## **AD 2 AERODROMES**

## **RJCK AD 2.1 AERODROME LOCATION INDICATOR AND NAME**

## **RJCK - KUSHIRO**

## RJCK AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	430227N/1441135E 158°/1.25km from RWY 17 THR
2	Direction and distance from (city)	9nm WNW from Kushiro city
3	Elevation/ Reference temperature	311ft / 23°C(2004-2008)
4	Geoid undulation at AD ELEV PSN	Nil
5	MAG VAR/ Annual change	9° W(2009) / 2'E
6	AD Administration, address, tele- phone, telefax, telex, AFS, e-mail and/or Web-site addresses	Hokkaido Airports Co.,Ltd. Kushiro Airport Office Post:2-260 Tsuruoka, Kushiro-city, Hokkaido Tel:0154-57-8880 Fax:0154-57-8881
7	Types of traffic permitted(IFR/VFR)	IFR/VFR
8	Remarks	Nil

#### **RJCK AD 2.3 OPERATIONAL HOURS**

1	AD Administration	2300 - 1200
2	Customs and immigration	On request Customs: 0154-22-3730 Immigration: 0154-22-2430
3	Health and sanitation	On request Quarantine(human): 0154-23-3340 Quarantine(animal): 0123-24-6080 Quarantine(plant): 0154-22-4291
4	AIS Briefing Office	Nil
5	ATS Reporting Office(ARO)	Nil
6	MET Briefing Office	H24 (NEW CHITOSE)
7	ATS	2300 - 1200
8	Fuelling	2300 - 1100
9	Handling	2245 - 1000
10	Security	2300 - 1130
11	De-icing	Nil
12	Remarks	Nil

## **RJCK AD 2.4 HANDLING SERVICES AND FACILITIES**

1	Cargo-handling facilities	All the modern institutions that deal with the weight thing to B767 type.
2	Fuel/ oil types	JET A-1
3	Fuelling facilities/ capacity	Fuel Truck Refuelling
4	De-icing facilities	Nil
5	Hangar space for visiting aircraft	Nil
6	Repair facilities for visiting aircraft	Nil
7	Remarks	Nil

## **RJCK AD 2.5 PASSENGER FACILITIES**

1	Hotels	Nil	
2	Restaurants	At Airport	
3	Transportation	Buses, Taxi	
4	Medical facilities	Hospital in Kushiro city 10km	
5	Bank and Post Office	Nil	
6	Tourist Office	Nil	
7	Remarks	Nil	

## **RJCK AD 2.6 RESCUE AND FIRE FIGHTING SERVICES**

1	AD category for fire fighting	CAT 8
2	Rescue equipment	3 Chemical fire fighting trucks, 1 Water-supply truck, 1 Lighting power supply truck, 1 Emergency medical equipments conveyance truck.
3	Capability for removal of disabled aircraft	Nil
4	Remarks	Nil

## **RJCK AD 2.7 SEASONAL AVAILABILITY-CLEARING**

1	Types of clearing equipment	Snow remove equipments: 4 Snow plows, 2 Rotaries, 4 Snow sweeper, 1 Urea sprinkler equipment	
2	Clearance priorities	(1) RWY 17/35, TWY T1 and T7, P1-P6, APRON (2)TWY T2-T6 APRON	
3	Remarks	Seasonal availability: All seasons	

## **RJCK AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA**

Apron surface and strength Spot NR1, 2, 3, 5, 6 and 7 Surface : Concrete Strength: PCR 1132/R/B/W/T 2 Taxiway width, surface and WIDTH & STRENGTH T1,T7,P6 : 26.5m PCR 1160/F/C/X/T strength T2,T3,T4,T5,T6 : 30m PCR 1160/F/C/X/T P1,P2,P3,P4,P5 : 23m PCR 1160/F/C/X/T 3 ACL and elevation Not Available 4 VOR checkpoints Not Available 5 INS checkpoints (Spot NR) 1: 430247.60N1441141.22E 2: 430246.01N1441142.06E 3: 430244.19N1441143.01E 5: 430242.23N1441144.04E 6: 430240.11N1441145.15E 7: 430237.35N1441145.22E 6 Remarks Nil

#### RJCK 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 ID sign:Spot NR1, 2, 3, 5, 6, 7, A, B
2	RWY and TWY markings and LGT	RWY:17/35 (Marking) RWY designation, RWY CL, RWY THR, Aiming point, TDZ, RWY side stripe (LGT) RCLL, REDL, RTHL, RENL, RTZL(RWY17), WBAR(RWY17), RWY DIST marker LGT  TWY:T1-T7 (Marking) TWY CL, RWY HLDG PSN, TWY side stripe, Mandatory instruction marking (LGT) TWY edge LGT, TWY CL LGT, Stop bar LGT, RWY guard LGT, Taxiing guidance sign  TWY:P1-P6 (Marking) TWY CL, TWY side stripe (LGT) TWY edge LGT, TWY CL LGT, Taxiing guidance sign
3	Stop bars	Stop bar LGT: TWY T1 - T7 Stop bar LGT operations;  1) Stop bar LGT are installed at each taxi-holding position associated with RWY 17/35.  2) Stop bar LGT will be operated when the visibility or the lowest RVR of RWY 17/35 is at or less than 600m.  3) Stop bar LGT on TWY T1 and T7 are controlled individually by ATC.  4) Stop bar LGT on TWY T2 through T6 are not controlled individually by ATC.  5) During the period stop bar LGT are operated, TWY T2 through T6 are not available for the departing aircraft.
4	Remarks	(Marking) Overrun area (LGT) Apron flood LGT

## **RJCK AD 2.10 AERODROME OBSTACLES**

In Area2 See Obstacle data

In Area3 To be developed

## **RJCK AD 2.11 METEOROLOGICAL INFORMATION PROVIDED**

1	Associated MET Office	NEW CHITOSE
2	Hours of service	H24 (NEW CHITOSE)
	MET Office outside hours	
3	Office responsible for TAF preparation	NEW CHITOSE
	Periods of validity	30 Hours
4	Trend forecast	Nil
	Interval of issuance	
5	Briefing/ consultation provided	Briefing is available upon inquiry at NEW CHITOSE
6	Flight documentation	С
	Language(s) used	En
7	Charts and other information available	S <sub>6</sub> , U <sub>85</sub> , U <sub>7</sub> ,U <sub>5</sub> , U <sub>3</sub> , U <sub>25</sub> , U <sub>2</sub> /T <sub>r</sub> , P <sub>S</sub> , P <sub>5</sub> , P <sub>3</sub> , P <sub>25</sub> , P <sub>SWE</sub> , P <sub>SWF</sub> , P <sub>SWG</sub> , P <sub>SWI</sub> ,
	for briefing or consultation	P <sub>SWM</sub> , P <sub>SW</sub> (domestic), E, C, W <sub>E</sub> , W <sub>F</sub> , W <sub>G</sub> , W <sub>I</sub> , W, N
8	Supplementary equipment	Nil
	available for providing information	
9	ATS units provided with information	TWR
10	Additional information(limitation of ser-	Nil
	vice, etc.)	

## **RJCK AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS**

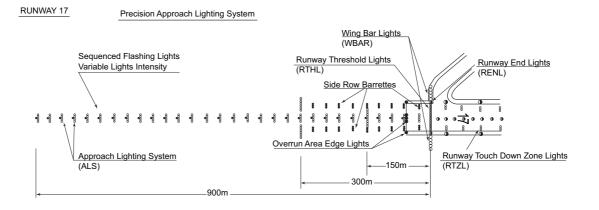
Designations RWY NR	TRUE BRG		Strength(PCR) and surface of RWY	THR coordinates THR geoid undulation	THR elevation and highest elevation of TDZ of precision APP RWY		
1	1 2 3		4	5	6		
17			PCR 1160/F/C/X/T Asphalt Concrete	430305.30N1441114.92E	THR ELEV:322.5ft TDZ ELEV:325.1ft		
35	35 338.96° 2500×45 430149.6		430149.68N1441154.58E	THR ELEV:290ft			
Slope	Slope of RWY		Strip ensions(M)	RESA(Overrun) Dimensions(M)	Remarks		
7	7		10	11	14		
See AD 2.24 AD Chart		2620×300		AD Chart 2620×300		192×(MNM:95 MAX:283)	RWY Grooving 2500×45m
		26	2620×300 90×(MNM:90 MAX *For detail, ask airport admini				

