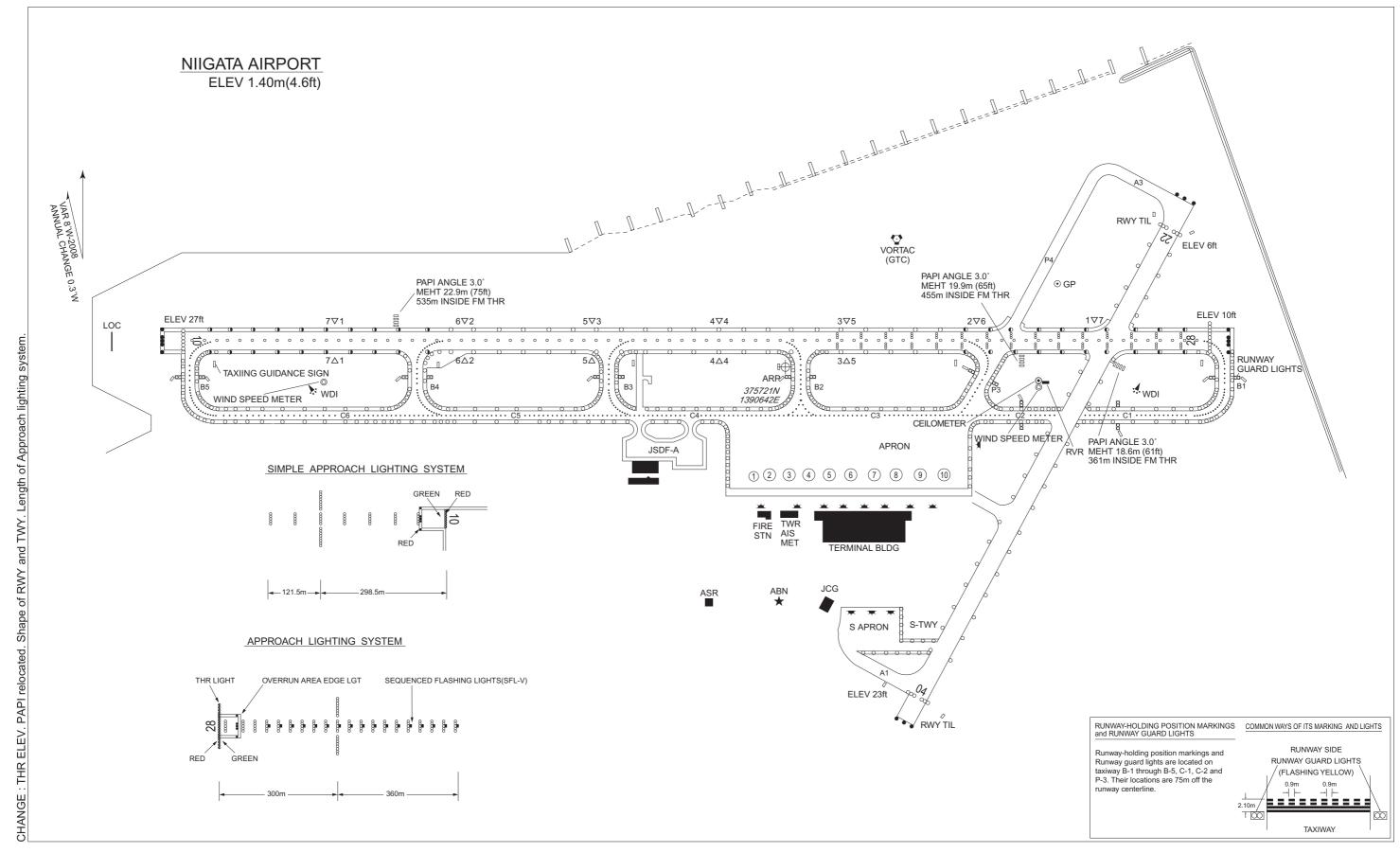
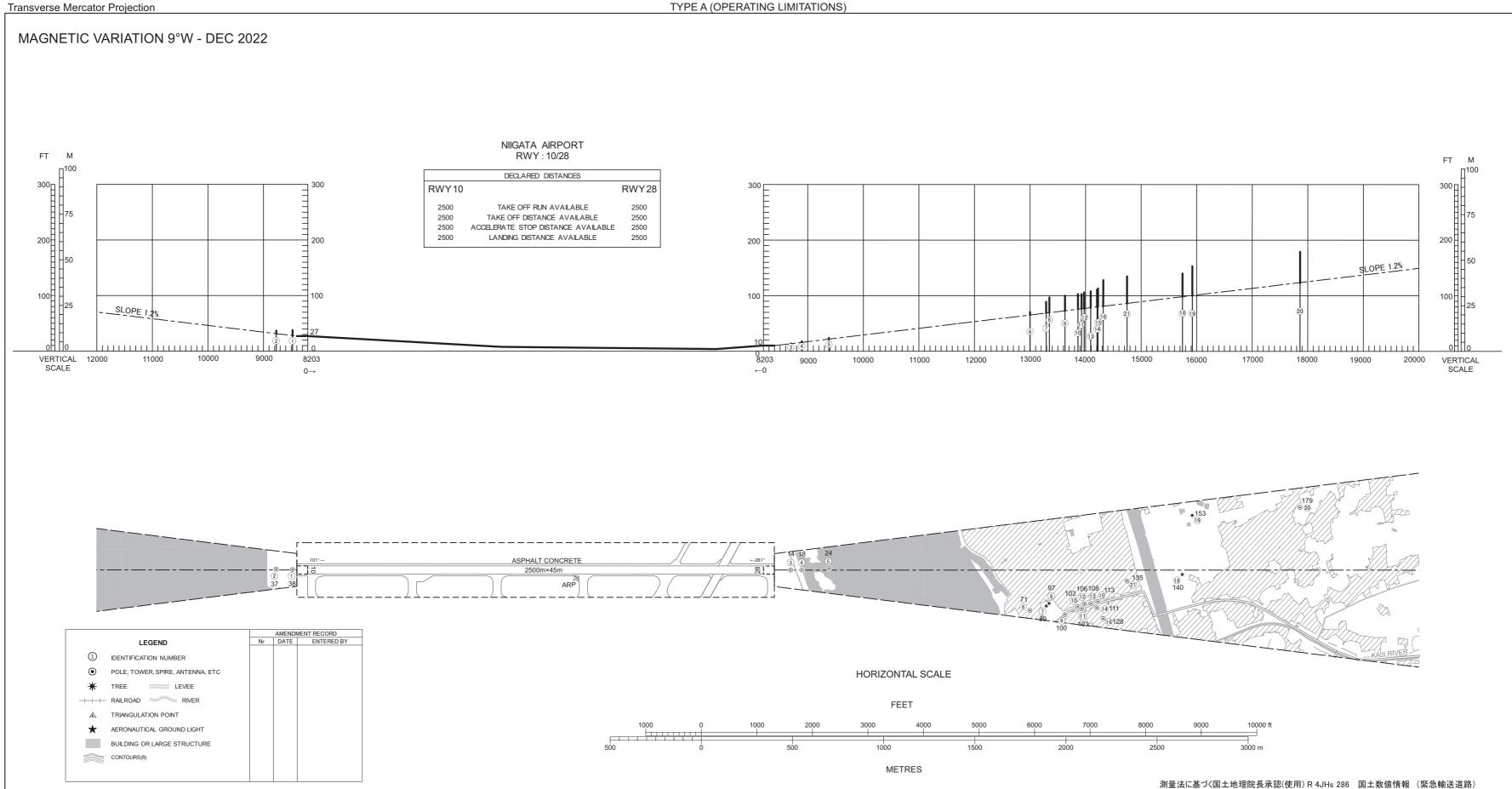
#### **AERODROME CHART**



