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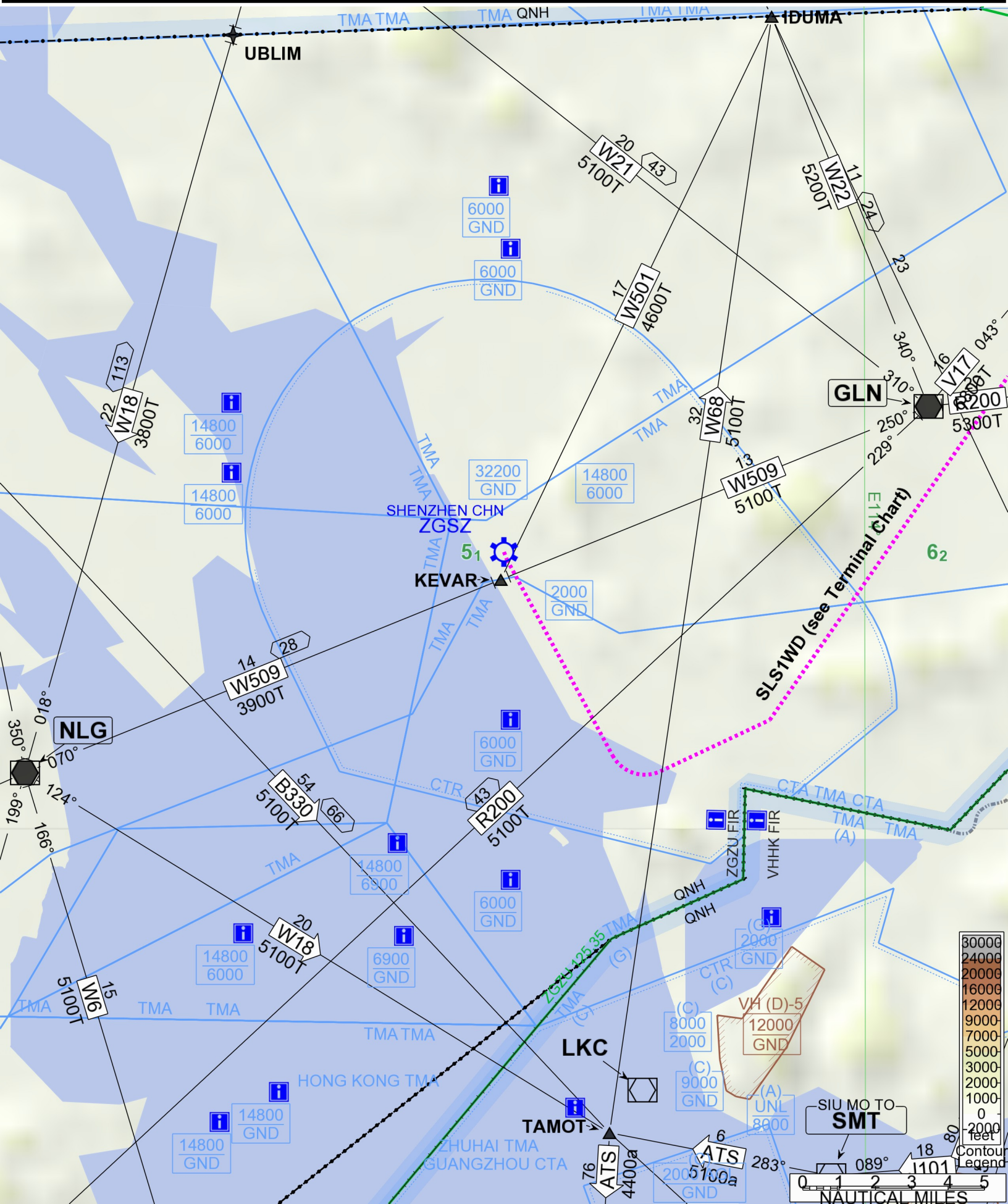
List of pages in this Trip Kit

Enroute Chart - CHH7959 Departure
NavData cycle 2023-09 Expired: 27 Sep 2023
Scale: 1:250000 (1 inch = 3.43 naut mi). Printed on 10 Apr 2025

JEPPESEN
JeppView for Windows



Enroute Chart - CHH7959 Destination
NavData cycle 2023-09 Expired: 27 Sep 2023
Scale: 1:250000 (1 inch = 3.43 naut mi). Printed on 10 Apr 2025

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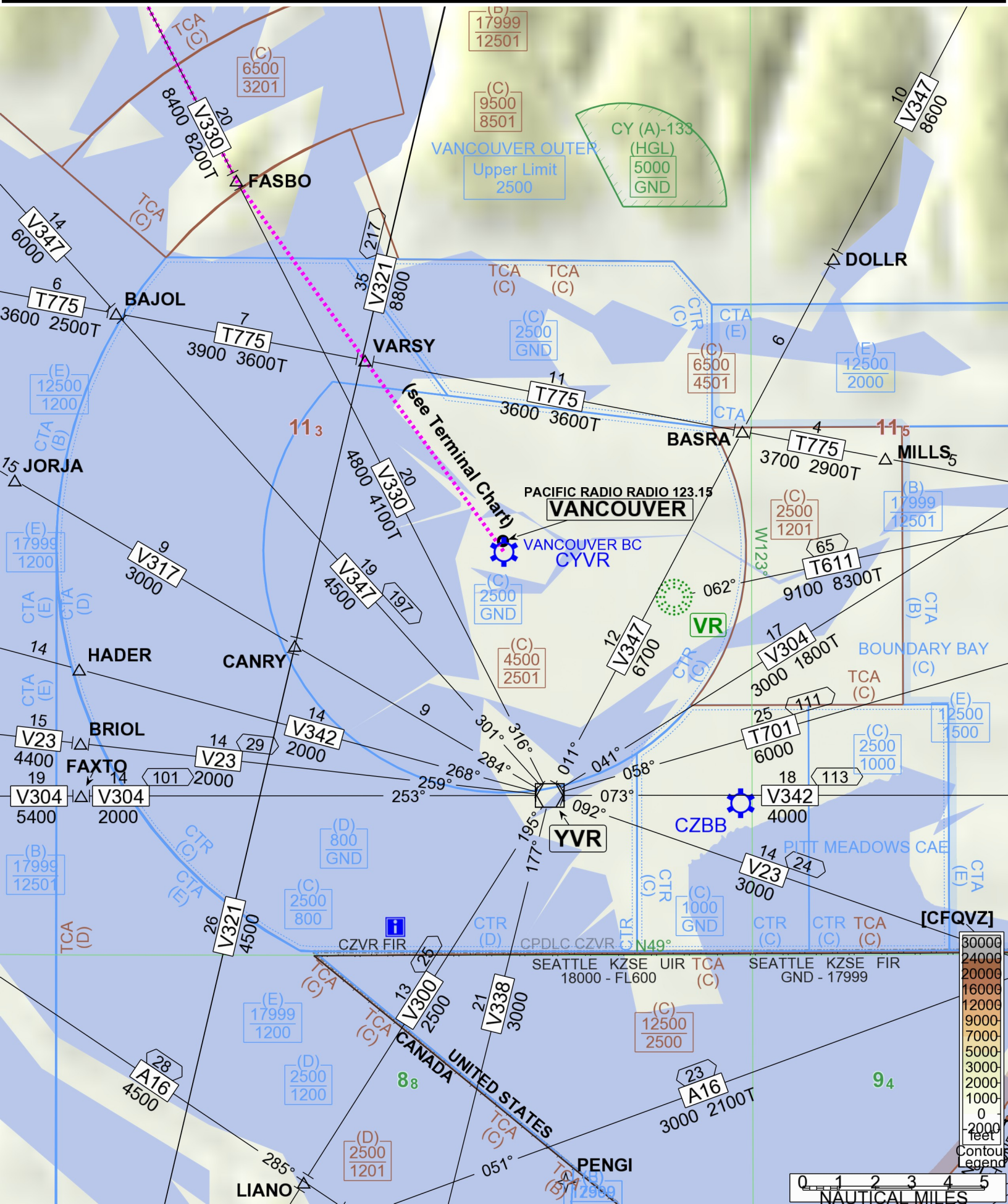
JeppView for Windows



Enroute Chart - CHH7959 Full Route
NavData cycle 2023-09 Expired: 27 Sep 2023
Scale: 1:59683574 (1 inch = 818.55 naut mi). Printed on 10 Apr 2025

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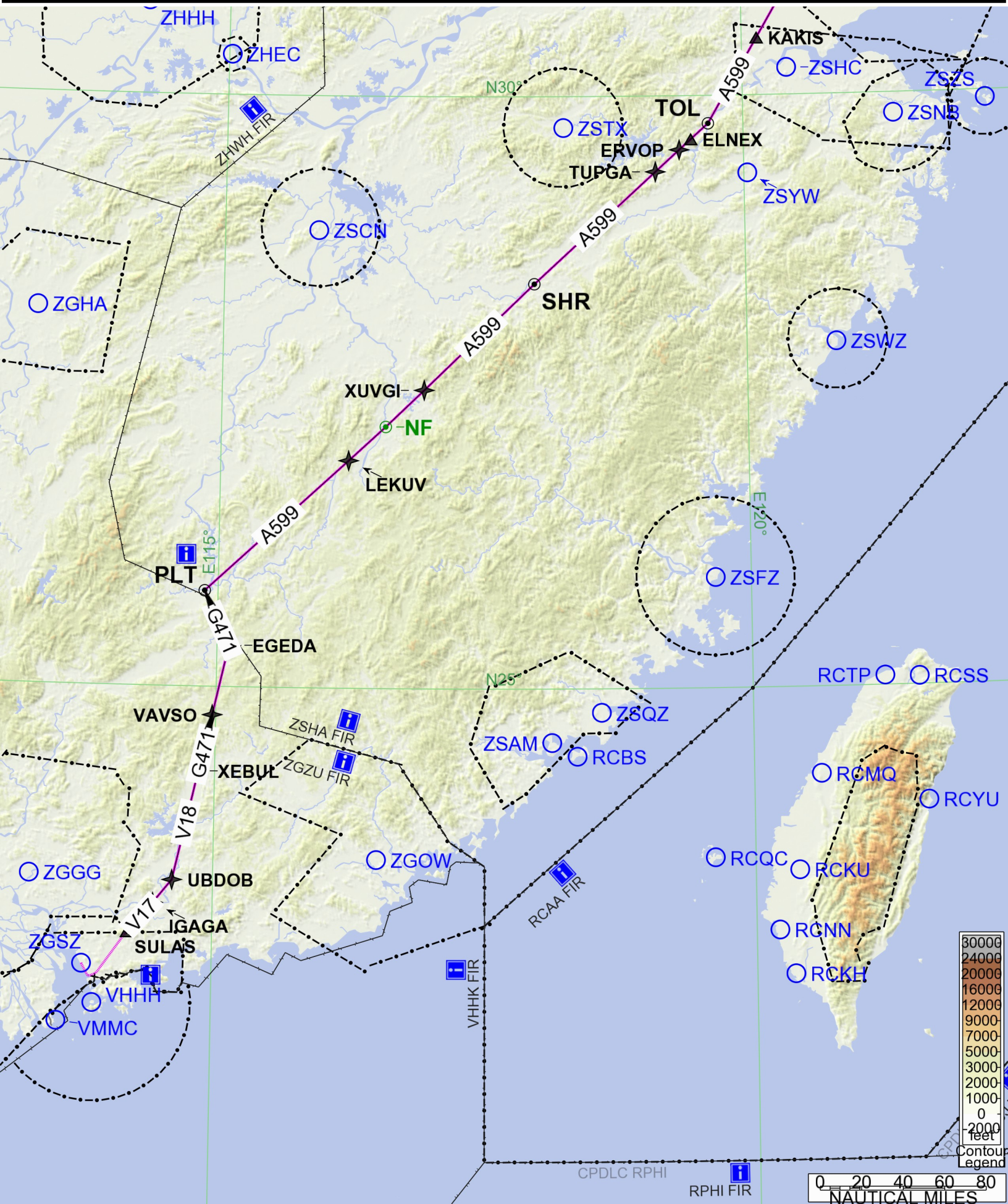
JeppView for Windows

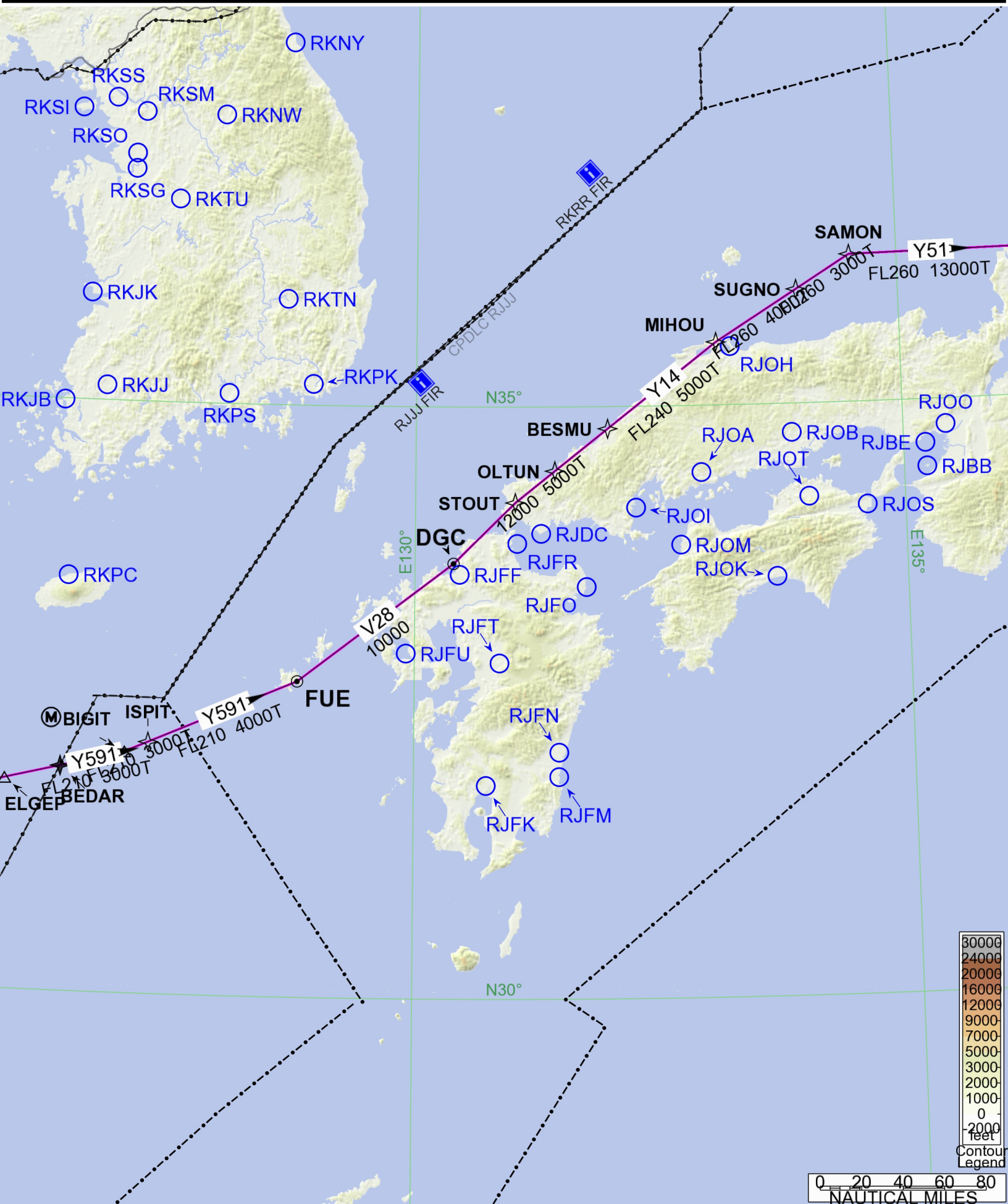
Enroute Chart - CHH7959 Strip Chart Page 1
NavData cycle 2023-09 Expired: 27 Sep 2023
Scale: 1:4374806 (1 inch = 60.00 naut mi). Printed on 10 Apr 2025

JEPPESEN
JeppView for Windows



Enroute Chart - CHH7959 Strip Chart Page 2
NavData cycle 2023-09 Expired: 27 Sep 2023
Scale: 1:4374806 (1 inch = 60.00 naut mi). Printed on 10 Apr 2025

JEPPESEN
JeppView for Windows



Enroute Chart - CHH7959 Strip Chart Page 3
NavData cycle 2023-09 Expired: 27 Sep 2023
Scale: 1:4374806 (1 inch = 60.00 naut mi). Printed on 10 Apr 2025

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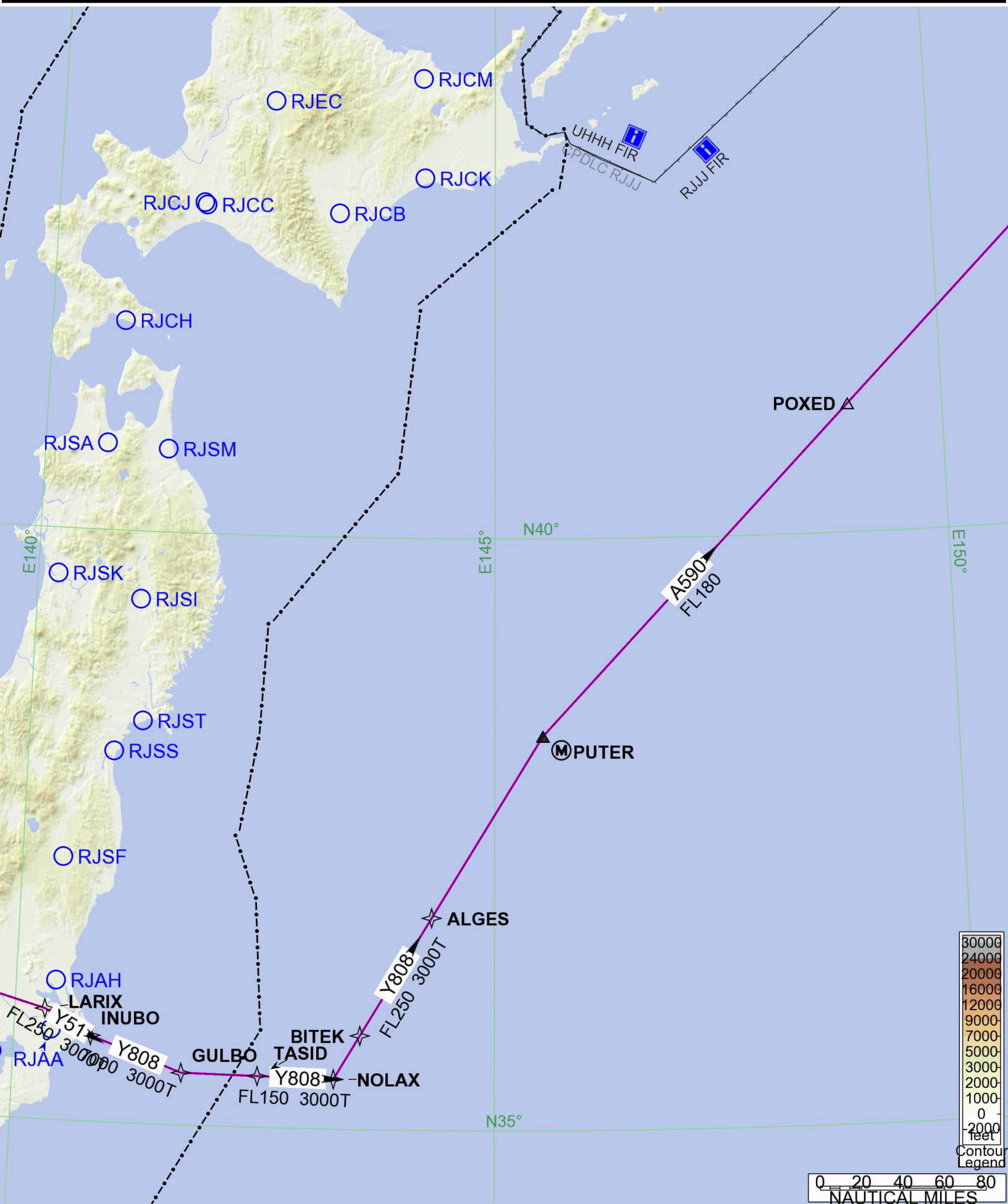
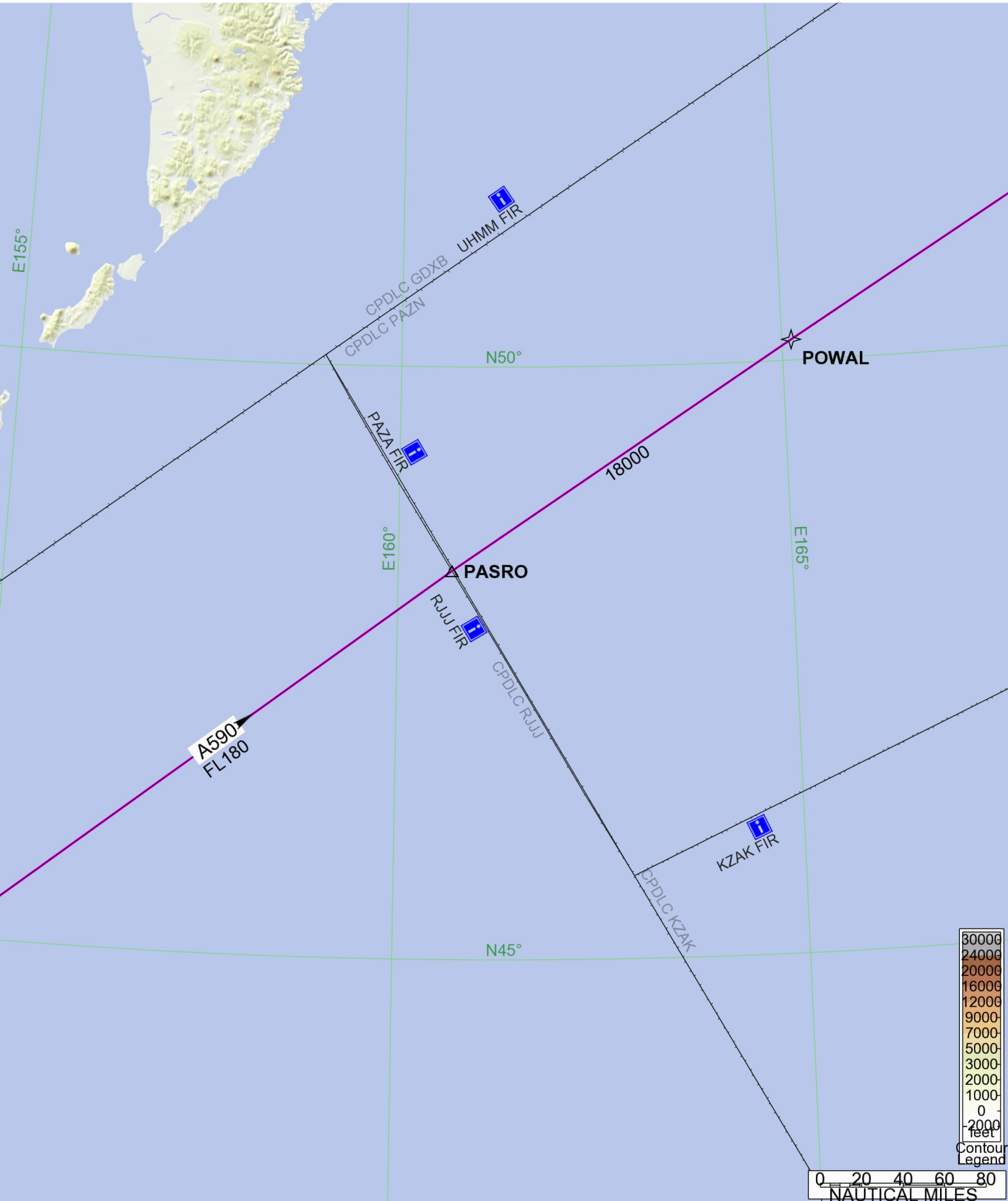
JeppView for Windows



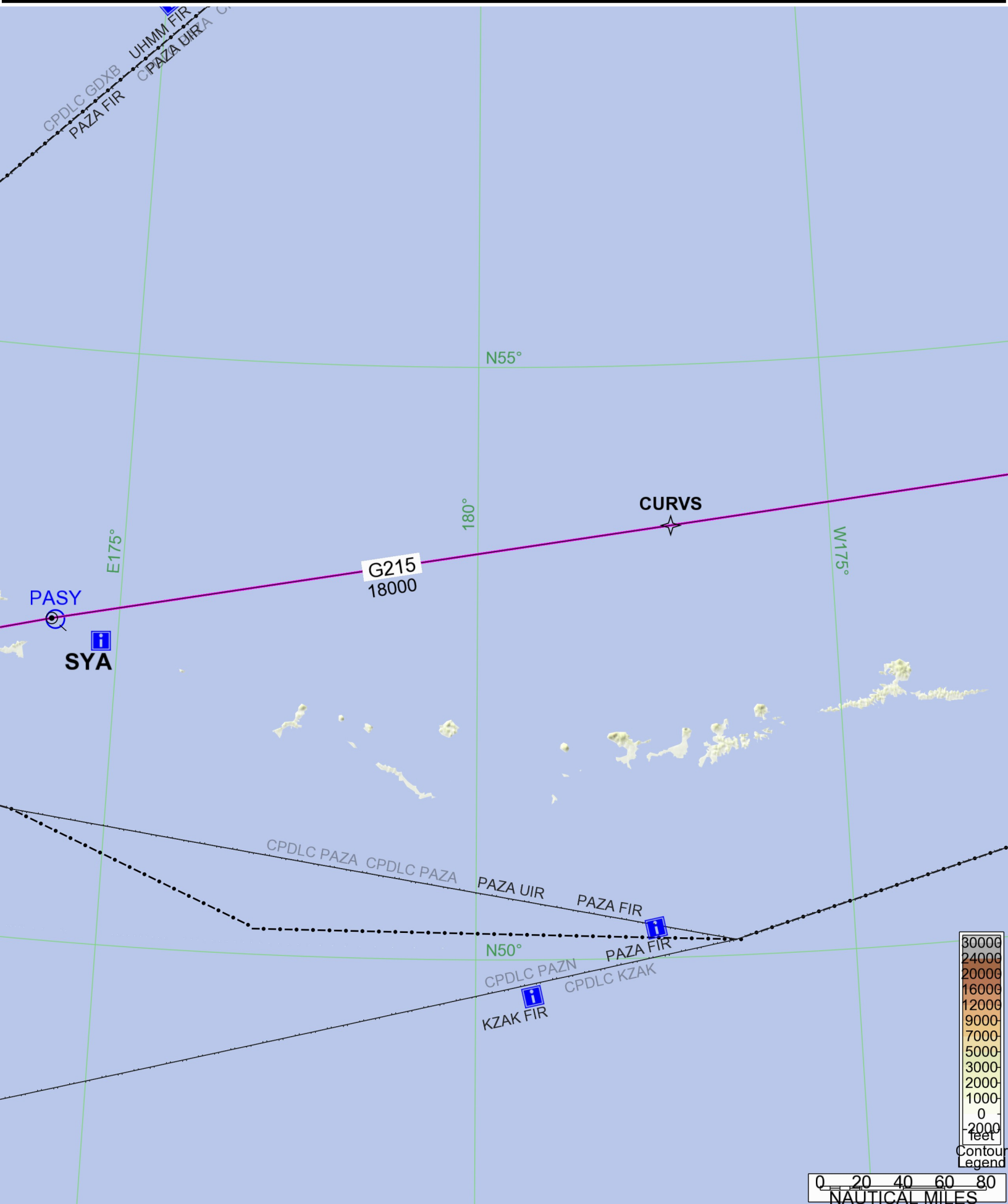
Enroute Chart - CHH7959 Strip Chart Page 4
NavData cycle 2023-09 Expired: 27 Sep 2023
Scale: 1:4374806 (1 inch = 60.00 naut mi). Printed on 10 Apr 2025

JEPPESEN
JeppView for Windows



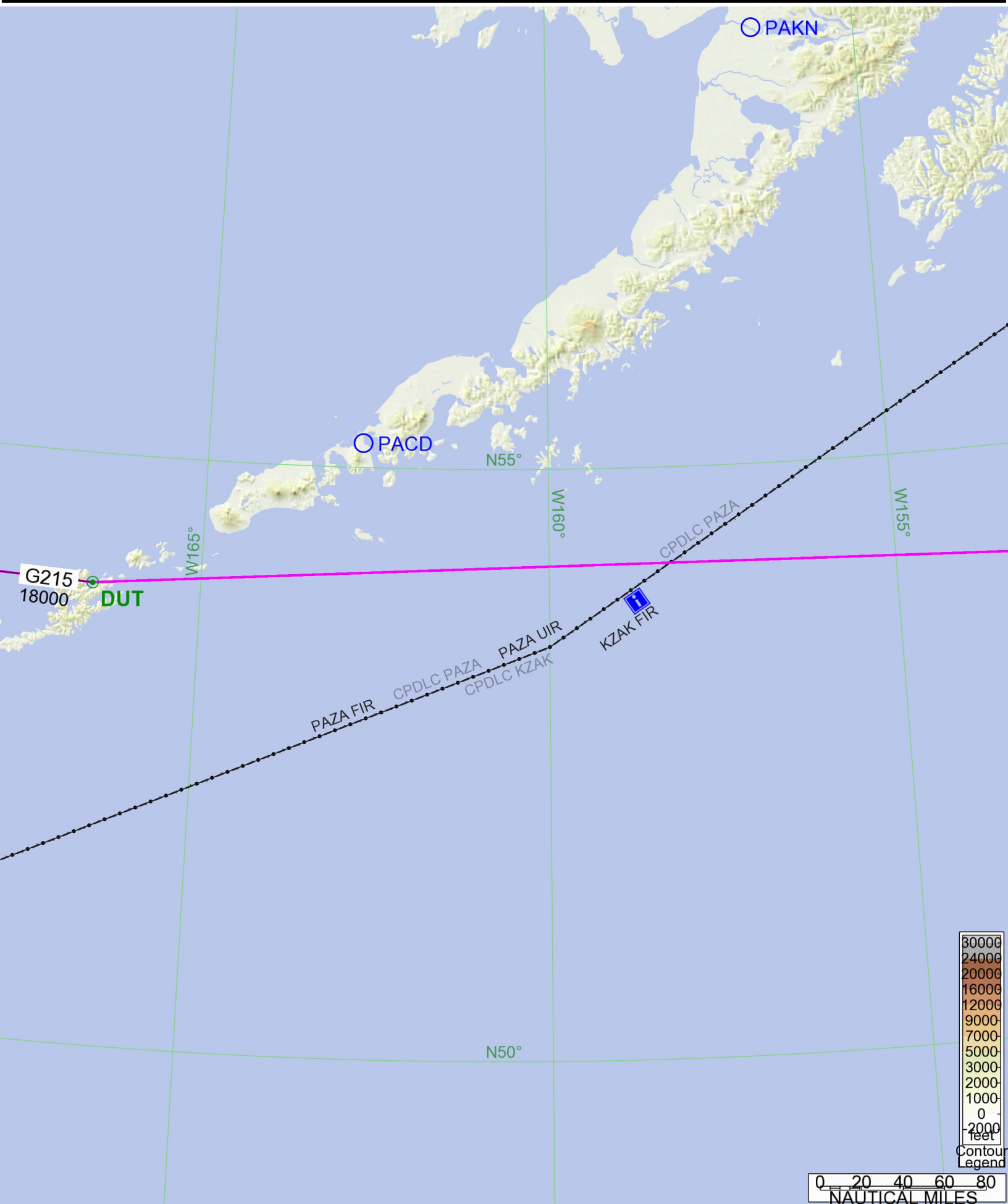
Enroute Chart - CHH7959 Strip Chart Page 5
NavData cycle 2023-09 Expired: 27 Sep 2023
Scale: 1:4374806 (1 inch = 60.00 naut mi). Printed on 10 Apr 2025

JEPPESEN
JeppView for Windows



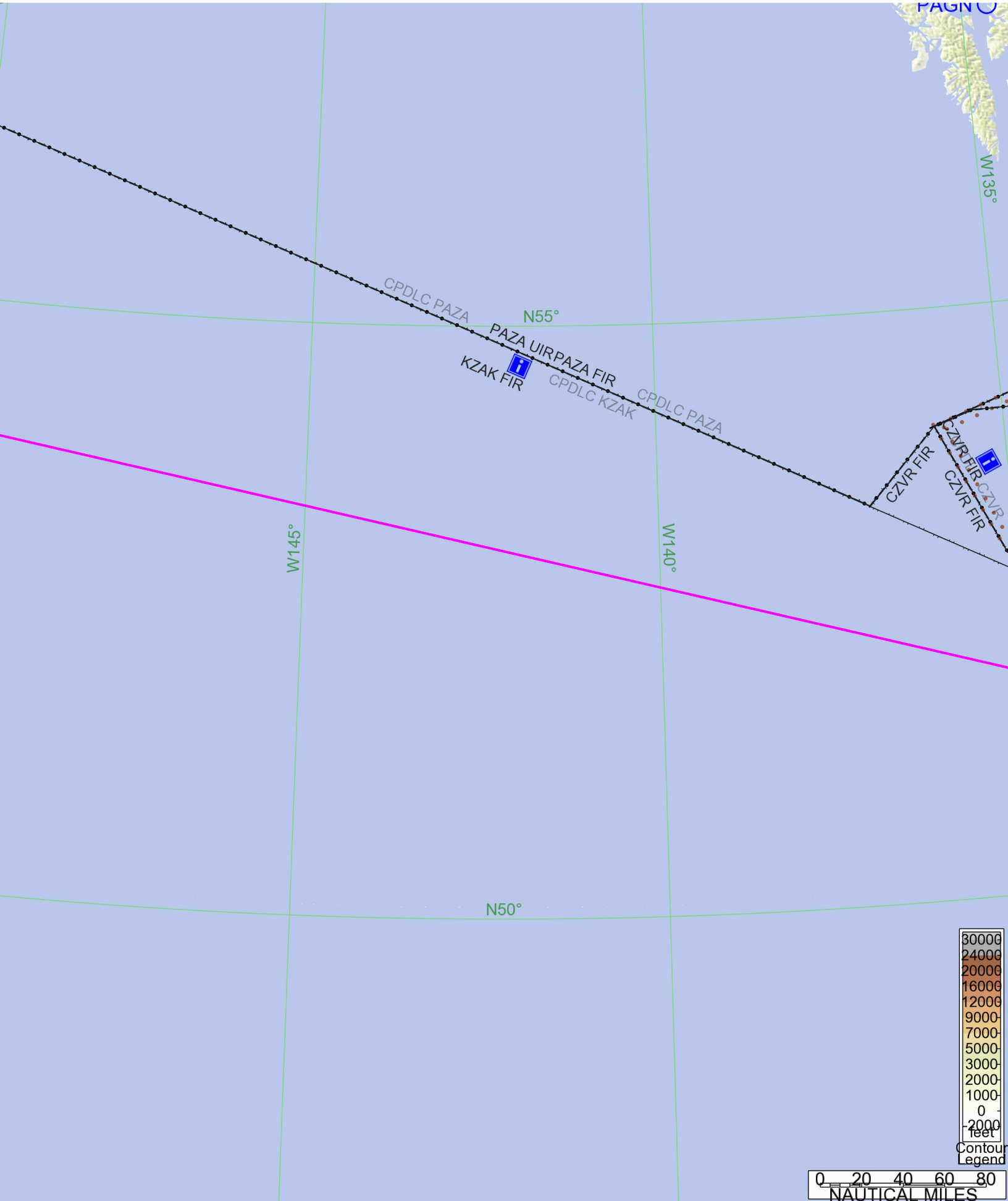
Enroute Chart - CHH7959 Strip Chart Page 6
NavData cycle 2023-09 Expired: 27 Sep 2023
Scale: 1:4374806 (1 inch = 60.00 naut mi). Printed on 10 Apr 2025

JEPPESEN
JeppView for Windows



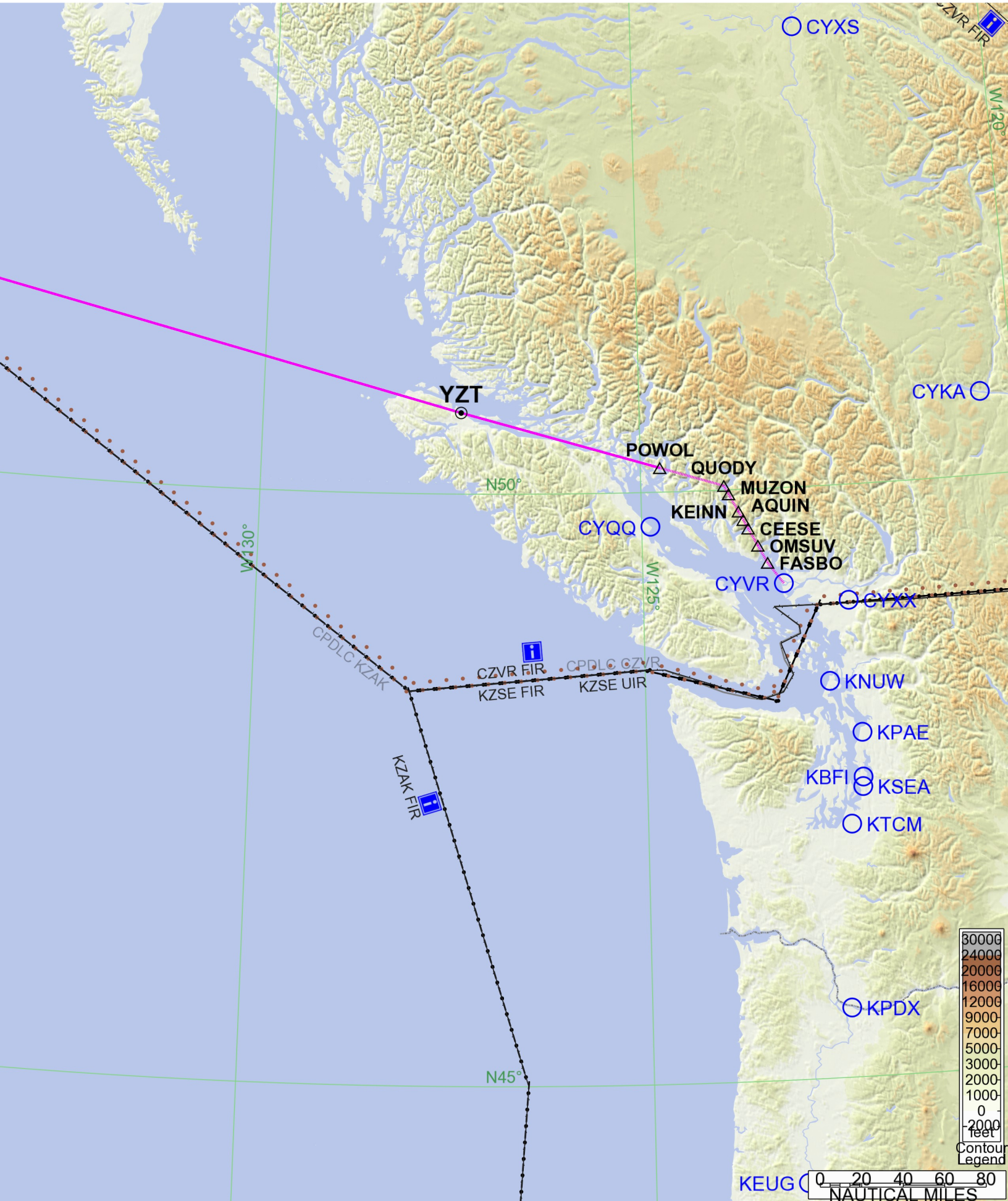
Enroute Chart - CHH7959 Strip Chart Page 7
NavData cycle 2023-09 Expired: 27 Sep 2023
Scale: 1:4374806 (1 inch = 60.00 naut mi). Printed on 10 Apr 2025

JEPPESEN
JeppView for Windows



Enroute Chart - CHH7959 Strip Chart Page 8
NavData cycle 2023-09 Expired: 27 Sep 2023
Scale: 1:4374806 (1 inch = 60.00 naut mi). Printed on 10 Apr 2025

JEPPESEN
JeppView for Windows



General Information

Location: SHENZHEN CHN
ICAO/IATA: ZGSZ / SZX
Lat/Long: N22° 38.3', E113° 48.7'
Elevation: 13 ft

Airport Use: Public
Daylight Savings: Not Observed
UTC Conversion: -8:00 = UTC
Magnetic Variation: 2.0° W

Fuel Types: Jet A-1
Repair Types: Minor Airframe, Minor Engine
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: No

Sunrise: 2210 Z
Sunset: 1043 Z

Runway Information

Runway: 15
Length x Width: 11155 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 12 ft
Lighting: Edge, ALS, Centerline, TDZ

Runway: 16
Length x Width: 12467 ft x 197 ft
Surface Type: concrete
TDZ-Elev: 13 ft
Lighting: Edge, ALS, Centerline

Runway: 33
Length x Width: 11155 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 12 ft
Lighting: Edge, ALS, Centerline, TDZ

Runway: 34

Length x Width: 12467 ft x 197 ft
Surface Type: concrete
TDZ-Elev: 13 ft
Lighting: Edge, ALS, Centerline

Communication Information

ATIS: 131.450
ATIS: 126.850 Arrival Service
ATIS: 127.450 Departure Service
Baoan Tower: 130.350
Baoan Tower: 118.450
Baoan Tower: 118.050 Secondary
Baoan Ground: 121.850 Secondary
Baoan Ground: 121.800
Baoan Ground: 121.650
Baoan Apron Ramp/Taxi: 122.825
Baoan Apron Ramp/Taxi: 122.700
Baoan Apron Ramp/Taxi: 121.625
Baoan Clearance Delivery: 121.850
Baoan Clearance Delivery: 121.950
Zhuhai Approach: 120.350
Zhuhai Approach: 127.950
Zhuhai Approach: 125.525 Secondary
Zhuhai Approach: 123.850
Zhuhai Approach: 119.775 Secondary
Zhuhai Approach: 119.025
Zhuhai Approach: 119.550

1. GENERAL

1.1. ATIS

D-ATIS Arrival 126.85

D-ATIS Departure 127.45

1.2. WAKE TURBULENCE RE-CATEGORIZATION (RECAT-CN)

For Wake Turbulence Re-Categorization (RECAT-CN) Separation Standards see ATC pages.

1.3. RUN-UP TESTS

Engine run-ups are subject to GND or APN clearance, and shall be carried out at a designated location. Fast engine run-ups in the vicinity of boarding bridges or on apron are strictly forbidden.

1.4. RWY OPERATION

1.4.1. GENERAL

During changing the direction of RWY in use, if downwind speed is more than 3m/s (6 KT) and not exceeding 5m/s (10 KT), ATC shall inform ACFT of the ground wind direction and speed, and instruct downwind take-off or downwind landing for short time. If pilot decides not to take off or land on downwind RWY, inform ATC immediately.

1.4.2. RWY CLOSING TIME

RWY 15/33 closed on Monday, Wednesday, Friday and Saturday between 1800-2200UTC, but it is still available for taxiing during closure period.

RWY 16/34 closed on Tuesday, Thursday and Sunday between 1800-2200UTC.

If airlines want to use RWY in the closing time, contact the APT management department with 60 minutes PPR via
Tel: +86-755-23456111/23456222 or Fax: +86-755-23458415.

Also refer to latest NOTAMs.

1.5. TAXI PROCEDURES

1.5.1. GENERAL

TWYs D5, D6, F, G4 thru G6 (between G and J), J, K4 (between A and K), Q (between D and G), T3 (between C and G), T5 (between D and G), V3 and W3 MAX wingspan 224'/68.4m.

TWYs A12, B (between B3 and B4 and between K4 and A12), D9 (from West of D to apron), D10 (from West of D to apron), D11 (from West of D to apron), G9 (from East of G to apron), G10, G11, K (between K2 and K4), K1 (between A and K), K2, K3, L (South of L2), L2 thru L4 and Q (between C and D) MAX wingspan 213'/65m.

TWYs D7, D8 (from West of D to apron), G7, G8 (from East of G to apron), W1 (from South of W to apron) and W2 (from South of W to apron) MAX wingspan 171'/52m.

TWY B (between K2 and K4) MAX wingspan 156'/47.6m.

TWY B (between L3 and L4) MAX wingspan 138'/42m.

TWYs B (between K2 and B4), B3, K (between K1 and K2), K1 (East of K), K4 (East of K), L (between L1 and L2) and L1 (from East of B to apron) MAX wingspan 118'/36m.

TWY B5 thru B7 MAX wingspan 102'/31m.

Parallel taxiing on TWYs D7 and D8 as on G7 and G8 is strictly forbidden.
Without ATC clearance, 180° turnaround on TWY is forbidden.

1. GENERAL

1.5.2. RULES FOR CROSSING RWY 15/33

Read back ATC instructions concerning holding and crossing, verify any questions before crossing:

- Taxi to the designated holding position and hold short of RWY 15/33.
- Upon receiving crossing clearance from ATC, conduct crossing ASAP.
- Monitor TWR frequency for other information of RWY and observe activities on RWY and around carefully.
- While crossing RWY 15/33 following a taking off ACFT, pilot shall be responsible for safety separation with the taking off ACFT to avoid effect of wake turbulence.
- Report to TWR "RWY vacated" after crossing.
- ACFT shall hold short of TWY A after crossing RWY 15/33 from West to East, or short of TWY C after crossing from East to West and then wait for instructions from GND.

1.5.3. RWY HOLDING POSITIONS AND REQUIREMENTS

- ACFT shall stop and wait for ATC instructions at the relative RWY holding positions.
- The nose of ACFT shall get close to the RWY holding position marking without exceeding it when ACFT is waiting.
- ACFT shall report to ATC when nose of ACFT exceeds holding position without instruction.

1.6. PARKING INFORMATION

Visual Docking Guidance System available at stands 301 thru 309, 314 thru 362, 317R, 350L, 350R, 361R, 362R, 501, 502, 504 thru 510, 520 thru 530, 540 thru 549, 560 thru 570, 505R, 507R, 510R, 528R, 529R, 545R, 547R, 549R, 566R, 568R and 569R.

All stands are push-back except stands 26 thru 30, 27L/R, 29L/R, 30R, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 102, 102L/R, 104, 104L/R, 106, 106L/R, 108, 108L/R, 110, 110L/R, 112, 112L/R, 114, 114L/R, 116, 116L/R, 118, 118L/R, 120R, Z01 and Z02. Taxiing on own power or push-back is strictly forbidden without ATC clearance.

ACFT parking on T3 and Satellite Hall bridge stands shall close APU and use 400 Hz GPU and A/C, except for following special situations:

- 400 Hz GPU and A/C are under maintenance;
- ACFT needs APU to start up engine;
- APU is under maintenance;
- other malfunctions of ACFT;
- in case of exceptional circumstances influencing the regularity and safety of operation, such as public health events, extreme weather, special plane support or insufficient flight transition time;
- quality of power supply or capacity of A/C cannot satisfy demand of ACFT.

Stands 375 and 376 are used for helicopter parking.

1.7. OTHER INFORMATION

1.7.1. GENERAL

ACFT push-back, start-up, taxiing and other operations in the APN control areas shall follow the instructions of APN.

Two RWYs are parallel and wide-distance, RWY designator is not supplemented with "L" or "R", pilots shall pay attention to identify.

A freeway is located to the West of APT, do not mistake for RWY.

ACFT shall report to ATC immediately when realizing taxiing on the wrong way or an incursion of RWY.

RWY 15 and 16 right-hand circuit. Birds in vicinity of APT.

2. ARRIVAL

2.1. SPEED RESTRICTIONS

Arriving ACFT shall follow speed limits as follows (unless otherwise instructed by ATC):

- MAX 250 KT below 10000' QNH;
- 220 KT within 30NM from ARP;
- 180 KT and continue flying until 8NM from TDZ when ACFT joins downwind leg or approach final leg.
- ACFT shall immediately inform ATC if ACFT cannot fulfill above speed limits.

2.2. COMMUNICATION FAILURE PROCEDURES

2.2.1. ONE-WAY RADIO COMMUNICATION FAILURE

If only the radio receiver is available, ACFT shall continue to fly according to ATC.

If only the radio transmitter is available, the pilot shall inform the flight intention to ATC immediately, and report the position and altitude in time.

2.2.2. TWO-WAY RADIO COMMUNICATION FAILURE

The ACFT shall continue to approach according to the following specific procedures and land as soon as possible. If APT condition is not available for landing, the pilots shall decide to return or alternate by themselves.

2.2.3. ARRIVALS

The ACFT shall fly to NLG at the last assigned altitude (climb to 5910' when lower than 5910'). If the ACFT is higher than 5910' at NLG, join holding pattern and descend to 5910'. If deciding to continue to approach, descend to IAF altitude at 4930' in holding pattern, then land ILS/DME Y RWY16/34 approach procedure according to the operation direction.

2.2.4. AERODROME RADIO COMMUNICATION FAILURE

When ACFT cannot establish communication with the aerodrome ATC, contact the previous ATC unit and follow the instruction to fly.

2.2.5. RADIO COMMUNICATION RETURNING TO NORMAL

Resume normal operation and inform relevant ATC units immediately.

2.3. OPERATIONS ON PARALLEL RWY s

Upon receipt of approach clearance, pilot shall monitor the operating status of other ACFT in vicinity by airborne equipment and establish visual separation as practicable, then report "visual separation established" when controller notifies the relative position with other ACFT.

Under certain adverse weather condition (e.g. wind shear, turbulence, downdrafts or crosswind) report the situation to controller immediately. According to the reports and weather information, ATC will take the appropriate methods to deal with it. Dependent parallel approaches are implemented in RWY 15 and RWY 16.

2.4. RWY OPERATION

2.4.1. GENERAL

ACFT shall keep listening TWR frequency before vacating RWY; under low visibility conditions, report vacated RWY designation and TWY in use during initial contact with GND.

2. ARRIVAL

2.4.2. VACATING RWY VIA RAPID EXIT TWY s

ACFT shall vacate RWY as quickly as possible.

ACFT shall fully vacate RWY within 50 seconds after flying over THR. Flight crew shall inform TWR controller if more time needed before landing.

Each RWY is equipped with several rapid exit TWYs. ACFT shall vacate from the nearest available rapid exit TWY or follow ATC instruction. Flight crew shall inform TWR controller if can not use the suggested rapid exit TWY.

RWY 16/34 are equipped with rapid exit TWY lights to help pilot obtaining the distance information between rapid exit TWY during the night or under low visibility conditions. RWY 15/33 are not equipped with rapid exit TWY lights (rapid exit TWY lights indicate 300m, 200m and 100m from rapid exit TWY.)

Refer to 10-9 pages for LDAs for each rapid exit TWY.

ACFT is forbidden to stop at rapid exit TWY before fully cross the "NO ENTRY" on it.

2.5. TAXI PROCEDURES

ACFT shall turn transponder on Mode S after landing until entering parking stands.
ACFT shall keep ADS-B equipment on while taxiing.
Within APN areas, ACFT shall contact APN for stands information and taxiing clearance before entering APN areas.
Follow-me is not available, except special flight. If required, landing ACFT shall file for Follow-me service to APT Operation Control Center (AOC) in 30 minutes advance.
When taxiing into stands 503 and 504 ACFT CAT E and above are recommended to use lead-in lines type A first. ACFT CAT D and below can use either type A or type B lead-in lines.

3. DEPARTURE

3.1. START-UP, PUSH-BACK AND TAXI PROCEDURES

ACFT shall keep ADS-B equipment on while push-back and taxiing.

Follow-me is not available.

Within APN operation control area, following rules for apply:

- Obtain delivery clearance from Delivery.
- Obtain push-back and start-up clearance from Delivery when ACFT is on standby.
- Obtain push-back and start-up clearance from APN after agreement with Delivery.
- Report parking stand number to APN controller at the first contact with APN.
- Follow APN controller instructions when pushing back and starting up.
- Obtain taxiing clearance from APN after pushing back and starting up.

Obtain delivery clearance by DCL or delivery frequency.

Report stand number and repeat call sign, SID and initial altitude to TWR delivery controller 5 minutes earlier than closing cabin door.

Inform delivery "ready to push-back and start-up", then keep on frequency until requested to change.

Push-back and start-up upon receiving clearance from GND or APN.

ACFT shall follow push-back and start-up instructions by ATC within 3 minutes or re-apply clearance if not fulfilled in time. After receiving ATC clearance for push-back, pilot shall repeat and tell ground worker.

Pilot shall leave TWR frequency without instruction as soon as airborne to contact assigned APP frequency and report departure RWY designation.

Under normal conditions, ACFT shall finish RWY alignment within 60 seconds after leaving holding position. If flight crew need more time, pilot shall inform ATC before entering RWY.

3. DEPARTURE

3.2. NOISE ABATEMENT PROCEDURES

Upon condition of complying with the requirement of obstacle clearance and climb gradient required by flight procedure, the following operating procedures for the take-off climb shall be implemented. If the procedures cannot be implemented due to any reason, pilot shall inform ATC before take-off (except for special flight):

1. Under the condition that ACFT performance allows, use the reduced thrust to take off.
2. At 450m (1500'):
   - Climb speed of V_2 + 20km/h (10 KT);
   - Reduce engine power/thrust to climb power/thrust;
   - Maintain a speed with flaps and slats in the take-off configuration.
3. Above 900m (3000'):
   - Accelerate and retract flaps/slats on schedule;
   - Maintain a positive rate of climb;
   - Complete the transition to normal en-route climb speed.

3.3. COMMUNICATION FAILURE PROCEDURES

3.3.1. ONE-WAY RADIO COMMUNICATION FAILURE

If only the radio receiver is available, ACFT shall continue to fly according to ATC.

If only the radio transmitter is available, the pilot shall inform the flight intention to ATC immediately, and report the position and altitude in time.

3.3.2. TWO-WAY RADIO COMMUNICATION FAILURE

The ACFT shall continue according to the following specific proce dures and land as soon as possible. If APT condition is not available for landing, the pilots shall decide to return or alternate by themselves.

3.3.3. DEPARTURES

The ACFT shall continue to depart as the last assigned instruction. If the ACFT cannot continue departing, MAINTAIN 5910' to fly to NLG and join holding pattern, then decide whether to dump fuel or continue to approach and land. If deciding to approach, join holding pattern and descend to IAF altitude at 4930', then land ILS/DME Y RWY16/34 approach procedure according to the operation direction.