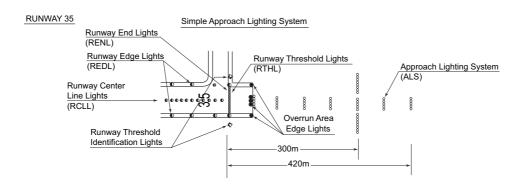
## **RJCK AD 2.13 DECLARED DISTANCES**

RWY Designator	TORA (m)	TODA (m)	ASDA (m)	LDA (m)	Remarks
1	2	3	4	5	6
17 35	2500 2500	2500 2500	2500 2500	2500 2500	Nil Nil

#### **RJCK 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
17	PALS (CAT III) 900m LIH	Green Green	PAPI 3.0°/LEFT 400m 66ft	900m	2500m 15m Coded color (White/Red) LIH	2500m 60m Coded color (White/Yellow) LIH	Red	Nil(*1)
35	SALS 420m LIH	Green -	PAPI 3.0°/LEFT 425m 74ft	Nil	2500m 15m Coded color (White/Red) LIH	2500m 60m Coded color (White/Yellow) LIH	Red	Nil(*1)
				Remarks				
10								
Overrun area edge LGT(LEN:60m Color:Red) (*1) RWY THR ID LGT for RWY 35 THR (Color: White)								





## **RJCK AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY**

1	ABN/IBN location, characteristics and hours of operation	ABN: 430247N/1441143E, White/Green EV4.3sec, HO	
2	LDI location and LGT Anemometer location and LGT	LDI : Nil Anemometer : RWY 17 : 295.5m from RWY 17 THR, LGTD RWY 35 : 341.1m from RWY 35 THR, LGTD	
3	TWY edge and centerline lighting	TWY edge and center line lights installed, see AD2.9	
4	Secondary power supply/ switch- over time	Within 1sec: PALS, REDL, RENL, RTHL, WBAR, RCLL, RTZL, Overrun area edge LGT, Stop bar LGT, RWY guard LGT, TWY centerline LGT Within 15sec: other LGT	
5	Remarks	WDI LGT	

## **RJCK AD 2.16 HELICOPTER LANDING AREA**

Nil	
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#### **RJCK 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
Kushiro CTR	Area within a radius of 9km(5NM) of ARP (430227N/1441135E)	3,000 or below	D	Kushiro Tower En	
Hidaka ACA	See RJEC attached chart		E	Hidaka APP En	

## **RJCK AD 2.18 ATS COMMUNICATION FACILITIES**

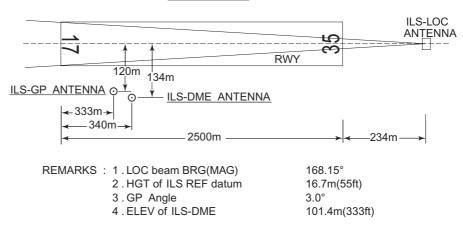
Service designation	Call sign	Frequency	Hours of operation	Remarks
1	2	3	4	5
APP	Hidaka Approach	128.325MHz	2230 - 1200	
		246.1MHz		
		134.55MHz		
TWR	Kushiro Tower	118.05MHz(1)	2300 - 1200	(1)Primary
		126.2MHz		

## **RJCK 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 (9°W/2022)	TCE	111.0MHz	H24	430209.78N/1441202.72E		
DME	TCE	1008MHz (CH-47X)	H24	430209.78N/1441202.72E	342ft	DME unusable: 300°-310° beyond 35NM BLW 5000ft. 340°-350° beyond 35NM BLW 7000ft.
ILS-LOC 17	IKS	108.9MHz	2300 - 1200	430142.60N/1441158.28E		LOC: 234m (768ft) away FM RWY 35 THR, BRG (MAG) 168.15°
ILS-GP 17	-	329.3MHz (CH-26X)	2300 - 1200	430253.79N/1441115.22E		GP:333m (1093ft) inside FM RWY17 THR, 120m (394ft) W of RCL. HGT of ILS REF datum 16.7m (55ft). GP angle 3.0°
ILS-DME 17	IKS	987MHz (CH-26X)	2300 - 1200	430253.40N/1441114.78E	333ft	DME: 340m (1115ft) inside FM RWY17 THR, 134m (440ft) W of RCL
MSAS		1575.42MHz	H24			Transmitting antennas are satellite based.

<u>ILS</u>

#### KUSHIRO AP



AIP Japan KUSHIRO

#### **RJCK AD 2.20 LOCAL TRAFFIC REGULATIONS**

1. Air	port regulations									
	PPR Prior permission is required for transient aircraft except scheduled and/or emergency flight. Tel: Hokkaido Airports Co.,Ltd. Kushiro Airport Office 0154-57-8880									
2. Tax	kiing to and from stands									
			Nil							
3. Pa	rking area for small aircraft(Genera	al aviation)								
			Nil							
4. Pa	rking area for helicopters									
			Nil							
5. Ap	ron - taxiing during winter condition	ns								
			Nil							
6. Tax	kiing - limitations									
	1. Wing tip clearance at the TW	/ intersection	(REF AD1.1.6.8)							
	Wing tip clearance at the TWY in taxiing behind it are as follows.	tersection bet	ween the aircraft hold	ding at the stop	o marking on the TWY and the other aircraft					
	(1)When B763 holding at the	stop marking	on TWY T5 or T6							
	wing span (WS) of ACFT taxiing on TWY P4-P6	WS =<23m	23m <ws =<40m<="" td=""><td>WS &gt;40m</td><td></td></ws>	WS >40m						
	wing tip clearance	*A	*B	*C	Legend:					
	(2)When MD90 holding at the	stop marking	on TWY T2		*A: wing tip clearance >= 15m *B: 6.5m =< wing tip clearance < 15m					
	wing span (WS) of ACFT taxiing on TWY P1-P2	WS =<47m	47m <ws =<64m<="" td=""><td>WS &gt;64m</td><td>*C : wing tip clearance &lt; 6.5m</td></ws>	WS >64m	*C : wing tip clearance < 6.5m					
	wing tip clearance	*A	*B	*C						
7. Sc	hool and training flights - technical	test flights - u	ise of runways							
			Nil							

	Nil

Nil

8. Helicopter traffic - limitation

9. Removal of disabled aircraft from runways

#### **RJCK AD 2.21 NOISE ABATEMENT PROCEDURES**

Nil	

#### **RJCK AD 2.22 FLIGHT PROCEDURES**

1. TAKE OFF MINIMA										
	RWY	ACFT CAT	REDL 8	RCLL		CLL or RCL king		IL IE ONLY)		
		CAI	RVR	VIS	RVR	VIS	RVR	VIS		
Multi-Engine ACFT with	17/35	A,B,C	400m *200m **150m	400m *200m	400m *250m	400m *250m	-	500m		
TKOF ALTN AP FILED	17/35	D	400m *250m **200m	400m *250m	400m *300m	400m *300m	-	500m		
OTHER	17/35	A,B,C,D	AVBL LDG MINIMA							

<sup>\*</sup> APPLICABLE WHEN LVP/LVPD IN FORCE.

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

If radio communications with Hidaka Approach are lost for 1 minute, squawk Mode A/3 Code 7600 and;

- (I) 1. Contact Kushiro Tower.
  - 2. If unable, proceed in accordance with visual flight rules.
  - 3. If unable, proceed to KUSHIRO VOR/DME at last assigned altitude or 3,500 feet whichever is higher, and execute instrument approach.
- (II) Procedures other than above will be issued when situation requires.

<sup>\*\*</sup> APPLICABLE WHEN LVP/LVPD IN FORCE and MULTIPLE RVRs AVAILABLE.

## 3. ILS Category III Operations at Kushiro Airport

#### 1) Facilities

The following facilities are available:

#### **RWY 17**

- (1) ILS RWY 17 CAT III
- (2) Lighting system RWY 17 CAT III
- (3) RVR by forward-scatter meters (the touchdown zone, the mid-point and stop-end of the RWY)

#### 2) Conditions

A. The following systems must be operative:

#### For ILS RWY17 approach (CAT III)

#### (1) ILS comprising;

- ILS-LOC17 with standby transmitter (including far field monitor)
- ILS-GP17 with standby transmitter
   (When any standby transmitters or far field monitor unserviceable, downgrade ILS-CAT I.)
- ILS-DME17

#### (2)Lighting systems comprising;

- PALS 17 (including side row barrettes)
- High INTST REDL
- High INTST RTHL
- RCLL and RTZL
- (3) Secondary power supply

(4)RVR by forward-scatter meters at the touchdown zone, the mid-point and stop-end of the RWY.

