## AD 2 AERODROMES

### RJCH AD 2.1 AERODROME LOCATION INDICATOR AND NAME

# RJCH - HAKODATE

### RJCH AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

| | | |
|---|---|---|
| 1 | ARP coordinates and site at AD | *414612N/1404919E* |
| 2 | Direction and distance from (city) | 7.6KM (4.1NM), BRG 095° from Hakodate JR Station |
| 3 | Elevation/ Reference temperature | 111.9ft / 25°C (2004-2008) |
| 4 | Geoid undulation at AD ELEV PSN | 112.5FT |
| 5 | MAG VAR/ Annual change | 9°W (2009) / 1.2'E |
| 6 | AD Administration, address, telephone, telefax, telex, AFS, e-mail and/or Web-site addresses | Hokkaido Airports Co.,Ltd. Hakodate Airport Office<br>511, Takamatsu-cho, Hakodate, Hokkaido<br>TEL: 0138-57-1620 FAX:0138-57-1621 |
| 7 | Types of traffic permitted (IFR/VFR) | IFR/VFR |
| 8 | Remarks | Hakodate Airport Office(Civil Aviation Bureau)<br>511, Takamatsu-cho, Hakodate, Hokkaido<br>TEL:0138-57-1737, FAX:0138-59-4745<br><br>e-mail and web-site:Nil |

### RJCH AD 2.3 OPERATIONAL HOURS

| | | |
|---|---|---|
| 1 | AD Administration | 2230 - 1130 |
| 2 | Customs and immigration | INTL SKED FLT hours only |
| 3 | Health and sanitation | Quarantine(human): 2330-0815<br>Quarantine(animal): 2330-0800<br>Quarantine(plant): INTL SKED FLT hours only |
| 4 | AIS Briefing Office | Nil |
| 5 | ATS Reporting Office(ARO) | Nil |
| 6 | MET Briefing Office | H24 (NEW CHITOSE) |
| 7 | ATS | 2230 - 1130 |
| 8 | Fuelling | 2230 - 1130 |
| 9 | Handling | 2230 - 1130 |
| 10 | Security | 2230 - 1130 |
| 11 | De-icing | Nil |
| 12 | Remarks | Nil |

## RJCH AD 2.4 HANDLING SERVICES AND FACILITIES

| | | |
|---|---|---|
| 1 | Cargo-handling facilities | All the modern institutions that deal with the weight thing to a Boeing747 type freighter |
| 2 | Fuel/ oil types | Fuel grades: JET A-1<br>Oil grades: W80, MJO-2 |
| 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 |

## RJCH AD 2.5 PASSENGER FACILITIES

| | | |
|---|---|---|
| 1 | Hotels | Hotels in Hakodate city |
| 2 | Restaurants | Available , Not continuous |
| 3 | Transportation | Busses and Taxis |
| 4 | Medical facilities | Hospitals in Hakodate city |
| 5 | Bank and Post Office | Bank in Hakodate city, Post office in Hakodate city |
| 6 | Tourist Office | Tourist office in Hakodate city |
| 7 | Remarks | Nil |

## RJCH AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

| | | |
|---|---|---|
| 1 | AD category for fire fighting | CAT 9 |
| 2 | Rescue equipment | Fire engines |
| 3 | Capability for removal of disabled aircraft | Nil |
| 4 | Remarks | Nil |

## RJCH AD 2.7 SEASONAL AVAILABILITY-CLEARING

| | | |
|---|---|---|
| 1 | Types of clearing equipment | Snow removed equipment:<br>a)rotatry x 3<br>b)snow plows x 4<br>c)snow sweeper x 4<br>d)urea sprinkler equipment x 1 |
| 2 | Clearance priorities | 1.RWY, 2.TWY, 3.APRON |
| 3 | Remarks | Seasonal availability: All seasons. |

## RJCH AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

| | | |
|---|---|---|
| 1 | Apron surface and strength | Surface: Concrete<br>Strength: PCN 74/F/B/X/T |
| 2 | Taxiway width, surface and strength | Width: P1 - P6 : 23m<br>T1, T7 : 28.5m<br>T2 - T6 : 34m<br>Surface: All TWY(except P2 and P3 behind SPOT1-10) : Asphalt Concrete<br>TWY P2 and P3 behind SPOT1-10 : Concrete<br>Strength: All TWY(except P2 and P3 behind SPOT1-10) : PCN 98/F/C/X/T<br>TWY P2 and P3 behind SPOT1-10 : PCN 74/F/B/X/T |
| 3 | ACL and elevation | Not available |
| 4 | VOR checkpoints | Not available |
| 5 | INS checkpoints | Spot NR<br>*1 414631.62N, 1404848.33E*<br>*2W 414631.87N, 1404849.46E*<br>*2 414631.17N, 1404850.18E*<br>*3 414631.21N, 1404852.59E*<br>*4 414630.51N, 1404855.48E*<br>*5 414629.73N, 1404858.32E*<br>*6 414628.84N, 1404900.90E*<br>*7 414628.03N, 1404903.16E*<br>*8 414627.48N, 1404905.43E*<br>*9 414626.98N, 1404907.49E*<br>*10 414626.45N, 1404909.65E* |
| 6 | Remarks | Nil |

## RJCH 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 | ACFT stand ID signs:NR.3, NR.4 and NR.5<br>ACFT stand taxi lane:Nil<br>Visual docking guidance system :Nil |
| 2 | RWY and TWY markings and LGT | RWY: RWY12/30<br>(Marking) RWY designation, RWY CL, RWY THR,<br>Aiming point, TDZ, RWY side stripe<br>(LGT): RCLL, REDL, RTHL, RENL, RTZL(RWY12), WBAR(RWY12),<br>RWY DIST marker LGT<br><br>TWY: P1-P6<br>(Marking) TWY CL, TWY side stripe<br>(LGT) TWY edge LGT, TWY CL LGT<br><br>TWY: T1-T7<br>(Marking) TWY CL, RWY HLDG PSN, TWY side stripe<br>(LGT) TWY edge LGT, TWY CL LGT, RWY guard LGT, Taxiing guidance sign |
| 3 | Stop bars | Nil |
| 4 | Remarks | (Marking) Overrun area<br>(LGT) Apron flood LGT |

## RJCH AD 2.10 AERODROME OBSTACLES

SEE ATTACHED CHARTS

In approach/TKOF areas

| RWY/Area affected | Obstacle type | Coordinates | Elevation | Markings/ LGT | Remarks |
|---|---|---|---|---|---|
| RWY30 | Light Facility | *414557.2N/1405024.8E* | 152FT | | |
| RWY30 | Light Facility | *414556.5N/1405027.3E* | 152FT | | |
| RWY30 | Antenna | *414556.0N/1405028.2E* | 160FT | | |
| RWY30 | LOC | *414555.3N/1405032.1E* | 165FT | | |
| RWY30 | Building | *414556.7N/1405033.0E* | 164FT | | |
| RWY30 | Fence | *414555.5N/1405033.5E* | 161FT | | |
| RWY30 | Tree | *414551.5N/1405033.2E* | 171FT | | |
| RWY30 | Tree | *414550.4N/1405035.0E* | 169FT | | |
| RWY30 | Light Facility | *414554.0N/1405037.1E* | 162FT | | |
| RWY30 | Light Facility | *414553.4N/1405039.6E* | 165FT | | |
| RWY30 | Light Facility | *414552.8N/1405042.1E* | 168FT | | |
| RWY30 | Light Facility | *414552.1N/1405044.5E* | 171FT | | |
| RWY30 | Post | *414551.9N/1405045.7E* | 176FT | | |
| RWY30 | Light Facility | *414551.6N/1405046.9E* | 174FT | | |
| RWY30 | Light Facility | *414551.0N/1405049.3E* | 177FT | | |
| RWY30 | Tree | *414549.6N/1405049.2E* | 181FT | | |
| RWY30 | Light Facility | *414550.4N/1405052.0E* | 180FT | | |
| RWY30 | Light Facility | *414549.8N/1405054.4E* | 183FT | | |
| RWY30 | Light Facility | *414549.2N/1405056.9E* | 186FT | | |
| RWY30 | Light Facility | *414548.6N/1405059.4E* | 189FT | | |
| RWY12 | Light Facility | *414628.2N/1404816.4E* | 93FT | | |
| RWY12 | Fence | *414628.7N/1404814.0E* | 95FT | | |
| RWY12 | Post | *414633.5N/1404809.4E* | 104FT | | |
| RWY12 | Post | *414633.1N/1404807.6E* | 101FT | | |
| RWY12 | Post | *414632.3N/1404804.9E* | 105FT | | |
| RWY12 | Post | *414634.8N/1404805.3E* | 106FT | | |
| RWY12 | Post | *414633.5N/1404804.3E* | 106FT | | |
| RWY12 | Tree | *414630.0N/1404801.3E* | 102FT | | |
| RWY12 | Rod | *414640.3N/1404736.1E* | 132FT | | |
| RWY12 | Rod | *414645.2N/1404734.8E* | 162FT | | |
| RWY12 | Rod | *414646.0N/1404733.7E* | 164FT | | |
| RWY12 | Rod | *414646.8N/1404732.0E* | 164FT | | |
| RWY12 | Rod | *414643.6N/1404658.5E* | 171FT | | |
| RWY12 | Post | *414633.8N/1404811.5E* | 100FT | | |
| RWY12 | Building | *414635.5N/1404807.7E* | 100FT | | |
| RWY12 | Post | *414635.9N/1404806.7E* | 111FT | | |
| RWY12 | Post | *414635.7N/1404805.2E* | 105FT | | |
| RWY12 | Antenna | *414637.3N/1404805.9E* | 103FT | | |
| RWY12 | Post | *414636.5N/1404805.5E* | 110FT | | |
| RWY12 | Chimney | *414637.3N/1404804.9E* | 111FT | | |
| RWY12 | Lamppost | *414626.9N/1404759.8E* | 97FT | | |
| RWY12 | Building | *414628.1N/1404750.0E* | 125FT | | |

| RWY/Area affected | Obstacle type | Coordinates | Elevation | Markings/ LGT | Remarks |
|---|---|---|---|---|---|
| RWY12 | Rod | *414633.0N/1404720.2E* | 170FT | | |
| | Spire | *414805.6N/1405049.0E* | 464FT | | |
| | Spire | *414811.5N/1404802.8E* | 293FT | | |
| | Spire | *414812.6N/1405042.4E* | 540FT | | |
| | Rod | *414713.0N/1405202.5E* | 338FT | | |
| | Spire | *414817.5N/1404804.3E* | 292FT | | |
| | Spire | *414819.4N/1405035.8E* | 562FT | | |
| | Antenna | *414834.3N/1404848.9E* | 424FT | | |
| | Spire | *414826.4N/1405033.8E* | 559FT | | |
| | Spire | *414822.2N/1404741.2E* | 344FT | | |
| | chimney | *414824.9N/1404743.9E* | 327FT | | |
| | Spire | *414830.4N/1404756.8E* | 362FT | | |
| | Building | *414830.1N/1404752.9E* | 340FT | | |
| | Spire | *414826.1N/1404740.3E* | 369FT | | |
| | Spire | *414842.2N/1405026.8E* | 541FT | | |
| | Antenna | *414849.6N/1404847.6E* | 438FT | | |
| | Spire | *414843.6N/1404747.0E* | 416FT | | |
| | Spire | *414858.3N/1405002.8E* | 595FT | | |
| | Spire | *414905.8N/1404952.3E* | 618FT | | |
| | Spire | *414851.8N/1404739.5E* | 453FT | | |
| | Spire | *414912.0N/1404943.6E* | 702FT | | |
| | Spire | *414915.6N/1404932.4E* | 570FT | | |
| | Spire | *414900.2N/1404736.9E* | 488FT | | |
| | Spire | *414917.8N/1404920.0E* | 530FT | | |
| | Spire | *414919.5N/1404906.0E* | 654FT | | |
| | Spire | *414921.4N/1404850.7E* | 629FT | | |
| | Spire | *414905.9N/1404735.2E* | 491FT | | |
| RWY 12 | Rod | *414643.3N/1404704.1E* | 174FT | | |
| | Building | *414825.4N/1405040.2E* | 573FT | | |
| | Antenna | *414854.4N/1404843.5E* | 437FT | | |
| | Post | *414835.0N/1404917.1E* | 413FT | | |
| | Tree | *414839.8N/1404912.7E* | 446FT | | |
| | Building | *414847.3N/1404850.0E* | 407FT | | Above the conical surface |
| | Building | *414847.8N/1404833.6E* | 403FT | | Above the conical surface |
| | Building | *414854.4N/1404856.4E* | 427FT | | Above the conical surface |
| | Building | *414820.0N/1405000.0E* | 423FT | - / LIL | Above the conical surface |
| | Building | *414830.7N/1405007.6E* | 398FT | - / - | Above the conical surface |
| | Spire | *414820.2N/1404852.4E* | 414FT | Marking / LIL | Above the conical surface |
| | Spire | *414829.1N/1404859.3E* | 406FT | Marking / - | Above the conical surface |
| | Spire | *414830.4N/1404906.0E* | 394FT | - / - | Above the conical surface |
| | Spire | *414833.4N/1404854.2E* | 388FT | Marking / - | Above the conical surface |
| | Spire | *414841.1N/1404851.4E* | 391FT | | Above the conical surface |
| | Spire | *414830.9N/1404919.9E* | 387FT | Marking / LIL | Above the conical surface |
| | Spire | *414822.3N/1405031.8E* | 480FT | - / - | Above the conical surface |
| | Spire | *414820.4N/1405036.0E* | 524FT | - / - | Above the conical surface |
| | Spire | *414815.0N/1405041.3E* | 545FT | Marking / - | Above the conical surface |

| RWY/Area affected | Obstacle type | Coordinates | Elevation | Markings/ LGT | Remarks |
|---|---|---|---|---|---|
| | Spire | *414807.6N/1405048.9E* | 476FT | Marking / - | Above the conical surface |
| | Spire | *414800.5N/1405055.3E* | 406FT | Marking / - | Above the conical surface |
| | Spire | *414811.5N/1404803.2E* | 350FT | Marking / - | Above the conical surface |
| | Building | *414831.3N/1405009.2E* | 398FT | - / - | Above the conical surface |
| | Spire | *414826.3N/1404757.7E* | 363FT | Marking / - | Above the conical surface |
| | Spire | *414818.6N/1404807.1E* | 378FT | Marking / LIL | Above the conical surface |

In circling area and at AD

| Obstacle type | Coordinates | Elevation | Markings/ LGT | Remarks |
|---|---|---|---|---|
| Building | *414632.7N/1404818.4E* | 102FT | | |
| Post | *414634.3N/1404815.8E* | 114FT | | |
| Post | *414637.4N/1404807.7E* | 106FT | | |
| Building | *414602.1N/1405028.7E* | 161FT | | |
| Lamppost | *414637.9N/1404808.9E* | 117FT | | |
| Post | *414635.4N/1404816.0E* | 126FT | | |
| Post | *414635.0N/1404819.8E* | 123FT | | |
| Post | *414636.1N/1404816.0E* | 126FT | | |
| Post | *414634.4N/1404822.6E* | 117FT | | |
| Fence | *414604.3N/1405030.7E* | 182FT | | |
| Equipment | *414616.2N/1404941.6E* | 168FT | | |
| Post | *414637.4N/1404816.0E* | 128FT | | |
| ITV | *414623.9N/1404914.3E* | 139FT | | |
| ABN | *414633.3N/1404844.6E* | 185FT | | |
| Light Pole | *414628.3N/1404907.9E* | 192FT | | |
| Light Pole | *414630.8N/1404857.0E* | 191FT | | |
| Light Pole | *414629.8N/1404902.2E* | 192FT | | |
| Light Pole | *414631.7N/1404854.6E* | 190FT | | |
| Light Pole | *414627.4N/1404913.1E* | 192FT | | |
| Light Pole | *414627.9N/1404911.0E* | 192FT | | |
| Fence | *414612.8N/1405014.8E* | 241FT | | |
| Fence | *414615.3N/1405004.4E* | 246FT | | |
| Rod | *414630.3N/1404903.8E* | 219FT | | |
| Tree | *414618.6N/1404830.4E* | 116FT | | |
| Tree | *414616.0N/1404840.9E* | 139FT | | |