Civil Aviation Bureau, Japan (EFF:1 DEC 2022)



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



CHANGE: Update

DIMENSIONS AND ELEVATIONS IN FEET BEARINGS ARE MAGNETIC

AERODROME OBSTACLE CHART-ICAO TYPE B



Civil Aviation Bureau, Japan (EFF:1 DEC 2022)

RJSN / NIIGATA SID

## OKESA SIX DEPARTURE

RWY 04 : Turn left HDG 244°...

RWY 10 : Climb RWY HDG to 500FT, turn left HDG 244°...

RWY 22 : Climb RWY HDG to 800FT, turn left... RWY 28 : Climb RWY HDG to 500FT, turn right...

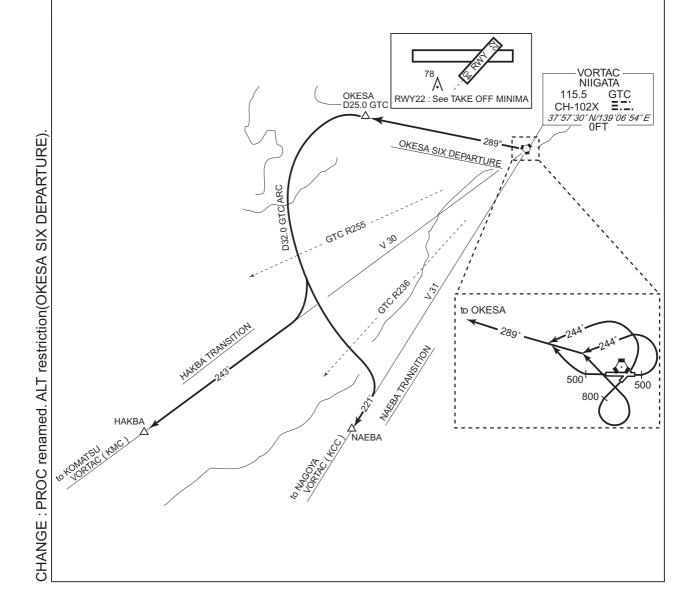
...to intercept and proceed via GTC R289 to OKESA.