- B. The following information must be currently available:
  - (a) Surface wind speed and direction
  - (b) RVR
- C. ITEM A and/or B are not met, the relevant information will be notified to the pilots as soon as practicable.
- 3) Operating Minimum

Approach minima stated in AD2.24(Instrument Approach Chart) are observed.

- 4) LVP
  - LVP will be available when the following conditions are met;
  - (1) Ceiling is at or less than 400ft and/or RVR is at or less than 1,000m.
  - (2) Facilities listed 1) above are operational.
  - (3) ILS Critical Area is protected.

In order to protect ILS Critical Area for the succeeding arrival aircraft, an arrival aircraft may be given the following instruction by ATC :

"REPORT OUT OF ILS CRITICAL AREA"

The exit TWY centerline LGT are fixed alternate green and yellow inside the ILS Critical Area. If an aircraft is given the above instruction, she is expected to advise the ATC when the TWY centerline LGT change from alternate green and yellow to steady green.

#### 5) Approval for CAT III Operations

Operators must obtain operational approval from the State of Registry or the State of Operator, as appropriate, to conduct CAT III Operations. (See GEN1.5)

#### 6) TWY available for CAT III Operations

Exit taxiway: T1, T5, T6, T7 and the parallel TWY.

## ■ 4. LVTO at Kushiro Airport

#### 1) Facilities

The following facilities are available:

RWY 17	RWY 35
Lighting system RWY 17 for LVTO     RVR by forward-scatter meters     (the touchdown zone, the mid-point and stop-end of the runway)	Lighting system RWY 35 for LVTO     RVR by forward-scatter meters     (the touchdown zone, the mid-point and stop-end of the runway)

#### 2) Conditions

A. The following systems must be operative:

For LVTO
<ul><li>(1) Lighting system comprising;</li><li>High INTST REDL</li><li>High INTST RENL</li><li>RCLL</li></ul>
(2) Secondary power supply

- B. The following information must be currently available:
  - a) Surface wind speed and direction.
  - b) RVR or VIS
- C. ITEM A and/or B are not met, the relevant information will be notified to the pilots as soon as practicable.
- 3) Operating Minima

Take-off minima stated in AD2.22(TAKE-OFF MINIMA) are observed.

- 4) LVP/LVPD
  - (1)LVP/LVPD will be available when the following conditions are met:
    - a)RVR is at or less than 1000m.
    - b)Facilities listed 1) above are operational.
  - (2)Taxiway available for LVTO Entering taxiway: T1 and T7

## **RJCK AD 2.23 ADDITIONAL INFORMATION**

Nil

#### **RJCK AD 2.24 CHARTS RELATED TO AN AERODROME**

Aerodrome/Heliport Chart

Precision Approach Terrain Chart (precision approach CAT II and III runways)

Standard Departure Chart - Instrument (KUSHIRO REVERSAL)

Standard Departure Chart - Instrument (TANCHO - RNAV)

Standard Departure Chart - Instrument (HIDAKA - RNAV)

Standard Departure Chart - Instrument (RUGMO - RNAV)

Standard Departure Chart - Instrument (ENTOD - RNAV)

Standard Arrival Chart - Instrument (PIBAM - RNAV)

Standard Arrival Chart - Instrument (AKESI, IGAMO-N, RUGMO-N, RUNPA-N - RNAV)

Standard Arrival Chart - Instrument (IGAMO-S, RUGMO-S, RUNPA-S - RNAV)

Standard Arrival Chart - Instrument (LEKUP-N/S - RNAV)

Instrument Approach Chart (ILS Z or LOC Z RWY17 (CAT III))

Instrument Approach Chart (ILS Y or LOC Y RWY17 (CAT III))

Instrument Approach Chart (ILS X RWY17 (CAT III))

Instrument Approach Chart (VOR RWY17)

Instrument Approach Chart (VOR RWY35)

Instrument Approach Chart (RNP Z RWY17(AR))

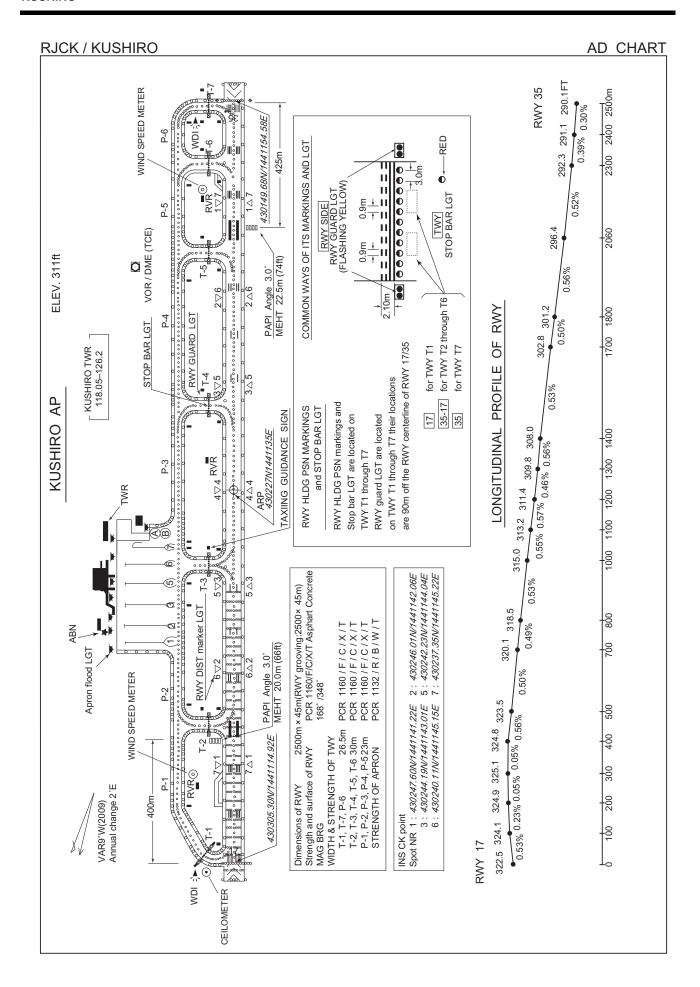
Instrument Approach Chart (RNP Y RWY17(AR))

Instrument Approach Chart (RNP X RWY17)

Instrument Approach Chart (RNP RWY35)

Other Chart (VISUAL REP)

Other Chart (MVA CHART)







RJCK / KUSHIRO SID

## KUSHIRO REVERSAL FIVE DEPARTURE

RWY17: Climb RWY HDG to 1000FT, turn right...

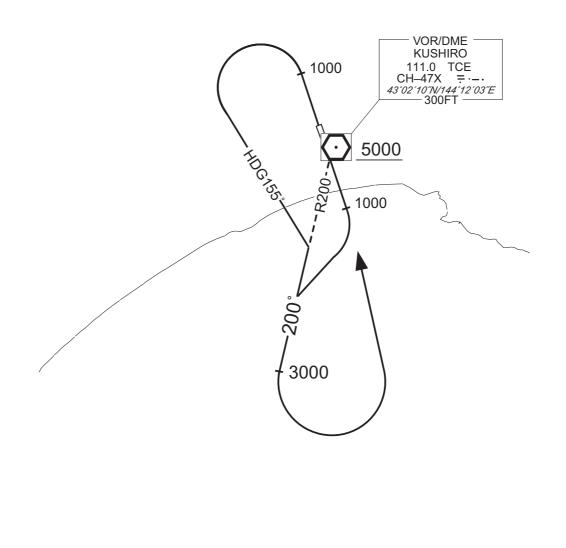
RWY35: Climb RWY HDG to 1000FT, turn left HDG155°...

...to intercept and proceed via TCE R200 to 3000FT, turn left, direct to

TCE VOR/DME.

Cross TCE VOR/DME at or above 5000FT.

Note: No turn before DER.



PROC renamed. KUSHIRO VOR/DME relocated(KSE→TCE)

RJCK / KUSHIRO **RNAV SID** TANCHO ONE DEPARTURE RNP1 Note GNSS required. VAR 9°W 348° .168° <u>700</u> YUDOH 10000

RWY17 : Climb on HDG168 $^\circ$  at or above 700FT, turn right direct to YUDOH at or above 10000FT. RWY35 : Climb on HDG348 $^\circ$  at or above 800FT, turn left direct to YUDOH at or above 10000FT.