3.3.4. AERODROME RADIO COMMUNICATION FAILURE

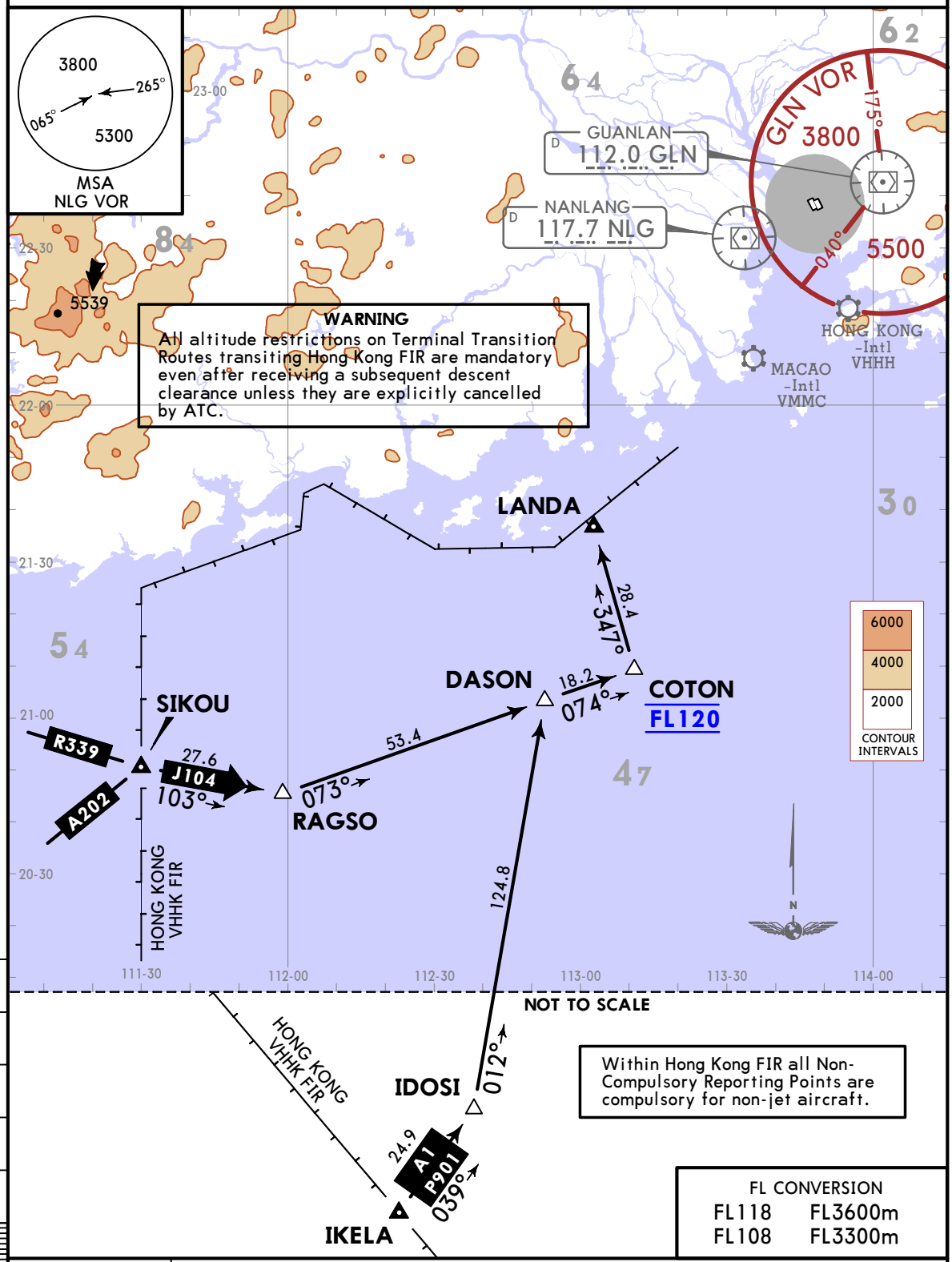
When ACFT cannot establish communication with the aerodrome ATC, contact the previous ATC unit and follow the instruction to fly.

3.3.5. RADIO COMMUNICATION RETURNING TO NORMAL

Resume normal operation and inform relevant ATC units immediately.

D-ATIS	Apt Elev	Alt Set: hPa	Trans level: FL118 below 980 hPa FL108 980 hPa or above
126.85	13		

TERMINAL TRANSITION ROUTES
TRANSITING HONG KONG FIR
VIA J104 TO LANDA

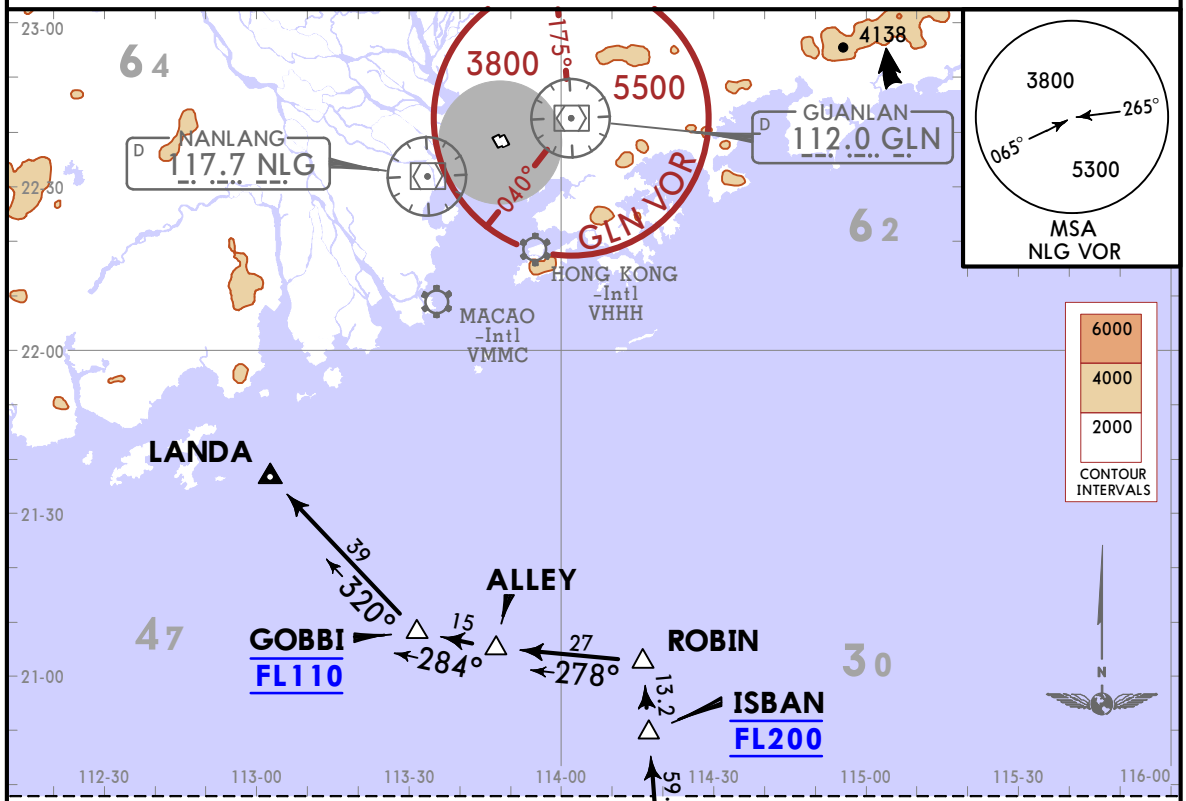


ENTRY ROUTE	ROUTING
A-1	From IKELA along A-1/P-901 to IDOSI, then direct to DASON, then along J-104 to COTON, then direct to LANDA. Cross COTON at FL120, do not descend without ATC clearance.
A-202/R-339	From SIKOU along J-104 to COTON, then direct to LANDA. Cross COTON at FL120, do not descend without ATC clearance.

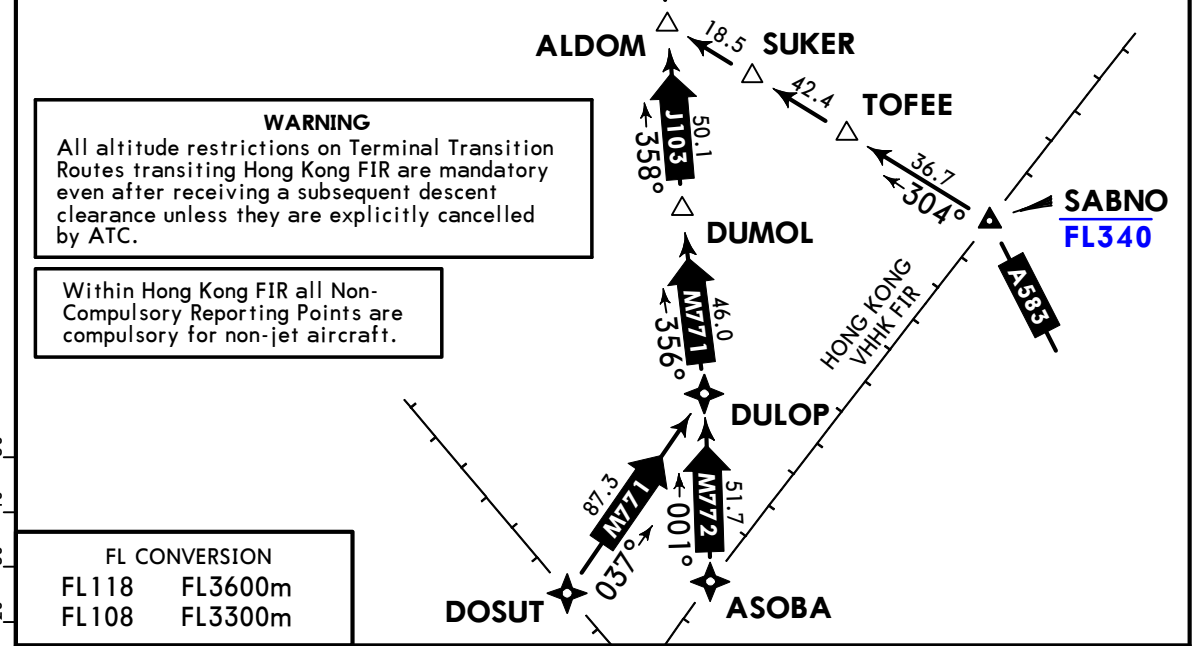
CHANGES: None.

D-ATIS	Apt Elev	Alt Set: hPa	Trans level: FL118 below 980 hPa FL108 980 hPa or above
126.85	13		

TERMINAL TRANSITION ROUTES
TRANSITING HONG KONG FIR
VIA J103 TO LANDA



NOT TO SCALE



WARNING
All altitude restrictions on Terminal Transition Routes transiting Hong Kong FIR are mandatory even after receiving a subsequent descent clearance unless they are explicitly cancelled by ATC.

Within Hong Kong FIR all Non-Compulsory Reporting Points are compulsory for non-jet aircraft.

FL CONVERSION

FL118	FL3600m
FL108	FL3300m

ENTRY ROUTE	ROUTING
A-583	From SABNO direct via TOFEE and SUKER to ALDOM, then along J-103 to ROBIN, then direct to ALLEY, then direct to GOBBI, then direct to LANDA. Cross SABNO at or below FL340, ISBAN at FL200 and GOBBI at FL110, do not descend without ATC clearance.
M-771	From DOSUT along M-771 to DUMOL, then along J-103 to ROBIN, then direct to ALLEY, then direct to GOBBI, then direct to LANDA. Cross ISBAN at FL200 and GOBBI at FL110, do not descend without ATC clearance.
M-772	From ASOBA along M-772 to DULOP, then along M-771 to DUMOL, then along J-103 to ROBIN, then direct to ALLEY, then direct to GOBBI, then direct to LANDA. Cross ISBAN at FL200 and GOBBI at FL110, do not descend without ATC clearance.

CHANGES: ARROW renamed ALDOM.

D-ATIS	BAOAN Tower		ZHUHAI Approach				
	West (RWY 16/34)	*East (RWY 15/33)	*APPØ1	APPØ2	*APPØ3	*APPØ4	*APPØ5
126.85	118.45	130.35	120.35	119.55	123.85	119.025	127.95

Apt Elev		
13	RNP 1 GNSS	Alt Set: hPa Trans level: FL118 below 980 hPa FL108 980 hPa or above

If unable to comply with RNP 1 operation requirements, inform Baoan Tower or Zhuhai Approach on first contact.

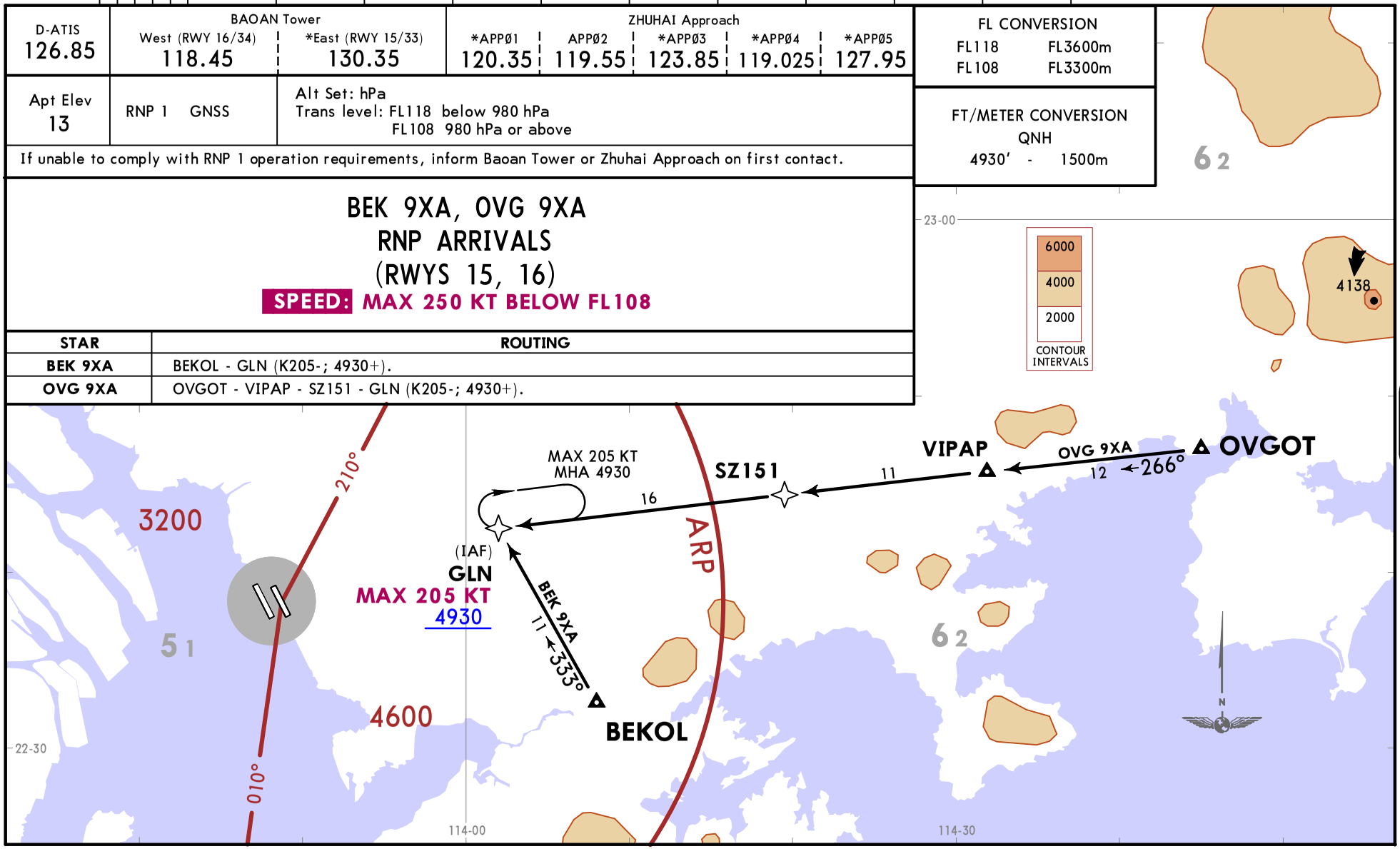
FL CONVERSION	
FL118	FL3600m
FL108	FL3300m

FT/METER CONVERSION		
QNH		
4930'	-	1500m

BEK 9XA, OVG 9XA
RNP ARRIVALS
(RWYS 15, 16)

SPEED: MAX 250 KT BELOW FL108

STAR	ROUTING
BEK 9XA	BEKOL - GLN (K205-; 4930+).
OVG 9XA	OVGOT - VIPAP - SZ151 - GLN (K205-; 4930+).



CHANGES: MSA.

D-ATIS	BAOAN Tower		ZHUHAI Approach				
	West (RWY 16/34)	*East (RWY 15/33)	*APP01	APP02	*APP03	*APP04	*APP05
126.85	118.45	130.35	120.35	119.55	123.85	119.025	127.95

Apt Elev		
13	RNP 1 GNSS	Alt Set: hPa Trans level: FL118 below 980 hPa FL108 980 hPa or above

If unable to comply with RNP 1 operation requirements, inform Baoan Tower or Zhuhai Approach on first contact.

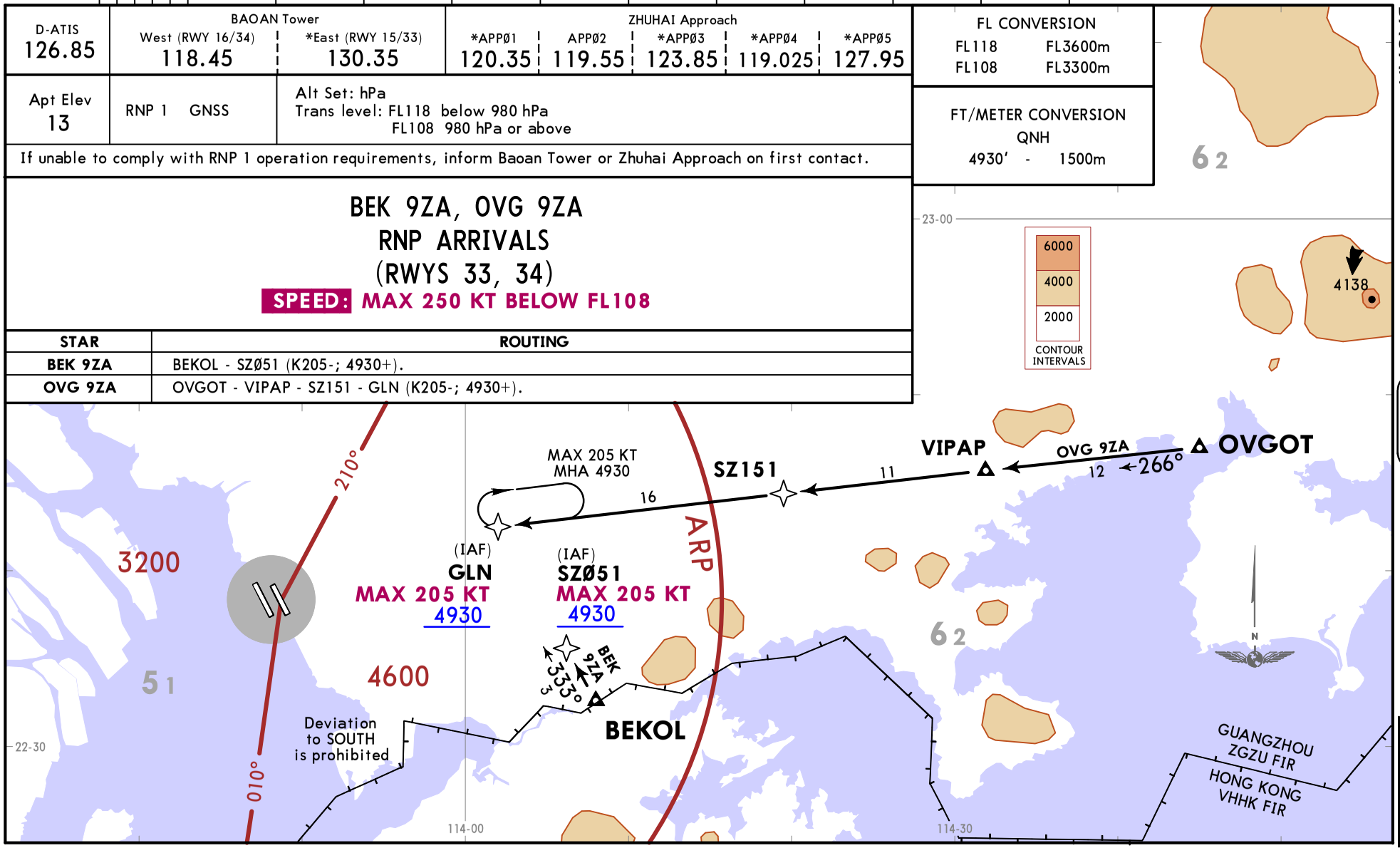
FL CONVERSION	
FL118	FL3600m
FL108	FL3300m

FT/METER CONVERSION		
QNH		
4930'	-	1500m

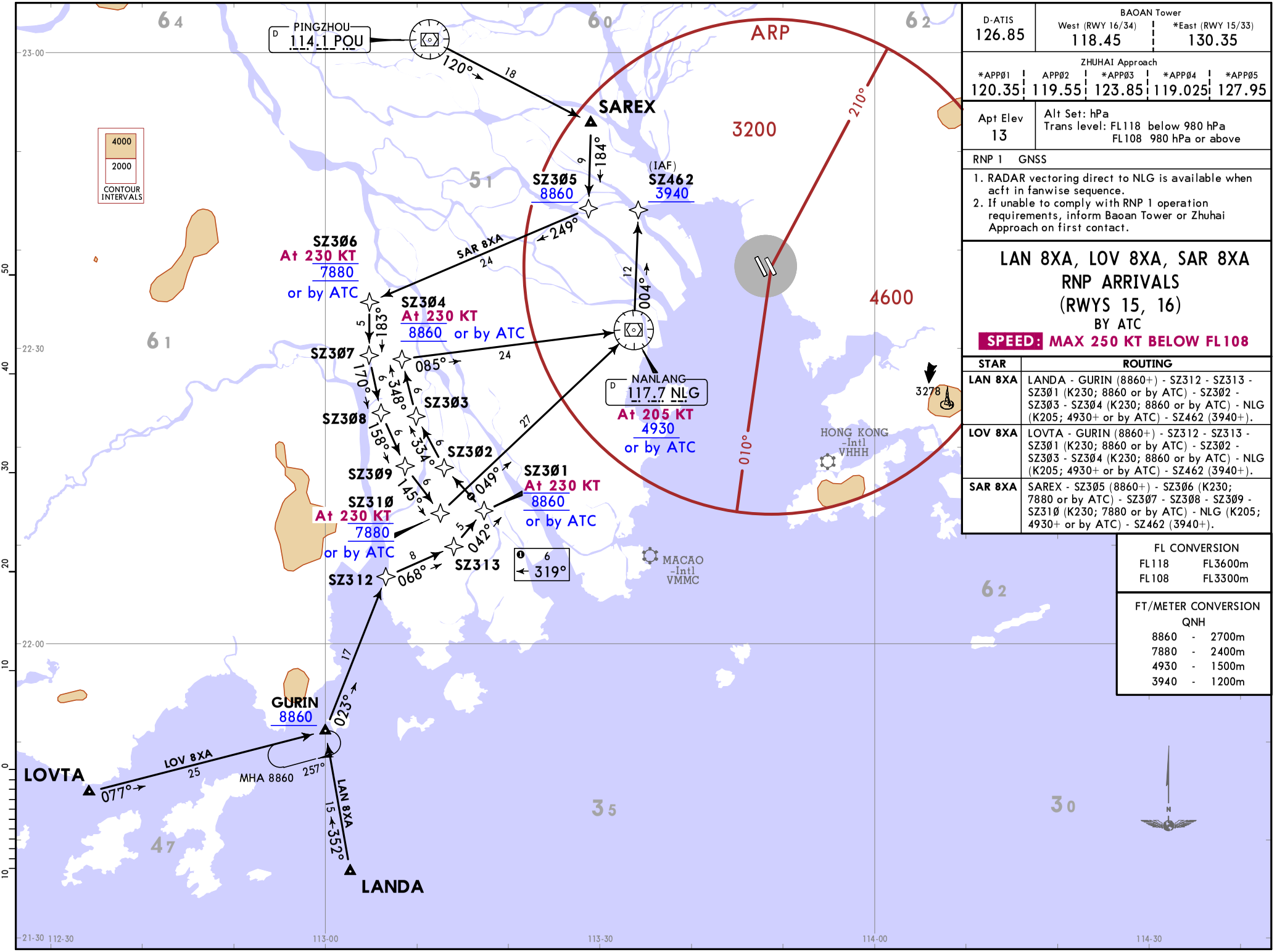
BEK 9ZA, OVG 9ZA
RNP ARRIVALS
(RWYS 33, 34)

SPEED: MAX 250 KT BELOW FL108

STAR	ROUTING
BEK 9ZA	BEKOL - SZ051 (K205-; 4930+).
OVG 9ZA	OVGOT - VIPAP - SZ151 - GLN (K205-; 4930+).



CHANGES: MSA.



D-ATIS	BAOAN Tower West (RWY 16/34)	BAOAN Tower *East (RWY 15/33)
126.85	118.45	130.35

ZHUHAI Approach

*APP01	APP02	*APP03	*APP04	*APP05
120.35	119.55	123.85	119.025	127.95

Apt Elev	Alt Set: hPa
13	Trans level: FL118 below 980 hPa FL108 980 hPa or above

RNP 1 GNSS

1. RADAR vectoring direct to NLG is available when acft in fanwise sequence.
2. If unable to comply with RNP 1 operation requirements, inform Baoan Tower or Zhuhai Approach on first contact.

LAN 8XA, LOV 8XA, SAR 8XA RNP ARRIVALS (RWYS 15, 16)

BY ATC

SPEED: MAX 250 KT BELOW FL108

STAR	ROUTING
LAN 8XA	LANDA - GURIN (8860+) - SZ312 - SZ313 - SZ301 (K230; 8860 or by ATC) - SZ302 - SZ303 - SZ304 (K230; 8860 or by ATC) - NLG (K205; 4930+ or by ATC) - SZ462 (3940+).
LOV 8XA	LOVTA - GURIN (8860+) - SZ312 - SZ313 - SZ301 (K230; 8860 or by ATC) - SZ302 - SZ303 - SZ304 (K230; 8860 or by ATC) - NLG (K205; 4930+ or by ATC) - SZ462 (3940+).
SAR 8XA	SAREX - SZ305 (8860+) - SZ306 (K230; 7880 or by ATC) - SZ307 - SZ308 - SZ309 - SZ310 (K230; 7880 or by ATC) - NLG (K205; 4930+ or by ATC) - SZ462 (3940+).

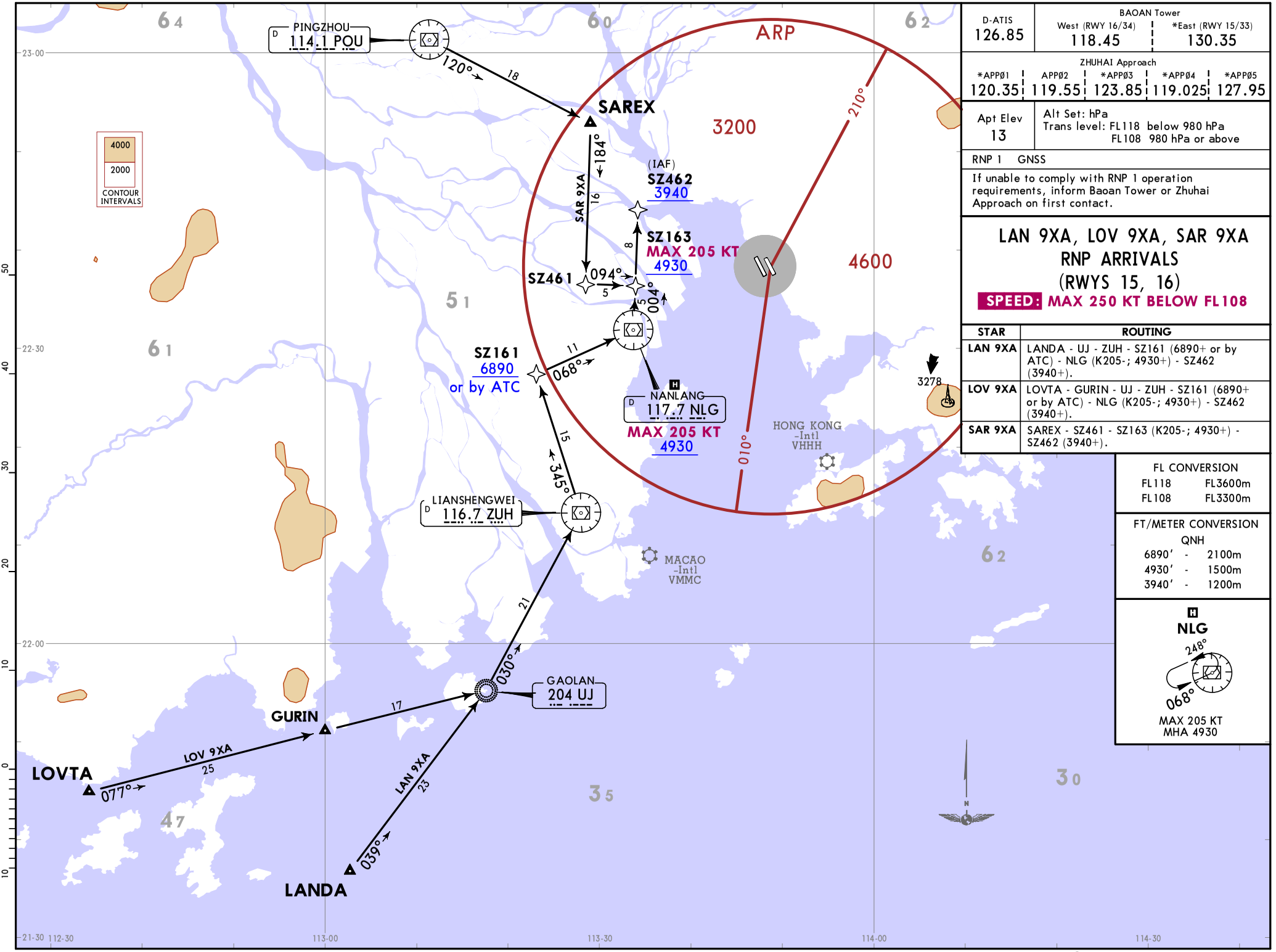
FL CONVERSION

FL118	FL3600m
FL108	FL3300m

FT/METER CONVERSION

QNH

8860	-	2700m
7880	-	2400m
4930	-	1500m
3940	-	1200m



D-ATIS	BAOAN Tower West (RWY 16/34)	BAOAN Tower *East (RWY 15/33)
126.85	118.45	130.35

ZHUHAI Approach *APPØ1	APPØ2	*APPØ3	*APPØ4	*APPØ5
120.35	119.55	123.85	119.025	127.95

Apt Elev	Alt Set: hPa
13	Trans level: FL118 below 980 hPa FL108 980 hPa or above

RNP 1 GNSS

If unable to comply with RNP 1 operation requirements, inform Baoan Tower or Zhuhai Approach on first contact.

LAN 9XA, LOV 9XA, SAR 9XA RNP ARRIVALS (RWYS 15, 16)

SPEED: MAX 250 KT BELOW FL108

STAR	ROUTING
LAN 9XA	LANDA - UJ - ZUH - SZ161 (6890+ or by ATC) - NLG (K205-; 4930+) - SZ462 (3940+).
LOV 9XA	LOVTA - GURIN - UJ - ZUH - SZ161 (6890+ or by ATC) - NLG (K205-; 4930+) - SZ462 (3940+).
SAR 9XA	SAREX - SZ461 - SZ163 (K205-; 4930+) - SZ462 (3940+).

FL CONVERSION

FL118	FL3600m
FL108	FL3300m

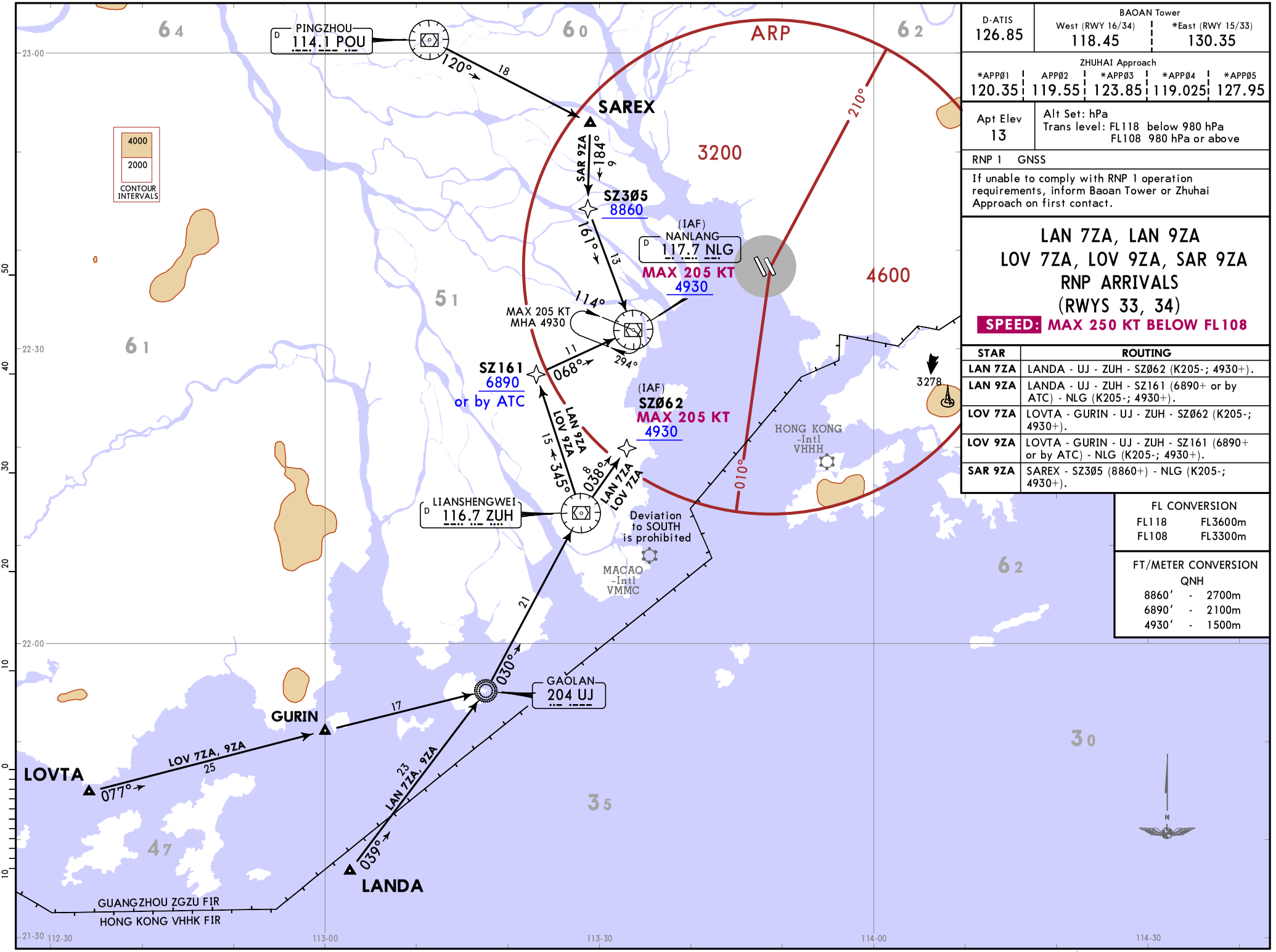
FT/METER CONVERSION

QNH

6890′	-	2100m
4930′	-	1500m
3940′	-	1200m

NLG
248°
068°
MAX 205 KT
MHA 4930

CHANGES: MSA.



D-ATIS	BAOAN Tower West (RWY 16/34)	BAOAN Tower *East (RWY 15/33)
126.85	118.45	130.35

ZHUHAI Approach

*APP01	APP02	*APP03	*APP04	*APP05
120.35	119.55	123.85	119.025	127.95

Apt Elev	Alt Set: hPa
13	Trans level: FL118 below 980 hPa FL108 980 hPa or above

RNP 1 GNSS

If unable to comply with RNP 1 operation requirements, inform Baoan Tower or Zhuhai Approach on first contact.

LAN 7ZA, LAN 9ZA
LOV 7ZA, LOV 9ZA, SAR 9ZA
RNP ARRIVALS
(RWYS 33, 34)

SPEED: MAX 250 KT BELOW FL108

STAR	ROUTING
LAN 7ZA	LANDA - UJ - ZUH - SZ062 (K205-; 4930+).
LAN 9ZA	LANDA - UJ - ZUH - SZ161 (6890+ or by ATC) - NLG (K205-; 4930+).
LOV 7ZA	LOVTA - GURIN - UJ - ZUH - SZ062 (K205-; 4930+).
LOV 9ZA	LOVTA - GURIN - UJ - ZUH - SZ161 (6890+ or by ATC) - NLG (K205-; 4930+).
SAR 9ZA	SAREX - SZ305 (8860+) - NLG (K205-; 4930+).

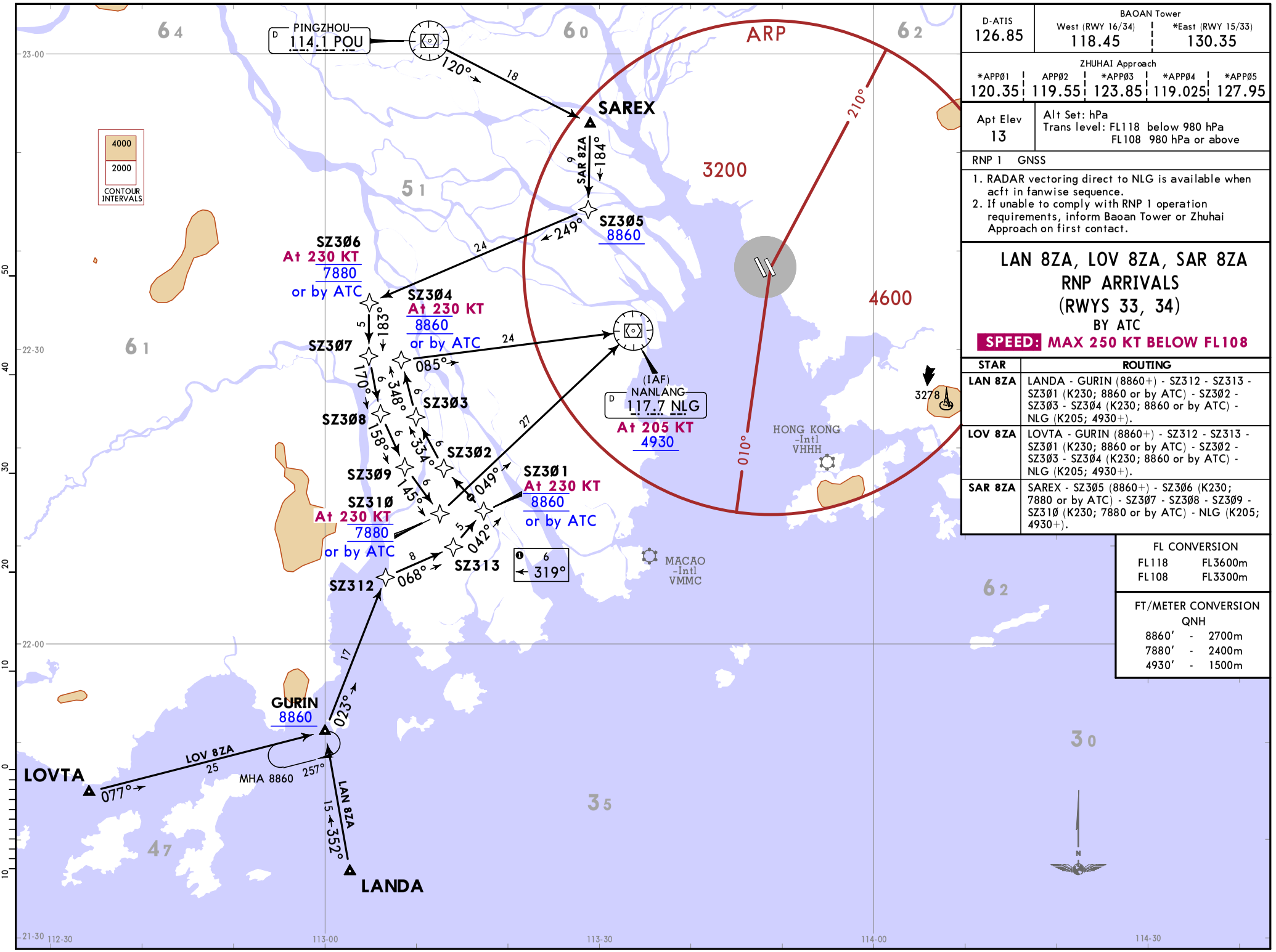
FL CONVERSION

FL118	FL3600m
FL108	FL3300m

FT/METER CONVERSION
QNH

8860'	-	2700m
6890'	-	2100m
4930'	-	1500m

CHANGES: MSA.



D-ATIS	BAOAN Tower West (RWY 16/34)	BAOAN Tower *East (RWY 15/33)
126.85	118.45	130.35

ZHUHAI Approach *APPØ1	APPØ2	*APPØ3	*APPØ4	*APPØ5
120.35	119.55	123.85	119.025	127.95

Apt Elev	Alt Set: hPa
13	Trans level: FL118 below 980 hPa FL108 980 hPa or above

RNP 1 GNSS

1. RADAR vectoring direct to NLG is available when acft in fanwise sequence.
2. If unable to comply with RNP 1 operation requirements, inform Baoan Tower or Zhuhai Approach on first contact.

LAN 8ZA, LOV 8ZA, SAR 8ZA RNP ARRIVALS (RWYS 33, 34)

BY ATC

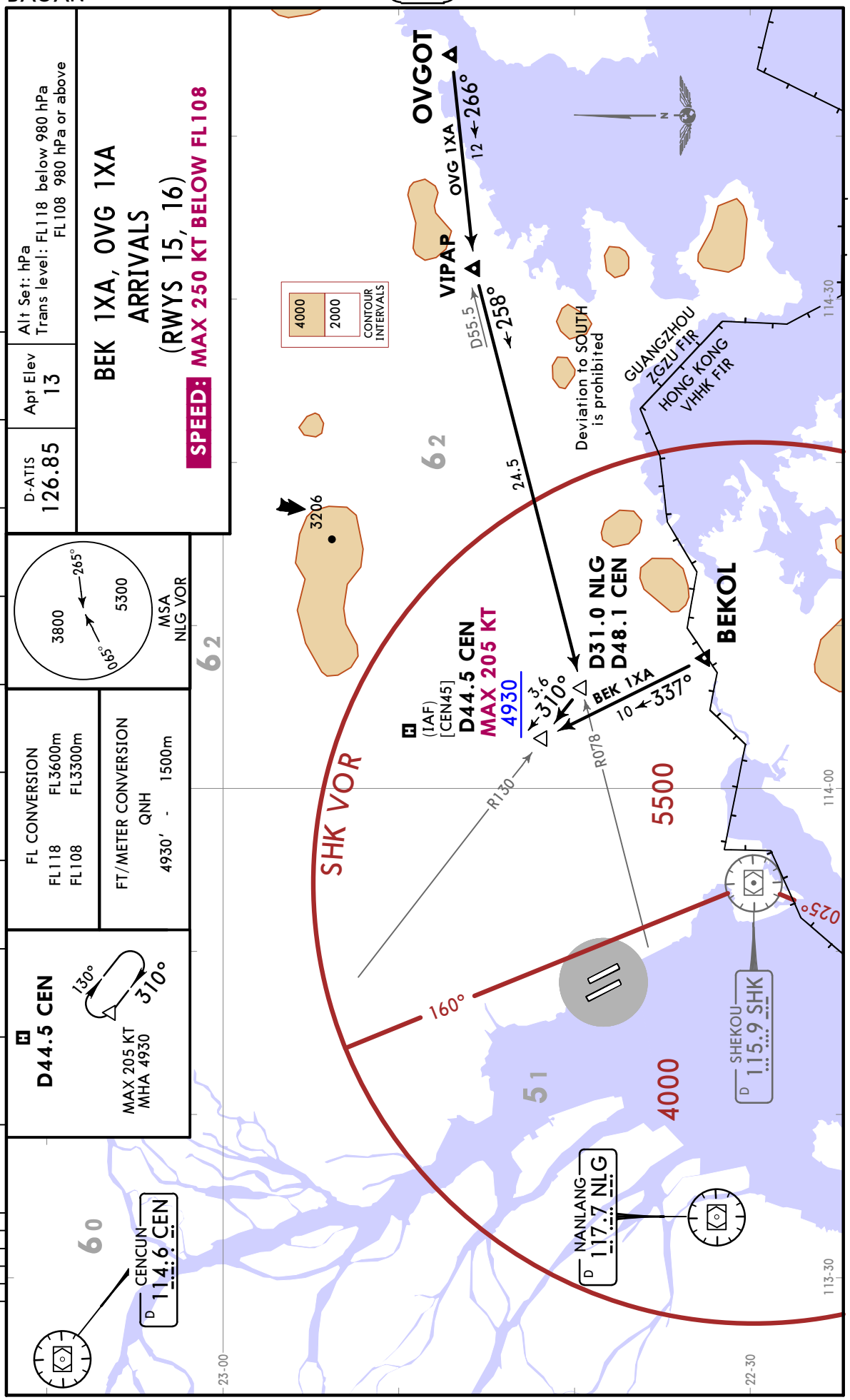
SPEED: MAX 250 KT BELOW FL108

STAR	ROUTING
LAN 8ZA	LANDA - GURIN (8860+) - SZ312 - SZ313 - SZ3Ø1 (K230; 8860 or by ATC) - SZ3Ø2 - SZ3Ø3 - SZ3Ø4 (K230; 8860 or by ATC) - NLG (K205; 4930+).
LOV 8ZA	LOVTA - GURIN (8860+) - SZ312 - SZ313 - SZ3Ø1 (K230; 8860 or by ATC) - SZ3Ø2 - SZ3Ø3 - SZ3Ø4 (K230; 8860 or by ATC) - NLG (K205; 4930+).
SAR 8ZA	SAREX - SZ3Ø5 (8860+) - SZ3Ø6 (K230; 7880 or by ATC) - SZ3Ø7 - SZ3Ø8 - SZ3Ø9 - SZ31Ø (K230; 7880 or by ATC) - NLG (K205; 4930+).

FL CONVERSION	
FL118	FL3600m
FL108	FL3300m

FT/METER CONVERSION QNH		
8860′	-	2700m
7880′	-	2400m
4930′	-	1500m

CHANGES: MSA.



CHANGES: STARs revised.

D-ATIS	Apt Elev	
126.85	13	Alt Set: hPa Trans level: FL118 below 980 hPa FL108 980 hPa or above

BEK 1ZA, OVG 1ZA ARRIVALS (RWYS 33, 34)

NOT AVAILABLE WHEN SHK VOR U/S

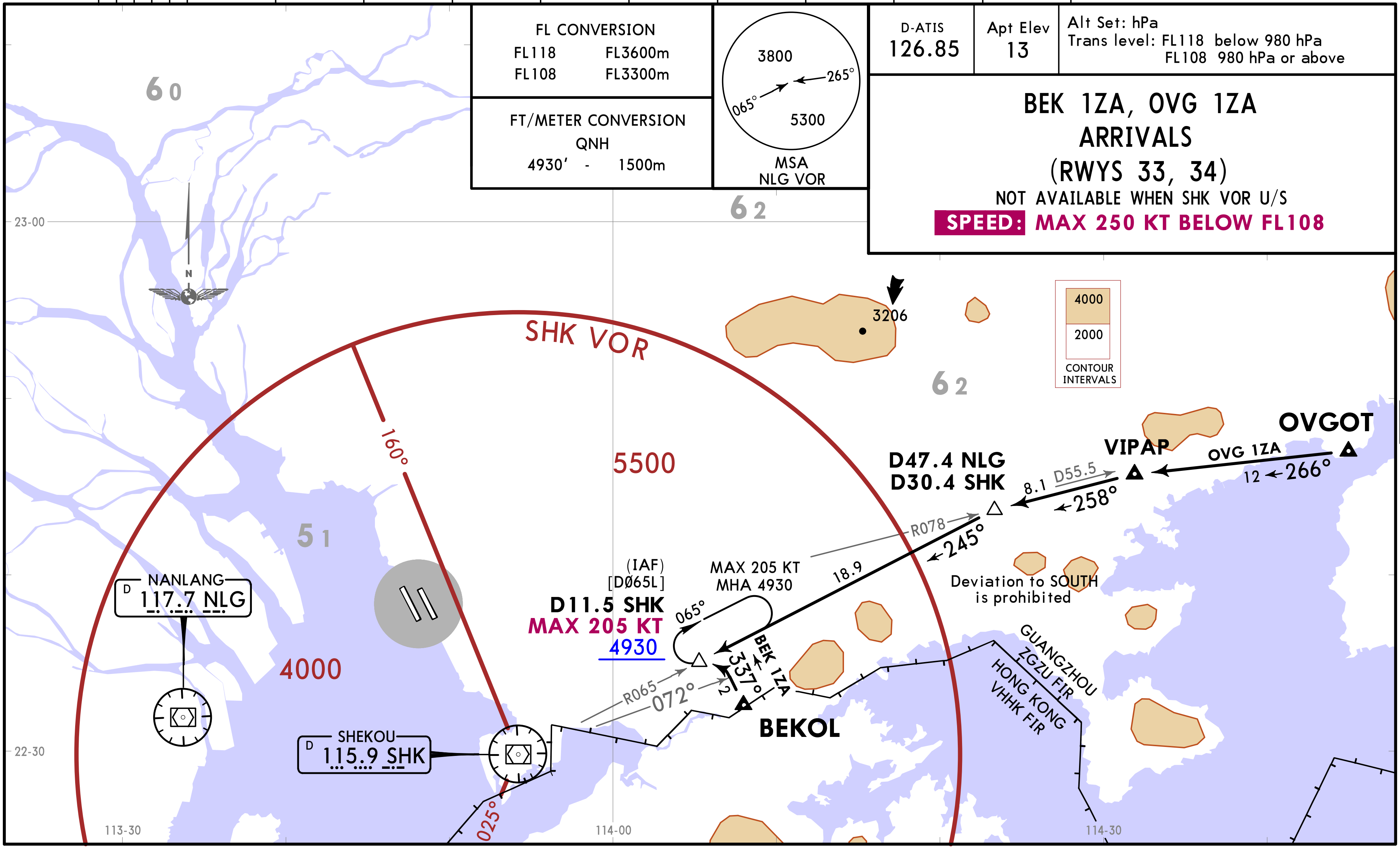
SPEED: MAX 250 KT BELOW FL108

MSA NLG VOR: 3800 (065°–265°), 5300

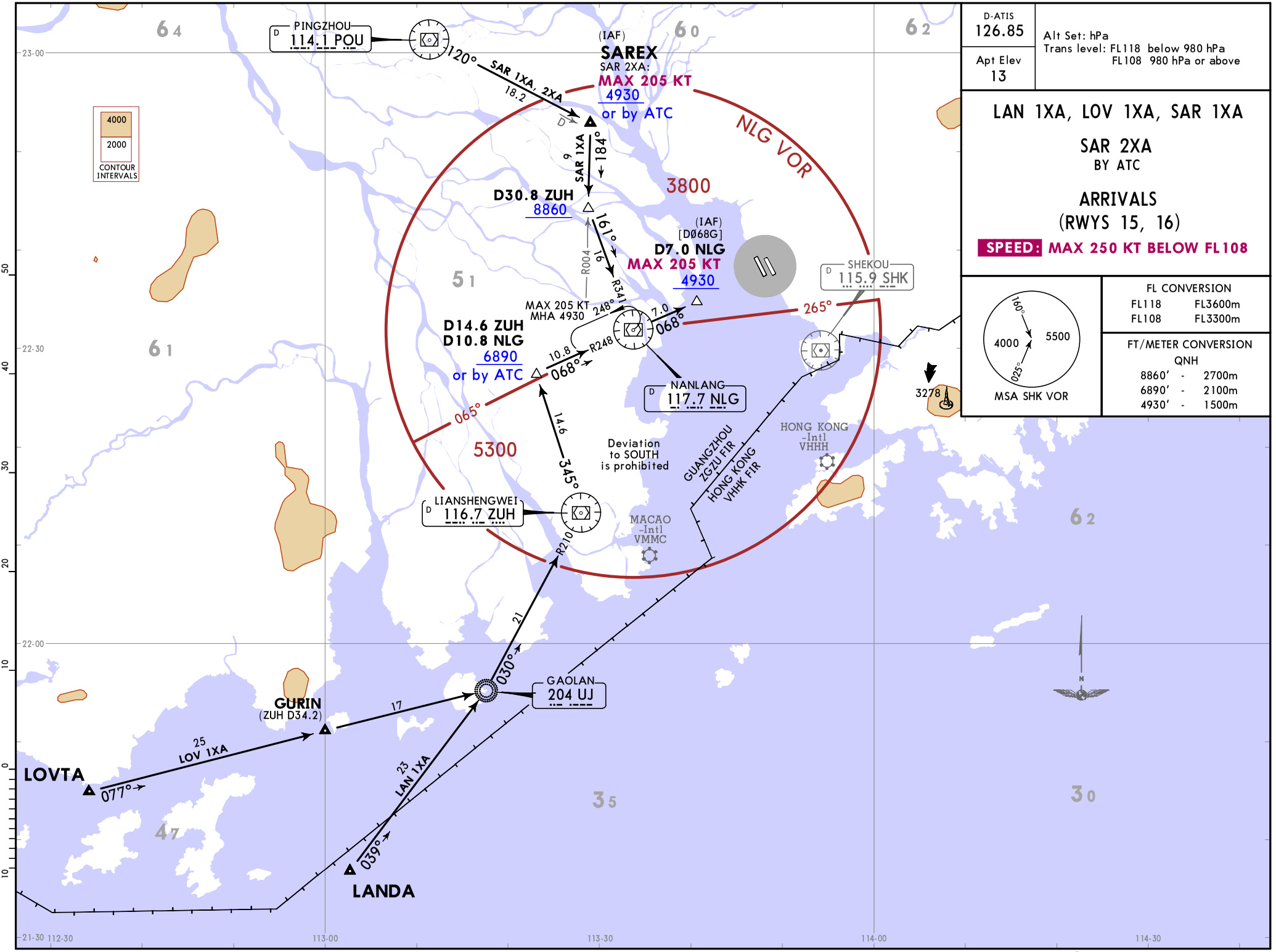
FL CONVERSION

FL118	FL3600m
FL108	FL3300m

FT/METER CONVERSION
QNH
4930' - 1500m



CHANGES: STARs withdrawn and revised.



