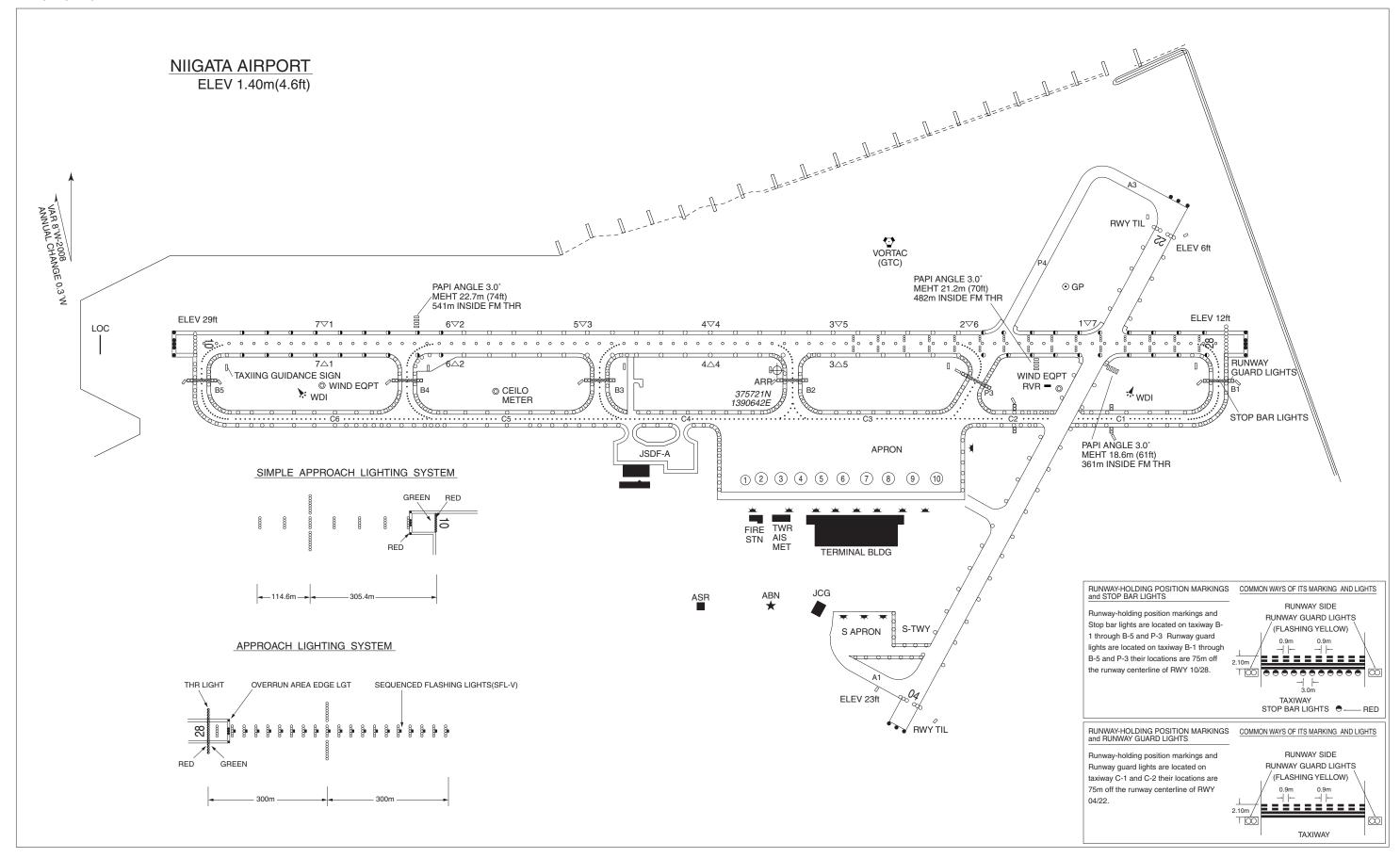
#### **AERODROME CHART**

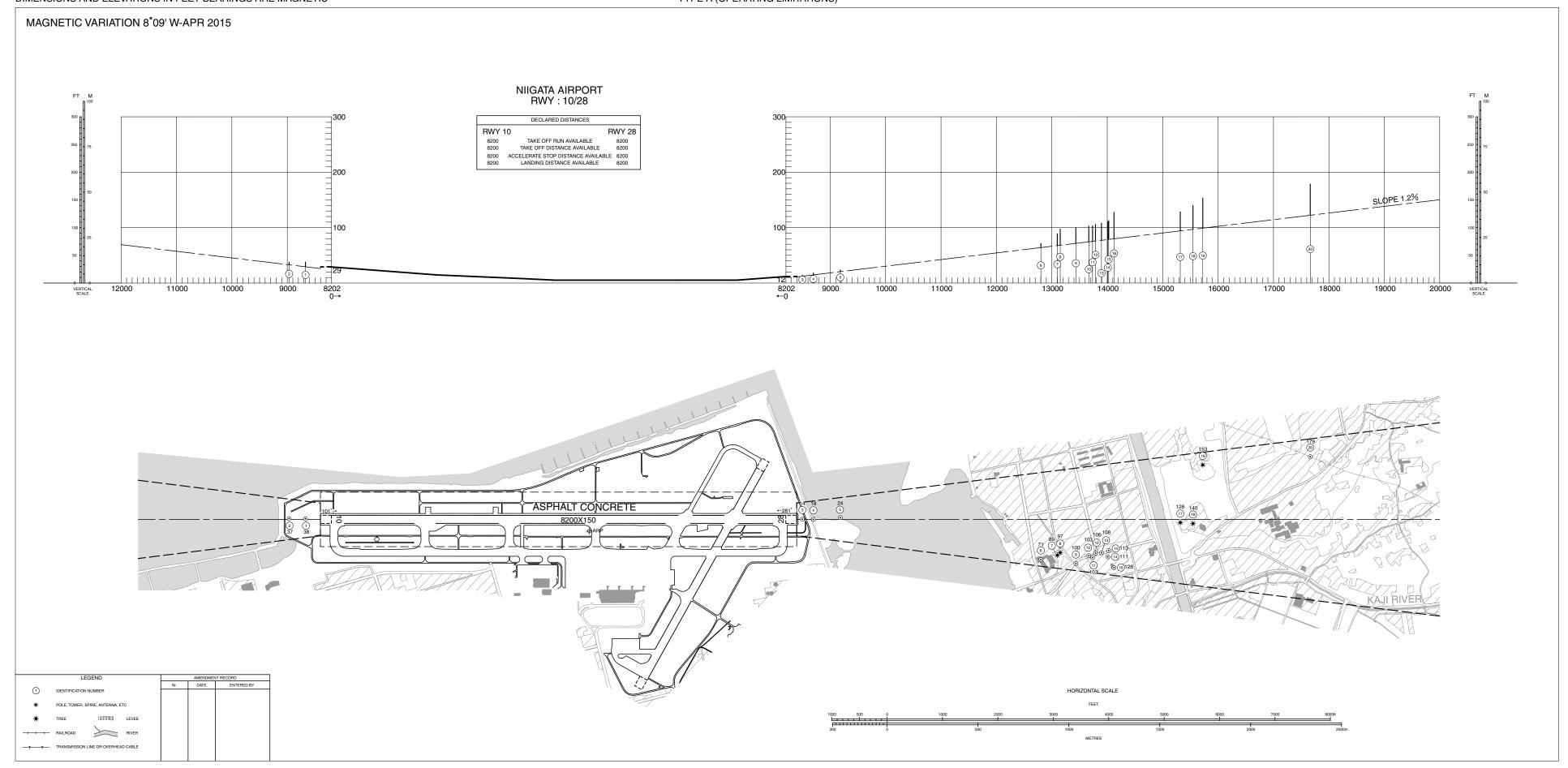


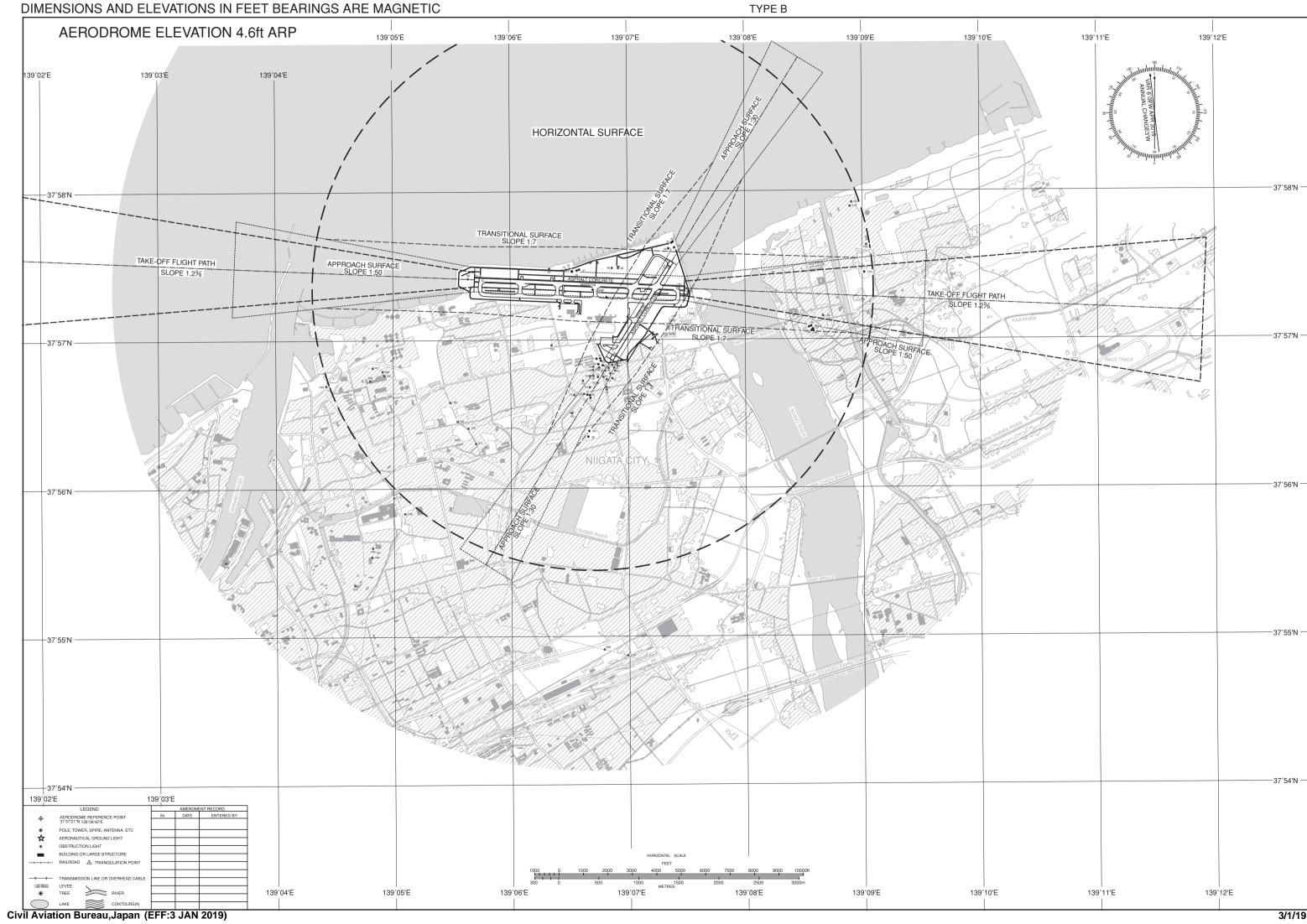




# AERODROME OBSTACLE CHART-ICAO TYPE A (OPERATING LIMITATIONS)

DIMENSIONS AND ELEVATIONS IN FEET BEARINGS ARE MAGNETIC





3/1/19

RJSN / NIIGATA SID

## OKESA FIVE DEPARTURE

RWY 04/10 : Turn left HDG 244°,...

