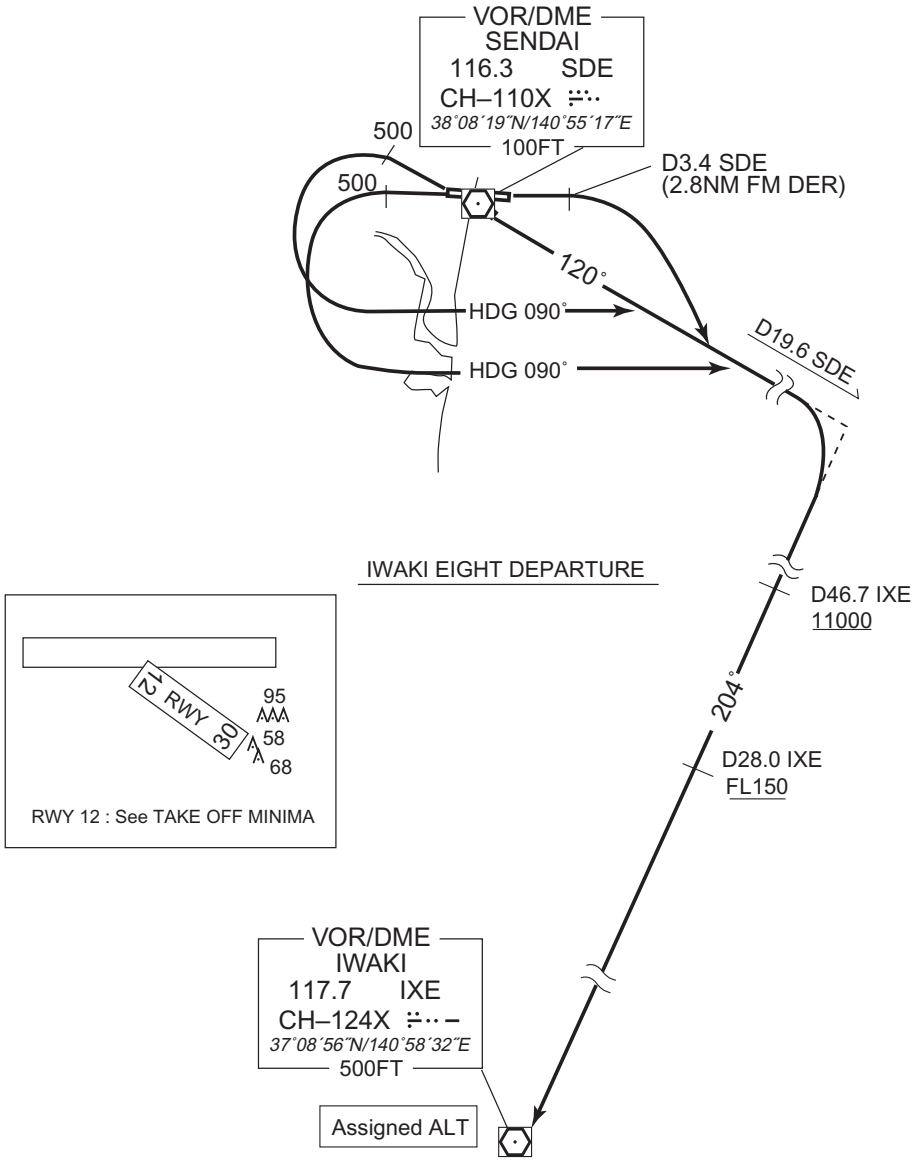
RWY 27 : Climb RWY HDG to 500FT, turn left HDG 090˚ to intercept and proceed...

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 ...

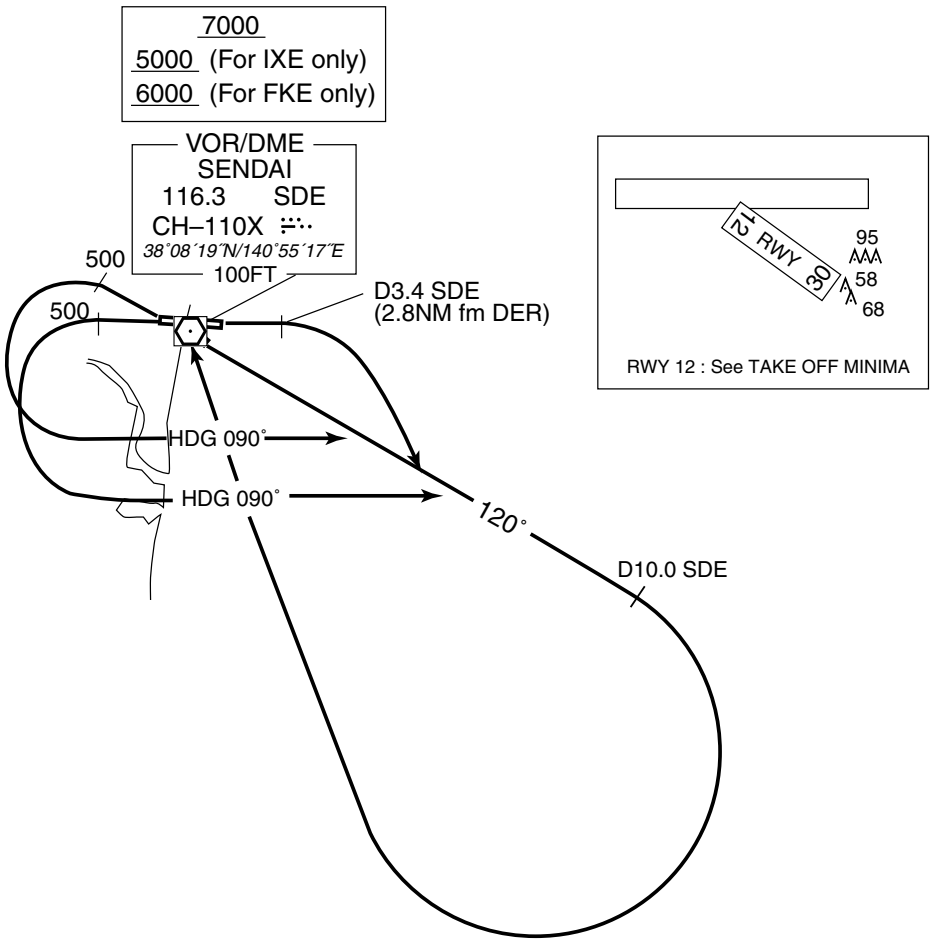
RWY 27 : Climb RWY HDG to 500FT, turn left HDG 090˚ to intercept and proceed...

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

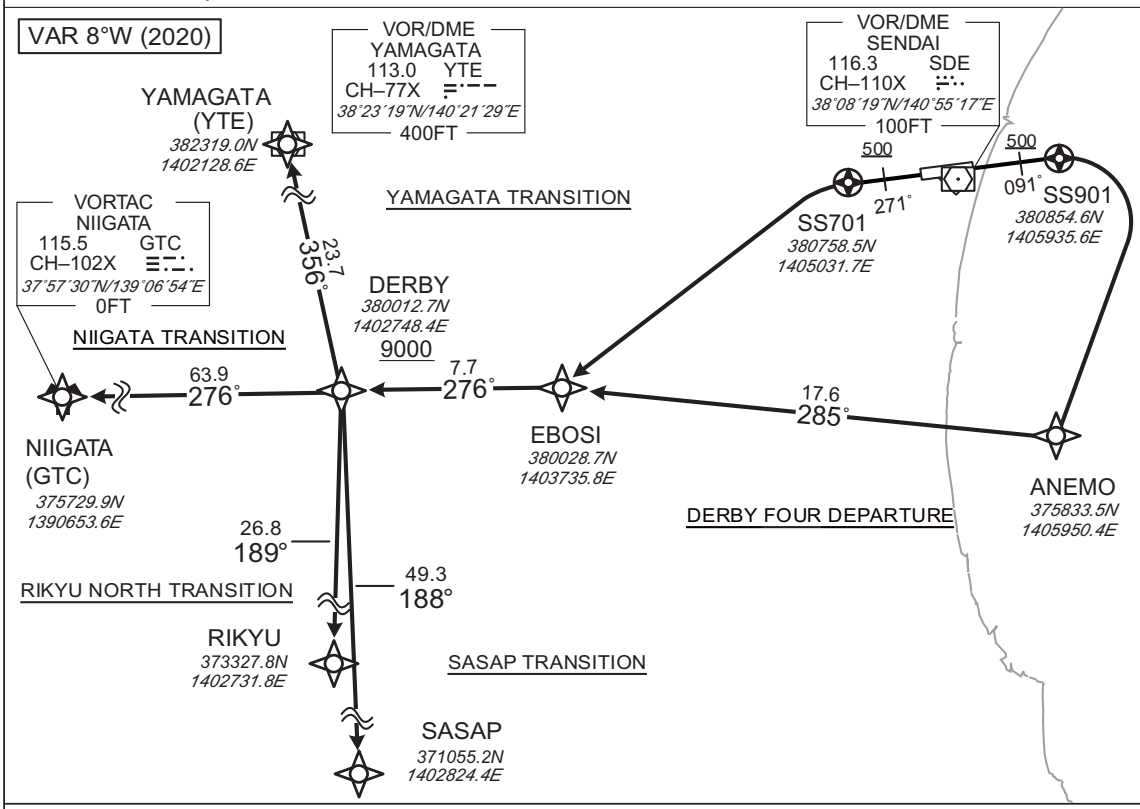
RJSS / SENDAI — RNAV SID and TRANSITION

CHANGE : VAR. SID renamed. YAMAGATA TRANSITION, RIKYU NORTH TRANSITION, SASAP TRANSITION established. Navigation specification. Sensor for RNAV. SID course. ALT restriction at DERBY.

DERBY FOUR DEPARTURE
YAMAGATA TRANSITION / NIIGATA TRANSITION / RIKYU NORTH TRANSITION / SASAP TRANSITION

Basic RNP1

Note GNSS required.



DERBY FOUR DEPARTURE

RWY09 : Climb on HDG091° at or above 500FT, direct to SS901, turn right direct to ANEMO, to EBOSI, to DERBY at or above 9000FT.

RWY27 : Climb on HDG271° at or above 500FT, direct to SS701, turn left direct to EBOSI, to DERBY at or above 9000FT.

NOTE RWY09: 5.0% climb gradient required up to 500FT.
OBST ALT 62FT located at 0.2NM 103° FM end of RWY09.
RWY27: 5.9% climb gradient required up to 1300FT.
OBST ALT 1181FT located at 4.6NM 285° FM end of RWY27.

YAMAGATA TRANSITION

From DERBY at or above 9000FT, to YTE.

NIIGATA TRANSITION

From DERBY at or above 9000FT, to GTC.

RIKYU NORTH TRANSITION

From DERBY at or above 9000FT, to RIKYU.

SASAP TRANSITION

From DERBY at or above 9000FT, to SASAP.

STANDARD DEPARTURE CHART - INSTRUMENT

RJSS / SENDAI

RNAV SID and TRANSITION

CHANGE : VAR. SID renamed. SID course. ALT restriction at DERBY. Navigation specification. NIIGATA TRANSITION deleted.

DERBY FOUR 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	—	—	091 (082.5)	-8.3	—	—	+500	—	—	Basic RNP1
002	DF	SS901	Y	—	-8.3	—	—	—	—	—	Basic RNP1
003	DF	ANEMO	—	—	-8.3	—	R	—	—	—	Basic RNP1
004	TF	EBOSI	—	285 (276.4)	-8.3	17.6	—	—	—	—	Basic RNP1
005	TF	DERBY	—	276 (268.1)	-8.3	7.7	—	+9000	—	—	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	—	—	271 (262.5)	-8.3	—	—	+500	—	—	Basic RNP1
002	DF	SS701	Y	—	-8.3	—	—	—	—	—	Basic RNP1
003	DF	EBOSI	—	—	-8.3	—	L	—	—	—	Basic RNP1
004	TF	DERBY	—	276 (268.1)	-8.3	7.7	—	+9000	—	—	Basic RNP1

STANDARD DEPARTURE CHART - INSTRUMENT

RJSS / SENDAI

RNAV SID and TRANSITION

CHANGE : YAMAGATA TRANSITION, RIKYU NORTH TRANSITION, SASAP TRANSITION established. NIIGATA TRANSITION added.