D-ATIS	126.85
Apt Elev	13

Alt Set: hPa
Trans level: FL118 below 980 hPa
FL108 980 hPa or above

LAN 1XA, LOV 1XA, SAR 1XA

SAR 2XA
BY ATC

ARRIVALS
(RWYS 15, 16)

SPEED: MAX 250 KT BELOW FL108

MSA SHK VOR

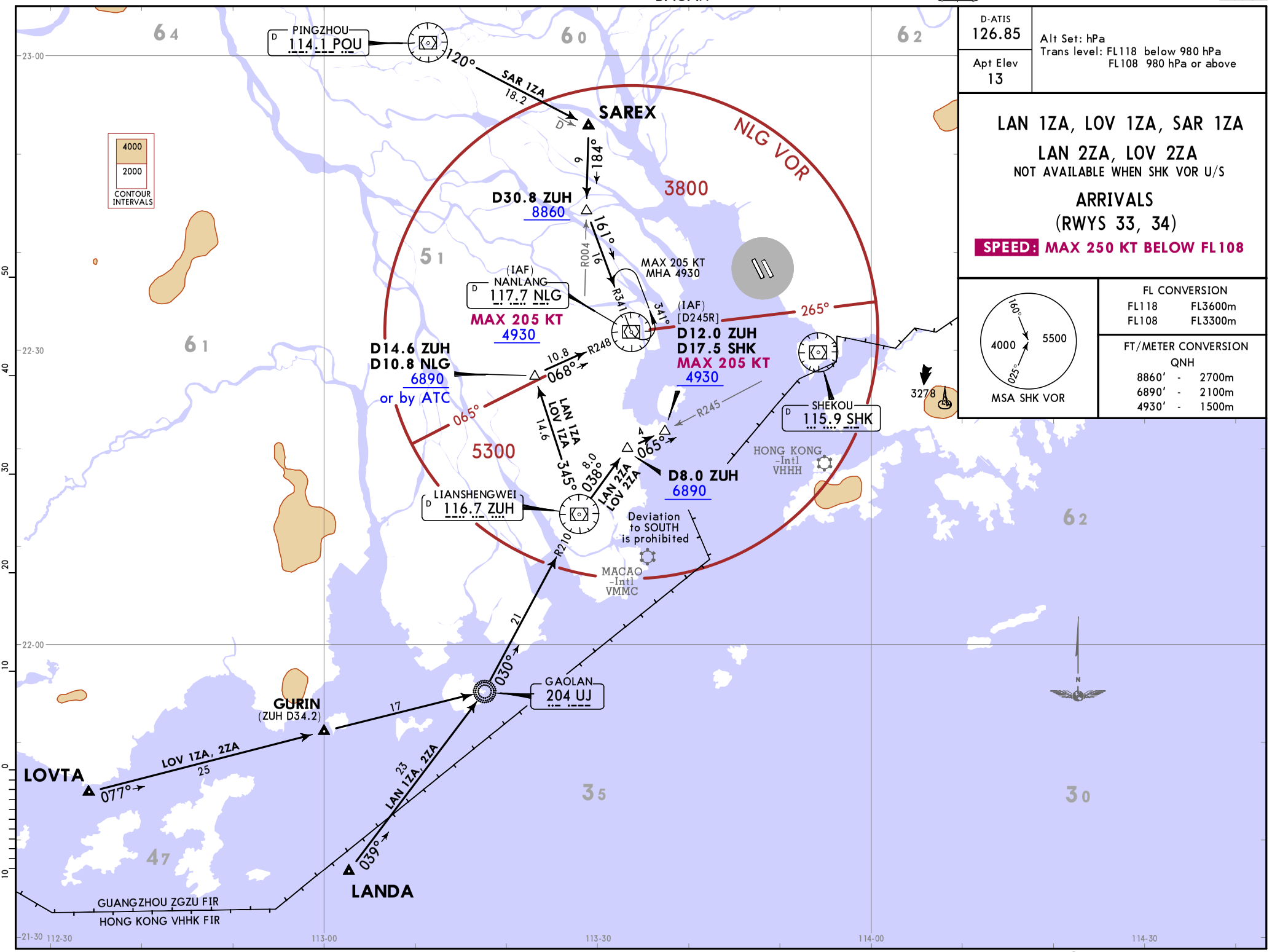
FL CONVERSION

FL118	FL3600m
FL108	FL3300m

FT/METER CONVERSION
QNH

8860′	-	2700m
6890′	-	2100m
4930′	-	1500m

CHANGES: Speed restrictions, MSA.



D-ATIS 126.85

Apt Elev 13

Alt Set: hPa
Trans level: FL118 below 980 hPa
FL108 980 hPa or above

LAN 1ZA, LOV 1ZA, SAR 1ZA
LAN 2ZA, LOV 2ZA
NOT AVAILABLE WHEN SHK VOR U/S

ARRIVALS
(RWYS 33, 34)

SPEED: MAX 250 KT BELOW FL108

MSA SHK VOR

FL CONVERSION	
FL118	FL3600m
FL108	FL3300m

FT/METER CONVERSION QNH		
8860′	-	2700m
6890′	-	2100m
4930′	-	1500m

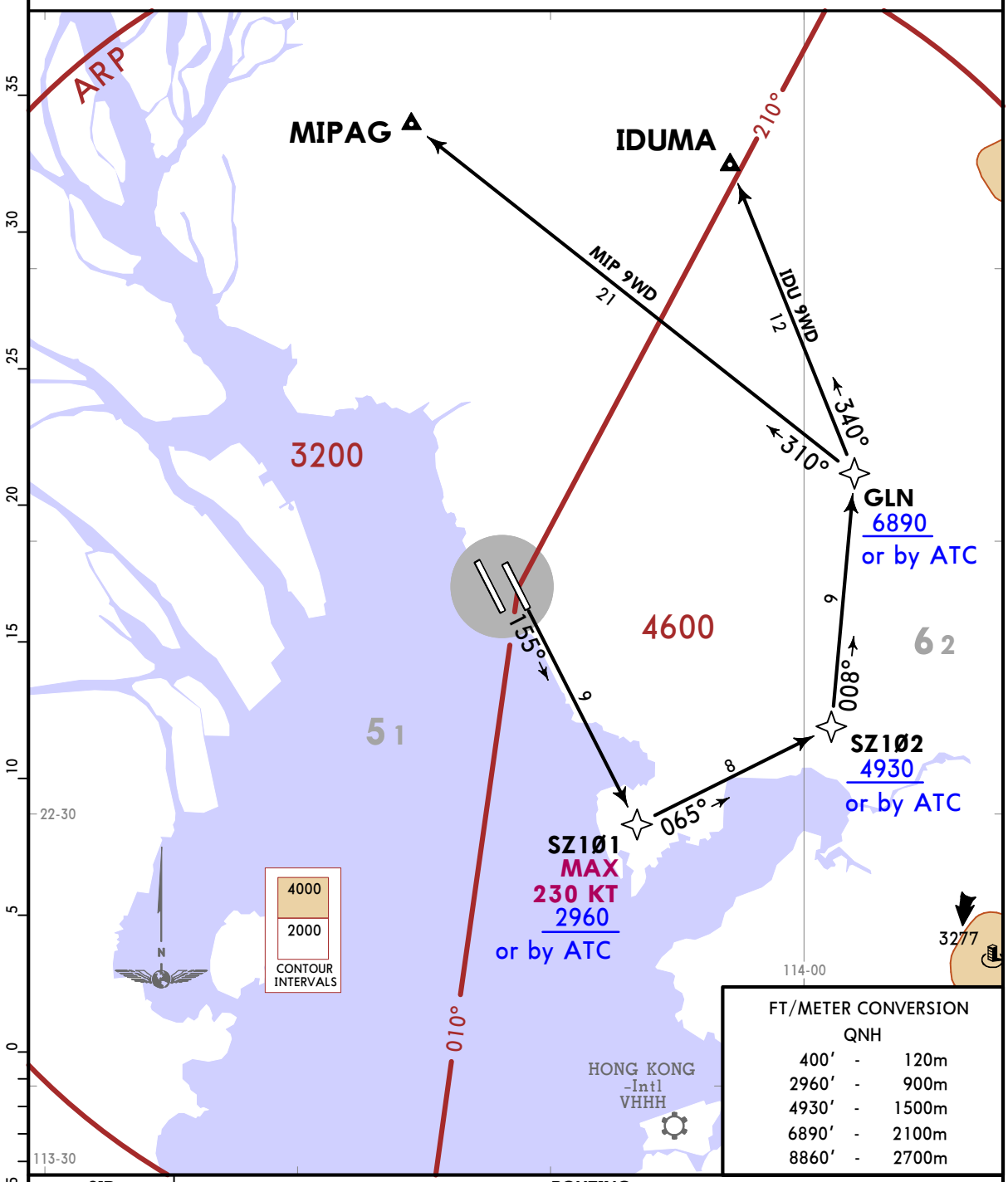
CHANGES: Speed restrictions, MSA.

BAOAN Tower		ZHUHAI Approach				
West (RWY 16/34)	*East (RWY 15/33)	*APP01	APP02	*APP03	*APP04	*APP05
118.45	130.35	120.35	119.55	123.85	119.025	127.95

Apt Elev		
13	RNP 1 GNSS	Trans alt: 8860 If unable to comply with RNP 1 operation requirements, inform Baoan Tower or Zhuhai Approach on first contact.

IDU 9WD, MIP 9WD
RNP DEPARTURES
(RWY 15)

DEVIATION TO SOUTH OF SZ101-SZ102 IS FORBIDDEN



SID	ROUTING
IDU 9WD	(400) - SZ101 (K230-; 2960+ or by ATC) - SZ102 (4930+ or by ATC) - GLN (6890+ or by ATC) - IDUMA.
MIP 9WD	(400) - SZ101 (K230-; 2960+ or by ATC) - SZ102 (4930+ or by ATC) - GLN (6890+ or by ATC) - MIPAG.

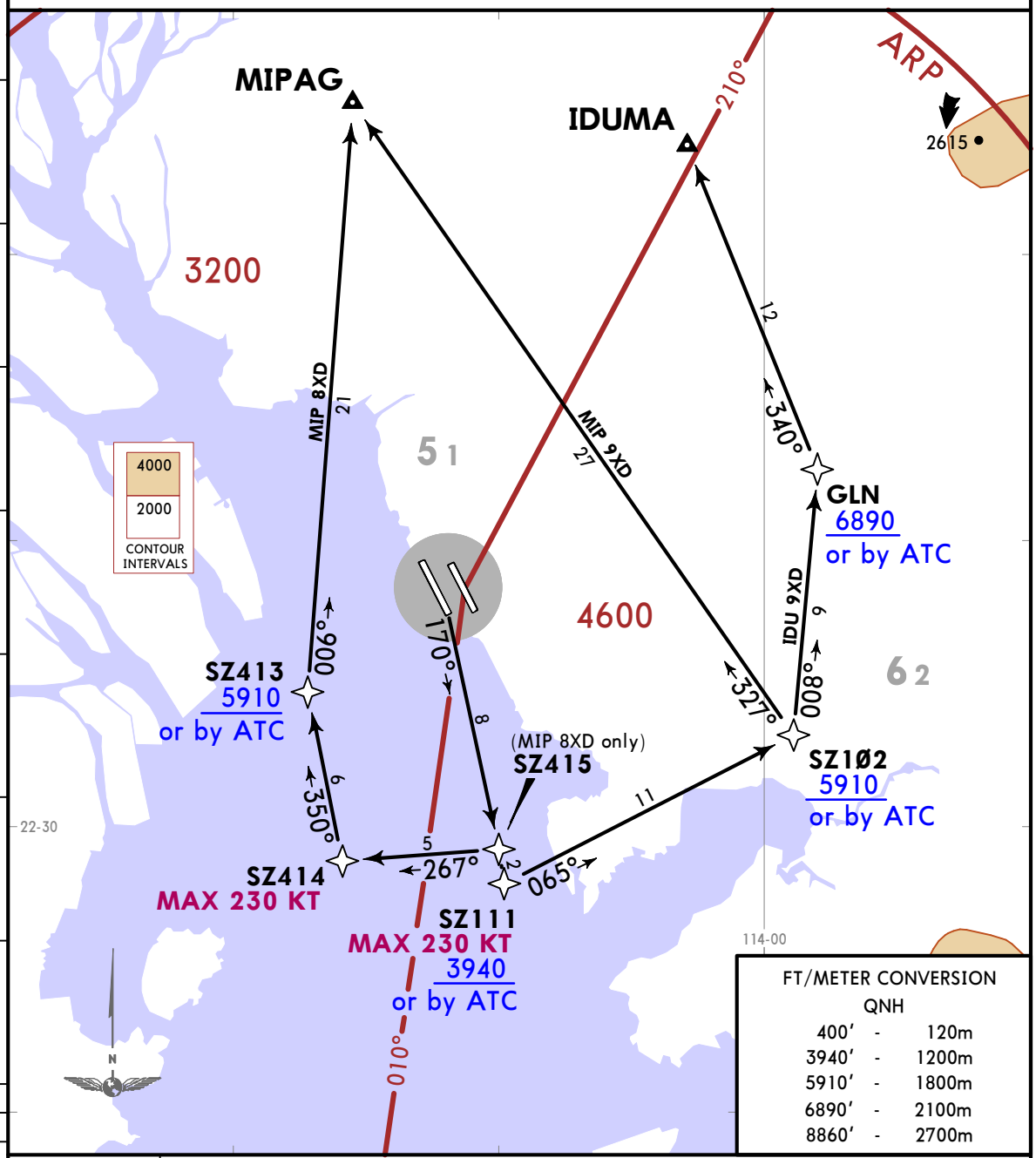
CHANGES: MSA.

BAOAN Tower		ZHUHAI Approach				
West (RWY 16/34)	*East (RWY 15/33)	*APP01	APP02	*APP03	*APP04	*APP05
118.45	130.35	120.35	119.55	123.85	119.025	127.95

Apt Elev		
13	RNP 1 GNSS	Trans alt: 8860 1. No turn before DER. 2. If unable to comply with RNP 1 operation requirements, inform Baoan Tower or Zhuhai Approach on first contact.

IDU 9XD, MIP 8XD, MIP 9XD
RNP DEPARTURES
(RWY 16)

DEVIATION TO SOUTH OF SZ101-SZ102 IS FORBIDDEN



FT/METER CONVERSION QNH		
400′	-	120m
3940′	-	1200m
5910′	-	1800m
6890′	-	2100m
8860′	-	2700m

SID	ROUTING
IDU 9XD ❶	(400) - SZ111 (K230-; 3940+ or by ATC) - SZ102 (5910+ or by ATC) - GLN (6890+ or by ATC) - IDUMA.
MIP 8XD By ATC	(400) - SZ415 - SZ414 (K230-) - SZ413 (5910+ or by ATC) - MIPAG.
MIP 9XD ❶	(400) - SZ111 (K230-; 3940+ or by ATC) - SZ102 (5910+ or by ATC) - MIPAG.

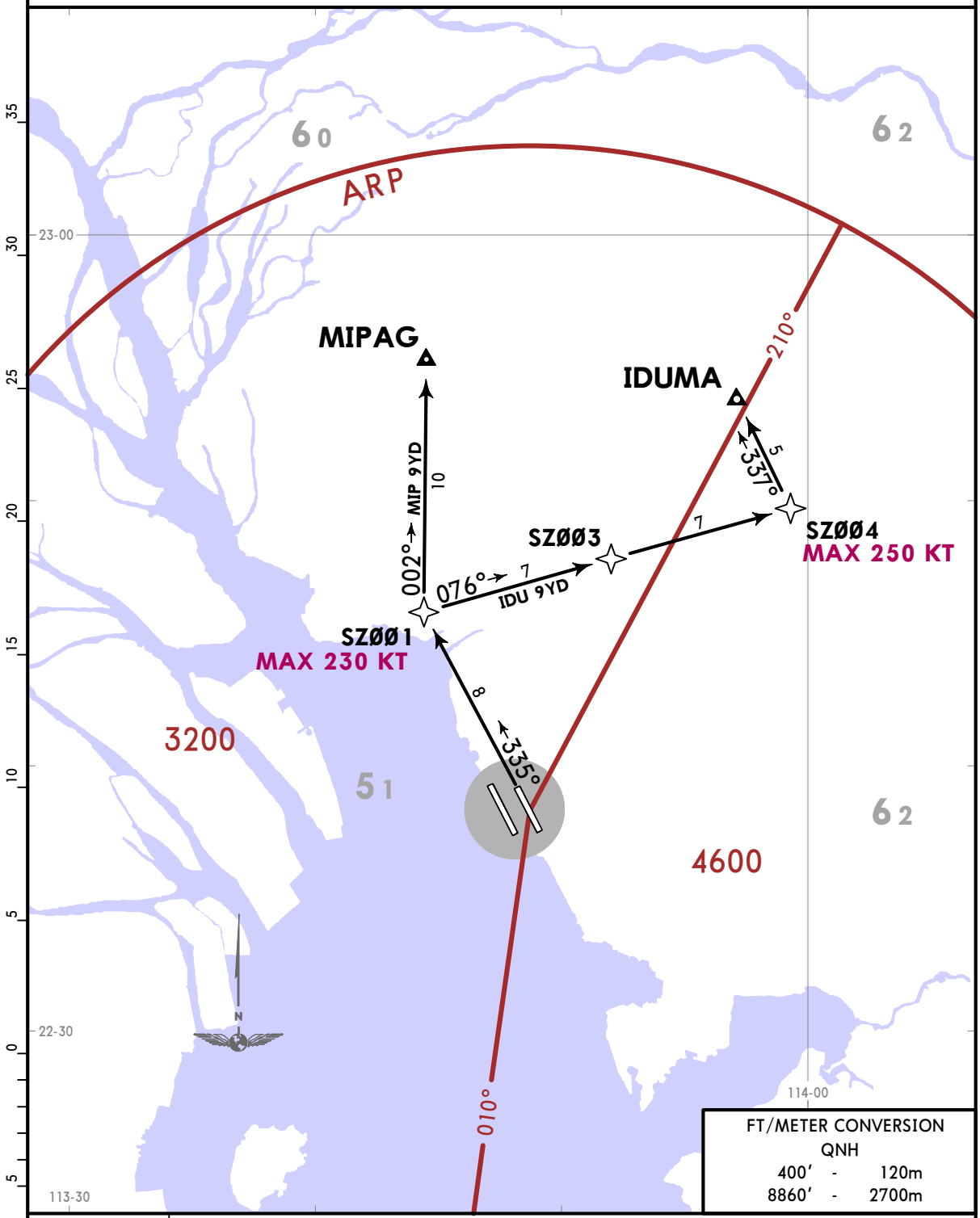
❶ When two RWYs are used for independent departure, RNAV SIDs need ATC clearance.

CHANGES: MSA.

BAOAN Tower		ZHUHAI Approach				
West (RWY 16/34)	*East (RWY 15/33)	*APP01	APP02	*APP03	*APP04	*APP05
118.45	130.35	120.35	119.55	123.85	119.025	127.95

Apt Elev		
13	RNP 1 GNSS	Trans alt: 8860 If unable to comply with RNP 1 operation requirements, inform Baoan Tower or Zhuhai Approach on first contact.

IDU 9YD, MIP 9YD
RNP DEPARTURES
(RWY 33)



FT/METER CONVERSION QNH		
400′	-	120m
8860′	-	2700m

SID	ROUTING
IDU 9YD	(400) - SZØØ1 (K230-) - SZØØ3 - SZØØ4 (K250-) - IDUMA.
MIP 9YD	(400) - SZØØ1 (K230-) - MIPAG.

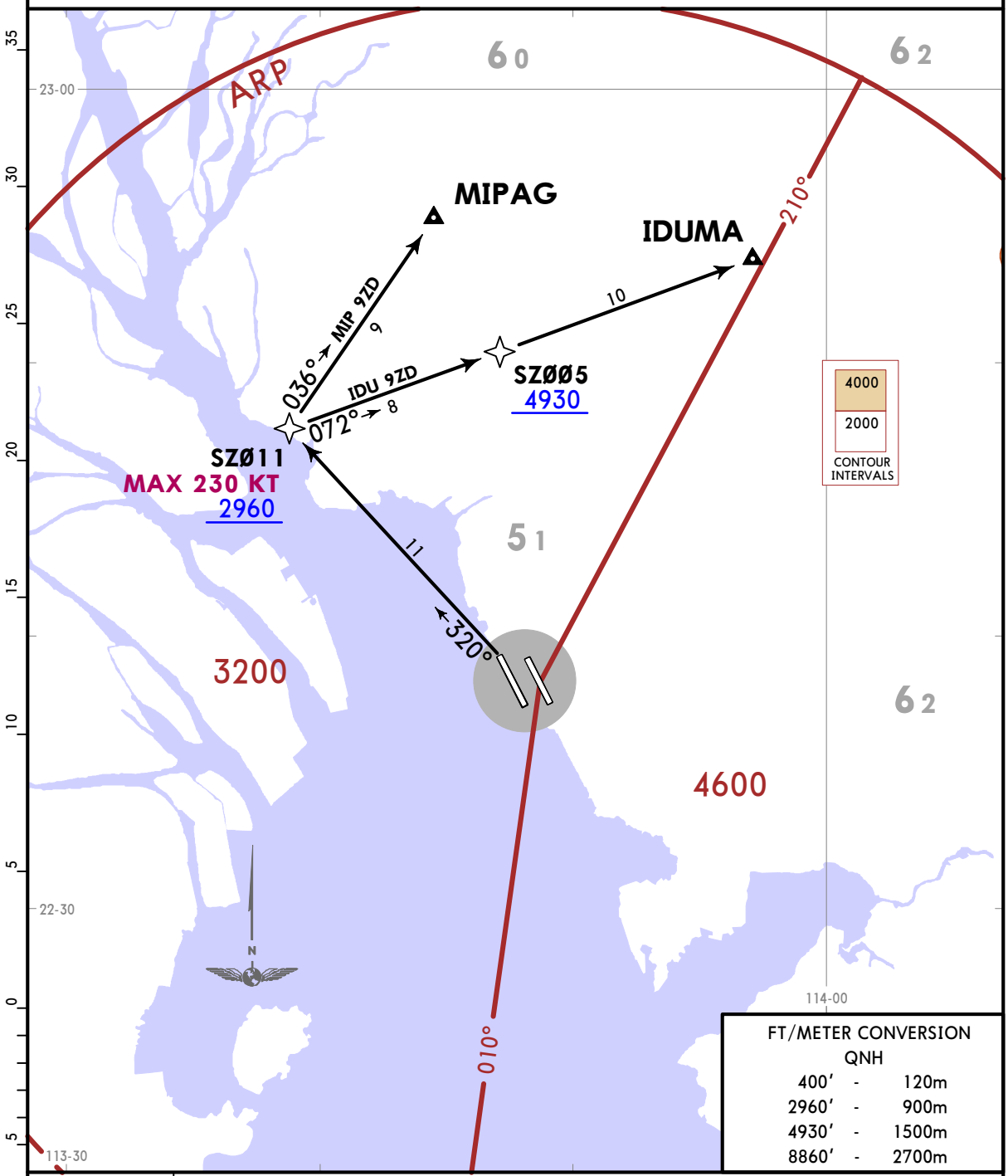
CHANGES: MSA.

BAOAN Tower		ZHUHAI Approach				
West (RWY 16/34)	*East (RWY 15/33)	*APP01	APP02	*APP03	*APP04	*APP05
118.45	130.35	120.35	119.55	123.85	119.025	127.95

Apt Elev		
13	RNP 1 GNSS	Trans alt: 8860 1. No turn before DER. 2. If unable to comply with RNP 1 operation requirements, inform Baoan Tower or Zhuhai Approach on first contact.

IDU 9ZD, MIP 9ZD
RNP DEPARTURES
(RWY 34)

WHEN TWO RUNWAYS ARE USED FOR INDEPENDENT DEPARTURE, RNAV SIDS NEED ATC CLEARANCE



FT/METER CONVERSION
QNH

400′	-	120m
2960′	-	900m
4930′	-	1500m
8860′	-	2700m

SID	ROUTING
IDU 9ZD	(400) - SZØ11 (K230-; 2960+) - SZØ05 (4930+) - IDUMA.
MIP 9ZD	(400) - SZØ11 (K230-; 2960+) - MIPAG.

CHANGES: MSA.

CHANGES: MSA.

BAOAN Tower

West (RWY 16/34)	*East (RWY 15/33)
118.45	130.35

ZHUHAI Approach

*APPØ1	APPØ2	*APPØ3	*APPØ4	*APPØ5
120.35	119.55	123.85	119.025	127.95

Apt Elev 13

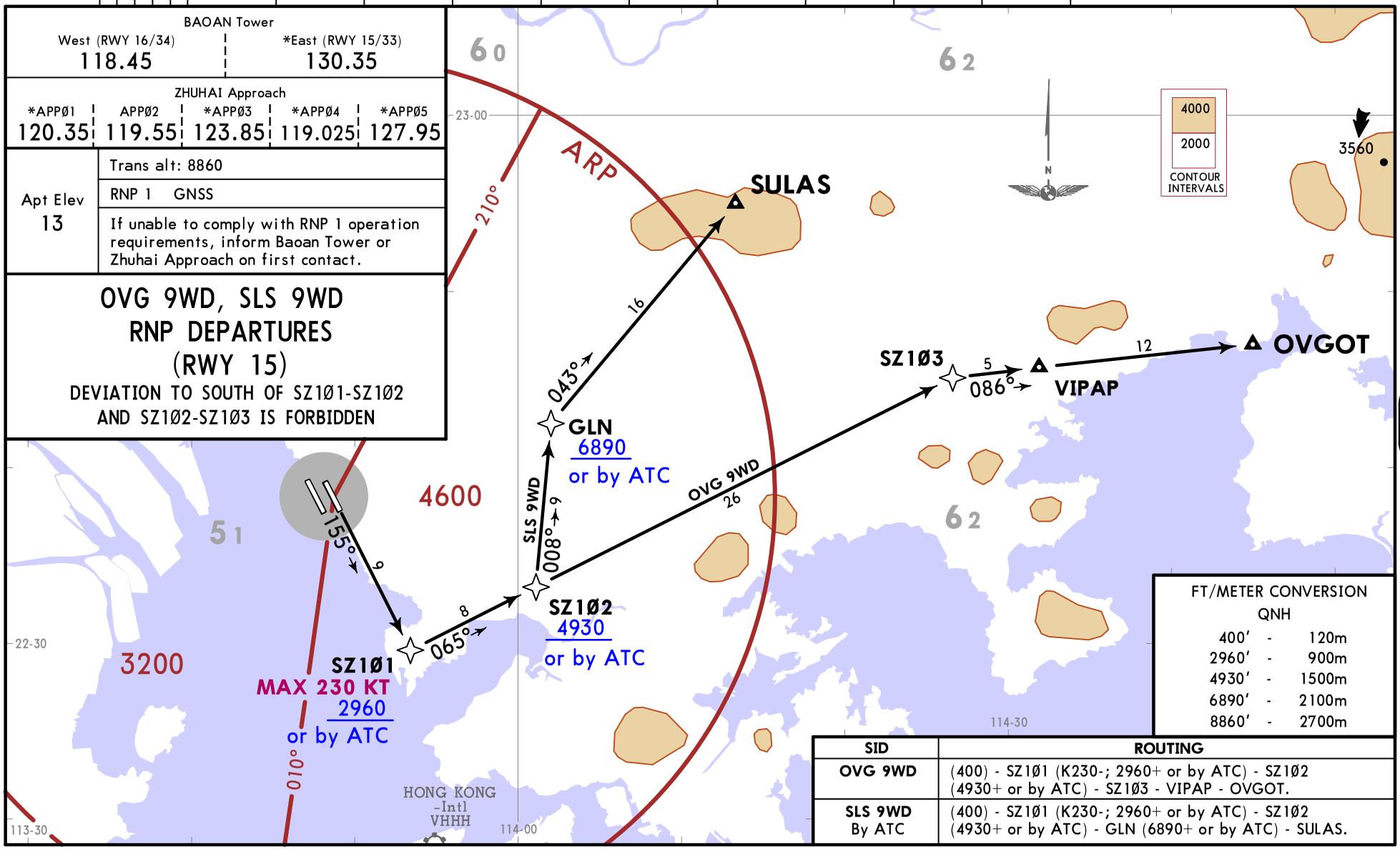
Trans alt: 8860

RNP 1 GNSS

If unable to comply with RNP 1 operation requirements, inform Baoan Tower or Zhuhai Approach on first contact.

OVG 9WD, SLS 9WD RNP DEPARTURES (RWY 15)

DEVIATION TO SOUTH OF SZ1Ø1-SZ1Ø2 AND SZ1Ø2-SZ1Ø3 IS FORBIDDEN



FT/METER CONVERSION
QNH

400′	-	120m
2960′	-	900m
4930′	-	1500m
6890′	-	2100m
8860′	-	2700m

SID	ROUTING
OVG 9WD	(400) - SZ1Ø1 (K230-; 2960+ or by ATC) - SZ1Ø2 (4930+ or by ATC) - SZ1Ø3 - VIPAP - OVGOT.
SLS 9WD By ATC	(400) - SZ1Ø1 (K230-; 2960+ or by ATC) - SZ1Ø2 (4930+ or by ATC) - GLN (6890+ or by ATC) - SULAS.

CHANGES: MSA.

BAOAN Tower

West (RWY 16/34)	*East (RWY 15/33)
118.45	130.35

ZHUHAI Approach

*APP01	APP02	*APP03	*APP04	*APP05
120.35	119.55	123.85	119.025	127.95

Apt Elev 13

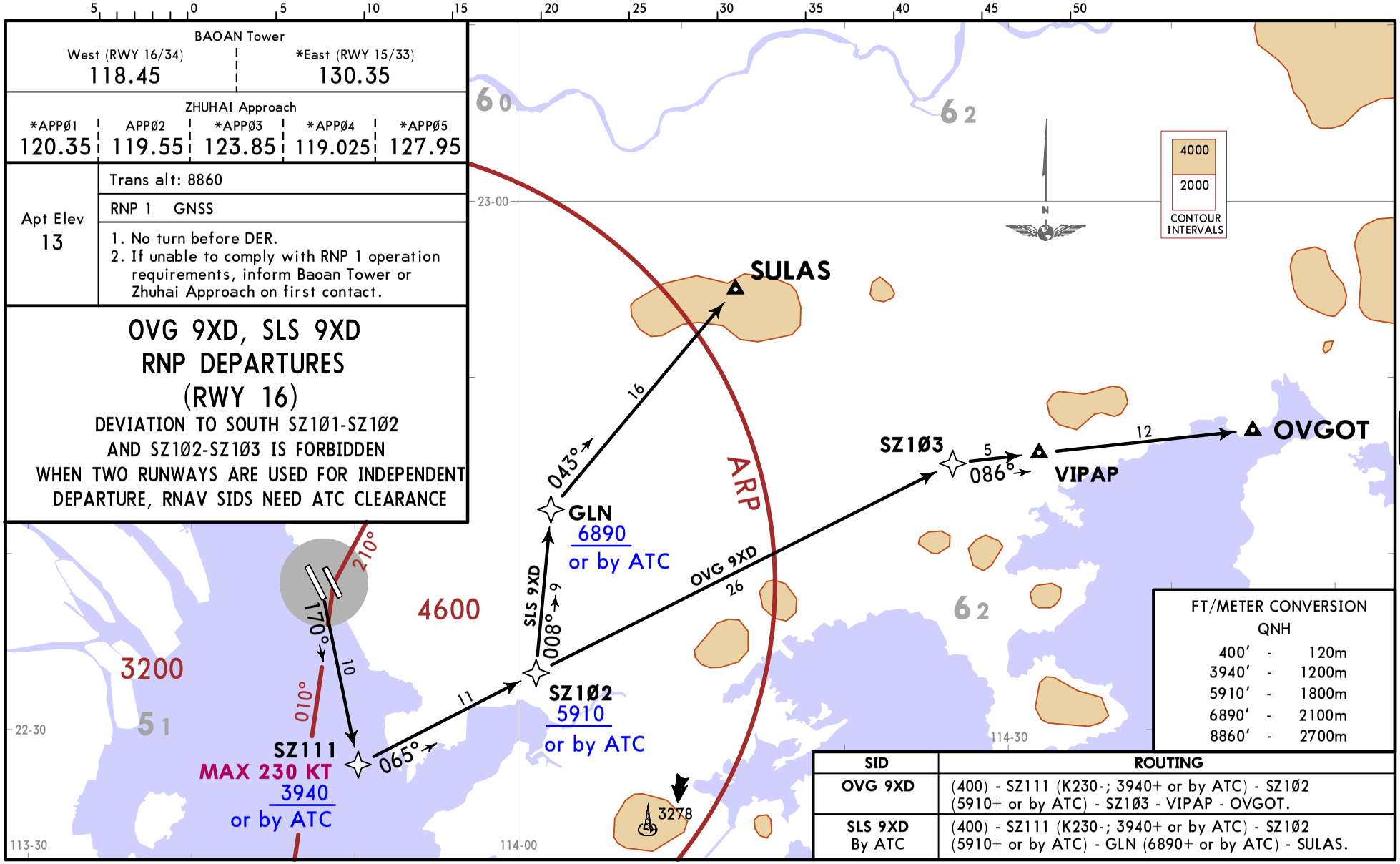
Trans alt: 8860

RNP 1 GNSS

1. No turn before DER.
2. If unable to comply with RNP 1 operation requirements, inform Baoan Tower or Zhuhai Approach on first contact.

OVG 9XD, SLS 9XD RNP DEPARTURES (RWY 16)

DEVIATION TO SOUTH SZ101-SZ102 AND SZ102-SZ103 IS FORBIDDEN WHEN TWO RUNWAYS ARE USED FOR INDEPENDENT DEPARTURE, RNAV SIDS NEED ATC CLEARANCE



FT/METER CONVERSION
QNH

400′	-	120m
3940′	-	1200m
5910′	-	1800m
6890′	-	2100m
8860′	-	2700m

SID	ROUTING
OVG 9XD	(400) - SZ111 (K230-; 3940+ or by ATC) - SZ102 (5910+ or by ATC) - SZ103 - VIPAP - OVGOT.
SLS 9XD By ATC	(400) - SZ111 (K230-; 3940+ or by ATC) - SZ102 (5910+ or by ATC) - GLN (6890+ or by ATC) - SULAS.

ZGSZ/SZX
BAOAN

JEPPESEN
23 JUN 23 (10-3F)

SHENZHEN, PR OF CHINA
RNAV SID

CHANGES: MSA.

BAOAN Tower

West (RWY 16/34)	*East (RWY 15/33)
118.45	130.35

ZHUHAI Approach

*APP01	APP02	*APP03	*APP04	*APP05
120.35	119.55	123.85	119.025	127.95

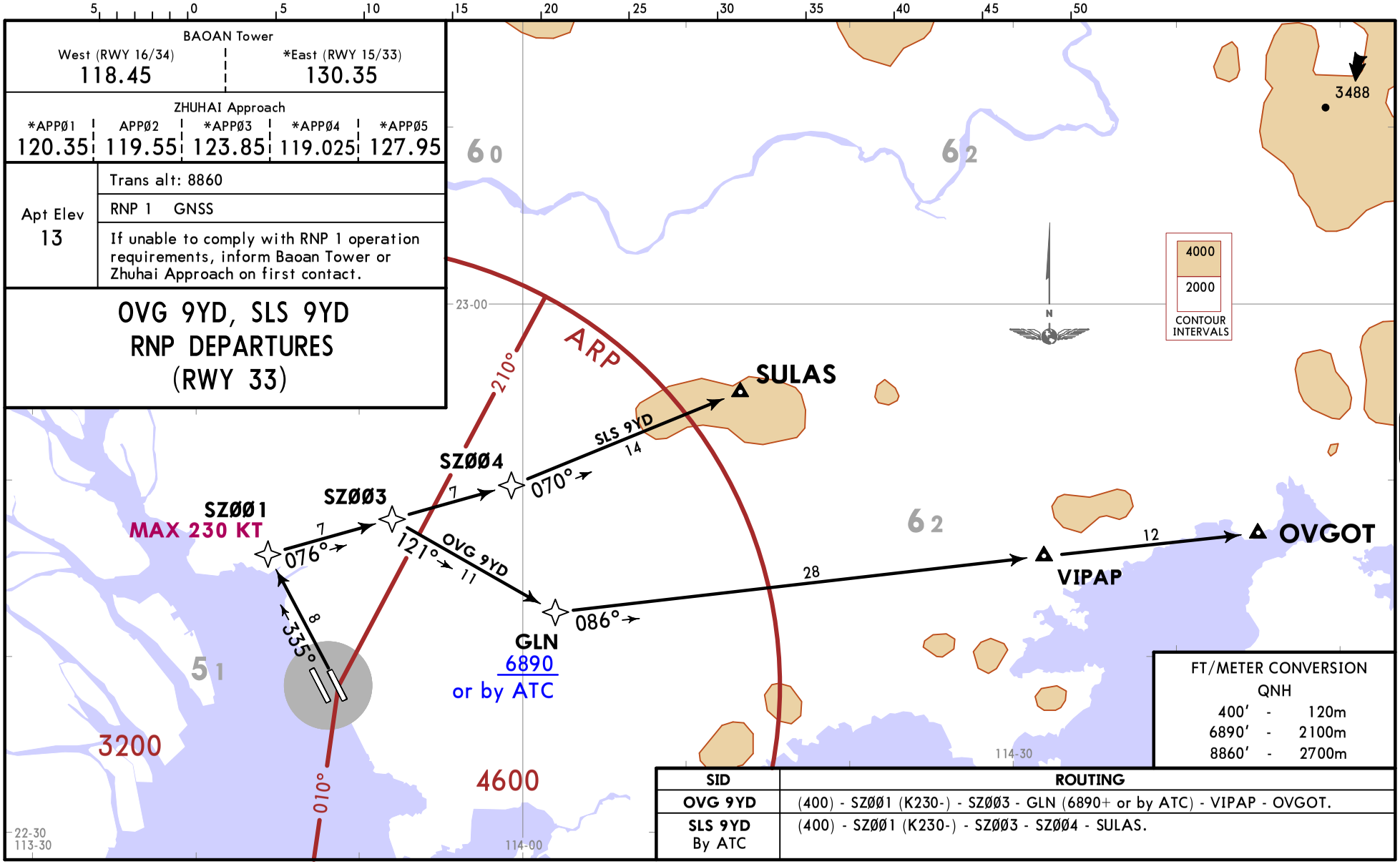
Apt Elev 13

Trans alt: 8860

RNP 1 GNSS

If unable to comply with RNP 1 operation requirements, inform Baoan Tower or Zhuhai Approach on first contact.

OVG 9YD, SLS 9YD RNP DEPARTURES (RWY 33)



FT/METER CONVERSION
QNH

400′	-	120m
6890′	-	2100m
8860′	-	2700m

SID	ROUTING
OVG 9YD	(400) - SZØØ1 (K230-) - SZØØ3 - GLN (6890+ or by ATC) - VIPAP - OVGOT.
SLS 9YD By ATC	(400) - SZØØ1 (K230-) - SZØØ3 - SZØØ4 - SULAS.

BAOAN Tower	
West (RWY 16/34)	*East (RWY 15/33)
118.45	130.35

ZHUHAI Approach				
*APPØ1	APPØ2	*APPØ3	*APPØ4	*APPØ5
120.35	119.55	123.85	119.025	127.95

Apt Elev
13

Trans alt: 8860

RNP 1 GNSS

1. No turn before DER.
2. If unable to comply with RNP 1 operation requirements, inform Baoan Tower or Zhuhai Approach on first contact.

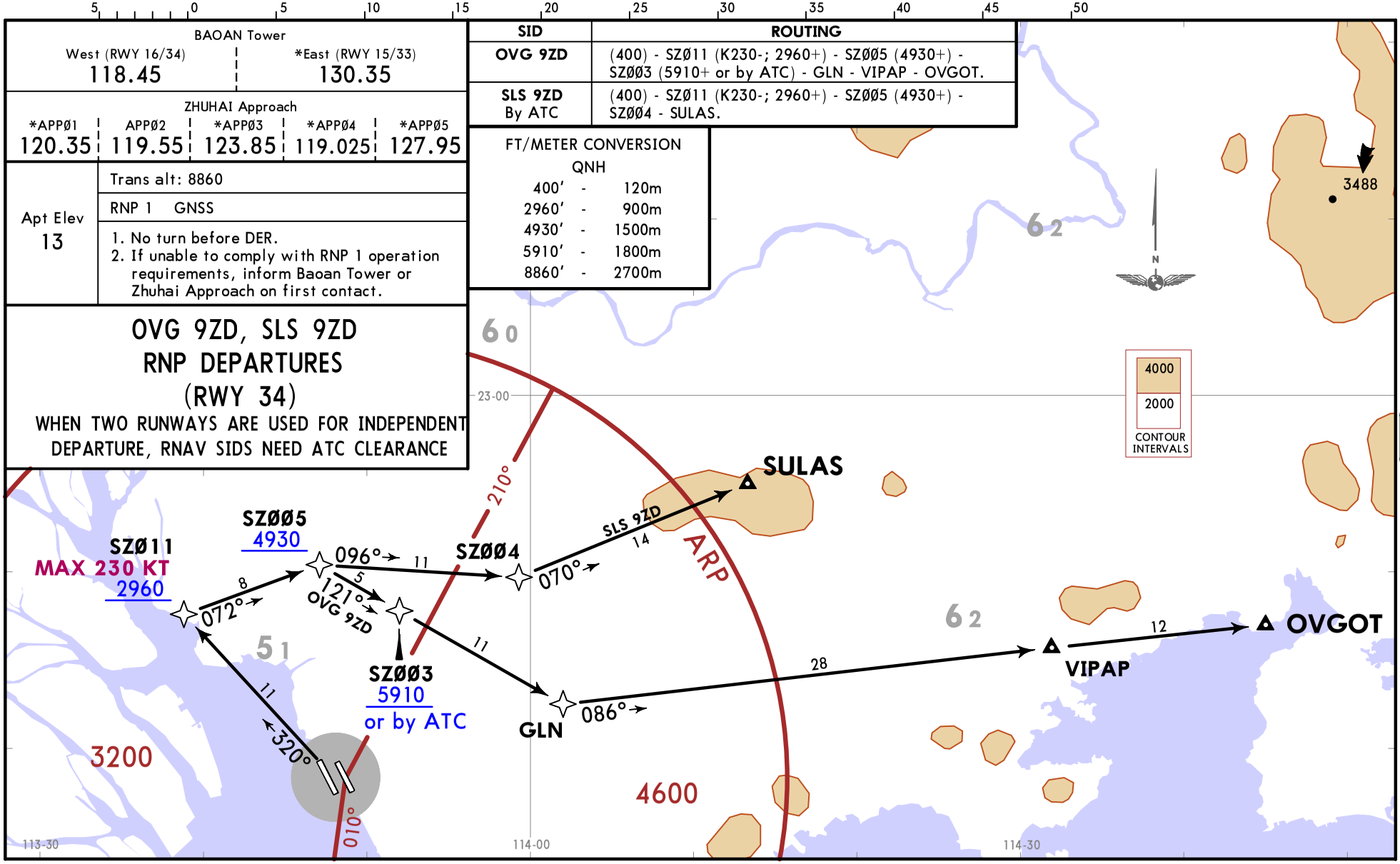
SID	ROUTING
OVG 9ZD	(400) - SZØ11 (K230-; 2960+) - SZØØ5 (4930+) - SZØØ3 (5910+ or by ATC) - GLN - VIPAP - OVGOT.
SLS 9ZD By ATC	(400) - SZØ11 (K230-; 2960+) - SZØØ5 (4930+) - SZØØ4 - SULAS.

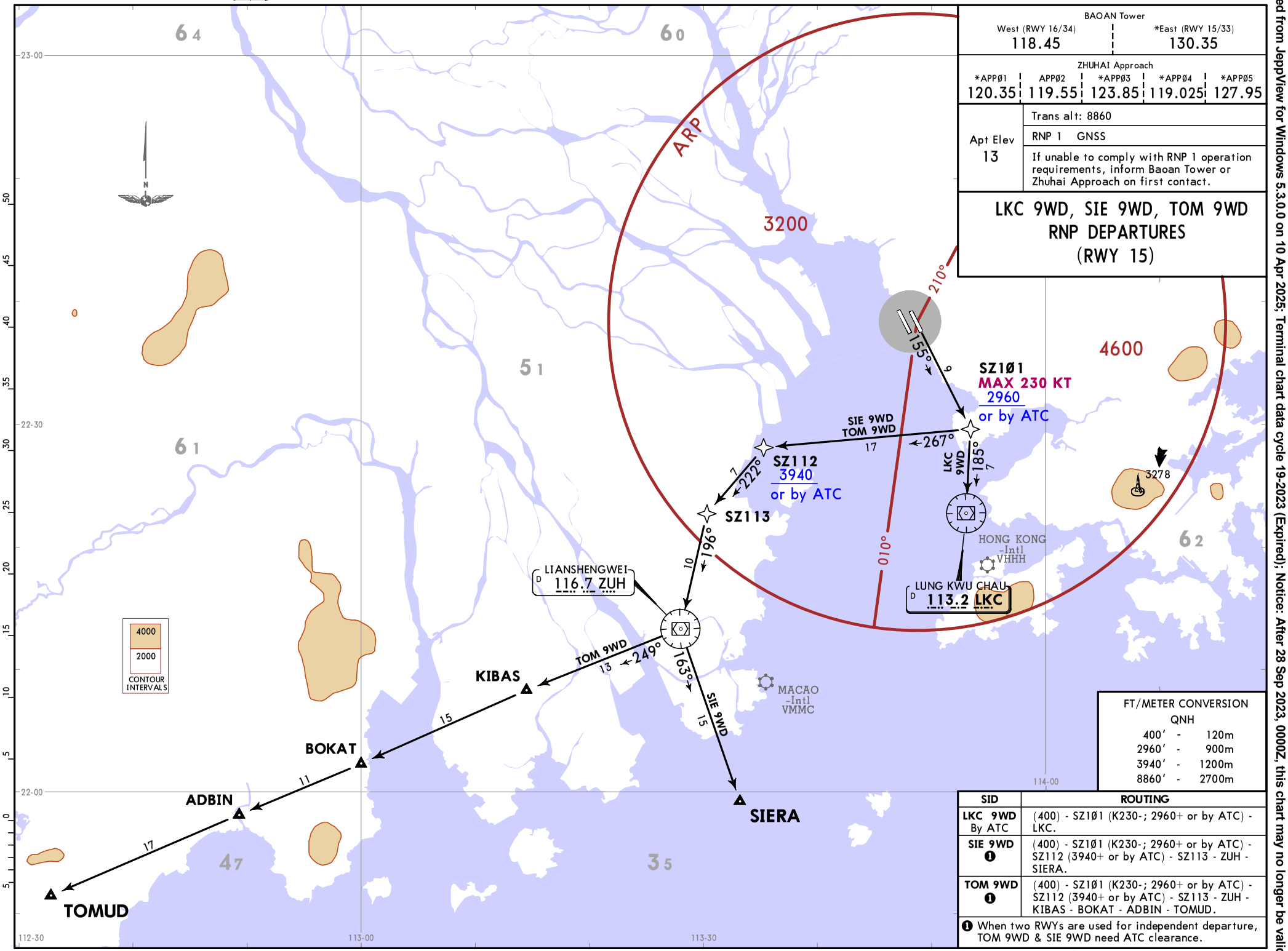
FT/METER CONVERSION
QNH

400′	-	120m
2960′	-	900m
4930′	-	1500m
5910′	-	1800m
8860′	-	2700m

OVG 9ZD, SLS 9ZD RNP DEPARTURES (RWY 34)

WHEN TWO RUNWAYS ARE USED FOR INDEPENDENT DEPARTURE, RNAV SIDS NEED ATC CLEARANCE





BAOAN Tower

West (RWY 16/34)	*East (RWY 15/33)
118.45	130.35

ZHUHAI Approach

*APP01	APP02	*APP03	*APP04	*APP05
120.35	119.55	123.85	119.025	127.95

Apt Elev 13

Trans alt: 8860

RNP 1 GNSS

If unable to comply with RNP 1 operation requirements, inform Baoan Tower or Zhuhai Approach on first contact.

LKC 9WD, SIE 9WD, TOM 9WD RNP DEPARTURES (RWY 15)

FT/METER CONVERSION
QNH

400'	-	120m
2960'	-	900m
3940'	-	1200m
8860'	-	2700m

SID	ROUTING
LKC 9WD By ATC	(400) - SZ101 (K230-; 2960+ or by ATC) - LKC.
SIE 9WD ❶	(400) - SZ101 (K230-; 2960+ or by ATC) - SZ112 (3940+ or by ATC) - SZ113 - ZUH - SIERA.
TOM 9WD ❶	(400) - SZ101 (K230-; 2960+ or by ATC) - SZ112 (3940+ or by ATC) - SZ113 - ZUH - KIBAS - BOKAT - ADBIN - TOMUD.

❶ When two RWYs are used for independent departure, TOM 9WD & SIE 9WD need ATC clearance.

CHANGES: MSA.

BAOAN Tower	
West (RWY 16/34)	*East (RWY 15/33)
118.45	130.35

ZHUHAI Approach				
*APPØ1	APPØ2	*APPØ3	*APPØ4	*APPØ5
120.35	119.55	123.85	119.025	127.95

Apt Elev 13

Trans alt: 8860

RNP 1 GNSS

1. No turn before DER.
2. If unable to comply with RNP 1 operation requirements, inform Baoan Tower or Zhuhai Approach on first contact.

LKC 9XD, SIE 9XD, TOM 9XD RNP DEPARTURES (RWY 16)

ARP

3200

4600

210°

170°

8

(SIE 9XD, TOM 9XD only)

SZ415

MAX 230 KT

14

267°

2

SZ111

MAX 230 KT

3940

or by ATC

SZ112

3940

or by ATC

7

222°

SZ113

6

156°

LKC 9XD

010°

196°

10

3278

HONG KONG -Intl VHHH

LUNG KWU CHAU

D 113.2 LKC

LIANSHENGWEI

D 116.7 ZUH

TOM 9XD

13

249°

163°

SIE 9XD

15

KIBAS

BOKAT

15

11

ADBIN

17

TOMUD

SIERA

MACAO -Intl VMMC

4000

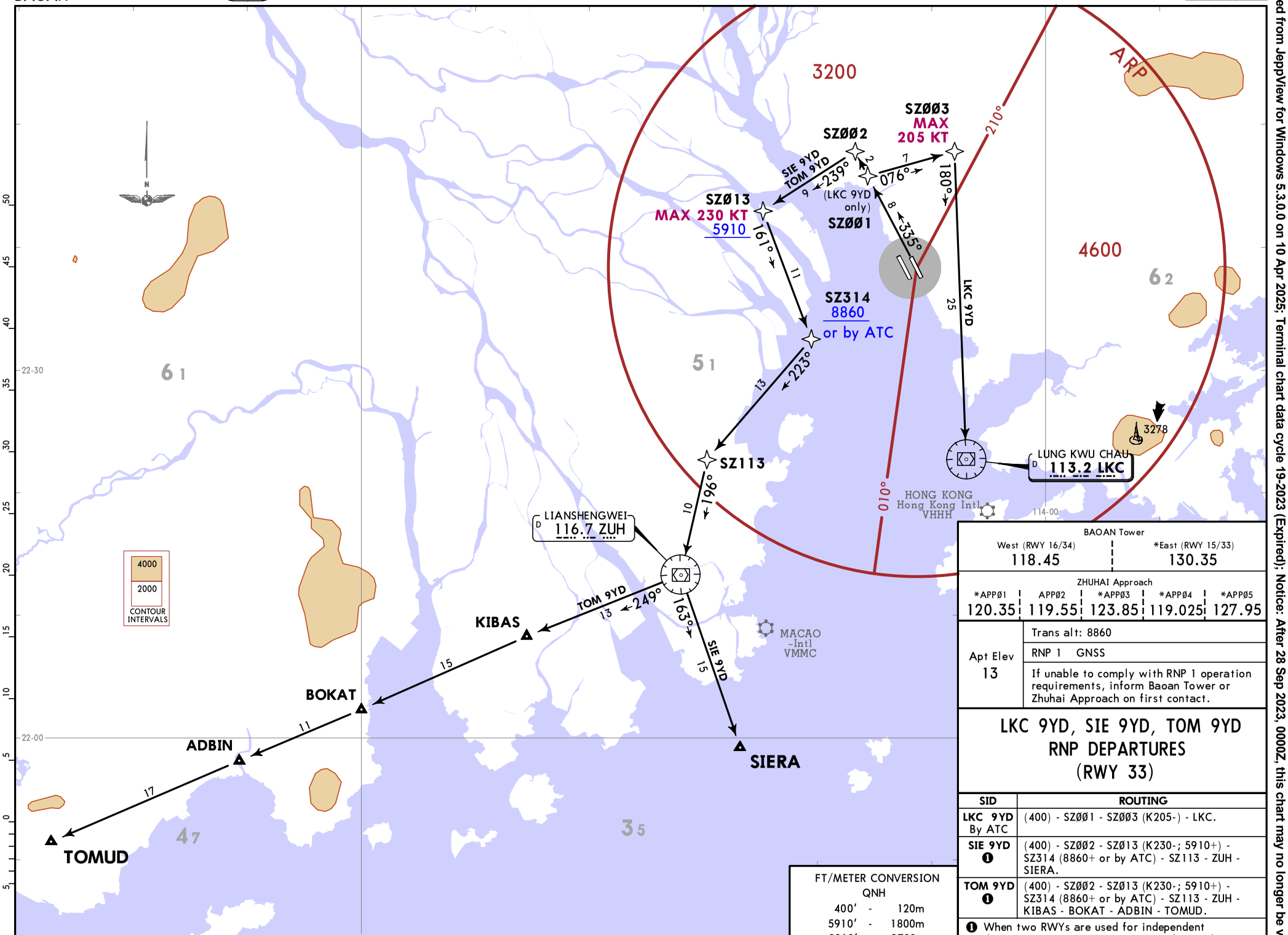
2000

CONTOUR INTERVALS

FT/METER CONVERSION QNH		
400′	-	120m
3940′	-	1200m
8860′	-	2700m

SID	ROUTING
LKC 9XD By ATC	(400) - SZ111 (K230-; 3940+ or by ATC) - LKC.
SIE 9XD	(400) - SZ415 (K230-) - SZ112 (3940+ or by ATC) - SZ113 - ZUH - SIERA.
TOM 9XD	(400) - SZ415 (K230-) - SZ112 (3940+ or by ATC) - SZ113 - ZUH - KIBAS - BOKAT - ADBIN - TOMUD.

CHANGES: MSA.



BAOAN Tower	
West (RWY 16/34)	*East (RWY 15/33)
118.45	130.35

ZHUHAI Approach				
*APPØ1	APPØ2	*APPØ3	*APPØ4	*APPØ5
120.35	119.55	123.85	119.025	127.95

Apt Elev	
13	Trans alt: 8860
	RNP 1 GNSS
	If unable to comply with RNP 1 operation requirements, inform Baoan Tower or Zhuhai Approach on first contact.