| Obstacle type | Coordinates | Elevation | Markings/ LGT | Remarks |
|---|---|---|---|---|
| Tree | *414603.3N/1404932.7E* | 142FT | | |
| Building | *414629.9N/1404711.2E* | 182FT | | |
| Antenna | *414603.2N/1404929.2E* | 147FT | | |
| Rod | *414621.0N/1404757.2E* | 166FT | | |
| Signboard | *414618.8N/1404810.9E* | 136FT | | |
| Antenna | *414559.6N/1404919.4E* | 166FT | | |
| Equipment | *414631.8N/1404909.0E* | 227FT | | |
| Antenna | *414549.6N/1404937.0E* | 226FT | | |
| Equipment | *414626.5N/1404957.2E* | 292FT | | |
| Post | *414633.2N/1404959.4E* | 260FT | | |
| Signboard | *414632.8N/1405000.6E* | 261FT | | |
| Building | *414633.9N/1405001.9E* | 270FT | | |
| Building | *414619.2N/1405010.5E* | 288FT | | |
| Post | *414623.4N/1405014.3E* | 298FT | | |
| Antenna | *414539.0N/1405005.7E* | 206FT | | |
| Antenna | *414816.0N/1404947.4E* | 407FT | | |
| Rod | *414815.4N/1404958.4E* | 438FT | | |
| Spire | *414754.3N/1405100.0E* | 370FT | | |
| Antenna | *414819.1N/1404905.8E* | 401FT | | |
| chimney | *414818.4N/1405001.7E* | 458FT | | |
| Antenna | *414820.0N/1404905.0E* | 401FT | | Above the horizontal surface |
| Post | *414622.7N/1405024.0E* | 273FT | | |
| Antenna | *414622.1N/1405025.0E* | 314FT | | |
| Post | *414620.7N/1405026.7E* | 262FT | | |
| Post | *414629.5N/1405029.6E* | 292FT | | |
| Tree | *414647.6N/1405024.0E* | 302FT | | |
| Building | *414716.9N/1404921.4E* | 280FT | | |
| Spire | *414632.5N/1405043.2E* | 298FT | | |
| Spire | *414644.0N/1405039.6E* | 317FT | | |
| Spire | *414703.0N/1405031.9E* | 326FT | | |
| Post | *414653.9N/1405043.5E* | 322FT | | |
| Building | *414629.4N/1405102.3E* | 255FT | | |
| Tree | *414729.4N/1404959.6E* | 334FT | | |
| Spire | *414733.3N/1405000.6E* | 321FT | | |
| Antenna | *414737.0N/1404959.0E* | 377FT | | |
| Spire | *414740.1N/1404946.4E* | 378FT | | |
| Spire | *414614.6N/1405121.2E* | 257FT | | |
| Spire | *414742.9N/1404935.0E* | 400FT | | |
| Spire | *414606.3N/1405123.6E* | 253FT | | |
| Building | *414737.9N/1405011.4E* | 313FT | | |
| Spire | *414743.6N/1404952.0E* | 377FT | | |
| Rod | *414747.6N/1404928.6E* | 350FT | | |
| Lamppost | *414731.4N/1405037.0E* | 315FT | | |
| Building | *414751.4N/1404952.6E* | 348FT | | |
| Spire | *414754.7N/1404843.8E* | 351FT | | |
| Spire | *414722.9N/1405108.6E* | 318FT | | |

| Obstacle type | Coordinates | Elevation | Markings/ LGT | Remarks |
|---|---|---|---|---|
| Antenna | *414802.1N/1404939.9E* | 411FT | | |
| Spire | *414743.6N/1405107.5E* | 301FT | | |
| Post | *414619.7N/1405050.8E* | 269FT | | |
| Rod | *414742.2N/1404927.7E* | 328FT | | |
| Post | *414627.4N/1405044.8E* | 267FT | | |
| Spire | *414700.7N/1405033.4E* | 327FT | | |
| Spire | *414731.5N/1405108.2E* | 323FT | | |
| Rod | *414803.5N/1404947.0E* | 430FT | | |
| Antenna | *414740.0N/1404942.0E* | 383FT | | Above the horizontal surface |
| Building | *414804.3N/1404943.2E* | 381FT | - / - | Above the horizontal surface |
| Spire | *414811.3N/1404845.5E* | 341FT | Marking / - | Above the horizontal surface |
| Spire | *414752.8N/1405102.4E* | 304FT | - / - | Above the horizontal surface |
| Spire | *414743.8N/1405108.2E* | 298FT | Marking / - | Above the horizontal surface |
| Spire | *414730.6N/1405109.1E* | 309FT | - / - | Above the horizontal surface |
| Spire | *414807.0N/1404806.1E* | 309FT | - / - | Above the horizontal surface |
| Spire | *414803.6N/1404816.9E* | 313FT | Marking / - | Above the horizontal surface |
| Spire | *414801.7N/1404823.0E* | 314FT | Marking / LIL | Above the horizontal surface |
| Antenna | *414748.6N/1404929.7E* | 341FT | - / - | Above the horizontal surface |
| Antenna | *414806.3N/1404945.3E* | 407FT | - / - | Above the horizontal surface |
| Building | *414804.1N/1404943.8E* | 372FT | - / - | Above the horizontal surface |
| Spire | *414826.6N/1405028.7E* | 549FT | - / - | Above the conical surface |
| Spire | *414833.7N/1404931.0E* | 386FT | Marking / - | Above the conical surface |
| Spire | *414837.1N/1404940.3E* | 340FT | Marking / LIL | Above the conical surface |
| Antenna | *414851.9N/1404847.9E* | 460FT | Marking / - | Above the conical surface |
| Antenna | *414827.7N/1405012.4E* | 406FT | - / - | Above the conical surface |
| Antenna | *414748.1N/1404930.3E* | 311FT | - / - | Above the horizontal surface |
| Building | *414834.4N/1405013.5E* | 418FT | - / - | Above the conical surface |
| Building | *414828.7N/1405010.1E* | 408FT | - / - | Above the conical surface |
| Antenna | *414822.4N/1404742.7E* | 330FT | - / - | Above the conical surface |
| Antenna | *414817.2N/1404950.9E* | 392FT | - / - | Above the horizontal surface |
| Antenna | *414821.6N/1404743.9E* | 349FT | - / - | Above the conical surface |
| Antenna | *414821.5N/1404744.0E* | 349FT | - / - | Above the conical surface |
| Antenna | *414816.0N/1404948.0E* | 400FT | - / - | Above the horizontal surface |
| Antenna | *414904.0N/1404847.0E* | 479FT | - / - | Above the conical surface |
| Building | *414902.0N/1404854.0E* | 465FT | - / - | Above the conical surface |
| | | | | |
| Solar power plant | *414835.3N/1404833.6E* | 375FT | - / - | Above the conical surface |
| Rod | *414818N1404807E* | 303FT | - / - | Above the conical surface |
| Rod | *414818N1404808E* | 306FT | - / - | Above the conical surface |
| Rod | *414819N1404809E* | 308FT | - / - | Above the conical surface |
| Rod | *414819N1404810E* | 314FT | - / - | Above the conical surface |

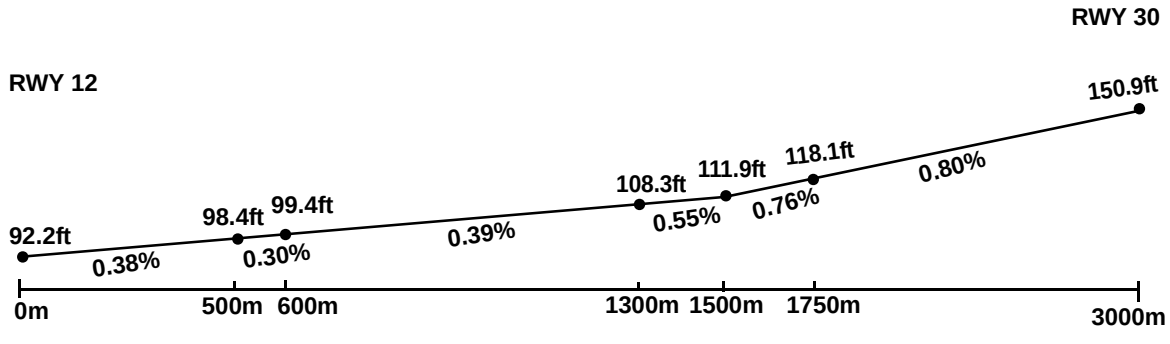
## RJCH AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

| | | |
|---|---|---|
| 1 | Associated MET Office | NEW CHITOSE |
| 2 | Hours of service<br>MET Office outside hours | H24 (NEW CHITOSE) |
| 3 | Office responsible for TAF preparation<br>Periods of validity | NEW CHITOSE<br>30 Hours |
| 4 | Trend forecast<br>Interval of issuance | Nil |
| 5 | Briefing/consultation provided | Briefing is available upon inquiry at NEW CHITOSE |
| 6 | Flight documentation<br>Language(s) used | C<br>En |
| 7 | Charts and other information available for briefing or consultation | $S_6$, $U_{85}$, $U_7$, $U_5$ $U_3$, $U_{25}$, $U_2$/Tr, $P_S$, $P_5$, $P_3$, $P_{25}$, $P_{SWE}$, $P_{SWF}$, $P_{SWG}$, $P_{SWI}$, $P_{SWM}$, $P_{SW}$(domestic), E, C, $W_E$, $W_F$, $W_G$, $W_I$, W, N |
| 8 | Supplementary equipment<br>available for providing information | Nil |
| 9 | ATS units provided with information | TWR, APP, ATIS |
| 10 | Additional information(limitation of service, etc.) | Nil |

## RJCH AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

| Designations RWY NR | TRUE BRG | Dimensions of RWY(M) | Strength(PCN) and surface of RWY | THR coordinates<br>THR geoid undulation | THR elevation and highest elevation of TDZ<br>of precision APP RWY |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 12 | 107.98° | 3000×45 | PCN<br>98/F/C/X/T<br>Asphalt Concrete | *414627.62N*<br>*1404817.61E*<br>112.6FT | THR ELEV 92.2ft<br>TDZ ELEV 103ft |
| 30 | 287.98° | 3000×45 | PCN<br>98/F/C/X/T<br>Asphalt Concrete | *414557.54N*<br>*1405021.00E*<br>112.5FT | THR ELEV 151ft |

| Slope of RWY | Strip Dimensions(M) | RESA (Overrun) Dimensions(M) | Remarks |
|---|---|---|---|
| 7 | 10 | 11 | 14 |
| see attached figure | 3120×300 | 192 × (MNM:102 MAX:300)* | RWY grooving 3000X45m |
| | 3120×300 | 240 × 300<br>*For detail, ask airport administrator | |



## RJCH AD 2.13 DECLARED DISTANCES

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

## RJCH 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 |
| 12 | PALS (CAT I) 640m LIH | Green Green | PAPI 3.0°/Left 384m 65ft | 900m | 3000m 30m Coded Color (White/Red) LIH | 3000m 60m Coded Color (White/Yellow) LIH | Red | Nil (*2) |
| 30 | SALS (*1) 420m LIH | Green - | PAPI 3.0°/Left 538m 74ft | - | 3000m 30m Coded Color (White/Red) LIH | 3000m 60m Coded Color (White/Yellow) LIH | Red | Nil (*2) |
| Remarks | | | | | | | | |
| 10 | | | | | | | | |
| SALS with RAI(LEN:480m) and APCH Guidance LGT(1341m and 1760m FM RWY THR) for RWY 30(*1)<br>Overrun area edge LGT: LEN:60m Color:Red (*2) | | | | | | | | |

## RJCH AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

| | | |
|---|---|---|
| 1 | ABN/IBN location, characteristics and hours of operation | ABN: *414633N/1404843E*, ALTN FLG(2)WG EV 4.3sec , HO |
| 2 | LDI location and LGT<br>Anemometer location and LGT | LDI : Nil<br>Anemometer: RWY12 400m WSW from ABN, LGTD<br>RWY30 2350m ESE from ABN, LGTD |
| 3 | TWY edge and center line lighting | TWY edge and center line lights installed, see AD2.9 |
| 4 | Secondary power supply/ switch-over time | Within 1sec : REDL, RENL, RTHL, WBAR, RCLL, Overrun area edge LGT<br>Within 15sec: Other lights |
| 5 | Remarks | WDI LGT |

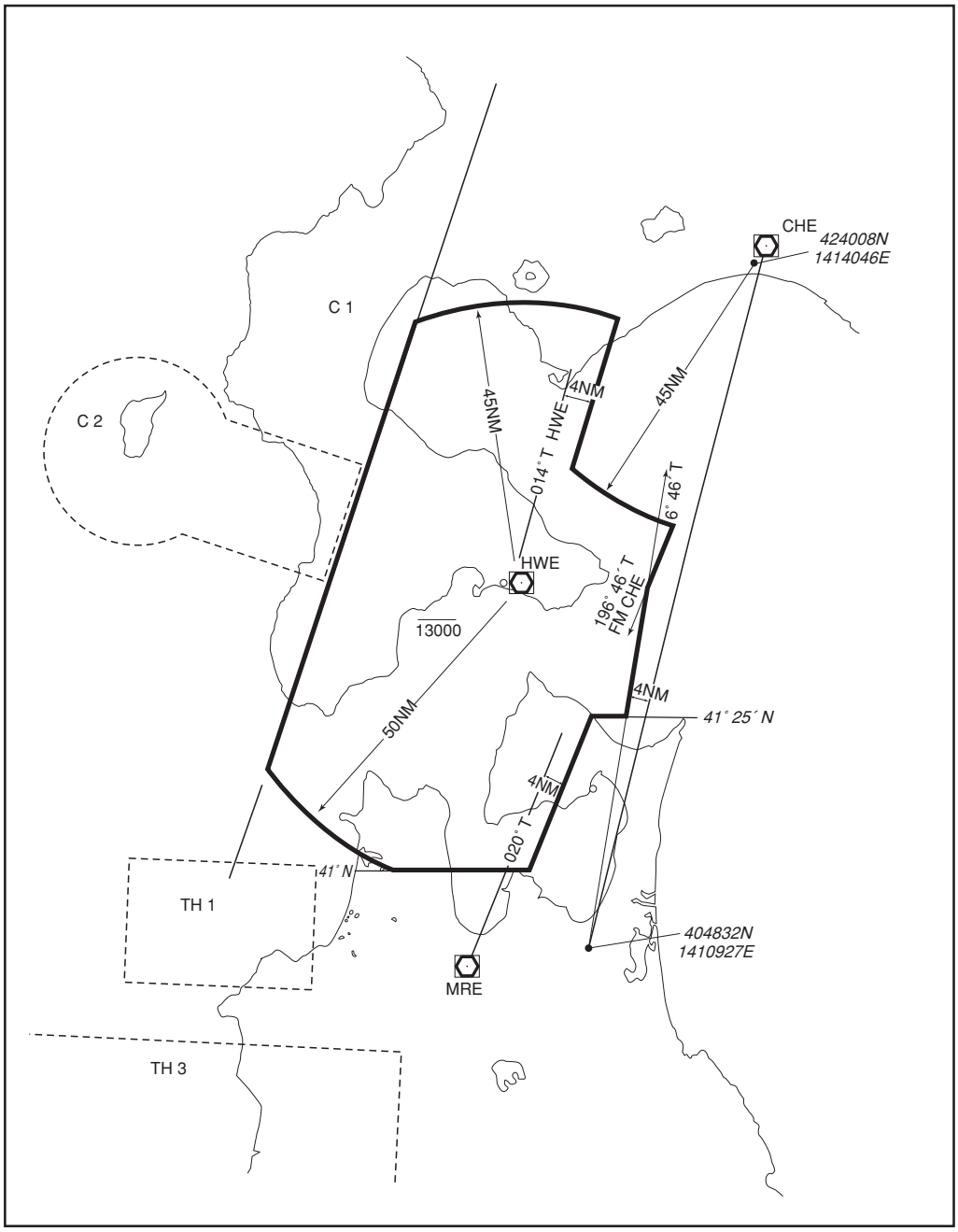
## RJCH AD 2.16 HELICOPTER LANDING AREA

Nil

## RJCH 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 |
| HAKODATE CTR | Area within a radius of 5 nm of HAKODATE ARP (*41°46'N140°49'E* ) | 3000 | D | HAKODATE TWR En | |
| HAKODATE ACA | SEE RJCH ATTACHED CHART | | E | HAKODATE APP HAKODATE DEP HAKODATE RADAR En | |

函館進入管制区
Hakodate Approach Control Area



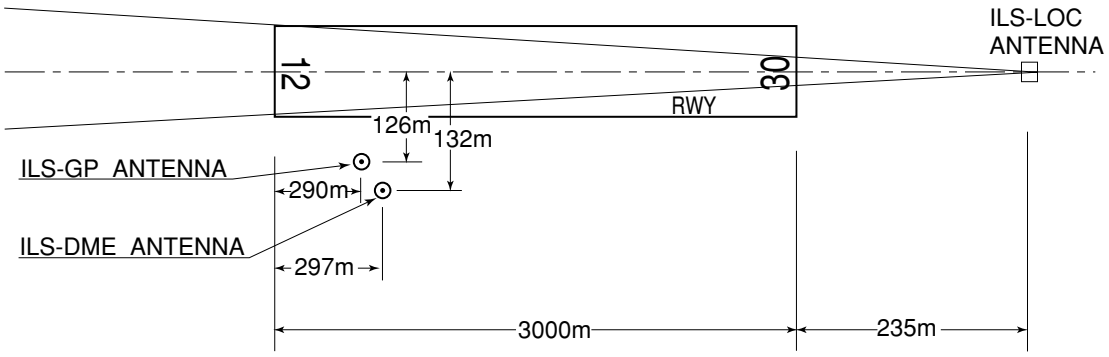
## RJCH AD 2.18 ATS COMMUNICATION FACILITIES

| Service designation | Call sign | Frequency | Hours of operation | Remarks |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| TWR | Hakodate Tower | 118.35MHz(1)<br>126.2MHz(2)<br>121.5 MHz(E)<br>243.0 MHz(E) | 2230 - 1130 | (1)Primary<br>(2)Secondary |
| APP/ASR | Hakodate Approach/Radar | 119.0 MHz<br>121.0 MHz<br>121.5MHz(E)<br>243.0MHz(E) | 2230 - 1130 | |
| DEP | Hakodate Departure | 127.9 MHz<br>121.0 MHz<br>121.5MHz(E)<br>243.0MHz(E) | 2230 - 1130 | |
| ATIS | Hakodate Airport | 126.6MHz | 2230 - 1130 | |

## RJCH 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/2014) | HWE | 112.3MHz | H24 | *414626.51N/ 1404955.98E* | | VOR unusable:<br>020°-030° beyond 30nm BLW 6000ft.<br>030°-040° beyond 35nm BLW 5000ft.<br>070°-090° beyond 25nm BLW 5000ft.<br>090°-100° beyond 35nm BLW 5000ft.<br>100°-110° beyond 20nm BLW 4000ft.<br>200°-240° beyond 35nm BLW 5000ft.<br>340°-350° beyond 35nm BLW 6000ft.<br>350°-010° beyond 15nm BLW 6000ft. |
| DME | HWE | 1157MHz (CH-70X) | H24 | *414626.51N/ 1404955.98E* | 300ft | DME unusable:<br>000°-020° beyond 25nm BLW 6000ft.<br>100°-110° beyond 35nm BLW 4000ft.<br>340°-360° beyond 30nm BLW 6000ft. |
| ILS-LOC 12 | IHL | 109.3MHz | 2230 - 1130 | *414555.24N/ 1405030.81E* | | LOC:235m (771ft) away FM RWY 30 THR, BRG (MAG) 117° |
| ILS-GP 12 | - | 332.0MHz | 2230 - 1130 | *414620.82N/ 1404827.84E* | | GP : 290m (951ft) FM inside RWY 12 THR, 126m (413ft) S of RCL.<br>GP 3.0°<br>HGT of ILS Ref datum 15.5m(51ft). |
| ILS-DME 12 | IHL | 991MHz (CH-30X) | 2230 - 1130 | *414620.53N/ 1404828.07E* | 111ft | DME:297m(974ft) inside FM RWY 12 THR, 132m(433ft) S of RCL. |
| MSAS | | 1575.42MHz | H24 | | | Transmitting antennas are satellite based. |