YAMAGATA 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	—	—	-8.3	—	—	+9000	—	—	Basic RNP1
002	TF	YTE	—	356 (347.9)	-8.3	23.7	—	—	—	—	Basic RNP1

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	—	—	-8.3	—	—	+9000	—	—	Basic RNP1
002	TF	GTC	—	276 (268.0)	-8.3	63.9	—	—	—	—	Basic RNP1

RIKYU NORTH 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	—	—	-8.3	—	—	+9000	—	—	Basic RNP1
002	TF	RIKYU	—	189 (180.5)	-8.3	26.8	—	—	—	—	Basic RNP1

SASAP 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	—	—	-8.3	—	—	+9000	—	—	Basic RNP1
002	TF	SASAP	—	188 (179.4)	-8.3	49.3	—	—	—	—	Basic RNP1

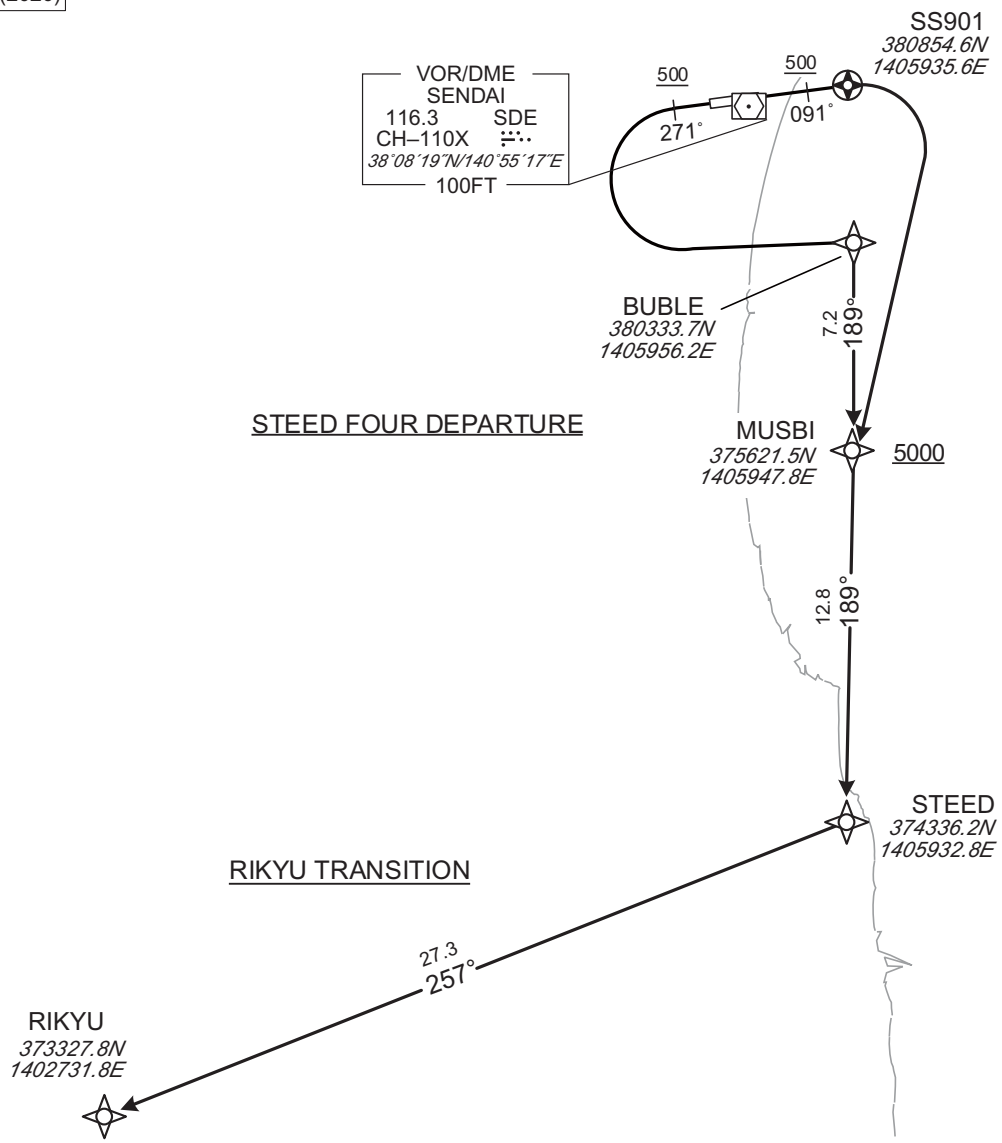
STANDARD DEPARTURE CHART - INSTRUMENT

RJSS / SENDAI — RNAV SID and TRANSITION

STEED FOUR DEPARTURE / RIKYU TRANSITION — Basic RNP1

Note GNSS required.

VAR 8˚W(2020)



STEED FOUR DEPARTURE

RWY09 : Climb on HDG091˚ at or above 500FT, direct to SS901, turn right direct to MUSBI at or above 5000FT, to STEED.

RWY27 : Climb on HDG271˚ at or above 500FT, turn left direct to BUBLE, to MUSBI at or above 5000FT, to STEED.

NOTE RWY09: 5.0% climb gradient required up to 500FT.
OBST ALT 62FT located at 0.2NM 103˚ 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.

CHANGE : VAR. SID renamed. Navigation specification. Sensor for RNAV. PROC course. MUSBI established.

STANDARD DEPARTURE CHART - INSTRUMENT

RJSS / SENDAI RNAV SID and TRANSITION

CHANGE : VAR. SID renamed. Navigation specification. PROC course. MUSBI established.

STEED FOUR 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	—	—	091 (082.5)	-8.3	—	—	+500	—	—	Basic RNP1
002	DF	SS901	Y	—	-8.3	—	—	—	—	—	Basic RNP1
003	DF	MUSBI	—	—	-8.3	—	R	+5000	—	—	Basic RNP1
004	TF	STEED	—	189 (180.9)	-8.3	12.8	—	—	—	—	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	—	—	271 (262.5)	-8.3	—	—	+500	—	—	Basic RNP1
002	DF	BUBLE	—	—	-8.3	—	L	—	—	—	Basic RNP1
003	TF	MUSBI	—	189 (180.9)	-8.3	7.2	—	+5000	—	—	Basic RNP1
004	TF	STEED	—	189 (180.9)	-8.3	12.8	—	—	—	—	Basic RNP1

RIKYU TRANSITION

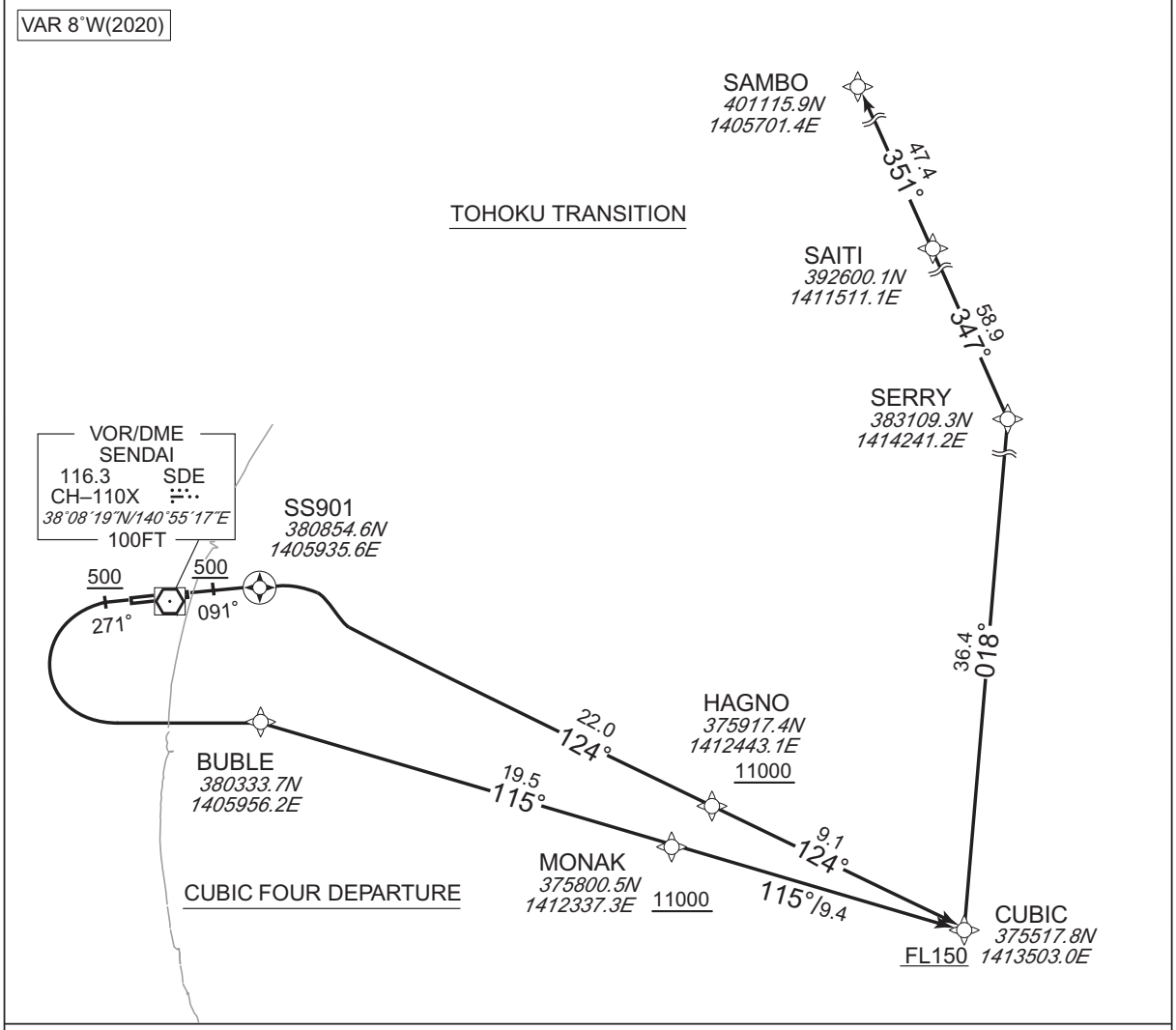
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course ˚M(˚T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	IF	STEED	—	—	-8.3	—	—	—	—	—	Basic RNP1
002	TF	RIKYU	—	257 (248.4)	-8.3	27.3	—	—	—	—	Basic RNP1

STANDARD DEPARTURE CHART - INSTRUMENT

RJSS / SENDAI — RNAV SID and TRANSITION

CUBIC FOUR DEPARTURE / TOHOKU TRANSITION | Basic RNP1

Note GNSS required.



CUBIC FOUR DEPARTURE

RWY09 : Climb on HDG091˚ at or above 500FT, direct to SS901, to HAGNO at or above 11000FT, to CUBIC at or above FL150.

RWY27 : Climb on HDG271˚ at or above 500FT, turn left direct to BUBLE, to MONAK at or above 11000FT, to CUBIC at or above FL150.

NOTE RWY09: 5.0% climb gradient required up to 500FT.
OBST ALT 62FT located at 0.2NM 103˚ 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.

TOHOKU TRANSITION

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

CHANGE : VAR. SID renamed. Navigation specification. Sensor for RNAV. PROC course. HAGNO, MONAK, SERRY established. RIDER abolished. TOHOKU TRANSITION added.

STANDARD DEPARTURE CHART - INSTRUMENT

RJSS / SENDAI

RNAV SID and TRANSITION

CHANGE : VAR. SID renamed. Navigation specification. PROC course. HAGNO, MONAK, SERRY established. RIDER abolished. TOHOKU TRANSITION added.