LKC 9YD, SIE 9YD, TOM 9YD RNP DEPARTURES (RWY 33)

SID	ROUTING
LKC 9YD By ATC	(400) - SZØØ1 - SZØØ3 (K205-) - LKC.
SIE 9YD ❶	(400) - SZØØ2 - SZØ13 (K230-; 5910+) - SZ314 (8860+ or by ATC) - SZ113 - ZUH - SIERA.
TOM 9YD ❶	(400) - SZØØ2 - SZØ13 (K230-; 5910+) - SZ314 (8860+ or by ATC) - SZ113 - ZUH - KIBAS - BOKAT - ADBIN - TOMUD.

❶ When two RWYs are used for independent departure, SIE 9YD & TOM 9YD need ATC clearance.

FT/METER CONVERSION QNH	
400' -	120m
5910' -	1800m
8860' -	2700m

CHANGES: MSA.

BAOAN Tower	
West (RWY 16/34)	*East (RWY 15/33)
118.45	130.35

ZHUHAI Approach				
*APPØ1	APPØ2	*APPØ3	*APPØ4	*APPØ5
120.35	119.55	123.85	119.025	127.95

Apt Elev	
13	Trans alt: 8860
	RNP 1 GNSS
	1. No turn before DER.
	2. If unable to comply with RNP 1 operation requirements, inform Baoan Tower or Zhuhai Approach on first contact.

LKC 9ZD, SIE 9ZD, TOM 9ZD RNP DEPARTURES (RWY 34)

ARP
3200
4600
010°
210°
SZØ12
(LKC 9ZD only)
SZØ21
MAX 230 KT
SZØ13
MAX 230 KT
5910
SZ314
8860
or by ATC
SZ113
SIE 9ZD
TOM 9ZD
239°
161°
223°
196°
320°
LKC 9ZD
LIANSHENGWEI
D 116.7 ZUH
LUNG KWU CHAU
D 113.2 LKC
HONG KONG -Intl VHHH
MACAO -Intl VMMC
3278
KIBAS
BOKAT
ADBIN
TOMUD
SIERA
TOM 9ZD
249°
163°
SIE 9ZD
CONTOUR INTERVALS
4000
2000

FT/METER CONVERSION QNH		
400′	-	120m
5910′	-	1800m
8860′	-	2700m

SID	ROUTING
LKC 9ZD By ATC	(400) - SZØ21 (K230-) - LKC.
SIE 9ZD	(400) - SZØ12 - SZØ13 (K230-; 5910+) - SZ314 (8860+ or by ATC) - SZ113 - ZUH - SIERA.
TOM 9ZD	(400) - SZØ12 - SZØ13 (K230-; 5910+) - SZ314 (8860+ or by ATC) - SZ113 - ZUH - KIBAS - BOKAT - ADBIN - TOMUD.

CHANGES: MSA.

Apt Elev 13

Trans alt: 8860

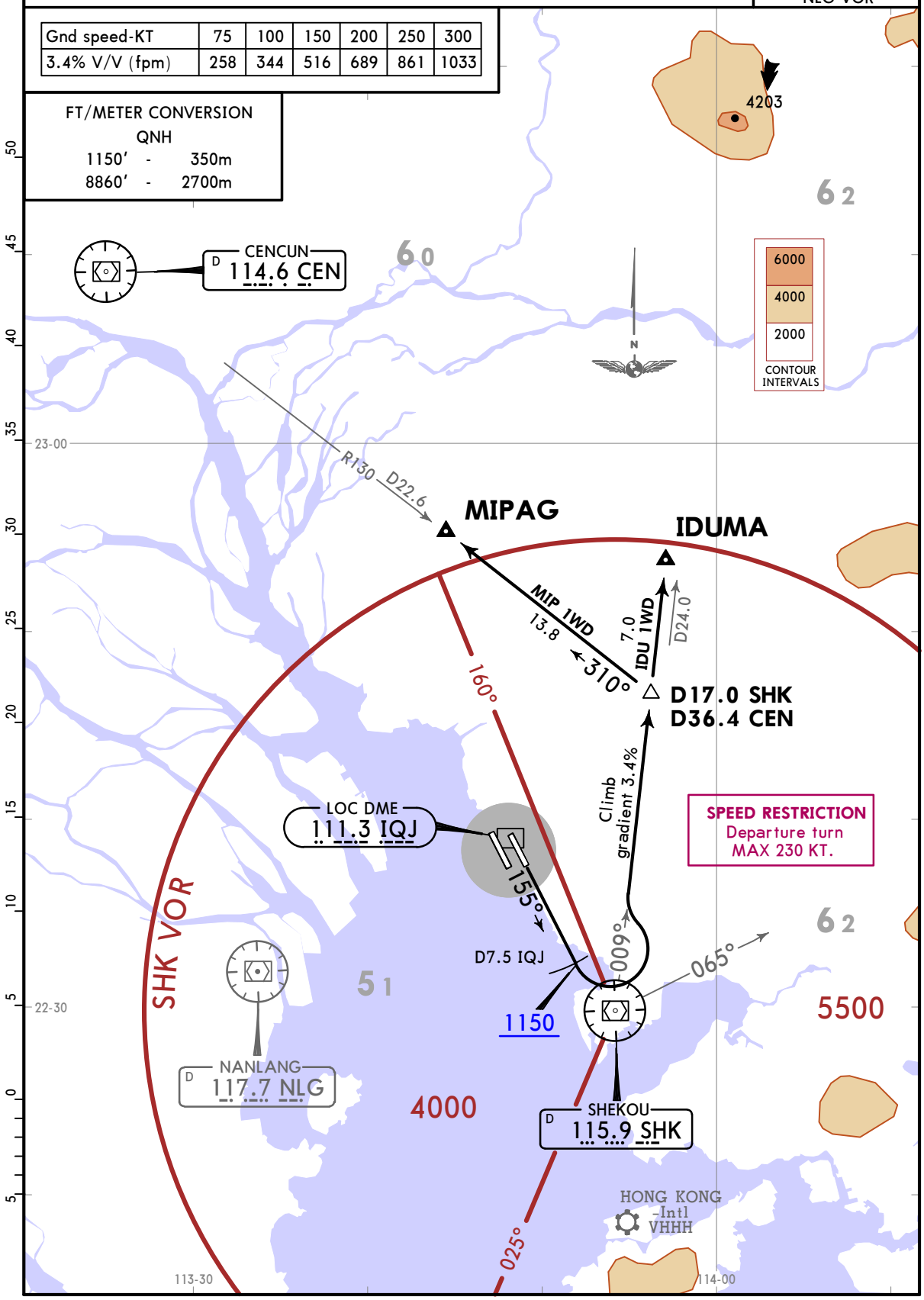
IDU 1WD, MIP 1WD DEPARTURES (RWY 15)

DEVIATION TO SOUTH OF SHK R065 IS FORBIDDEN

MSA NLG VOR
3800
265°
065°
5300

Gnd speed-KT	75	100	150	200	250	300
3.4% V/V (fpm)	258	344	516	689	861	1033

FT/METER CONVERSION
QNH
1150′ - 350m
8860′ - 2700m



CHANGES: SIDs revised, MSA.

Apt Elev 13

Trans alt: 8860
No turn before DER.

IDU 1XD, MIP 1XD DEPARTURES (RWY 16)

DEVIATION TO SOUTH OF SHK R065 IS FORBIDDEN WHEN TWO RUNWAYS ARE USED FOR INDEPENDENT DEPARTURE, ATC CLEARANCE IS NEEDED

MSA
NLG VOR
3800
265°
065°
5300

FT/METER CONVERSION
QNH
1150' - 350m
8860' - 2700m

CONTOUR INTERVALS
6000
4000
2000

CENCUN
D 114.6 CEN

4203

R130 D22.6

MIPAG

IDUMA

MIP 1XD
13.8
310°

7.0
IDU 1XD
D24.0

D17.0 SHK
D36.4 CEN

LOC DME
108.1 ISZ

SPEED RESTRICTION
Departure turn
MAX 230 KT.

160°

170°

SHK VOR

D7.4 ISZ

1150

SHK
009°

065°

5500

NANLANG
D 117.7 NLG

4000

SHEKOU
D 115.9 SHK

HONG KONG
Intl
VHHH

025°

23-00
22-30
113-30
114-00

CHANGES: SIDs revised, MSA.

Apt Elev
13

Trans alt: 8860

IDU 1YD, MIP 1YD DEPARTURES (RWY 33)

MSA
NLG VOR
3800
265°
065°
5300

4203

6000
4000
2000
CONTOUR INTERVALS

MIPAG
IDUMA
D27.9 NLG
D26.8
2.8
D30.7
160°
343°
MIP 1YD
IDU 1YD
D5.5 IMH
335°
047°
830

SPEED RESTRICTION
Departure turn
MAX 230 KT.

LOC DME
110.7 IMH

SHK VOR
NANLANG
D 117.7 NLG
SHEKOU
D 115.9 SHK

5500
4000
6 0
6 2
5 1

HONG KONG
-Intl
VHHH

025°

FT/METER CONVERSION
QNH
830' - 250m
8860' - 2700m

23-00
22-30
114-00
113-30

CHANGES: SIDs revised, MSA.

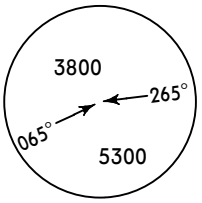
Apt Elev	Trans alt: 8860
13	No turn before DER.

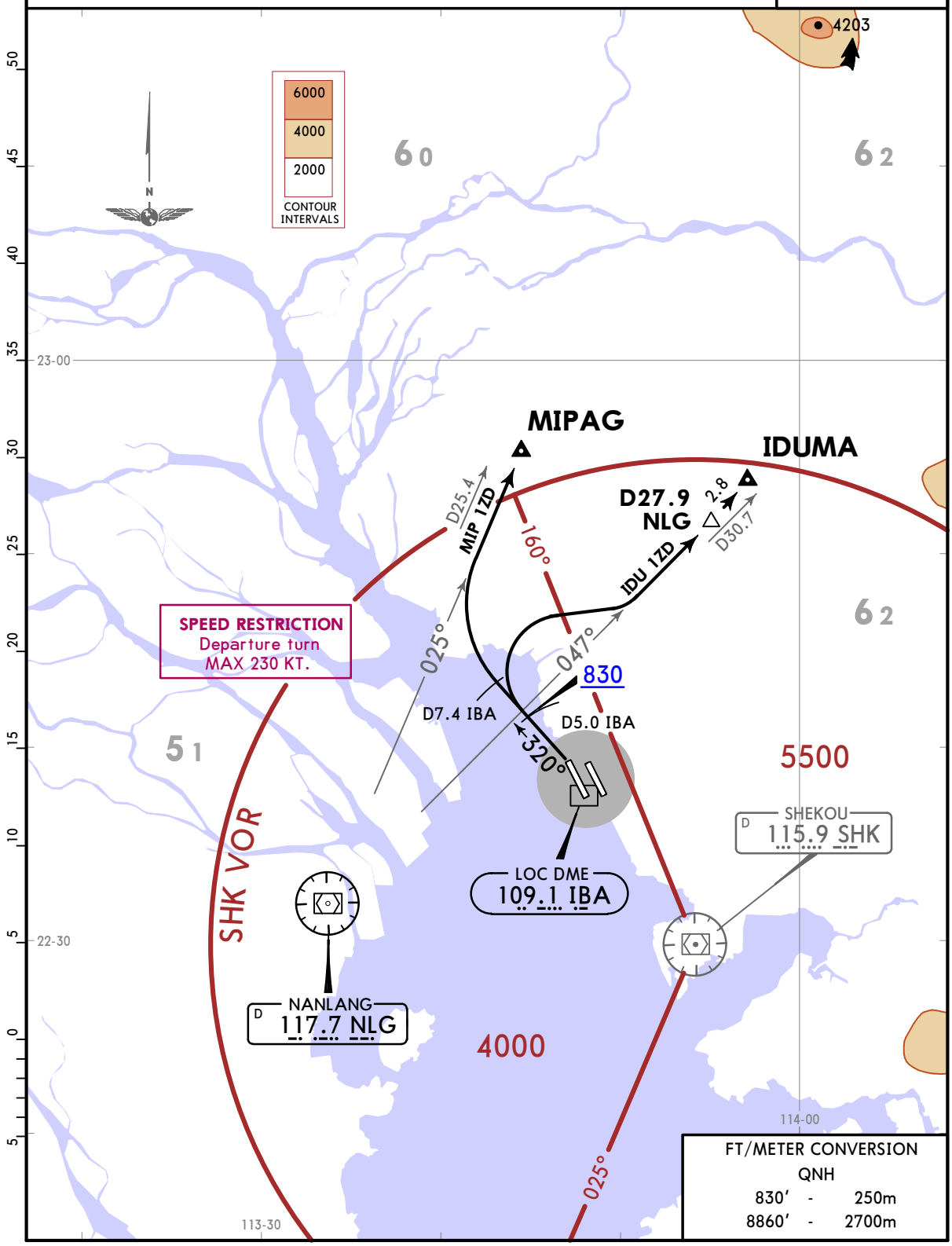
IDU 1ZD

WHEN TWO RUNWAYS ARE USED FOR INDEPENDENT DEPARTURE, ATC CLEARANCE IS NEEDED

MIP 1ZD

DEPARTURES
(RWY 34)





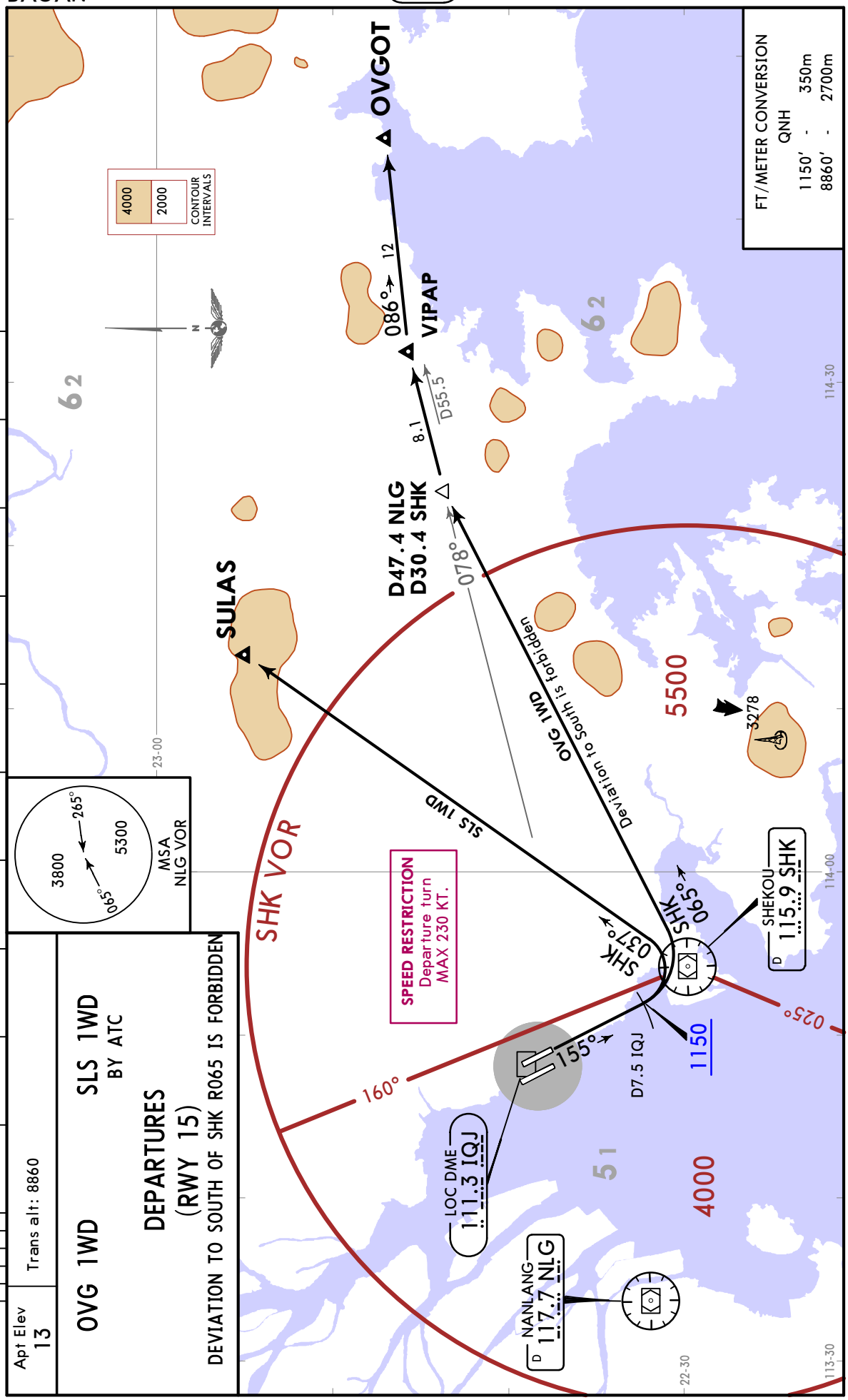
FT/METER CONVERSION		
QNH		
830'	-	250m
8860'	-	2700m

CHANGES: SIDs revised, MSA.

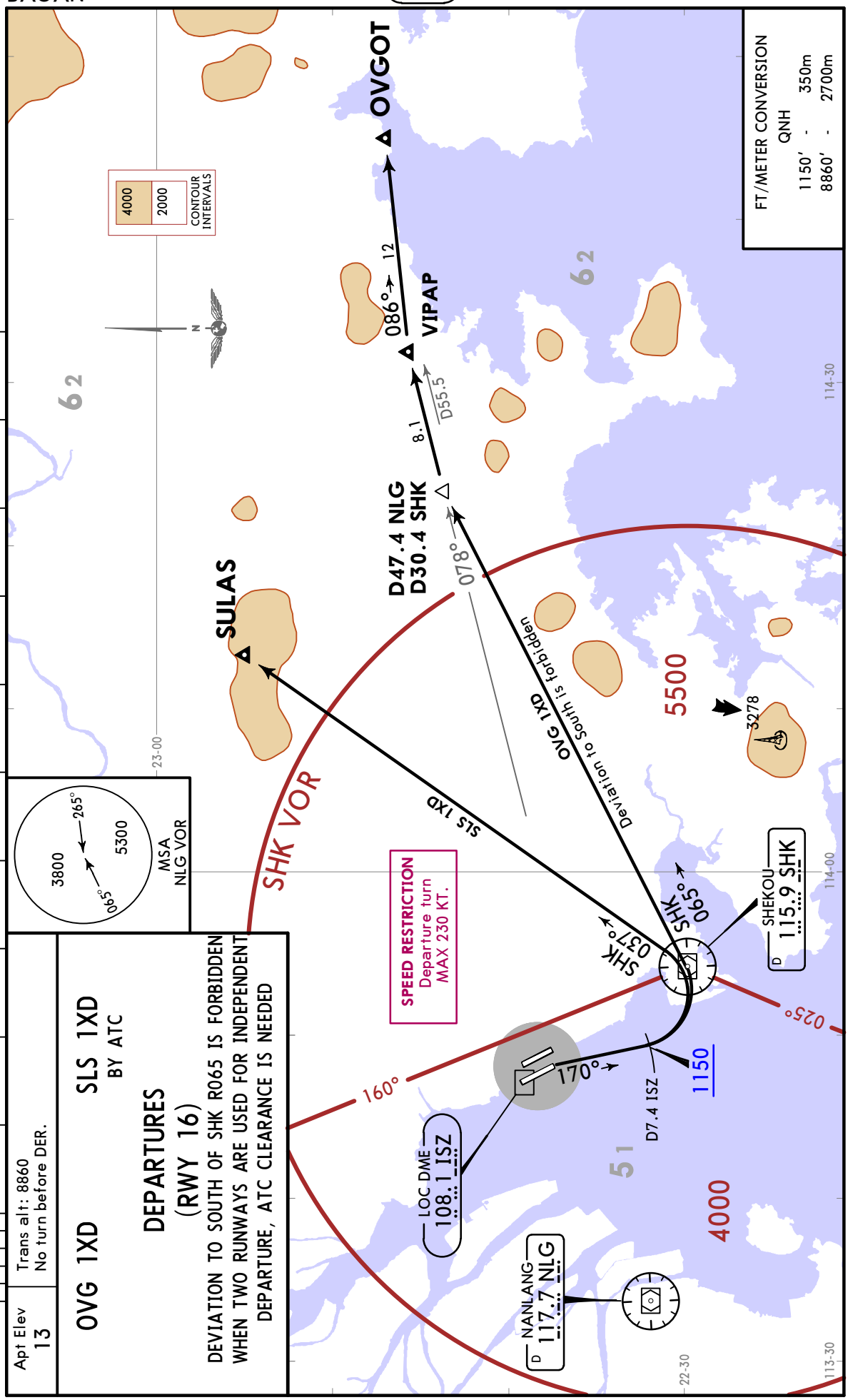
ZGSZ/SZX
BAOAN

JEPPESEN
17 MAR 23 (10-3S) Eff 22 Mar 1600Z

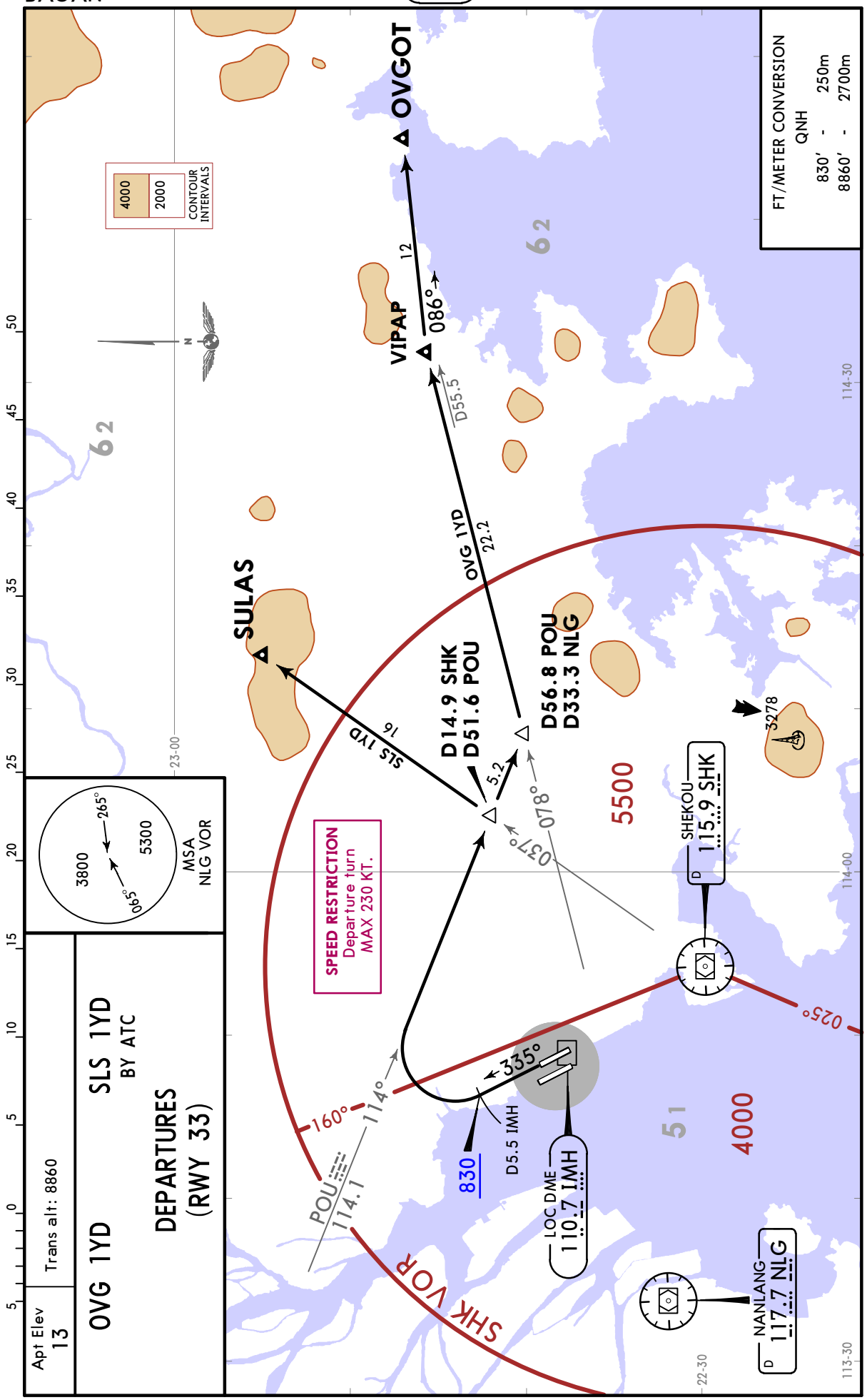
SHENZHEN, PR OF CHINA
SID



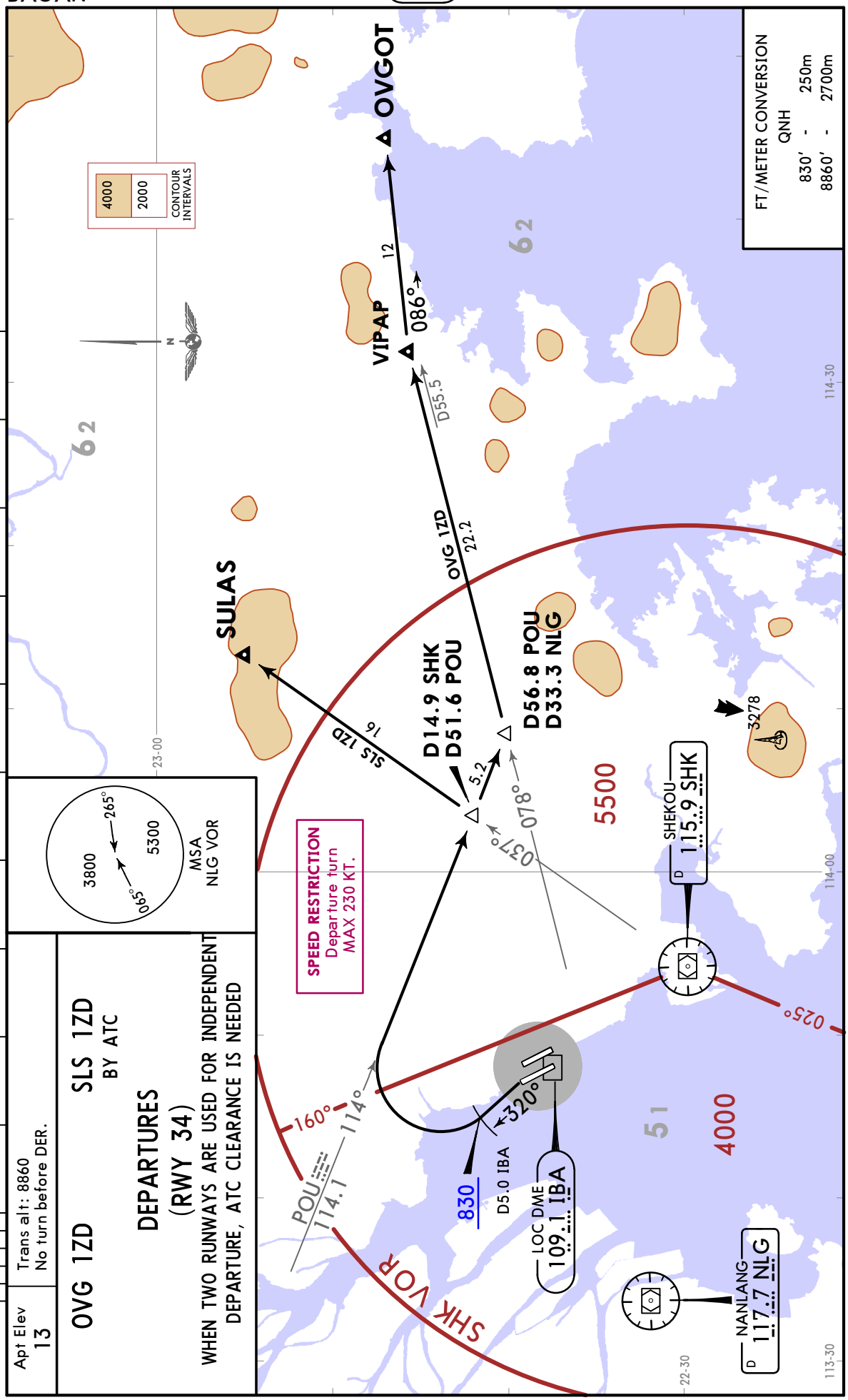
CHANGES: SIDs withdrawn & revised, MSA.



CHANGES: SIDs withdrawn & revised; MSA.



CHANGES: SIDs revised, MSA.



CHANGES: SIDs revised, MSA.

SHENZHEN, PR OF CHINA

SID

Apt Elev	Trans alt: 8860
13	

SIE 1WD ❶
TOM 1WD ❶

LKC 1WD
TOM 2WD ❶
BY ATC

DEPARTURES
(RWY 15)

❶ When two RWYs are used for independent departure, ATC clearance is needed. Deviation to SOUTH of SHK R245 is forbidden.

SPEED RESTRICTION
Departure turn
MAX 230 KT.

LOC DME
111.3 IQJ

SIE 1WD,
TOM 1WD, 2WD:
Turn
990

1150

155°

D7.5 IQJ

SHEKOU
115.9 SHK

NANLANG
117.7 NLG
5910
or by ATC

SIE 1WD
TOM 1WD, 2WD

176°
LKC 1WD

R356

245°

LUNG KWU CHAU
113.2 LKC

3278

219°
199°

SIE 1WD
TOM 1WD
19

TOM 2WD
29.4

R019

LIANSHENGWEI
116.7 ZUH

249°
163°

TOM 1WD
13

KIBAS

SIE 1WD
15.0

BOKAT

D28.0

15

11

ADBIN

17

TOMUD

SIERA

160°

025°

SHK VOR

4000

5500

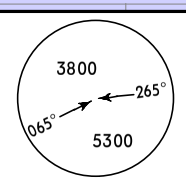
HONG KONG
Intl
VHHH

MACAO
- Intl
VMMC

6 4
6 0
5 1
6 1
6 2
3 5
4 7

4000
2000
CONTOUR INTERVALS

23-00
22-30
22-00
114-00
113-00
113-30



MSA
NLG VOR

FT/METER CONVERSION
QNH

990′	-	300m
1150′	-	350m
5910′	-	1800m
8860′	-	2700m

CHANGES: MSA.

Apt Elev	Trans alt: 8860
13	No turn before DER.

SIE 1XD ❶
TOM 1XD ❶

LKC 1XD ❷
TOM 2XD ❶
BY ATC

DEPARTURES
(RWY 16)

❶ Deviation to SOUTH of SHK R245 is forbidden.
❷ When two RWYs are used for independent departure, ATC clearance is needed.

SPEED RESTRICTION
Departure turn
MAX 230 KT.

LOC DME
108.1 ISZ

SIE 1XD,
TOM 1XD, 2XD:
Turn
500

170°
SIE 1XD
TOM 1XD, 2XD

LKC
1X
162°

D7.4
ISZ
1150

NANLANG
117.7 NLG
5910
or by ATC

219°
199°

SHEKOU
115.9 SHK

3278

245°

R342

LUNG KWU CHAU
113.2 LKC

SIE 1XD
TOM 1XD
19

TOM 2XD
29.4

4000

HONG KONG
Intl
VHHH

5500

R019

LIANSHENGWEI
116.7 ZUH

249°
163°

TOM 1XD
13

KIBAS

SIE 1XD
15.0

MACAO
- Intl
VMMC

025°

SHK VOR

D28.0
15

BOKAT

11

ADBIN

17

TOMUD

SIERA

4000
2000
CONTOUR INTERVALS

3800
265°
065°
5300
MSA
NLG VOR

FT/METER CONVERSION
QNH

500′	-	150m
1150′	-	350m
5910′	-	1800m
8860′	-	2700m

CHANGES: SIDs revised, MSA, chart reindexed.

SHENZHEN, PR OF CHINA

SID

Apt Elev	Trans alt: 8860
13	

SIE 1YD ❶
TOM 1YD ❶
LKC 1YD
TOM 2YD ❶
BY ATC

DEPARTURES
(RWY 33)

❶ When two RWYs are used for independent departure, ATC clearance is needed.

SPEED RESTRICTION
Departure turn
MAX 230 KT.

LKC 1YD: Turn 830

SIE 1YD, TOM 1YD, 2YD: Turn 500

160°

181°

LKC 1YD

D5.5 IMH

D4.5 IMH

335°

215°

SIE 1YD
TOM 1YD, 2YD

D7.9 SHK
5910

NANLANG
117.7 NLG
3940

R035

LOC DME
110.7 IMH

SHEKOU
115.9 SHK

15

R001

3278

LUNG KWU CHAU
113.2 LKC

219°

199°

SIE 1YD
TOM 1YD
19

TOM 2YD
29.4

4000

HONG KONG
- Intl
VHHH

5500

6 2

R019

LIANSHENGWEI
116.7 ZUH

249°

163°

TOM 1YD
13

KIBAS

025°

SHK VOR

MACAO
- Intl
VMMC

SIE 1YD
15.0

SIERA

D28.0

15

BOKAT

11

ADBIN

17

TOMUD

4000
2000
CONTOUR INTERVALS

6 4
6 0
5 1
6 1
4 7
3 5

23-00
22-30
22-00
113-00
113-30
114-00

3800
265°
065°
5300
MSA
NLG VOR

FT/METER CONVERSION
QNH

500′	-	150m
830′	-	250m
3940′	-	1200m
5910′	-	1800m
8860′	-	2700m

CHANGES: SIDs revised, MSA, chart reindexed.

Apt Elev	Trans alt: 8860
13	No turn before DER.

SIE 1ZD
TOM 1ZD
LKC 1ZD
TOM 2ZD
BY ATC
DEPARTURES
(RWY 34)

SPEED RESTRICTION
Departure turn
MAX 230 KT.

160°
320°
500
SIE 1ZD
TOM 1ZD, 2ZD
LKC 1ZD
025°
SHK VOR

NANLANG
117.7 NLG
3940
219°
199°
SIE 1ZD
TOM 1ZD
19
TOM 2ZD
29.4

SHEKOU
115.9 SHK

3278

LUNG KWU CHAU
113.2 LKC

4000

HONG KONG
- Intl
VHHH

5500

LIANSHENGWEI
116.7 ZUH
R019
249°
163°
TOM 1ZD
13
SIE 1ZD
15.0

KIBAS
BOKAT
D28.0
15
ADBIN
11
TOMUD
17

MACAO
- Intl
VMMC

SIERA

4000
2000
CONTOUR INTERVALS

3800
265°
065°
5300
MSA
NLG VOR

FT/METER CONVERSION
QNH
500′ - 150m
3940′ - 1200m
8860′ - 2700m

CHANGES: SIDs revised, MSA, chart reindexed.

D-ATIS Departure	ACARS: D-ATIS *PDC *DCL	*BAOAN Delivery	*BAOAN Ground West	*BAOAN Ground East	APN01	Apron APN02	Apron APN03	Tower West (Rwy 16/34)	Tower East (Rwy 15/33)
127.45		121.95	121.8	121.65	122.7	121.625	122.825	118.45	130.35

ZGSZ/SZX

Apt Elev 13′
N22 38.3 E113 48.7

CHANGES: Twy holding positions changed.

For AIRPORT BRIEFING refer to 10-1P pages.

TWR East Tower 130.35

TWR West Tower 118.45

GND East Ground 121.65

GND West Ground 121.8

APN01 122.7

APN02 121.625

APN03 122.825

02°W

Elev 13′

Elev 12′

12,467 3800m

11,155 3400m

16 155°

15 155°

34 335°

33 335°

22-39

22-38

22-37

113-47

113-48

113-49

HS1 HS2 HS3 HS4 HS5 HS6 HS7 HS8 HS9 HS10 HS11 HS12 HS13 HS14 HS15

SATELLITE HALL APRON

NORTH APRON

DONGHAI AIRLINES APRON

TML A APRON

TERMINAL A

TERMINAL B

TML B APRON

CARGO APRON

CHINA SOUTHERN AIRLINES APRON

SHENZHEN AIRLINES APRON

SOUTH APRON

SOUTHEAST APRON

T3 APRON

T3 TERMINAL

T3 CARGO APRON

ARP

FOR DETAILS SEE 10-9B

FOR DETAILS SEE 10-9C

Do not mistake freeway for rwy.

LEGEND
APN/GND/TWR control area
HS1 HOT SPOTS See 10-9A for description.

Feet 0 500 1000 1500 2000 2500 3000
Meters 0 200 400 600 800 1000

8 SEP 23

JEPPESEN 10-9

SHENZHEN, PR OF CHINA

BAOAN

HOT SPOTS

(For information only, not to be construed as ATC instructions.)

HS1 INTERSECTION OF TWYS G, R:
ACFT in this area shall observe cautiously, then operate according to ATC clearance and "see and avoidance" rules.

HS2 INTERSECTION OF TWYS D, R:
ACFT in this area shall observe cautiously, then operate according to ATC clearance and "see and avoidance" rules.

HS3 INTERSECTION OF TWYS C, C6:
When ACFT taxiing to TWY C from TWY S or R, pilot shall avoid taxiing into RWY 15/33 via TWY C6 by mistake.

HS4 INTERSECTION OF TWYS E11, E and RWY 34:
When ACFT taxiing from TWY G to TWY E via TWY E11, pilot shall avoid taxiing into RWY 34 via TWY E11 by mistake.

HS5 INTERSECTION OF TWYS C1, C2 and TWY C, RWY 15:
When ACFT taxiing from TWY D to RWY 15 via TWY C1 or C2, pilot shall avoid mistaking TWY C as RWY 15.

HS6 AREA FOR TAXIING INTO STAND 317 (317L/317R):
ACFT in this area shall observe cautiously, then operate according to ATC clearance and "see and avoidance" rules.

HS7 AREA FOR TAXIING INTO STAND 350 (350L/350R):
ACFT in this area shall observe cautiously, then operate according to ATC clearance and "see and avoidance" rules.

HS8 AREA FOR TAXIING INTO STAND 361 (361L/361R):
ACFT in this area shall observe cautiously, then operate according to ATC clearance and "see and avoidance" rules.

HS9 AREA FOR TAXIING INTO STAND 362 (362L/362R):
ACFT in this area shall observe cautiously, then operate according to ATC clearance and "see and avoidance" rules.

HS10 INTERSECTION OF TWYS E, G5:
ACFT in this area shall observe cautiously, then operate according to ATC clearance and "see and avoidance" rules.

HS11 INTERSECTION OF TWYS G, G5:
ACFT in this area shall observe cautiously, then operate according to ATC clearance and "see and avoidance" rules.

HS12 INTERSECTION OF TWYS W2, R:
ACFT in this area shall observe cautiously, then operate according to ATC clearance and "see and avoidance" rules.

HS13 INTERSECTION OF TWYS C, C3:
ACFT in this area shall observe cautiously, then operate according to ATC clearance and "see and avoidance" rules.

HS14 INTERSECTION OF TWYS C, D6:
ACFT in this area shall observe cautiously, then operate according to ATC clearance and "see and avoidance" rules.

HS15 INTERSECTION OF TWYS V1, T4:
ACFT in this area shall observe cautiously, then operate according to ATC clearance and "see and avoidance" rules.

ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS – LANDING BEYOND – Threshold	Glide Slope	TAKE-OFF	WIDTH
15	HIRL ❶ CL❷ HIALS-II SFL TDZ PAPI-L (3.0°) ❸ RVR	❺	10,151' 3094m	❻	148' 45m
33	HIRL ❶ CL❷ HIALS-II SFL TDZ PAPI-L (3.0°) ❹ RVR				
16 ❼	HIRL ❽ CL❾ HIALS SFL PAPI-L (3.0°) ❿ RVR	⓬	11,443' 3488m	⓭	197' 60m
34	HIRL ❽ CL❾ HIALS SFL PAPI-L (3.0°) ⓫ RVR		11,440' 3487m		

❶ spacing 60m
❷ spacing 30m
❸ HST-C7, C8, C9, A8 & A9
❹ HST-C6, C5, C4, A5 & A4
❺ LDA to HST

RWY 15:	C7	5098' (1554m)	RWY 33:	C6	5098' (1554m)
	C8, A8	6575' (2004m)		C5, A5	6378' (1944m)
	C9, A9	8051' (2454m)		C4, A4	8051' (2454m)

❻ TAKE-OFF RUN AVAILABLE

RWY 15:	From rwy head	11,155' (3400m)	RWY 33:	From rwy head	11,155' (3400m)
	Twy A2, C2 int	10,745' (3275m)		Twy C11 int	10,725' (3269m)

❼ grooved
❽ spacing 60m
❾ spacing 30m
❿ HSTIL-E6, E7 & E9
⓫ HSTIL-E5, E4 & E3
⓬ LDA to HST

RWY 16:	E6	5755' (1754m)	RWY 34:	E5	5098' (1554m)
	E7	7067' (2154m)		E4	6411' (1954m)
	E9	8379' (2554m)		E3	7723' (2354m)

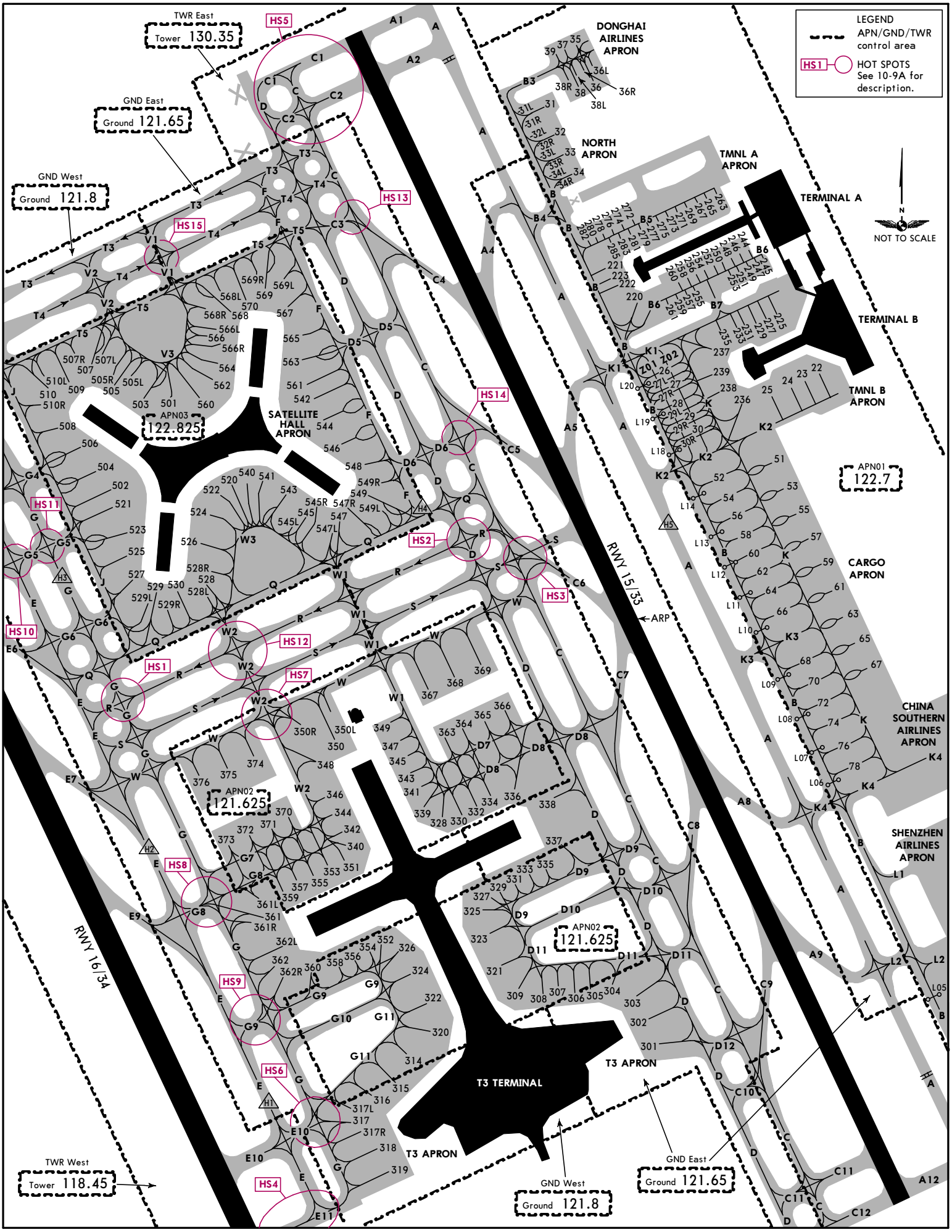
⓭ TAKE-OFF RUN AVAILABLE

RWY 16:	From rwy head	12,467' (3800m)	RWY 34:	From rwy head	12,467' (3800m)
	Twy E2 int	11,706' (3568m)		Twy E10 int	11,706' (3568m)

Standard TAKE-OFF

		RL	NIL (DAY only)
2 TURB Eng or 3 & 4 Eng	A B C D	RVR 400m VIS 800m	RVR 500m VIS 800m
Other 1 & 2 Eng		Minimums not established by CAAC	

CHANGES: Rwy 15/33 ALSF-II changed to HIALS-II SFL.



ZGSZ/SZX

JEPPESEN SHENZHEN, PR OF CHINA

8 SEP 23 (10-9B)

BAOAN

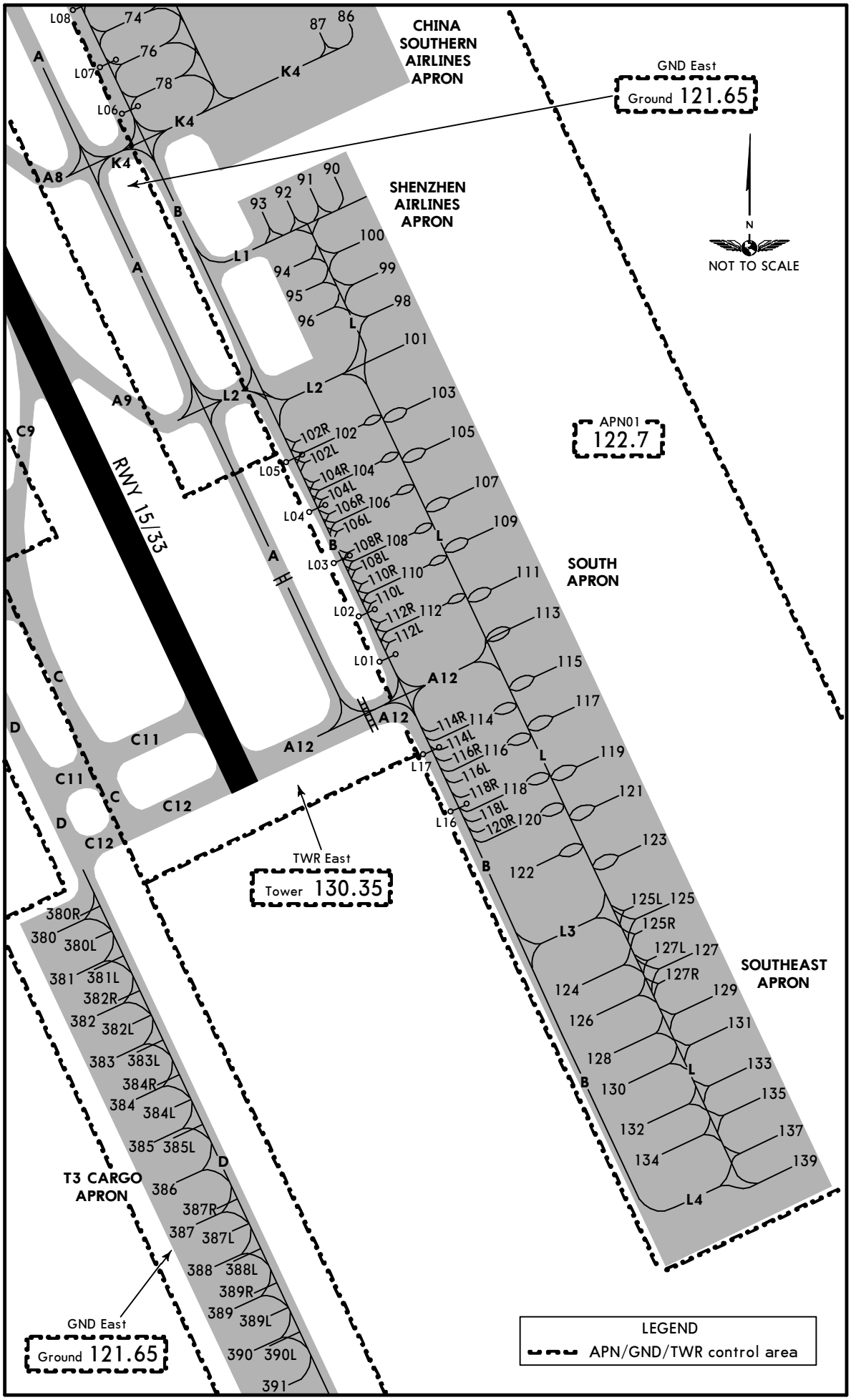
ZGSZ/SZX

JEPPESEN

8 SEP 23 (10-9C)

SHENZHEN, PR OF CHINA

BAOAN



CHANGES: Twy holding position changed.

ZGSZ/SZX
BAOAN

JEPPESEN 23 JUN 23 (11-1)

SHENZHEN, PR OF CHINA
RNP ILS DME Z Rwy 15

D-ATIS Arrival	ZHUHAI Approach					*BAOAN Tower	*Ground
	*APP01	APP02	*APP03	*APP04	*APP05		
126.85	120.35	119.55	123.85	119.025	127.95	130.35	121.65

LOC IQJ	Final Apch Crs	D10.3 IQJ	ILS DA(H) Refer to Minimums	Apt Elev 13′ Rwy 12′
111.3	155°	3290′ (3278′)		

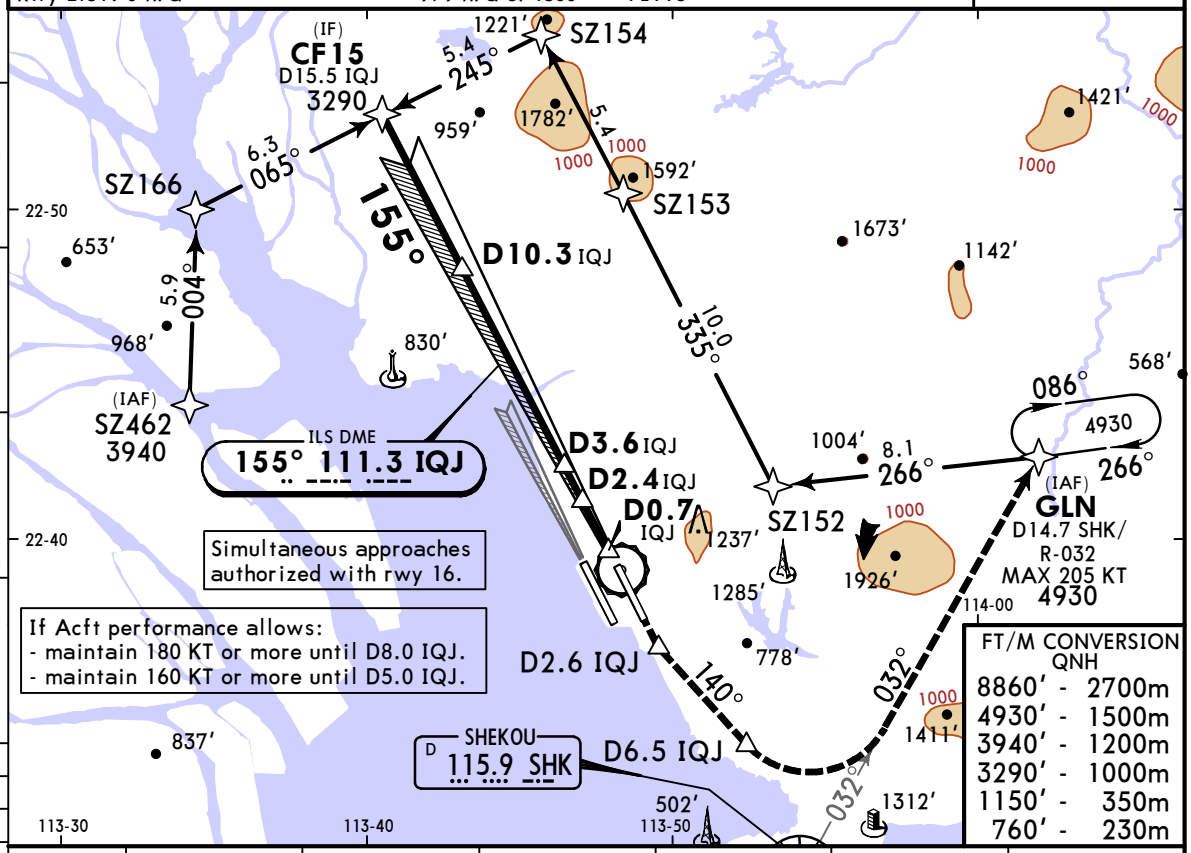
MISSED APCH: Climb STRAIGHT AHEAD to D2.6 IQJ, turn LEFT (MAX 185 KT) onto 140° to D6.5 IQJ, then turn LEFT (MAX 185 KT, remain within D10.7 IQJ) to intercept R-032 SHK and climb to 4930′. Over D14.7 SHK VOR join hold or as directed. Refer to minimums for missed apch climb gradient.

Alt Set: hPa
Rwy Elev: 0 hPa

Trans level: 980 hPa or above - FL108
979 hPa or less - FL118

Trans alt: 8860′

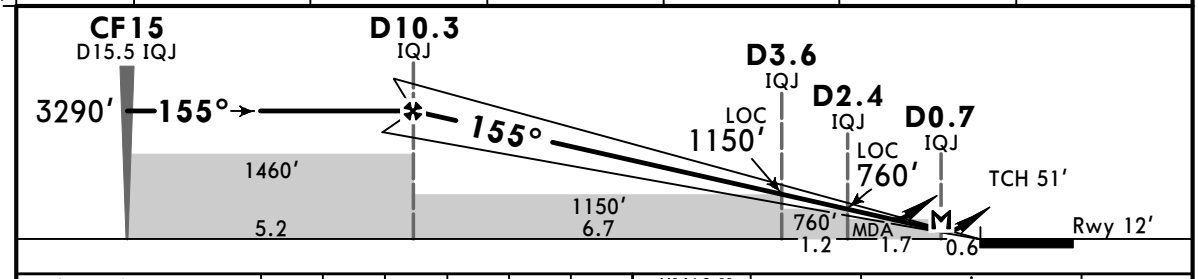
MSA ARP: 3200 (210°–010°) 4600



FT/M CONVERSION QNH

8860′	2700m
4930′	1500m
3940′	1200m
3290′	1000m
1150′	350m
760′	230m

LOC (GS out)	IQJ DME	10.0	8.0	6.0	4.0	2.0
	ALTITUDE	3200′	2560′	1930′	1290′	650′



Gnd speed-Kts		70	90	100	120	140	160
ILS GS or LOC Descent Angle	3.00°	372	478	531	637	743	849
MAP at D0.7 IQJ							

HIALS-II
PAPI

D2.6 IQJ

185 KT MAX LT onto 140°

D6.5 IQJ

Standard — STRAIGHT-IN LANDING RWY 15

ILS

MACG min 4.0% until D6.5 IQJ
DA(H) 212′ (200′)

	FULL	TDZ or CL out	ALS out
A	RVR 550m VIS 800m	RVR 550m [1] VIS 800m	1200m
B			
C			
D			

MACG min 2.5%
DA(H) BC:734′(722′)
A:717′(705′) D:750′(738′)

FULL/TDZ or CL out	ALS out
3300m	
3400m	

LOC (GS out)

CDFA
MDA(H) 460′ (448′)

	ALS out
1700m	
1700m	2100m

CIRCLE-TO-LAND

Not authorized East of rwy

Max Kts.	MDA(H)	VIS
100	730′(717′)	3300m
135	740′(727′)	
180	910′(897′)	4000m
205		4400m

[1] W/o HUD/AP/FD: RVR 750m.