RWY 22 : Climb RWY HDG to 800FT, turn left,...

RWY 28 : Turn right,....

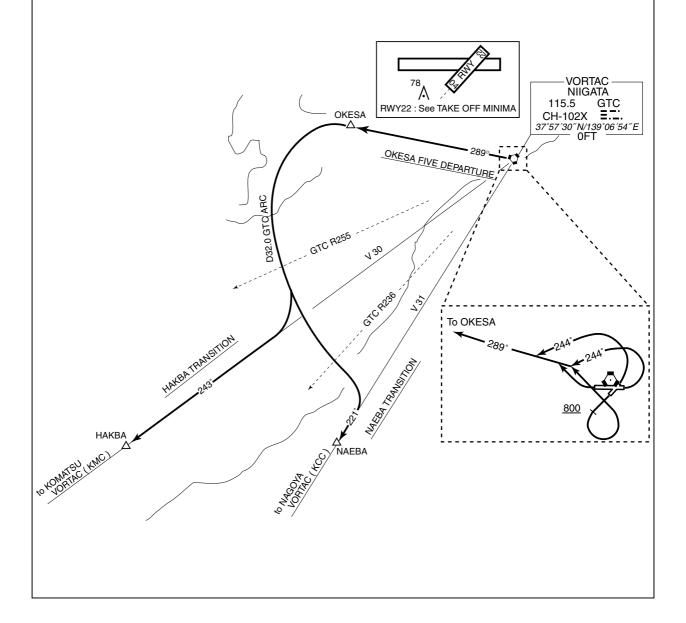
.... climb via GTC R289 to OKESA.

#### NAEBA TRANSITION

From over OKESA, turn left to intercept and proceed via GTC 32.0DME counterclockwise ARC, turn right to intercept and proceed via GTC R221 to NAEBA.