#### NAEBA TRANSITION

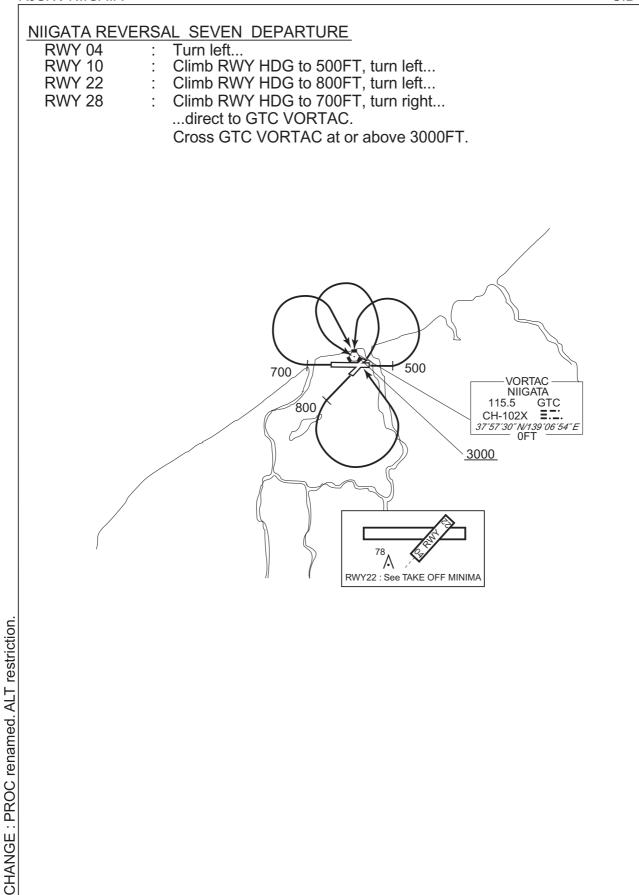
From over OKESA, turn left to intercept and proceed via GTC 32.0DME counterclockwise ARC, turn right to intercept and proceed via GTC R221 to NAEBA.

#### HAKBA TRANSITION

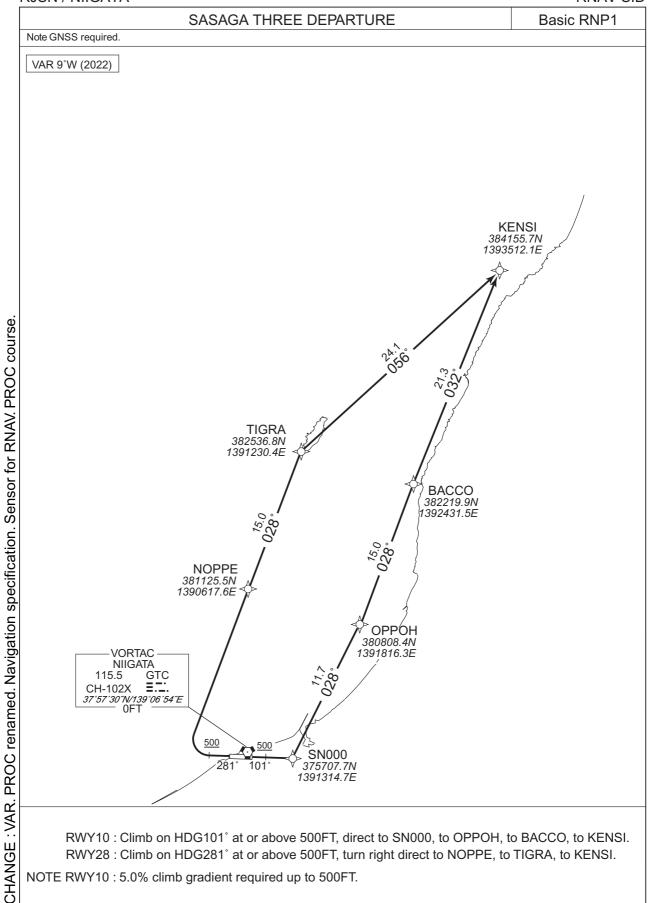
From over OKESA, turn left to intercept and proceed via GTC 32.0DME counterclockwise ARC, turn right to intercept and proceed via GTC R243 to HAKBA.



RJSN / NIIGATA SID



**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.

RJSN / NIIGATA RNAV SID

## SASAGA THREE DEPARTURE

## RWY10

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation		Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	VA	_	_	101 (092.7)	-8.6	_	_	+500	_	_	Basic RNP1
002	DF	SN000	_	_	-8.6	_	_	_	-	_	Basic RNP1
003	TF	ОРРОН	_	028 (019.7)	-8.6	11.7	_	_	_	_	Basic RNP1
004	TF	BACCO	_	028 (019.1)	-8.6	15.0	_	_	_	_	Basic RNP1
005	TF	KENSI	_	032 (023.0)	-8.6	21.3	_	_	_	_	Basic RNP1

## RWY28

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation		Turn Direction				Navigation Specification
001	VA	_	_	281 (272.7)	-8.6	_	_	+500	-	_	Basic RNP1
002	DF	NOPPE	_	_	-8.6	_	R	_	-	_	Basic RNP1
003	TF	TIGRA	_	028 (018.9)	-8.6	15.0	_	_	_	_	Basic RNP1
004	TF	KENSI	_	056 (047.3)	-8.6	24.1	_	_	_	_	Basic RNP1