PANS OPS

CHANGES: MSA West sector raised.

ZGSZ/SZX BAOAN

JEPPESEN

23 JUN 23 (11-2)

SHENZHEN, PR OF CHINA
ILS DME Y Rwy 15

D-ATIS Arrival	ZHUHAI Approach					*BAOAN Tower	*Ground
	*APP01	APP02	*APP03	*APP04	*APP05		
126.85	120.35	119.55	123.85	119.025	127.95	130.35	121.65

LOC IQJ	Final Apch Crs	D10.3 IQJ	ILS DA(H)	Apt Elev 13′
111.3	155°	3290′ (3278′)	Refer to Minimums	Rwy 12′

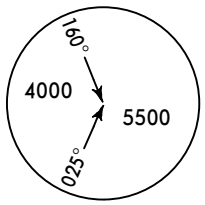
MISSED APCH: Climb STRAIGHT AHEAD to D2.6 IQJ, turn LEFT (MAX 185 KT) onto 140° to D6.5 IQJ, then turn LEFT (MAX 185 KT, remain within D10.7 IQJ) to intercept R-037 SHK and climb to 4930′. Over D14.5 SHK VOR join holding or as directed. Refer to minimums for missed apch climb grad.

Alt Set: hPa
Rwy Elev: 0 hPa

Trans level: 980 hPa or above - FL108
979 hPa or less - FL118

Trans alt: 8860′

BRIEFING STRIP ™

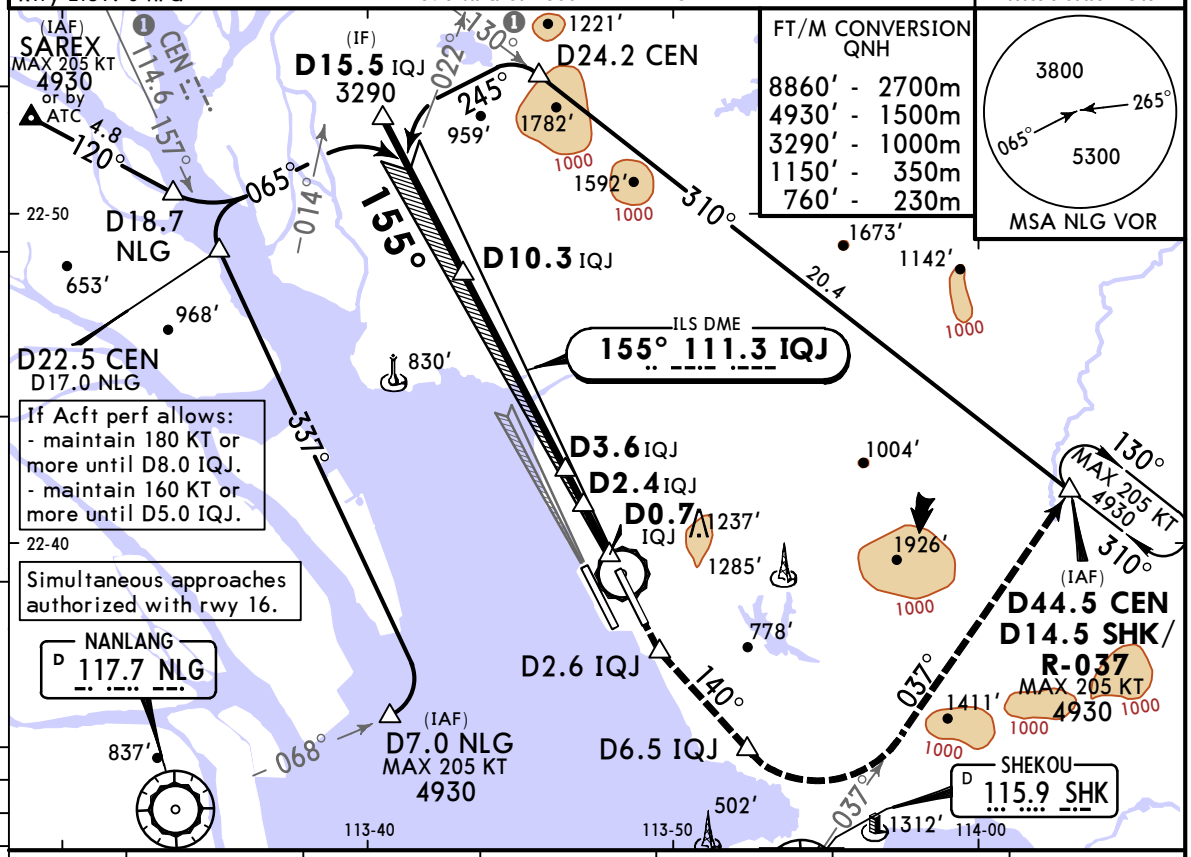


MSA SHK VOR

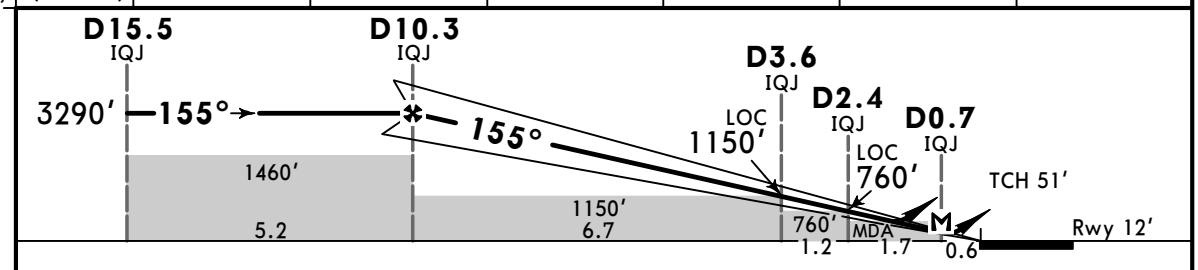
MSA NLG VOR

FT/M CONVERSION QNH

8860′ -	2700m
4930′ -	1500m
3290′ -	1000m
1150′ -	350m
760′ -	230m



LOC (GS out)	IQJ DME	10.0	8.0	6.0	4.0	2.0
	ALTITUDE	3200′	2560′	1930′	1290′	650′



Gnd speed-Kts		70	90	100	120	140	160
ILS GS or LOC Descent Angle	3.00°	372	478	531	637	743	849
MAP at D0.7 IQJ							

HIALS-II
PAPI

D2.6 IQJ

185 KT MAX onto 140°
LT

D6.5 IQJ

Standard — STRAIGHT-IN LANDING RWY 15

ILS

MACG min 4.0% until D6.5 IQJ
DA(H) 212′ (200′)

MACG min 2.5%
DA(H) BC:734′(722′) A:717′(705′) D:750′(738′)

LOC (GS out)

CDFA
MDA(H) 460′ (448′)

	FULL	TDZ or CL out	ALS out	FULL/TDZ or CL out	ALS out		ALS out
A	RVR 550m VIS 800m	RVR 550m [1] VIS 800m	1200m	3300m		1700m	
B							
C				3400m		1700m	2100m
D							

CIRCLE-TO-LAND

Not authorized East of rwy

Max Kts	MDA(H)	VIS
100	730′ (717′)	3300m
135	740′ (727′)	
180	910′ (897′)	4000m
205		4400m

PANS OPS

[1] W/o HUD/AP/FD: RVR 750m.

CHANGES: None.

ZGSZ/SZX
BAOAN

JEPPESEN

23 JUN 23 (11-2A)

SHENZHEN, PR OF CHINA
❶ SA CAT I RNP ILS DME Z Rwy 15

D-ATIS Arrival	ZHUHAI Approach					*BAOAN Tower	*Ground
	*APP01	APP02	*APP03	*APP04	*APP05		
126.85	120.35	119.55	123.85	119.025	127.95	130.35	121.65

BRIEFING STRIP ™

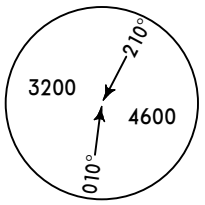
LOC IQJ	Final Apch Crs	D10.3 IQJ	SA CAT I ILS	Apt Elev 13′
111.3	155°	3290′ (3278′)	RA 157′ DA(H) 162′ (150′)	Rwy 12′

MISSED APCH: Climb STRAIGHT AHEAD to D2.6 IQJ, turn LEFT (MAX 185 KT) onto 140° to D6.5 IQJ, then turn LEFT (MAX 185 KT, remain within D10.7 IQJ) to intercept R-032 SHK and climb to 4930′. Over D14.7 SHK VOR join hold or as directed. Minimum climb of 4.0% (243 ′/NM) until D6.5 IQJ.

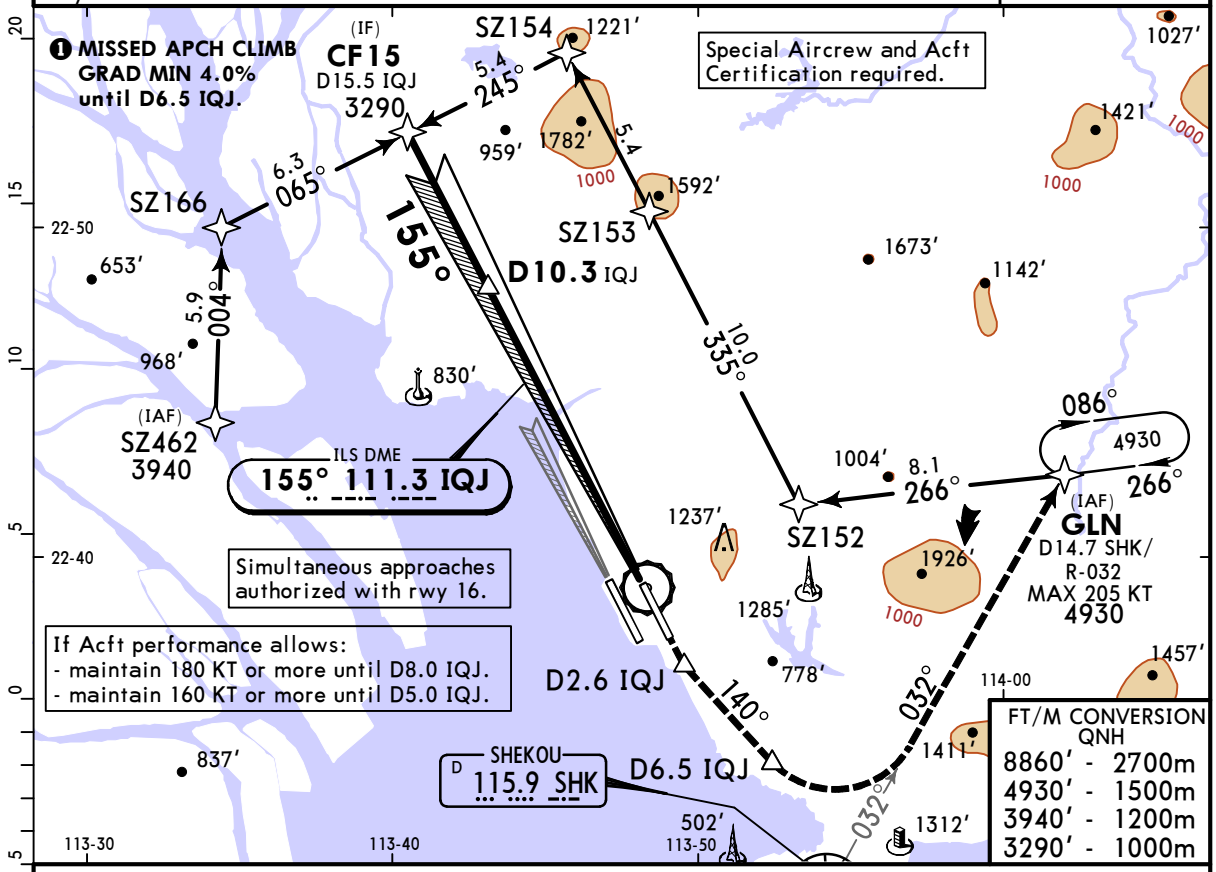
Alt Set: hPa
Rwy Elev: 0 hPa

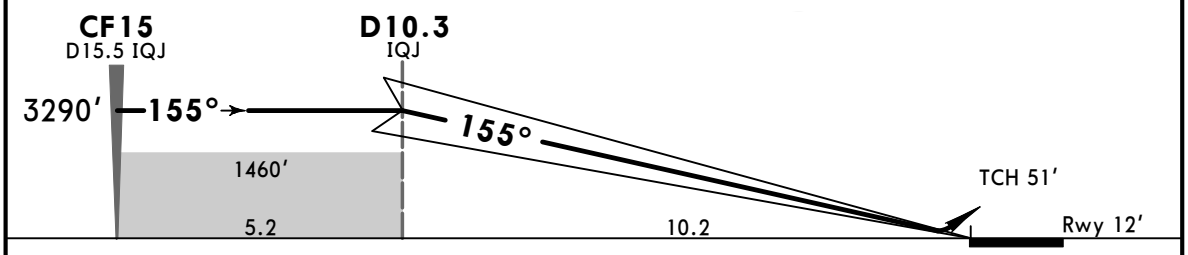
Trans level: 980 hPa or above - FL108
979 hPa or less - FL118

Trans alt: 8860′



MSA ARP





Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	372	478	531	637	743	849

HIALS-II
PAPI

D2.6 IQJ

185 KT MAX LT onto 140°

D6.5 IQJ

Standard

STRAIGHT-IN LANDING RWY 15
SA CAT I ILS 1

RA 157′
DA(H) **162′** (150′)

RVR 450m

PANS OPS

1 HUD required.

CHANGES: MSA West sector.

ZGSZ/SZX
BAOAN

JEPPESEN

23 JUN 23 (11-2B)

SHENZHEN, PR OF CHINA
SA CAT I ILS DME Y Rwy 15

D-ATIS Arrival	ZHUHAI Approach					*BAOAN Tower	*Ground
	*APP01	APP02	*APP03	*APP04	*APP05		
126.85	120.35	119.55	123.85	119.025	127.95	130.35	121.65

BRIEFING STRIP

LOC IQJ	Final Apch Crs	D10.3 IQJ	SA CAT I ILS	Apt Elev 13′
111.3	155°	3290′ (3278′)	RA 157′ DA(H) 162′ (150′)	Rwy 12′

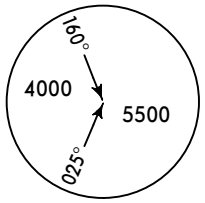
MISSED APCH: Climb STRAIGHT AHEAD to D2.6 IQJ, turn LEFT (MAX 185 KT) onto 140° to D6.5 IQJ, then turn LEFT (MAX 185 KT, remain within D10.7 IQJ) to intercept R-037 SHK and climb to 4930′. Over D14.5 SHK VOR join holding or as directed. Missed approach requires a minimum climb of 4.0% (243′/NM until D6.5 IQJ.

Alt Set: hPa
Rwy Elev: 0 hPa

Trans level: 980 hPa or above - FL108
979 hPa or less - FL118

Trans alt: 8860′

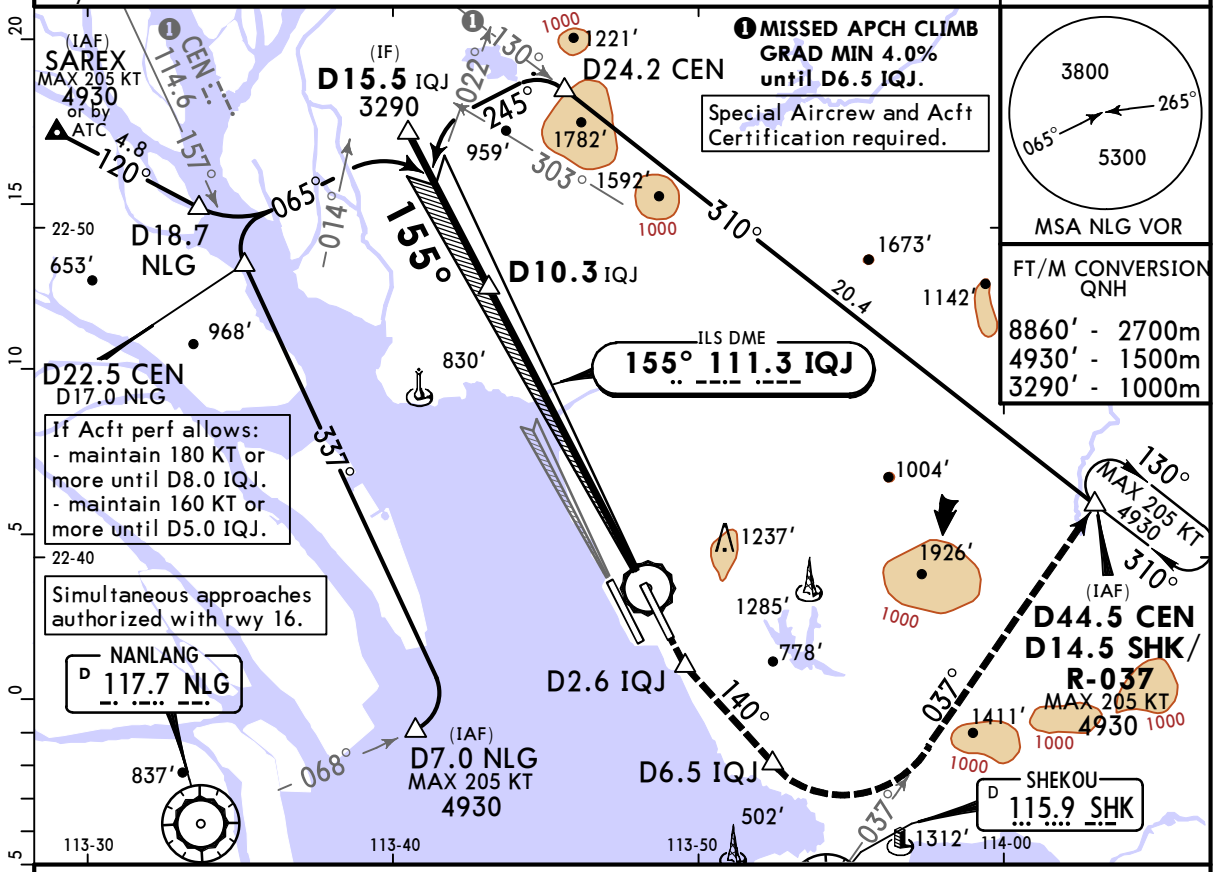
MSA SHK VOR

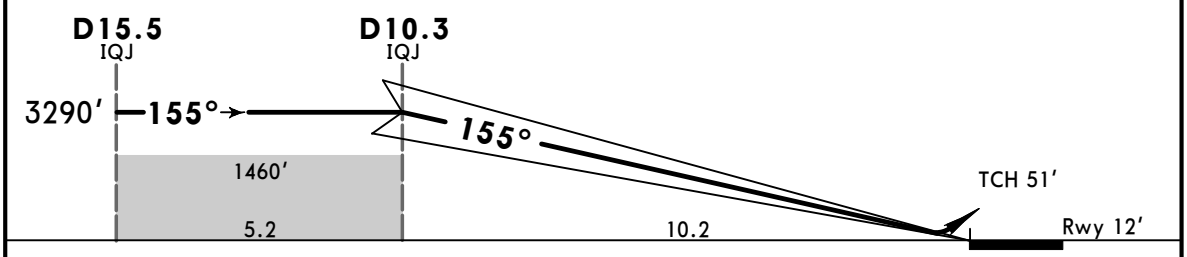


MSA NLG VOR

FT/M CONVERSION QNH

8860′ - 2700m
4930′ - 1500m
3290′ - 1000m





Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	372	478	531	637	743	849

HIALS-II
PAPI

D2.6 IQJ

185 KT MAX LT onto 140°

D6.5 IQJ

Standard

STRAIGHT-IN LANDING RWY 15
SA CAT I ILS 1

RA 157′
DA(H) 162′ (150′)

RVR 450m

PANS OPS

1 HUD required.

CHANGES: None.

ZGSZ/SZX
BAOAN

JEPPESEN
23 JUN 23 (11-3)

SHENZHEN, PR OF CHINA
RNP ILS DME Z Rwy 16

D-ATIS Arrival	ZHUHAI Approach					BAOAN Tower	*Ground
	*APP01	APP02	*APP03	*APP04	*APP05		
126.85	120.35	119.55	123.85	119.025	127.95	118.45	121.8

BRIEFING STRIP ™

LOC ISZ	Final Apch Crs	D7.3 ISZ	ILS DA(H) Refer to Minimums	Apt Elev 13′ Rwy 13′
108.1	155°	2300′ (2287′)		

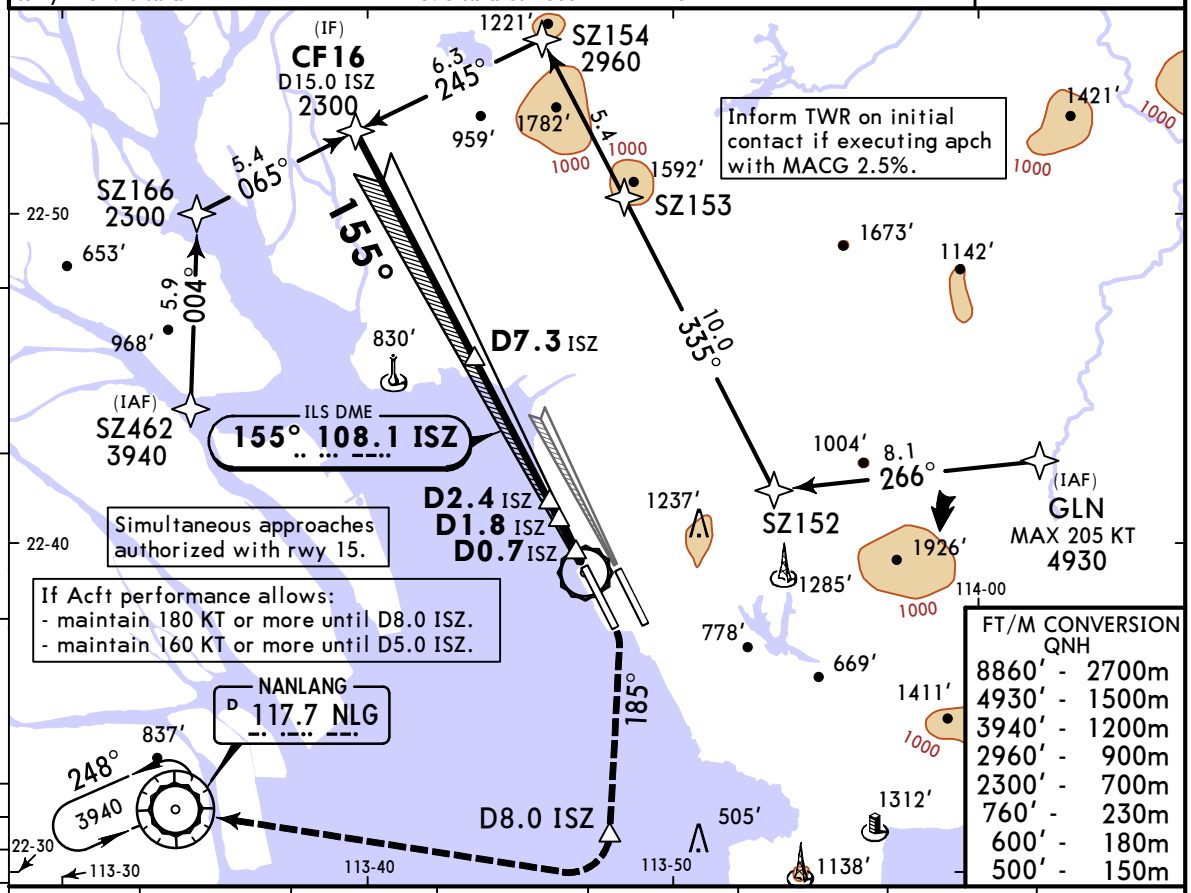
MISSED APCH: Climb STRAIGHT AHEAD to 500′, turn RIGHT (MAX 220 KT) onto 185° to D8.0 ISZ, turn RIGHT (MAX 220 KT, remain within D11.2 ISZ) direct to NLG VOR at 3940′. Join holding or as directed.
Refer to minimums for missed approach climb gradients.

Alt Set: hPa
Rwy Elev: 0 hPa

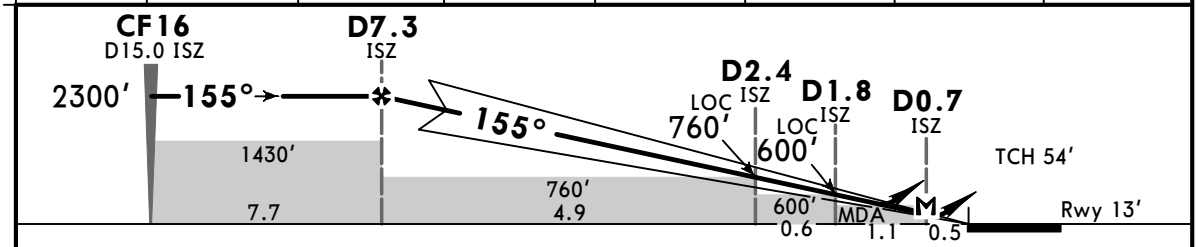
Trans level: 980 hPa or above - FL108
979 hPa or less - FL118

Trans alt: 8860′

MSA ARP
3200 (210°–010°) 4600



LOC (GS out)	ISZ DME	7.0	6.0	5.0	4.0	3.0	2.0
	ALTITUDE	2250′	1930′	1610′	1290′	970′	650′



Gnd speed-Kts		70	90	100	120	140	160
ILS GS	3.00°	372	478	531	637	743	849
LOC Descent Angle	3.06°	379	487	541	650	758	866
MAP at D0.7 ISZ							

HIALS
PAPI

500′

220 KT MAX
RT

onto 185°

D8.0 ISZ

PANS OPS

Standard

STRAIGHT-IN LANDING RWY 16

	ILS MACG MIN 3.0% DA(H) 213′ (200′)		ILS MACG MIN 2.5% DA(H) A: 325′ (312′) B: 341′ (328′) CD: 357′ (344′)		LOC (GS out) CDFA MDA(H) 420′ (407′)	
	FULL	ALS out	FULL	ALS out		ALS out
A	RVR 550m [1] VIS 800m	1200m	1000m	1400m	1500m	
B			1100m	1500m		
C			1200m	1600m	1500m	1900m
D						

CIRCLE-TO-LAND
Not authorized East of rwy

Max Kts	MDA(H)	VIS
100	730′ (717′)	3300m
135	740′ (727′)	
180	910′ (897′)	4000m
205		4400m

[1] RVR 750m when a Flight Director or Autopilot or HUD to DA is not used.

CHANGES: MSA West sector, missed approach holding altitude NLG.

ZGSZ/SZX BAOAN

JEPPESEN 23 JUN 23 (11-4)

SHENZHEN, PR OF CHINA
ILS DME Y Rwy 16

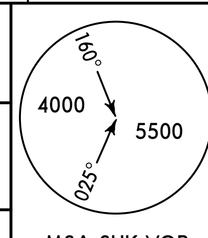
D-ATIS Arrival	ZHUHAI Approach					BAOAN Tower	*Ground
	*APP01	APP02	*APP03	*APP04	*APP05		
126.85	120.35	119.55	123.85	119.025	127.95	118.45	121.8

BRIEFING STRIP ™

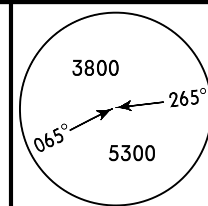
LOC ISZ	Final Apch Crs	D7.3 ISZ	ILS DA(H)	Apt Elev 13′
108.1	155°	2300′ (2287′)	Refer to Minimums	Rwy 13′

MISSED APCH: Climb STRAIGHT AHEAD to 500′, turn RIGHT (MAX 220 KT) onto 185° to D8.0 ISZ, turn RIGHT (MAX 220 KT, remain within D11.2 ISZ) direct to NLG VOR at 3940′. Join holding or as directed.
Refer to minimums for missed approach climb gradients.

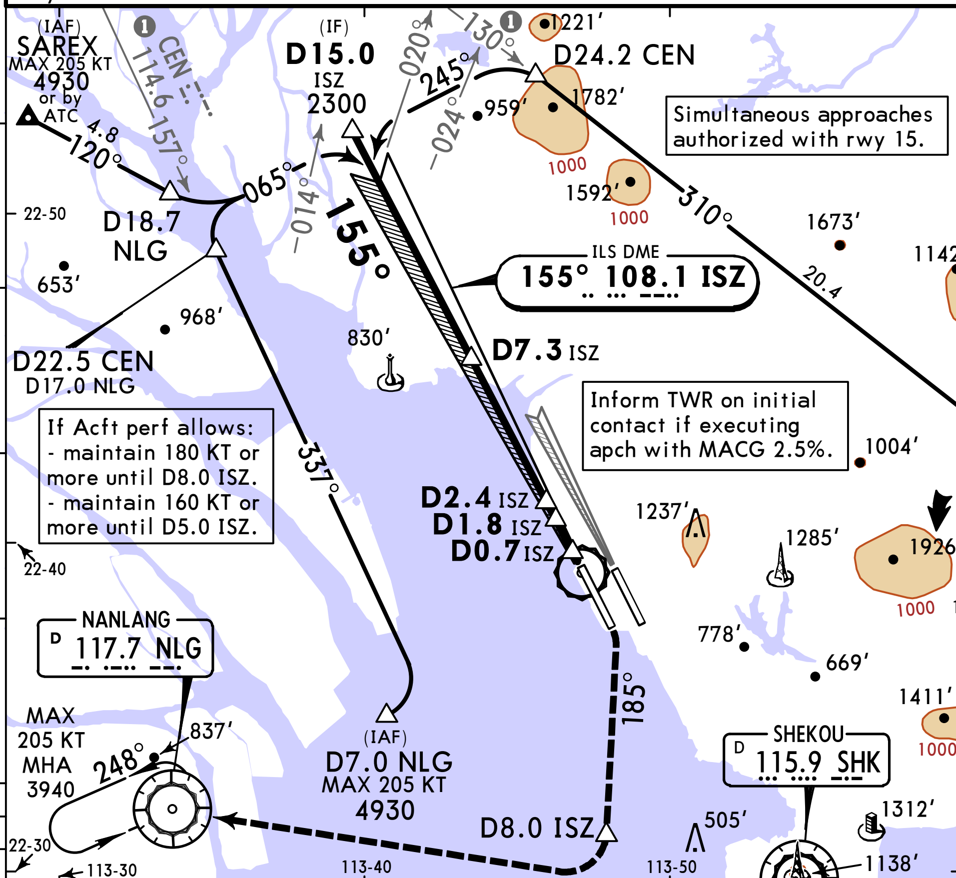
Alt Set: hPa
Rwy Elev: 0 hPa
Trans level: 980 hPa or above - FL108
979 hPa or less - FL118
Trans alt: 8860′



MSA SHK VOR

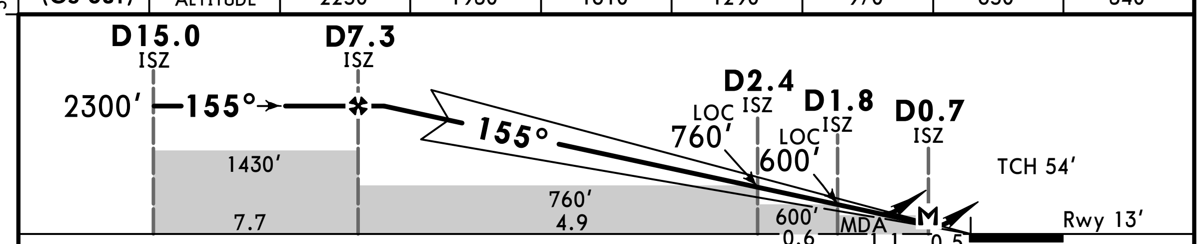


MSA NLG VOR



FT/M CONVERSION QNH	
8860′	2700m
4930′	1500m
3940′	1200m
2300′	700m
760′	230m
600′	180m
500′	150m

LOC (GS out)	ISZ DME	7.0	6.0	5.0	4.0	3.0	2.0	1.0
	ALTITUDE	2250′	1930′	1610′	1290′	970′	650′	340′



Gnd speed-Kts		70	90	100	120	140	160
ILS GS	3.00°	372	478	531	637	743	849
LOC Descent Angle	3.06°	379	487	541	650	758	866
MAP at D0.7 ISZ							

HIALS PAPI

500′ ↑ — 220 KT MAX RT onto 185° — D8.0 ISZ

Standard

STRAIGHT-IN LANDING RWY 16

	ILS MACG MIN 3.0% DA(H) 213′ (200′) FULL	ILS MACG MIN 3.0% ALS out	ILS MACG MIN 2.5% DA(H) A: 325′ (312′) B: 341′ (328′) CD: 357′ (344′) FULL	ILS MACG MIN 2.5% ALS out	LOC (GS out) CDFA MDA(H) 420′ (407′) FULL	LOC (GS out) ALS out
A	RVR 550m 1 VIS 800m	1200m	1000m	1400m	1500m	1500m
B	RVR 550m 1 VIS 800m	1200m	1100m	1500m	1500m	1500m
C	RVR 550m 1 VIS 800m	1200m	1200m	1600m	1500m	1900m
D	RVR 550m 1 VIS 800m	1200m	1200m	1600m	1500m	1900m

CIRCLE-TO-LAND

Not authorized East of rwy

Max Kts	MDA(H)	VIS
100	730′ (717′)	3300m
135	740′ (727′)	3300m
180	910′ (897′)	4000m
205	910′ (897′)	4400m

PANS OPS

1 RVR 750m when a Flight Director or Autopilot or HUD to DA is not used.

CHANGES: Missed approach holding altitude NLG.

ZGSZ/SZX BAOAN

JEPPESEN

23 JUN 23 (11-4A)

SHENZHEN, PR OF CHINA
SA CAT I RNP ILS DME Z Rwy 16

D-ATIS Arrival	ZHUHAI Approach					BAOAN Tower	*Ground
	*APP01	APP02	*APP03	*APP04	*APP05		
126.85	120.35	119.55	123.85	119.025	127.95	118.45	121.8

LOC ISZ	Final Apch Crs	D7.3 ISZ	SA CAT I ILS	Apt Elev 13′
108.1	155°	2300′ (2287′)	RA 154′ DA(H) 163′ (150′)	Rwy 13′

MISSED APCH: Climb STRAIGHT AHEAD to 500′, turn RIGHT (MAX 220 KT) onto 185° to D8.0 ISZ, turn RIGHT (MAX 220 KT, remain within D11.2 ISZ) direct to NLG VOR at 3940′. Join holding or as directed.

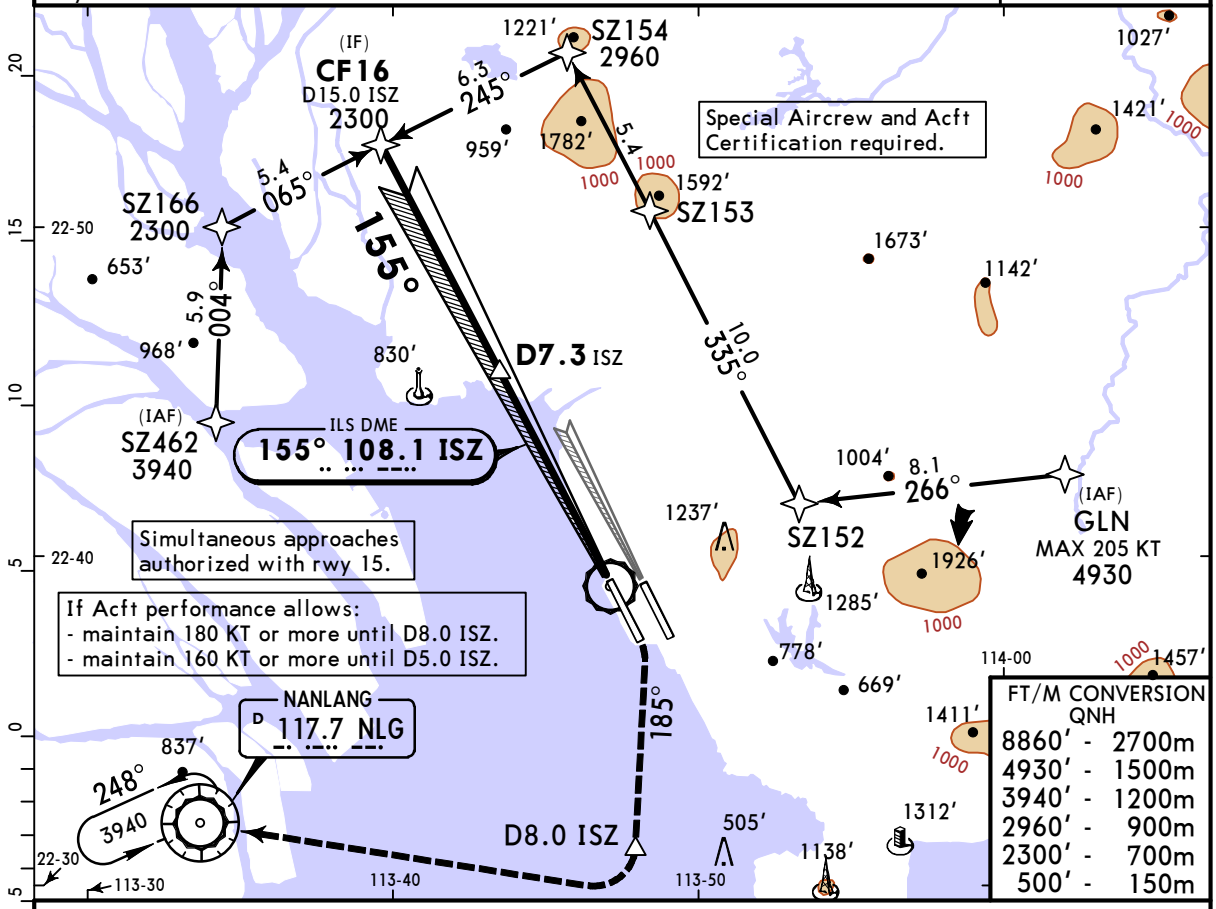
Alt Set: hPa
Rwy Elev: 0 hPa

Trans level: 980 hPa or above - FL108
979 hPa or less - FL118

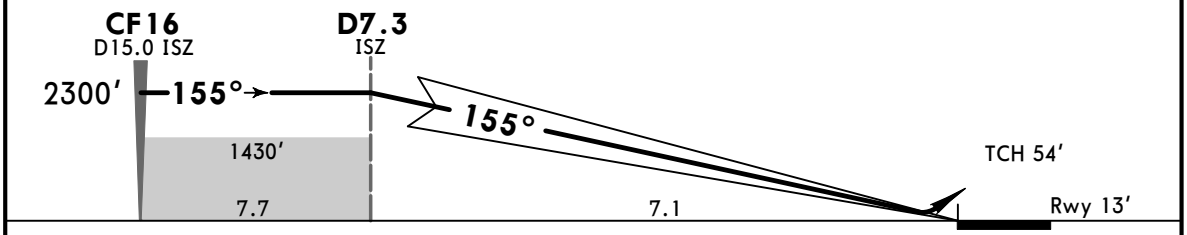
Trans alt: 8860′

MSA ARP
3200 (210°–010°) 4600

BRIEFING STRIP ™



FT/M CONVERSION QNH	
8860′	2700m
4930′	1500m
3940′	1200m
2960′	900m
2300′	700m
500′	150m



Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	372	478	531	637	743	849

HIALS
PAPI

500′

220 KT MAX
RT
onto 185°

D8.0 ISZ

Standard

STRAIGHT-IN LANDING RWY 16
SA CAT I ILS 1

RA 154′
DA(H) 163′ (150′)

RVR 450m

PANS OPS

1 HUD required.

CHANGES: MSA West sector, missed approach holding altitude NLG.

ZGSZ/SZX
BAOAN

JEPPESEN
23 JUN 23 (11-4B)

SHENZHEN, PR OF CHINA
SA CAT I ILS DME Y Rwy 16

D-ATIS Arrival	ZHUHAI Approach					BAOAN Tower	*Ground
	*APP01	APP02	*APP03	*APP04	*APP05		
126.85	120.35	119.55	123.85	119.025	127.95	118.45	121.8

LOC ISZ	Final Apch Crs	D7.3 ISZ	SA CAT I ILS	Apt Elev 13′
108.1	155°	2300′ (2287′)	RA 157′ DA(H) 163′ (150′)	Rwy 13′

MISSED APCH: Climb STRAIGHT AHEAD to 500′, turn RIGHT (MAX 220 KT) onto 185° to D8.0 ISZ, turn RIGHT (MAX 220 KT, remain within D11.2 ISZ) direct to NLG VOR at 3940′. Join holding or as directed.

Alt Set: hPa
Rwy Elev: 0 hPa

Trans level: 980 hPa or above - FL108
979 hPa or less - FL118

Trans alt: 8860′

MSA SHK VOR
160° 4000 5500 025°

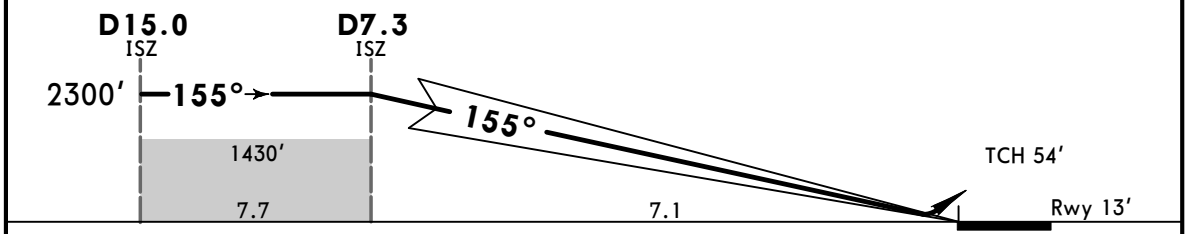
MSA NLG VOR
3800 265° 065° 5300

BRIEFING STRIP ™

(IAF) SAREX MAX 205 KT 4930 or by ATC
4.8 120°
CEN 114.6 157°
(IF) D15.0 ISZ 2300
020° 245° 130° 024°
D24.2 CEN
1221′ 959′ 1782′ 1592′ 1000
Special Aircrew and Acft Certification required.
310° 1673′ 1142′ 20.4
065° 014° 155°
D18.7 NLG
22-50 653′ 968′
ILS DME 155° 108.1 ISZ
D7.3 ISZ
830′
D22.5 CEN D17.0 NLG
If Acft perf allows:
- maintain 180 KT or more until D8.0 ISZ.
- maintain 160 KT or more until D5.0 ISZ.
337°
Simultaneous approaches authorized with rwy 15.
1004′
1237′ 1285′ 1926′ 1000
(IAF) D44.5 CEN MAX 205 KT 4930
22-40
NANLANG D 117.7 NLG
MAX 205 KT
MHA 3940
248° 837′
(IAF) D7.0 NLG MAX 205 KT 4930
185°
D8.0 ISZ
778′ 669′
114-00 1000 1457′
1411′ 1000
SHEKOU D 115.9 SHK
505′ 1312′ 1138′
22-30 113-30 113-40 113-50

FT/M CONVERSION QNH

8860′	2700m
4930′	1500m
3940′	1200m
2300′	700m
500′	150m



Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	372	478	531	637	743	849

HIALS
PAPI

500′

220 KT MAX
RT
onto 185°

D8.0 ISZ

PANS OPS

Standard

STRAIGHT-IN LANDING RWY 16
SA CAT I ILS 1

RA 157′
DA(H) 163′ (150′)

RVR 450m

1 HUD required.

CHANGES: Missed approach holding altitude NLG.

RNP ILS DME Z Rwy 33

BRIEFING STRIP ™

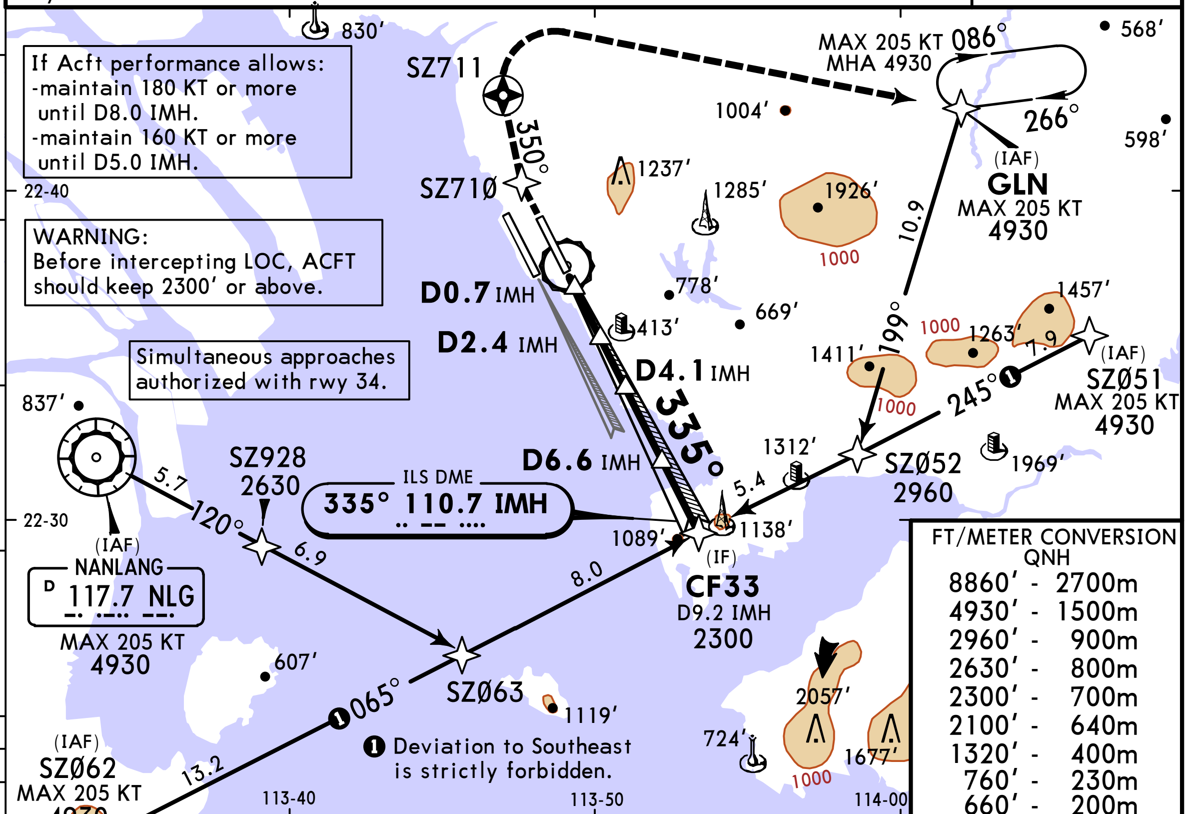
D-ATIS Arrival	ZHUHAI Approach					*BAOAN Tower	*Ground
	*APP01	APP02	*APP03	*APP04	*APP05		
126.85	120.35	119.55	123.85	119.025	127.95	130.35	121.65

LOC	Final Apch Crs	D6.6 IMH	ILS DA(H)	Apt Elev 13'
IMH 110.7	335°	2100' (2088')	Refer to Minimums	Rwy 12'

MISSED APCH: Climb STRAIGHT AHEAD to SZ71Ø, at 660' or above turn RIGHT (MAX 185 KT) along 350° to SZ711 at 1320' or above, then turn RIGHT (MAX 185 KT) to GLN at 4930'. Over GLN join holding or as directed.
Refer to minimums for missed apch climb gradient.

Alt Set: hPa
Rwy Elev: 0 hPa
Trans level: 980 hPa or above - FL108
979 hPa or less - FL118
Trans alt: 8860'

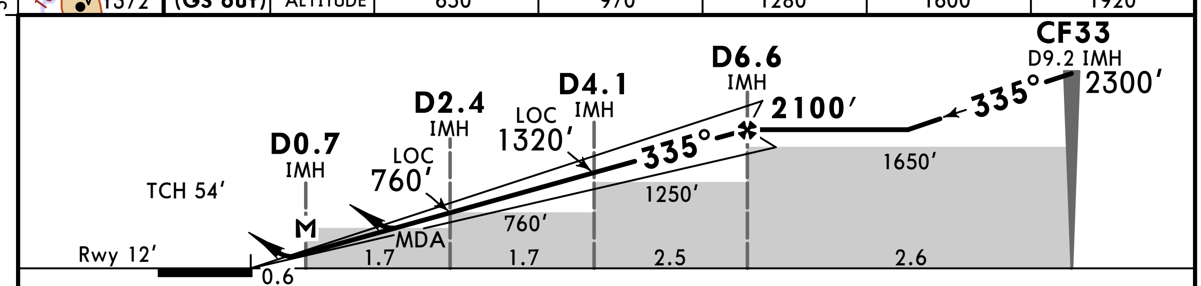
MSA ARP: 3200 (010°–210°), 4600 (210°–010°)



FT/METER CONVERSION QNH

ft	m
8860'	2700m
4930'	1500m
2960'	900m
2630'	800m
2300'	700m
2100'	640m
1320'	400m
760'	230m
660'	200m

LOC (GS out)	IMH DME	2.0	3.0	4.0	5.0	6.0
	ALTITUDE	650'	970'	1280'	1600'	1920'



Gnd speed-Kts		70	90	100	120	140	160
ILS GS or LOC Descent Angle	3.00°	372	478	531	637	743	849
MAP at D0.7 IMH							

HIALS-II
PAPI

SZ71Ø ↑ 185 KT MAX RT onto 350° SZ711

Standard

STRAIGHT-IN LANDING RWY 33

	ILS MACG MIN 4.0% (243'/NM) until SZ711 DA(H) 212' (200')		ILS MACG MIN 2.5% (152'/NM) DA(H) BC: 488' (476') A: 471' (459') D: 504' (492')			LOC (GS out) CDFA MDA(H) 630' (618')	CIRCLE-TO-LAND Not authorized East of rwy		
	FULL	TDZ or CL out	ALS out	FULL/TDZ or CL out	ALS out	ALS out	Max Kts	MDA(H)	VIS
A	RVR 550m VIS 800m	RVR 550m 1 VIS 800m	1200m	1800m		2700m	100	730' (717')	3300m
B				1900m			135	740' (727')	
C				1900m	2200m		180	910' (897')	4000m
D				2000m	2300m		205		4400m

1 W/o HUD/AP/FD: RVR 750m.

PANS OPS

CHANGES: MSA West sector.

ZGSZ/SZX BAOAN

JEPPESEN 23 JUN 23 (11-6)

SHENZHEN, PR OF CHINA
ILS DME Y Rwy 33

D-ATIS Arrival	ZHUHAI Approach					*BAOAN Tower	*Ground
	*APP01	APP02	*APP03	*APP04	*APP05		
126.85	120.35	119.55	123.85	119.025	127.95	130.35	121.65

BRIEFING STRIP ™

LOC IMH	Final Apch Crs	D5.6 IMH	ILS DA(H) Refer to Minimums	Apt Elev 13′ Rwy 12′
110.7	335°	1810′ (1798′)		

MISSED APCH: Climb STRAIGHT AHEAD to D2.5 IMH, turn RIGHT (MAX 185 KT) onto 350° to D5.5 IMH, then turn RIGHT (MAX 185 KT) along track 105° to intercept R-135 CEN climbing to 4930′. Join holding at D50.2 CEN/ D11.5 SHK or as directed. Refer to minimums for missed apch climb gradient.

Alt Set: hPa
Rwy Elev: 0 hPa

Trans level: 980 hPa or above - FL108
979 hPa or less - FL118

Trans alt: 8860′

MSA SHK VOR: 160°, 4000, 5500, 025°

MSA NLG VOR: 3800, 265°, 065°, 5300

Simultaneous approaches authorized with rwy 34.

If Acft perf allows:
- maintain 180 KT or more until D8.0 IMH.
- maintain 160 KT or more until D5.0 IMH.

(IAF) NANLANG D 117.7 NLG
MAX 205 KT 4930

ILS DME 335° 110.7 IMH

WARNING: Before intercepting LOC, ACFT should keep 2300′ or above.

(IAF) D17.5/ R-245 SHK MAX 205 KT 4930

(IF) D9.2 IMH 2300

SHEKOU D 115.9 SHK

(IAF) D50.2 CEN D11.5 SHK/ R-065 MAX 205 KT 4930

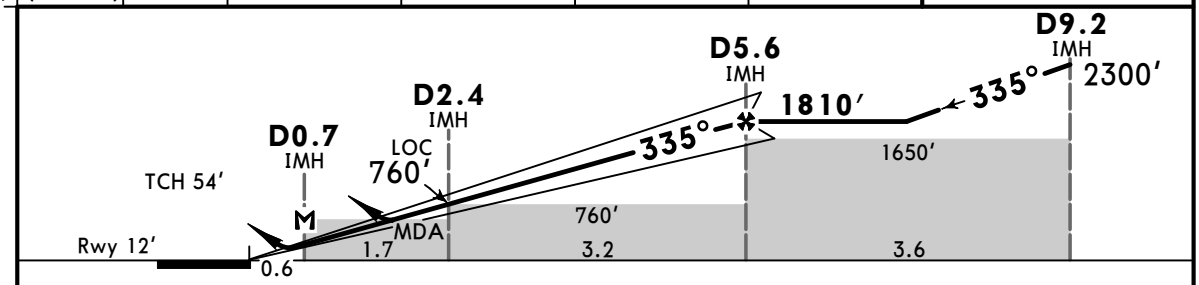
MAX 205 KT MHA 4930

1 Deviation to Southeast is strictly forbidden.

LOC (GS out)	IMH DME	2.0	3.0	4.0	5.0
	ALTITUDE	650′	970′	1280′	1600′

FT/METER CONVERSION QNH

8860′	2700m
4930′	1500m
2960′	900m
2630′	800m
2300′	700m
1810′	550m
760′	230m



Gnd speed-Kts		70	90	100	120	140	160
ILS GS or LOC Descent Angle	3.00°	372	478	531	637	743	849
MAP D0.7 IMH							

HIALS-II PAPI | D2.5 IMH | 185 KT MAX RT | onto 350° | D5.5 IMH

Standard STRAIGHT-IN LANDING RWY 33

ILS
MACG MIN 4.0% (243′/NM) until D5.5 IMH
DA(H) 212′ (200′)
MACG MIN 2.5% (152′/NM)
DA(H) BC:488′(476′) A:471′(459′) D:504′(492′)

LOC (GS out)
CDFA
MDA(H) 630′ (618′)

CIRCLE-TO-LAND
Not authorized East of rwy

	FULL	TDZ or CL out	ALS out	FULL/TDZ or CL out	ALS out	ALS out	Max Kts	MDA(H)	VIS
A	RVR 550m VIS 800m	RVR 550m 1 VIS 800m	1200m	1800m		2700m	100	730′(717′)	3300m
B				1900m			135	740′(727′)	
C				1900m	2200m		180	910′(897′)	4000m
D				2000m	2300m		205		4400m

PANS OPS

1 W/o HUD/AP/FD: RVR 750m.

CHANGES: None.