#### HAKBA TRANSITION

From over OKESA, turn left to intercept and proceed via GTC 32.0DME counterclockwise ARC, turn right to intercept and proceed via GTC R243 to HAKBA.



RJSN / NIIGATA SID

## KENSI SIX DEPARTURE

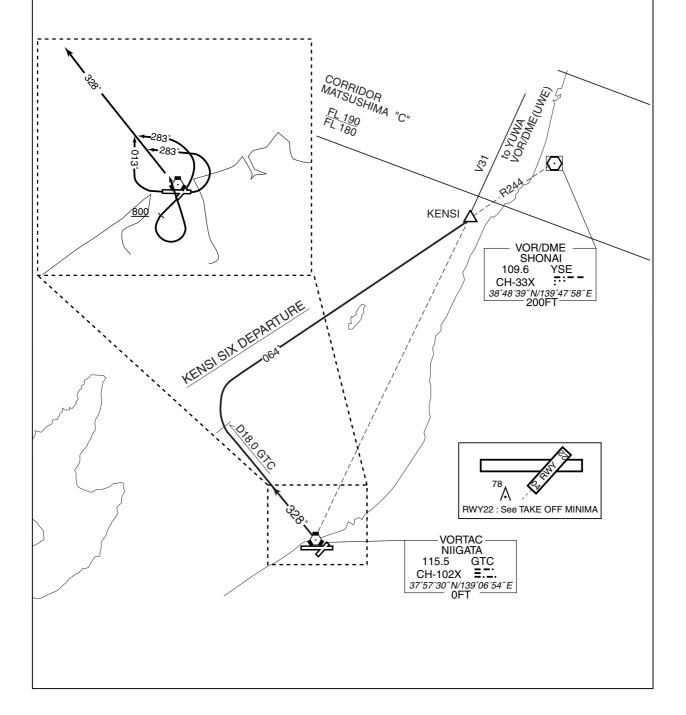
RWY 04/10 : Turn left HDG 283°,...

RWY 22 : Climb RWY HDG to 800FT, turn left,...

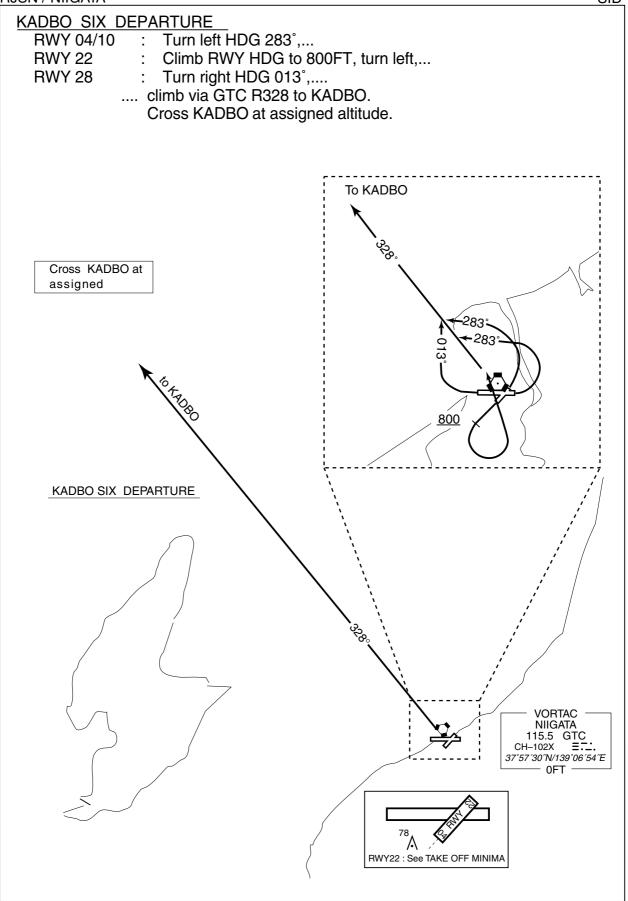
RWY 28 : Turn right HDG 013°,...

... climb via GTC R328 to GTC 18.0DME, turn right to intercept and

proceed via YSE R244 to KENSI.



RJSN / NIIGATA SID



RJSN / NIIGATA SID

## NIIGATA REVERSAL SIX DEPARTURE

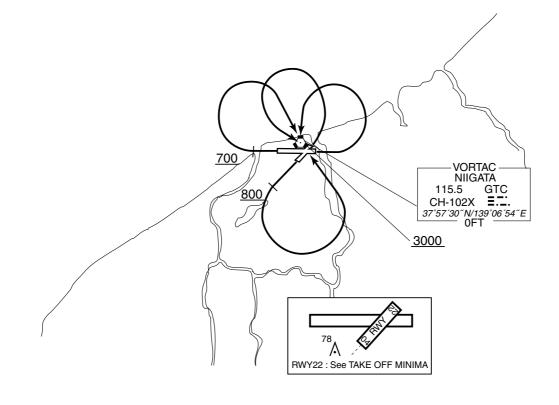
RWY 04/10 : Turn left...

RWY 22 : Climb RWY HDG to 800FT, turn left... RWY 28 : Climb RWY HDG to 700FT, turn right...

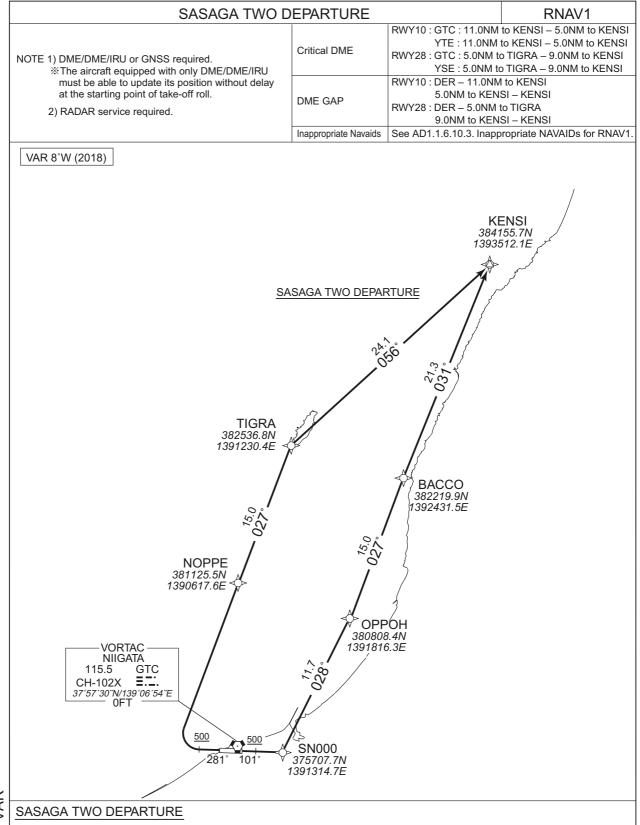
....direct to GTC VORTAC.