ILS for RWY12




REMARKS : 1.ILS-LOC beam(BRG) 117˚
2.ILS-GP Angle 3.0˚
3.HGT of ILS REF datum 15.5m(51.0ft)
4.ELEV of ILS-DME 33.9m(111ft)

## RJCH AD 2.20 LOCAL TRAFFIC REGULATIONS

1. Airport regulations

**PPR**
Prior permission is required for all transient aircraft due to parking congestion except scheduled and/or emergency flight.
Tel: Hokkaido Airports Co.,Ltd. Hakodate Airport Office 0138-57-1729

2. Taxiing to and from stands

Nil

3. Parking area for small aircraft(General aviation)

Nil

4. Parking area for helicopters

Nil

5. Apron - taxiing during winter conditions

Nil

6. Taxiing - limitations

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

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

When B772 holding at the stop marking on TWY T2 or T6

| Wing Span (WS) of aircraft taxiing on TWY P1-P2 or P5-P6 | WS=<35.4m | 35.4m<WS =<52.4m | WS >52.4m |
|---|---|---|---|
| Wing tip clearance | *A | *B | *C |

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

7. School and training flights - technical test flights - use of runways

Nil

8. Helicopter traffic - limitation

Nil

9. Removal of disabled aircraft from runways

Nil

## RJCH AD 2.21 NOISE ABATEMENT PROCEDURES

**1.Noise abatement Operating Procedures**
For all jet aircraft, in order to reduce aircraft noise in the vicinity of airport, the following procedures shall be applied unless compliance of the procedures adversely affects the safety of aircraft operations. In case that the aircraft is unable to take these procedures, pilots should execute alternative procedures which are considered to be practically equivalent.
(1) For take-off from RWY30: Steepest Climb Procedure
(2) For landing to RWY12: Delayed Flap Approach Procedure and Reduced Flap Setting Procedure
(3) Reverse Thrust: Nil

**2. Preferential Runways Procedures:** Nil

**3. Noise Preferential Routes:** Nil

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

(1) 離陸について（滑走路 30）
急上昇方式
(2) 着陸について（滑走路 12）
ディレイド･フラップ進入方式及び低フラップ角着陸方式
(3) リバース･スラストについて
なし

**2. 優先滑走路方式**
なし

**3. 優先飛行経路**
なし

## RJCH AD 2.22 FLIGHT PROCEDURES

**1. TAKE OFF MINIMA**

| | RWY | ACFT CAT | REDL & RCLL | | REDL or RCLL or RCL marking | | NIL (DAYTIME ONLY) | |
|---|---|---|---|---|---|---|---|---|
| | | | RVR | VIS | RVR | VIS | RVR | VIS |
| Multi-Engine ACFT with TKOF ALTN AP Filed | 12 | A,B, C,D | 400m | 400m | 400m | 400m | - | 500m |
| | 30 | A,B, C,D | - | 400m | - | 400m | - | 500m |
| OTHER | 12<br>30 | A,B, C,D | AVBL LDG MINIMA | | | | | |

**2. Trajectorized Airport Traffic Data Processing System (TAPS)**

Aircraft flying under control of Hakodate approach control in the approach control area will be instructed to reply with discrete code on Mode A/3 and Mode C

If an aircraft with non-discrete capability be instructed to reply with the discrete code, it shall report a controller accordingly.

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

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

**3. Lost communication procedures for arrival aircraft under radar navigational guidance**

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

(I) 1. Contact HAKODATE Tower.
2. If unable, proceed in accordance with visual flight rules.
3. If unable, proceed to HAKODATE VOR/DME at last assigned altitude or 5,000 feet whichever is higher, and execute instrument approach

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

## RJCH AD 2.23 ADDITIONAL INFORMATION

Nil

## RJCH AD 2.24 CHARTS RELATED TO AN AERODROME

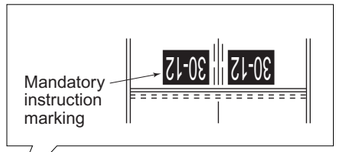
Aerodrome Chart
Aircraft Parking/Docking Chart
Aerodrome Obstacle Chart-ICAO type A (RWY12)
Aerodrome Obstacle Chart-ICAO type A (RWY30)
Aerodrome Obstacle Chart-ICAO type B
Standard Departure Chart-Instrument (HAKODATE SOUTH, HAKODATE REVERSAL, TAPPI, ESASI, TIKYU)
Standard Departure Chart-Instrument (TSUGARU-RNAV)
Standard Arrival Chart-Instrument (YAKEI-RNAV)
Standard Arrival Chart-Instrument (PATRA-RNAV)
Instrument Approach Chart (ILS Z or LOC Z RWY12)
Instrument Approach Chart (ILS Y or LOC Y RWY12)
Instrument Approach Chart (VOR RWY30)
Instrument Approach Chart (VOR RWY12)
Instrument Approach Chart (RNAV(GNSS) Z RWY30)
Instrument Approach Chart (RNAV(RNP) Y RWY30)
Instrument Approach Chart (RNAV(RNP) RWY12)
Other Chart (Visual REP)
Other Chart (LDG CHART)
Other Chart (MVA CHART)

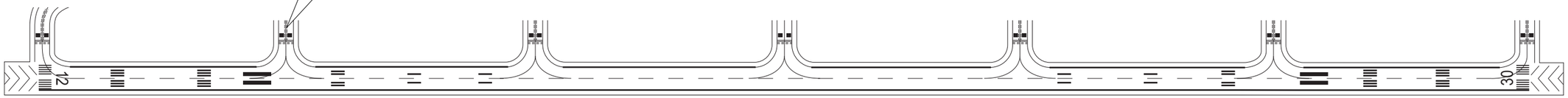
AERODROME CHART

# HAKODATE AIRPORT

ELEV34.1m (111.9ft)

MARKING AIDS



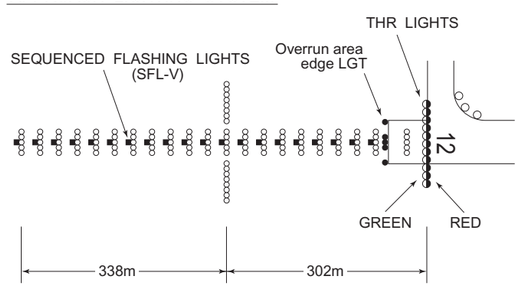




VAR9°W-2009
Annual Change 1.2° E

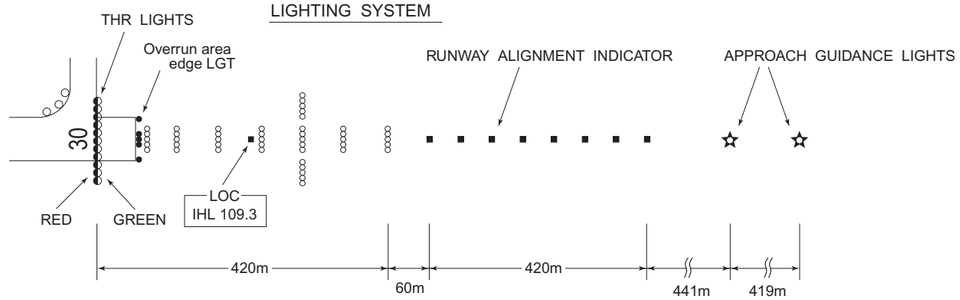
VOR/DME
HWE 112.3
CH-70X

TERMINAL BLDG
CARGO
INTL
DOMESTIC
TWR
AIS/MET
ABN
APRON
FIRE STATION
1 2W2 3 4 5 6 7 8 9 10
P1 P2 P3 P4 P5 P6
WDI WIND SPEED METER
RVR
CEILO METER
WDI
WIND SPEED METER
T1 T2 T3 T4 T5 T6 T7
ELEV 151ft
9▽1 8▽2 7▽3 6▽4 5▽5 4▽6 3▽7 1▽9
Asph conc
PCN 98F/C/X/T
3000m×45m
12
30
ELEV 92ft
9△1 8△2 7△3 6△4 5△5 4△6 3△7 2△8 1△9
TDZ ELEV 103ft
RWY GUARD LGT(T1-T7)
ARP *414612N*
*1404919E*
ILS
GP 332.0
PAPI ANGLE 3.0°
MEHT 19.9m (65ft)
384m INSIDE FM THR
PAPI ANGLE 3.0°
MEHT 22.5m (74ft)
538m INSIDE FM THR

## APPROACH LIGHTING SYSTEM



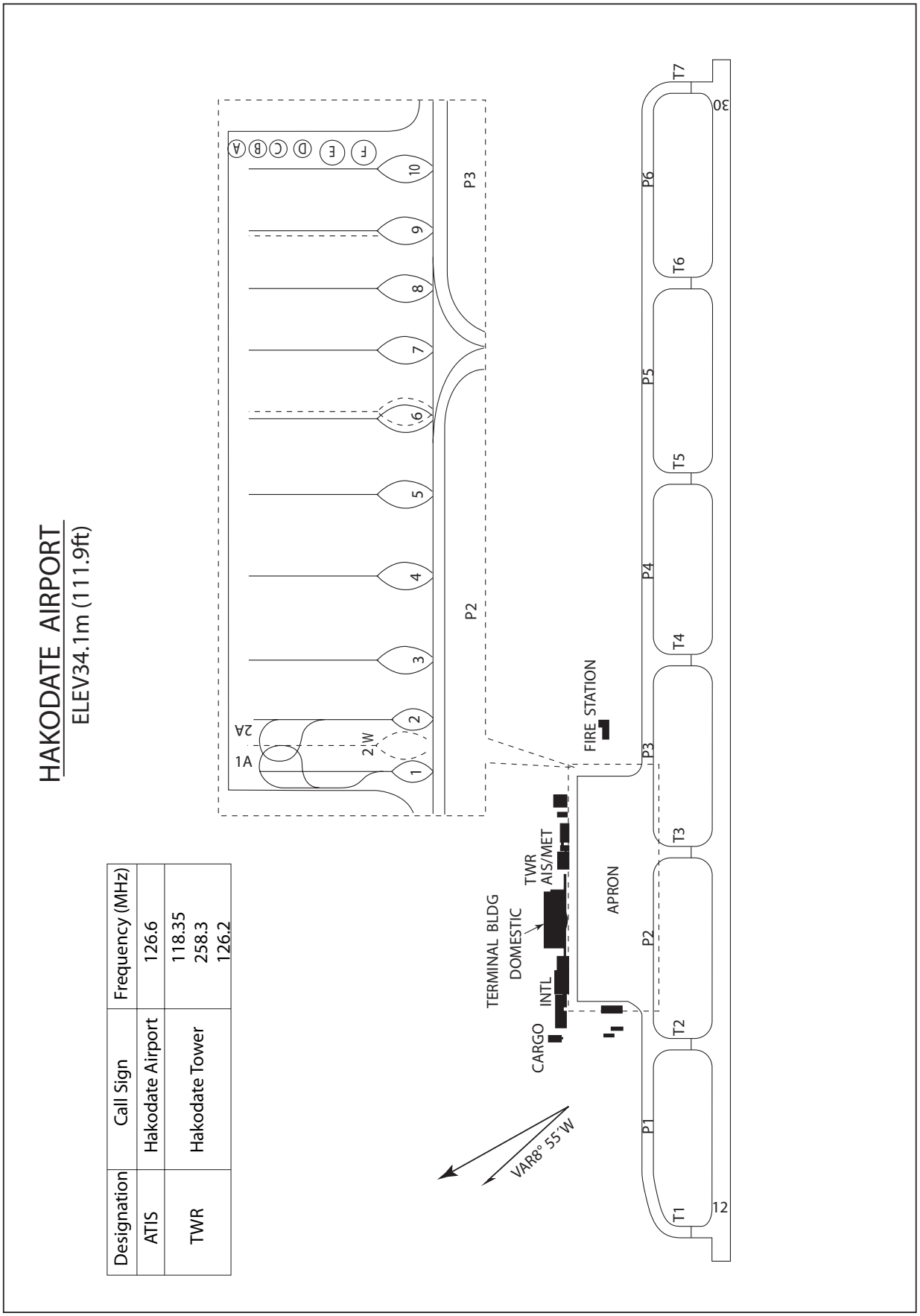

## SIMPLE APPROACH LIGHTING SYSTEM




CHANGE:STOP BAR LGT abolished

**AIRCRAFT PARKING/DOCKING CHART**

RJCH / HAKODATE AD CHART



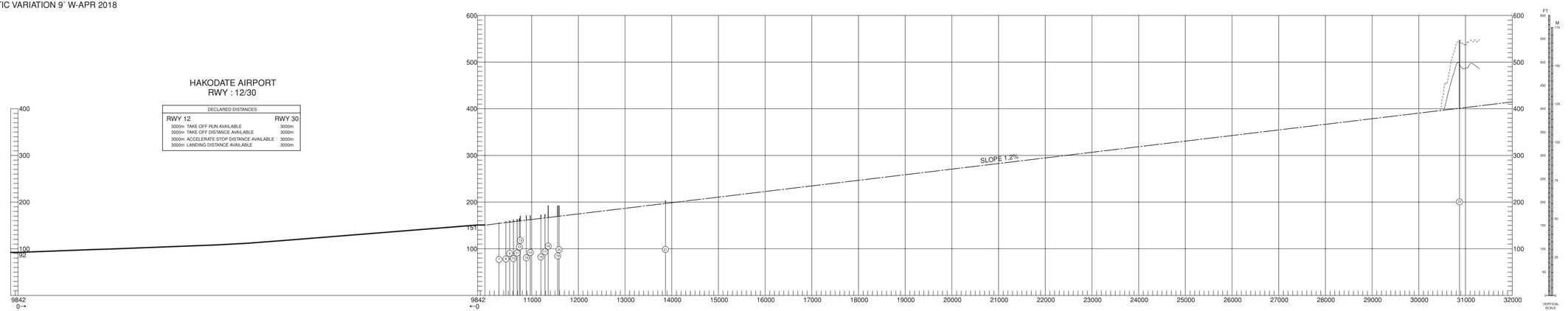
# AERODROME OBSTACLE CHART - ICAO
## TYPE A (OPERATING LIMITATIONS)

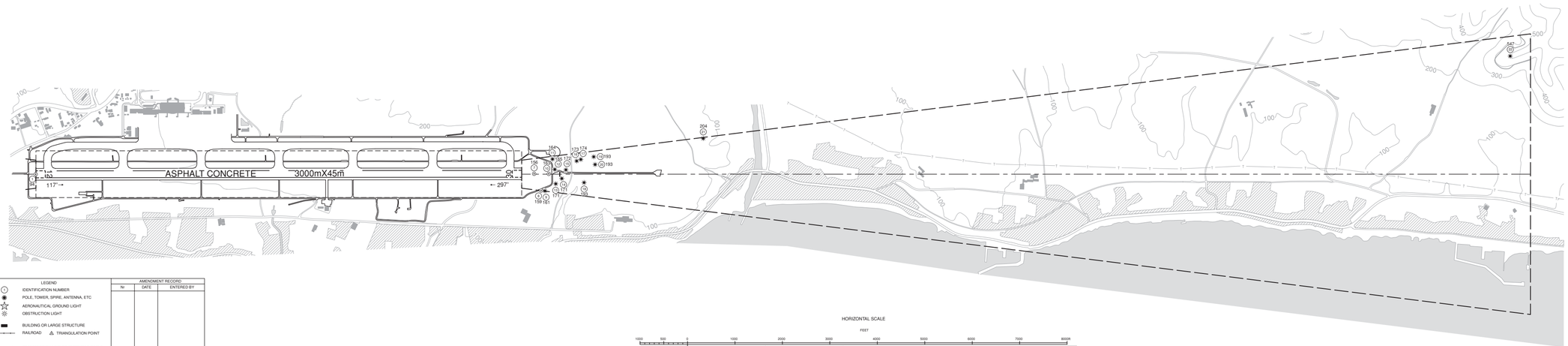
DIMENSIONS AND ELEVATIONS IN FEET, BEARINGS ARE MAGNETIC

MAGNETIC VARIATION 9° W-APR 2018

HAKODATE AIRPORT
RWY : 12/30

| DECLARED DISTANCES | |
|---|---|
| RWY 12 | RWY 30 |
| 3000m TAKE OFF RUN AVAILABLE | 3000m |
| 3000m TAKE OFF DISTANCE AVAILABLE | 3000m |
| 3000m ACCELERATE STOP DISTANCE AVAILABLE | 3000m |
| 3000m LANDING DISTANCE AVAILABLE | 3000m |




LEGEND

- IDENTIFICATION NUMBER
- POLE,TOWER, SPIRE, ANTENNA, ETC
- AERONAUTICAL GROUND LIGHT
- OBSTRUCTION LIGHT
- BUILDING OR LARGE STRUCTURE
- RAILROAD
- TRIANGULATION POINT
- TRANSMISSION LINE OR OVERHEAD CABLE
- LEVEE
- RIVER
- TREE
- LAKE
- CONTOURS(ft)