ZGSZ/SZX BAOAN

23 JUN 23 (11-6A)

JEPPESEN

SHENZHEN, PR OF CHINA
SA CAT I RNP ILS DME Z Rwy 33

BRIEFING STRIP™

D-ATIS Arrival	ZHUHAI Approach					*BAOAN Tower	*Ground
	*APP01	APP02	*APP03	*APP04	*APP05		
126.85	120.35	119.55	123.85	119.025	127.95	130.35	121.65

LOC IMH	Final Apch Crs	D6.6 IMH	SA CAT I ILS	Apt Elev 13′
110.7	335°	2100′ (2088′)	RA 157′ DA(H) 162′ (150′)	Rwy 12′

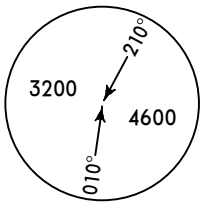
MISSED APCH: Climb STRAIGHT AHEAD to SZ71Ø, at 660′ or above turn RIGHT (MAX 185 KT) along 350° to SZ711 at 1320′ or above, then turn RIGHT (MAX 185 KT) to GLN at 4930′. Over GLN join holding or as directed. Missed approach requires a minimum climb of 4.0% (243′/NM) until SZ711.

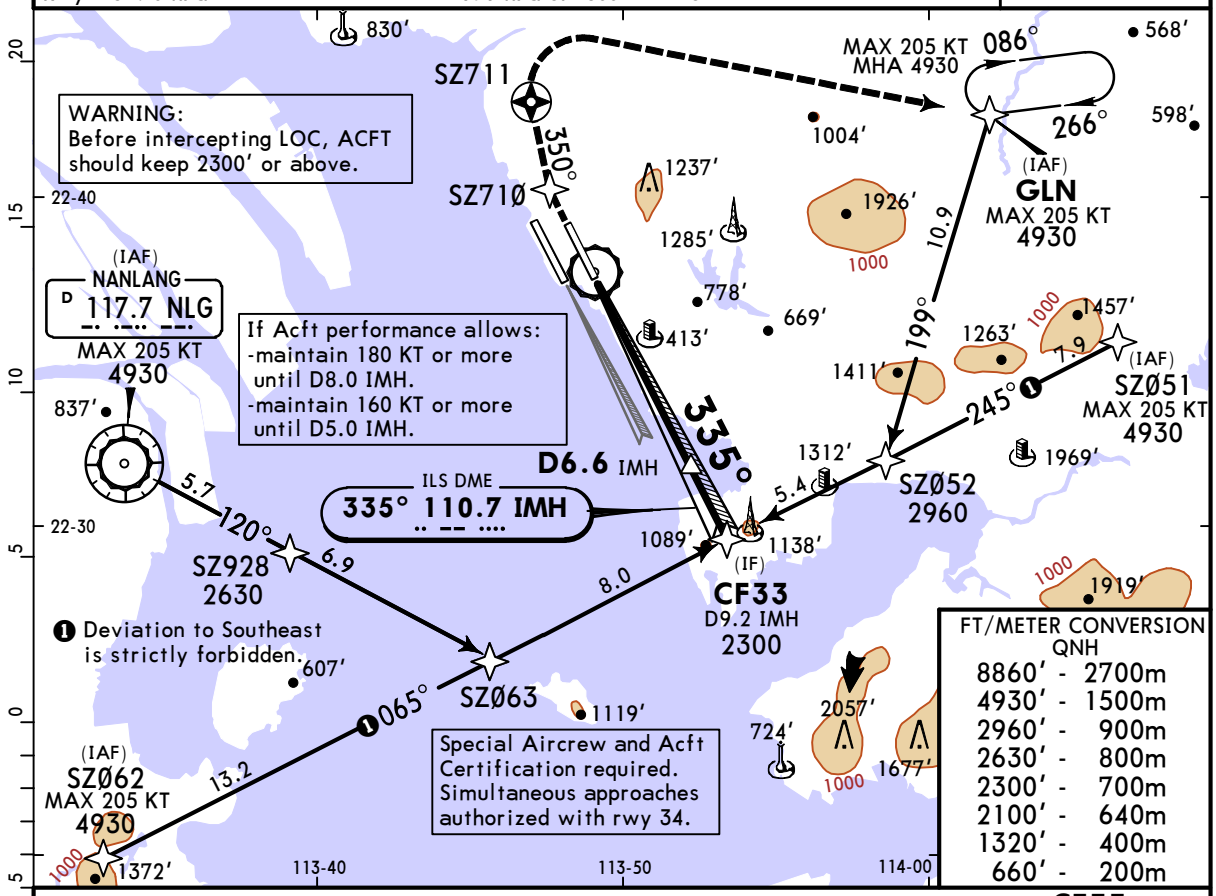
Alt Set: hPa
Rwy Elev: 0 hPa

Trans level: 980 hPa or above - FL108
979 hPa or less - FL118

Trans alt: 8860′

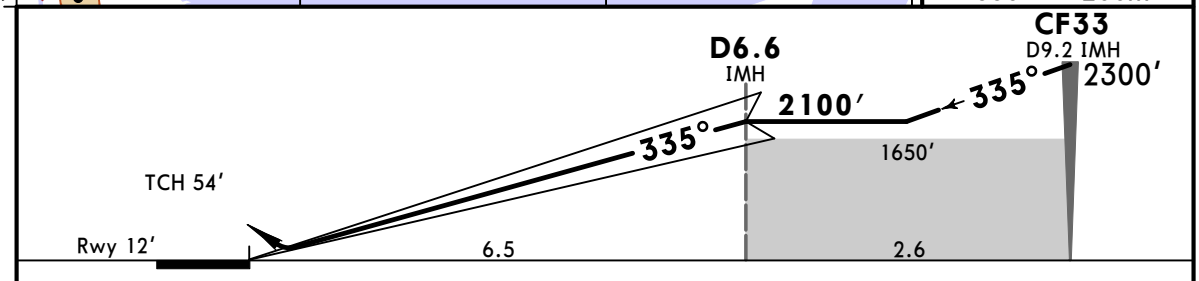
MSA ARP





FT/METER CONVERSION
QNH

8860′	2700m
4930′	1500m
2960′	900m
2630′	800m
2300′	700m
2100′	640m
1320′	400m
660′	200m



Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	372	478	531	637	743	849

HIALS-II
PAPI
SZ71Ø
185 KT MAX
RT
onto 350°
SZ711

Standard

STRAIGHT-IN LANDING RWY 33
SA CAT I ILS 1

RA 157′
DA(H) 162′ (150′)

RVR 450m

PANS OPS

1 HUD required.

CHANGES: MSA.

ZGSZ/SZX BAOAN

23 JUN 23 (11-6B)

JEPPESEN

SHENZHEN, PR OF CHINA
SA CAT I ILS DME Y Rwy 33

D-ATIS Arrival	ZHUHAI Approach					*BAOAN Tower	*Ground
	*APP01	APP02	*APP03	*APP04	*APP05		
126.85	120.35	119.55	123.85	119.025	127.95	130.35	121.65

BRIEFING STRIP™

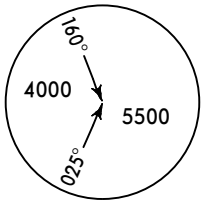
LOC IMH	Final Apch Crs	D5.6 IMH	SA CAT I ILS	Apt Elev 13′
110.7	335°	1810′ (1798′)	RA 157′ DA(H) 162′ (150′)	Rwy 12′

MISSED APCH: Climb STRAIGHT AHEAD to D2.5 IMH, turn RIGHT (MAX 185 KT) onto 350° to D5.5 IMH, then turn RIGHT (MAX 185 KT) along track 105° to intercept R-135 CEN climbing to 4930′. Join hold at D50.2 CEN/D11.5 SHK or as directed. Missed apch requires a MIN climb of 4.0% (243′/NM) until D5.5 IMH.

Alt Set: hPa
Rwy Elev: 0 hPa

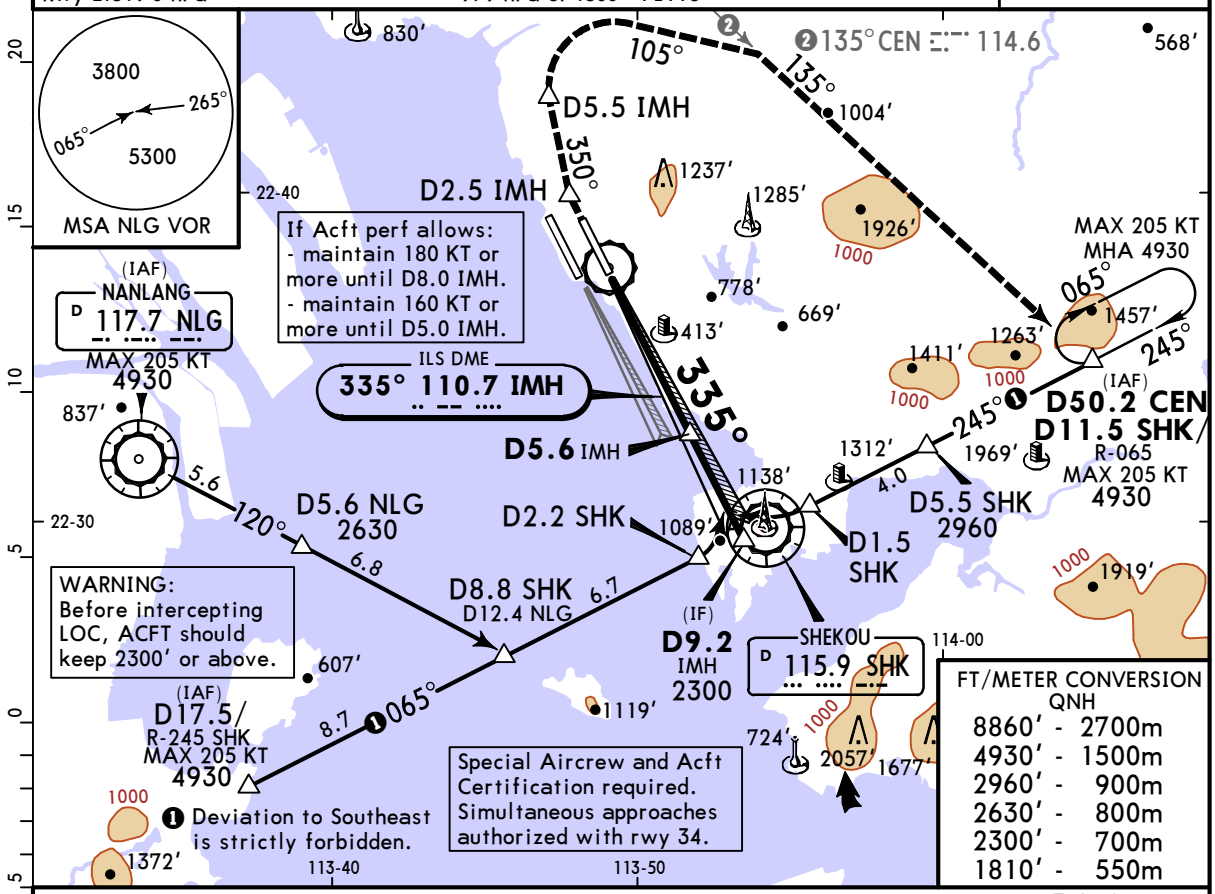
Trans level: 980 hPa or above - FL108
979 hPa or less - FL118

Trans alt: 8860′



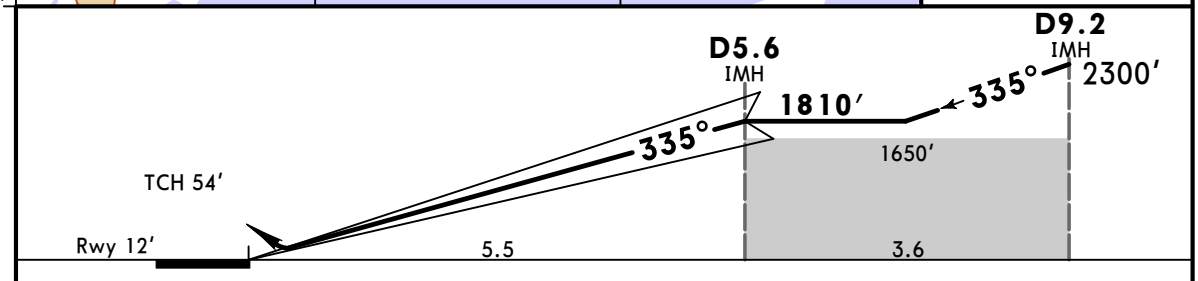
MSA SHK VOR

MSA NLG VOR



FT/METER CONVERSION
QNH

8860′	2700m
4930′	1500m
2960′	900m
2630′	800m
2300′	700m
1810′	550m



Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	372	478	531	637	743	849

HIALS-II
PAPI

D2.5 IMH

185 KT MAX onto 350°
RT

D5.5 IMH

Standard

STRAIGHT-IN LANDING RWY 33
SA CAT I ILS 1

RA 157′
DA(H) **162′** (150′)

RVR 450m

1 HUD required.

PANS OPS

CHANGES: None.

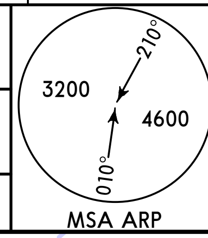
BRIEFING STRIP ™

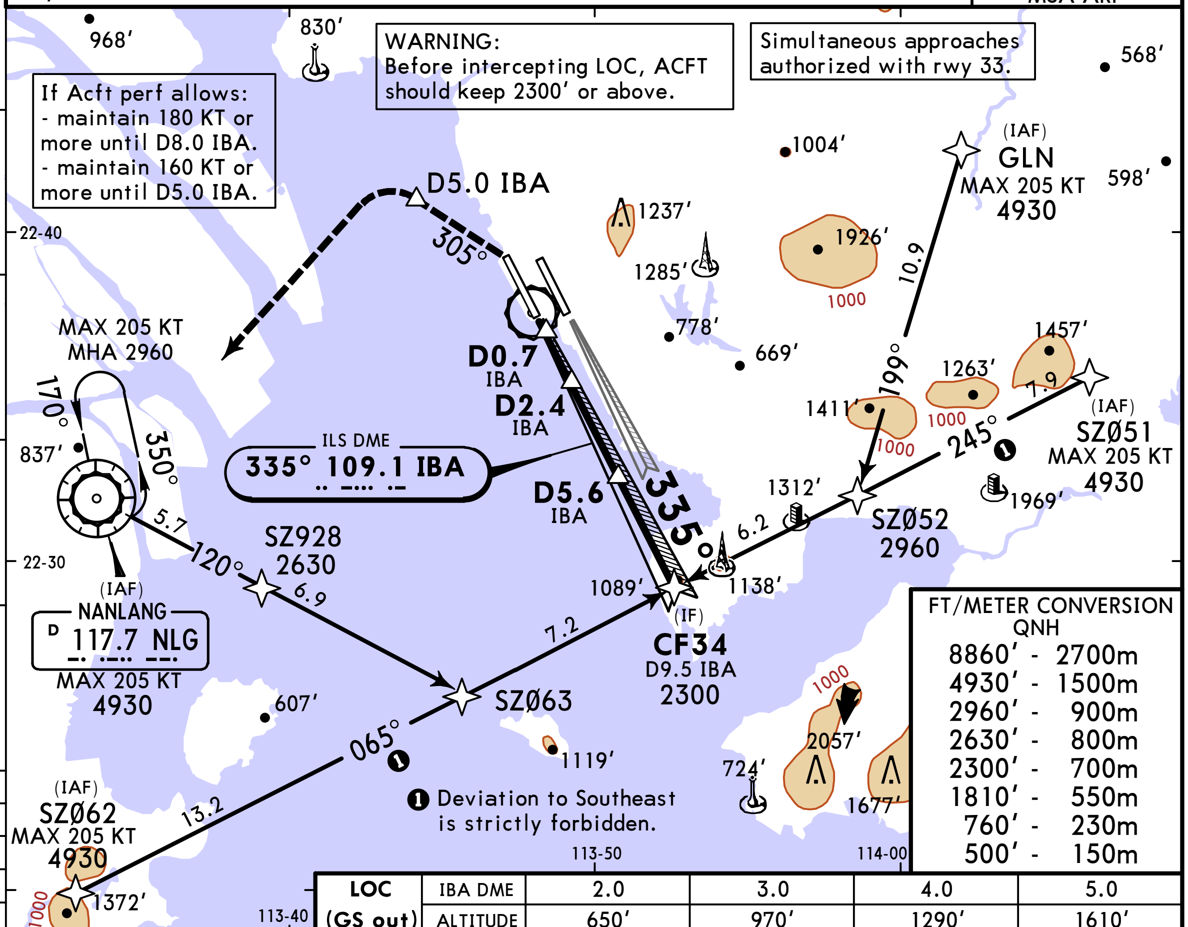
D-ATIS Arrival	ZHUHAI Approach *APP01	APP02	*APP03	*APP04	*APP05	BAOAN Tower	*Ground
126.85	120.35	119.55	123.85	119.025	127.95	118.45	121.8

LOC IBA	Final Apch Crs	D5.6 IBA	ILS DA(H)	Apt Elev 13′
109.1	335°	1810′(1797′)	213′(200′)	Rwy 13′

MISSED APCH: Climb STRAIGHT AHEAD to 500′, turn LEFT (MAX 220 KT) onto 305° to D5.0 IBA, turn LEFT (MAX 220 KT) direct to NLG VOR at 2960′. Join holding or as directed.

Alt Set: hPa
Rwy Elev: 0 hPa
Trans level: 980 hPa or above - FL108
979 hPa or less - FL118
Trans alt: 8860′

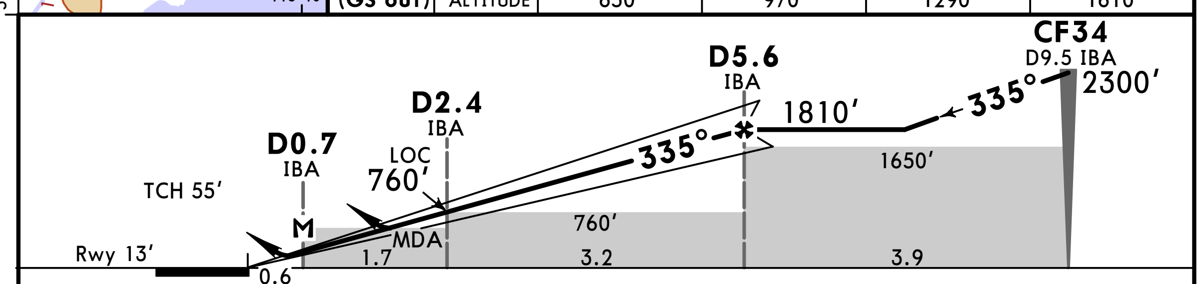




FT/METER CONVERSION
QNH

FT	m
8860′	2700m
4930′	1500m
2960′	900m
2630′	800m
2300′	700m
1810′	550m
760′	230m
500′	150m

LOC (GS out)	IBA DME	2.0	3.0	4.0	5.0
	ALTITUDE	650′	970′	1290′	1610′



Gnd speed-Kts		70	90	100	120	140	160
ILS GS or LOC Descent Angle	3.00°	372	478	531	637	743	849
MAP at D0.7 IBA							

HIALS
PAPI

500′ ↑ · 220 KT MAX LT onto 305° · D5.0 IBA

Standard

STRAIGHT-IN LANDING RWY 34

	ILS DA(H) 213′(200′) FULL	ILS ALS out	LOC (GS out) CDFA MDA(H) 420′(407′)	LOC ALS out
A	RVR 550m 1 VIS 800m	1200m	1500m	
B				
C			1500m	1900m
D				

CIRCLE-TO-LAND

Not authorized East of rwy

Max Kts	MDA(H)	VIS
100	730′(717′)	3300m
135	740′(727′)	
180	910′(897′)	4000m
205		4400m

1 W/o HUD/AP/FD: RVR 750m.

PANS OPS

CHANGES: MSA.

ZGSZ/SZX BAOAN

JEPPESEN 23 JUN 23 (11-8)

SHENZHEN, PR OF CHINA ILS DME Y Rwy 34

D-ATIS Arrival	ZHUHAI Approach					BAOAN Tower	*Ground
	*APP01	APP02	*APP03	*APP04	*APP05		
126.85	120.35	119.55	123.85	119.025	127.95	118.45	121.8

BRIEFING STRIP ™

LOC IBA	Final Apch Crs	D5.6 IBA	ILS DA(H)	Apt Elev 13′
109.1	335°	1810′ (1797′)	213′ (200′)	Rwy 13′

MISSED APCH: Climb STRAIGHT AHEAD to 500′, turn LEFT (MAX 220 KT) onto 305° to D5.0 IBA, turn LEFT (MAX 220 KT) direct to NLG VOR at 2960′. Join holding or as directed.

Alt Set: hPa
Rwy Elev: 0 hPa

Trans level: 980 hPa or above - FL108
979 hPa or less - FL118

Trans alt: 8860′

MSA SHK VOR: 160°–4000, 025°–5500

MSA NLG VOR: 3800, 065°–265°, 5300

WARNING: Before intercepting LOC, ACFT should keep 2300′ or above.

Simultaneous approaches authorized with rwy 33.

If Acft perf allows:
- maintain 180 KT or more until D8.0 IBA.
- maintain 160 KT or more until D5.0 IBA.

D5.0 IBA, 305°, D0.7 IBA, D2.4 IBA, D5.6 IBA

ILS DME 335° 109.1 IBA

MAX 205 KT
MHA 2960

170°, 837′, 350°, 5.6

(IAF) NANLANG D 117.7 NLG
MAX 205 KT
4930

120°, 6.8, D5.6 NLG 2630

22-30

D4.0 SHK, D15.0 NLG, 4.8

D8.8 SHK, D12.4 NLG, 8.7, 065°

(IAF) D17.5 SHK
MAX 205 KT
4930

(IF) D9.5 IBA 2300

SHEKOU D 115.9 SHK

D1.5 SHK, 1.5

D5.5 SHK 2960, 4.0, 245°

(IAF) D11.5 SHK
MAX 205 KT
4930
6.0

1 Deviation to Southeast is strictly forbidden.

113-40, 113-50, 114-00

22-40

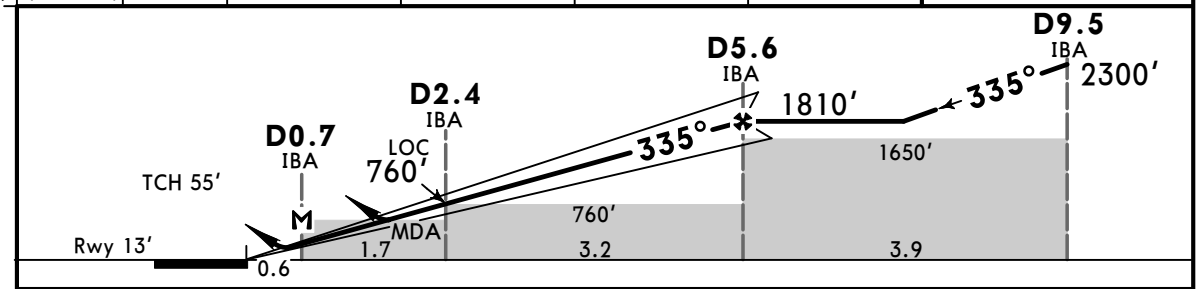
830′, 568′, 1004′, 1237′, 1285′, 1926′, 778′, 669′, 1457′, 1263′, 1411′, 1969′, 1089′, 1138′, 1919′, 607′, 1119′, 724′, 1677′, 2057′

1000

LOC (GS out)	IBA DME	2.0	3.0	4.0	5.0
	ALTITUDE	650′	970′	1290′	1610′

FT/METER CONVERSION QNH

8860′	2700m
4930′	1500m
2960′	900m
2630′	800m
2300′	700m
1810′	550m
760′	230m
500′	150m



Gnd speed-Kts		70	90	100	120	140	160
ILS GS or LOC Descent Angle	3.00°	372	478	531	637	743	849
MAP at D0.7 IBA							

HIALS, PAPI

500′

220 KT MAX onto 305°

LT

D5.0 IBA

Standard STRAIGHT-IN LANDING RWY 34

ILS DA(H) 213′ (200′)		LOC (GS out) CDFA MDA(H) 420′ (407′)		CIRCLE-TO-LAND Not authorized East of rwy		
FULL	ALS out		ALS out	Max Kts	MDA(H)	VIS
A	RVR 550m 1 VIS 800m	1200m	1500m	100	730′ (717′)	3300m
B				135	740′ (727′)	
C			1500m	1900m	180	910′ (897′)
D					205	4400m

PANS OPS

1 W/o HUD/AP/FD: RVR 750m.

CHANGES: None.

SHENZHEN, PR OF CHINA
SA CAT I RNP ILS DME Z Rwy 34

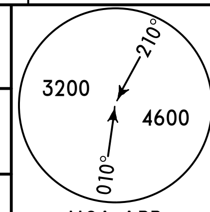
D-ATIS Arrival	ZHUHAI Approach *APP01	APP02	*APP03	*APP04	*APP05	BAOAN Tower	*Ground
126.85	120.35	119.55	123.85	119.025	127.95	118.45	121.8

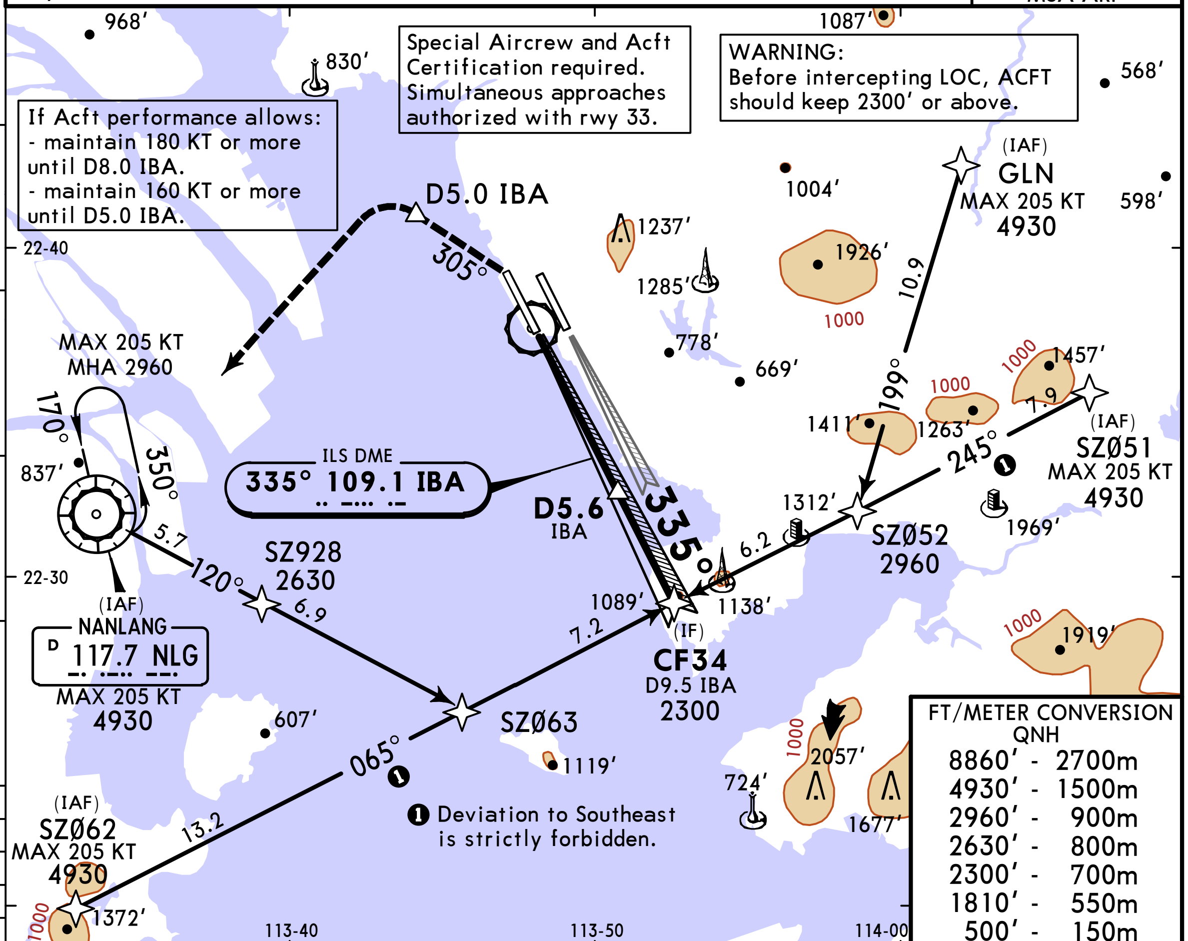
BRIEFING STRIP™

LOC IBA	Final Apch Crs	D5.6 IBA	SA CAT I ILS	Apt Elev 13′
109.1	335°	1810′ (1797′)	RA 157′ DA(H) 163′(150′)	Rwy 13′

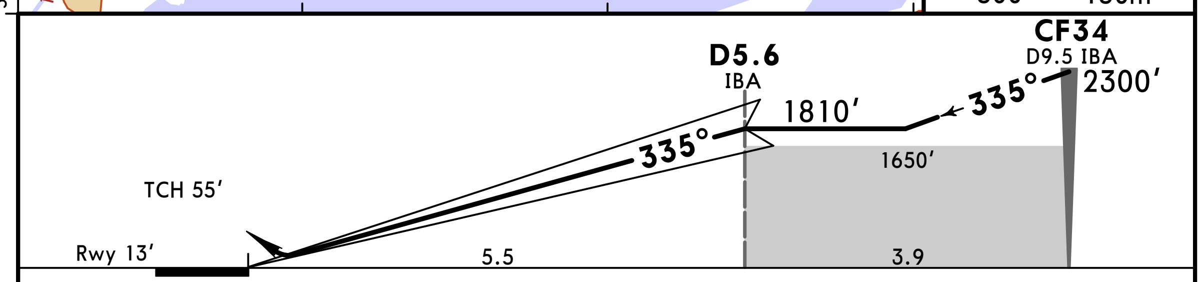
MISSED APCH: Climb STRAIGHT AHEAD to 500′, turn LEFT (MAX 220 KT) onto 305° to D5.0 IBA, turn LEFT (MAX 220 KT) direct to NLG VOR at 2960′. Join holding or as directed.

Alt Set: hPa Trans level: 980 hPa or above - FL108 Trans alt: 8860′
Rwy Elev: 0 hPa 979 hPa or less - FL118





FT/METER CONVERSION QNH	
8860′	2700m
4930′	1500m
2960′	900m
2630′	800m
2300′	700m
1810′	550m
500′	150m



Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	372	478	531	637	743	849

HIALS PAPI | 500′ ↑ | 220 KT MAX LT onto 305° | D5.0 IBA

Standard

STRAIGHT-IN LANDING RWY 34
SA CAT I ILS 1

RA 157′
DA(H) **163′** (150′)

RVR 450m

PANS OPS

1 HUD required.

CHANGES: MSA.

ZGSZ/SZX BAOAN

23 JUN 23 (11-8B)

JEPPESEN

SHENZHEN, PR OF CHINA
SA CAT I ILS DME Y Rwy 34

D-ATIS Arrival	ZHUHAI Approach					BAOAN Tower	*Ground
	*APP01	APP02	*APP03	*APP04	*APP05		
126.85	120.35	119.55	123.85	119.025	127.95	118.45	121.8

BRIEFING STRIP™

LOC IBA	Final Apch Crs	D5.6 IBA	SA CAT I ILS	Apt Elev 13′
109.1	335°	1810′ (1797′)	RA 157′ DA(H) 163′ (150′)	Rwy 13′

MISSED APCH: Climb STRAIGHT AHEAD to 500′, turn LEFT (MAX 220 KT) onto 305° to D5.0 IBA, turn LEFT (MAX 220 KT) direct to NLG VOR at 2960′. Join holding or as directed.

Alt Set: hPa
Rwy Elev: 0 hPa

Trans level: 980 hPa or above - FL108
979 hPa or less - FL118

Trans alt: 8860′

MSA SHK VOR: 190° 4000 5500 025°

MSA NLG VOR: 3800 265° 065° 5300

WARNING:
Before intercepting LOC, ACFT should keep 2300′ or above.

D5.0 IBA

305°

If Acft perf allows:
- maintain 180 KT or more until D8.0 IBA.
- maintain 160 KT or more until D5.0 IBA.

MAX 205 KT
MHA 2960

170° 350° 5.6 120°

837′

ILS DME
335° 109.1 IBA

D5.6 IBA

335°

D5.6 NLG
2630

6.8

(IAF)
NANLANG
D 117.7 NLG
MAX 205 KT
4930

D4.0 SHK
D15.0 NLG

4.8

1089′

1138′

(IF)
D9.5 IBA
2300

D8.8 SHK
D12.4 NLG

1119′

607′

065°

8.7

(IAF)
D17.5 SHK
MAX 205 KT
4930

1 Deviation to Southeast is strictly forbidden.

Simultaneous approaches authorized with rwy 33.

Special Aircrew and Acft Certification required.

1312′

4.0

D1.5 SHK

1.5

D5.5 SHK
2960

245°

6.0

1457′ (IAF)
D11.5 SHK
MAX 205 KT
4930

1411′ 1263′ 1969′ 1919′ 1677′ 2057′ 724′ 1430′ 1087′ 568′ 1004′ 1237′ 1285′ 1926′ 778′ 669′ 830′

1000

SHEKOU
D 115.9 SHK

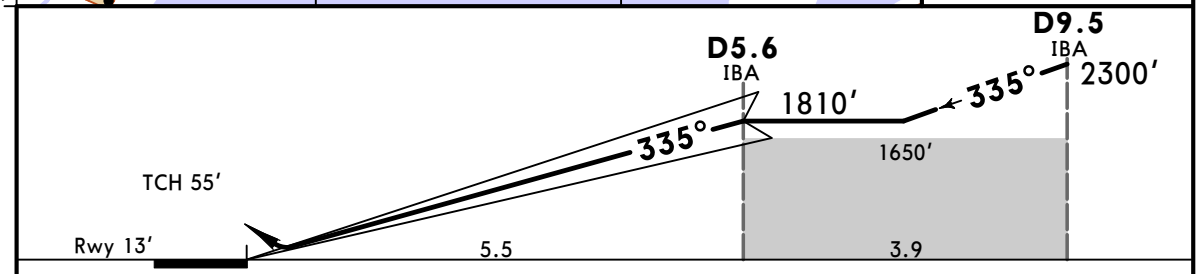
114-00

FT/METER CONVERSION
QNH

8860′	2700m
4930′	1500m
2960′	900m
2630′	800m
2300′	700m
1810′	550m
500′	150m

22-40 22-30 22-20 113-40 113-50

20 15 10 5 0 5



Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	372	478	531	637	743	849

HIALS
PAPI

500′

220 KT MAX
LT onto 305°

D5.0 IBA

Standard

STRAIGHT-IN LANDING RWY 34
SA CAT I ILS 1

RA 157′
DA(H) 163′ (150′)

RVR 450m

1 HUD required.

PANS OPS

CHANGES: None.

ZGSZ/SZX
BAOAN

JEPPESEN
23 JUN 23 (11-9)

SHENZHEN, PR OF CHINA
RNP (AR) ILS DME W Rwy 34

D-ATIS Arrival	ZHUHAI Approach					BAOAN Tower	*Ground
	*APP01	APP02	*APP03	*APP04	*APP05		
126.85	120.35	119.55	123.85	119.025	127.95	118.45	121.8

BRIEFING STRIP ™

LOC IBA	Final Apch Crs	No altitude published	ILS DA(H)	Apt Elev 13′ Rwy 13′
109.1	335°		213′(200′)	

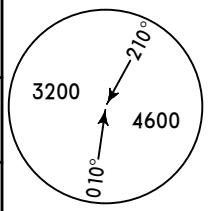
MISSED APCH: Climb STRAIGHT AHEAD to 500′, turn LEFT (MAX 220 KT) onto 305° to D5.0 IBA, turn LEFT (MAX 220 KT) direct to NLG VOR at 3000′. Join holding or as directed.

Alt Set: hPa
Rwy Elev: 0 hPa

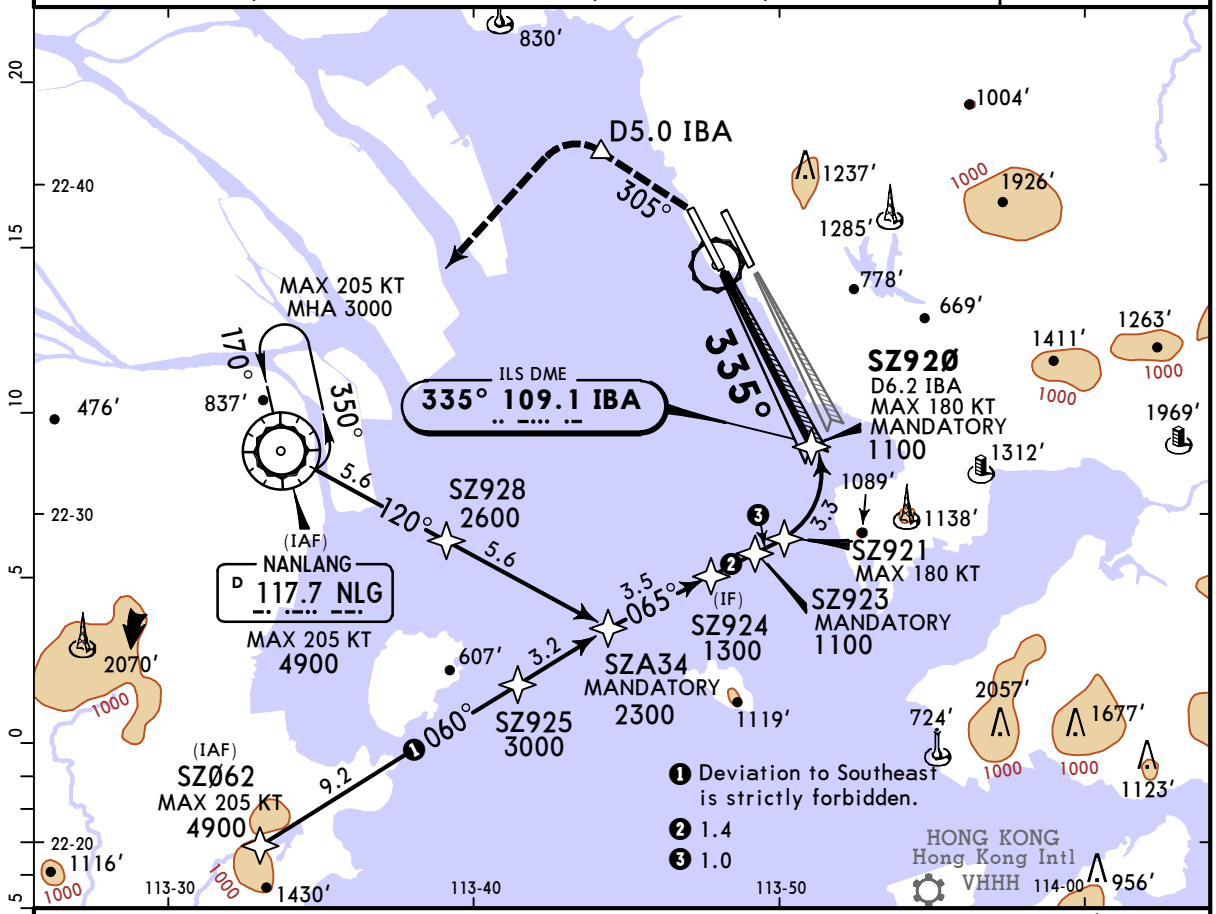
Trans level: 980 hPa or above - FL108
979 hPa or less - FL118

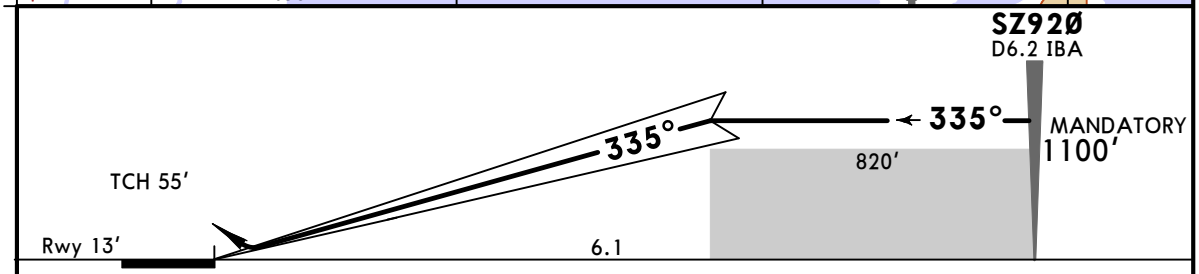
Trans alt: 8860′

1. Authorization required. 2. Dual GNSS and IRU required. 3. RF required.



MSA ARP





Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	372	478	531	637	743	849

HIALS
PAPI

500′

220 KT MAX
LT
onto 305°

D5.0 IBA

PANS OPS

Standard STRAIGHT-IN LANDING RWY 34

DA(H) 213′(200′)

	FULL	ALS out
A	RVR 550m 1	1200m
B	VIS 800m	
C		
D		

1 W/o HUD/AP/FD: RVR 750m.

CHANGES: MSA.

General Information

Location: VANCOUVER BC CAN
ICAO/IATA: CYVR / YVR
Lat/Long: N49° 11.7', W123° 11.0'
Elevation: 13 ft

Airport Use: Public
Daylight Savings: Observed
UTC Conversion: +8:00 = UTC
Magnetic Variation: 17.0° E

Fuel Types: 100 Octane (LL), Jet A, Jet A-1
Oxygen Types: High Pressure, Low Pressure
Repair Types: Major Airframe, Major Engine
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: Yes
LLWS Alert: No
Beacon: No

Sunrise: 1332 Z
Sunset: 0257 Z

Runway Information

Runway: 08L
Length x Width: 9941 ft x 200 ft
Surface Type: concrete
TDZ-Elev: 13 ft
Lighting: Edge, ALS, Centerline, TDZ

Runway: 08R
Length x Width: 10803 ft x 200 ft
Surface Type: asphalt
TDZ-Elev: 9 ft
Lighting: Edge, ALS, Centerline, TDZ

Runway: 13
Length x Width: 7300 ft x 200 ft
Surface Type: asphalt
TDZ-Elev: 8 ft
Lighting: Edge, ALS

Runway: 26L
Length x Width: 10803 ft x 200 ft
Surface Type: asphalt
TDZ-Elev: 7 ft
Lighting: Edge, ALS, Centerline, TDZ

Runway: 26R
Length x Width: 9941 ft x 200 ft
Surface Type: concrete
TDZ-Elev: 9 ft
Lighting: Edge, ALS, Centerline, TDZ

Runway: 31
Length x Width: 7300 ft x 200 ft
Surface Type: asphalt
TDZ-Elev: 8 ft
Lighting: Edge, ALS

Communication Information

ATIS: 124.600
Vancouver Tower: 125.650
Vancouver Tower: 124.025
Vancouver Tower: 119.550
Vancouver Tower: 118.700
Vancouver Ground: 127.150
Vancouver Ground: 121.700
Vancouver Clearance Delivery: 121.400
Vancouver Arrival: 128.175
Vancouver Arrival: 133.100
Vancouver Arrival: 128.600
Vancouver Arrival: 134.225
Vancouver Departure: 126.125
Vancouver Departure: 132.300
Vancouver De-Ice Operations: 129.950
Vancouver Terminal Area: 125.200
Pacific Radio Radio: 123.150 Flight Info Service RCO
Iceman Operations: 130.700
Pad Control Operations: 131.975
Iceman Operations: 130.925

CANUCK 5 ARRIVAL
(BOOTH.CANUC5)
(RWYS 08L/R, 13)

D-ATIS	Apt Elev	Alt Set: INCHES Trans level: FL180
124.6	13	Safe Altitude within 100 NM 12,800.

BOOTH
227° 5.5
MHA 10200
040°
VITEV
FL210
8
7347
STAVE
14
LANNE
MAX 250 KT
14000
10000
239°
10.1
MILLS
264°
4.2
BASRA
10000
SEBOG
8000
5
APLEX
5000
8
125°
(DTW)
VINLO
MAX 210 KT
3000
8.1
(FACF)
EMKAM
3000
(FACF)
BUBUL
3000
083°
083°
083°
263°
263°
263°
MAX 200 KT
MAX 200 KT
RWYS 08L/R, 13
RWØ8L

CONTOUR INTERVALS: 8000, 6000, 4000, 2000

ABBOTSFORD CYXX
CANADA
UNITED STATES
LANGLEY Regl CYNJ
PITT MEADOWS CYPK
VANCOUVER Boundary Bay CZBB
7800

CANUCK 5 ARRIVAL
(BOOTH.CANUC5)
(RWYS 26L/R)

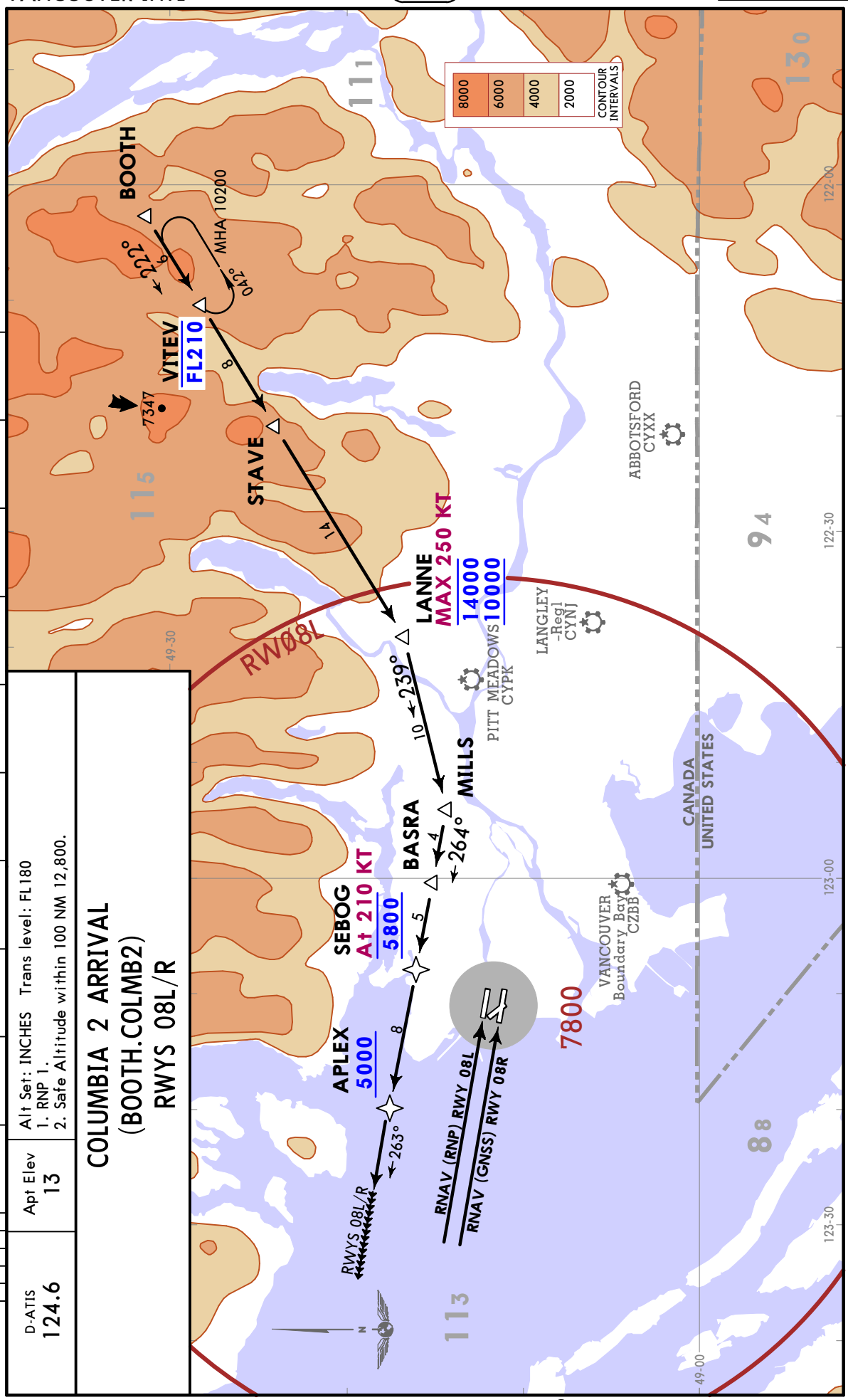
D-ATIS 124.6

Apt Elev 13

Alt Set: INCHES Trans level: FL180
Safe Altitude within 100 NM 12,800.

BOOTH
222°
5.9
MHA 10200
040°
VITEV
8
STAVE
MAX 230 KT
12000
9200
212°
6.4
211°
4
GOPAD
9000
MOGUS
7000
1
OBTOT
5000
211°
7.2
MAX 200 KT
263°
263°
225°
5.8
4.9
083°
MAX 200 KT
083°
(FACF)
GOREG
3000
(FACF)
SAVED
3000
263°
263°
RW26L
7347
7800
CONTOUR INTERVALS
8000
6000
4000
2000
ABBOTSFORD
CYXX
PITT MEADOWS
CYPK
LANGLEY
-Regl
CYNJ
VANCOUVER
Boundary Bay
CZBB
CANADA
UNITED STATES
111
115
113
49-30
122.00
122.30
123.00
49-00

CHANGES: MSA revised.



COLUMBIA 2 ARRIVAL
(BOOTH.COLMB2)
RWYS 08L/R

Alt Set: INCHES Trans level: FL180
1. RNP 1.
2. Safe Altitude within 100 NM 12,800.

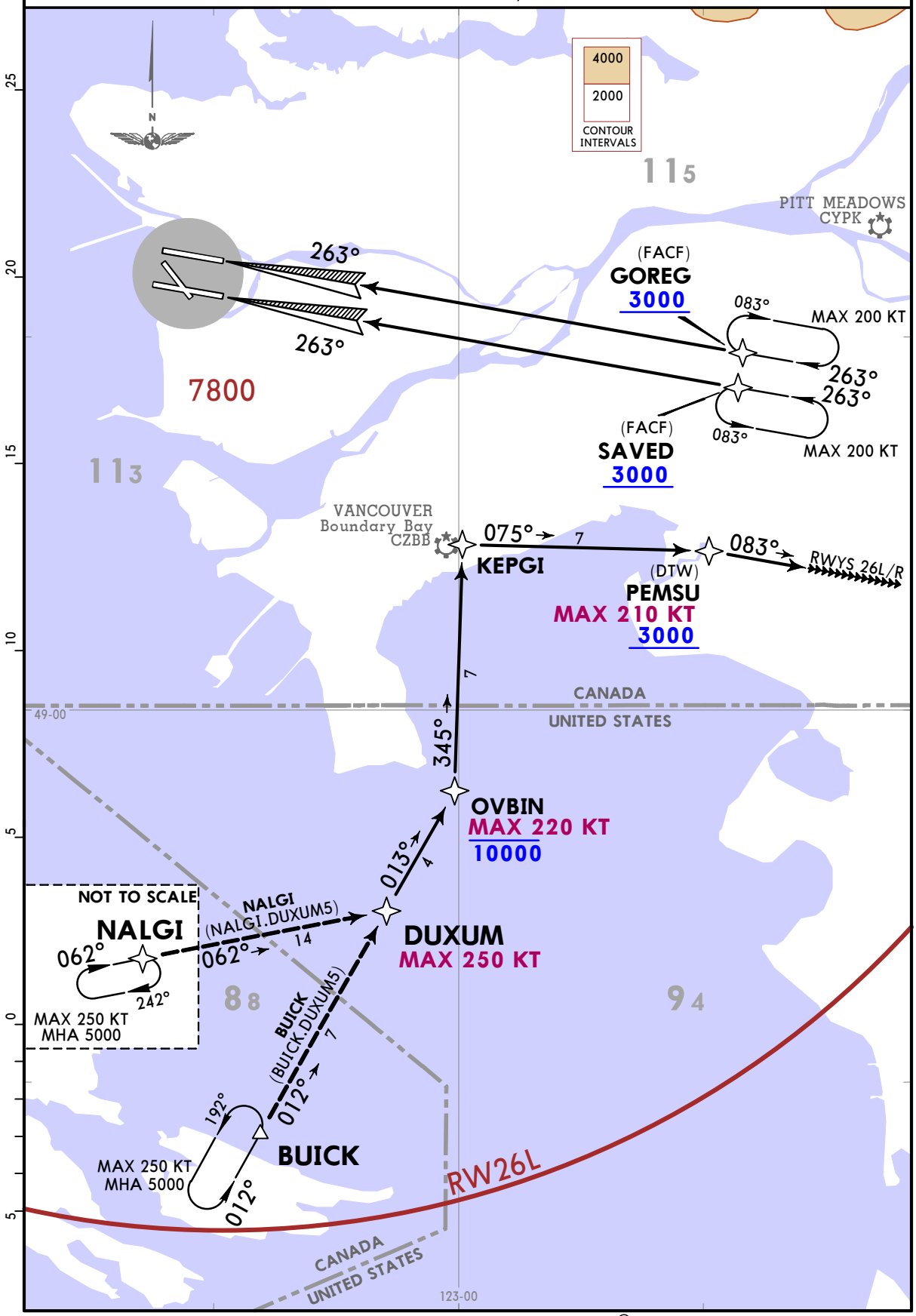
Apt Elev 13

D-ATIS 124.6

CHANGES: None.

D-ATIS	Apt Elev	
124.6	13	Alt Set: INCHES Trans level: FL180 Safe Altitude within 100 NM 12,800.

DUXUM 5 ARRIVAL
(DUXUM.DUXUM5)
RWYS 26L/R



CHANGES: MSA revised.

JEPPESEN
17 FEB 23 (10-2D) Eff 23 Feb

VANCOUVER, BC
RNAV STAR

D-ATIS	Apt Elev	Alt Set: INCHES Trans level: FL180
124.6	13	Safe Altitude within 100 NM 12,800.