Cross GTC VORTAC at or above 3000FT.

## NIIGATA REVERSAL SIX DEPARTURE



RJSN / NIIGATA RNAV SID



RWY10: Climb on HDG101° at or above 500FT, direct to SN000, to OPPOH, to BACCO, to KENSI.

RWY28: Climb on HDG281° at or above 500FT, turn right direct to NOPPE, to TIGRA, to KENSI.

NOTE RWY10: 5.0% climb gradient required up to 500FT.

OBST ALT 197FT located at 0.9NM 115° FM end of RWY10.

RJSN / NIIGATA RNAV SID

## SASAGA TWO DEPARTURE

## RWY10

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation		Turn Direction	Altitude (FT)	Speed (KIAS)		Navigation Specification
001	VA	_	_	101 (092.7)	-8.3	_	_	+500	_	_	RNAV1
002	DF	SN000	_	_	-8.3	_	_	_	_	_	RNAV1
003	TF	ОРРОН	_	028 (019.7)	-8.3	11.7	_	_	_	_	RNAV1
004	TF	BACCO	_	027 (019.1)	-8.3	15.0	_	_	_	_	RNAV1
005	TF	KENSI	_	031 (023.0)	-8.3	21.3	_	_	_	_	RNAV1

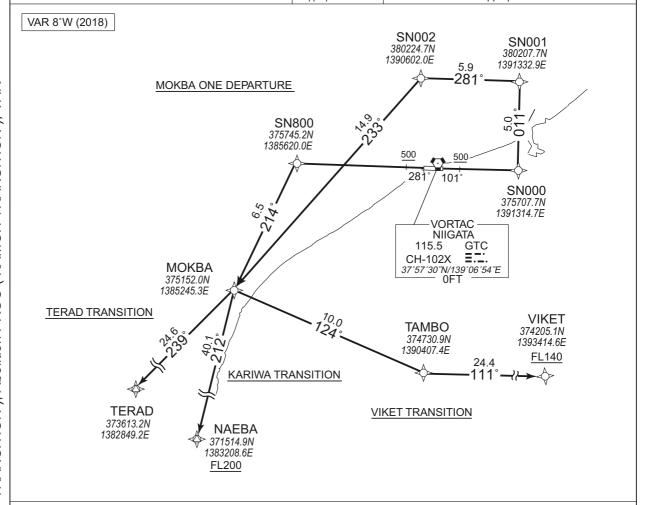
#### RWY28

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation		Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	
001	VA	_	_	281 (272.7)	-8.3	_	_	+500	_	_	RNAV1
002	DF	NOPPE	_	_	-8.3	_	R	_	_	_	RNAV1
003	TF	TIGRA	_	027 (018.9)	-8.3	15.0	_	_	_	_	RNAV1
004	TF	KENSI	_	056 (047.3)	-8.3	24.1	_	_	_	_	RNAV1

## **RJSN / NIIGATA**

#### RNAV SID and TRANSITION

#### MOKBA ONE DEPARTURE RNAV1 KARIWA TRANSITION / TERAD TRANSITION / VIKET TRANSITION VIKET TRANSITION GTC: 13.0NM to VIKET – 11.0NM to VIKET NTE: 13.0NM to VIKET – 5.0NM to VIKET NOTE 1) DME/DME/IRU or GNSS required. Critical DMF %The aircraft equipped with only DME/DME/IRU must be able to update its position without delay RWY10: DER - MOKBA at the starting point of take-off roll. RWY28: DER - MOKBA KARIWA TRANSITION 2) RADAR service required. MOKBA - 3.0NM to NAEBA DME GAP TERAD TRANSITION: MOKBA - TERAD VIKET TRANSITION MOKBA - 13.0NM to VIKET See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1. Inappropriate Navaids



#### MOKBA ONE DEPARTURE

RWY10: Climb on HDG101° at or above 500FT, direct to SN000, to SN001, to SN002, to MOKBA.

RWY28: Climb on HDG281° at or above 500FT, direct to SN800, to MOKBA.

NOTE RWY10: 5.0% climb gradient required up to 500FT.

OBST ALT 197FT located at 0.9NM 115° FM end of RWY10.

#### KARIWA TRANSITION

From MOKBA, to NAEBA at or above FL200.

#### **TERAD TRANSITION**

From MOKBA, to TERAD.

#### VIKET TRANSITION

From MOKBA, to TAMBO, to VIKET at or above FL140.

## **RJSN / NIIGATA**

## RNAV SID and TRANSITION

## MOKBA ONE DEPARTURE

#### RWY10

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation		Turn Direction	Altitude (FT)	Speed (KIAS)		Navigation Specification
001	VA	_	_	101 (092.7)	-8.3	_	_	+500	ı	_	RNAV1
002	DF	SN000	_	_	-8.3	_	_	_	ı	_	RNAV1
003	TF	SN001	_	011 (002.7)	-8.3	5.0	_	_	ı	_	RNAV1
004	TF	SN002	_	281 (272.8)	-8.3	5.9	_	-	_	_	RNAV1
005	TF	MOKBA	_	233 (224.9)	-8.3	14.9	_	_	_	_	RNAV1

## RWY28

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over		Magnetic Variation		Turn Direction		Speed (KIAS)		Navigation Specification
001	VA	_	_	281 (272.7)	-8.3	_	_	+500	ı	1	RNAV1
002	DF	SN800	_	_	-8.3	_	_	_	_	_	RNAV1
003	TF	MOKBA	_	214 (205.6)	-8.3	6.5	_	_	_	_	RNAV1

## KARIWA TRANSITION

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over				Turn Direction				Navigation Specification
001	IF	MOKBA	_	-	-8.3	_	_	_	_	_	RNAV1
002	TF	NAEBA	_	212 (204.2)	-8.3	40.1	_	+FL200	_	_	RNAV1

## TERAD TRANSITION

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over		Magnetic Variation		Turn Direction				Navigation Specification
001	IF	MOKBA	_	_	-8.3	_	-	_	_	_	RNAV1
002	TF	TERAD	_	239 (230.5)	-8.3	24.6	_	_	_	_	RNAV1