AMENDMENT RECORD

| Nr | DATE | ENTERED BY |
|---|---|---|
| | | |

CHANGE: Update

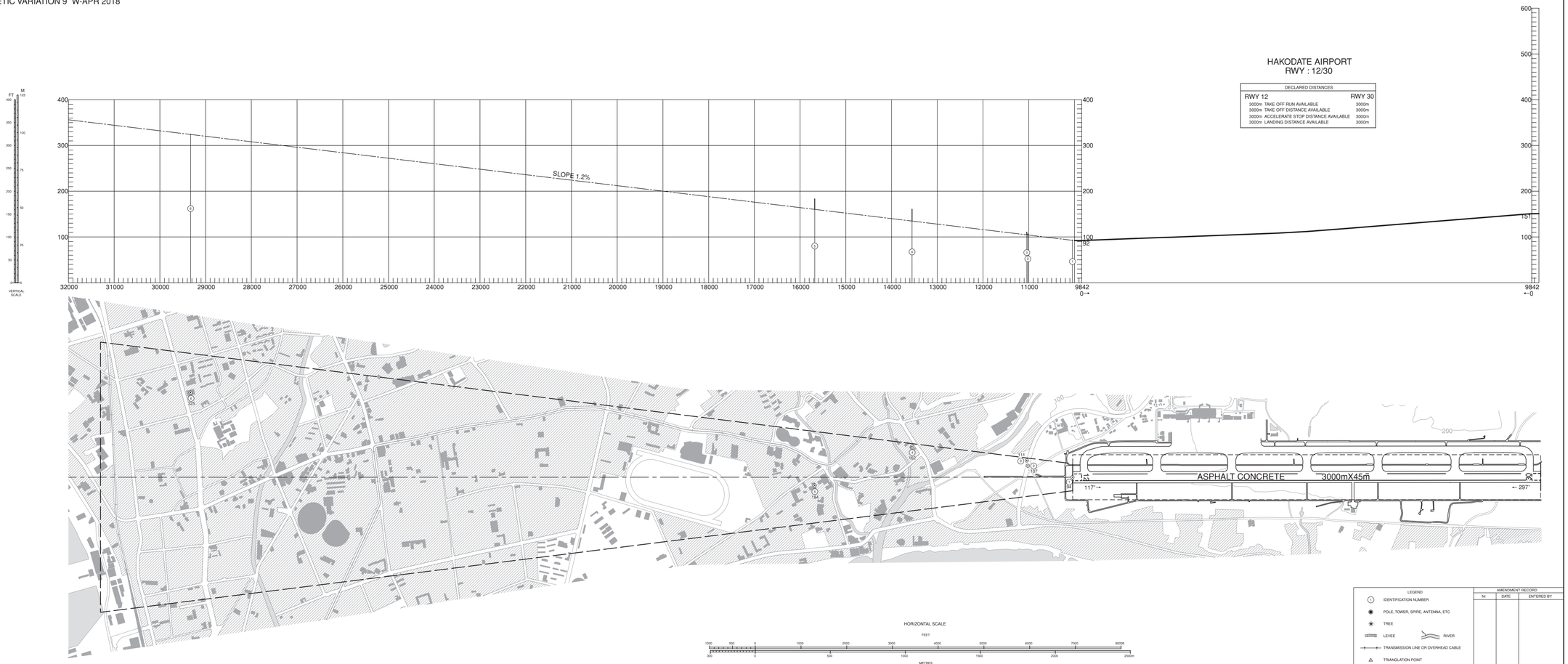
# AERODROME OBSTACLE CHART - ICAO
## TYPE A (OPERATING LIMITATIONS)

DIMENSIONS AND ELEVATIONS IN FEET, BEARINGS ARE MAGNETIC

MAGNETIC VARIATION 9° W-APR 2018

HAKODATE AIRPORT
RWY : 12/30

| DECLARED DISTANCES | |
|---|---|
| RWY 12 | RWY 30 |
| 3000m TAKE OFF RUN AVAILABLE | 3000m |
| 3000m TAKE OFF DISTANCE AVAILABLE | 3000m |
| 3000m ACCELERATE STOP DISTANCE AVAILABLE | 3000m |
| 3000m LANDING DISTANCE AVAILABLE | 3000m |




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

| AMENDMENT RECORD | | |
|---|---|---|
| Nr | DATE | ENTERED BY |

CHANGE: Update

# AERODROME OBSTACLE CHART - ICAO
## TYPE B

DIMENSIONS AND ELEVATIONS IN FEET, BEARINGS ARE MAGNETIC

AERODROME ELEVATION 111.9ft ARP

VAR8° W APR.2018
ANNUAL CHANGE2.6'W

HORIZONTAL SCALE
FEET
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000ft
300 0 500 1000 1500 2000 2500 3000m
METERS

HAKODATE CITY
HORIZONTAL SURFACE
CONICAL SURFACE
SLOPE 1:50
TRANSITIONAL SURFACE
SLOPE 1:7
APPROACH SURFACE
SLOPE 1:50
TAKE-OFF FLIGHT PATH
SLOPE 1.2%
ASPHALT/CONCRETE
RACE TRACK
TSUGARU STRAIT

140°44'0"E 140°45'0"E 140°46'0"E 140°47'0"E 140°48'0"E 140°49'0"E 140°50'0"E 140°51'0"E 140°52'0"E 140°53'0"E 140°54'0"E 140°55'0"E
41°50'0"N 41°49'0"N 41°48'0"N 41°47'0"N 41°46'0"N 41°45'0"N

LEGEND
- AERODROME REFERENCE POINT *41°46'12"N 140°49'19"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 | | |
|---|---|---|
| NO | DATE | ENTERED BY |

CHANGE: Update

**STANDARD DEPARTURE CHART - INSTRUMENT**

RJCH / HAKODATE SID and TRANSITION

CHANGE : ESASI SIX DEPARTURE.

## HAKODATE SOUTH SEVEN DEPARTURE

RWY 12: Climb RWY HDG until 600FT, turn right HDG239˚...
RWY 30: Climb RWY HDG until 500FT, turn left HDG149˚...
...to intercept and proceed via HWE R194 to MRE VOR/DME.
Cross HWE R194/30.0DME at or above 6000FT.
Note RWY12 : 4.0% climb gradient required up to 1300FT.
OBST ALT 919FT located at 3.43NM 105˚ FM end of RWY12.
RWY30 : 5.4% climb gradient required up to 1600FT.
OBST ALT 1296FT located at 4.63NM 267˚ FM end of RWY30.

## HAKODATE REVERSAL FIVE DEPARTURE

RWY 12: Climb RWY HDG until 600FT, turn right HDG239˚...
RWY 30: Climb RWY HDG until 500FT, turn left HDG149˚...
...to intercept and proceed via HWE R194 to 3000FT, turn right direct to HWE VOR/DME.
Cross HWE VOR/DME at or above 5000FT.
Note RWY12 : 4.0% climb gradient required up to 1300FT.
OBST ALT 919FT located at 3.43NM 105˚ FM end of RWY12.
RWY30 : 5.4% climb gradient required up to 1600FT.
OBST ALT 1296FT located at 4.63NM 267˚ FM end of RWY30.

## TAPPI SEVEN DEPARTURE

RWY 12: Climb RWY HDG until 600FT, turn right HDG272˚...
RWY 30: Climb RWY HDG until 500FT, turn left HDG182˚...
...to intercept and proceed via HWE R227 to TAPPI. Cross TAPPI at or above FL170.
Note RWY12 : 4.0% climb gradient required up to 1300FT.
OBST ALT 919FT located at 3.43NM 105˚ FM end of RWY12.
RWY30 : 5.4% climb gradient required up to 1600FT.
OBST ALT 1296FT located at 4.63NM 267˚ FM end of RWY30.

### YUWA TRANSITION

From over TAPPI, proceed via UWE R008 to UWE VOR/DME.
Cross UWE R008/21.0DME at assigned altitude.

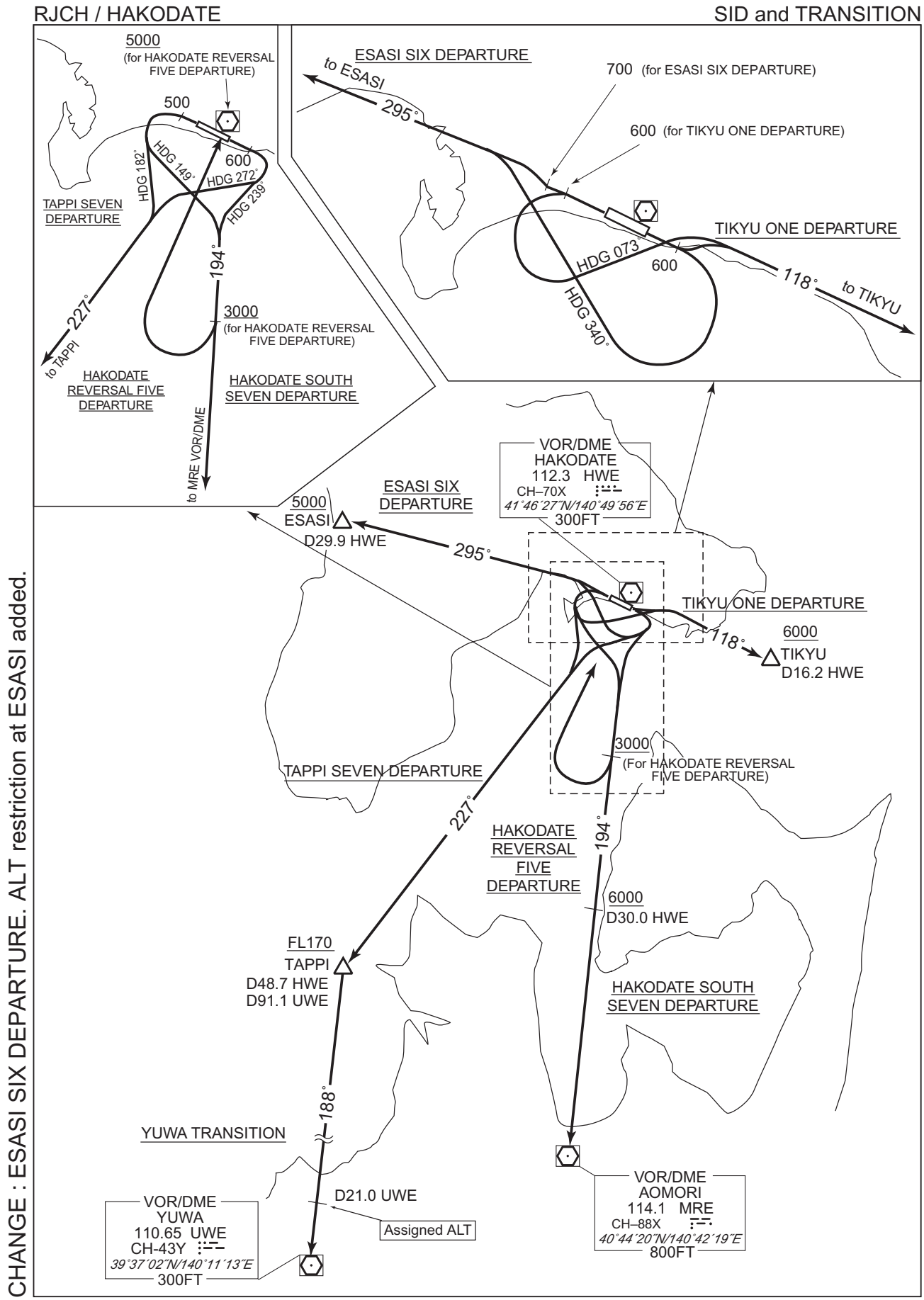
## ESASI SIX DEPARTURE

RWY 12: Climb RWY HDG until 600FT, turn right HDG340˚...
RWY 30: Climb RWY HDG until 700FT, turn right,...
...to intercept and proceed via HWE R295 to ESASI.
Cross ESASI at or above 5000FT.
Note RWY12 : 4.9% climb gradient required up to 1300FT.
OBST ALT 919FT located at 3.43NM 105˚ FM end of RWY12.

## TIKYU ONE DEPARTURE

RWY 12: Climb RWY HDG until 600FT, turn left,...
RWY 30: Climb RWY HDG until 600FT, turn left HDG073˚...
...to intercept and proceed via HWE R118 to TIKYU.
Cross TIKYU at or above 6000FT.
Note RWY12 : 6.3% climb gradient required up to 1700FT.
OBST ALT 1302FT located at 4.03NM 101˚ FM end of RWY12.
RWY30 : 5.4% climb gradient required up to 1600FT.
OBST ALT 1296FT located at 4.63NM 267˚ FM end of RWY30.

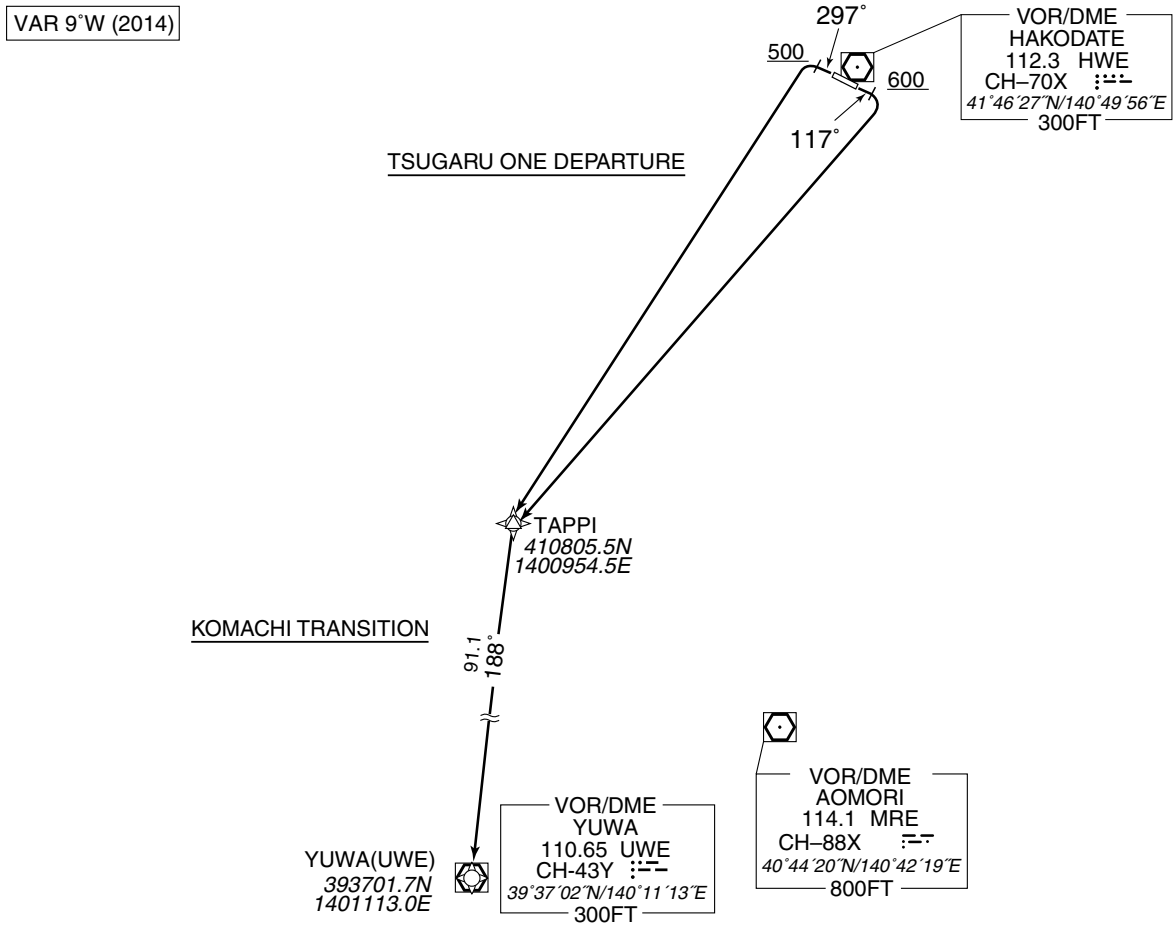
**STANDARD DEPARTURE CHART - INSTRUMENT**



**STANDARD DEPARTURE CHART - INSTRUMENT**

RJCH / HAKODATE RNAV SID and TRANSITION

| TSUGARU ONE DEPARTURE<br>KOMACHI TRANSITION | | RNAV1 |
|---|---|---|
| Note 1 ) DME/DME/IRU or GNSS required.<br>※The aircraft equipped with only DME/DME/IRU must be able to update its position without delay at the starting point of take-off roll.<br>2 ) RADAR service required. | Critical DME | RWY12 : MRE : 30.0NM to TAPPI – TAPPI<br>RWY30 : MRE : 47.6NM to TAPPI – TAPPI<br>HWE : 47.6NM to TAPPI – 40.0NM to TAPPI<br>KOMACHI Transition :<br>MRE: TAPPI - 24.0NM to UWE<br>HWE: TAPPI - 55.0NM to UWE<br>UWE: 55.0NM to UWE - 24.0NM to UWE<br>HPE: 16.0NM to UWE - UWE |
| | DME GAP | RWY12 : RWY12DER – 30.0NM to TAPPI<br>RWY30 : RWY30DER – 47.6NM to TAPPI<br>KOMACHI Transition: 24.0NM to UWE – 22.0NM to UWE<br>19.0NM to UWE – 16.0NM to UWE |
| | Inappropriate Navaids | See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1 |




TSUGARU ONE DEPARTURE

RWY12 : Climb on HDG117˚ at or above 600FT, turn right direct to TAPPI.
RWY30 : Climb on HDG297˚ at or above 500FT, turn left direct to TAPPI.

NOTE RWY12 : 4.0% climb gradient required up to 1300FT.
OBST ALT 919FT located at 3.43NM 105˚ FM end of RWY12.
RWY30 : 5.4% climb gradient required up to 1600FT.
OBST ALT 1296FT located at 4.63NM 267˚ FM end of RWY30.