GRIZZ 7 ARRIVAL (EGRET.GRIZZ7)
RWYS 08L/R & 13

RWYS 08L/R & 13
263°
NAKMA
MAX 210 KT
3000
083°
083°
17
268°
VANCOUVER
115.9 YVR
8000
TATGO
10000
RWØ8L
29
295°
EGRET
JET AIRCRAFT
At 280 KT
12000
10000
NON-JET AIRCRAFT
10000
11
17
278°
PIZZE
14000
152°
109°
20
289°
ILSAA
METOW
(METOW.GRIZZ7)
65
NOT TO SCALE
268°
METOW
PAINE
(PAE.GRIZZ7)
58
332°
PAINE
110.6 PAE
7800
10769
12000
10000
8000
6000
4000
2000
CONTOUR INTERVALS
CANADA
UNITED STATES
PITT MEADOWS CYPK
LANGLEY -Regl CYNJ
VANCOUVER Boundary Bay CZBB
ABBOTSFORD CYXX
NANAIMO CYCD
BELLINGHAM -Intl KBLI
EASTSOUND Orcas I KORS
VICTORIA -Intl CYYJ
FRIDAY HARBOR KFHR
LOPEZ Lopez Island S31
BURLINGTON/MT VERNON Skagit Regl KBVS
OAK HARBOR Whidbey I NAS KNUW
OAK HARBOR Eisenberg KOKH
ARLINGTON -Mun KAWO
PORT ANGELES Port Angeles Cgas KNOW
PORT ANGELES William R Fairchild Intl KCLM
PORT TOWNSEND Jefferson Co Intl 0S9
EVERETT Snohomish Co KPAE
SNOHOMISH Harvey S43
11 3
11 5
11 1
12 2
13 0
8 8
9 4
9 2
10 3
11 6
49-00
48-30
48-00
124-00
123-30
123-00
122-30
122-00
121-30
121-00

D-ATIS	Apt Elev
124.6	13

Alt Set: INCHES Trans level: FL180
Safe Altitude within 100 NM 12,800.

GRIZZ 7 ARRIVAL (EGRET.GRIZZ7)
RWYS 26L/R

RW26L
7800
263°
263°
PITT MEADOWS
CYPK
PEMSU
MAX 210 KT
3000
KEPGI
VANCOUVER
Boundary Bay
CZBB
7
075°
083°
LANGLEY
-Regl
CYNJ
ABBOTSFORD
CYXX
RWYS 26L/R
345°
7
CANADA
UNITED STATES
OVBIN
MAX 220 KT
10000
GOVAV
8000
EGRET
JET AIRCRAFT
At 250 KT
12000
10000
NON-JET AIRCRAFT
10000
BELLINGHAM
-Intl
KBLI
21
291°
EASTSOUND
Orcas I
KORS
CANADA
UNITED STATES
10769
PIZZE
14000
17
278°
11
109°
152°
BEZOV
FRIDAY HARBOR
KFHR
LOPEZ
Lopez Island
S31
BURLINGTON/MT VERNON
Skagit Regl
KBVS
OAK HARBOR
Whidbey I NAS
KNUW
OAK HARBOR
Eisenberg
KOKH
PORT TOWNSEND
Jefferson Co Intl
0S9
ARLINGTON
-Mun
KAWO
PAINE
(PAE.GRIZZ7)
38
332°
20
289°
ILSAA
METOW
(METOW.GRIZZ7)
65
268°
METOW
PAINE
D
110.6 PAE
EVERETT
Snohomish Co
KPAE
SNOHOMISH
Harvey
S43
CANADA
UNITED STATES

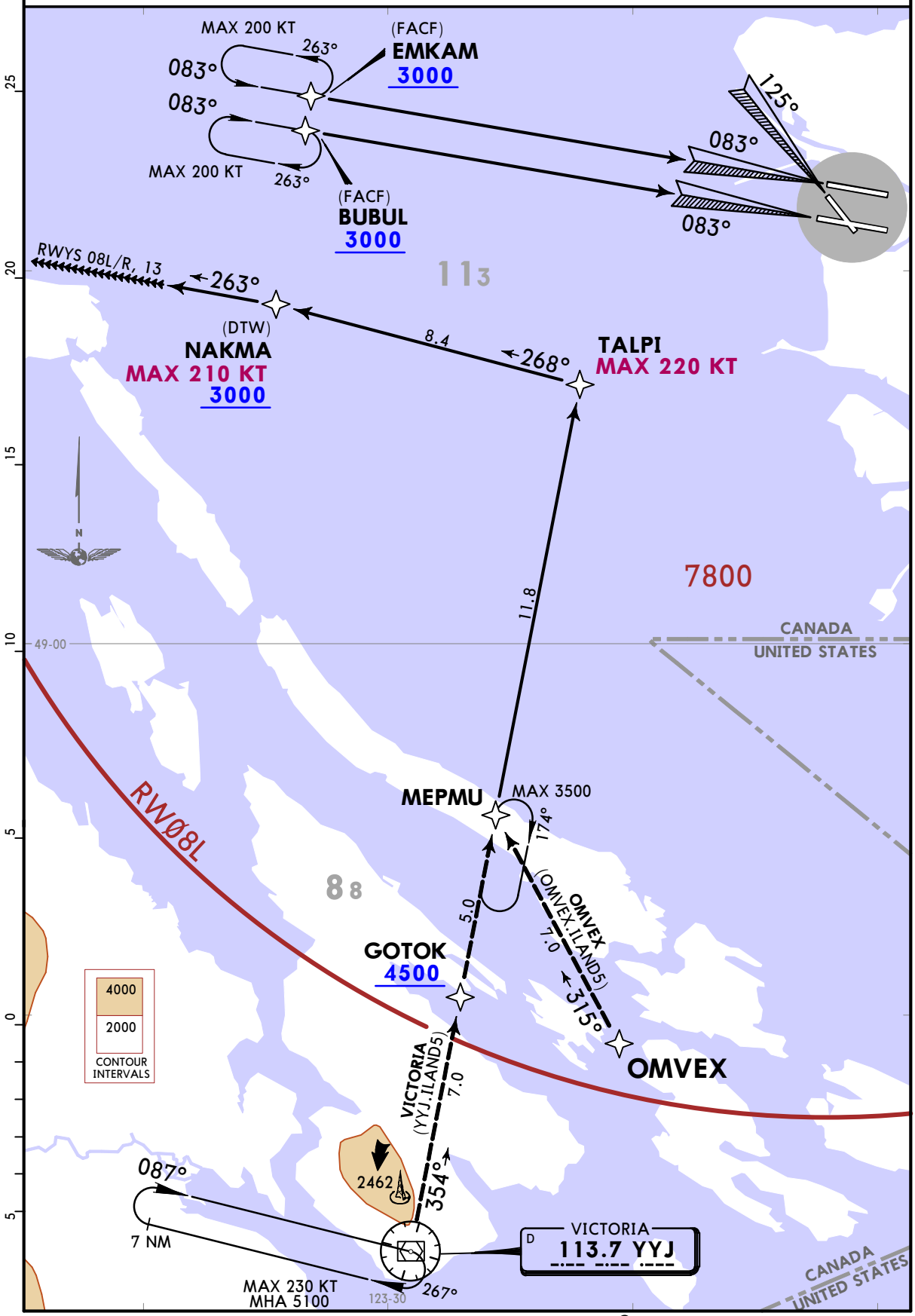
12000
10000
8000
6000
4000
2000
CONTOUR INTERVALS

49-00
48-30
48-00
123-00
122-30
122-00
121-30
121-00
120-30

CHANGES: MSA revised.

D-ATIS	Apt Elev	
124.6	13	Alt Set: INCHES Trans level: FL180 Safe Altitude within 100 NM 12,800.

ISLAND 5 ARRIVAL (MEPMU.ILAND5)
(RWYS 08L/R, 13)

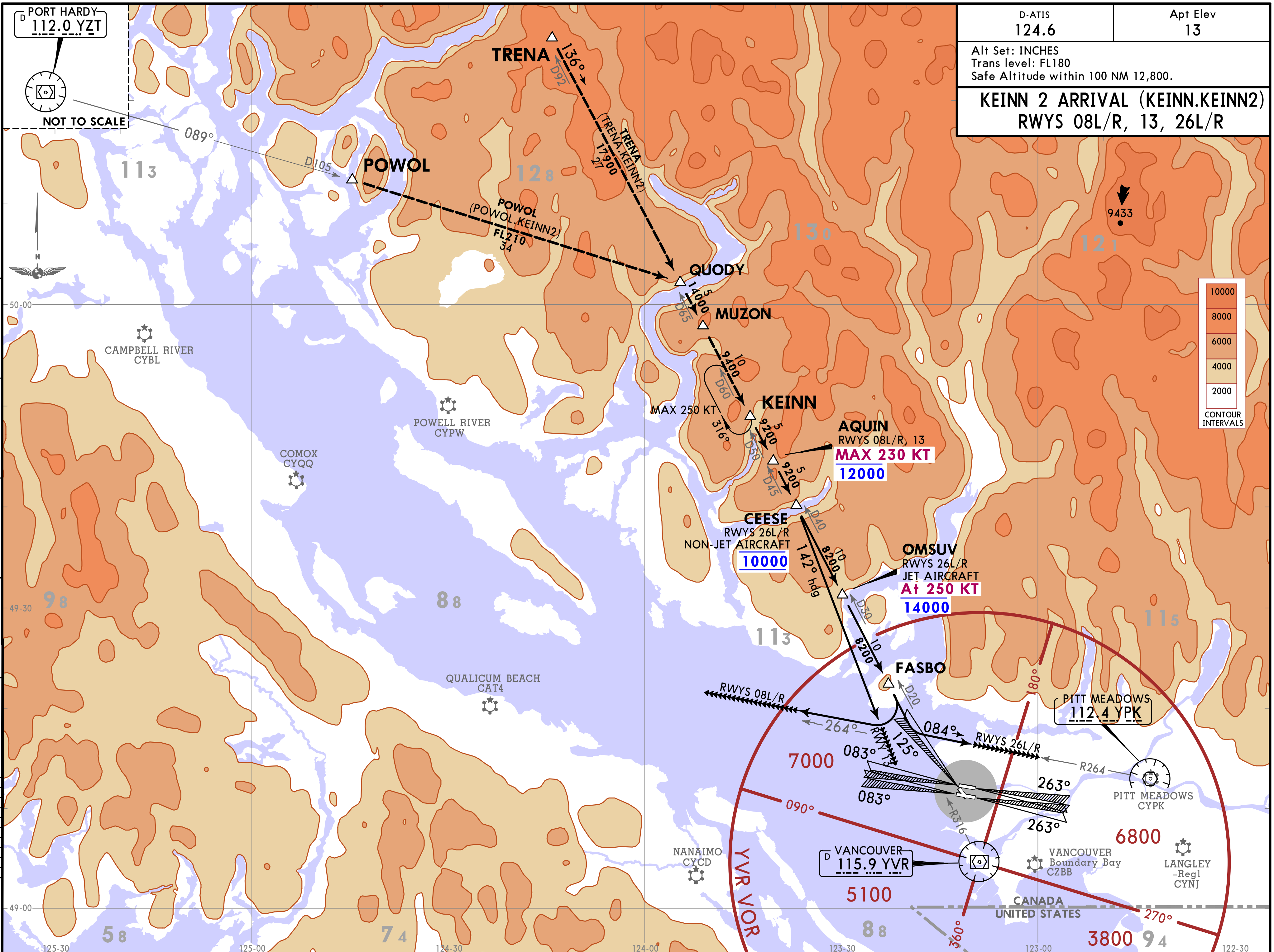


CHANGES: Reissue.

D-ATIS	Apt Elev
124.6	13

Alt Set: INCHES
Trans level: FL180
Safe Altitude within 100 NM 12,800.

KEINN 2 ARRIVAL (KEINN.KEINN2)
RWYS 08L/R, 13, 26L/R



CHANGES: MSA.

CYVR/YVR
VANCOUVER INTL

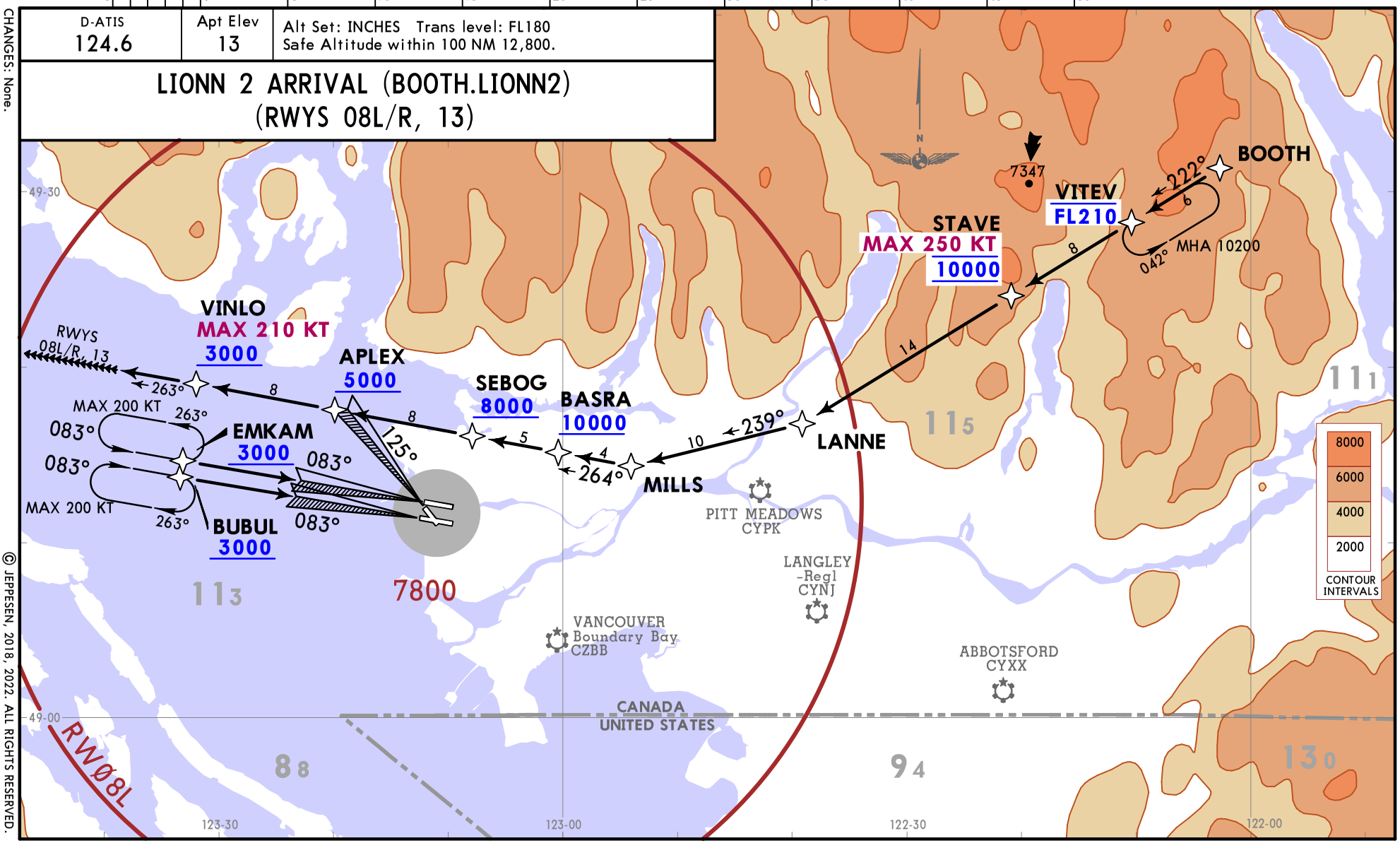
JEPPESEN
2 SEP 22 (10-2J) Eff 8 Sep

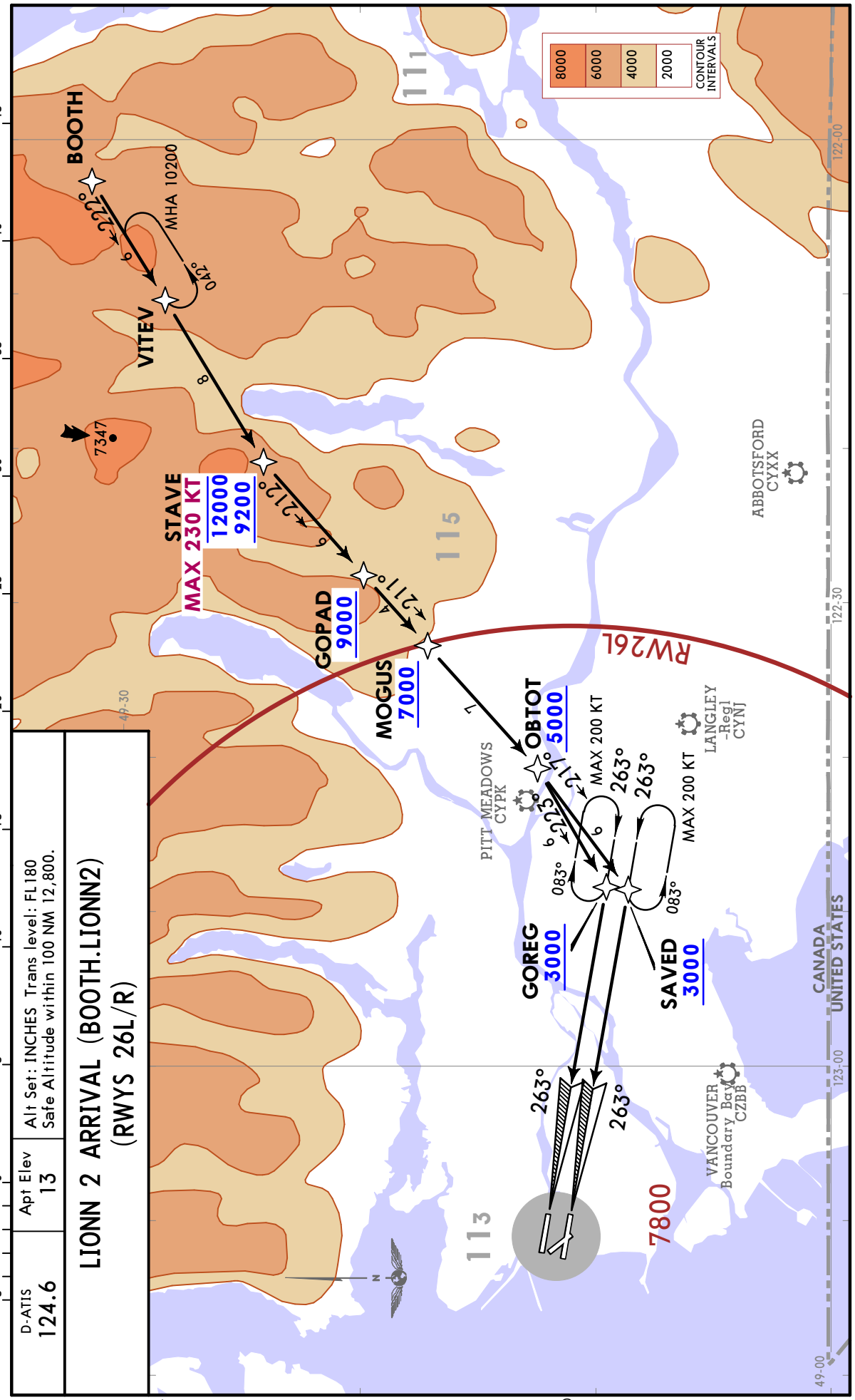
VANCOUVER, BC
RNAV STAR

CHANGES: None.

D-ATIS	Apt Elev	Alt Set: INCHES Trans level: FL180
124.6	13	Safe Altitude within 100 NM 12,800.

LIONN 2 ARRIVAL (BOOTH.LIONN2)
(RWYS 08L/R, 13)





D-ATIS 124.6

Apt Elev 13

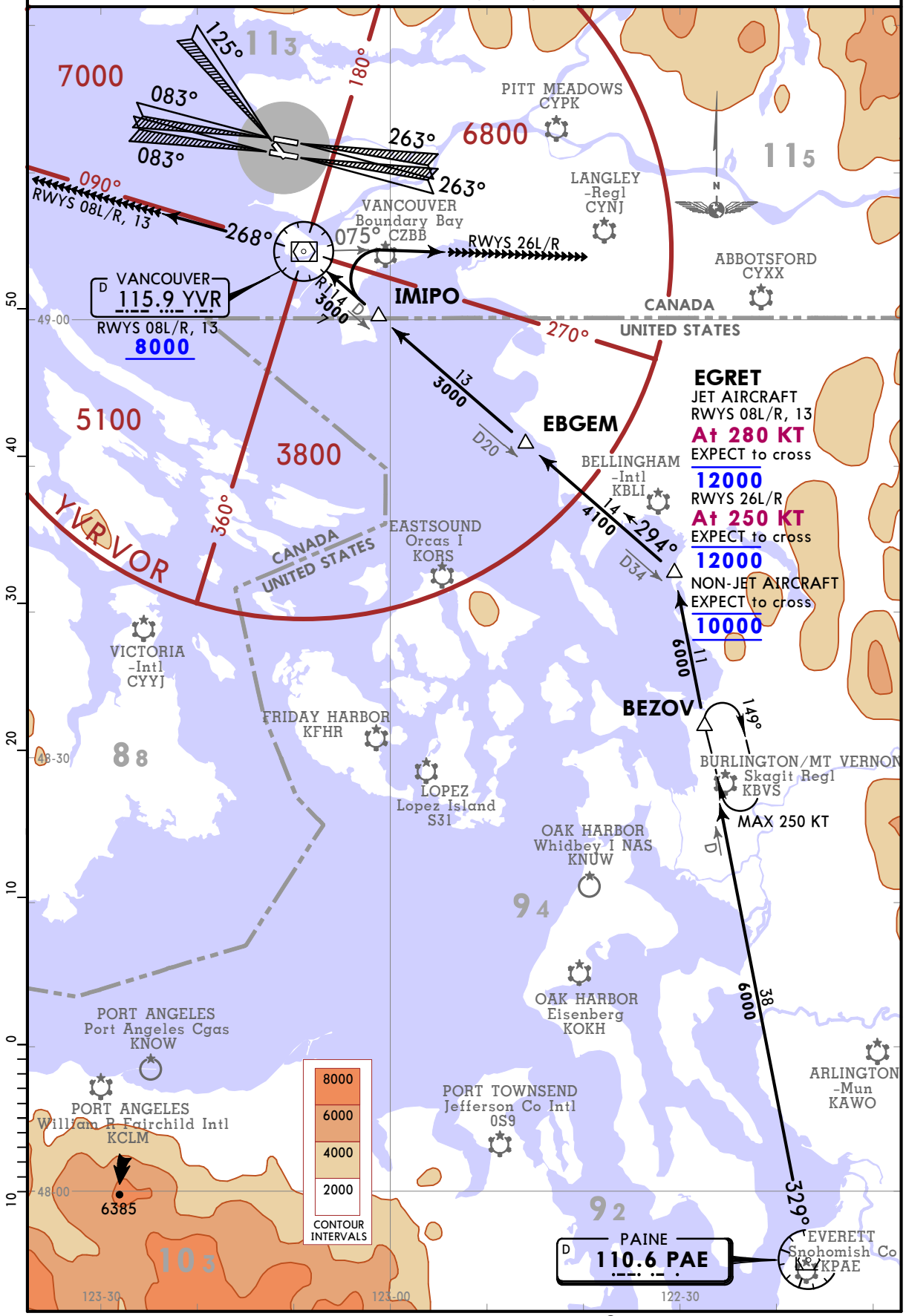
Alt Set: INCHES Trans level: FL180
Safe Altitude within 100 NM 12,800.

LIONN 2 ARRIVAL (BOOTH.LIONN2)
(RWYS 26L/R)

CHANGES: MSA revised.

D-ATIS	Apt Elev	
124.6	13	Alt Set: INCHES Trans level: FL180 Safe Altitude within 100 NM 12,800.

PAINE 4 ARRIVAL (PAE.PAINE4)
RWYS 08L/R, 13, 26L/R



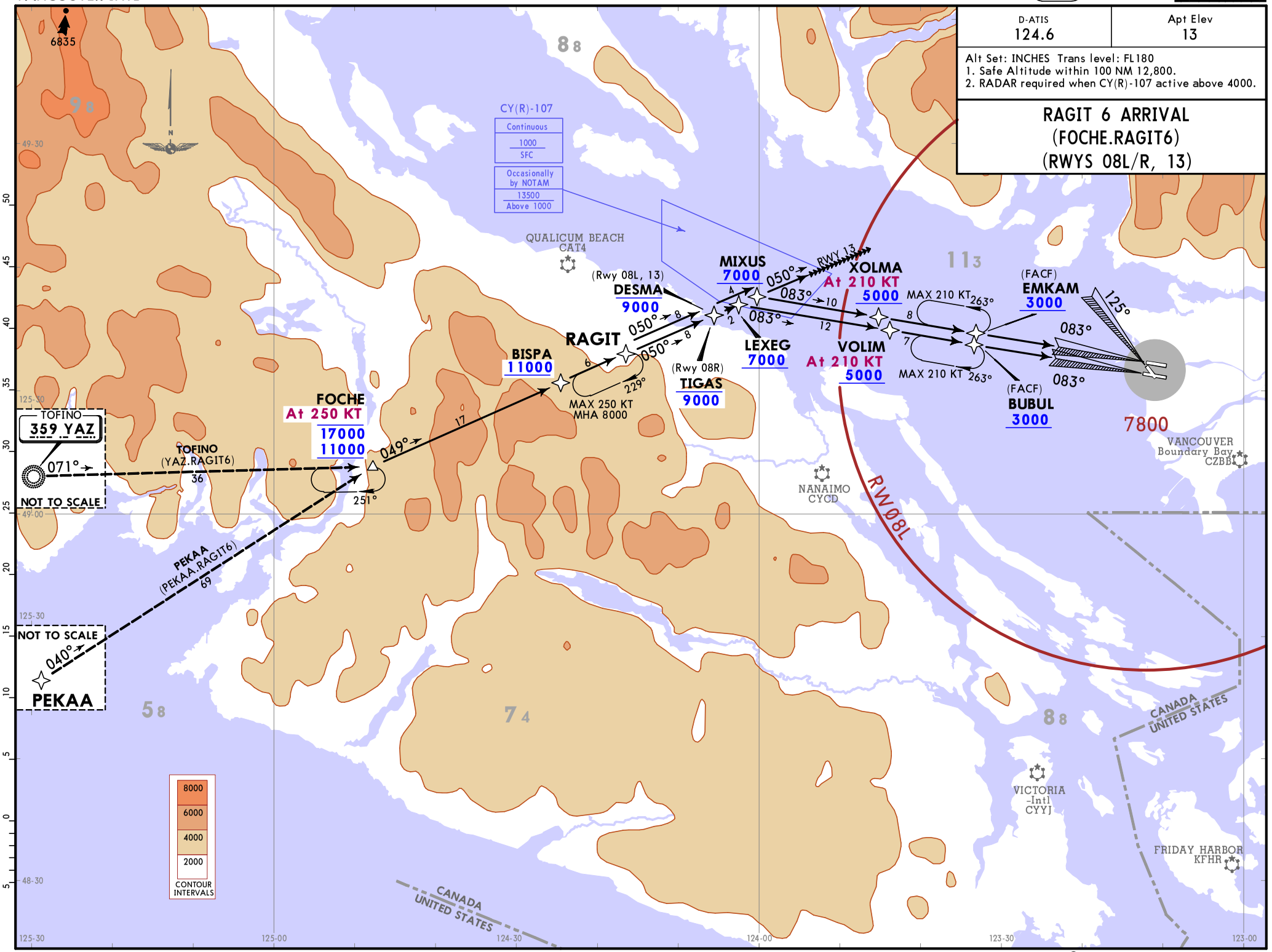
CHANGES: None.

JEPPESEN VANCOUVER, BC
17 FEB 23 (10-2M) Eff 23 Feb
RNAV STAR

D-ATIS	Apt Elev
124.6	13

Alt Set: INCHES Trans level: FL180
1. Safe Altitude within 100 NM 12,800.
2. RADAR required when CY(R)-107 active above 4000.

RAGIT 6 ARRIVAL
(FOCHE.RAGIT6)
(RWYS 08L/R, 13)



D-ATIS	Apt Elev	
124.6	13	Alt Set: INCHES Trans level: FL180 Safe Altitude within 100 NM 12,800.

SHARK 2 ARRIVAL
(CASDY.SHARK2)
(RWYS 26L/R)

7150

TOFINO
359 YAZ

071°

TOFINO
(YAZ.SHARK2)
36

FOCHE

072°

20

251°

073°

13

CASDY

073°

12.5

ANVAP
FL220
11000

NANAIMO
CYCD

URMIX
MAX 250 KT
12000
10000

13

ATUKI
10000

7

075°

13

VANCOUVER
Boundary Bay
CZBB

(DTW)
PEMSU
MAX 210 KT
3000

083°

083°
MAX 200 KT
RWYS 26L/R

(FACF)
SAVED
3000

263°

263°

(FACF)
GOREG
3000

083°

PITT MEADOWS
CYPK
MAX 200 KT

263°

263°

LANGLEY
-Regl
CYNJ

VANCOUVER
115.9 YVR
8000

RW26L

PEKAA
(PEKAA.SHARK2)
69

040°

NOT TO SCALE

PEKAA

8000
6000
4000
2000
CONTOUR INTERVALS

COMOX
CYQQ

QUALICUM BEACH
CAT4

7800

CANADA
UNITED STATES

VICTORIA
-Intl
CYYJ

EASTSOUND
Orcas I
KORS

BELLINGHAM
-Intl
KBLI

FRIDAY HARBOR
KFHR

LOPEZ
Lopez Island
S31

OAK HARBOR
Whidbey I NAS
KNUW

OAK HARBOR
Eisenberg
KOKH

PORT ANGELES
Port Angeles Cgas
KNOW

PORT ANGELES
William R Fairchild Intl
KCLM

49-30
49-00
48-30
125-30
125-00
124-30
124-00
123-00

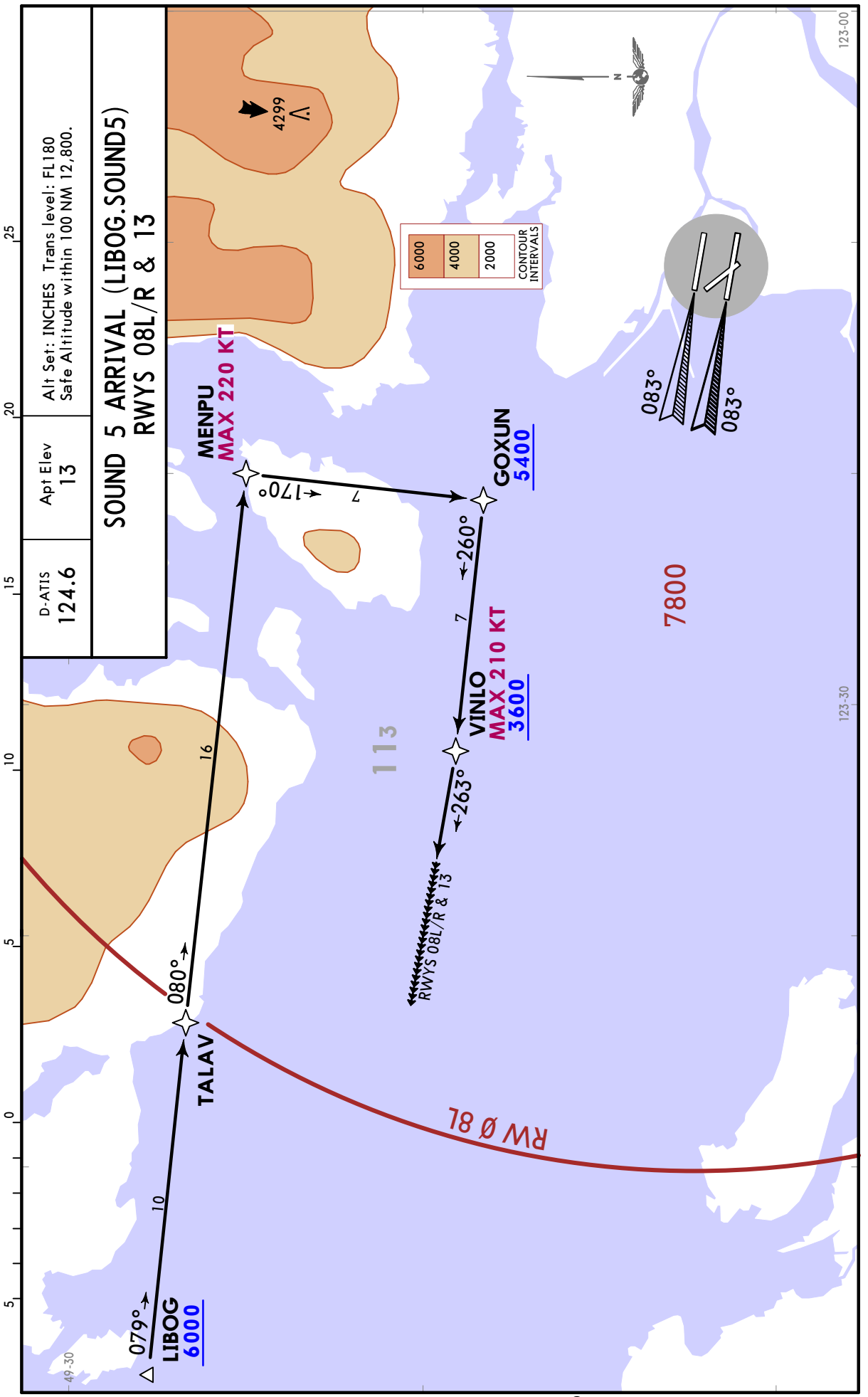
CHANGES: MSA revised.

SOUND 5 ARRIVAL (LIBOG.SOUND5)
RWYS 08L/R & 13

Alt Set: INCHES Trans level: FL180
Safe Altitude within 100 NM 12,800.

Apt Elev 13

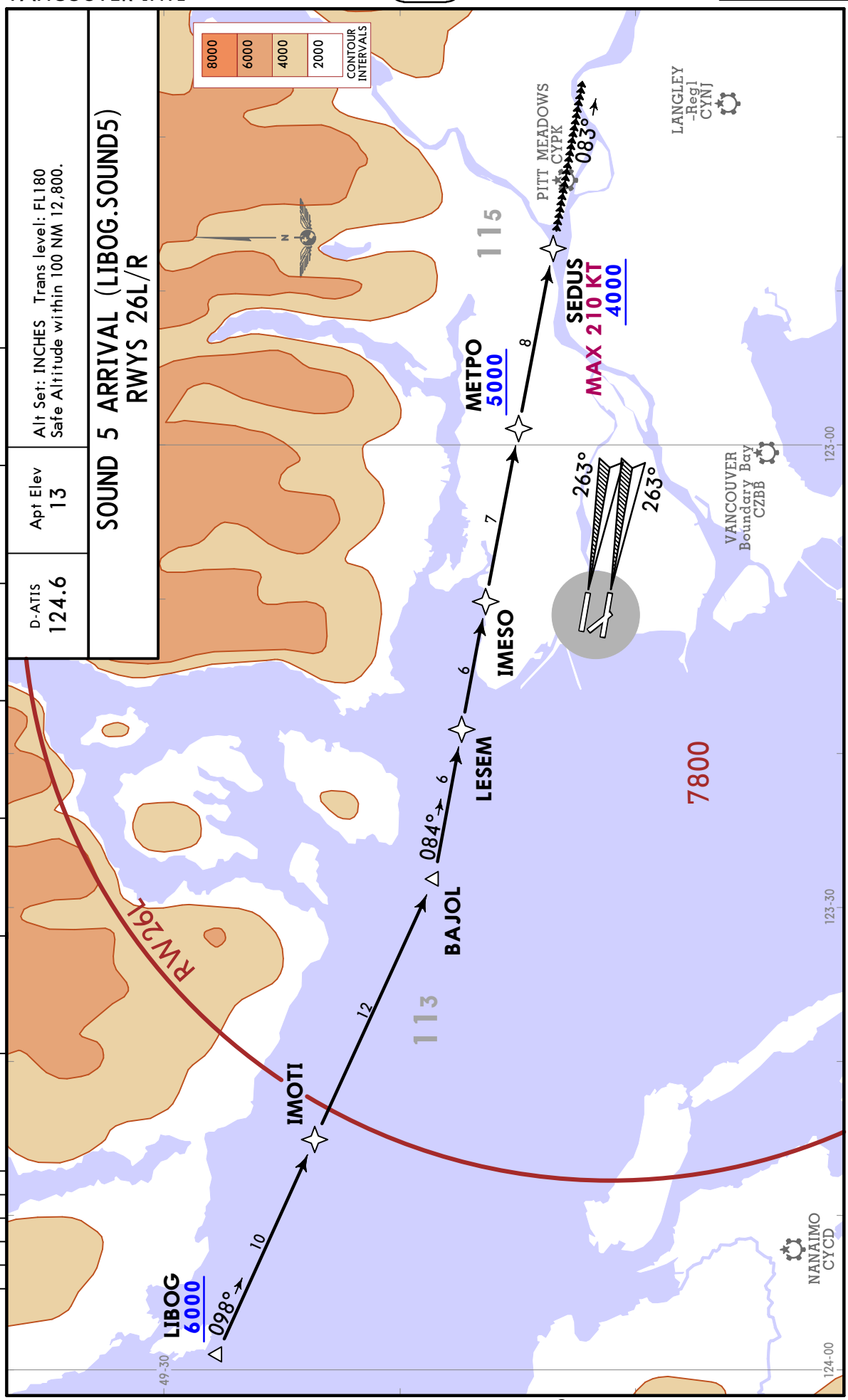
D-ATIS 124.6



CYVR/YVR
VANCOUVER INTL

JEPPESEN
17 FEB 23 (10-2Q) Eff 23 Feb

VANCOUVER, BC
RNAV STAR



CHANGES: MSA revised.

CHANGES: None.

D-ATIS	Apt Elev	Alt Set: INCHES Trans level: FL180
124.6	13	Safe Altitude within 100 NM 12,800.

STAVE 8 ARRIVAL (BOOTH.STAVE8)
RWYS 26L/R

HOLDING OVER VITEV
221°
041°

BOOTH
7347
VITEV
BOOTH (BOOTH.STAVE8)
10000
6
221°
D51
D45
STAVE
MAX 230 KT
12000
8
10000
D37
210°
9000
10
R041
MOGUS
D50
7
5000
OBTOT
D43
PITT MEADOWS
CYPK
RWYS 26L/R
LANGLEY
L-Regl
CYNJ
YVR VOR
ABBOTSFORD
CYXX
CANADA
UNITED STATES
VANCOUVER
115.9 YVR
VANCOUVER
Boundary Bay
CZBB
123-00
R030
NOT TO SCALE
VICTORIA
113.7 YYJ
263°
263°
090°
270°
360°
180°
7000
6800
5100
3800
11 3
11 5
11 1
49-30
49-00
122-30
122-00
8000
6000
4000
2000
CONTOUR INTERVALS

VITEV 4 ARRIVAL (BOOTH.VITEV4) RWYS 26L/R

D-ATIS 124.6

Apt Elev 13

Alt Set: INCHES Trans level: FL180
Safe Altitude within 100 NM 12,800.

CONTOUR INTERVALS 8000 6000 4000 2000

BOOTH

222° 6

047° 8

VITEV

STAVE
At 230 KT
12000
10000

247° 8

GONIR
9500

246° 9

PILGO

RW26L

9

157° 6

ILUXU
MAX 220 KT
6700

METPO
6100

084° 8

SEDUS
MAX 210 KT
4000

083°

PITT MEADOWS
CYPK

RWYS 26L/R

LANGLEY
-Regl
CYNJ

263°
263°

VANCOUVER
Boundary Bay
CZBB

7347

111
115
113
7800

122-00
122-30
123-00
49-30

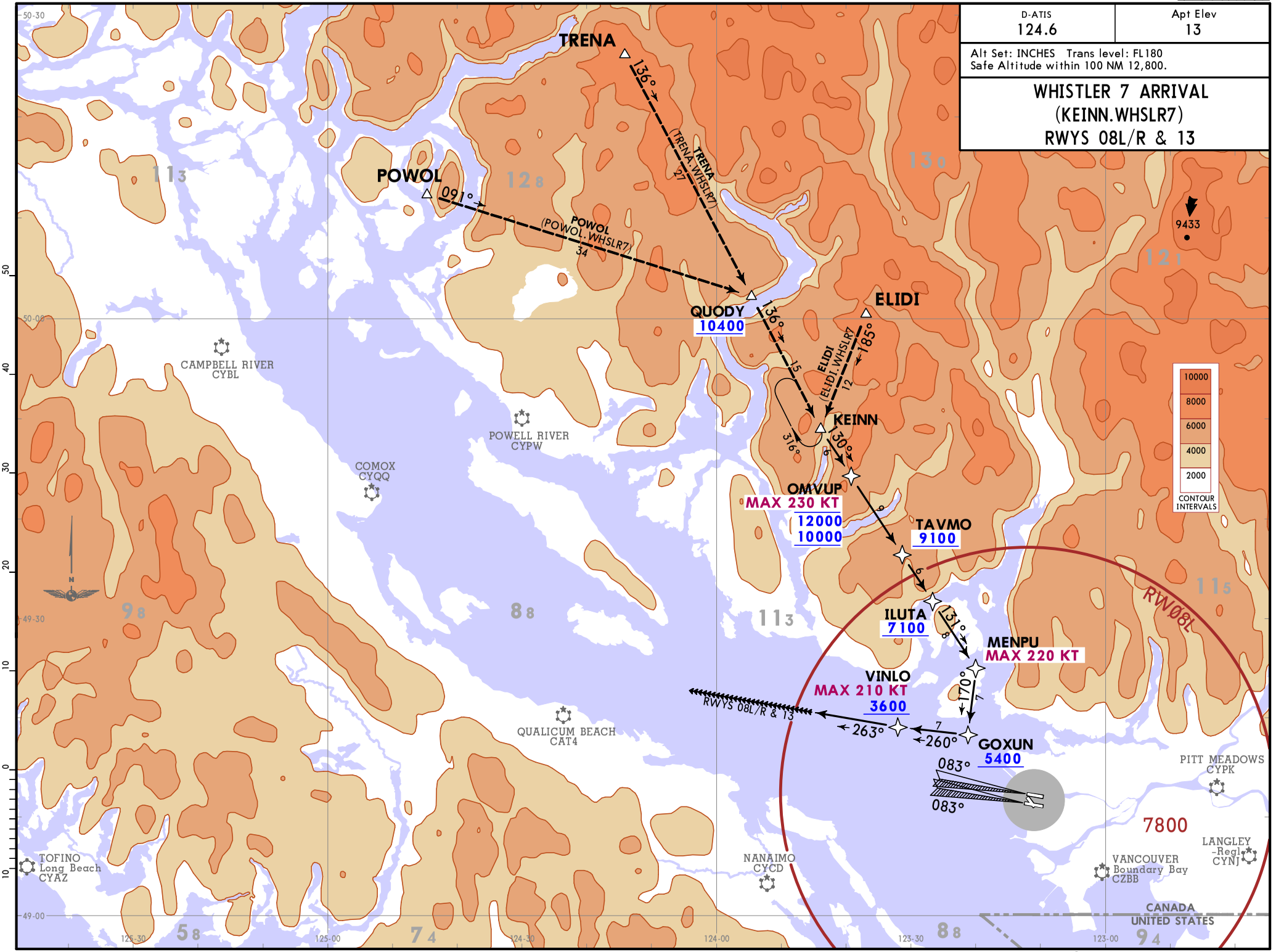
CHANGES: MSA revised.

JEPPESEN VANCOUVER, BC
17 FEB 23 (10-2U) Eff 23 Feb RNAV STAR

D-ATIS	Apt Elev
124.6	13

Alt Set: INCHES Trans level: FL180
Safe Altitude within 100 NM 12,800.

WHISTLER 7 ARRIVAL
(KEINN.WHSLR7)
RWYS 08L/R & 13



CHANGES: None.

CYVR/YVR
VANCOUVER INTL

JEPPESEN
17 FEB 23 (10-2V) Eff 23 Feb

VANCOUVER, BC
RNAV STAR

D-ATIS	Apt Elev	Alt Set: INCHES Trans level: FL180
124.6	13	Safe Altitude within 100 NM 12,800.

WHISTLER 7 ARRIVAL (KEINN.WHSLR7)
RWYS 26L/R

TRENA
136°
(TRENA.WHSLR7)
27
TRENA

POWOL
091°
POWOL
(POWOL.WHSLR7)
34

QUODY
10400
136°
15

ELIDI
185°
(ELIDI.WHSLR7)
12
ELIDI

KEINN
316°
10

CEESE
NON-JET AIRCRAFT
10000
10

OMSUV
JET AIRCRAFT
At 250 KT
14000
10000
135°
16

LESEM
10000
084°
6

IMESO
8000
7

METPO
5000
8

SEDUS
MAX 210 KT
4000

263°
263°
083°
RWYS 26L/R

RW26L

7800

9433

CAMPBELL RIVER
CYBL

POWELL RIVER
CYPW

COMOX
CYQQ

QUALICUM BEACH
CAT4

NANAIMO
CYCD

PITT MEADOWS
CYPK

LANGLEY
-Regl
CYNJ

VANCOUVER
Boundary Bay
CZBB

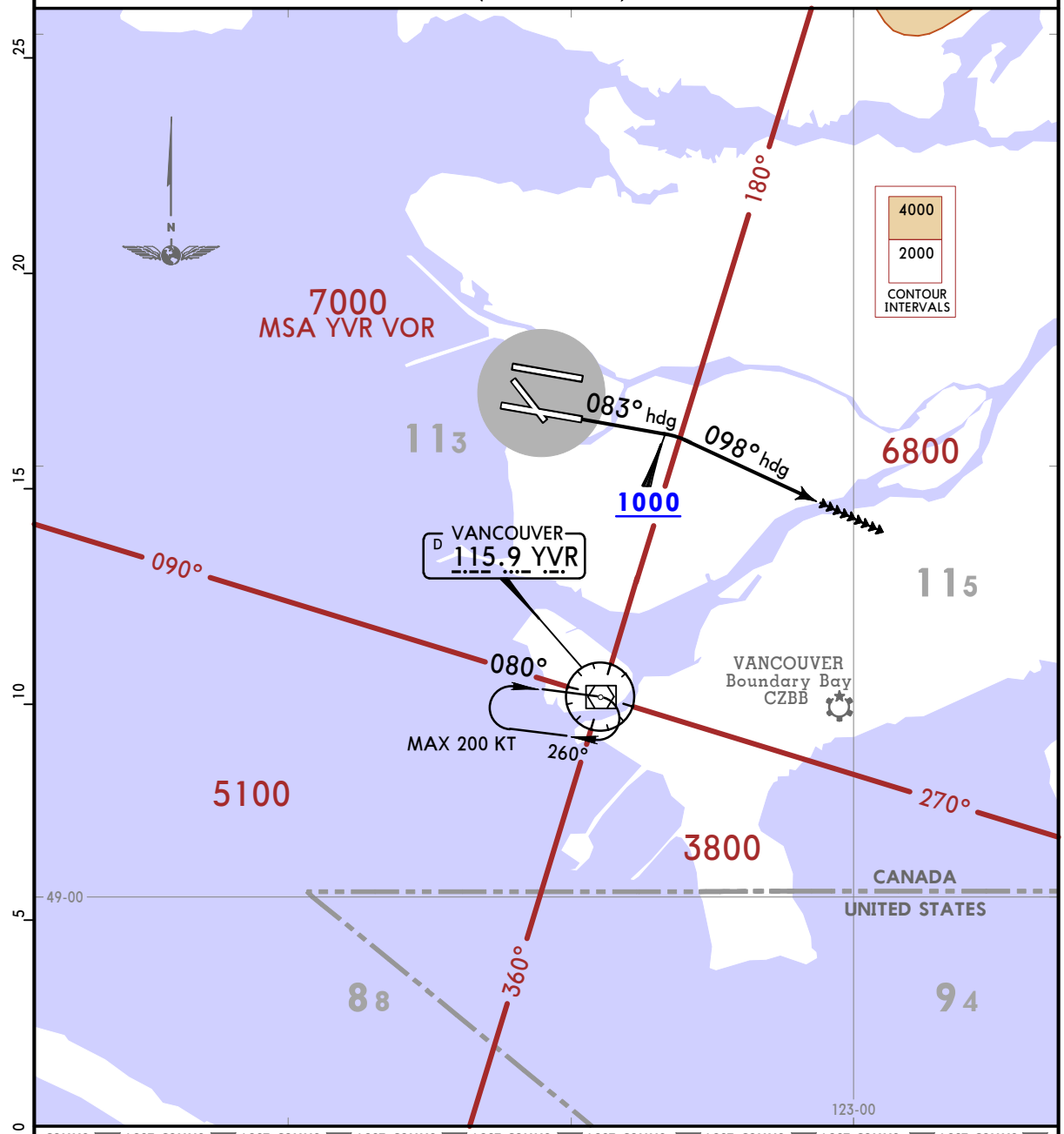
CANADA
UNITED STATES

CONTOUR INTERVALS
10000
8000
6000
4000
2000

CHANGES: MSA revised.

VANCOUVER Departure		Apt Elev	
NORTH	SOUTH	13	Trans alt: 18000 1. Safe Altitude within 100 NM 12,800. 2. Jet aircraft use Noise Abatement Departure Procedure 1 or 2. 3. Refer to 10-4 Noise Abatement Procedures for additional requirements.
126.12	132.3		

FRASER 7 DEPARTURE (FSR7.) (VECTOR)
(RWY 08R)



COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS

LOST COMMS ▶ On recognition of failure 5 minutes or less after take-off, below 7000 and in IFR weather conditions, proceed as follows:
1. Select transponder code 7600.
2. Beyond D10.0 of YVR MAINTAIN last assigned altitude, RIGHT turn direct to YVR VOR. Hold inbound R-260.
3. Proceed on course 5 minutes after selecting 7600 and climb to flight planned altitude.
If communication failure occurs more than 5 minutes after take-off, comply with the appropriate procedure for communication failure enroute.

◀ LOST COMMS

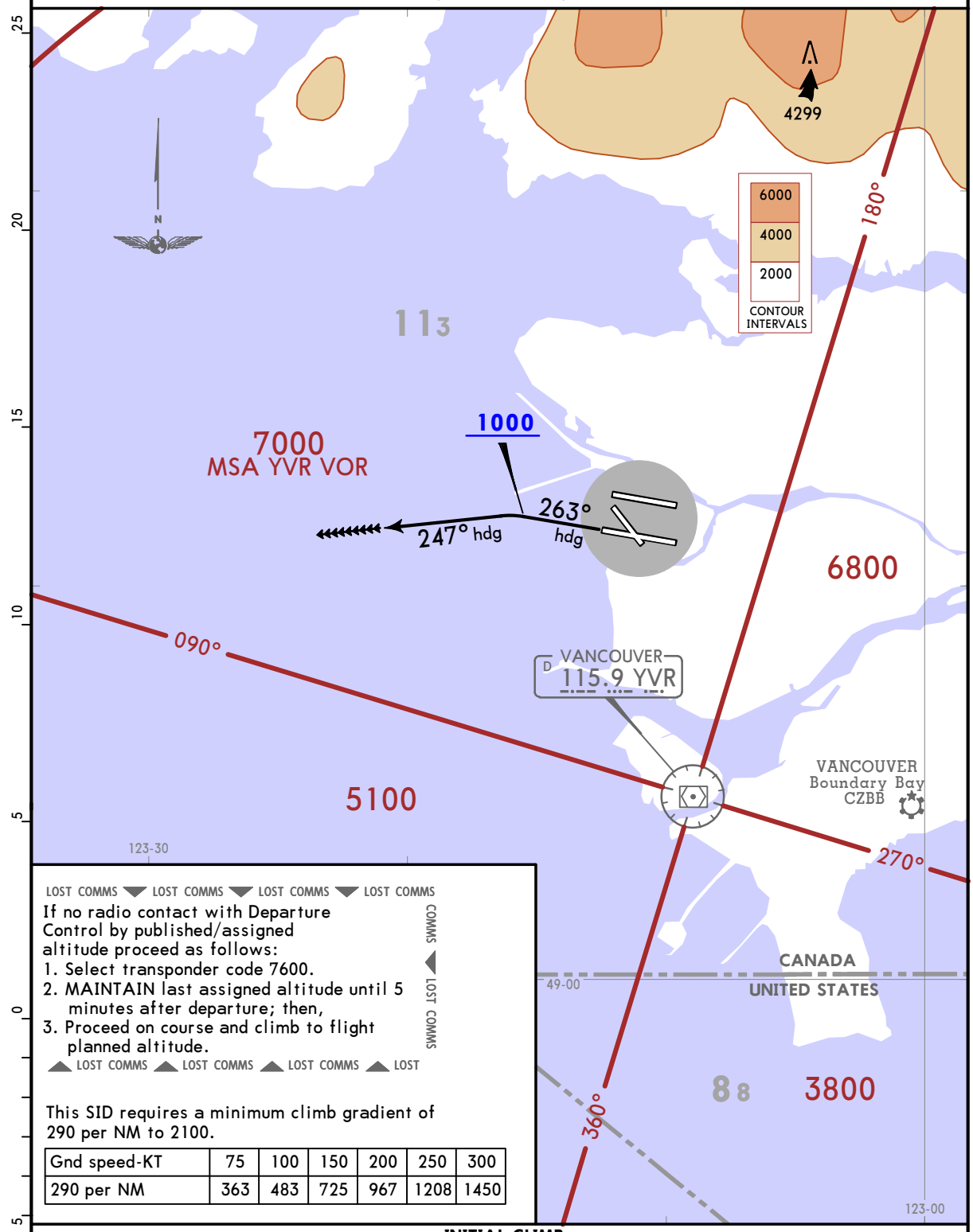
INITIAL CLIMB

Climb heading 083° to 1000. Then climbing RIGHT turn heading 098° or as assigned by ATC. MAINTAIN 7000 or as assigned. EXPECT RADAR vectors to filed/assigned route and clearance to flight planned altitude/flight level 5 minutes after departure.

CHANGES: MSA.

VANCOUVER Departure		Apt Elev	
NORTH	SOUTH	13	Trans alt: 18000 1. CAUTION: Simultaneous parallel departures may be in use. 2. Safe Altitude within 100 NM 12,800. 3. Jet aircraft use Noise Abatement Departure Procedure 1 or 2. 4. Refer to 10-4 Noise Abatement Procedures for additional requirements.
126.12	132.3		

GEORGIA 6 DEPARTURE (GRG6.) (VECTOR)
(RWY 26L)



LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS

If no radio contact with Departure Control by published/assigned altitude proceed as follows:
1. Select transponder code 7600.
2. MAINTAIN last assigned altitude until 5 minutes after departure; then,
3. Proceed on course and climb to flight planned altitude.