CUBIC FOUR 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	—	—	091 (082.5)	-8.3	—	—	+500	—	—	Basic RNP1
002	DF	SS901	Y	—	-8.3	—	—	—	—	—	Basic RNP1
003	TF	HAGNO	—	124 (115.8)	-8.3	22.0	—	+11000	—	—	Basic RNP1
004	TF	CUBIC	—	124 (116.1)	-8.3	9.1	—	+FL150	—	—	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	—	—	271 (262.5)	-8.3	—	—	+500	—	—	Basic RNP1
002	DF	BUBLE	—	—	-8.3	—	L	—	—	—	Basic RNP1
003	TF	MONAK	—	115 (106.4)	-8.3	19.5	—	+11000	—	—	Basic RNP1
004	TF	CUBIC	—	115 (106.7)	-8.3	9.4	—	+FL150	—	—	Basic RNP1

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	—	—	-8.3	—	—	+FL150	—	—	Basic RNP1
002	TF	SERRY	—	018 (009.5)	-8.3	36.4	—	—	—	—	Basic RNP1
003	TF	SAITI	—	347 (338.8)	-8.3	58.9	—	—	—	—	Basic RNP1
004	TF	SAMBO	—	351 (343.0)	-8.3	47.4	—	—	—	—	Basic RNP1

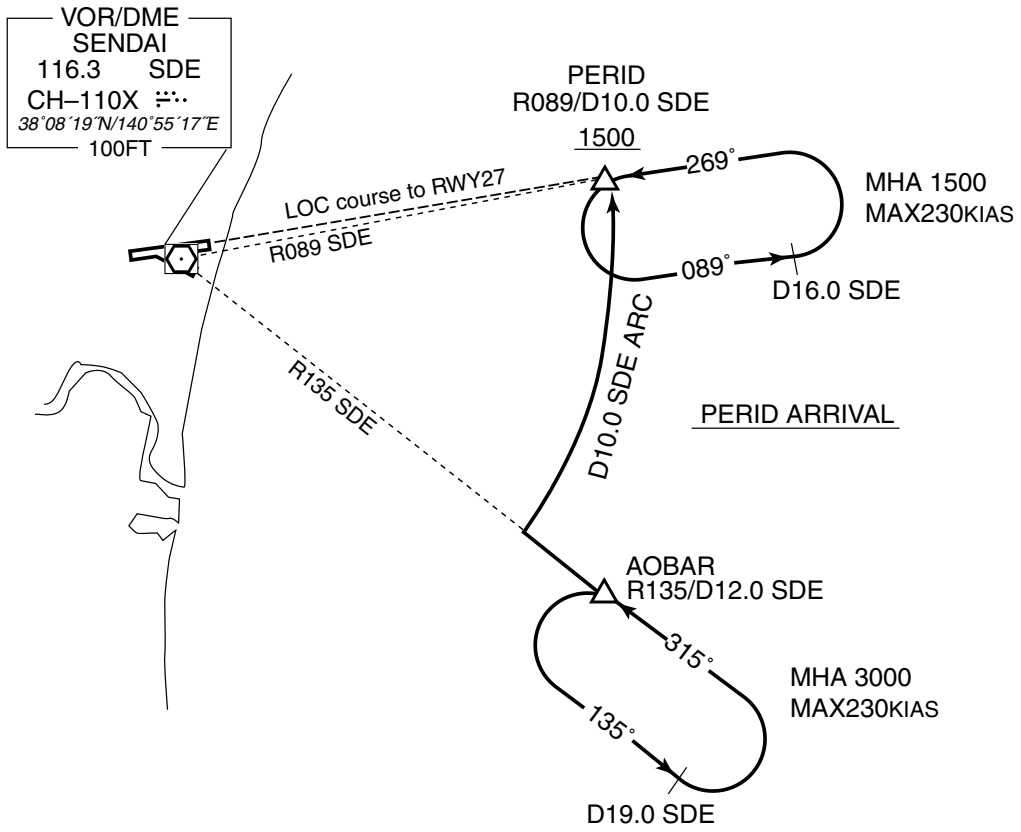
STANDARD ARRIVAL CHART-INSTRUMENT

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.



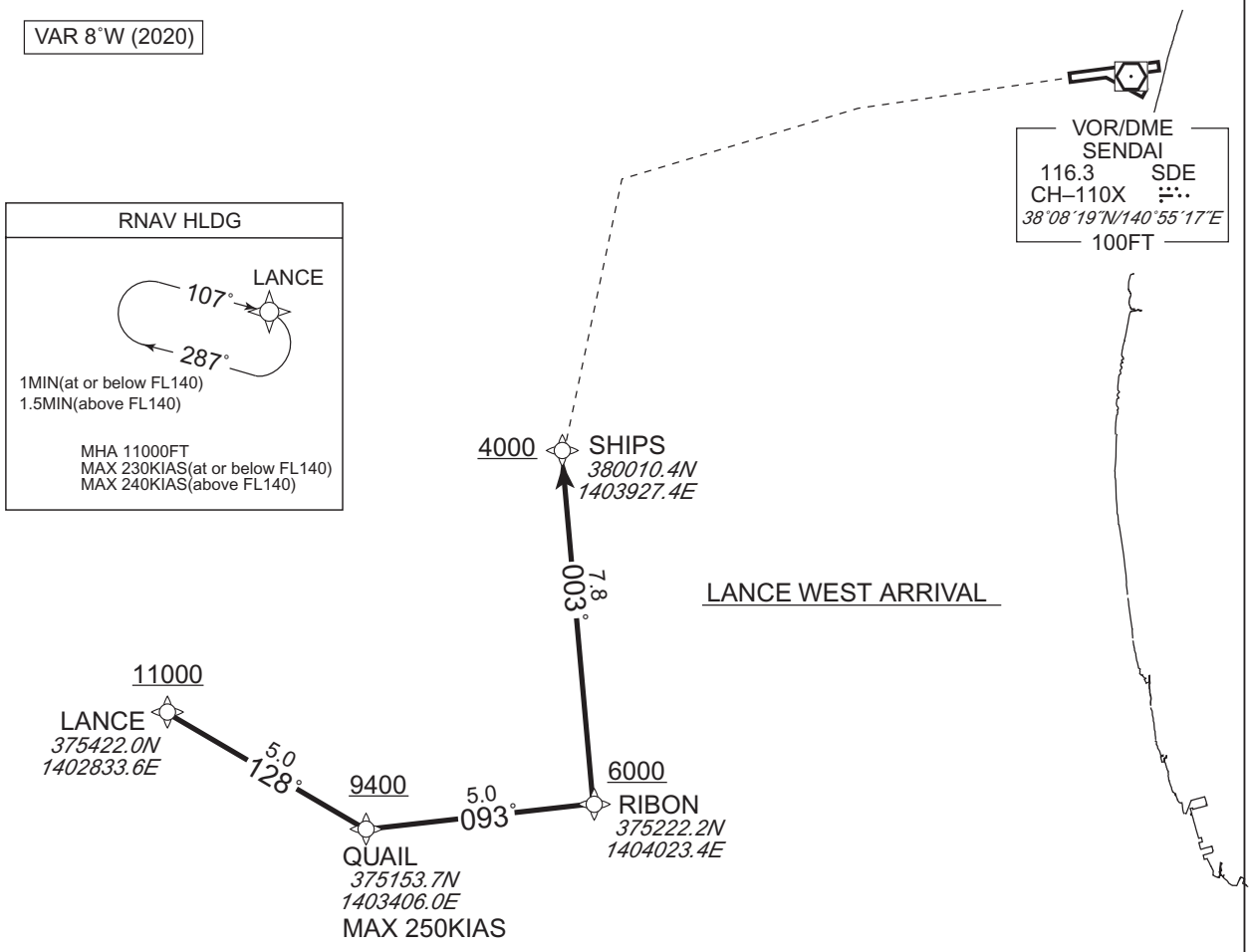
STANDARD ARRIVAL CHART - INSTRUMENT

CHANGE : VAR. Sensor for RNAV. Navigation specification. PROC course. ALT restriction at QUAIL. HLDG pattern established.

RJSS / SENDAI — RNAV STAR RWY09

LANCE WEST ARRIVAL — Basic RNP1

Note GNSS required.



LANCE WEST ARRIVAL

From LANCE at or above 11000FT, to QUAIL, at or above 9400FT, 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	LANCE	—	—	-8.3	—	—	+11000	—	—	Basic RNP1
002	TF	QUAIL	—	128 (119.4)	-8.3	5.0	—	+9400	-250	—	Basic RNP1
003	TF	RIBON	—	093 (084.5)	-8.3	5.0	—	+6000	—	—	Basic RNP1
004	TF	SHIPS	—	003 (354.6)	-8.3	7.8	—	+4000	—	—	Basic RNP1

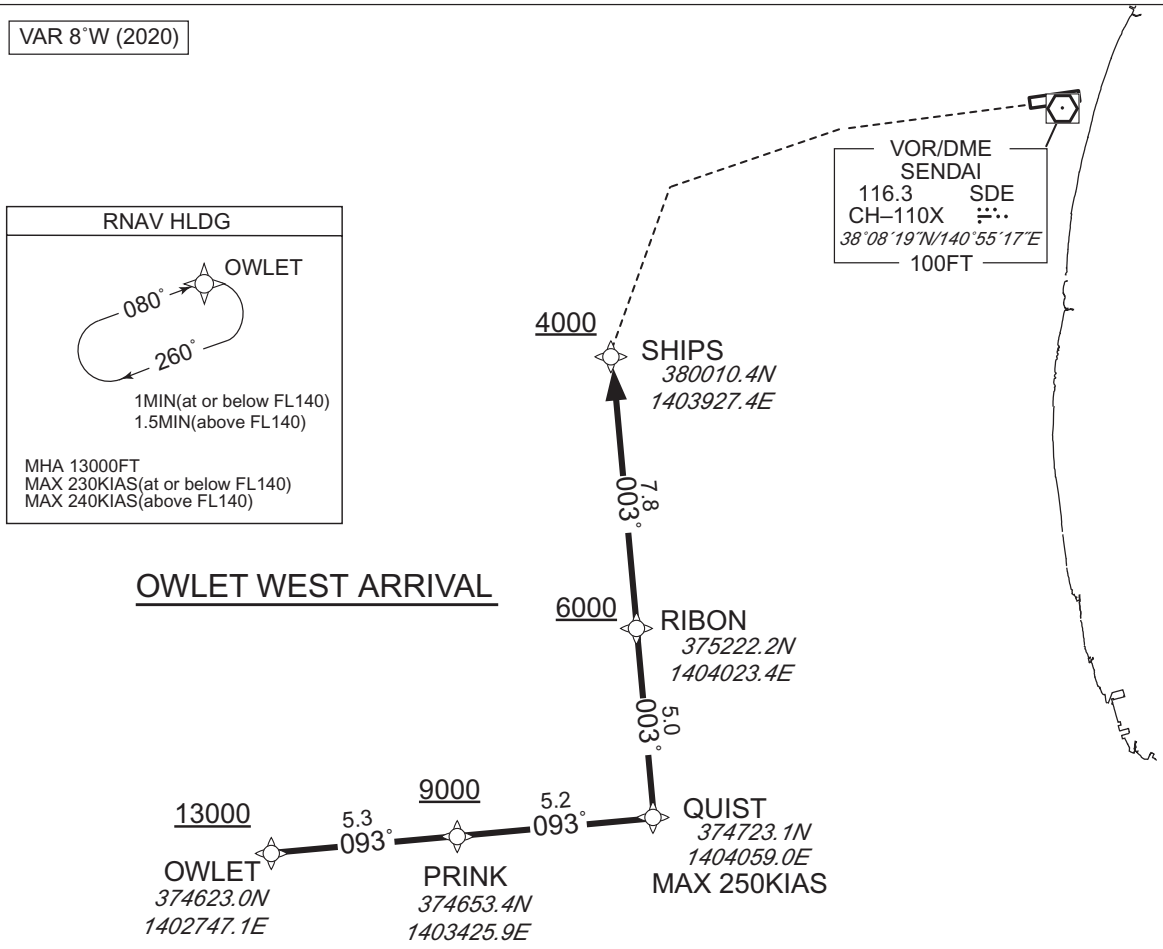
Path	Waypoint Identifier	Inbound Course ˚M(˚T)	Magnetic Variation	Outbound Time (MIN)	Turn Direction	Minimum Altitude (FT)	Maximum Altitude (FT)	Speed (KIAS)	Navigation Specification
Hold	LANCE	107 (098.3)	-8.3	1.0(-14000) 1.5(+14001)	R	11000	—	-230(-14000) -240(+14001)	Basic RNP1

STANDARD ARRIVAL CHART-INSTRUMENT

RJSS / SENDAI — RNAV STAR RWY09

OWLET WEST ARRIVAL — Basic RNP1

Note GNSS required.