#### RNAV SID and TRANSITION **RJSN / NIIGATA** MOKBA TWO DEPARTURE Basic RNP1 CHANGE: VAR. PROC renamed. Navigation specification. Sensor for RNAV. Course FM MOKBA to NAEBA. ALT restriction at TAMBO established KARIWA TRANSITION / TERAD TRANSITION / VIKET TRANSITION Note GNSS required. VAR 9°W (2022) SN002 SN001 380224.7N 380207.7N 1390602.0E 1391332.9E 5.9 281 MOKBA TWO DEPARTURE 5.0 SN800 375745.2N 1385620.0E 500 500 28 101 SN000 375707.7N 6.5 1391314.7E VORTAC NIIGATA GTC 115.5 CH-102X **MOKBA** 37°57′30″N/139°06′54″E 375152.0N OFT 1385245.3E TERAD TRANSITION 10.0 VIKET **TAMBO** 374205.1N 374730.9N 1393414.6E 1390407.4E FL140 9000 24.4 KARIWA TRANSITION 111 **TERAD** VIKET TRANSITION 373613.2N **NAEBA** 1382849.2E 371514.9N 1383208.6E FL200 MOKBA TWO 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. KARIWA TRANSITION From MOKBA, to NAEBA at or above FL200. **TERAD TRANSITION** From MOKBA, to TERAD. VIKET TRANSITION From MOKBA, to TAMBO at or above 9000FT, to VIKET at or above FL140.

## **RJSN / NIIGATA**

## RNAV SID and TRANSITION

## MOKBA TWO DEPARTURE

#### RWY10

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	1	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	
001	VA	-	_	101 (092.7)	-8.6	_	_	+500	_	_	Basic RNP1
002	DF	SN000	_	_	-8.6	_	_	_	_	_	Basic RNP1
003	TF	SN001	_	011 (002.7)	-8.6	5.0	_	-	_	_	Basic RNP1
004	TF	SN002	_	281 (272.8)	-8.6	5.9	_	_	_	_	Basic RNP1
005	TF	MOKBA	_	233 (224.9)	-8.6	14.9	_	-	_	_	Basic RNP1

## RWY28

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	1	Turn Direction				Navigation Specification
001	VA	_	_	281 (272.7)	-8.6	_	_	+500	_	_	Basic RNP1
002	DF	SN800	_	_	-8.6	_	_	_	-	_	Basic RNP1
003	TF	MOKBA	_	214 (205.6)	-8.6	6.5	_	_	-	_	Basic RNP1

## KARIWA TRANSITION

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over		Magnetic Variation		Turn Direction				Navigation Specification
001	IF	MOKBA	_	_	-8.6	_	_	_	_	_	Basic RNP1
002	TF	NAEBA	_	213 (204.2)	-8.6	40.1	_	+FL200	_	_	Basic RNP1

## TERAD TRANSITION

Serial Number	Path Descriptor		Fly Over		Magnetic Variation		Turn Direction				Navigation Specification
001	IF	MOKBA	_	_	-8.6	_	_	_	_	_	Basic RNP1
002	TF	TERAD	_	239 (230.5)	-8.6	24.6	_	_	_	_	Basic RNP1

## VIKET TRANSITION

1 -	Serial umber	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation		Turn Direction				Navigation Specification
	001	IF	MOKBA	_	_	-8.6	_	_	_	_	_	Basic RNP1
	002	TF	TAMBO	_	124 (115.8)	-8.6	10.0	_	+9000	_	_	Basic RNP1
	003	TF	VIKET	_	111 (102.7)	-8.6	24.4	_	+FL140	_	_	Basic RNP1

**RJSN / NIIGATA RNAV SID** SUKOB ONE DEPARTURE RNAV 1 RWY10: GTC: 10.0NM to SUKOB - SUKOB NTE: 10.0NM to SUKOB - SUKOB NOTE 1) DME/DME/IRU or GNSS required. Critical DME RWY28 : GTC : 15.0NM to SUKOB - SUKOB NTE : 15.0NM to SUKOB - SUKOB XThe aircraft equipped with only DME/DME/IRU must be able to update its position without delay at the starting point of take-off roll. RWY10: DER - 10.0NM to SUKOB DME GAP RWY28: DER - 15.0NM to SUKOB 2) RADAR service required. Inappropriate Navaids See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1. VAR 9°W (2022) SUKOB 382919.9N 1381752.8E FL150 SN001 380207.7N 1391332.9E/ 011°/5.0 500 500 101 SN000 375707.7N 1391314.7E VORTAC NIIGATA 115.5 GTC CH-102X 37°57′30″N/139°06′54″E OFT PROC. RWY10: Climb on HDG101° at or above 500FT, direct to SN000, to SN001, to SUKOB at or above FL150. CHANGE: New RWY28: Climb on HDG281° at or above 500FT, turn right direct to SUKOB at or above FL150. Note RWY10: 5.0% climb gradient required up to 500FT.