## RWY17

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	_	_	168 (159.0)	-9.2	_	ı	+700	_	_	RNP1
002	DF	YUDOH	_	_	-9.2	_	R	+10000	_	_	RNP1

#### RWY35

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	_	_	348 (339.0)	-9.2	_	_	+800	_	_	RNP1
002	DF	YUDOH	_	_	-9.2	_	L	+10000	_	_	RNP1

Waypoint Identifier	Coordinates
YUDOH	423005.4N / 1434446.5E
•	

RJCK / KUSHIRO

HIDAKA ONE DEPARTURE

RNP1

Note GNSS required.

VAR 9 W

Bood 348' 7000

OBIHIRO(OBE) 9000

RWY17 : Climb on HDG168 $^{\circ}$  at or above 700FT, turn right direct to OBE at or above 9000FT. RWY35 : Climb on HDG348 $^{\circ}$  at or above 800FT, turn left direct to OBE at or above 9000FT.

#### RWY17

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	_	_	168 (159.0)	-9.2	_	_	+700	_	_	RNP1
002	DF	OBE	_	_	-9.2	_	R	+9000	_	_	RNP1

#### RWY35

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	_	_	348 (339.0)	-9.2	_	-	+800	_	_	RNP1
002	DF	OBE	_	_	-9.2	_	L	+9000	_	_	RNP1

Waypoint Identifier	Coordinates
OBE	424402.3N / 1431313.6E

RUGMO ONE DEPARTURE RNP1

Note GNSS required.

VAR 9°W

RUGMO 6000

RNAV SID

RNP1

RWY17 : Climb on HDG168 $^{\circ}$  at or above 700FT, turn right direct to RUGMO at or above 6000FT. RWY35 : Climb on HDG348 $^{\circ}$  at or above 800FT, turn left direct to RUGMO at or above 6000FT.

### RWY17

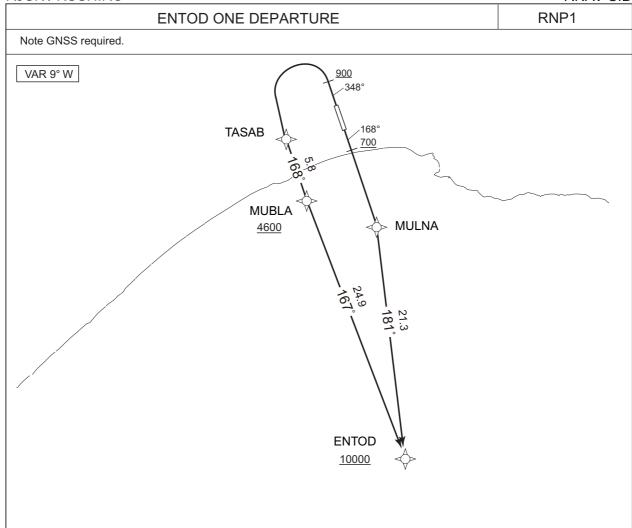
Serial	Path	Waypoint	Fly	Course	Magnetic	Distance	Turn	Altitude	Speed	Vertical	Navigation
Number	Descriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	Specification
001	VA	_	ı	168 (159.0)	-9.2	_	ı	+700	_	_	RNP1
002	DF	RUGMO	ı	_	-9.2	_	R	+6000	_	_	RNP1

## RWY35

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	_	_	348 (339.0)	-9.2	_	_	+800	_	_	RNP1
002	DF	RUGMO	ı	, 	-9.2	_	L	+6000	ı	_	RNP1

Waypoint Identifier	Coordinates
RUGMO	430433.6N / 1432949.1E

RJCK / KUSHIRO RNAV SID



RWY17: Climb on HDG168° at or above 700FT, direct to MULNA, to ENTOD at or above 10000FT. RWY35: Climb on HDG348° at or above 900FT, turn left direct to TASAB, to MUBLA at or above 4600FT, to ENTOD at or above 10000FT.

#### RWY17

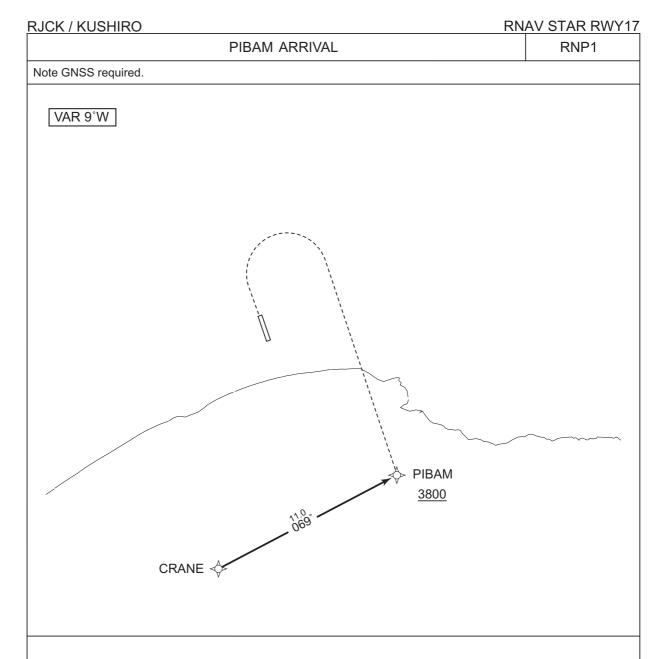
Serial Number	Path r Descriptor	Waypoint Identifier			Magnetic Variation		Turn Direction		•		Navigation Specification
001	VA	_	_	168 (159.0)	-9.3	_	_	+700	_	_	RNP1
002	DF	MULNA	_	_	-9.3	_	_	_	_	_	RNP1
003	TF	ENTOD	_	181 (171.4)	-9.3	21.3	_	+10000	_	_	RNP1

#### RWY35

'	1700133	,										
	Serial Number	Path Descriptor	Waypoint Identifier		Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)		Navigation Specification
	001	VA	_	_	348 (339.0)	-9.3	_	_	+900	_	_	RNP1
	002	DF	TASAB	_	_	-9.3	_	L	_	_	_	RNP1
	003	TF	MUBLA	_	168 (159.0)	-9.3	5.8	_	+4600	_	_	RNP1
	004	TF	ENTOD	_	167 (157.5)	-9.3	24.9	_	+10000	_	_	RNP1
П												

RJCK / KUSHIRO RNAV SID

Waypoint Identifier	Coordinates
MULNA	425251.7N / 1441636.0E
TASAB	430015.6N / 1440508.3E
MUBLA	425452.9N / 1440757.8E
ENTOD	423150 2N / 1442054 3F

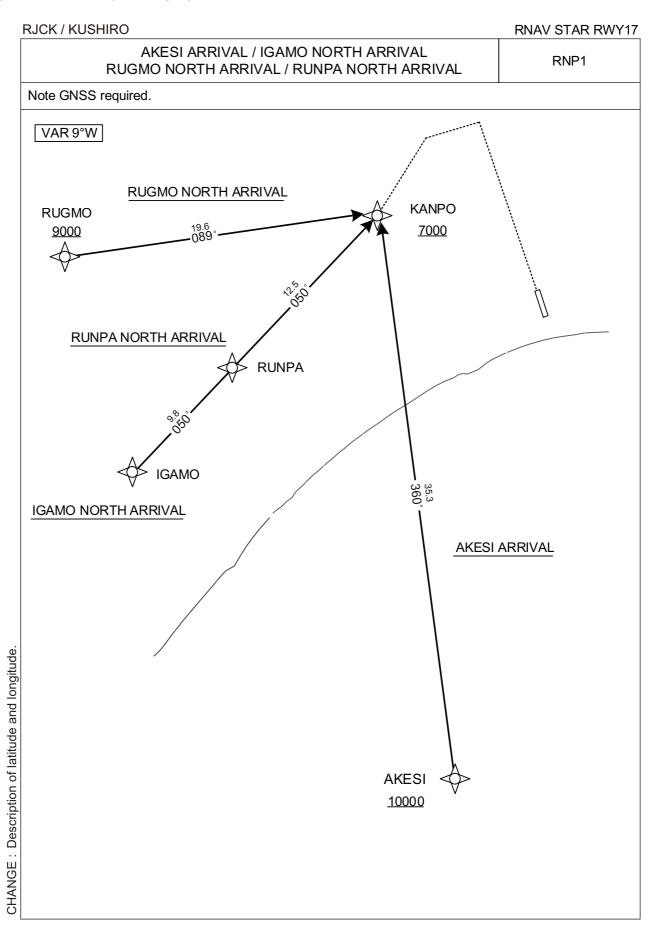


From CRANE, to PIBAM at or above 3800FT.