OWLET WEST ARRIVAL

From OWLET at or above 13000FT, to PRINK at or above 9000FT, 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	—	—	-8.3	—	—	+13000	—	—	Basic RNP1
002	TF	PRINK	—	093 (084.4)	-8.3	5.3	—	+9000	—	—	Basic RNP1
003	TF	QUIST	—	093 (084.5)	-8.3	5.2	—	—	-250	—	Basic RNP1
004	TF	RIBON	—	003 (354.6)	-8.3	5.0	—	+6000	—	—	Basic RNP1
005	TF	SHIPS	—	003 (354.6)	-8.3	7.8	—	+4000	—	—	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	OWLET	080 (071.7)	-8.3	1.0(-14000) 1.5(+14001)	R	13000	—	-230(-14000) -240(+14001)	Basic RNP1

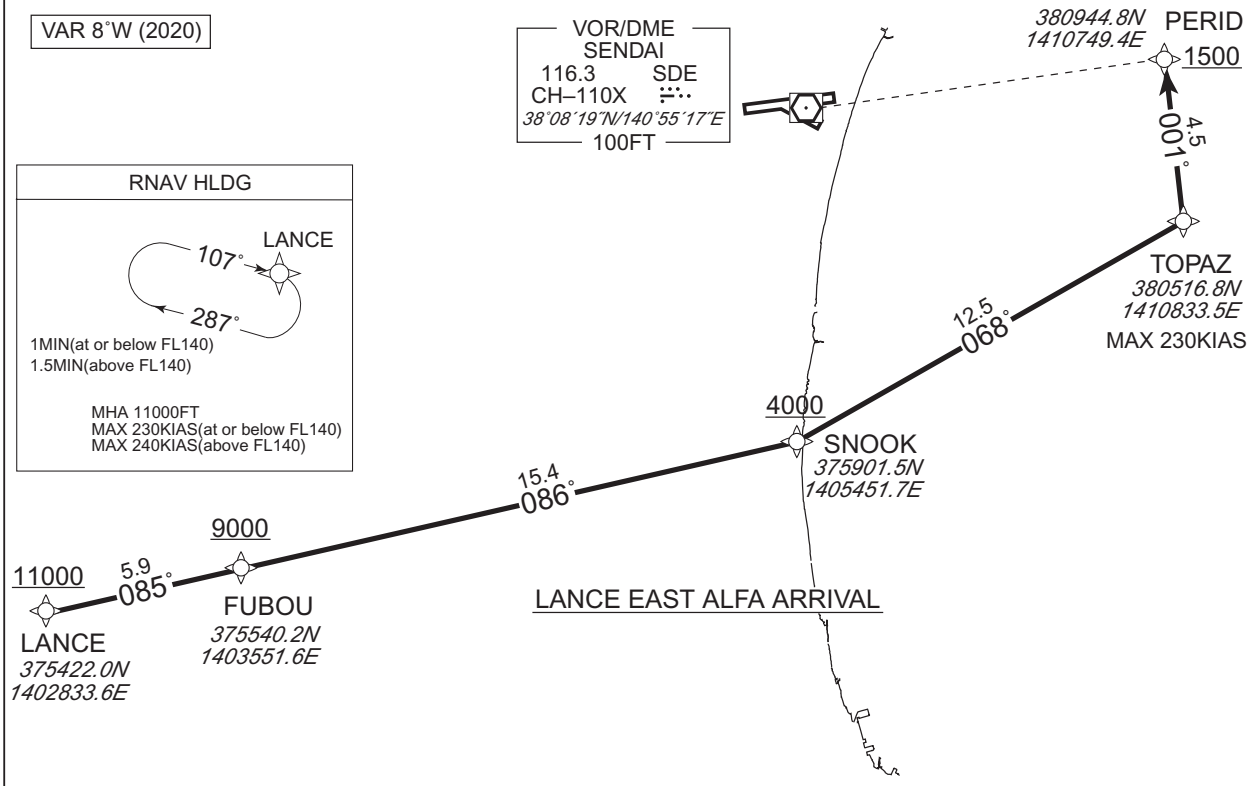
CHANGE : VAR. PROC course. ALT restriction at PRINK. HLDG pattern established.

STANDARD ARRIVAL CHART-INSTRUMENT

RJSS / SENDAI — RNAV STAR RWY27

LANCE EAST ALFA ARRIVAL — Basic RNP1

Note GNSS required.



LANCE EAST ALFA ARRIVAL

From LANCE at or above 11000FT, to FUBOU at or above 9000FT, to SNOOK at or above 4000FT, to TOPAZ, to PERID at or above 1500FT.

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	—	—	-8.3	—	—	+11000	—	—	Basic RNP1
002	TF	FUBOU	—	085 (077.2)	-8.3	5.9	—	+9000	—	—	Basic RNP1
003	TF	SNOOK	—	086 (077.3)	-8.3	15.4	—	+4000	—	—	Basic RNP1
004	TF	TOPAZ	—	068 (059.8)	-8.3	12.5	—	—	-230	—	Basic RNP1
005	TF	PERID	—	001 (352.6)	-8.3	4.5	—	+1500	—	—	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	LANCE	107 (098.3)	-8.3	1.0(-14000) 1.5(+14001)	R	11000	—	-230(-14000) -240(+14001)	Basic RNP1

CHANGE : VAR. Navigation specification. Sensor for RNAV. Course FM FUBOU to SNOOK. Course FM TOPAZ to PERID. ALT restriction at FUBOU. HLDG pattern established.

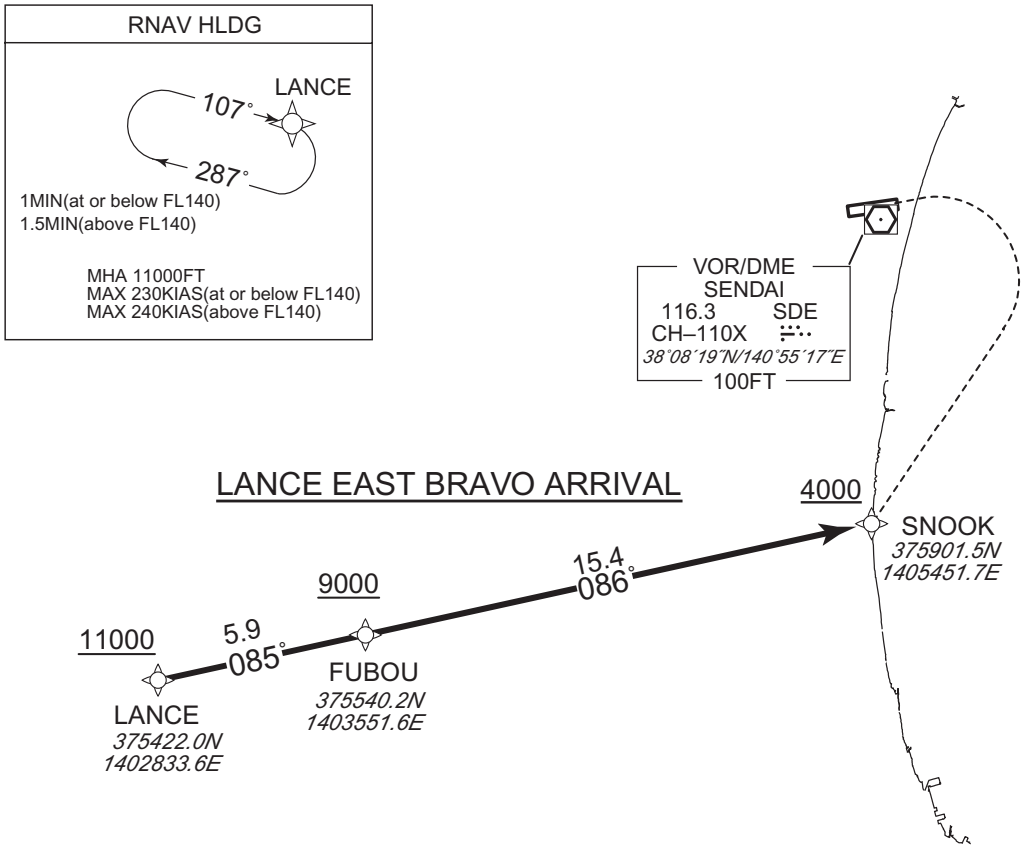
STANDARD ARRIVAL CHART-INSTRUMENT

RJSS / SENDAI — RNAV STAR RWY27

LANCE EAST BRAVO ARRIVAL — Basic RNP1

Note GNSS required.

VAR 8˚W (2020)



CHANGE : VAR. Course FM FUBOU to SNOOK. ALT restriction at FUBOU. HLDG pattern established.

LANCE EAST BRAVO ARRIVAL

From LANCE at or above 11000FT, to FUBOU at or above 9000FT, 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	—	—	-8.3	—	—	+11000	—	—	Basic RNP1
002	TF	FUBOU	—	085 (077.2)	-8.3	5.9	—	+9000	—	—	Basic RNP1
003	TF	SNOOK	—	086 (077.3)	-8.3	15.4	—	+4000	—	—	Basic RNP1

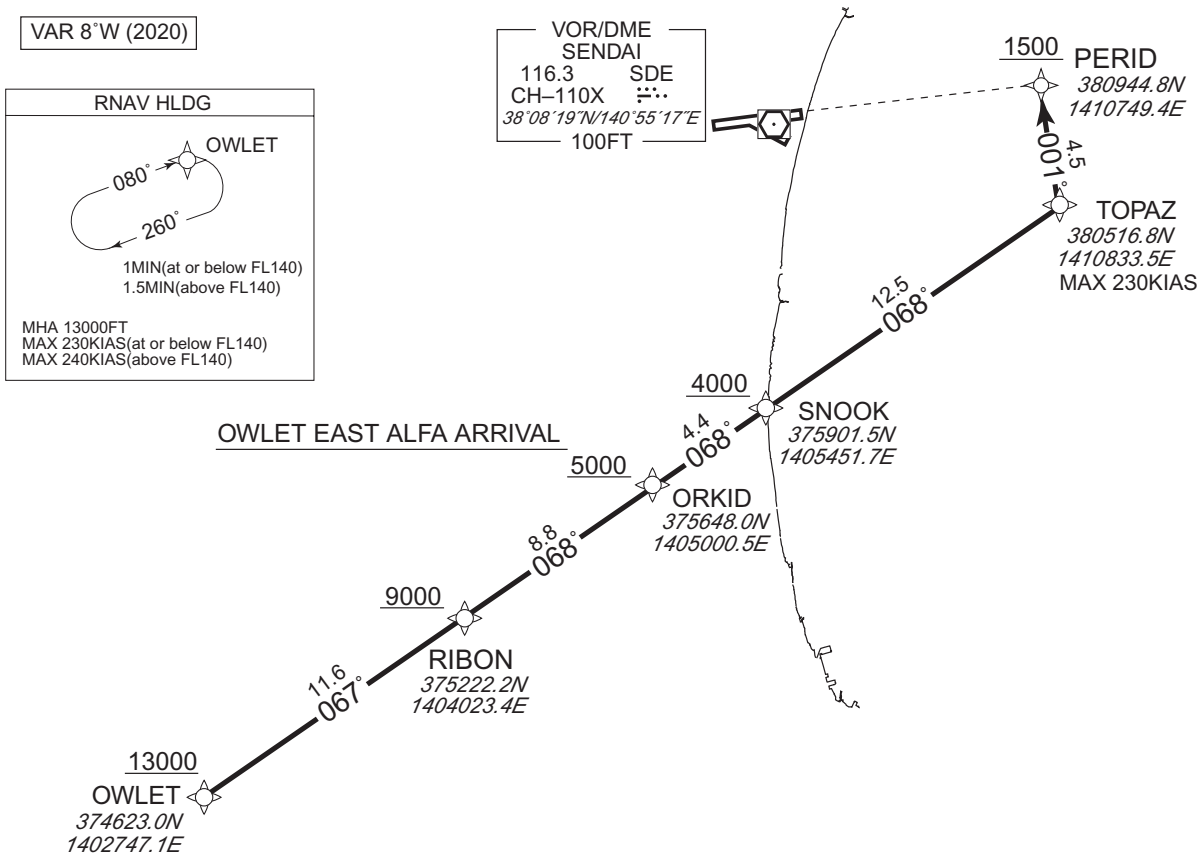
Path	Waypoint Identifier	Inbound Course ˚M(˚T)	Magnetic Variation	Outbound Time (MIN)	Turn Direction	Minimum Altitude (FT)	Maximum Altitude (FT)	Speed (KIAS)	Navigation Specification
Hold	LANCE	107 (098.3)	-8.3	1.0(-14000) 1.5(+14001)	R	11000	—	-230(-14000) -240(+14001)	Basic RNP1

STANDARD ARRIVAL CHART-INSTRUMENT

RJSS / SENDAI — RNAV STAR RWY27

OWLET EAST ALFA ARRIVAL — Basic RNP1

Note GNSS required.