RJSN/ NIIGATA RNAV SID

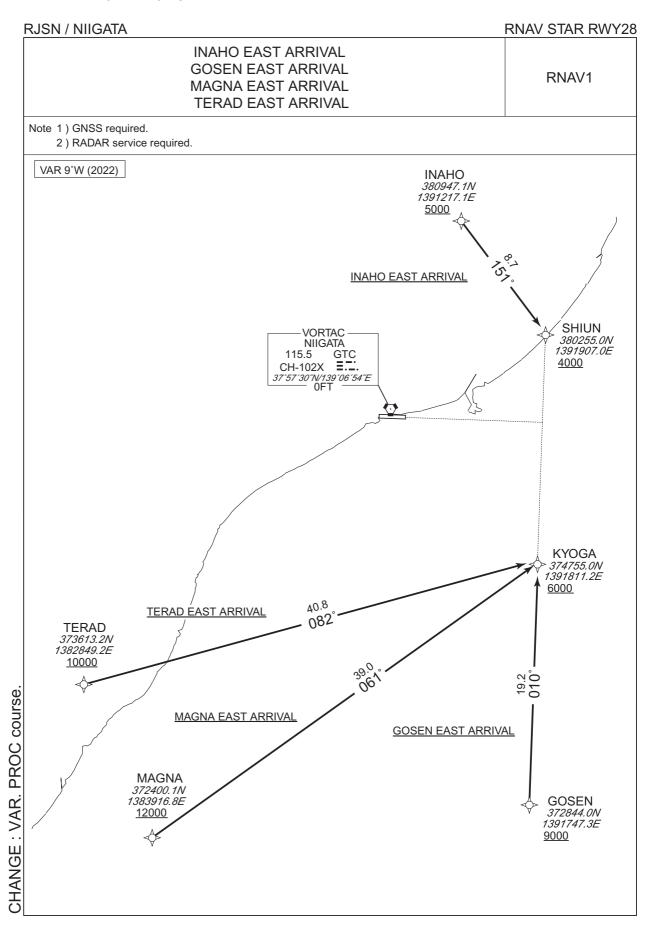
## **SUKOB ONE DEPARTURE**

## RWY10

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	VA	_	_	101 (092.7)	-8.6	_	_	+500	_	_	RNAV1
002	DF	SN000	_	_	-8.6	_	_	_	_	_	RNAV1
003	TF	SN001		011 (002.7)	-8.6	5.0		_	_		RNAV1
004	TF	SUKOB	_	311 (302.2)	-8.6	51.5		+FL150	_		RNAV1

## RWY28

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	VA	_	_	281 (272.7)	-8.6	_	_	+500	_	_	RNAV1
002	DF	SUKOB		_	-8.6	_	R	+FL150	_	_	RNAV1



## 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

Serial	Path	Waypoint	1		Magnetic						Navigation
Number	Descriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	Specification
001	IF	INAHO	_	_	-8.6	ı	_	+5000	_	_	RNAV1
002	TF	SHIUN	_	151 (141.9)	-8.6	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	_	_	-8.6	-	_	+9000	_	_	RNAV1
002	TF	KYOGA	_	010 (000.9)	-8.6	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

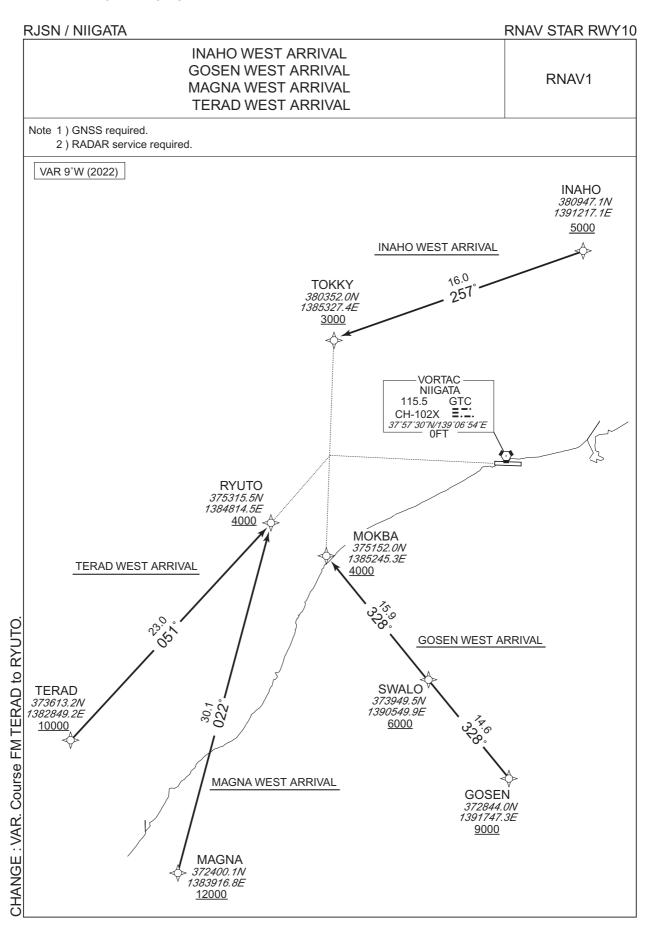
Serial	Path	Waypoint	Fly	Course	Magnetic	Distance	Turn	Altitude	Speed	Vertical	Navigation
Number	Descriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	Specification
001	IF	MAGNA	_	_	-8.6	_	_	+12000	_	_	RNAV1
002	TF	KYOGA	_	061 (052.0)	-8.6	39.0	-	+6000	_	_	RNAV1