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	CRANE	_	_	-9.2	_	-	_	_	_	RNP1
002	TF	PIBAM	_	069 (060.2)	-9.2	11.0	-	+3800	_	_	RNP1

Waypoint Identifier	Coordinates
CRANE	424916.8N / 1440846.6E
PIBAM	425443.3N / 1442145.2E





## RJCK / KUSHIRO

## **RNAV STAR RWY17**

## **AKESI ARRIVAL**

From AKESI at or above 10000FT, to KANPO at or above 7000FT.

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	AKESI	-	-	-9.2	-	-	+10000	-	-	RNP1
002	TF	KANPO	-	360 (350.3)	-9.2	35.3	-	+7000	-	-	RNP1

## IGAMO NORTH ARRIVAL

From IGAMO, to RUNPA, to KANPO at or above 7000FT.

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	IGAMO	-	-	-9.2	-	-	-	-	-	RNP1
002	TF	RUNPA	-	050 (040.9)	-9.2	9.8	-	-	1	-	RNP1
003	TF	KANPO	-	050 (041.0)	-9.2	12.5	-	+7000	-	-	RNP1

## **RUGMO NORTH ARRIVAL**

From RUGMO at or above 9000FT, to KANPO at or above 7000FT.

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	RUGMO	-	-	-9.2	-	-	+9000	-	-	RNP1
002	TF	KANPO	-	089 (079.6)	-9.2	19.6	-	+7000	-	-	RNP1

## **RUNPA NORTH ARRIVAL**

From RUNPA, to KANPO at or above 7000FT.

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	RUNPA	-	-	-9.2	-	-	-	-	-	RNP1
002	TF	KANPO	-	050 (041.0)	-9.2	12.5	-	+7000	-	-	RNP1

Waypoint Identifier	Coordinates
AKESI	423316.4N / 1440423.6E
IGAMO	425112.6N / 1433614.5E
RUNPA	425838.2N / 1434501.8E
RUGMO	430433.6N / 1432949.1E
KANPO	430802.7N / 1435613.8E

# RJCK / KUSHIRO **RNAV STAR RWY35** IGAMO SOUTH ARRIVAL / RUGMO SOUTH ARRIVAL RNP1 **RUNPA SOUTH ARRIVAL** Note GNSS required. VAR 9°W RUGMO SOUTH ARRIVAL **RUNPA SOUTH ARRIVAL RUGMO** 9000 **RUNPA** BÉSRU <u>7000</u> **CRANE** <u>3600</u> **OBKAL IGAMO** <u>7000</u> CHANGE: Description of latitude and longitude. IGAMO SOUTH ARRIVAL

#### RJCK / KUSHIRO

## **RNAV STAR RWY35**

## **IGAMO SOUTH ARRIVAL**

From IGAMO, to OBKAL at or above 7000FT, to CRANE at or above 3600FT.

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	IGAMO	-	-	-9.2	-	-	-	-	-	RNP1
002	TF	OBKAL	-	104 (094.4)	-9.2	16.2	-	+7000	1	-	RNP1
003	TF	CRANE	-	104 (094.7)	-9.2	7.7	-	+3600	-	-	RNP1

## **RUGMO SOUTH ARRIVAL**

From RUGMO at or above 9000FT, to RUNPA, to BESRU at or above 7000FT, to CRANE at or above 3600FT.

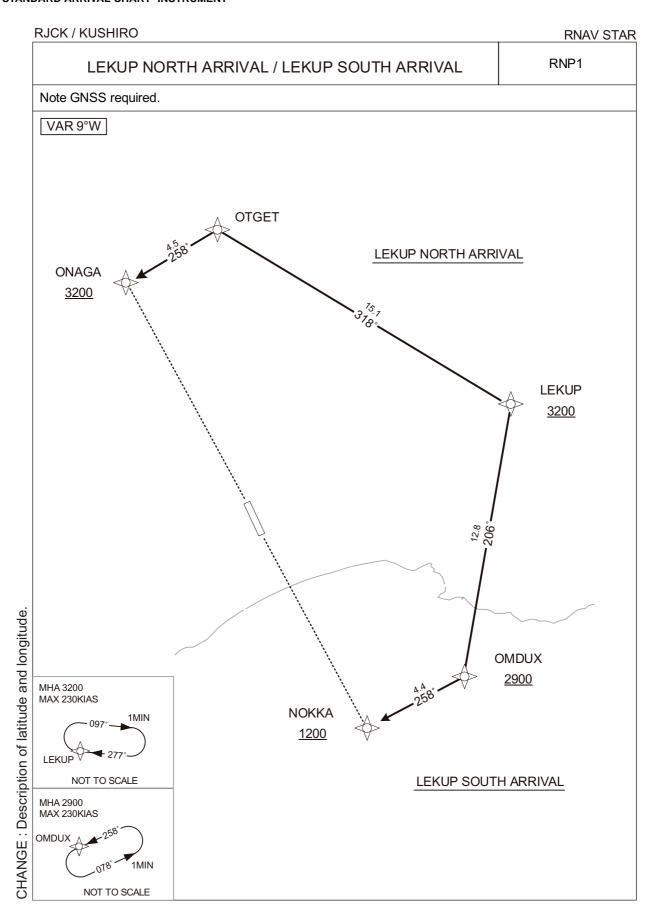
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	IF	RUGMO	-	-	-9.2	-	-	+9000	-	-	RNP1
002	TF	RUNPA	-	127 (118.0)	-9.2	12.6	-	-	-	-	RNP1
003	TF	BESRU	1	127 (118.1)	-9.2	12.0	-	+7000	1	1	RNP1
004	TF	CRANE	-	128 (118.3)	-9.2	7.8	-	+3600	-	-	RNP1

## **RUNPA SOUTH ARRIVAL**

From RUNPA, to BESRU at or above 7000FT, to CRANE at or above 3600FT.

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	RUNPA	1	ı	-9.2	1	ı	ı	1	1	RNP1
002	TF	BESRU	1	127 (118.1)	-9.2	12.0	-	+7000	1	1	RNP1
003	TF	CRANE	-	128 (118.3)	-9.2	7.8	-	+3600	-	-	RNP1

Waypoint Identifier	Coordinates
IGAMO	425112.6N / 1433614.5E
OBKAL	424955.3N / 1435815.3E
RUGMO	430433.6N / 1432949.1E
RUNPA	425838.2N / 1434501.8E
BESRU	425257.7N / 1435928.5E
CRANE	424916.8N / 1440846.6E



RJCK / KUSHIRO RNAV STAR

## **LEKUP NORTH ARRIVAL**

From LEKUP at or above 3200FT, to OTGET, to ONAGA at or above 3200FT.

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	LEKUP	1	-	-9.2	-	-	+3200	-	-	RNP1
002	TF	OTGET	1	318 (308.5)	-9.2	15.1	ı	1	1	-	RNP1
003	TF	ONAGA	-	258 (248.9)	-9.2	4.5	-	+3200	-	-	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	LEKUP	277 (268.1)	-9.2	1.0(-14000)	R	3200	FL140	-230(-14000)	RNP1