KOMACHI TRANSITION

From TAPPI, to UWE.

**STANDARD DEPARTURE CHART - INSTRUMENT**

RJCH / HAKODATE RNAV SID and TRANSITION

TSUGARU ONE DEPARTURE

RWY12

| 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 | — | — | 117 (108.0) | -8.9 | — | — | +600 | — | — | RNAV1 |
| 002 | DF | TAPPI | — | — | -8.9 | — | R | — | — | — | RNAV1 |

RWY30

| 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 | — | — | 297 (288.1) | -8.9 | — | — | +500 | — | — | RNAV1 |
| 002 | DF | TAPPI | — | — | -8.9 | — | L | — | — | — | RNAV1 |

KOMACHI TRANSITION

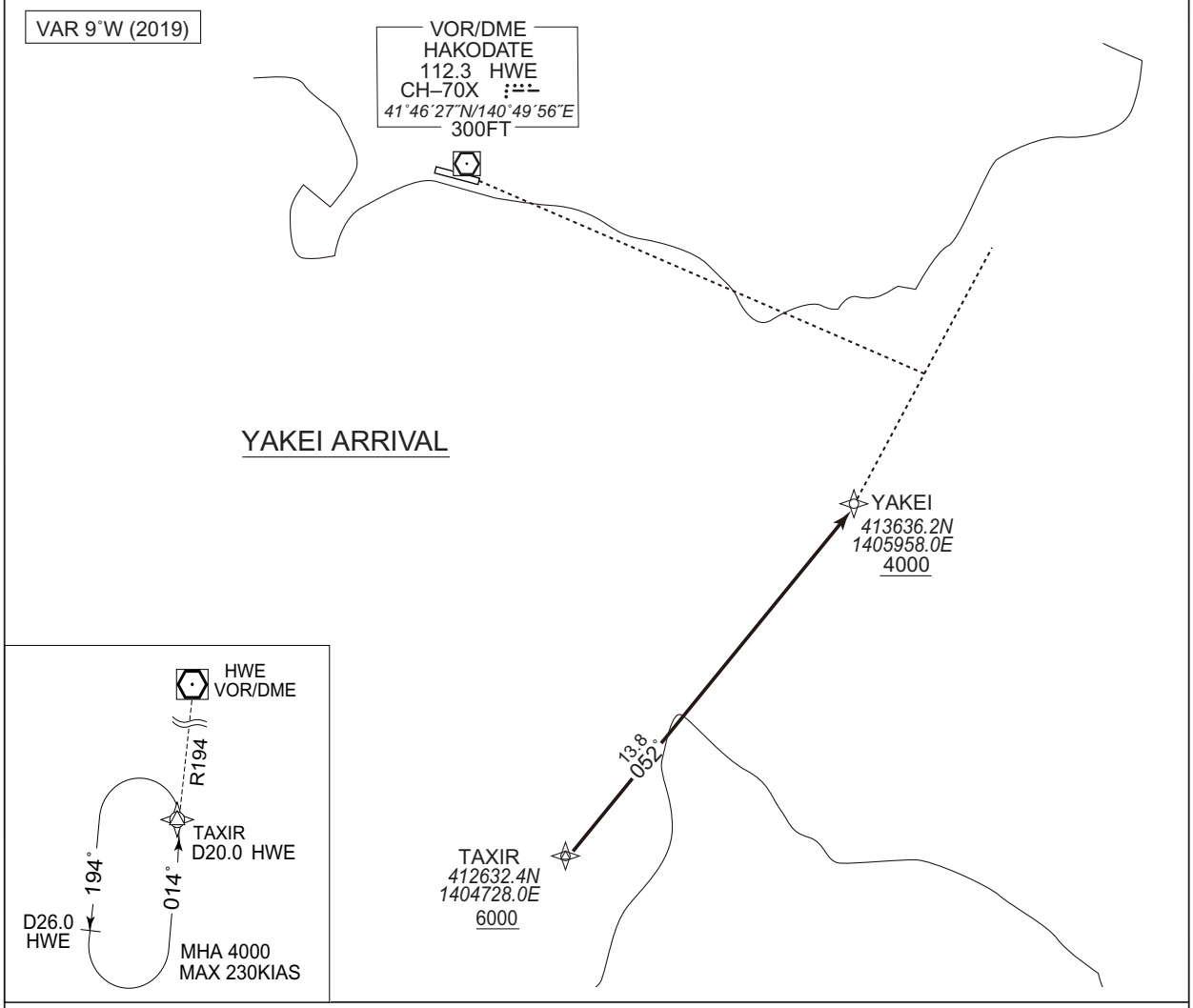
| Serial Number | Path Descriptor | Waypoint Identifier | Fly Over | Course °M(°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (FT) | Speed (KIAS) | Vertical Angle | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 001 | IF | TAPPI | — | — | -8.9 | — | — | — | — | — | RNAV1 |
| 002 | TF | UWE | — | 188 (179.4) | -8.9 | 91.1 | — | — | — | — | RNAV1 |

**STANDARD ARRIVAL CHART - INSTRUMENT**

RJCH / HAKODATE — RNAV STAR RWY30

| YAKEI ARRIVAL | RNAV1 |
|---|---|

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




YAKEI ARRIVAL

From TAXIR at or above 6000FT, to YAKEI at or above 4000FT.

| | |
|---|---|
| Critical DME | MKE : TAXIR – 10.0NM to YAKEI<br>HWE : 3.0NM to YAKEI – YAKEI |
| DME GAP | – |
| Inappropriate Navaids | See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1 |

| Serial Number | Path Descriptor | Waypoint Identifier | Fly Over | Course ˚M(˚T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (FT) | Speed (KIAS) | Vertical Angle | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 001 | IF | TAXIR | — | — | -9.4 | — | — | +6000 | — | — | RNAV1 |
| 002 | TF | YAKEI | — | 052 (042.9) | -9.4 | 13.8 | — | +4000 | — | — | RNAV1 |

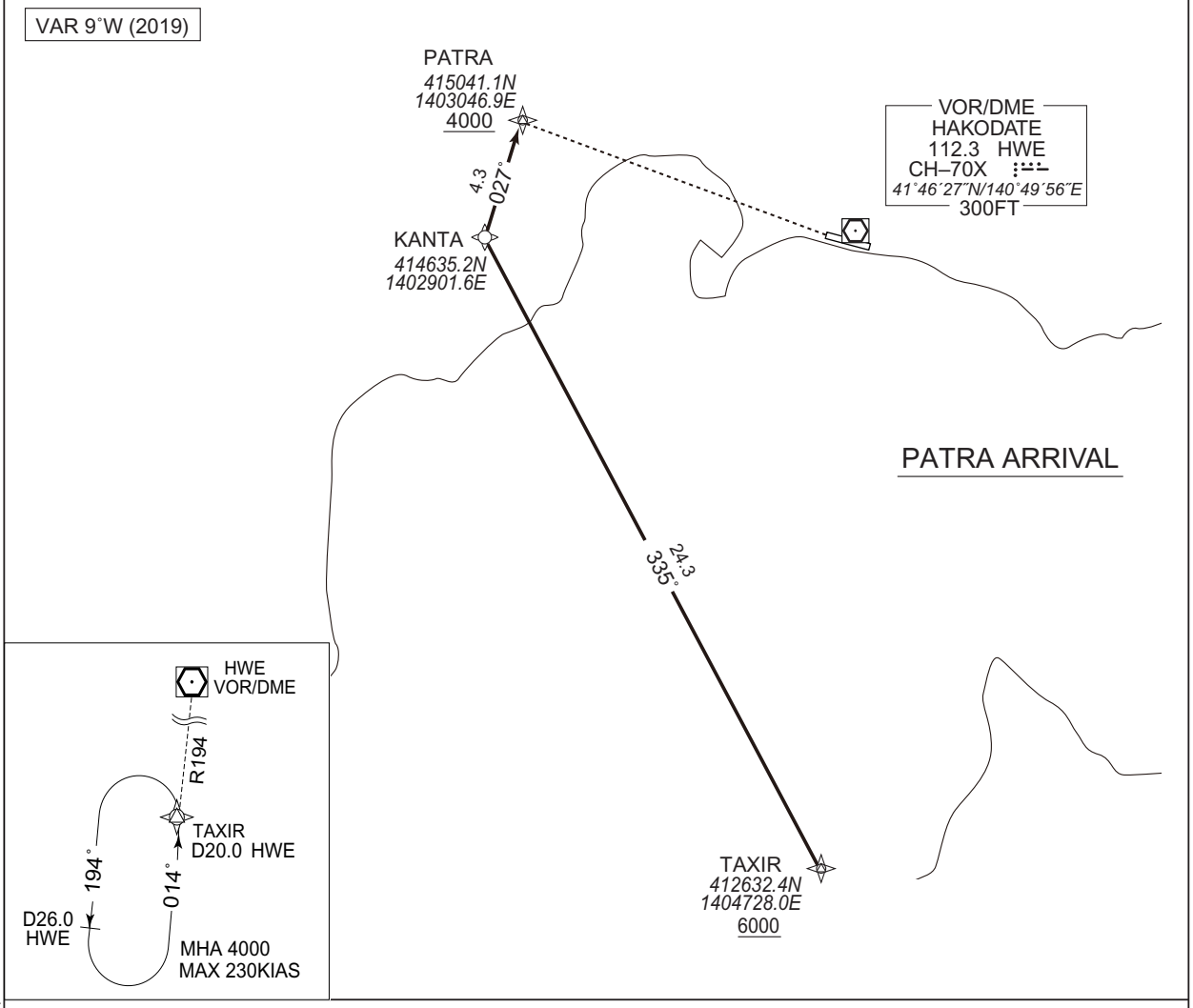
CHANGE : New PROC.

**STANDARD ARRIVAL CHART - INSTRUMENT**

RJCH / HAKODATE — RNAV STAR RWY12

| PATRA ARRIVAL | RNAV1 |
|---|---|

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




## PATRA ARRIVAL

From TAXIR at or above 6000FT, to KANTA, to PATRA at or above 4000FT.

| | |
|---|---|
| Critical DME | MRE : 18.0NM to KANTA – KANTA<br>HWE : 2.2NM to KANTA – KANTA |
| DME GAP | KANTA – PATRA |
| Inappropriate Navaids | See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1 |

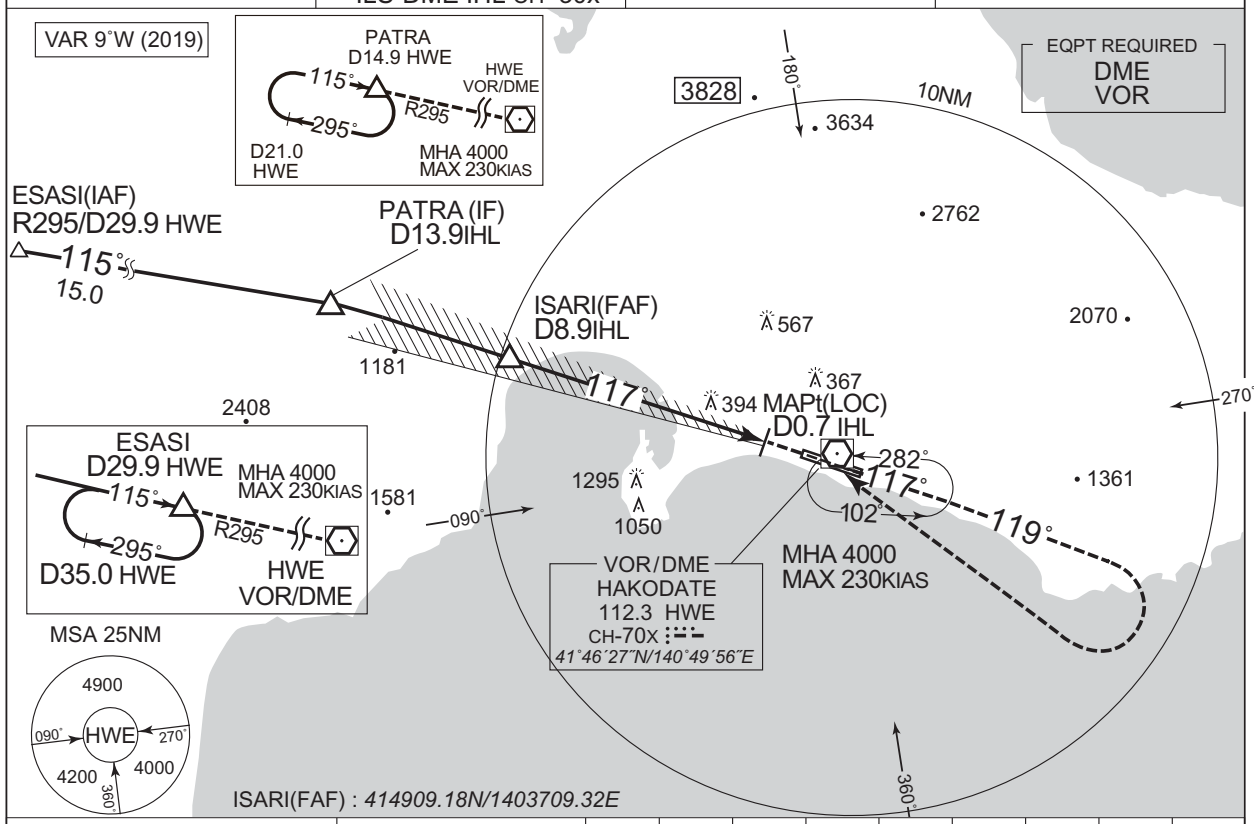
| Serial Number | Path Descriptor | Waypoint Identifier | Fly Over | Course ˚M(˚T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (FT) | Speed (KIAS) | Vertical Angle | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 001 | IF | TAXIR | — | — | -9.4 | — | — | +6000 | — | — | RNAV1 |
| 002 | TF | KANTA | — | 335 (325.6) | -9.4 | 24.3 | — | — | — | — | RNAV1 |
| 003 | TF | PATRA | — | 027 (017.7) | -9.4 | 4.3 | — | +4000 | — | — | RNAV1 |

CHANGE : Correction of misdescription(Name of PROC).

**INSTRUMENT APPROACH CHART**

RJCH / HAKODATE — ILS Z or LOC Z RWY12

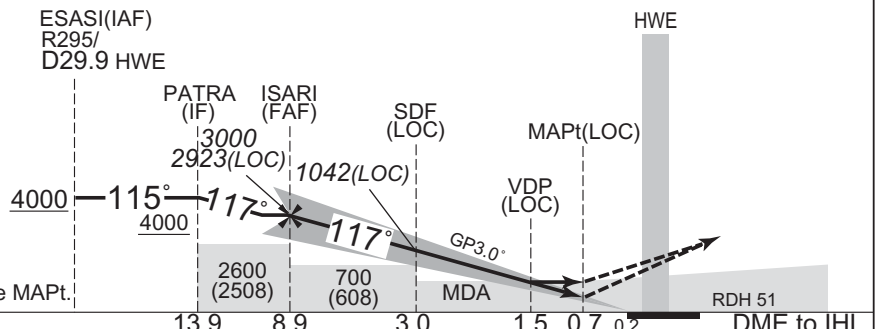
| HAKODATE APP | ILS–LOC | HAKODATE TWR | RADAR AVBL |
|---|---|---|---|
| 119.0 – 121.0<br>127.9 | 109.3 IHL<br>ILS–GP 332.0<br>ILS-DME IHL CH–30x | 118.35 – 126.2 | ATIS 126.6 |




| NM to IHL | FAF | 8 | 7 | 6 | 5 | 4 | 3 | 2 | MAPt |
|---|---|---|---|---|---|---|---|---|---|
| ALT (3.0° APCH Path) | 2923 | 2634 | 2316 | 1997 | 1679 | 1361 | 1042 | 724 | – |

MISSED APPROACH
Climb on HDG117° to 600FT,
via HWE R119 to 4000FT,
turn right, direct to HWE
VOR/DME and hold.
Contact HAKODATE APP.

Timing not authorized for defining the MAPt.