## 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
Number	Descriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	Specification
001	IF	TERAD	_	_	-8.6	_	_	+10000	_	_	RNAV1
002	TF	KYOGA	_	082 (073.1)	-8.6	40.8	-	+6000	ı	_	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	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	INAHO	_	_	-8.6	_	_	+5000	_	_	RNAV1
002	TF	TOKKY	_	257 (248.3)	-8.6	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	_	_	-8.6	_	_	+9000	_	_	RNAV1
002	TF	SWALO	_	328 (319.5)	-8.6	14.6	-	+6000	_	_	RNAV1
003	TF	MOKBA	_	328 (319.4)	-8.6	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						

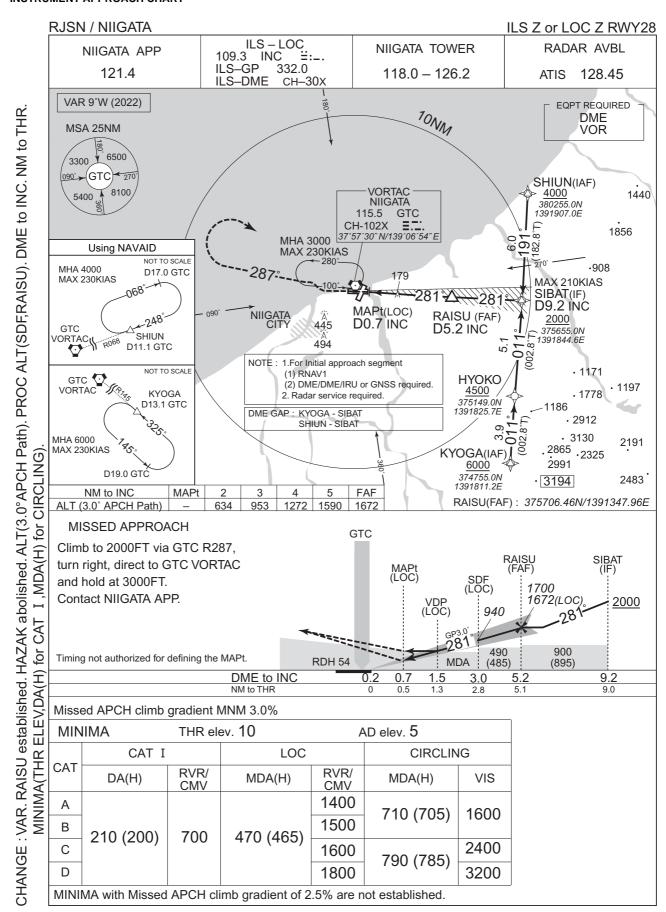
Serial	Path	Waypoint	Fly	Course	Magnetic	Distance	Turn	Altitude	Speed	Vertical	Navigation
Number	Descriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	Specification
001	IF	MAGNA	_	_	-8.6	_	_	+12000	_	_	RNAV1
002	TF	RYUTO	_	022 (013.6)	-8.6	30.1	_	+4000	_	_	RNAV1