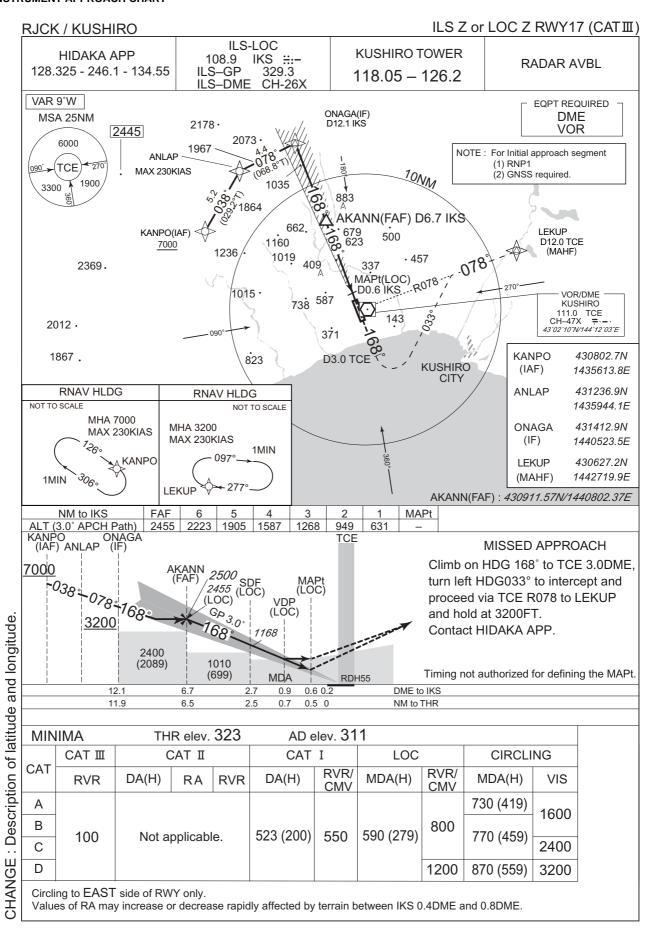
## LEKUP SOUTH ARRIVAL

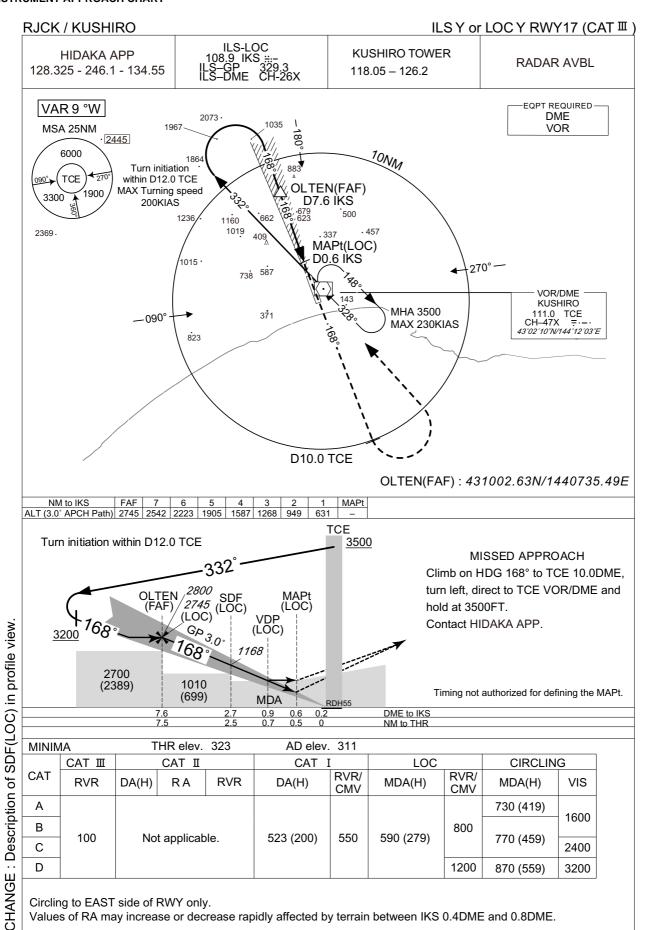
From LEKUP at or above 3200FT, to OMDUX at or above 2900FT, to NOKKA at or above 1200FT.

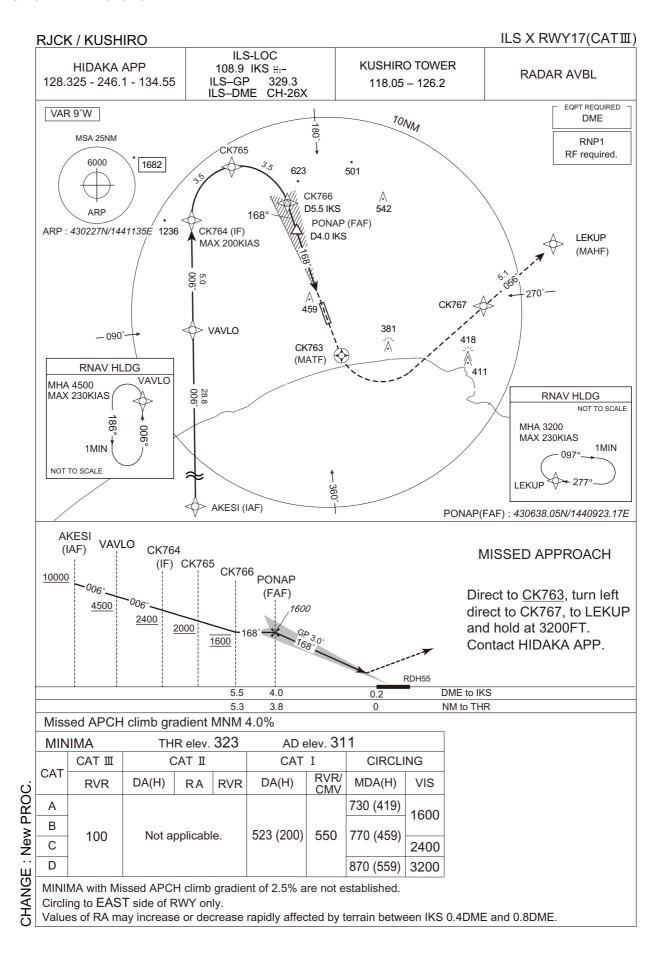
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	IF	LEKUP	-	-	-9.2	-	-	+3200	-	-	RNP1
002	TF	OMDUX	-	206 (196.8)	-9.2	12.8	-	+2900	-	-	RNP1
003	TF	NOKKA	-	258 (249.0)	-9.2	4.4	-	+1200	-	-	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	LEKUP	277 (268.1)	-9.2	1.0(-14000)	R	3200	FL140	-230(-14000)	RNP1
Hold	OMDUX	258 (249.0)	-9.2	1.0(-14000)	L	2900	FL140	-230(-14000)	RNP1

Waypoint Identifier	Coordinates
LEKUP	430627.2N / 1442719.9E
OTGET	431550.0N / 1441108.1E
ONAGA	431412.9N / 1440523.5E
OMDUX	425410.9N / 1442216.8E
NOKKA	425237.1N / 1441643.5E







## RJCK / KUSHIRO

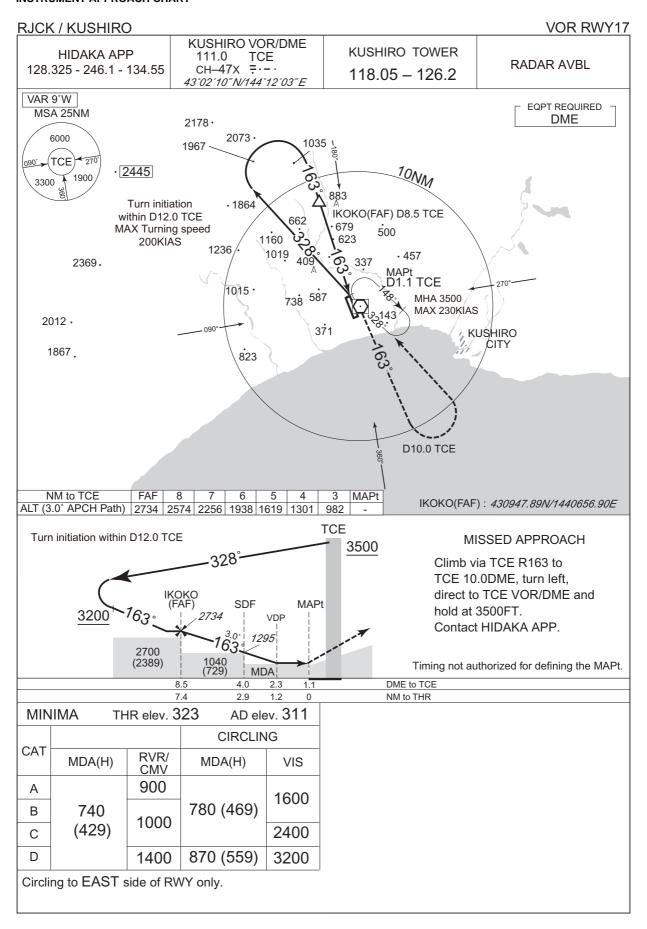
ILS X RWY17(CATⅢ)