OWLET EAST ALFA ARRIVAL

From OWLET at or above 13000FT, to RIBON at or above 9000FT, to ORKID at or above 5000FT, to SNOOK at or above 4000FT, to TOPAZ, to PERID at or above 1500FT.

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	—	—	-8.3	—	—	+13000	—	—	Basic RNP1
002	TF	RIBON	—	067 (058.9)	-8.3	11.6	—	+9000	—	—	Basic RNP1
003	TF	ORKID	—	068 (059.7)	-8.3	8.8	—	+5000	—	—	Basic RNP1
004	TF	SNOOK	—	068 (059.8)	-8.3	4.4	—	+4000	—	—	Basic RNP1
005	TF	TOPAZ	—	068 (059.8)	-8.3	12.5	—	—	-230	—	Basic RNP1
006	TF	PERID	—	001 (352.6)	-8.3	4.5	—	+1500	—	—	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	OWLET	080 (071.7)	-8.3	1.0(-14000) 1.5(+14001)	R	13000	—	-230(-14000) -240(+14001)	Basic RNP1

CHANGE : VAR. Navigation specification. Sensor for RNAV. ORKID established. DATTE abolished. PROC course. ALT restriction at RIBON. HLDG pattern established.

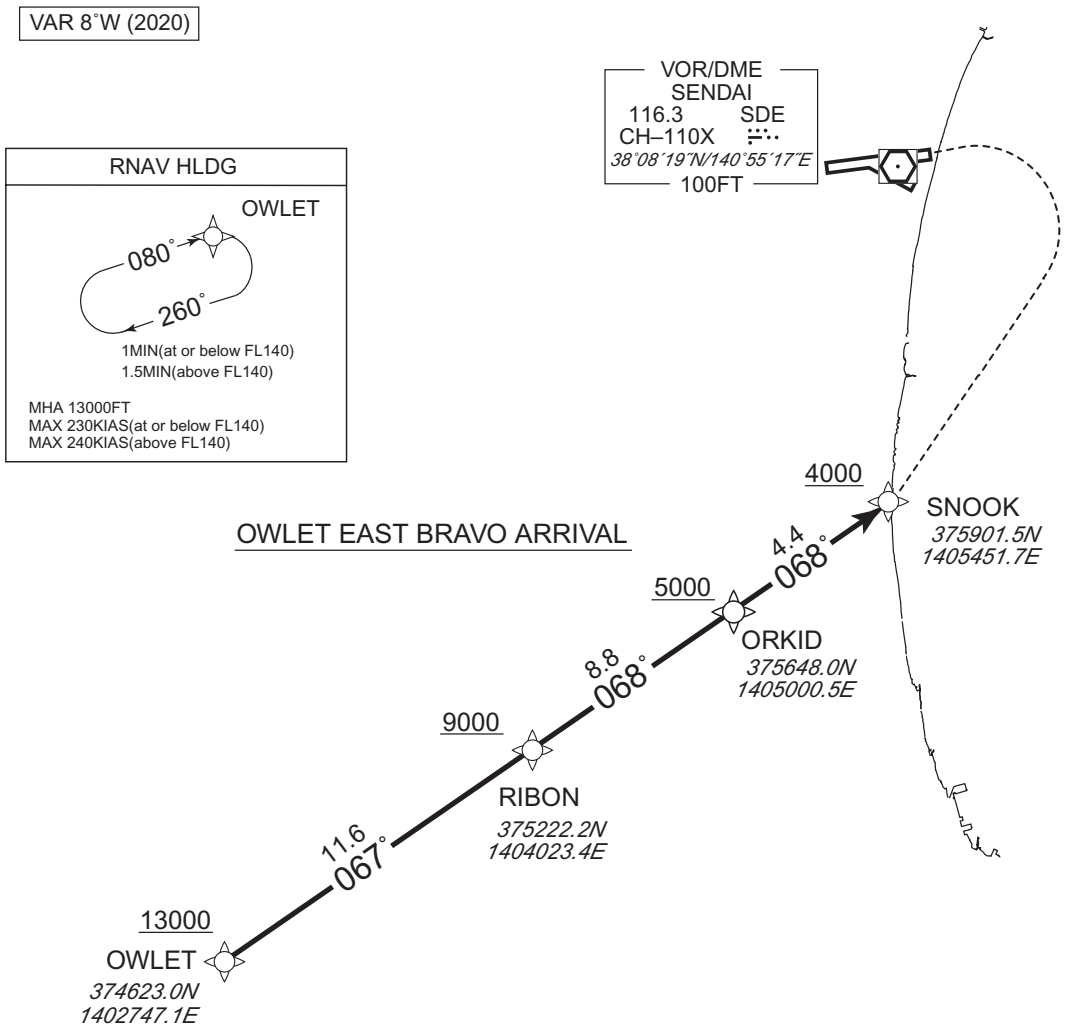
STANDARD ARRIVAL CHART-INSTRUMENT

RJSS / SENDAI — RNAV STAR RWY27

OWLET EAST BRAVO ARRIVAL — Basic RNP1

Note GNSS required.

CHANGE : VAR. ORKID established. DATTE abolished. Course FM RIBON to SNOOK. ALT restriction at RIBON. HLDG pattern established.



OWLET EAST BRAVO ARRIVAL

From OWLET at or above 13000FT, to RIBON at or above 9000FT, to ORKID at or above 5000FT, 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	—	—	-8.3	—	—	+13000	—	—	Basic RNP1
002	TF	RIBON	—	067 (058.9)	-8.3	11.6	—	+9000	—	—	Basic RNP1
003	TF	ORKID	—	068 (059.7)	-8.3	8.8	—	+5000	—	—	Basic RNP1
004	TF	SNOOK	—	068 (059.8)	-8.3	4.4	—	+4000	—	—	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	OWLET	080 (071.7)	-8.3	1.0(-14000) 1.5(+14001)	R	13000	—	-230(-14000) -240(+14001)	Basic RNP1

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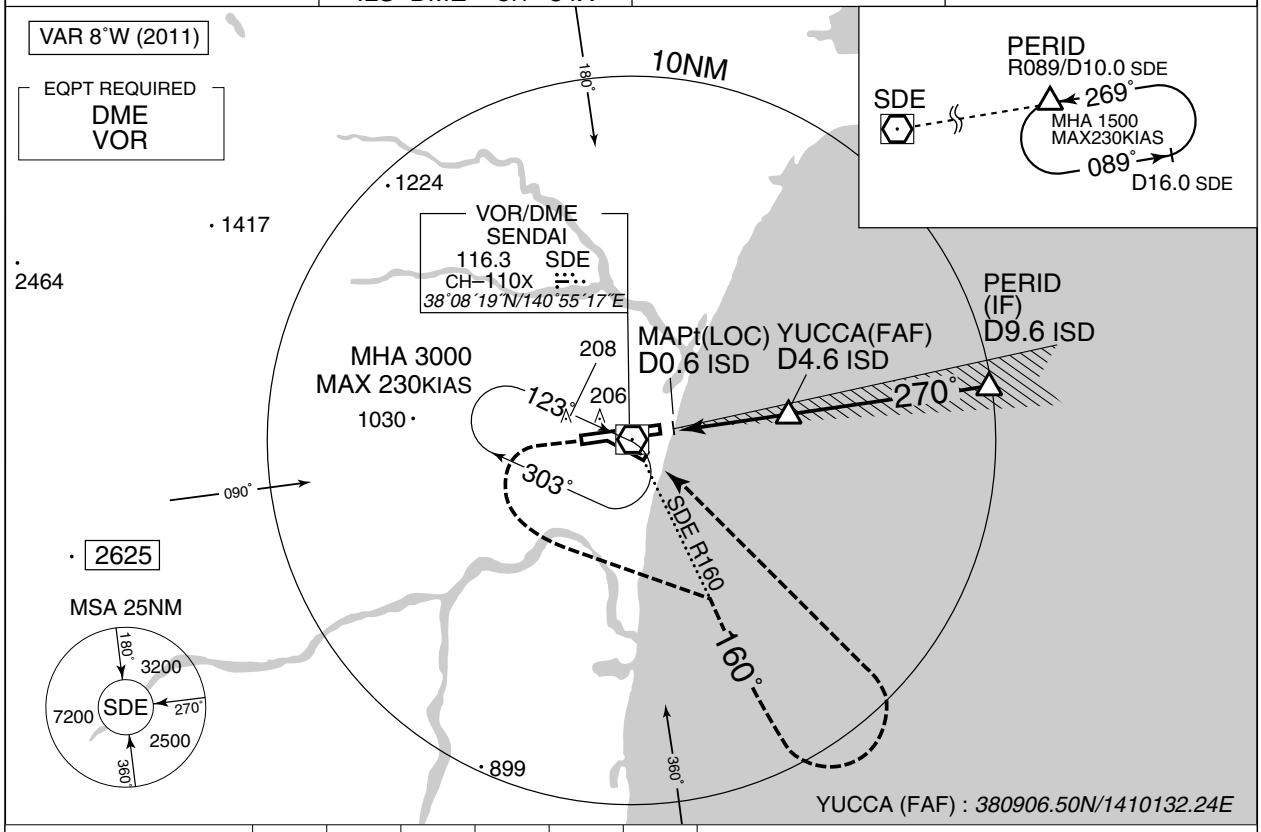
INSTRUMENT APPROACH CHART