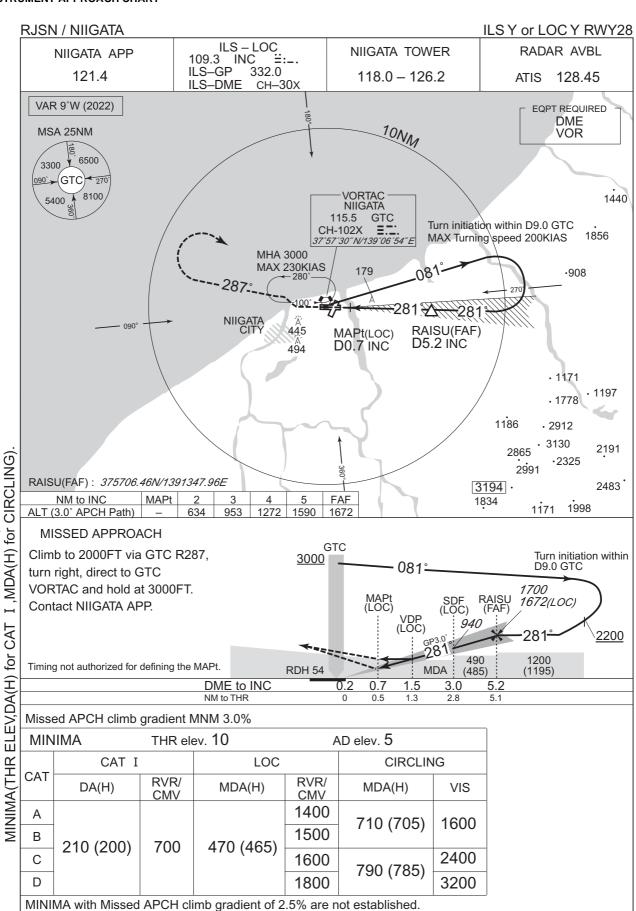
## TERAD WEST ARRIVAL

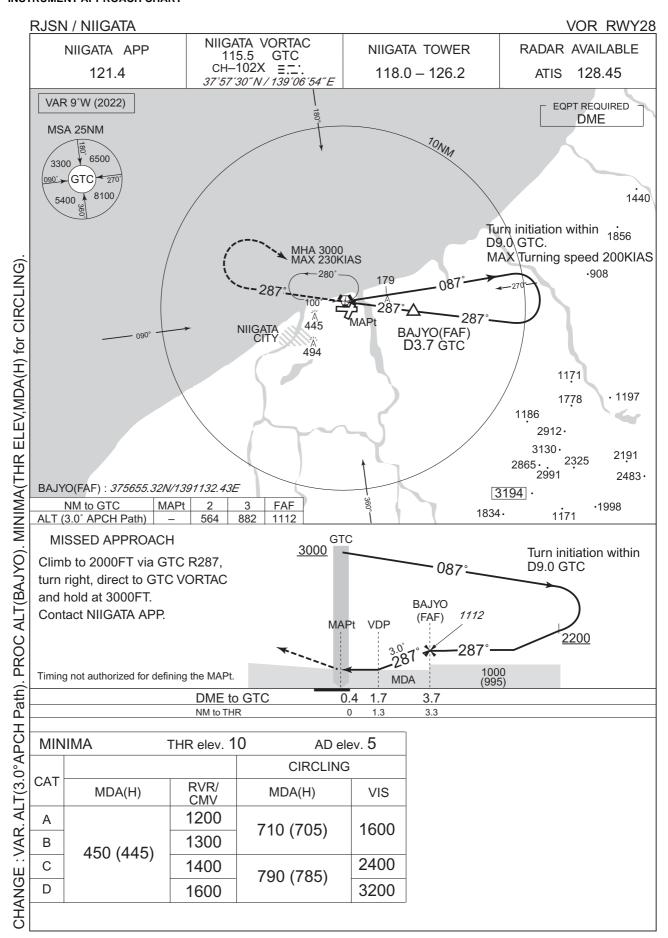
From TERAD at or above 10000FT, to RYUTO at or above 4000FT.

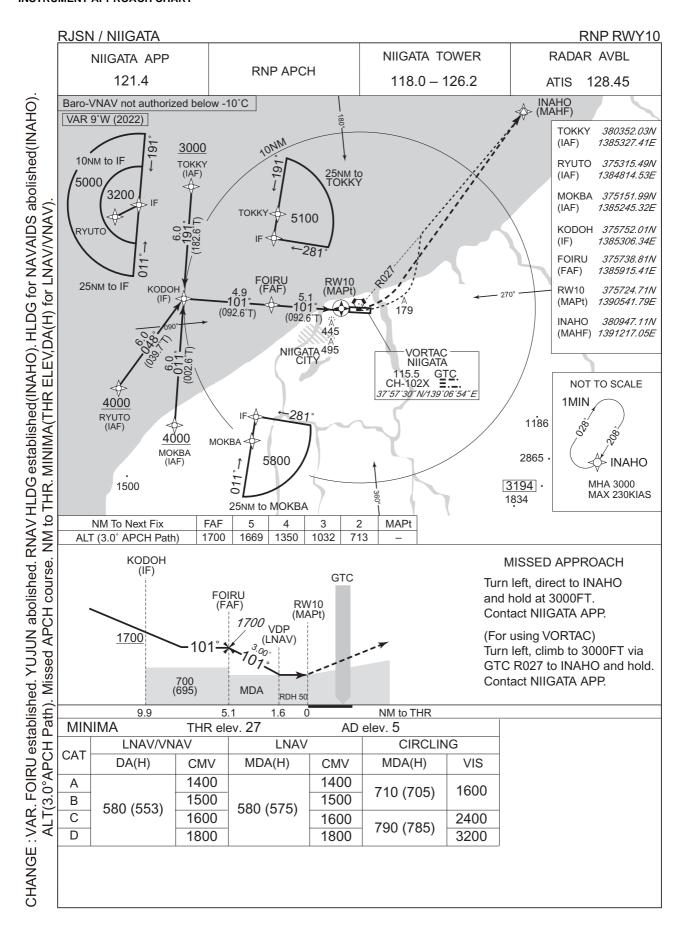
Critical DME	-
DME GAP	TERAD - RYUTO
Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1