## **VIKET TRANSITION**

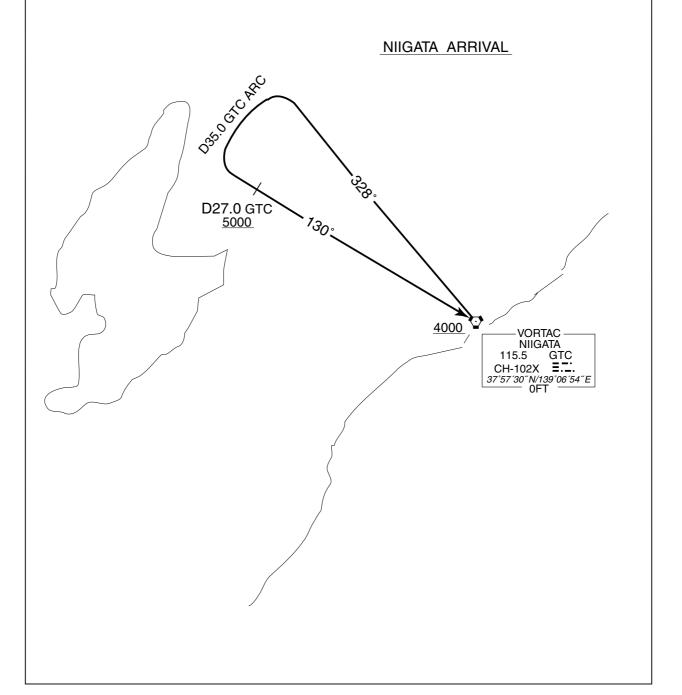
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation		Turn Direction				Navigation Specification
I TUITIDOI	Doddinptor	idontinoi	0 101	141( 1 )	Variation	(14141)	Diroction	(' ')	(111710)	7 111910	Opcomodicin
001	IF	MOKBA	_	_	-8.3	_	_	_	ı	_	RNAV1
002	TF	TAMBO	_	124 (115.8)	-8.3	10.0	_	_	1	_	RNAV1
003	TF	VIKET	_	111 (102.7)	-8.3	24.4	_	+FL140	_	_	RNAV1

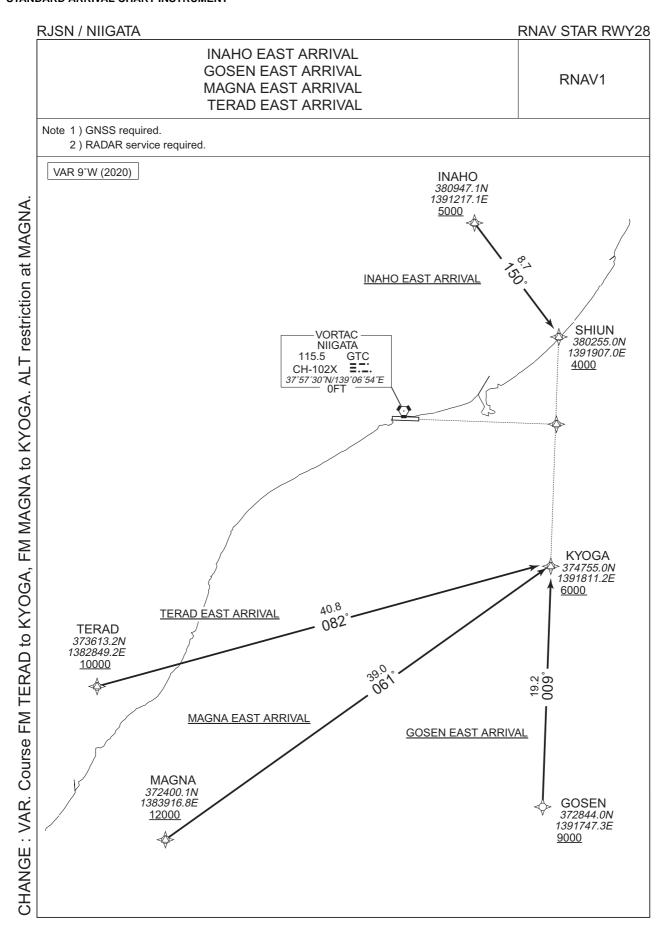
RJSN / NIIGATA STAR

## NIIGATA ARRIVAL

From over GTC VORTAC, proceed via GTC R328, turn left to intercept and proceed via GTC 35.0DME counterclockwise ARC, turn left, proceed via GTC R310 to GTC VORTAC.

Cross GTC R310/27.0DME at or above 5000FT, cross GTC VORTAC at or above 4000FT.





## RJSN / NIIGATA

**RNAV STAR RWY28** 

## INAHO EAST ARRIVAL

From INAHO at or above 5000FT, to SHIUN at or above 4000FT.

Critical DME	-
DME GAP	INAHO - SHIUN
Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1

Seria	Path	Waypoint	Fly		Magnetic	Distance	Turn	Altitude	Speed	Vertical	Navigation
Numbe	Pr Descriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	Specification
001	IF	INAHO	_	-	-8.5	_	_	+5000	_	_	RNAV1
002	TF	SHIUN	_	150 (141.9)	-8.5	8.7	_	+4000	_	_	RNAV1

## **GOSEN EAST ARRIVAL**

From GOSEN at or above 9000FT, to KYOGA at or above 6000FT.

Critical DME	-
DME GAP	GOSEN - KYOGA
Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1

Serial	Path	Waypoint	Fly	Course	Magnetic	Distance	Turn	Altitude	Speed	Vertical	Navigation
Number	Descriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	Specification
001	IF	GOSEN	_	_	-8.5	_	-	+9000	_	_	RNAV1
002	TF	KYOGA	_	009 (000.9)	-8.5	19.2	_	+6000	_	_	RNAV1

## MAGNA EAST ARRIVAL

From MAGNA at or above 12000FT, to KYOGA at or above 6000FT.

Critical DME	GTC:MAGNA - 10.0NM to KYOGA NTE:MAGNA - 10.0NM to KYOGA
DME GAP	10.0NM to KYOGA - KYOGA
Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1

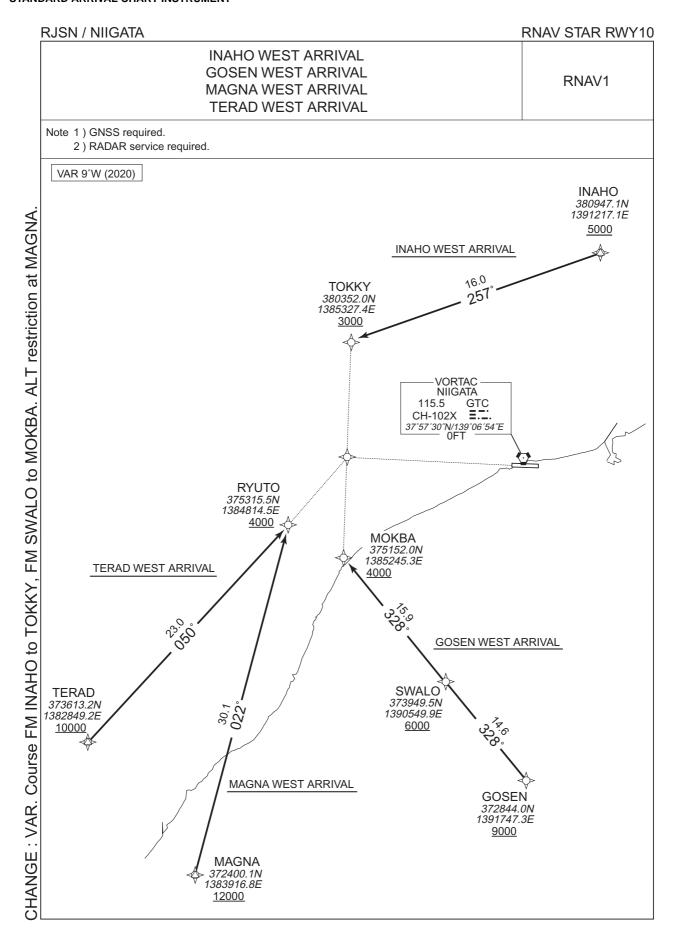
Serial	Path	Waypoint	Fly	Course	Magnetic	Distance	Turn	Altitude	Speed	Vertical	Navigation
Number	Descriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	Specification
001	IF	MAGNA	_	_	-8.5	_	_	+12000	_	_	RNAV1
002	TF	KYOGA	_	061 (052.0)	-8.5	39.0	_	+6000	_	_	RNAV1

## TERAD EAST ARRIVAL

From TERAD at or above 10000FT, to KYOGA at or above 6000FT.