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

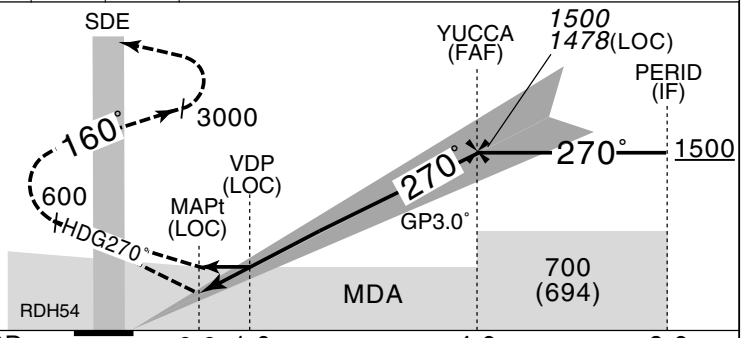


NM to ISD	MAPt	1	2	3	4	FAF
ALT (3.0° APCH Path)	–	326	645	964	1281	1478

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

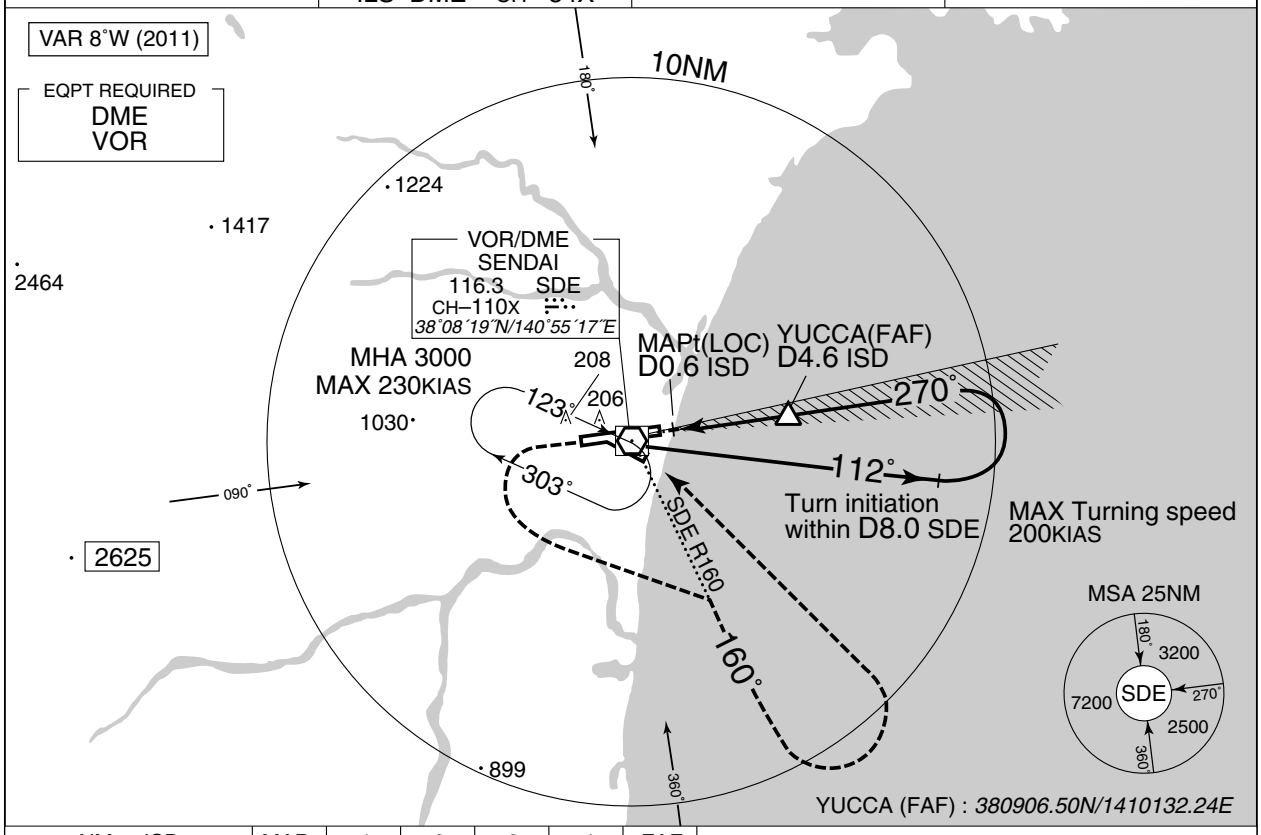
CAT	CAT I		LOC		CIRCLING	
	DA(H)	RVR/CMV	MDA(H)	RVR/CMV	MDA(H)	VIS
A	215 (200)	550	320 (314)	900	530 (524)	1600
B				1000		
C						2400
D				1400	560 (554)	3200

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

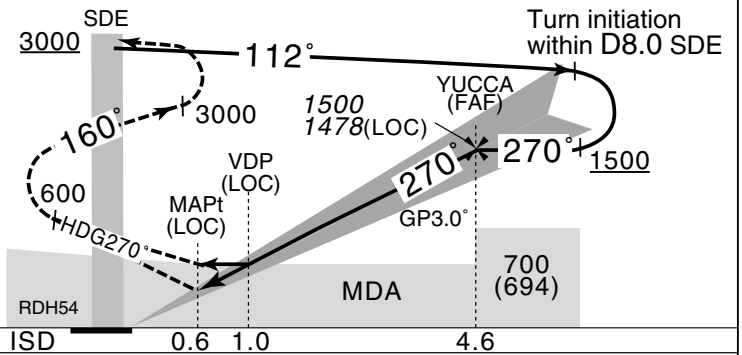


NM to ISD	MAPt	1	2	3	4	FAF
ALT (3.0° APCH Path)	–	326	645	964	1281	1478

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

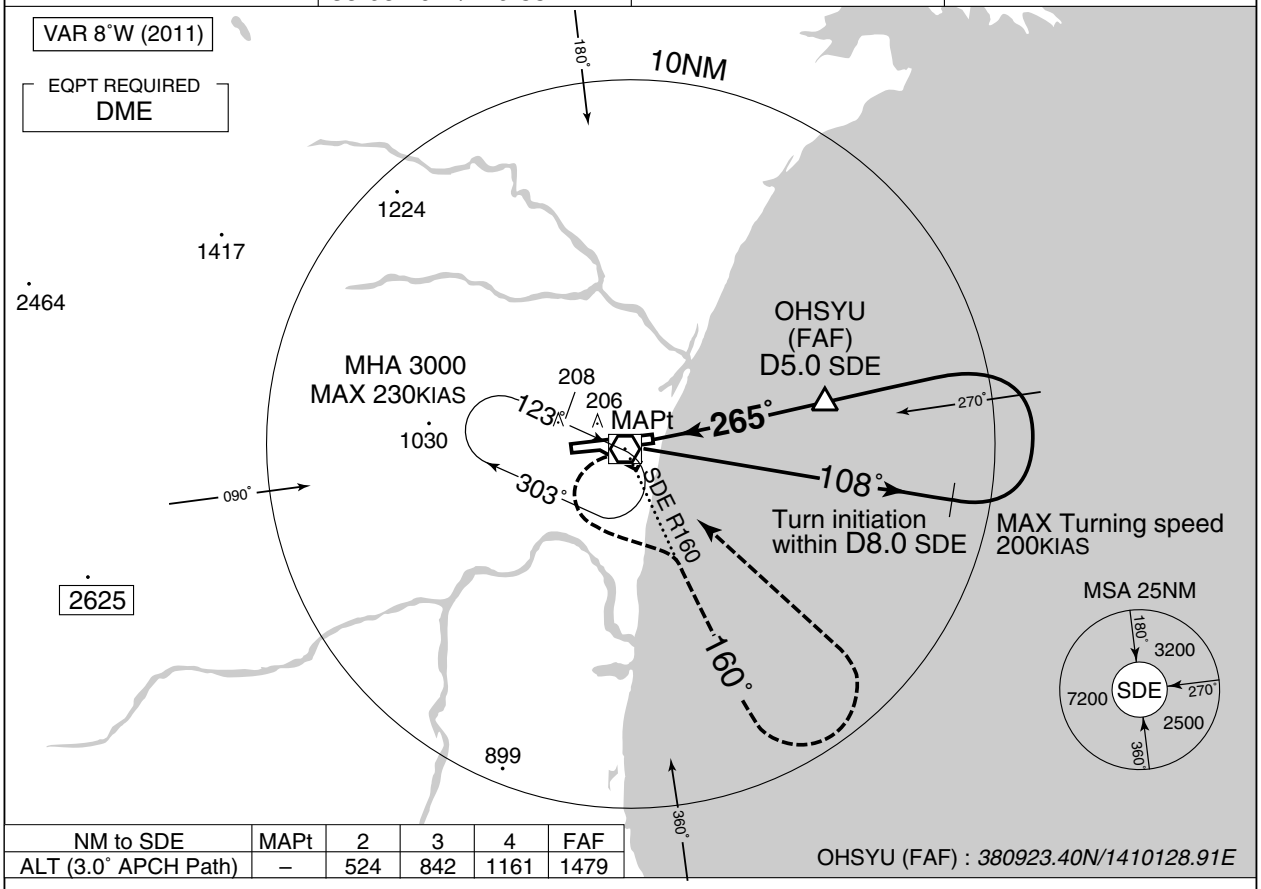
CAT	CAT I		LOC		CIRCLING	
	DA(H)	RVR/ CMV	MDA(H)	RVR/ CMV	MDA(H)	VIS
A	215 (200)	550	320 (314)	900	530 (524)	1600
B				1000		
C						2400
D				1400	560 (554)	3200

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

INSTRUMENT APPROACH CHART

RJSS / SENDAI VOR RWY27

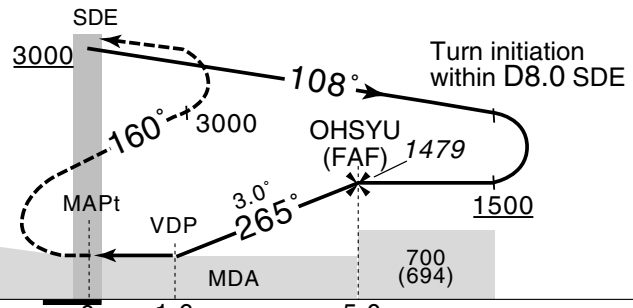
SENDAI APP	SENDAI VOR / DME 116.3 SDE CH–110X *38˚08´19˝N/140˚55´17˝E*	SENDAI TWR	RADAR AVBL
120.4 –261.2		118.7 –126.2	ATIS 126.45



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

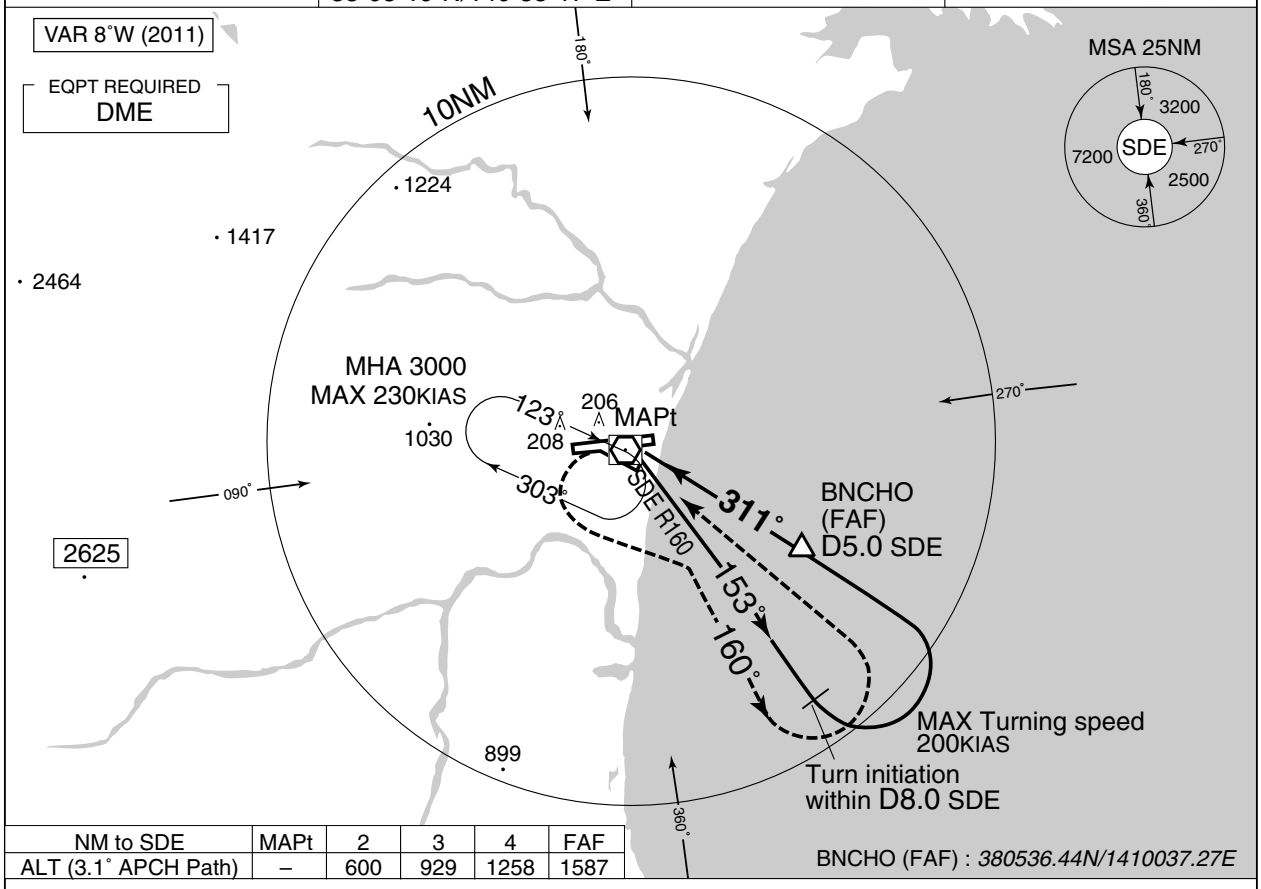
MINIMA THR elev. 15 AD elev. 6

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

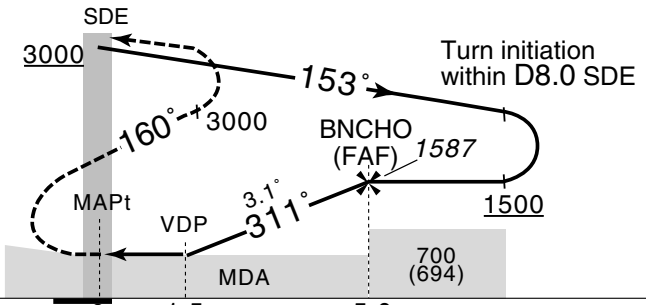
RJSS / SENDAI VOR RWY30

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.