Missed APCH climb gradient MNM 5.0%

MINIMA THR elev. 92 AD elev. 112

| CAT | CAT I | | LOC | | CIRCLING | |
|---|---|---|---|---|---|---|
| | DA(H) | RVR/CMV | MDA(H) | RVR/CMV | MDA(H) | VIS |
| A | 292 (200) | 700 | 540 (448) | 1200 | 550 (438) | 1600 |
| B | | | | 1300 | 570 (458) | |
| C | 299 (207) | | | 1400 | 600 (488) | 2400 |
| D | 309 (217) | | | 1600 | 690 (578) | 3200 |

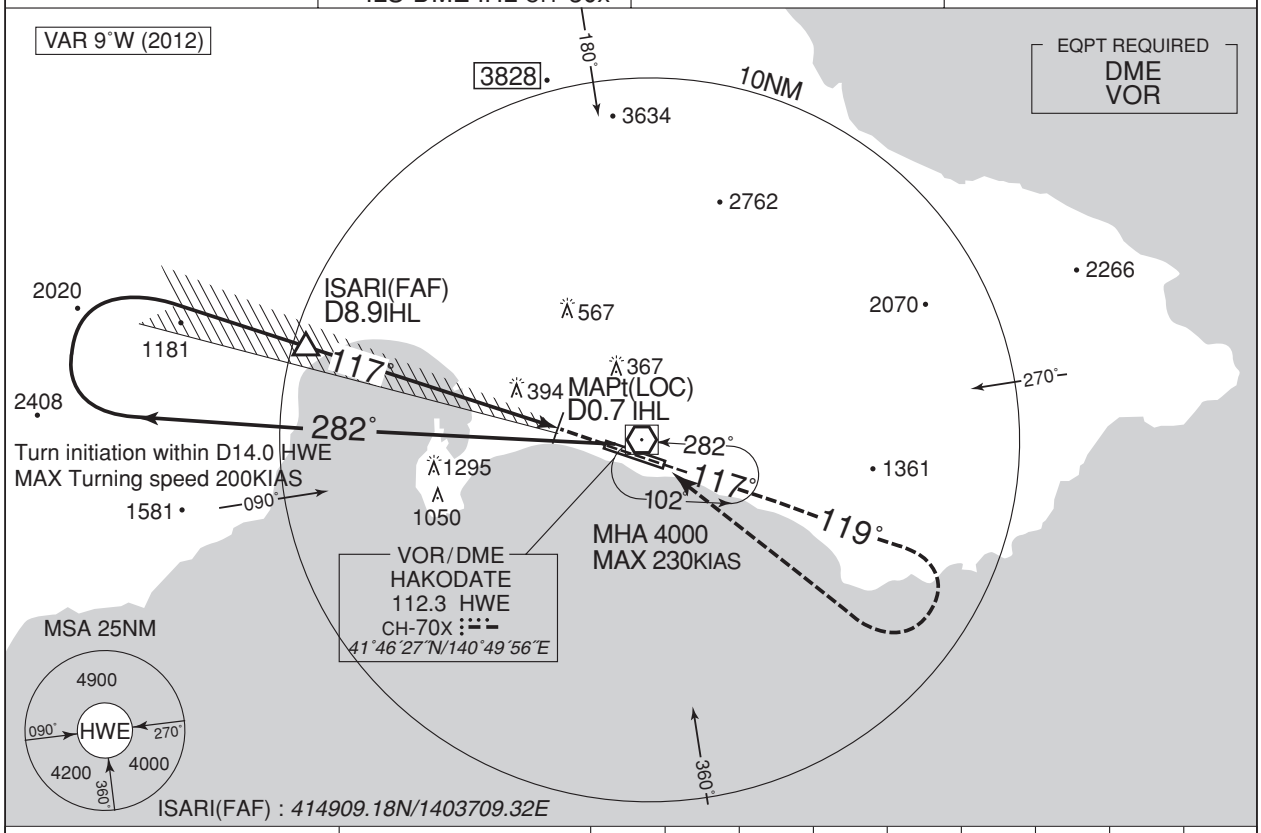
Circling to SOUTH side of RWY only.
MINIMA with Missed APCH climb gradient of 2.5% are not established.

CHANGE : ALT restriction at PATRA.

**INSTRUMENT APPROACH CHART**

RJCH / HAKODATE — ILS Y or LOC Y RWY12

| HAKODATE APP | ILS-LOC | HAKODATE TWR | RADAR AVBL |
|---|---|---|---|
| 119.0 – 121.0<br>127.9 | 109.3 IHL<br>ILS–GP 332.0<br>ILS-DME IHL CH–30x | 118.35 – 126.2 | ATIS 126.6 |

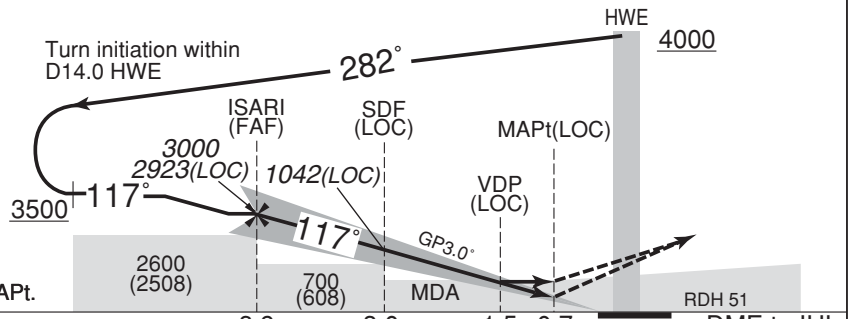



| | NM to IHL | FAF | 8 | 7 | 6 | 5 | 4 | 3 | 2 | MAPt |
|---|---|---|---|---|---|---|---|---|---|---|
| | ALT (3.0° APCH Path) | 2923 | 2634 | 2316 | 1997 | 1679 | 1361 | 1042 | 724 | – |

MISSED APPROACH

Climb on HDG117° to 600FT,
via HWE R119 to 4000FT,
turn right, direct to HWE
VOR/DME and hold.
Contact HAKODATE APP.

Timing not authorized for defining the MAPt.




Missed APCH climb gradient MNM 5.0%

MINIMA THR elev. 92 AD elev. 112

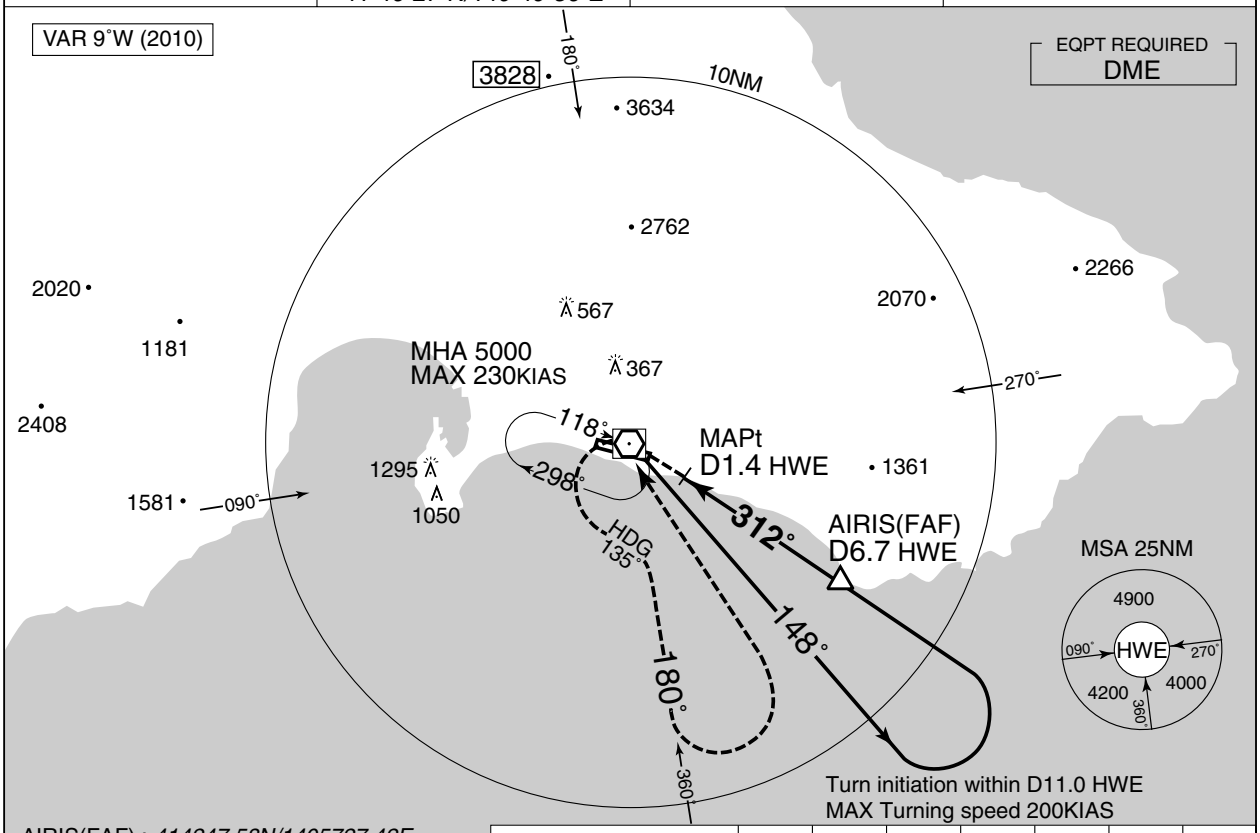
| CAT | CAT I | | LOC | | CIRCLING | |
|---|---|---|---|---|---|---|
| | DA(H) | RVR/CMV | MDA(H) | RVR/CMV | MDA(H) | VIS |
| A | 292 (200) | 700 | 540 (448) | 1200 | 550 (438) | 1600 |
| B | | | | 1300 | 570 (458) | |
| C | 299 (207) | | | 1400 | 600 (488) | 2400 |
| D | 309 (217) | | | 1600 | 690 (578) | 3200 |

Circling to SOUTH side of RWY only.
MINIMA with Missed APCH climb gradient of 2.5% are not established.

**INSTRUMENT APPROACH CHART**

RJCH / HAKODATE VOR RWY30

| HAKODATE APP | HAKODATE VOR/DME | HAKODATE TOWER | RADAR AVBL |
|---|---|---|---|
| 119.0 – 121.0<br>127.9 | 112.3 HWE<br>CH–70X<br>*41˚46´27˝N/140˚49´56˝E* | 118.35 – 126.2 | ATIS 126.6 |

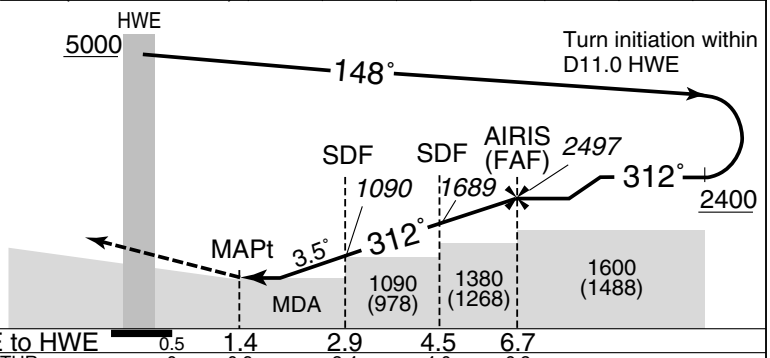



AIRIS(FAF) : *414247.58N/1405727.42E*

| NM to HWE | MAPt | 2 | 3 | 4 | 5 | 6 | FAF |
|---|---|---|---|---|---|---|---|
| ALT (3.5˚ APCH Path) | – | 750 | 1122 | 1494 | 1865 | 2237 | 2497 |

MISSED APPROACH
Turn left HDG135˚ to intercept HWE R180 to 3000FT, turn left direct to HWE VOR/DME and hold at 5000FT.
Contact HAKODATE APP.

No Turn before MAPt.
PAPI and descent angles not coincident.
Timing not authorized for definding the MAPt.




| DME to HWE | 0.5 | 1.4 | 2.9 | 4.5 | 6.7 |
|---|---|---|---|---|---|
| NM to THR | 0 | 0.9 | 2.4 | 4.0 | 6.2 |

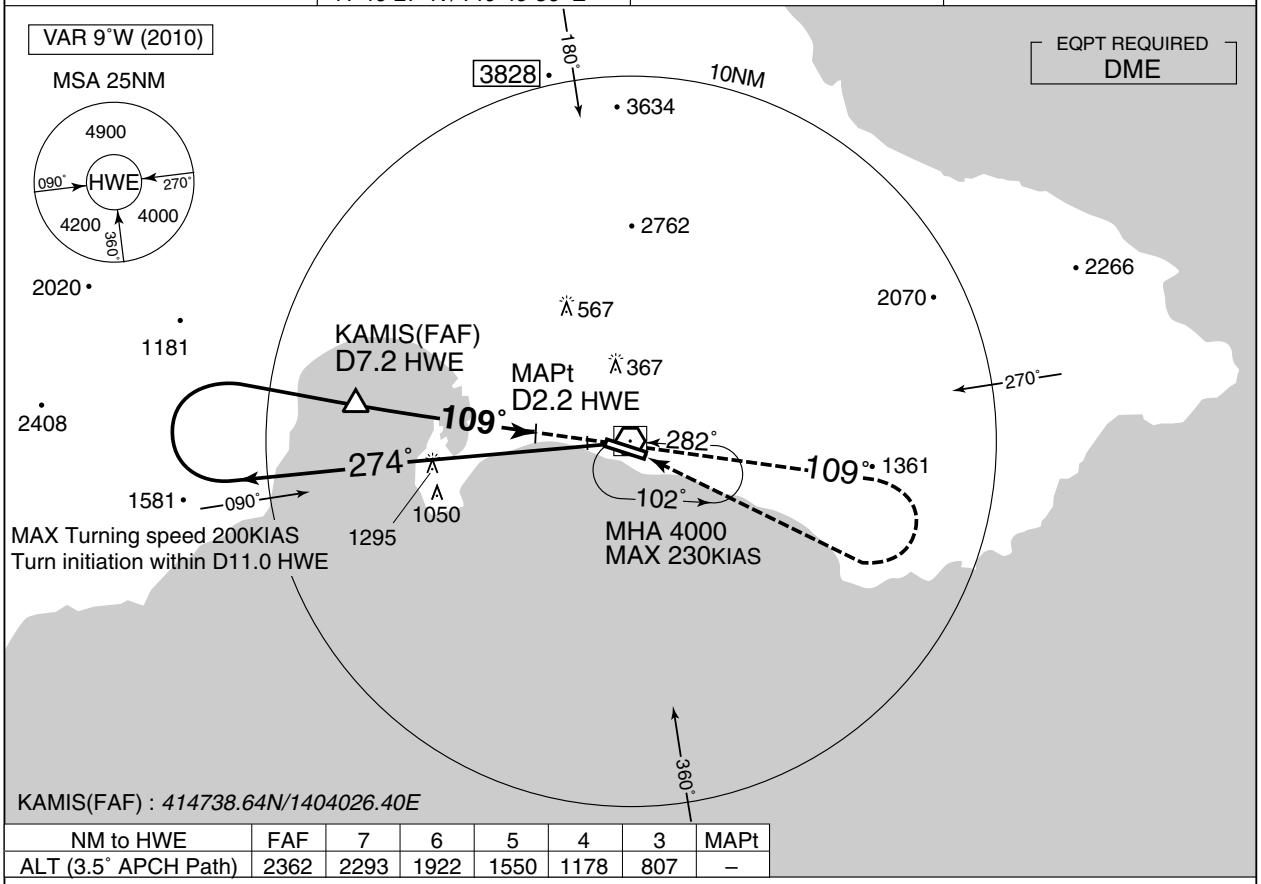
| MINIMA | THR elev. 151 | | AD elev. 112 | |
|---|---|---|---|---|
| CAT | | | CIRCLING | |
| | MDA(H) | CMV | MDA(H) | VIS |
| A | 730 (618) | 1000 | 730 (618) | 1600 |
| B | | 1200 | | |
| C | | | | 2400 |
| D | | 1600 | | 3200 |

Circling to SOUTH side of RWY only.

**INSTRUMENT APPROACH CHART**

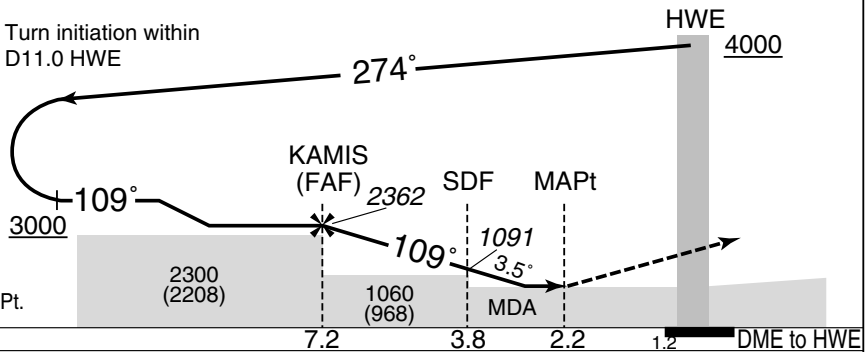
RJCH / HAKODATE VOR RWY12

| HAKODATE APP | HAKODATE VOR/DME | HAKODATE TOWER | RADAR AVBL |
|---|---|---|---|
| 119.0 – 121.0<br>127.9 | 112.3 HWE<br>CH–70X<br>*41˚46´27˝N/140˚49´56˝E* | 118.35 – 126.2 | ATIS 126.6 |




| NM to HWE | FAF | 7 | 6 | 5 | 4 | 3 | MAPt |
|---|---|---|---|---|---|---|---|
| ALT (3.5˚ APCH Path) | 2362 | 2293 | 1922 | 1550 | 1178 | 807 | – |

MISSED APPROACH
Climb via HWE R109 to 4000FT, turn right direct to HWE VOR/DME and hold.
Contact HAKODATE APP.




PAPI and descent angles not coincident.
Timing not authorized for definding the MAPt.

Missed APCH climb gradient MNM 3.6%

| MINIMA | | THR elev. 92 | AD elev. 112 | |
|---|---|---|---|---|
| CAT | | | CIRCLING | |
| | MDA(H) | RVR/ CMV | MDA(H) | VIS |
| A | 530 (438) | 1200 | 550 (438) | 1600 |
| B | | 1300 | 570 (458) | |
| C | | 1400 | 600 (488) | 2400 |
| D | | 1600 | 690 (578) | 3200 |

Circling to SOUTH side of RWY only.
MINIMA with Missed APCH climb gradient of 2.5% are not established.