Critical DME	-
DME GAP	TERAD - KYOGA
Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1

	Serial	Path	Waypoint	Fly	Course	Magnetic	Distance	Turn	Altitude	Speed	Vertical	Navigation
ı	Number	Descriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	Specification
	001	IF	TERAD	_	_	-8.5	_	_	+10000	_	_	RNAV1
	002	TF	KYOGA	_	082 (073.1)	-8.5	40.8	_	+6000	_	_	RNAV1



#### RJSN / NIIGATA

**RNAV STAR RWY10** 

#### INAHO WEST ARRIVAL

From INAHO at or above 5000FT, to TOKKY at or above 3000FT.

Critical DME	_
DME GAP	INAHO - TOKKY
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		Turn Direction			l	Navigation Specification
001	IF	INAHO	_	_	-8.5	_	_	+5000	_	_	RNAV1
002	TF	TOKKY	_	257 (248.3)	-8.5	16.0	_	+3000	_	_	RNAV1

## **GOSEN WEST ARRIVAL**

From GOSEN at or above 9000FT, to SWALO at or above 6000FT, to MOKBA at or above 4000FT.

Critical DME	-
DME GAP	GOSEN - MOKBA
Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1

Serial	Path	Waypoint	Fly	Course	Magnetic	Distance	Turn	Altitude	Speed	Vertical	Navigation
Number	Descriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	Specification
001	IF	GOSEN	_	_	-8.5	_	_	+9000	_	_	RNAV1
002	TF	SWALO	_	328 (319.5)	-8.5	14.6	_	+6000	_	_	RNAV1
003	TF	MOKBA	_	328 (319.4)	-8.5	15.9	_	+4000	_	_	RNAV1

#### MAGNA WEST ARRIVAL

From MAGNA at or above 12000FT, to RYUTO at or above 4000FT.

Critical DME	GTC:MAGNA - 15.0NM to RYUTO NTE:MAGNA - 15.0NM to RYUTO
DME GAP	15.0NM to RYUTO - RYUTO
Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1

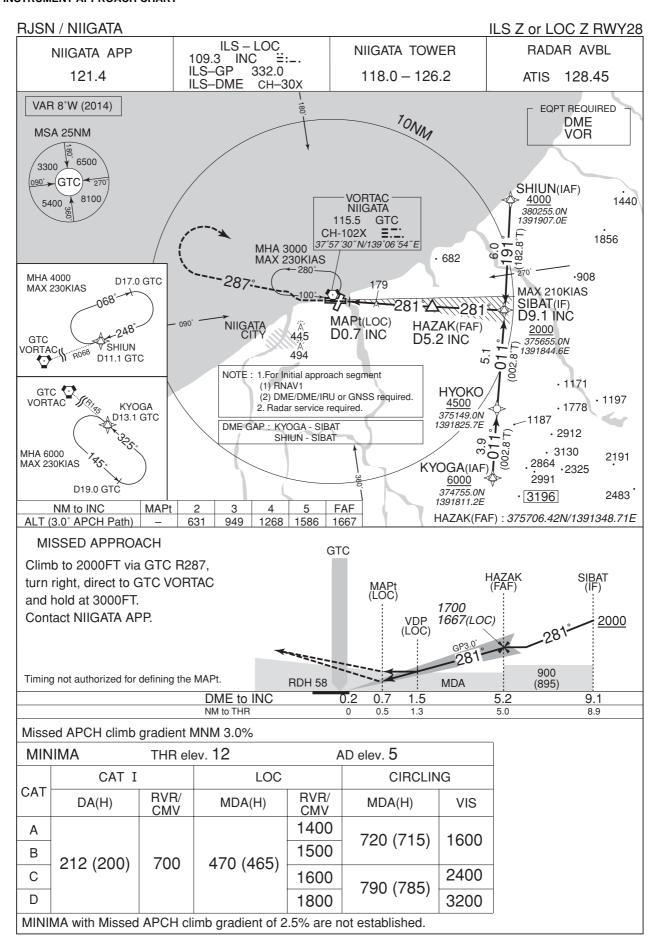
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation		Turn Direction			I	Navigation Specification
001	IF	MAGNA	_	_	-8.5	_	_	+12000	_	_	RNAV1
002	TF	RYUTO	_	022 (013.6)	-8.5	30.1	_	+4000	_	_	RNAV1