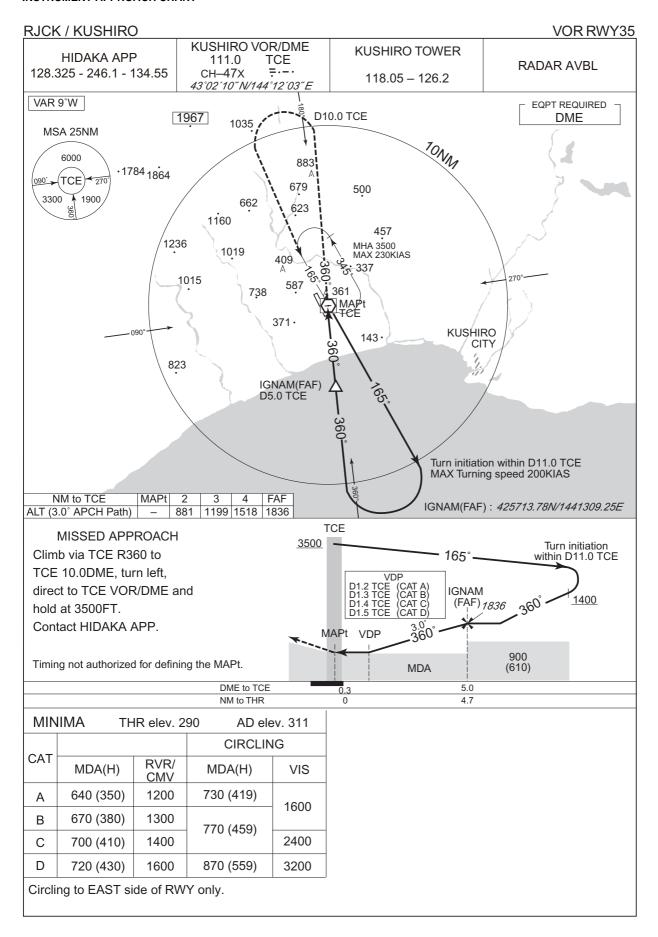
## Coding Table

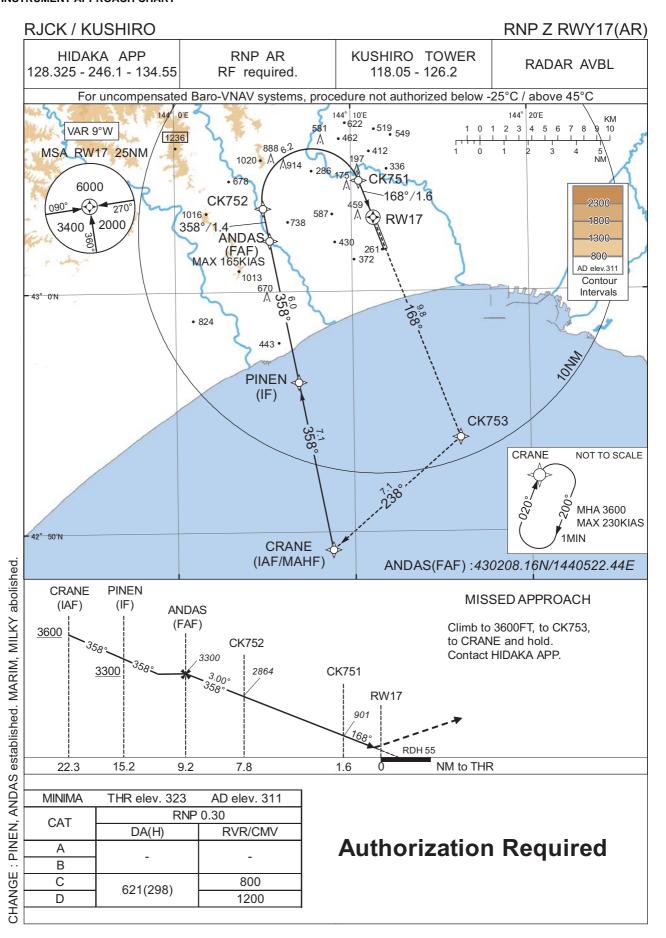
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
	·		OVCI	101( 1)		(14171)	Direction	, ,	(INIAO)	Aligic	Opecinication
001	IF	AKESI	_	_	-9.3	_	_	+10000	_	_	RNP1
002	TF	VAVLO	_	006 (357.1)	-9.3	28.8	_	+4500	_	_	RNP1
003	TF	CK764	_	006 (357.0)	-9.3	5.0	_	+2400	-200	_	RNP1
004	RF Center: CKRF3 r=2.51NM	CK765	_	_	-9.3	3.5	R	+2000	_	_	RNP1
005	RF Center: CKRF3 r=2.51NM	CK766	-	-	-9.3	3.5	R	1600	_	_	RNP1
001	DF	CK763	Υ	_	-9.3	_	_	_	_	_	RNP1
002	DF	CK767	_	_	-9.3	_	L	_	_	_	RNP1
003	TF	LEKUP	1	056 (046.9)	-9.3	5.1	_	3200	_	_	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	VAVLO	006 (357.0)	-9.3	1.0(-14000)	L	4500	FL140	-230(-14000)	RNP1
Hold	LEKUP	277 (268.1)	-9.3	1.0(-14000)	R	3200	FL140	-230(-14000)	RNP1

Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
AKESI	423316.40N / 1440423.57E	CKRF3	430707.83N / 1440527.18E
VAVLO	430200.49N / 1440223.10E		
CK764	430700.07N / 1440201.89E		
CK765	430935.11N / 1440444.33E		
CK766	430802.03N / 1440839.00E		
CK763	430017.29N / 1441242.98E		
CK767	430257.41N / 1442212.36E		
LEKUP	430627.23N / 1442719.94E		







## RJCK / KUSHIRO

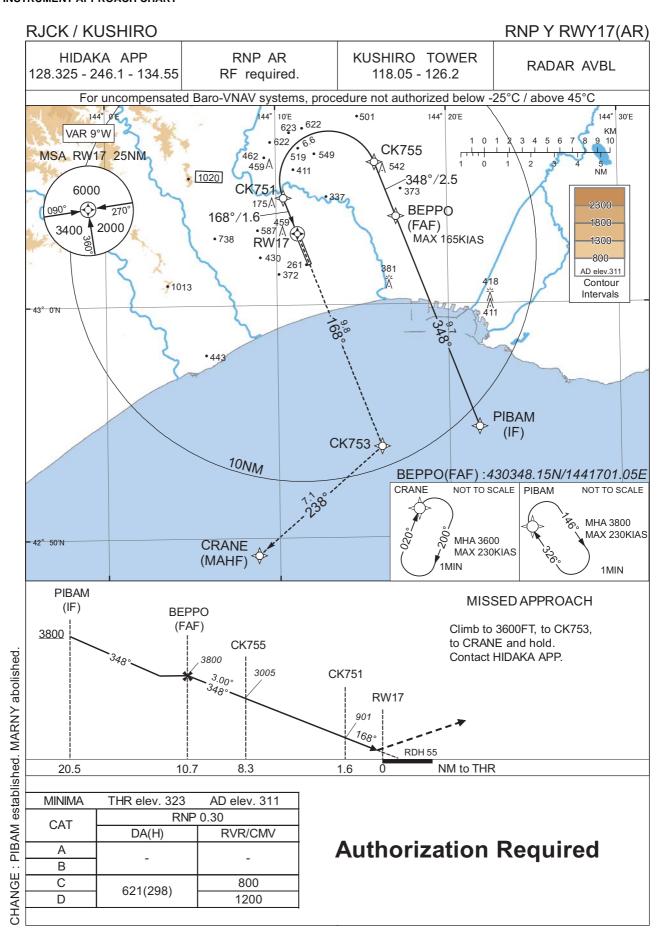
RNP Z RWY17(AR)

## 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	CRANE	1	-	-9.2		-	+3600	-	-	-
002	TF	PINEN	-	358 (349.1)	-9.2	7.1	-	+3300	-	-	1.0
003	TF	ANDAS	-	358 (349.0)	-9.2	6.0	-	3300	-165	1	1.0
004	TF	CK752	1	358 (349.0)	-9.2	1.4	1	2864	-	-3.00	0.3
005	RF Center: CKRF1 r=2.08NM	CK751	,	-	-9.2	6.2	R	901	1	-3.00	0.3
006	TF	RW17	Υ	168 (159.0)	-9.2	1.6	1	378	-	-3.00/55	0.3
007	TF	CK753	-	168 (159.0)	-9.2	9.8	-	-	-	1	1.0
008	TF	CRANE	-	238 (229.0)	-9.2	7.1		3600	-	-	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	CRANE	020 (010.5)	-9.2	1.0 (-14000)	R	3600	FL140	-230(-14000)	1.0

Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
CRANE	424916.84N / 1440846.59E	CKRF1	430352.65N / 1440747.87E
PINEN	425614.81N / 1440656.16E		
ANDAS	430208.16N / 1440522.44E		
CK752	430328.83N / 1440501.00E		
CK751	430437.47N / 1441026.54E		
RW17	430305.30N / 1441114.92E		
CK753	425355.48N / 1441602.58E		
		1	



## RJCK / KUSHIRO

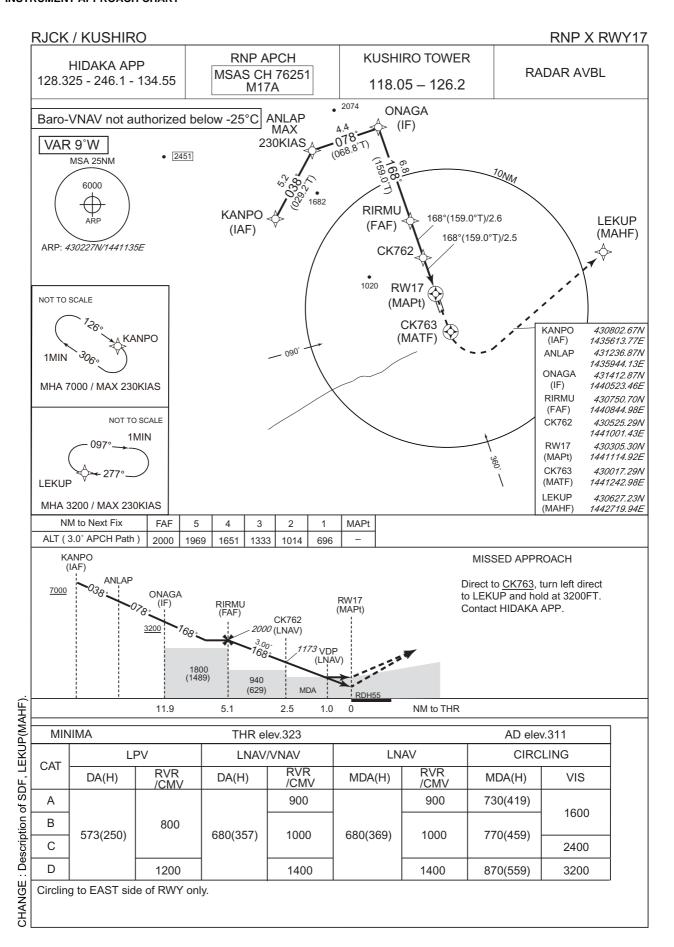
## RNP Y RWY17(AR)

## **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	PIBAM	1	-	-9.2	-	-	+3800	-	-	-
002	TF	ВЕРРО	-	348 (339.1)	-9.2	9.7	-	3800	-165	-	1.0
003	TF	CK755	-	348 (339.1)	-9.2	2.5	-	3005	-	-3.00	0.3
004	RF Center: CKRF2 r=2.10NM	CK751	1	1	-9.2	6.6	L	901	-	-3.00	0.3
005	TF	RW17	Υ	168 (159.0)	-9.2	1.6	-	378	-	-3.00/55	0.3
006	TF	CK753	-	168 (159.0)	-9.2	9.8	-	-	-	-	1.0
007	TF	CRANE	1	238 (229.0)	-9.2	7.1	-	3600	-	-	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	CRANE	020 (010.5)	-9.2	1.0 (-14000)	R	3600	FL140	-230(-14000)	1.0
Hold	PIBAM	326 (316.4)	-9.2	1.0 (-14000)	R	3800	FL140	-230(-14000)	1.0

Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
PIBAM	425443.27N / 1442145.22E	CKRF2	430522.76N / 1441307.17E
BEPPO	430348.15N / 1441701.05E		
CK755	430607.99N / 1441547.87E		
CK751	430437.47N / 1441026.54E		
RW17	430305.30N / 1441114.92E		
CK753	425355.48N / 1441602.58E		
CRANE	424916.84N / 1440846.59E		
	•	_	



# RJCK /KUSHIRO

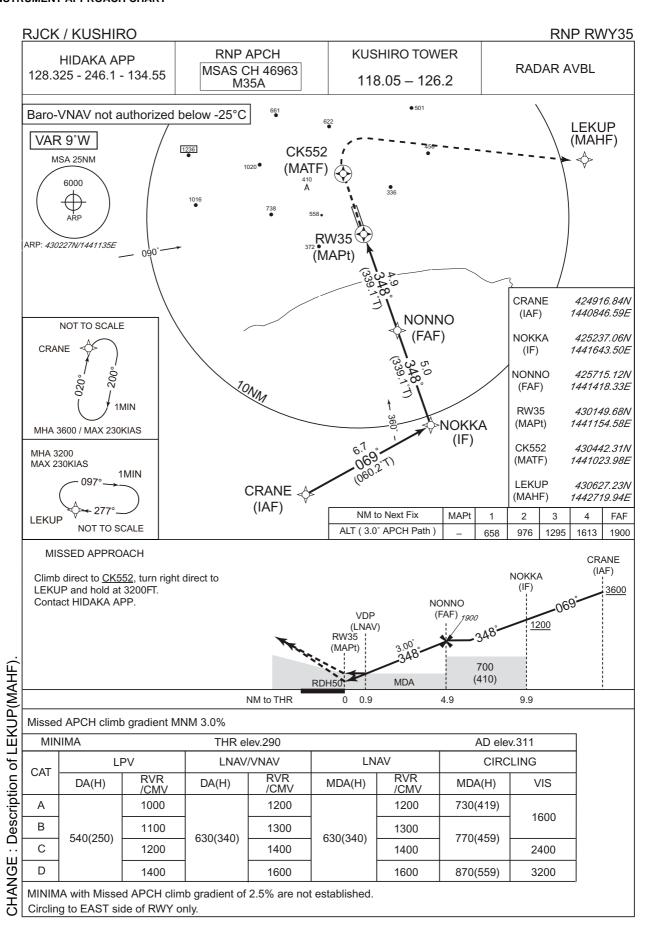
RNP X RWY17

## **FAS DATA BLOCK**

Operation type	0	LTP/FTP ellipsoidal height	+01279
SBAS service provider identifier	2	FPAP latitude	430149.6680N
Airport identifier	RJCK	FPAP longitude	1441154.5465E
Runway	17	Threshold crossing height	00016.7
Approach performance designator	0	TCH units selector	1
Route indicator	Х	Glide path angle	03.00
Reference path data selector	0	Course width at threshold	105.00
Reference path ID	M17A	✓ length offset	0000
LTP/FTP latitude	430305.2840N	HAL	40.0
LTP/FTP longitude	1441114.8770E	VAL	50.0
CRC remainder	A0B919FD		

## Required additional data

LTP/FTP orthometric height	98.0	



# RJCK /KUSHIRO

RNP RWY35

## **FAS DATA BLOCK**

Operation type	0	LTP/FTP ellipsoidal height	+01179
SBAS service provider identifier	2	FPAP latitude	430305.2840N
Airport identifier	RJCK	FPAP longitude	1441114.8770E
Runway	35	Threshold crossing height	00015.0
Approach performance designator	0	TCH units selector	1
Route indicator		Glide path angle	03.00
Reference path data selector	0	Course width at threshold	105.00
Reference path ID	M35A	✓ length offset	0000
LTP/FTP latitude	430149.6680N	HAL	40.0
LTP/FTP longitude	1441154.5465E	VAL	50.0
CRC remainder	F9C3454C		

Required additional data

LTP/FTP orthometric height	88.1



※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
北斗 Hokuto	080°T / 4.6NM	T字路交差点 Intersection
大楽毛 Otanoshike	113°T / 4.2NM	製紙工場煙突群 Chimneys
釧路ステーション Kushiro Station	110°T / 8.8NM	JR駅 Station
西庶路 Nishisyoro	215°T / 4.7NM	JR駅 Station
白糠 Shiranuka	225°T / 7.2NM	JR駅 Station