**INSTRUMENT APPROACH CHART**

RJCH / HAKODATE

RNAV(GNSS) Z RWY30

HAKODATE APP
119.0 – 121.0
127.9

1. DME/DME not authorized.
2. RADAR service required.
3. GNSS required.

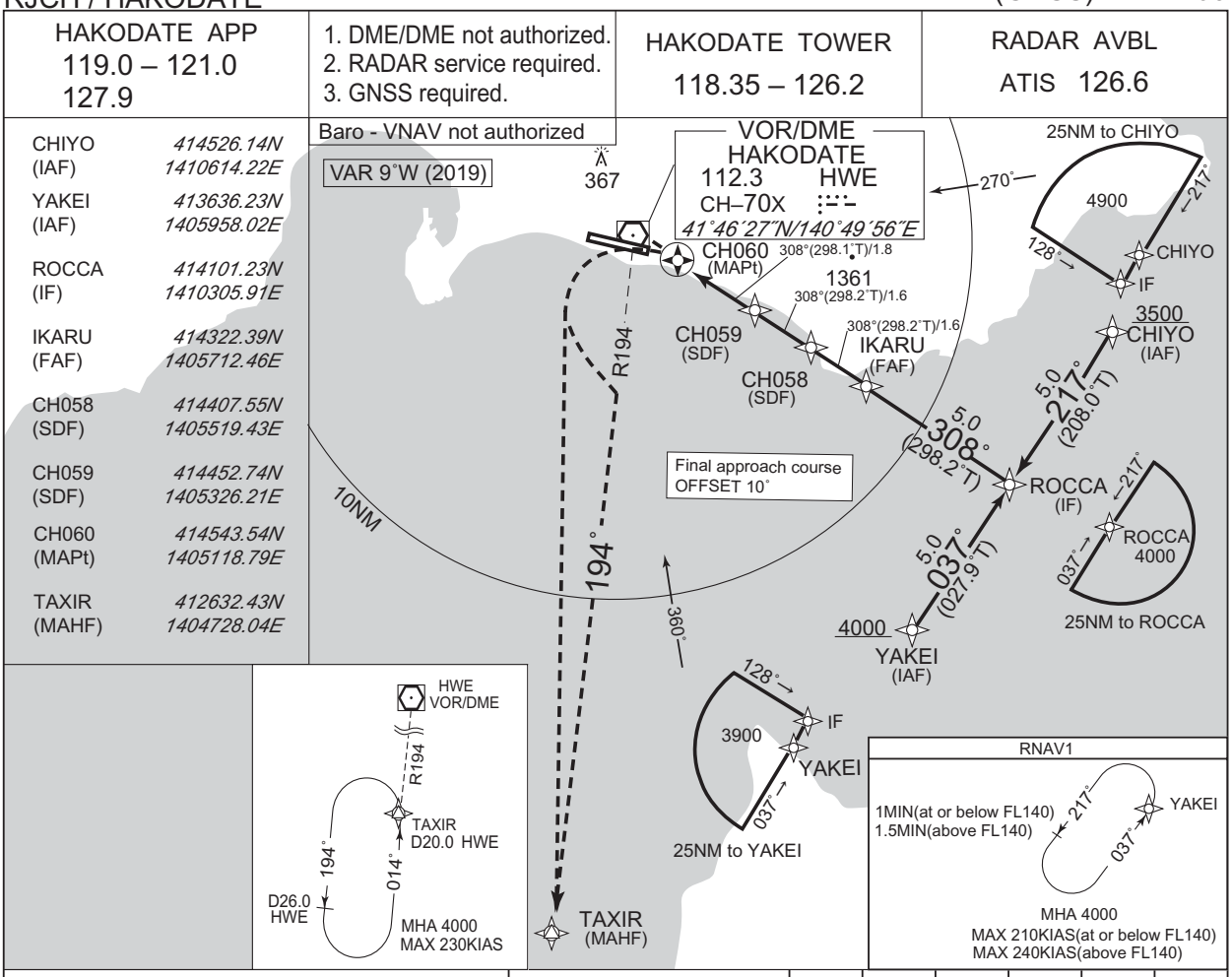
HAKODATE TOWER
118.35 – 126.2

RADAR AVBL
ATIS 126.6

Baro - VNAV not authorized

VAR 9˚W (2019)

| | |
|---|---|
| CHIYO (IAF) | 414526.14N 1410614.22E |
| YAKEI (IAF) | 413636.23N 1405958.02E |
| ROCCA (IF) | 414101.23N 1410305.91E |
| IKARU (FAF) | 414322.39N 1405712.46E |
| CH058 (SDF) | 414407.55N 1405519.43E |
| CH059 (SDF) | 414452.74N 1405326.21E |
| CH060 (MAPt) | 414543.54N 1405118.79E |
| TAXIR (MAHF) | 412632.43N 1404728.04E |

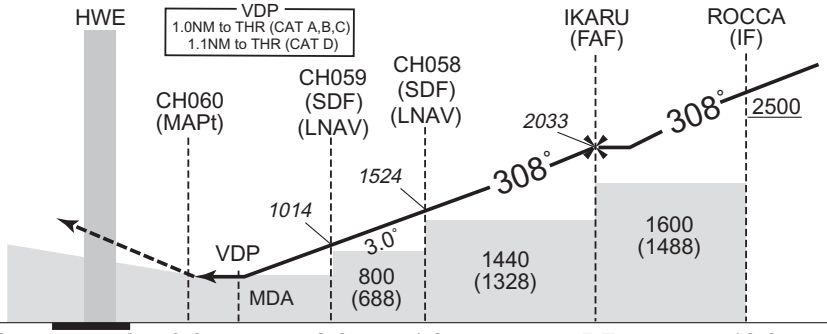



| NM to Next Fix | MAPt | 1 | 2 | 3 | 4 | FAF |
|---|---|---|---|---|---|---|
| ALT (3.0˚ APCH Path) | – | 760 | 1078 | 1397 | 1715 | 2033 |

MISSED APPROACH

Turn left direct to TAXIR
and hold at 4000FT.
Contact HAKODATE APP.

(for using VOR/DME)
Turn left climb to 4000FT
via HWE R194 to TAXIR
and hold.
Contact HAKODATE APP.




MINIMA THR elev. 151 AD elev. 112

| CAT | LNAV/VNAV | | LNAV | | CIRCLING | |
|---|---|---|---|---|---|---|
| | DA(H) | CMV | MDA(H) | CMV | MDA(H) | VIS |
| A | Not applicable | | 530 (418) | 900 | 550 (438) | 1600 |
| B | | | | 1000 | 570 (458) | |
| C | | | | | 600 (488) | 2400 |
| D | | | 550 (438) | 1400 | 690 (578) | 3200 |

Circling to SOUTH side of RWY only.

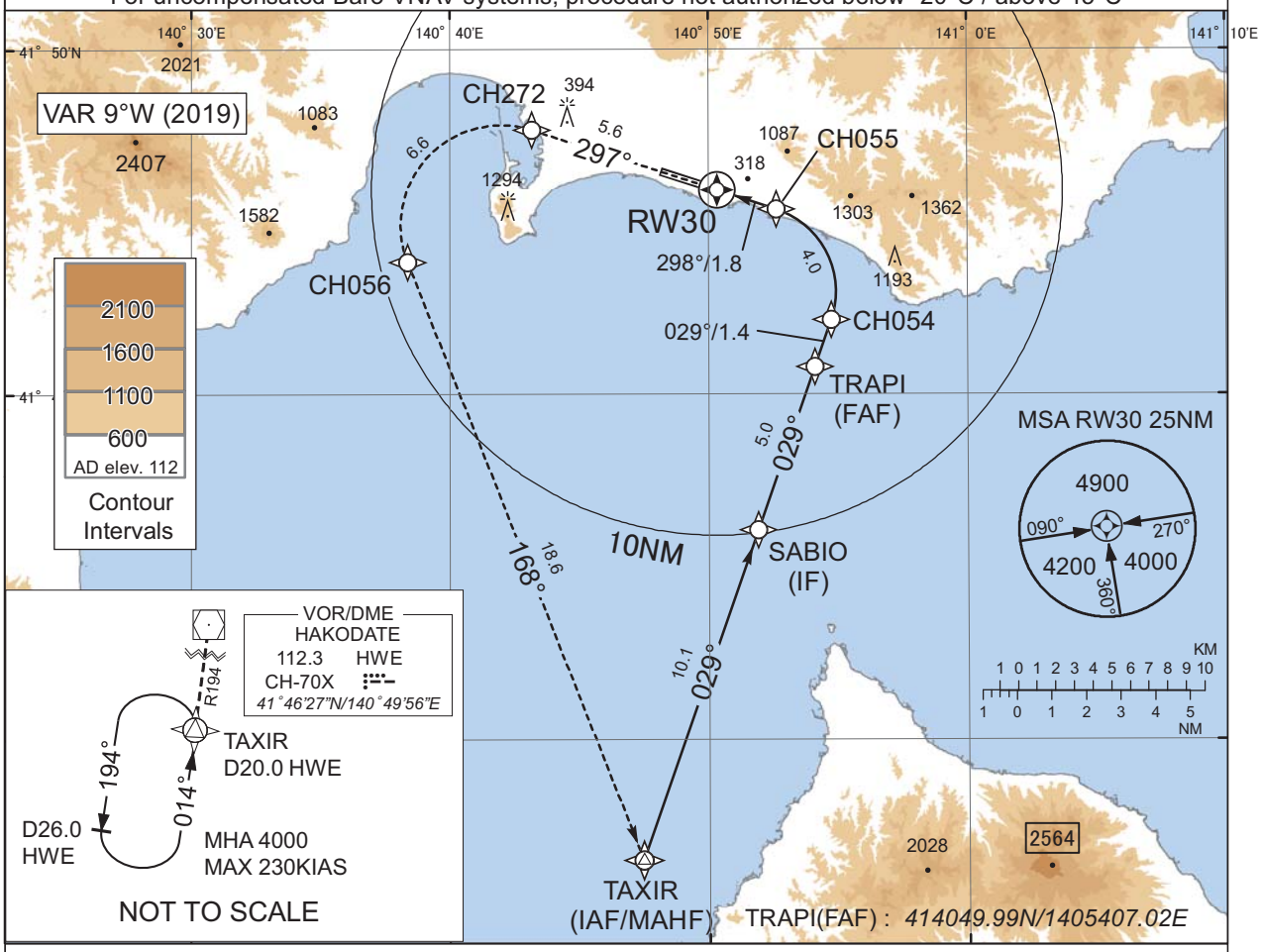
CHANGE : VAR. PROC. HLDG Pattern(TAXIR,YAKEI) established.

**INSTRUMENT APPROACH CHART**

RJCH / HAKODATE RNAV(RNP) Y RWY30

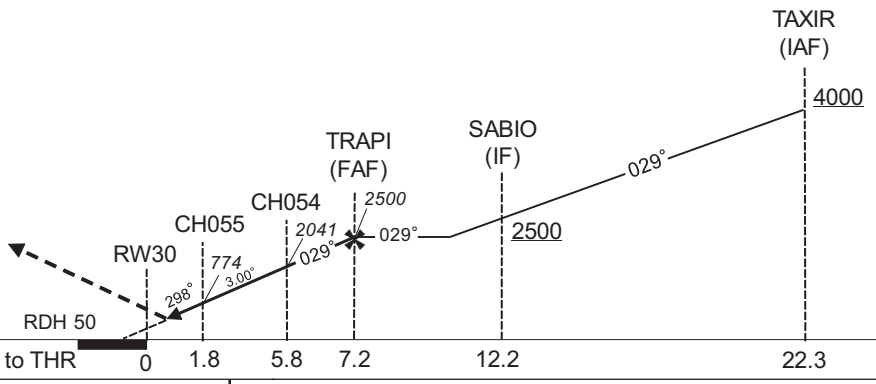
| HAKODATE APP 119.0 - 121.0 127.9 | GNSS and RF required. | HAKODATE TWR 118.35 - 126.2 | RADAR AVBL ATIS 126.6 |
|---|---|---|---|

For uncompensated Baro-VNAV systems, procedure not authorized below -20°C / above 45°C




MISSED APPROACH

Climb to 4000FT, to CH272,
to CH056 via fixed radius turn,
to TAXIR and hold.
Contact HAKODATE APP.




| MINIMA | THR elev. 151 | AD elev. 112 |
|---|---|---|
| CAT | RNP 0.30 | |
| | DA(H) | CMV |
| A | - | - |
| B | | |
| C | 486(335) | 1000 |
| D | 496(345) | 1400 |

# RNP AR

**Special Authorization Required**

CHANGE : VAR. PROC. HLDG Pattern. Minimum temperature.

INSTRUMENT APPROACH CHART

RJCH / HAKODATE RNAV(RNP) Y RWY30

## RNAV(RNP) Y RWY30

### 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 | TAXIR | - | - | -9.4 | - | - | +4000 | - | - | - |
| 002 | TF | SABIO | - | 029 (019.2) | -9.4 | 10.1 | - | +2500 | - | - | 1.0 |
| 003 | TF | TRAPI | - | 029 (019.2) | -9.4 | 5.0 | - | 2500 | - | - | 1.0 |
| 004 | TF | CH054 | - | 029 (019.2) | -9.4 | 1.4 | - | 2041 | - | -3.00 | 0.3 |
| 005 | RF Center: CHRF3 r=2.50NM | CH055 | - | - | -9.4 | 4.0 | L | 774 | - | -3.00 | 0.3 |
| 006 | TF | RW30 | Y | 298 (288.1) | -9.4 | 1.8 | - | 201 | - | -3.00/50 | 0.3 |
| 007 | TF | CH272 | - | 297 (288.1) | -9.4 | 5.6 | - | - | - | - | 1.0 |
| 008 | RF Center: CHRF4 r=2.90NM | CH056 | - | - | -9.4 | 6.6 | L | - | - | - | 1.0 |
| 009 | TF | TAXIR | - | 168 (158.5) | -9.4 | 18.6 | - | 4000 | - | - | 1.0 |

### Waypoint Coordinates

| Waypoint Identifier | Coordinates |
|---|---|
| TAXIR | *412632.43N / 1404728.04E* |
| SABIO | *413606.58N / 1405154.81E* |
| TRAPI | *414049.99N / 1405407.02E* |
| CH054 | *414211.71N / 1405445.20E* |
| CH055 | *414524.03N / 1405238.26E* |
| RW30 | *414557.54N / 1405021.00E* |
| CH272 | *414742.10N / 1404311.31E* |
| CH056 | *414352.33N / 1403822.94E* |

| RF Arc Center Identifier | Coordinates |
|---|---|
| CHRF3 | *414301.30N / 1405136.09E* |
| CHRF4 | *414456.26N / 1404159.49E* |

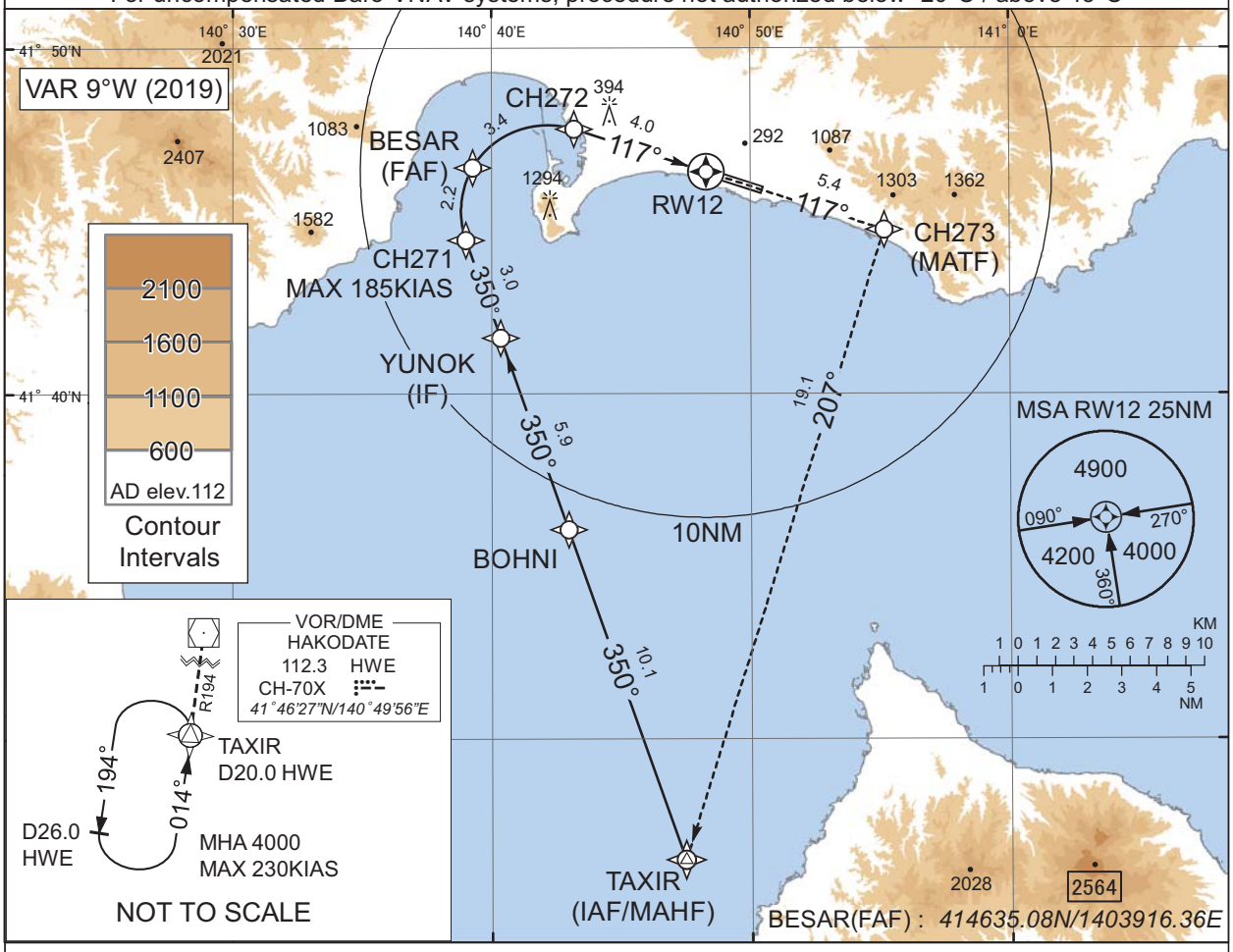
CHANGE : VAR. PROC.