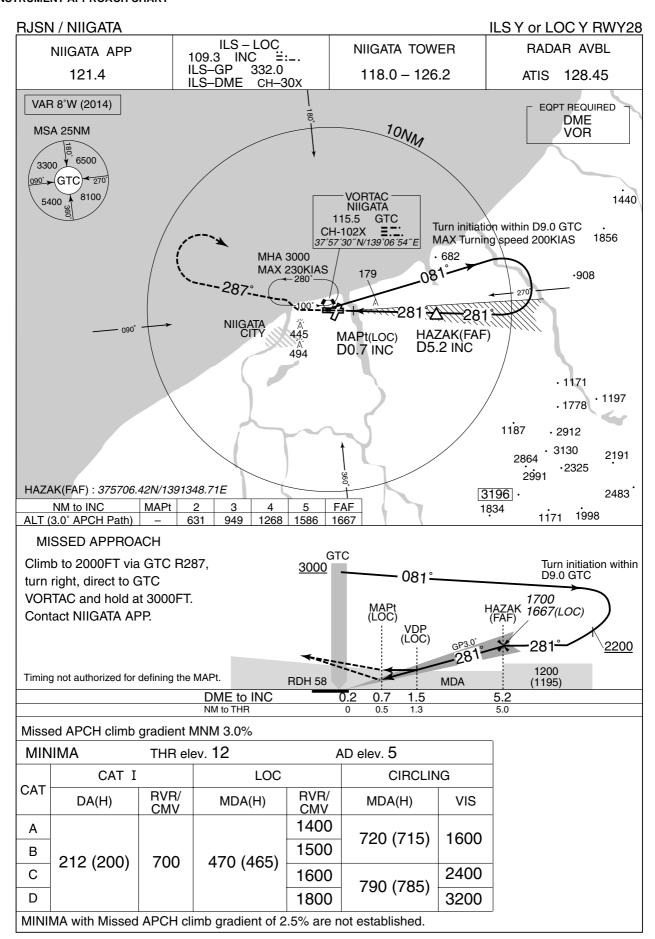
## TERAD WEST ARRIVAL

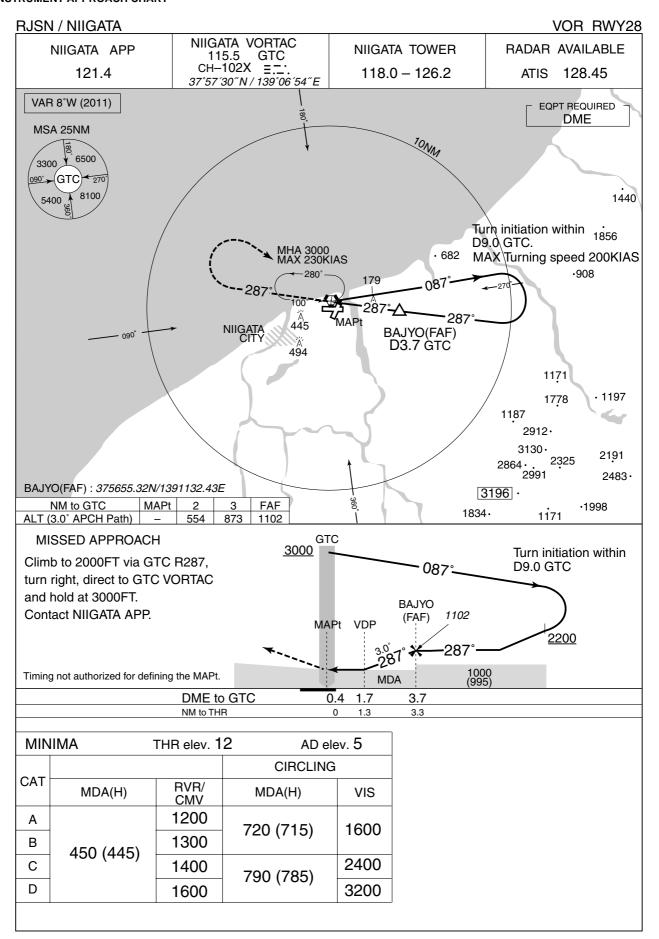
From TERAD at or above 10000FT, to RYUTO at or above 4000FT.

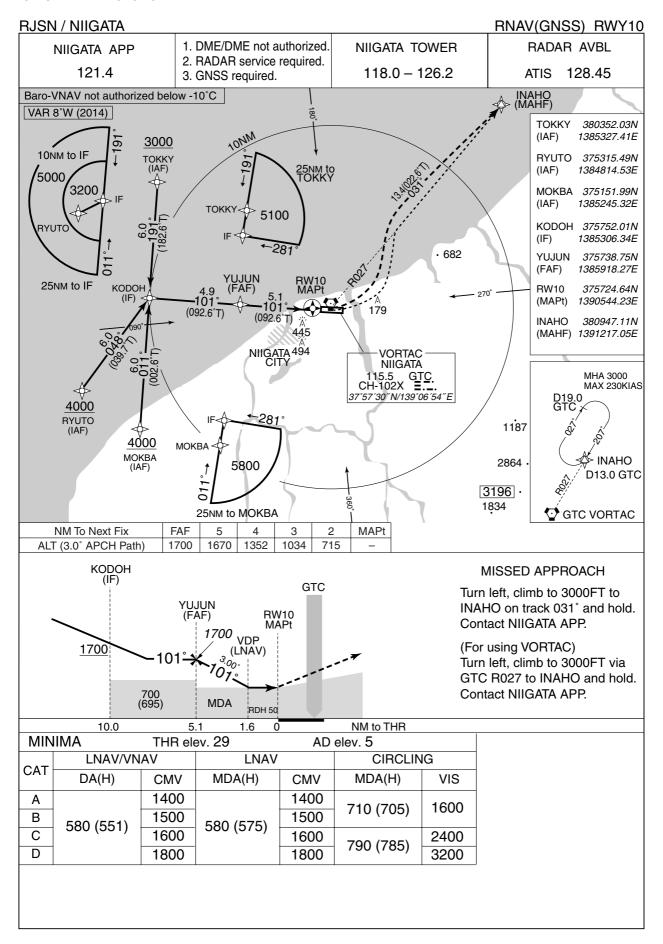
Critical DME	-
DME GAP	TERAD - RYUTO
Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1

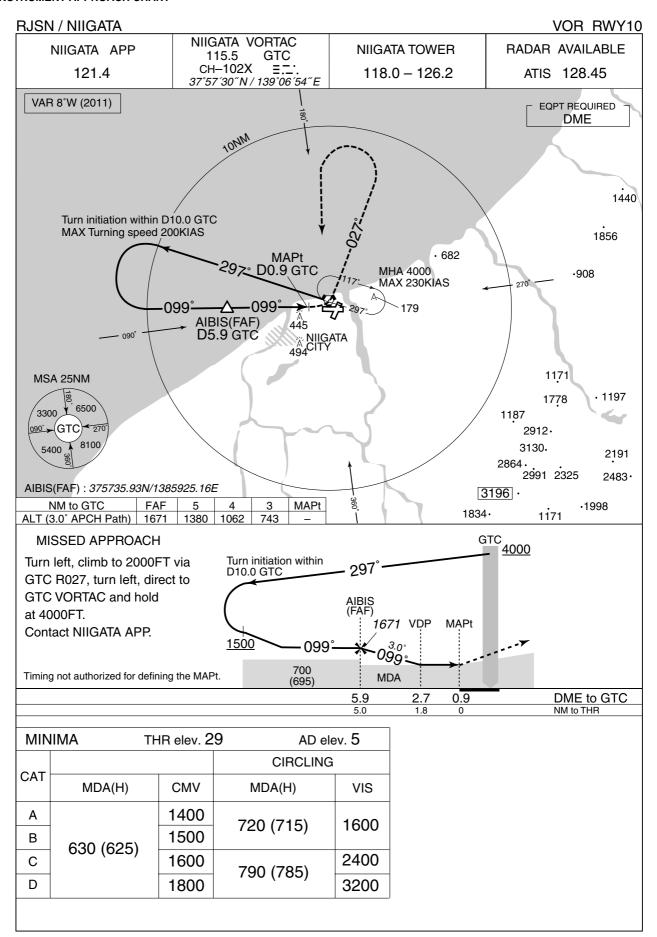
Serial	Path	Waypoint	Fly	Course	Magnetic	Distance	Turn	Altitude	Speed	Vertical	Navigation
Number	Descriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	Specification
001	IF	TERAD	_	_	-8.5	_	_	+10000	_	_	RNAV1
002	TF	RYUTO	_	050 (041.9)	-8.5	23.0	-	+4000	_	_	RNAV1