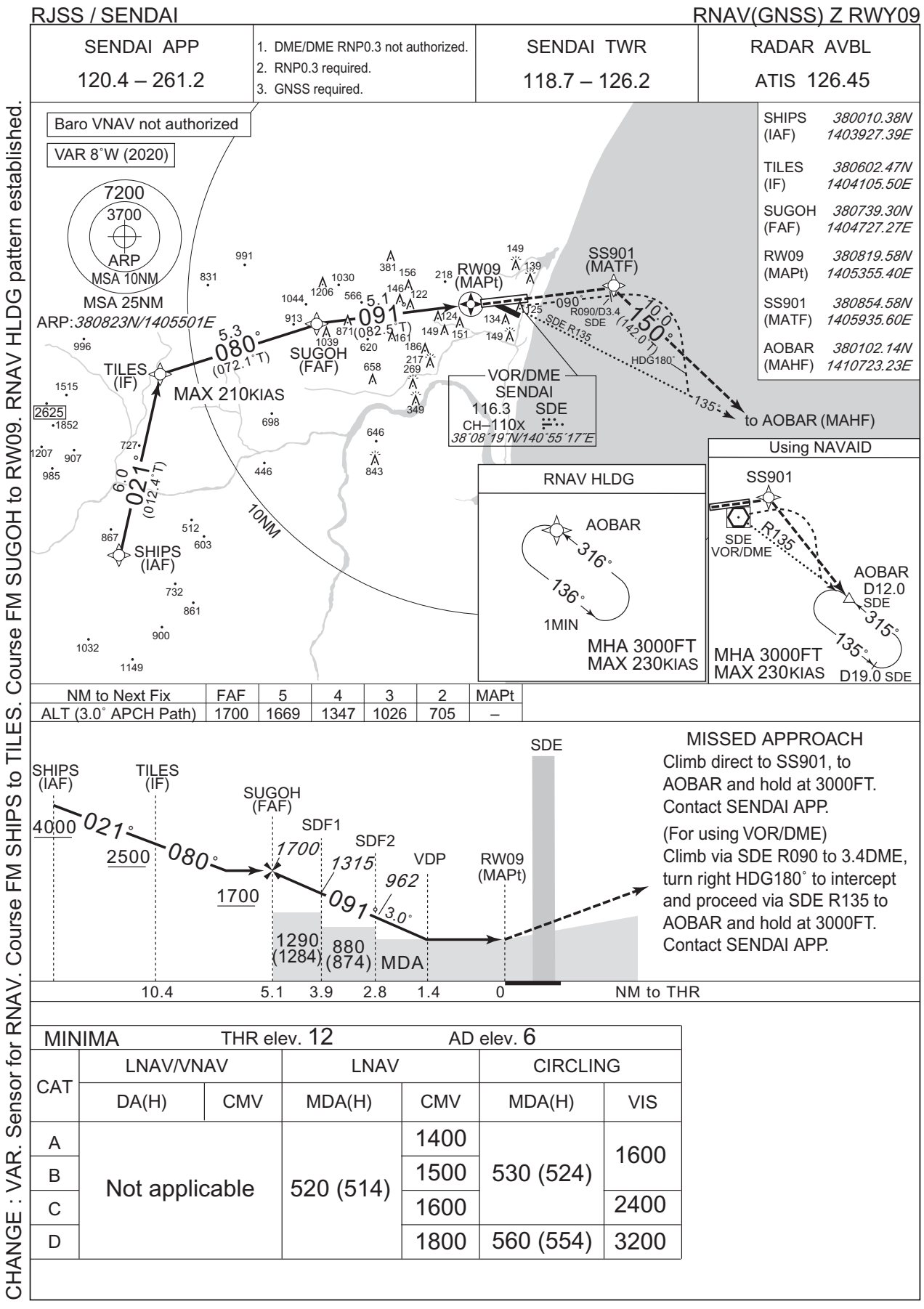
Timing not authorized for defining the MAPt.

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

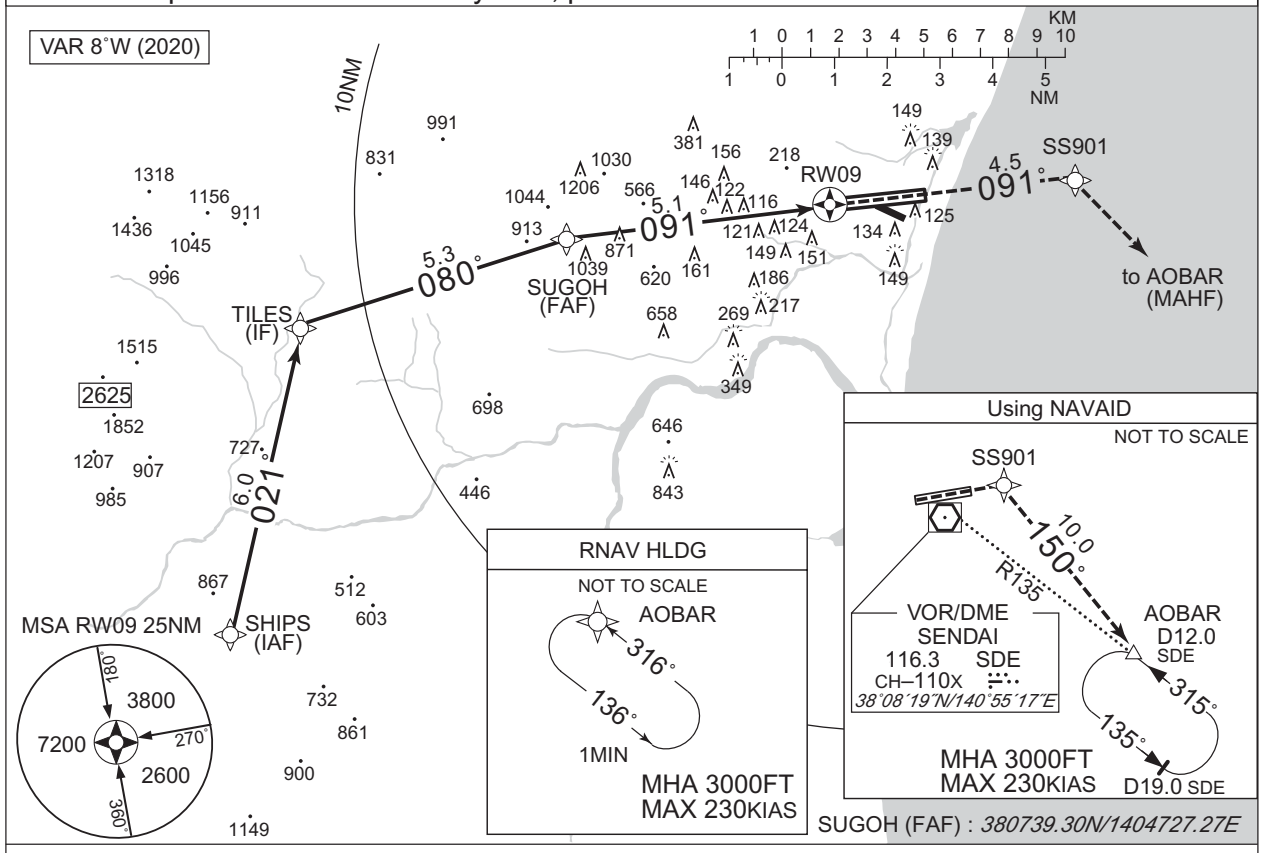


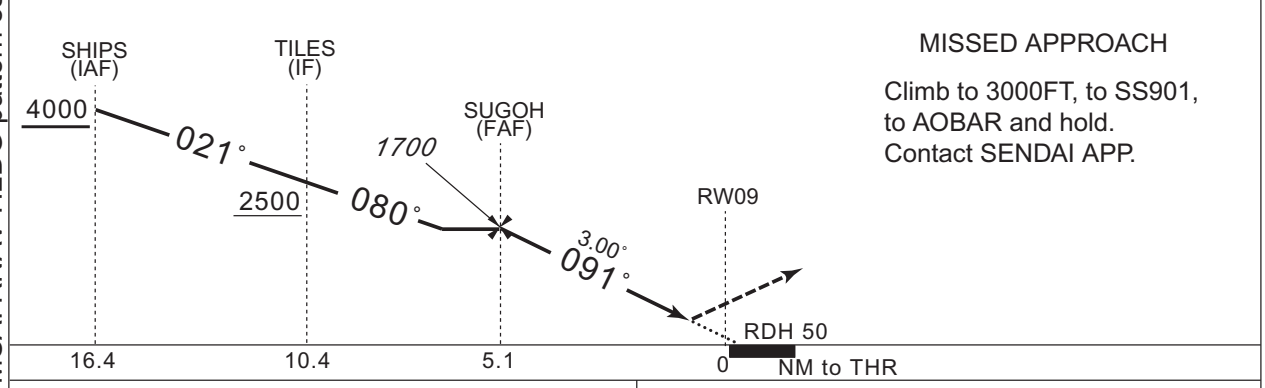
INSTRUMENT APPROACH CHART

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

CHANGE : VAR. PROC course. MSA. RNAV HLDG pattern established.

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	—	—	-8.3	—	—	+4000	—	—	—
002	TF	TILES	—	021 (012.4)	-8.3	6.0	—	+2500	—	—	1.0
003	TF	SUGOH	—	080 (072.1)	-8.3	5.3	—	1700	—	—	1.0
004	TF	RW09	Y	091 (082.5)	-8.3	5.1	—	62	—	-3.00/50	0.3
005	TF	SS901	—	091 (082.5)	-8.3	4.5	—	—	—	—	1.0
006	TF	AOBAR	—	150 (142.0)	-8.3	10.0	—	3000	—	—	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	AOBAR	316 (307.5)	-8.3	1.0(-14000)	L	3000	FL140	-230(-14000)	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*

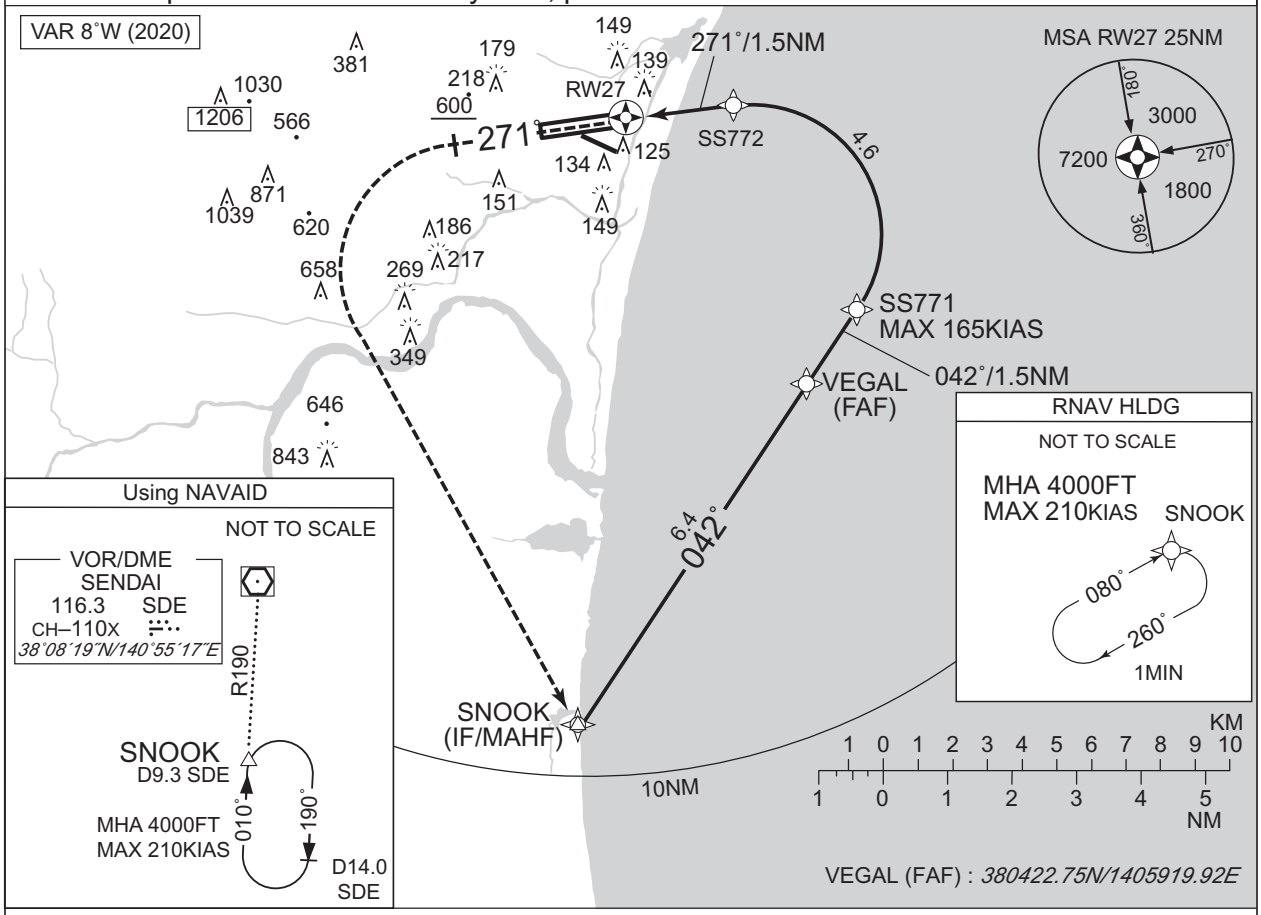
CHANGE : VAR. PROC course. RNAV HLDG pattern established.