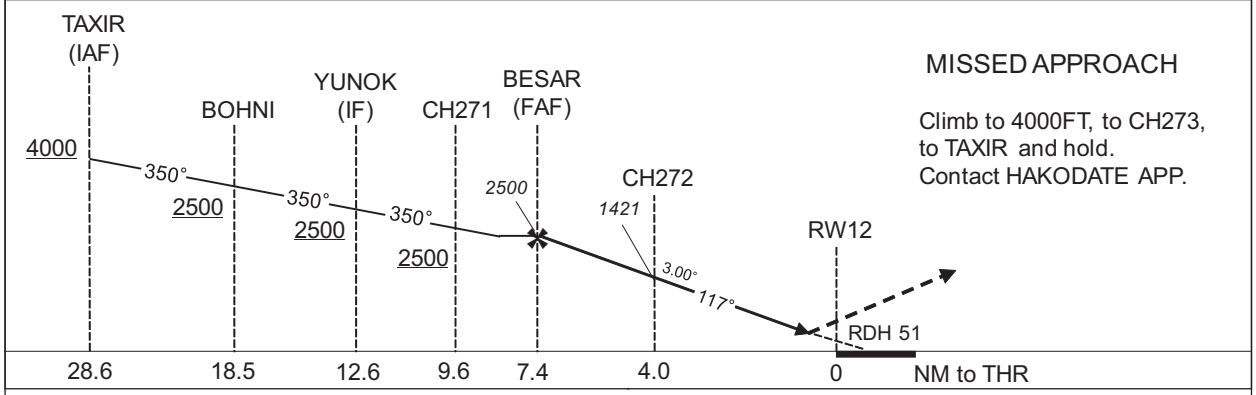
**INSTRUMENT APPROACH CHART**

RJCH / HAKODATE — RNAV(RNP) RWY12

| HAKODATE APP<br>119.0 - 121.0<br>127.9 | GNSS and RF required. | HAKODATE TWR<br>118.35 - 126.2 | RADAR AVBL<br>ATIS 126.6 |
|---|---|---|---|

For uncompensated Baro-VNAV systems, procedure not authorized below -20°C / above 45°C




Missed APCH climb gradient MNM 5.0%

| MINIMA | THR elev. 92 | AD elev. 112 |
|---|---|---|
| CAT | RNP 0.30 | |
| | DA(H) | RVR/CMV |
| A | - | - |
| B | | |
| C | 402(310) | 1400 |
| D | 423(331) | 1600 |

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

# RNP AR

**Special Authorization Required**

CHANGE : New PROC.

INSTRUMENT APPROACH CHART

RJCH / HAKODATE RNAV(RNP) RWY12

## RNAV(RNP) RWY12

### 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 | TAXIR | - | - | -9.4 | - | - | +4000 | - | - | - |
| 002 | TF | BOHNI | - | 350 (340.6) | -9.4 | 10.1 | - | +2500 | - | - | 1.0 |
| 003 | TF | YUNOK | - | 350 (340.6) | -9.4 | 5.9 | - | +2500 | - | - | 1.0 |
| 004 | TF | CH271 | - | 350 (340.5) | -9.4 | 3.0 | - | +2500 | -185 | - | 1.0 |
| 005 | RF Center: CHRF5 r=2.50NM | BESAR | - | - | -9.4 | 2.2 | R | 2500 | - | - | 1.0 |
| 006 | RF Center: CHRF5 r=2.50NM | CH272 | - | - | -9.4 | 3.4 | R | 1421 | - | -3.00 | 0.3 |
| 007 | TF | RW12 | Y | 117 (108.0) | -9.4 | 4.0 | - | 143 | - | -3.00/51 | 0.3 |
| 008 | TF | CH273 | - | 117 (108.1) | -9.4 | 5.4 | - | - | - | - | 1.0 |
| 009 | TF | TAXIR | - | 207 (197.6) | -9.4 | 19.1 | - | 4000 | - | - | 1.0 |

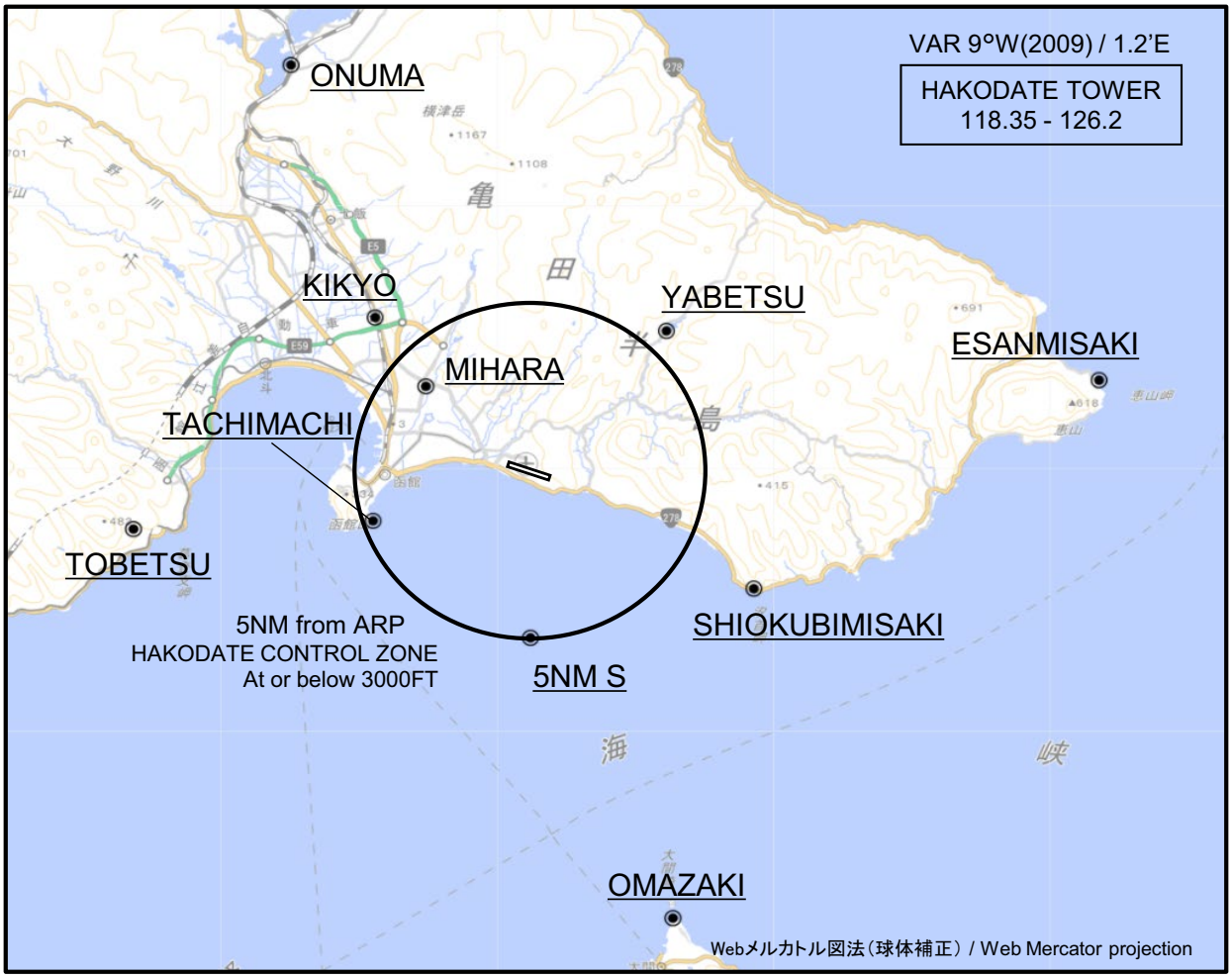
### Waypoint Coordinates

| Waypoint Identifier | Coordinates | RF Arc Center Identifier | Coordinates |
|---|---|---|---|
| TAXIR | *412632.43N / 1404728.04E* | CHRF5 | *414519.29N / 1404209.46E* |
| BOHNI | *413606.23N / 1404258.19E* | | |
| YUNOK | *414139.34N / 1404020.87E* | | |
| CH271 | *414429.13N / 1403900.50E* | | |
| BESAR | *414635.08N / 1403916.36E* | | |
| CH272 | *414742.10N / 1404311.31E* | | |
| RW12 | *414627.62N / 1404817.61E* | | |
| CH273 | *414446.88N / 1405510.13E* | | |

CHANGE : New PROC.

RJCH / HAKODATE

Visual REP

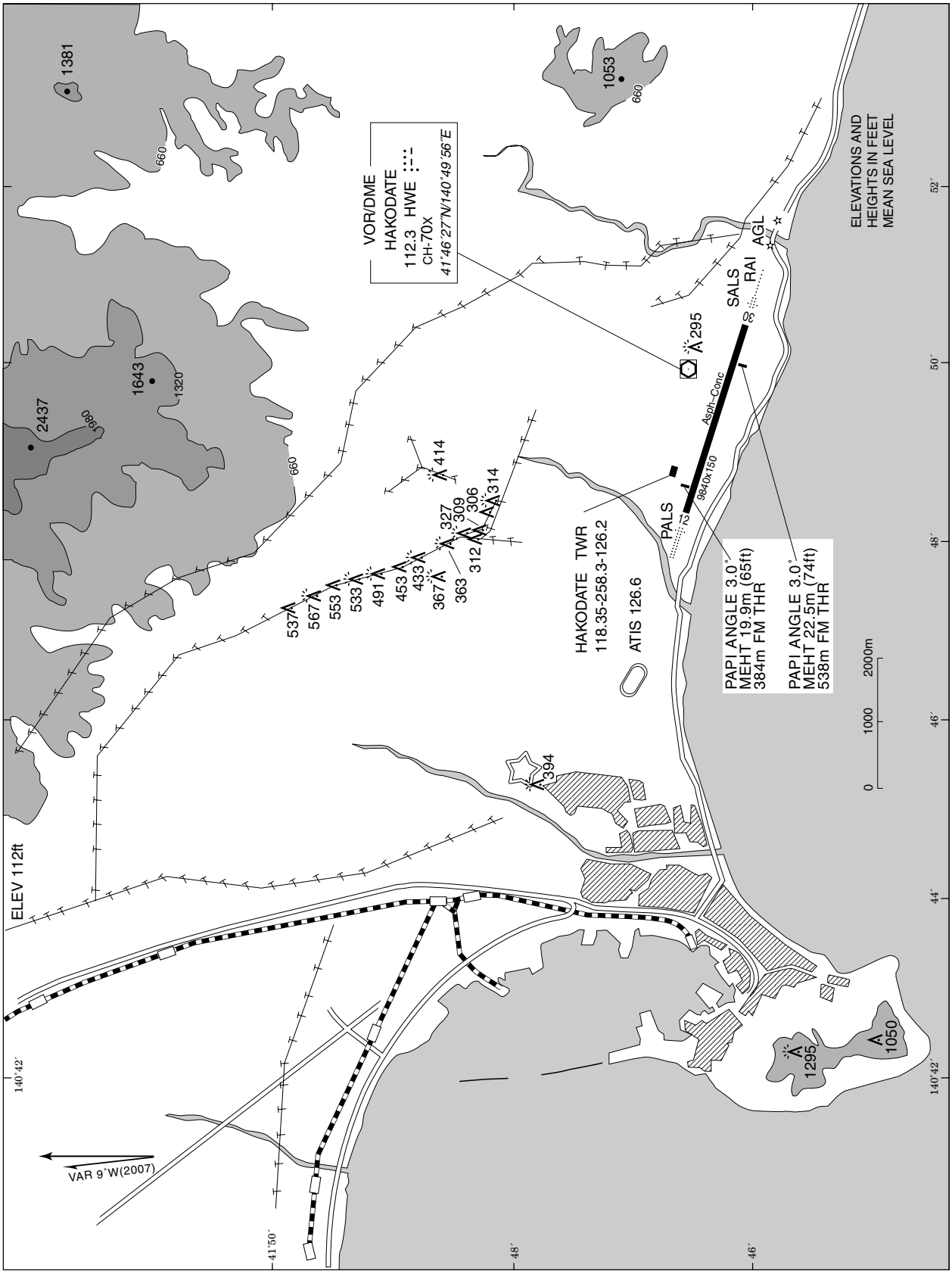



※図中に標高を示す数字がある場合、単位はメートル(m)である。The unit of measurement used to express elevation is meter(m).

CHANGE :DIST from ARP(Mihara).

| Call sign | BRG / DIST from ARP | Remarks |
|---|---|---|
| 大沼<br>Onuma | 330°T / 13.9NM | JR駅<br>JR Station |
| 桔梗<br>Kikyo | 316°T / 6.4NM | JR駅<br>JR Station |
| 矢別<br>Yabetsu | 043°T / 5.7NM | ダム<br>Dam |
| 恵山岬<br>Esanmisaki | 081°T / 16.5NM | 灯台<br>Lighthouse |
| 美原<br>Mihara | 310°T / 3.9NM | NHKラジオアンテナ<br>NHK radio antenna |
| 立待<br>Tachimachi | 252°T / 4.8NM | 岬<br>Cape |
| 当別<br>Tobetsu | 261°T / 11.5NM | トラピスト修道院<br>Religious house |
| 汐首岬<br>Shiokubimisaki | 119°T / 7.3NM | 灯台<br>Lighthouse |
| 5NM S | 180°T / 5.0NM | 海上<br>Over the sea |
| 大間崎<br>Omazaki | 163°T / 14.0NM | 岬<br>Cape |

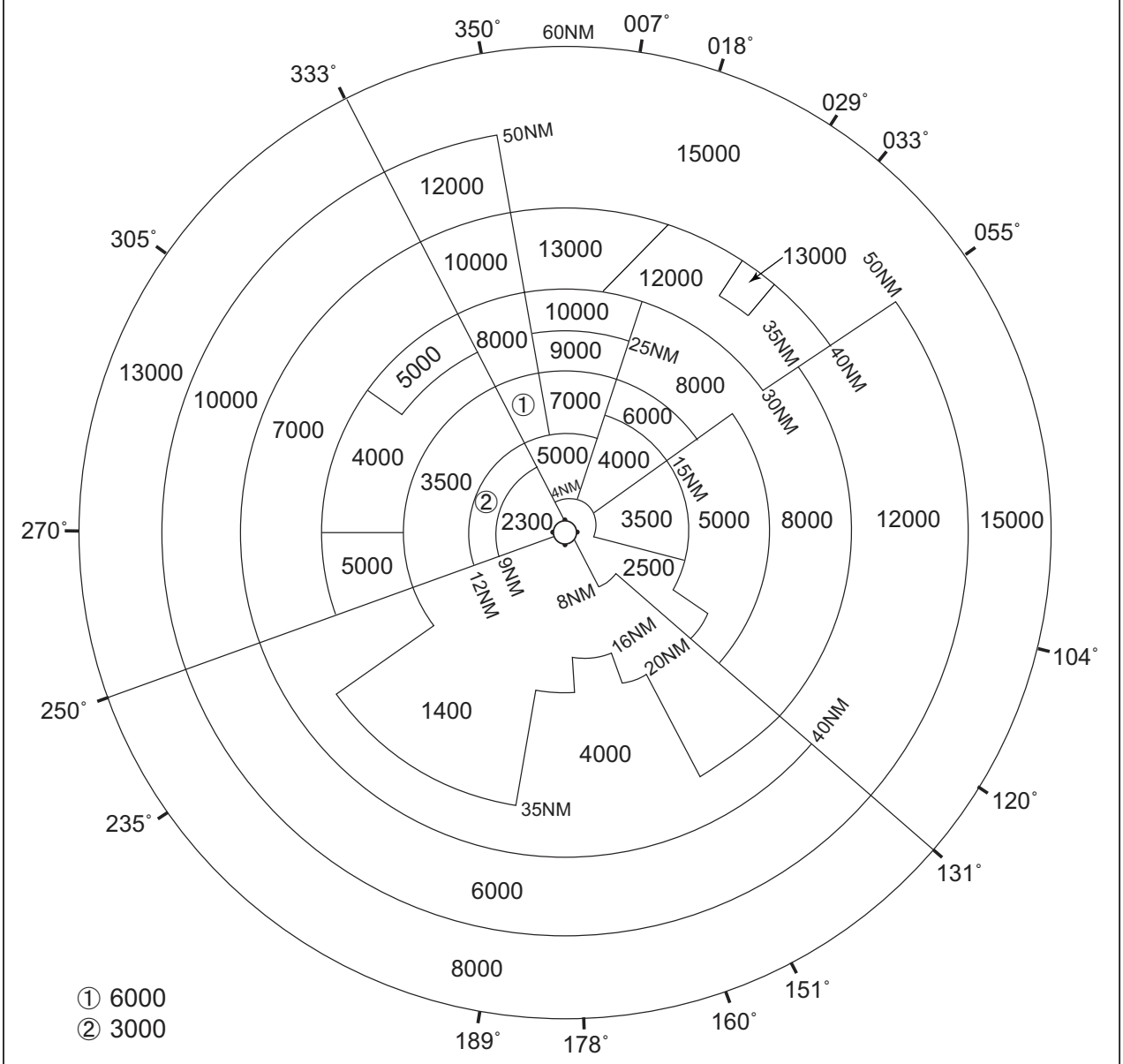
LDG CHART


ELEV 112ft
VOR/DME
HAKODATE
112.3 HWE
CH-70X
41°46'27"N/140°49'56"E
HAKODATE TWR
118.35-258.3-126.2
ATIS 126.6
PALS
SALS
RAI
AGL
Asph-Conc
9840x150
PAPI ANGLE 3.0°
MEHT 19.9m (65ft)
384m FM THR
PAPI ANGLE 3.0°
MEHT 22.5m (74ft)
538m FM THR
ELEVATIONS AND
HEIGHTS IN FEET
MEAN SEA LEVEL
VAR 9°W(2007)
0 1000 2000m
1381
1053
1643
2437
660
1320
1980
295
414
327
309
306
314
312
367
363
433
453
491
533
553
567
537
394
1295
1050
140°42'
41°50'
48'
46'
52'
50'
48'
46'
44'

RJCH / HAKODATE

Minimum Vectoring Altitude CHART

VAR 9˚W (2009)




CENTER : *414632N/1404907E* (RADAR SITE)

CHANGE : Update(BTN 007° and 033°).

**INTENTIONALLY LEFT BLANK**