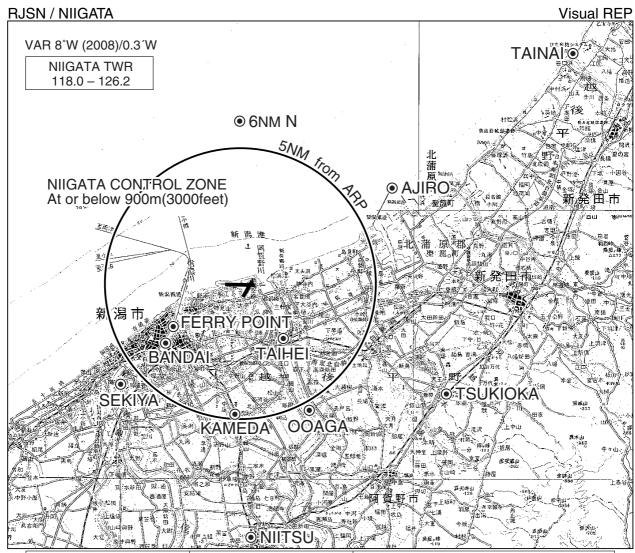






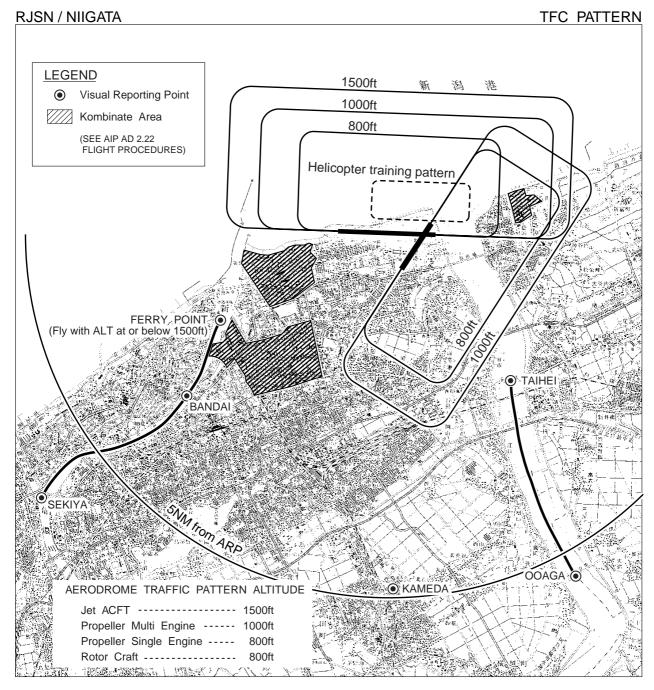






Call sign	BRG(MAG) / DIST from ARP	Remarks
胎 内 Tainai	062°/15NM	胎内川河口 River-mouth
月 岡 Tsukioka	126°/ 8.6NM	JR駅 Station
新 津 Niitsu	185°/ 9NM	JR駅 Station
大阿賀 Ooaga	159°/ 5.2NM	橋 Bridge
亀 田 Kameda	190°/ 4.7NM	JR駅 Station
関 屋 Sekiya	240°/ 6NM	分水路への分岐点 Diverging-point for Flood-control channel
*泰 平 Taihei	149°/ 2.6NM	橋 Bridge
*万 代 Bandai	240°/ 3.5NM	橋 Bridge
*フェリーポイント Ferry point	251°/ 2.6NM	万代橋より信濃川下流2kmの地点(1,500ft以下で通過すること) The point 2km down the Shinano from the Bandai Bridge. (Fly with ALT at or below 1500FT)
6NM N	360°/ 6NM	海上 Over the sea
網 代 Ajiro	065°/ 7NM	防波堤突端の赤色灯台 Red lighthouse at the tip of breakwater

\*ヘリコプター Use for helicopter



阿賀野ルート:大阿賀~泰平間の阿賀野川に沿う飛行経路(回転翼航空機用)

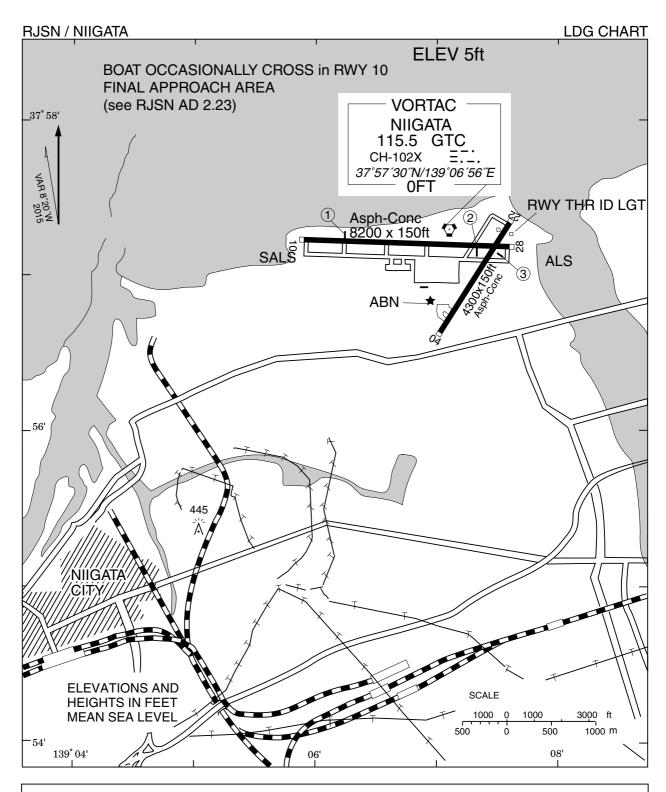
AGANO ROUTE: The route along Agano river between OOAGA and TAIHEI (Use for Rotor Craft)

信濃ルート:関屋~万代~フェリーポイント間の信濃川に沿う飛行経路(回転翼航空機用)

SHINANO ROUTE: The route along Shinano river between SEKIYA, BANDAI and FERRY POINT (Use for Rotor Craft)

※新潟タワーから上記ルートによる飛行の指示があった場合、VFR回転翼航空機は空港周辺における航空機 騒音軽減のためVMCを維持できない場合を除き可能な限り当該ルートに沿って飛行することが望ましい。

\*In order to reduce aircraft noise in the vicinity of airport, VFR Rotor Craft is expected to follow the above mentioned route when insrtucted by Niigata tower. (except the case of IMC)



- ①RWY10: Angle 3.0° MEHT 22.6m (74ft) 541m inside fm THR
- ②RWY28: Angle 3.0° MEHT 21.0m (69ft) 482m inside fm THR
- 3RWY22:Angle 3.0°MEHT 18.6m (61ft)361m inside fm THR