INSTRUMENT APPROACH CHART

RJSS / SENDAI — RNAV(RNP) RWY27

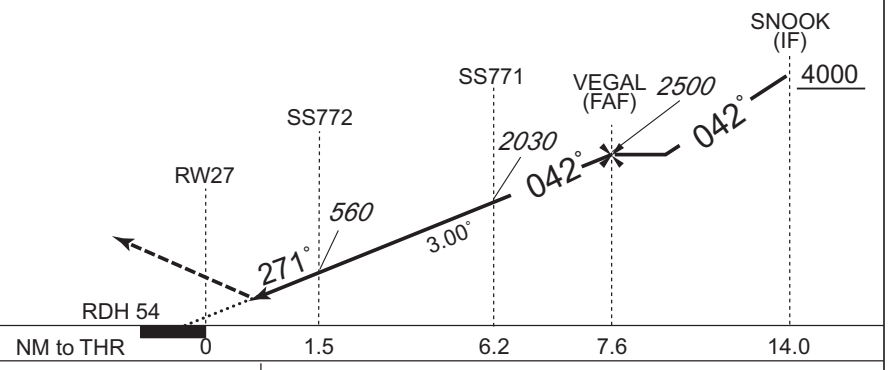
SENDAI APP	GNSS and RF required	SENDAI TWR	RADAR AVBL
120.4 – 261.2		118.7 – 126.2	ATIS 126.45

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



MISSED APPROACH

From RW27 on track 271˚, 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%

CHANGE : VAR. PROC course. MSA. RNAV HLDG pattern established.

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	—	—	-8.3	—	—	+4000	—	—	—
002	TF	VEGAL	—	042 (033.3)	-8.3	6.4	—	2500	—	—	1.0
003	TF	SS771	—	042 (033.4)	-8.3	1.5	—	2030	-165	-3.00	0.3
004	RF Center: SSRF1 R=2.02NM	SS772	—	—	-8.3	4.6	L	560	—	-3.00	0.3
005	TF	RW27	Y	271 (262.6)	-8.3	1.5	—	69	—	-3.00/54	0.3
006	FA	—	—	271 (262.6)	-8.3	—	—	+600	—	—	1.0
007	DF	SNOOK	—	—	-8.3	—	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	SNOOK	080 (071.9)	-8.3	1.0(-14000)	R	4000	FL140	-210(-14000)	1.0

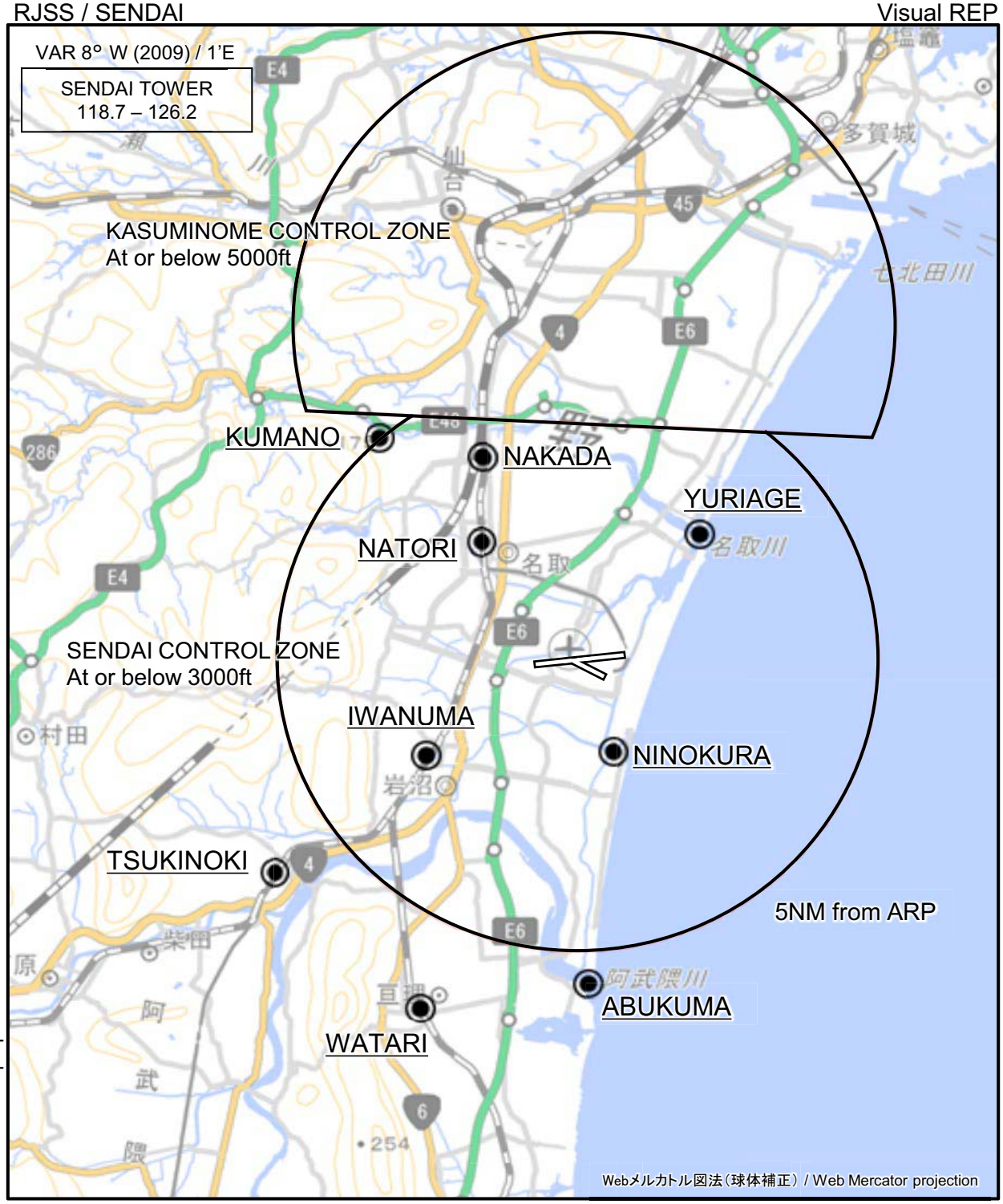
Waypoint Coordinates

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*		

CHANGE : VAR. PROC course. RNAV HLDG pattern established.

RJSS / SENDAI

Visual REP



CHANGE : Map updated.

RJSS / SENDAI Visual REP

Call sign	BRG / DIST from ARP	Remarks
熊野 Kumano	319°T / 5.0NM	熊野神社 Kumano Shrine
中田 Nakada	336°T / 3.8NM	JR南仙台駅 Station
閖上 Yuriage	043°T / 2.9NM	名取川河口 River-mouth of the Natori
名取 Natori	321°T / 2.6NM	JR名取駅 Station
二の倉 Ninokura	160°T / 1.7NM	県南浄化センター Sewage disposal center
岩沼 Iwanuma	236°T / 3.0NM	JR岩沼駅 Station
槻木 Tsukinoki	234°T / 6.2NM	JR槻木駅 Station
阿武隈 Abukuma	178°T / 5.6NM	阿武隈川河口 River-mouth of the Abukuma
亘理 Watari	204°T / 6.5NM	JR亘理駅 Station

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。

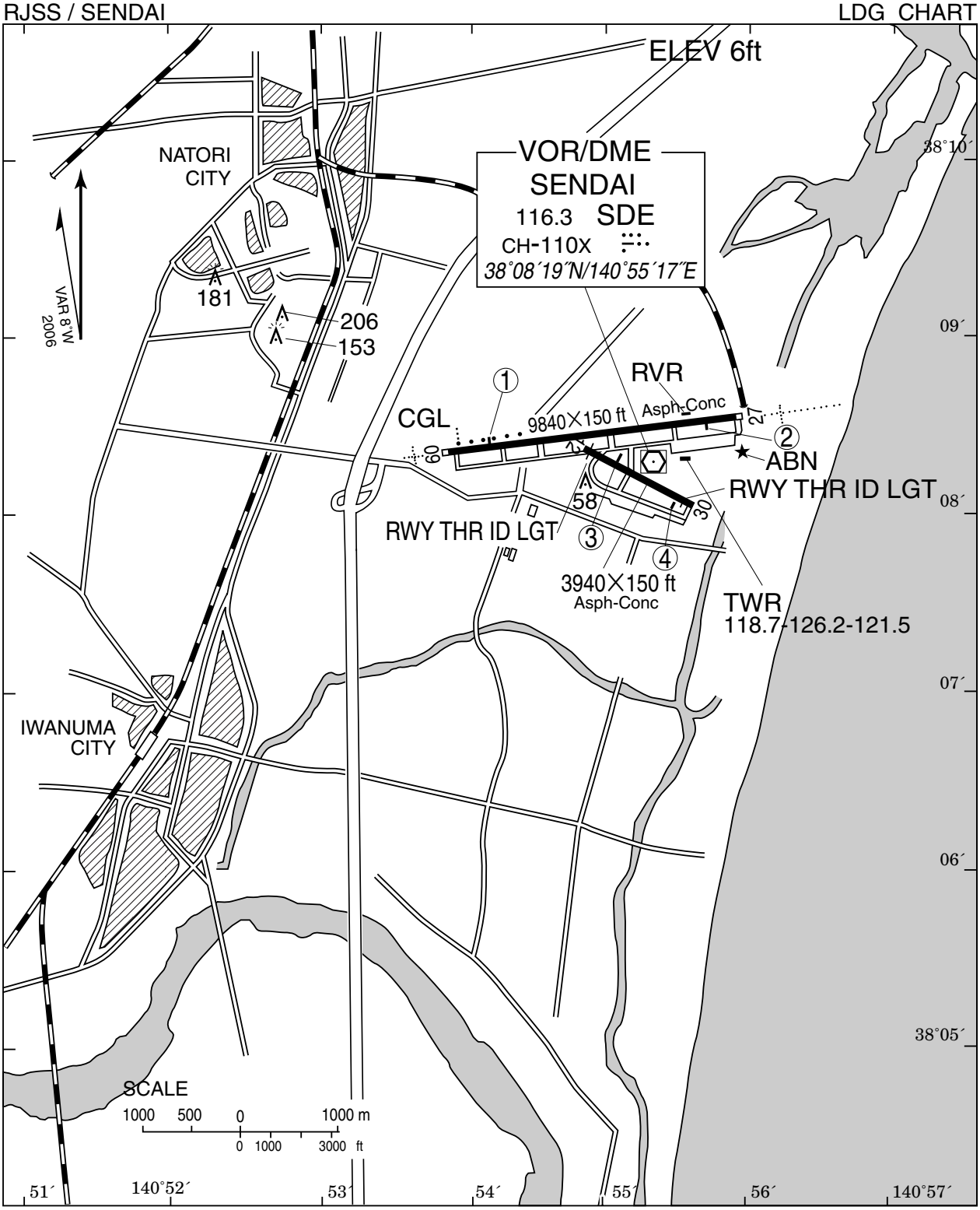
NOTE : When any VFR flight enters SENDAI CTR directly via KASUMINOME CTR, the pilot shall report to "SENDAI TWR" before entering SENDAI CTR.

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.

CHANGE : BRG/DIST from ARP.

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