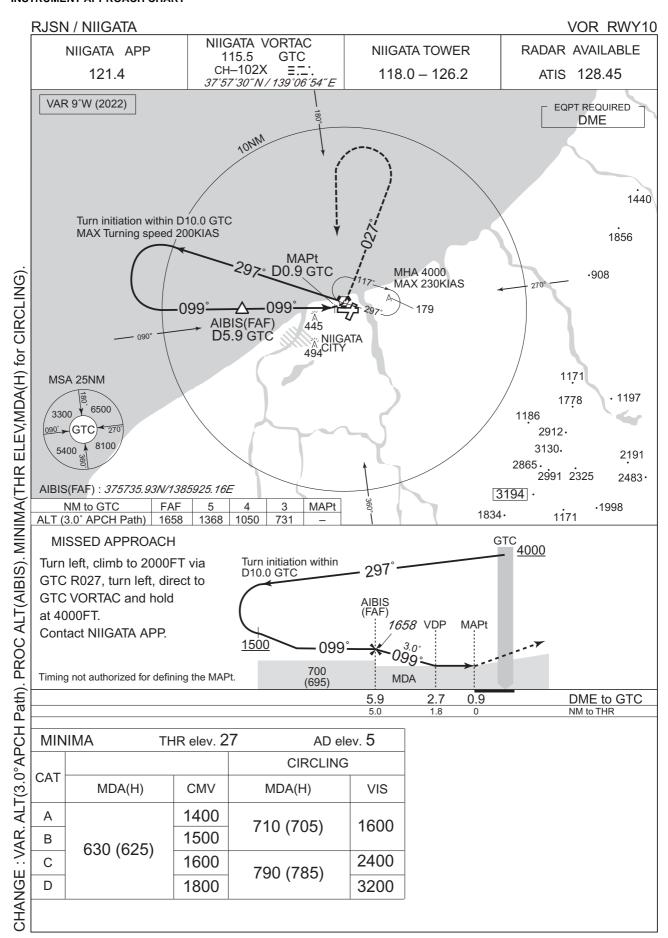
Serial	Path	Waypoint	Fly	Course	Magnetic	Distance	Turn	Altitude	Speed	Vertical	Navigation
Number	Descriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	Specification
001	IF	TERAD	_	_	-8.6	_	_	+10000	_	_	RNAV1
002	TF	RYUTO	_	051 (041.9)	-8.6	23.0	_	+4000	_	_	RNAV1



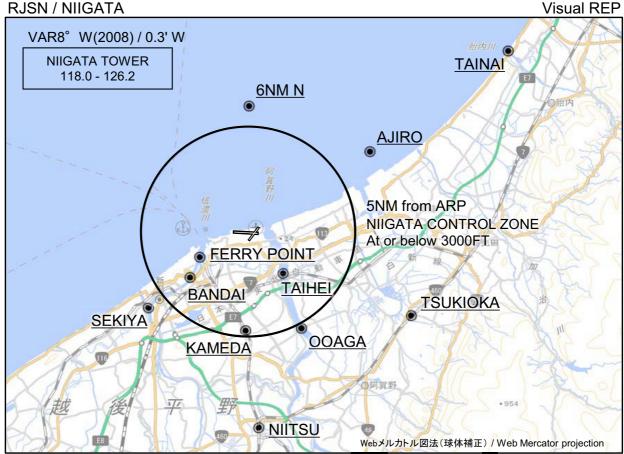








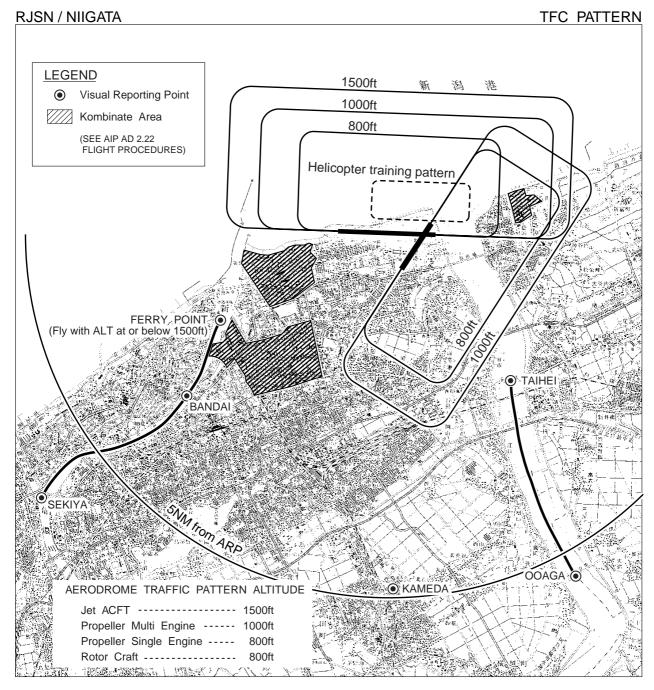




※図中に標高を示す数字がある場合、単位はメートル(m)である。 The unit of measurement used to express elevation is meter(m).

	Call sign	BRG / DIST from ARP	Remarks			
	胎内 Tainai	054°T / 14.9NM	胎内川河口 River-mouth 海上 Over the sea			
	6NM N	360°T / 6.0NM				
	網代 Ajiro	056°T / 6.9NM	防波堤突端の赤色灯台 Red lighthouse at the tip of breakwater			
ARP.	*フェリーポイント Ferry point	243°T / 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)			
BRG/DIST from ARP	*泰平 Taihei	141°T / 2.5NM	橋 Bridge			
S/DIST	*万代 Bandai	232°T / 3.5NM	橋 Bridge			
J. BRO	関屋 Sekiya	232°T / 6.0NM	分水路への分岐点 Diverging-point for Flood-control channel			
: Map updated.	月岡 Tsukioka	118°T / 8.6NM	JR駅 Station			
Мар и	大阿賀 Ooaga	152°T / 5.2NM	橋 Bridge			
IGE:	亀田 Kameda	182°T / 4.7NM	JR駅 Station			
CHANGE	新津 Niitsu	177°T / 9.4NM	JR駅 Station			

<sup>\*</sup>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)