COMMS ◀ LOST COMMS

▲ LOST COMMS ▲ LOST COMMS ▲ LOST COMMS ▲ LOST

This SID requires a minimum climb gradient of 290 per NM to 2100.

Gnd speed-KT	75	100	150	200	250	300
290 per NM	363	483	725	967	1208	1450

INITIAL CLIMB

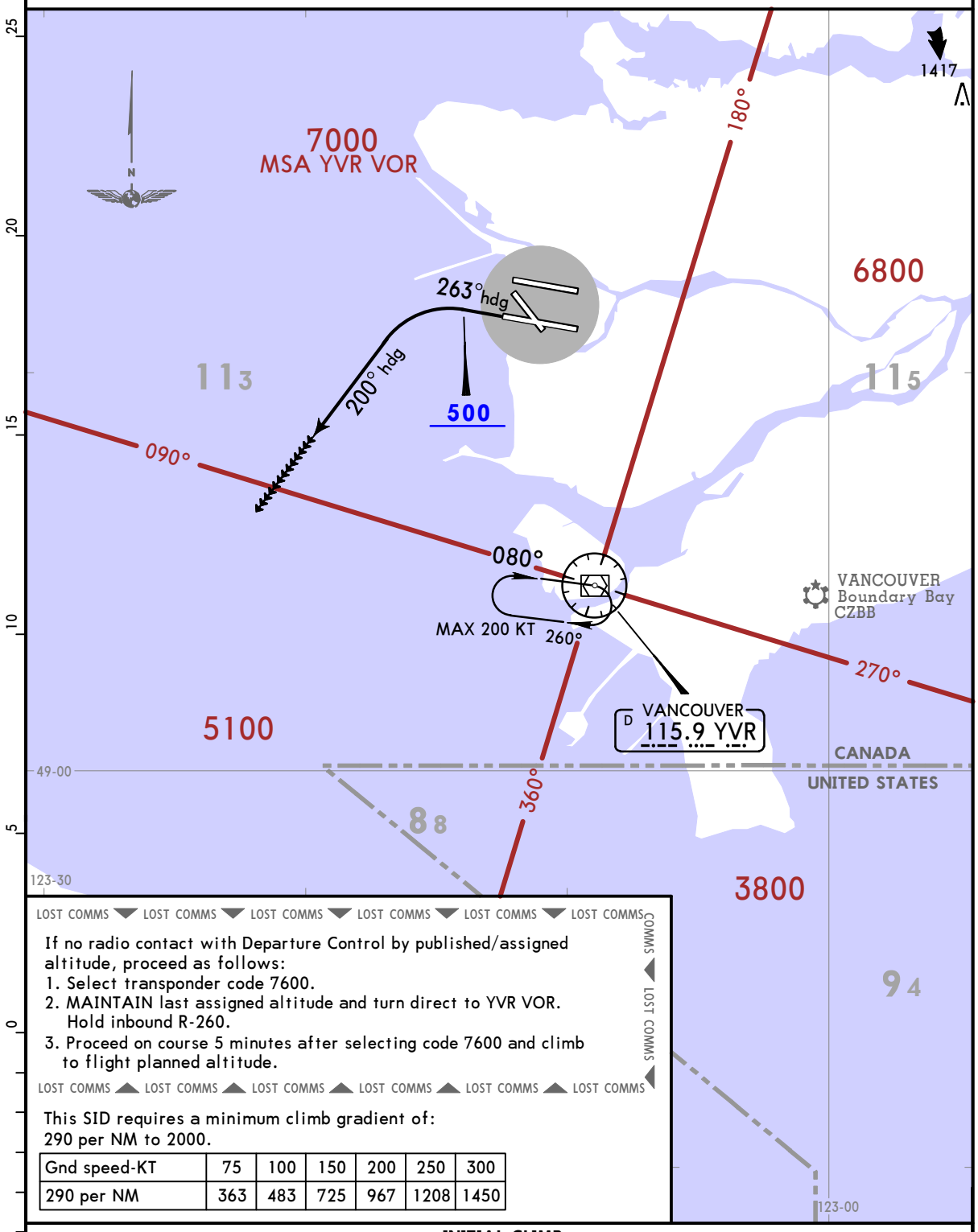
Climb heading 263° to 1000. Then climbing LEFT turn heading 247° or as assigned by ATC. MAINTAIN 7000 or as assigned. EXPECT RADAR vectors to filed/assigned route or depicted fix and clearance to flight planned altitude/flight level 5 minutes after departure.

CHANGES: MSA.

VANCOUVER Departure (SOUTH) 132.3	Apt Elev 13	Trans alt: 18000 1. Safe altitude within 100 NM 12,800. 2. Non-Jet aircraft only. 3. Refer to 10-4 Noise Abatement Procedures for additional requirements.

RICHMOND 7 DEPARTURE (RICHM7.) (VECTOR)
(RWY 26L)

SPEED: DO NOT EXCEED 165 KT IN CLIMB UNTIL IN CONTACT WITH DEPARTURE CONTROL AND PASSING 4000



LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS

If no radio contact with Departure Control by published/assigned altitude, proceed as follows:
1. Select transponder code 7600.
2. MAINTAIN last assigned altitude and turn direct to YVR VOR. Hold inbound R-260.
3. Proceed on course 5 minutes after selecting code 7600 and climb to flight planned altitude.

LOST COMMS ▲ LOST COMMS ▲ LOST COMMS ▲ LOST COMMS ▲ LOST COMMS ▲ LOST COMMS

LOST COMMS

This SID requires a minimum climb gradient of:
290 per NM to 2000.

Gnd speed-KT	75	100	150	200	250	300
290 per NM	363	483	725	967	1208	1450

INITIAL CLIMB

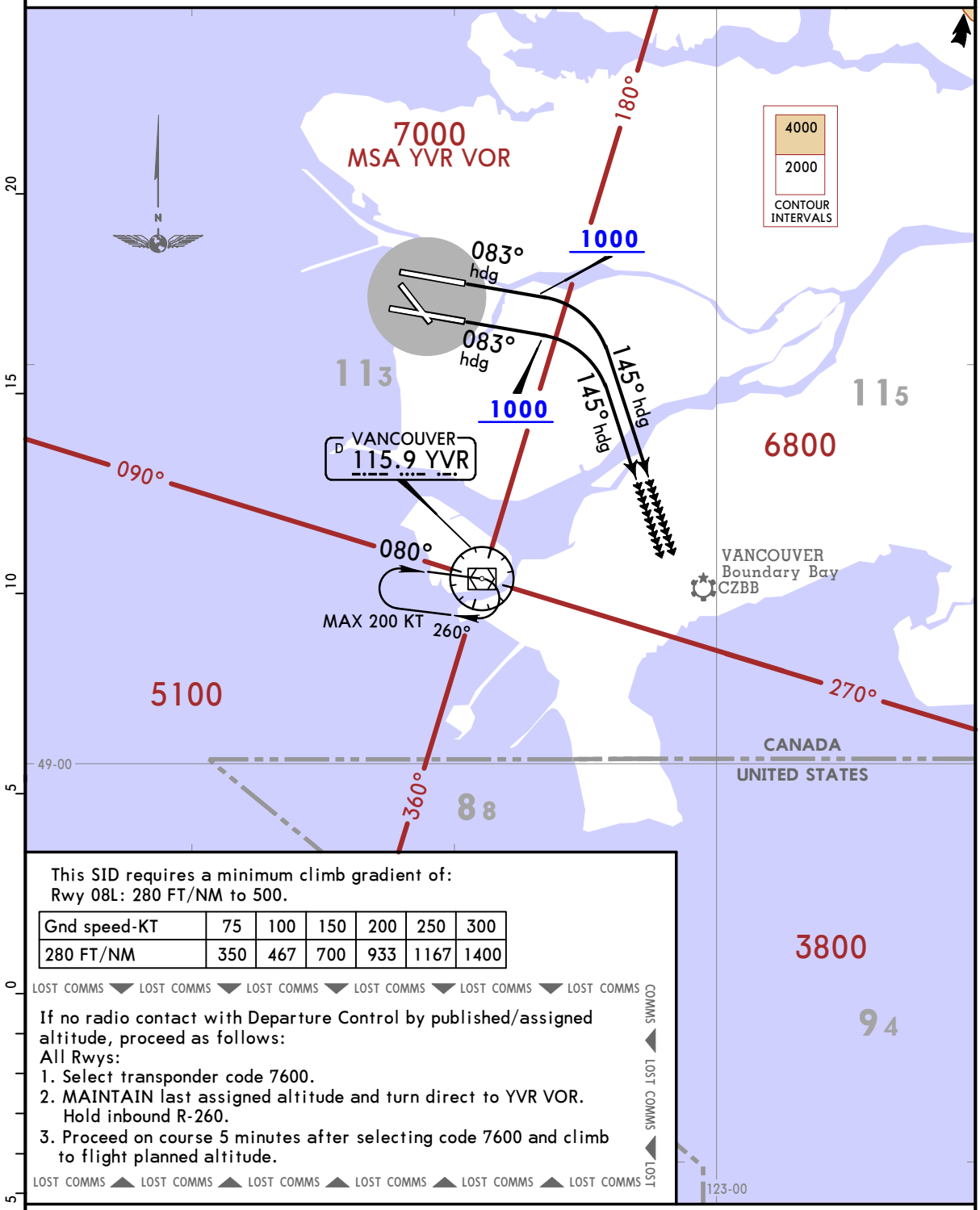
Climb heading 263° to 500. Then climbing LEFT turn heading 200° or as assigned by ATC.
Contact Departure Control after passing 1000 unless instructed otherwise by ATC. MAINTAIN 2000 or as assigned. EXPECT RADAR vectors to filed/assigned route or depicted fix and clearance to flight planned altitude/flight level 10 minutes after departure.

CHANGES: MSA.

VANCOUVER Departure (SOUTH) 132.3	Apt Elev 13	Trans alt: 18000 1. Safe altitude within 100 NM 12,800. 2. Non-Jet aircraft only. 3. Refer to 10-4 Noise Abatement Procedures for additional requirements.

STANLEY 5 DEPARTURE (STNLE5.)
(VECTOR)
(RWYS 08L/R)

SPEED: DO NOT EXCEED 165 KT IN CLIMB UNTIL IN CONTACT WITH DEPARTURE CONTROL AND PASSING 4000



This SID requires a minimum climb gradient of:
Rwy 08L: 280 FT/NM to 500.

Gnd speed-KT	75	100	150	200	250	300
280 FT/NM	350	467	700	933	1167	1400

LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS

If no radio contact with Departure Control by published/assigned altitude, proceed as follows:
All Rwys:
1. Select transponder code 7600.
2. MAINTAIN last assigned altitude and turn direct to YVR VOR. Hold inbound R-260.
3. Proceed on course 5 minutes after selecting code 7600 and climb to flight planned altitude.

LOST COMMS ▲ LOST COMMS ▲ LOST COMMS ▲ LOST COMMS ▲ LOST COMMS ▲ LOST COMMS

LOST COMMS ▼ LOST COMMS ▲

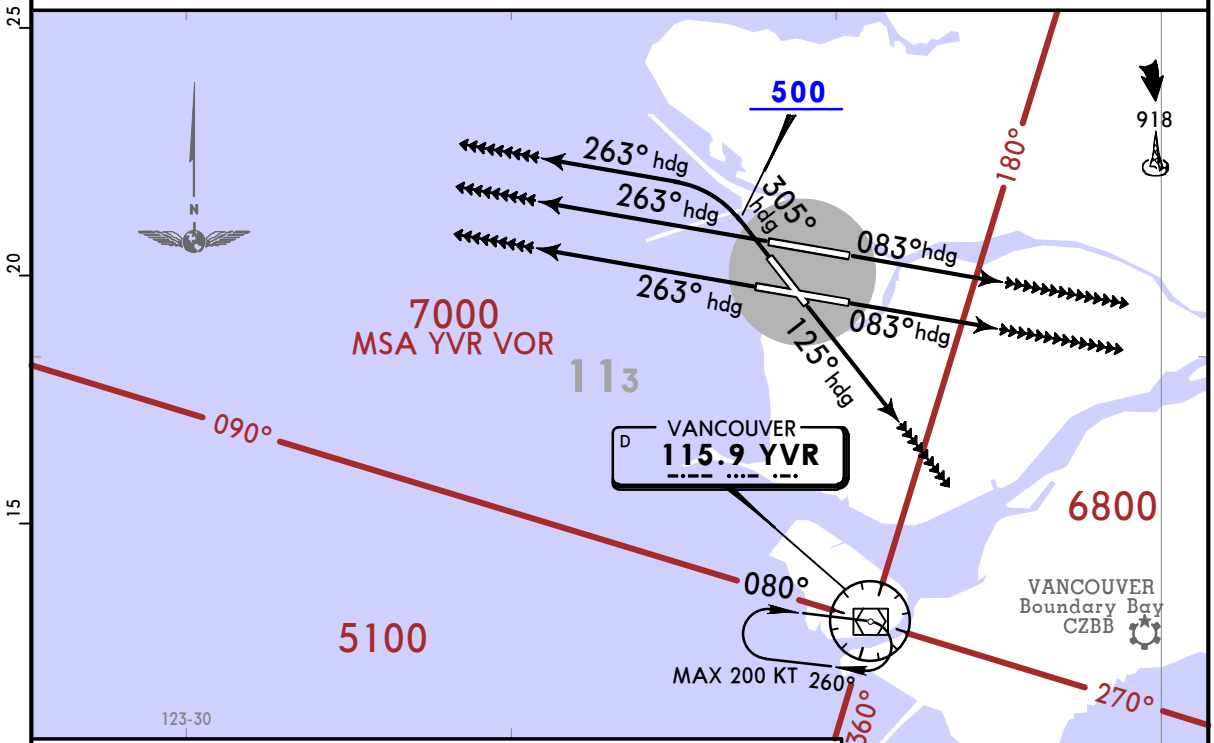
INITIAL CLIMB

Climb heading 083° to 1000. Then climbing RIGHT turn heading 145° or as assigned by ATC. MAINTAIN 2000 or as assigned. EXPECT RADAR vectors to filed/assigned route and clearance to flight planned altitude/flight level 10 minutes after departure.

CHANGES: Procedure renumbered, climb gradient, MSA.

VANCOUVER Departure		Apt Elev	Trans alt: 18000
NORTH	SOUTH	13	1. Safe altitude within 100 NM 12,800.
126.125	132.3		2. Non-Jet aircraft do not exceed 165 KT in climb until in contact with Departure Control and passing 4000.
			3. Jet aircraft use Noise Abatement Departure Procedure 1 or 2.
			4. Refer to 10-4 Noise Abatement Procedures for additional requirements.

VANCOUVER 2 DEPARTURE (YVR2.)
(VECTOR)
(ALL RWYS)



This SID requires a minimum climb gradients of:
Rwy 08L: 280 FT/NM to 500.
Rwys 26L/R: 290 FT/NM to 2100.

Gnd speed-KT	75	100	150	200	250	300
280 FT/NM	350	467	700	933	1167	1400
290 FT/NM	363	483	725	967	1208	1450

LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS

On recognition of failure 5 minutes or less after take-off, below 7000 and in IFR weather conditions, proceed as follows:
Rwys 08L/R:
1. Select transponder code 7600.
2. Beyond D10.0 of YVR VOR MAINTAIN last assigned altitude, RIGHT turn direct to YVR VOR. Hold inbound R-260.
3. Proceed on course 5 minutes after selecting 7600 and climb to flight planned altitude.

Rwys 13, 26L/R, 31:
1. Select transponder code 7600.
2. Proceed on course 5 minutes after selecting 7600 and climb to flight planned altitude.

If communication failure occurs more than 5 minutes after take-off, comply with appropriate procedures for communication failure enroute.

RWY	INITIAL CLIMB
08L/R	Climb heading 083° or as assigned by ATC.
13	Climb heading 125° or as assigned by ATC. NOTE: Building to 50 approximately 0.15 NM past DER, 685 LEFT of runway centerline. Tower to 50 approximately 0.2 NM past DER, 500 LEFT of runway centerline.
26L/R	Climb heading 263° or as assigned by ATC.
31	Climb heading 305° to 500. Then climbing LEFT turn heading 263° or as assigned by ATC.

ROUTING

MAINTAIN 7000 or as assigned. EXPECT RADAR vectors to filed/assigned route and clearance to flight planned altitude/flight level 5 minutes after departure.

CHANGES: Procedure renumbered, climb gradient, MSA.

NOISE ABATEMENT PROCEDURES

APPLICATION

These procedures apply to JET AIRCRAFT unless noted otherwise.

DEPARTURE PROCEDURES

JET AIRCRAFT

1. Noise Abatement Departure Procedure 1 or 2 required for all runways. See Jeppesen Canada ATC para 7.6. Advise ATC CLNC DEL if using Noise Abatement Departure Procedure 1. Follow SID to 3000′ before proceeding on course.
2. Rwy 08R between 2300-0600 local time; aircraft on westerly routes follow assigned SID to 2000′ before proceeding on course.
3. ICAO Annex 16 Chapter 2 or FAA FAR Part 36 Stage 2 certified aircraft; departures on Rwys 08L and 26R not permitted.

ARRIVAL PROCEDURES

IFR APPROACHES & PUBLISHED VISUAL APPROACHES

Use low power/drag profiles consistent with safe operating procedures, conforming to published visual approaches and as directed by ATC.

VFR APPROACHES

Conform to published VTA routes and as directed by ATC.

REVERSE THRUST - LANDING

All Rwys: Use of reverse thrust is to be avoided or reduced when conditions permit.

NIGHT RESTRICTIONS

LOCAL TIME	Procedure
1. 0001-0600	Departure of ICAO Annex 16 Chapter 2 or FAA FAR Part 36 Stage 2 certified JET AIRCRAFT 34,000 kg (74,957 lbs) and over not permitted.
2. 0001-0600	Departure of JET AIRCRAFT rated over 34,000 kg (74,957 lbs) (MTOW), regardless of actual take-off weight, require prior approval from YVRAA OPERATIONS.
3. 2200-0700	Departure/Arrival of ALL AIRCRAFT on Rwys 08L & 26R not permitted.*
4. 2200-0700	Local training flights not permitted.

* See CONTACT and APPROVALS Section.

ALL AIRCRAFT (PRIORITY FLIGHTS EXEMPT)

LOCAL TIME	Preferencial Runway Usage
1. 0600-2300 One direction flow	Defer to westerly flow. Minimize departures on runway 13 and arrivals on runway 31.
2. 2300-0600 Two direction flow	Westerly flow for departures and easterly flow for arrivals. Minimize departures on runway 13 and arrivals on runway 31.
Subject to limiting factors including: physical condition of surfaces; irregular airfield operations; crosswind and tailwind conditions: and, traffic volume. (MEDEVACS EXEMPT).	

IT IS THE PILOT'S RESPONSIBILITY TO ADHERE TO PUBLISHED NOISE ABATEMENT PROCEDURES.

CHANGES: None.

NOISE ABATEMENT PROCEDURES

ENGINE RUN-UP RESTRICTIONS

Maintenance engine run-ups for ALL AIRCRAFT require prior approval from YVRAA OPERATIONS. Guidelines are contained in the Airport Operations Directive, Aircraft Engine Run-ups.

ENGINE START RESTRICTIONS

Prior permission required YVRAA OPERATIONS for all engine airstarts or crossbleed starts on Aprons 1, 2, 3, 4, 5, 6, 8.

ALTITUDE RESTRICTIONS

1. Exclusive of the Departure and Arrival procedures, no departing or arriving aircraft shall operate over the City at less than 5000′ MSL (8000′ between 2300 - 0700 local time- except aircraft operating on published RNAV STAR).

2. The City is defined as that area lying between the South Arm of the Fraser River and the North Shore of Burrard Inlet and from Point Gray to the eastern boundary of the Vancouver Control Zone.

CONTACT and APPROVALS

Night Restrictions #3: YVRAA OPERATIONS may permit exemptions for emergencies and airfield maintenance. **Tel: 604-207-7022; Fax: 604-276-6099 (24 hours)**

IT IS THE PILOT'S RESPONSIBILITY TO ADHERE TO PUBLISHED NOISE ABATEMENT PROCEDURES.

CHANGES: Engine start restrictions added.

CODED TAXI ROUTES

READ BACK: "CODE ROUTE (name) AND ASSIGNED RUNWAY"

Monitor tower frequency approaching the hold line of the assigned runway, unless otherwise instructed by ATC.

Rwy 08R/26L - Tower 118.7 Rwy 08L/26R - Tower 119.55

CODE	TAXI ROUTE
Echo	Rwy 08R - E, D, H, L, hold short L6. Rwy 08L - E, D, H, hold short V, contact Ground 127.15 (expect taxi via H, M, M10). Rwy 26R - E, D, H, hold short V, contact Ground 127.15 (expect taxi via V, M, M9). Rwy 26L - E, D.
Golf	Rwy 08R - G, H, L, hold short L6. Rwy 08L - G, H, hold short V, contact Ground 127.15 (expect taxi via H, M, M10). Rwy 26R - G, H, hold short V, contact Ground 127.15 (expect taxi via V, M, M9). Rwy 26L - G, H, D.
❶ Juliet-Alpha	Rwy 08R - JA, J, K, V, hold short H, contact Ground 121.7 (expect taxi via V, L, L6). Rwy 08L - JA, J, M, M10. Rwy 26R - JA, J, M, M9. Rwy 26L - JA, J, K, V, hold short H, contact Ground 121.7 (expect taxi via H, D).
❶ Juliet-Bravo	Rwy 08R - JB, J, K, V, hold short H, contact Ground 121.7 (expect taxi via V, L, L6). Rwy 08L - JB, J, M, M10. Rwy 26R - JB, J, M, M9. Rwy 26L - JB, J, K, V, hold short H, contact Ground 121.7 (expect taxi via H, D).
❶ Juliet-Charlie	Rwy 08R - JC, K, V, hold short H, contact Ground 121.7 (expect taxi via V, L, L6). Rwy 08L - JC, J, M, M10. Rwy 26R - JC, J, M, M9. Rwy 26L - JC, K, V, hold short H, contact Ground 121.7 (expect taxi via H, D).
Lima	Rwy 08L - L, H, hold short V, contact Ground 127.15 (expect taxi via H, M, M10). Rwy 26R - L, H, hold short V, contact Ground 127.15 (expect taxi via V, M, M9). Rwy 26L - L, J, H, D.
❶ Papa	Rwy 08R - P, M, V, hold short H, contact Ground 121.7 (expect taxi via V, L, L6). Rwy 08L - P, M, M10. Rwy 26R - P, M, M9. Rwy 26L - P, M, V, hold short H, contact Ground 121.7 (expect taxi via H, D).
Sierra	Rwy 08R - S, M, V, hold short H, contact Ground 121.7 (expect taxi via V, L, L6). Rwy 08L - S, M, M10. Rwy 26R - S, M, M9. Rwy 26L - S, M, V, hold short H, contact Ground 121.7 (expect taxi via H, D).
❶ Tango	Rwy 08R - T, M, V, hold short H, contact Ground 121.7 (expect taxi via V, L, L6). Rwy 08L - T, M, M10. Rwy 26R - T, M, M9. Rwy 26L - T, M, V, hold short H, contact Ground 121.7 (expect taxi via H, D).

❶ Taxi routes for A340-600/B777-300/A350-900/A350-1000.

2023 SUMMER CONSTRUCTION AT CYVR: TAXIWAYS L, L2, L4 AND D3 REHABILITATION AND IMPROVEMENTS (SUP 15/23)

Introduction

From late March to Mid-December 2023, Vancouver International Airport (CYVR) will be conducting multiple airfield construction projects, impacting several surfaces on the south airfield. The following projects will take place between Late March 2023 to Late October 2023:

- Taxiway L Rehabilitation
- Taxiway L2 Improvements
- Taxiway L4 Improvements
- Taxiway D3 Improvements

Since all activities are subject to operational requirements and construction schedules, actual dates and times of surface closures relating to construction activities will be promulgated through briefing documents and NOTAM.

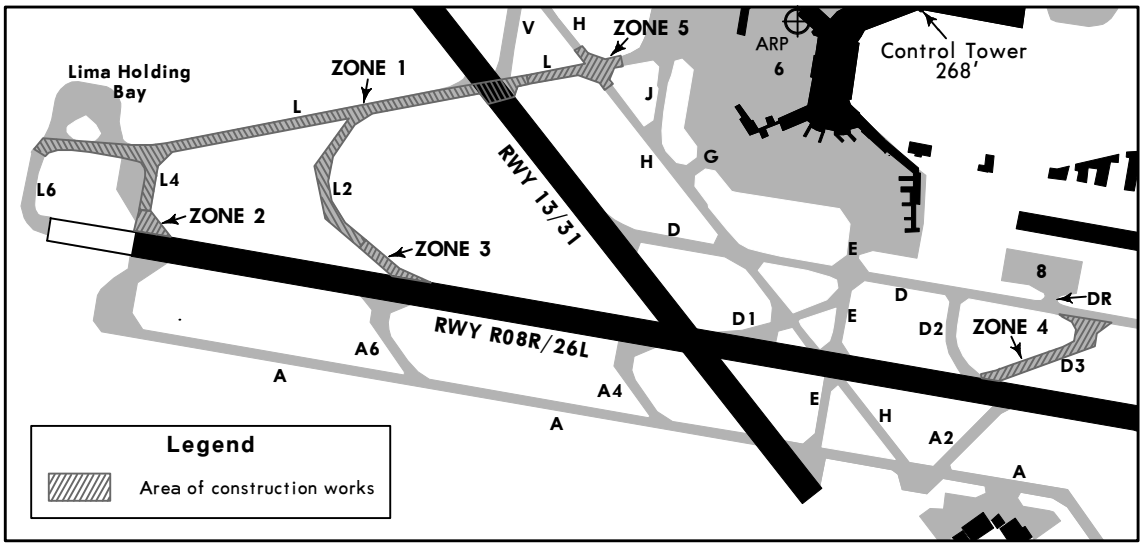


Figure 1: Work Zones

General Airfield Impacts During Construction

Date	Facility	Impact	Work Zone(s)
Late March - Late June	Twy L and Rwy 13/31 Intersection	**CLOSED** Daytime Work	Zone 1
Late March - Late July	Twy L between Rwy 13/31 and Twy L4	**CLOSED** Daytime Work	Zone 1
Late March - Late July	Twy L between Twy L4 and 08R Holding Position	**CLOSED** Daytime Work	Zone 1
Early July - Late July	Twy L between Twy J and Rwy 13/31	**CLOSED** Nighttime Work	Zone 5
Late March - Late October	Twy L2 within Rwy 08R/26L Strip	**CLOSED** Nighttime Work	Zone 3
	Twy L2 outside Rwy 08R/26L Strip	**CLOSED** Daytime Work	Zone 1
Late March - Late July	Twy L4 within Rwy 08R/26L Strip	**CLOSED** Nighttime Work	Zone 2
	Twy L4 outside Rwy 08R/26L Strip	**CLOSED** Daytime Work	Zone 1
Early July - Late October	Twy D3	**CLOSED** Nighttime Work	Zone 4

Details of any procedure or level of service changes implemented due to this construction activity will be promulgated via NOTAM.

CHANGES: Twy L6.

2023 SUMMER CONSTRUCTION AT CYVR: TAXIWAY C CLOSURE, TAXIWAY B INTERSECTION DEPARTURES (SUP 34/23)

Introduction

As part of the ongoing summer 2023 airside construction, CYVR will begin construction to extend Twy A and add a new entry point to Rwy 26L via Twy A7. Both the Twy A extension and Twy A7 will not be commissioned until 2025.

To accommodate this work, Twy C (North of F) will be NOTAM closed starting July 17, 2023. Once the work is complete in mid-September, Twy C will be returned to service.

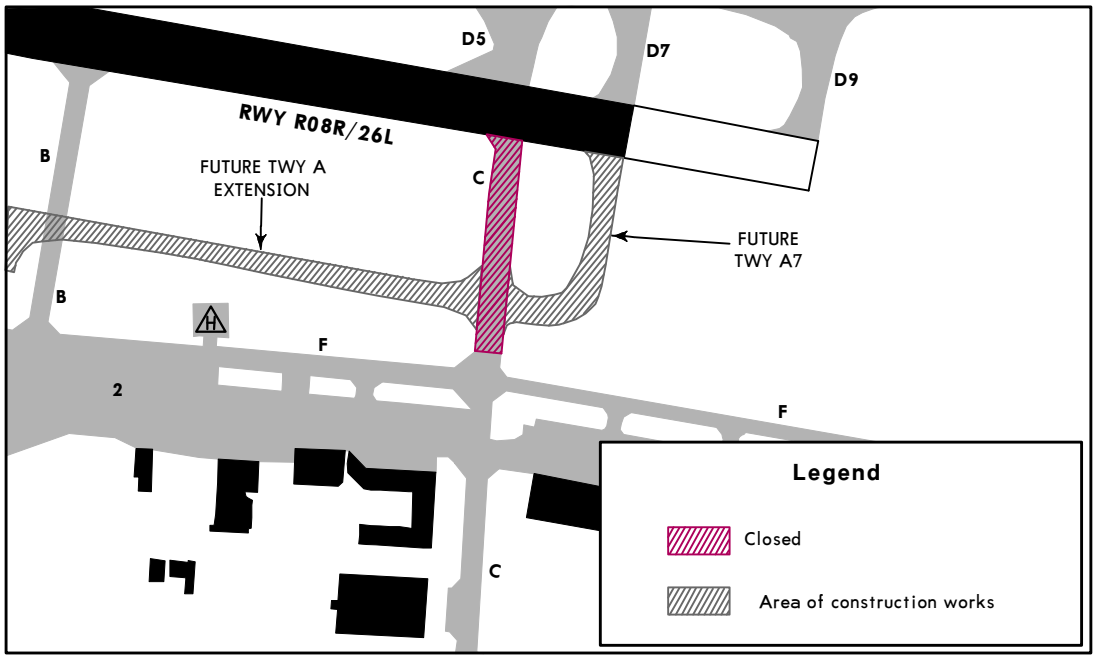


Figure 1: Construction Work

Impacts to Twy C and Twy F

Twy C (North of F) will be NOTAM closed starting July 17, 2023. Twy C will be returned to service in mid-September once the work in the vicinity of this taxiway is complete. Twy F will remain open during the closure, but some work may be required within the taxiway strip. Any impacts to the level of service of Twy F will be communicated via NOTAM.

Start Date	End Date	Facility	Impact
JULY 17, 2023	Mid-September, 2023	Twy C (North of F)	Closed
JULY 17, 2023	Mid-September, 2023	Twy F	See NOTAM

Twy B Intersection Departures

Intersection departures from Twy B will be available to southside operators departing Rwy 26L during the closure of Twy C. See declared distances below:

Rwy	Intersection	TORA in feet
26L	Twy B	8806′

Details of any procedure or level of service changes implemented due to this construction activity will be promulgate via NOTAM, publication amendment, or both.

Printed from JeppView for Windows 5.3.0.0 on 10 Apr 2025; Terminal chart data cycle 19-2023 (Expired); Notice: After 28 Sep 2023, 0000Z, this chart may no longer be valid

D-ATIS	Data Comm: D-ATIS PDC	VANCOUVER Clearance	Ground North	Ground South
124.6		121.4	127.15	121.7

Tower North	Tower South	Tower	Tower	PACIFIC Radio	VANCOUVER Departure North	VANCOUVER Departure South
119.55	118.7	124.0	125.65	123.15	126.125	132.3

RUNWAY INCURSION HOT SPOTS

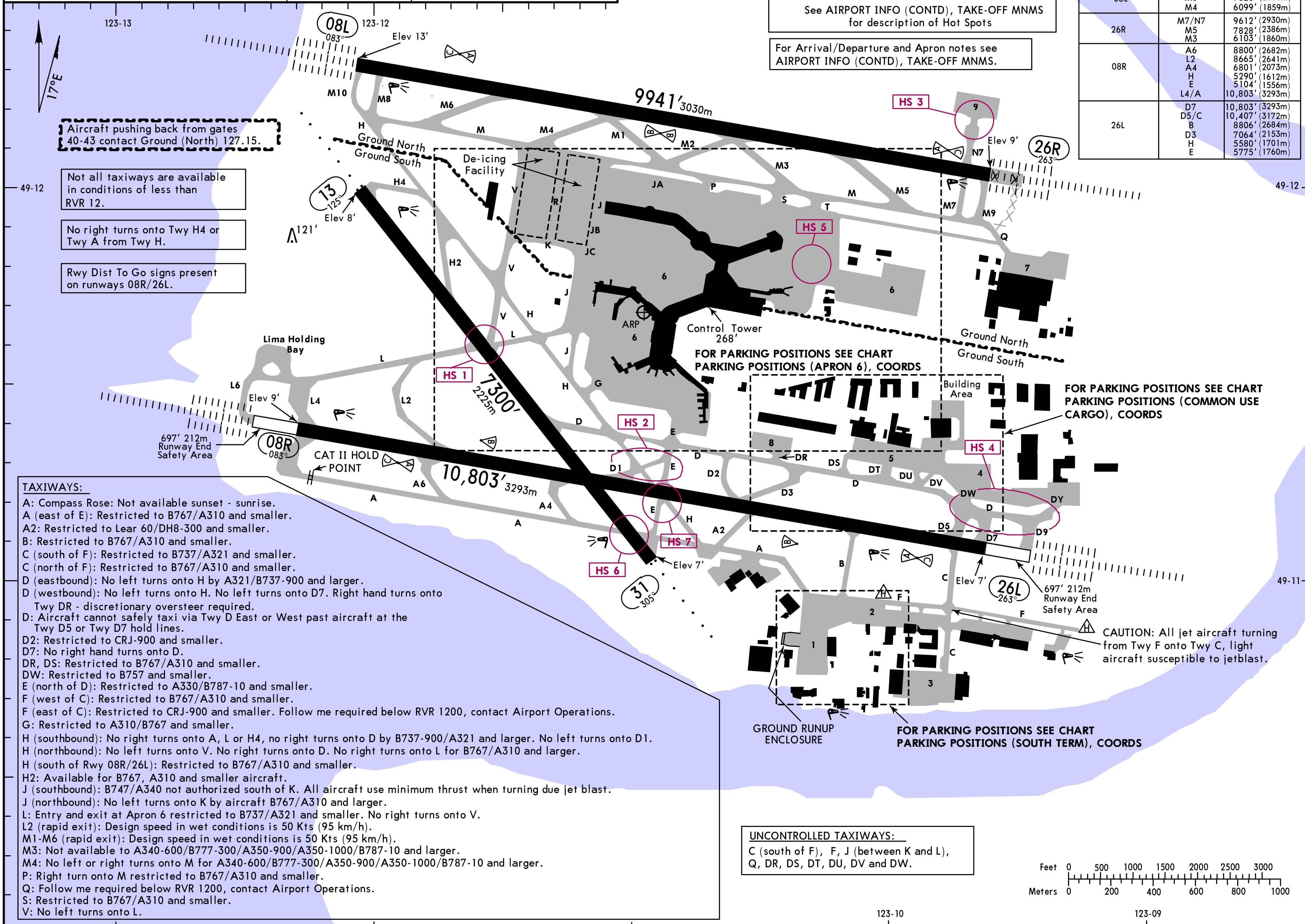
HS 1

See AIRPORT INFO (CONTD), TAKE-OFF MNMS for description of Hot Spots

For Arrival/Departure and Apron notes see AIRPORT INFO (CONTD), TAKE-OFF MNMS.

Take-off Run Available for Intersection Departures:

RUNWAY	INTERSECTION	RUNWAY REMAINING
08L	M8	9612' (2930m)
	M6	7828' (2386m)
	M4	6099' (1859m)
26R	M7/N7	9612' (2930m)
	M5	7828' (2386m)
	M3	6103' (1860m)
08R	A6	8800' (2682m)
	L2	8665' (2641m)
	A4	6801' (2073m)
	H	5290' (1612m)
	E	5104' (1556m)
	L4/A	10,803' (3293m)
26L	D7	10,803' (3293m)
	D5/C	10,407' (3172m)
	B	8806' (2684m)
	D3	7064' (2153m)
	H	5580' (1701m)
	E	5775' (1760m)



Aircraft pushing back from gates 40-43 contact Ground (North) 127.15.

Not all taxiways are available in conditions of less than RVR 12.

No right turns onto Twy H4 or Twy A from Twy H.

Rwy Dist To Go signs present on runways 08R/26L.

FOR PARKING POSITIONS SEE CHART PARKING POSITIONS (APRON 6), COORDS

FOR PARKING POSITIONS SEE CHART PARKING POSITIONS (COMMON USE CARGO), COORDS

FOR PARKING POSITIONS SEE CHART PARKING POSITIONS (SOUTH TERM), COORDS

CAUTION: All jet aircraft turning from Twy F onto Twy C, light aircraft susceptible to jetblast.

TAXIWAYS:

A: Compass Rose: Not available sunset - sunrise.
A (east of E): Restricted to B767/A310 and smaller.
A2: Restricted to Lear 60/DH8-300 and smaller.
B: Restricted to B767/A310 and smaller.
C (south of F): Restricted to B737/A321 and smaller.
C (north of F): Restricted to B767/A310 and smaller.
D (eastbound): No left turns onto H by A321/B737-900 and larger.
D (westbound): No left turns onto H. No left turns onto D7. Right hand turns onto Twy DR - discretionary overseer required.
D: Aircraft cannot safely taxi via Twy D East or West past aircraft at the Twy D5 or Twy D7 hold lines.
D2: Restricted to CRJ-900 and smaller.
D7: No right hand turns onto D.
DR, DS: Restricted to B767/A310 and smaller.
DW: Restricted to B757 and smaller.
E (north of D): Restricted to A330/B787-10 and smaller.
F (west of C): Restricted to B767/A310 and smaller.
F (east of C): Restricted to CRJ-900 and smaller. Follow me required below RVR 1200, contact Airport Operations.
G: Restricted to A310/B767 and smaller.
H (southbound): No right turns onto A, L or H4, no right turns onto D by B737-900/A321 and larger. No left turns onto D1.
H (northbound): No left turns onto V. No right turns onto D. No right turns onto L for B767/A310 and larger.
H (south of Rwy 08R/26L): Restricted to B767/A310 and smaller.
H2: Available for B767, A310 and smaller aircraft.
J (southbound): B747/A340 not authorized south of K. All aircraft use minimum thrust when turning due jet blast.
J (northbound): No left turns onto K by aircraft B767/A310 and larger.
L: Entry and exit at Apron 6 restricted to B737/A321 and smaller. No right turns onto V.
L2 (rapid exit): Design speed in wet conditions is 50 Kts (95 km/h).
M1-M6 (rapid exit): Design speed in wet conditions is 50 Kts (95 km/h).
M3: Not available to A340-600/B777-300/A350-900/A350-1000/B787-10 and larger.
M4: No left or right turns onto M for A340-600/B777-300/A350-900/A350-1000/B787-10 and larger.
P: Right turn onto M restricted to B767/A310 and smaller.
Q: Follow me required below RVR 1200, contact Airport Operations.
S: Restricted to B767/A310 and smaller.
V: No left turns onto L.

UNCONTROLLED TAXIWAYS:
C (south of F), F, J (between K and L), Q, DR, DS, DT, DU, DV and DW.

CHANGES: Twy A, D, F, L2, Q notes, intersection L of Rwy 08R deleted, intersection D9 of Rwy 26L deleted, Twy L6.

GENERAL

CAUTION: October - April migratory birds in vicinity of airport: Resident snow goose population, significant hazard at and below 400' AGL West of the threshold of Rwy 08R and Rwy 08L out to 1.9 NM.
CAUTION: Frequent VFR float aircraft activity on river south side of airport.
CAUTION: ALL JET AIRCRAFT: Light aircraft susceptable to jetblast when turning from twy F on to C.

Multilateration: Pilots must keep their transponder on at all times when maneuvering on the airport (turned on prior to brake release and on arrival, on until final engine shutdown). Pilots that do not have transponder code issued by ATC squawk 1000 when taxiing.

Rwy Arrivals & Departures:

Rwy 08L arrivals:
Use of reverse thrust is to be avoided or reduced when conditions permit.

Rwy 08R arrivals: Aircraft exiting onto Twy D1, turn North on Twy E. Do not stop in rwy area. See HOT SPOT 2.

Rwy 26R arrivals:
Use of reverse thrust is to be avoided or reduced when conditions permit.

Rwy 26L arrivals: Turns onto Rwy 31 NOT AUTHORIZED without clearance. Aicraft exiting onto Rwy 13/31: Right hand turns onto Twy D restricted to B767/A310 & smaller, discretionary oversteer is required. Aircraft exiting onto Twy H, hold short of Twy D. Do not stop in rwy area. See HOT SPOT 2.

Rwy 13 departures: Not Authorized for A340-600/B777-300/A350-900/A350-1000/B787-10 and larger.

Rwy 31 arrivals: Not Authorized for A340-600/B777-300/A350-900/A350-1000/B787-10 and larger.

UNCONTROLLED VEHICLES CROSSINGS

Twys DS, DT, DU, DV, DY, F, H (north of H4), J, JA, JB, JC, K, N7, P, Q, R, S, T, V.

APU SHUTDOWN PROCEDURE

Aircraft Auxiliary Power Unit (APU) use shall be limited to 15 minutes or less in total between on-block time and departure of aircraft from stands supplied with Ground Power Unit (GPU) and/or preconditioned air, for environmental reasons, if the outside air temperature is between 0 degrees and 20 degrees Celsius.

Aircraft shall not need to comply with the above limitations on stands not equipped with serviceable GPU and/or preconditioned air or if there are overriding health & safety considerations.

APRON

Advise ATC if ground crew not present at gate.

Apron 1: Restricted to CRJ-900/SF34 and smaller.

Apron 3: Jets towed in and out.

Apron 4: Restricted to B757 and smaller. Aircraft stand taxilane east of DW restricted to Convair CV-580 and smaller.

Apron 1, 2, 3, 4, 5, 6, 8: Prior permission required Airport Operations.

Apron 6 (East): bypass (taxilane centerline amber lighting): Simultaneous use of dual taxilanes restricted to narrow body aircraft. Restricted to B737 and smaller.

Apron 6 (East): Pushbacks from remote parking positions E1-E3 to west taxilane.

Apron 6 (East): Pushbacks from remote parking positions E10-E19 to south taxilane.

Apron 6 (horseshoe): Taxilanes restricted to B737/A321 and smaller.

Apron 6: Traveling eastbound, turns onto P restricted to B767/A310 and smaller.

Apron 6: All aircraft use minimum thrust due to jet blast.

Prior permission required from YVR OPS for all engine airstarts or crossbleed starts on Aprons 1, 2, 3, 4, 5, 6, 8.

Apron 8: Restricted to B767/A310 and smaller.

WIDE BODY Aircraft

A380 ❶/B747-8/AN124 Available Twys: D, DT, D3, D5, D7, D9, H (north of Rwy 08R/26L), J (north of parking position W2), JA, K (west of R), L (west of 13/31), L4, L6, M, M5, M6, M7, M9, M10, P, R, V. Discretionary oversteer is required at every intersection.

A340-600/B777-300/A350-900/A350-1000/B787-10 Available Twys: D, D3, D5, D7, D9, DT, DY, E (south of Rwy 08R/26L), H (north of Rwy 08R/26L), J, JA, JB, JC, K, L (west of J), L2, L4, L6, M, M4, M5, M6, M7, M8, M9, M10, P, T, R, V. Discretionary oversteer is required at every intersection.

Departing A340-600/B777-300 use the following coded taxi routes ONLY:

- Juliet - Alpha
- Juliet - Bravo
- Juliet - Charlie
- Papa
- Tango

❶ **A380:** When A380 is on Twy M between Twy J and Twy T, the taxilane between Gate 66 & Twy T is restricted to B757 & smaller (& vice versa).

ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS — LANDING BEYOND: Threshold	Glide Slope	TAKE-OFF	WIDTH
08R 26L	HIRL CL ALSF-II TDZ ❷PAPI-L (angle 3.0°) RVR		9724' 2964m 9640' 2938m	11,500' 3505m	200' 61m
❷ For aircraft with eye-to-wheel height up to 45'.					
08L 26R	HIRL CL ALSF-II TDZ ❸PAPI-L (angle 3.0°) RVR		8887' 2709m 8935' 2723m		200' 61m
❸ For aircraft with eye-to-wheel height up to 45'.					
13 31	MIRL ODALS ❹PAPI-L (angle 3.0°)		6193' 1888m		200' 61m
❹ For aircraft with eye-to-wheel height up to 45'.					

RUNWAY INCURSION HOT SPOTS

For information only, not to be construed as ATC instuctions.

HS 1 Twy V holdline for Rwy 13/31 is 100' (30m) back due to intersection geometry.

HS 2 Aircraft taxiing H, southbound, holdline is located 100' (30m) back from the standard runway hold position. Aircraft exiting onto Twy D1, turn North on Twy E. Do not stop in runway area.

HS 3 Twy N7 hold line for Rwy 26R/08L at intersection Twy N7 and Apron IX. 702' (214m) from Rwy edge.

HS 4 Aircraft cannot safely taxi via Twy D East or West past aircraft at the Twy D5 or Twy D7 hold lines. Twy D9 commences beyond the runway holdshort line for Rwy 08R/26L on Twy D and Twy DY.

HS 5 Multiple taxilanes converge.

HS 6 Taxiing to Rwy 08R/26L, aircraft fail to hold short and incur on Rwy 13/31 on Twy A.

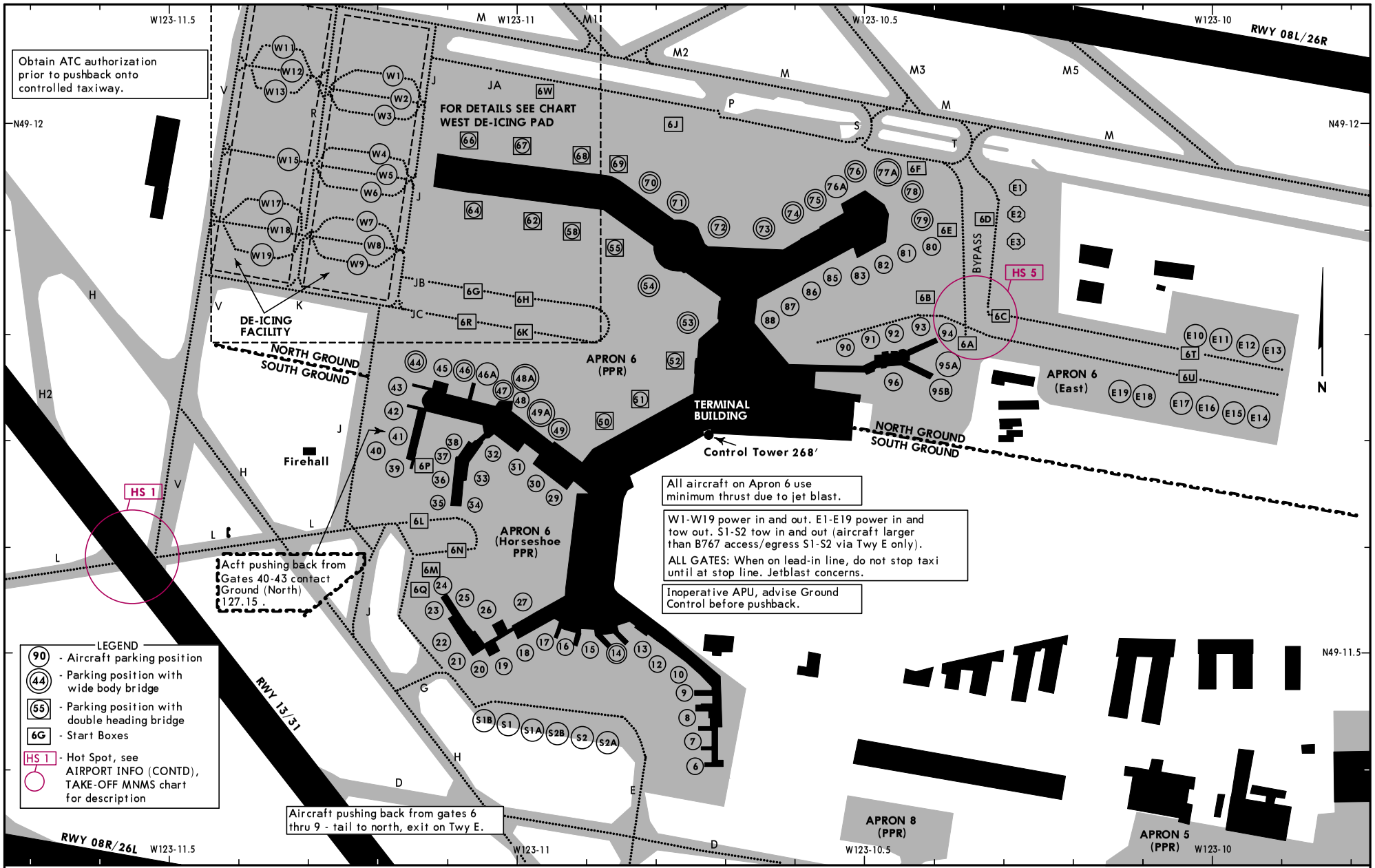
HS 7 Taxiing across Rwy 08R/26L, aircraft fail to hold short and incur on Rwy 13/31 on Twy E.

TAKE-OFF & DEPARTURE PROCEDURE

For departure procedure see Vancouver SID

	Rwys 08L/R, 26L/R			Rwys 13, 31
	Authorized Air Carriers		All Other Aircraft	
	HIRL & CL & RCLM	HIRL or CL or RCLM		
A B C D	TDZ RVR 6 Rollout or Mid RVR 6	❶ RVR 12 or 1/4	RVR 26 or 1/2	1/2

❶ RVR 10 required for start.

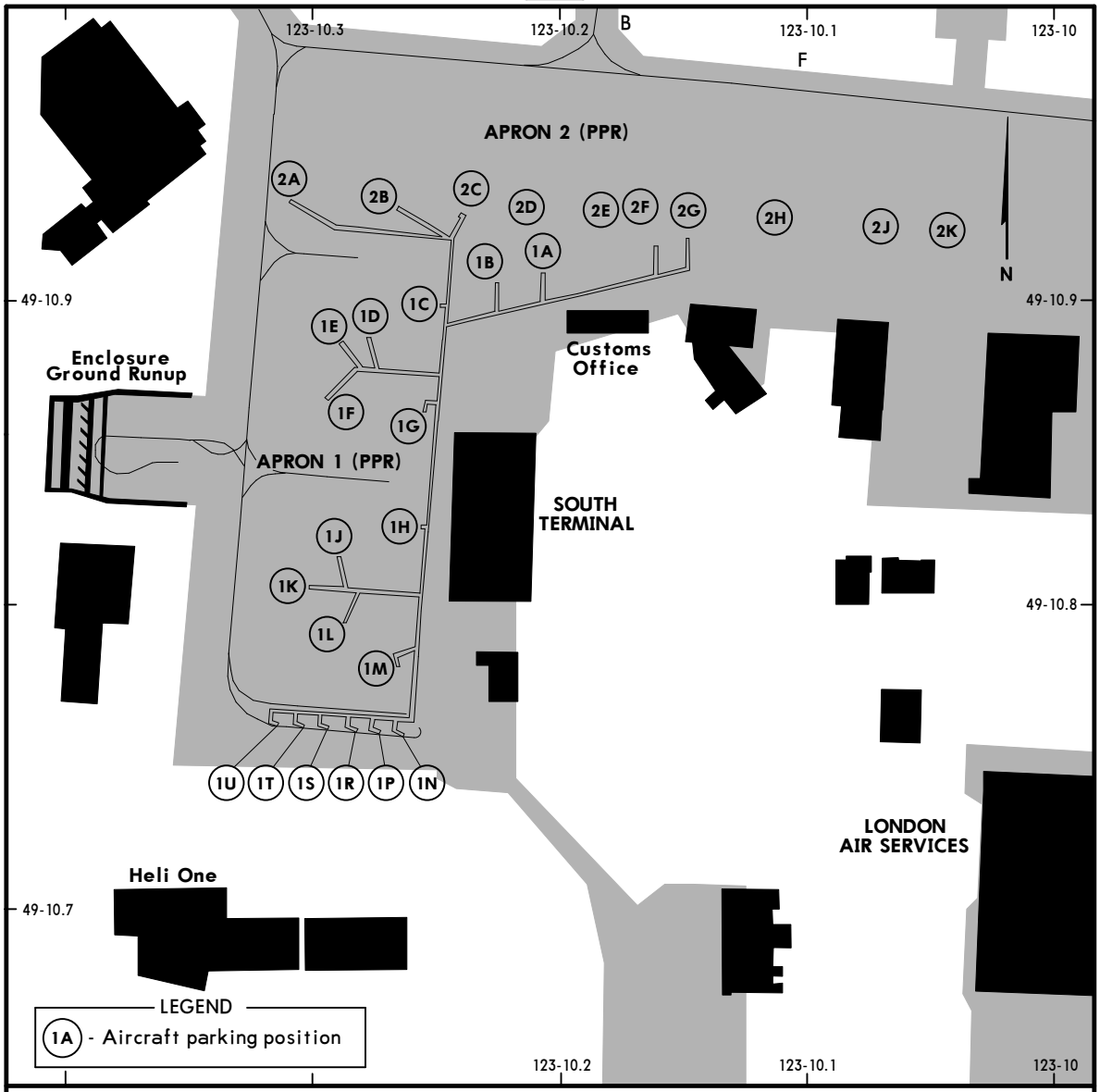


PARKING POSITION COORDINATES

POSITION No.	COORDINATES	POSITION No.	COORDINATES	POSITION No.	COORDINATES	POSITION No.	COORDINATES	POSITION No.	COORDINATES
6 thru 8	N49 11.4 W123 10.7	36 thru 38	N49 11.7 W123 11.1	66, 67	N49 12.0 W123 11.0	93, 94, 95A	N49 11.8 W123 10.4	S1, S1A, S1B	N49 11.4 W123 11.0
9, 10, 12, 13	N49 11.5 W123 10.8	39 thru 43	N49 11.7 W123 11.2	68, 69	N49 11.9 W123 10.9	95B	N49 11.7 W123 10.4	S2, S2A, S2B	N49 11.4 W123 10.9
14 thru 16	N49 11.5 W123 10.9	44 thru 46	N49 11.8 W123 11.1	70, 71	N49 11.9 W123 10.8	96	N49 11.7 W123 10.5	W1	N49 12.1 W123 11.2
17 thru 19	N49 11.5 W123 11.0	47	N49 11.8 W123 11.0	72, 73	N49 11.9 W123 10.7	E1 thru E3	N49 11.9 W123 10.3	W2 thru W4	N49 12.0 W123 11.2
20 thru 22	N49 11.5 W123 11.1	48, 49	N49 11.7 W123 11.0	74, 75	N49 11.9 W123 10.6	E10	N49 11.8 W123 10.0	W5, W6	N49 12.0 W123 11.3
23 thru 25	N49 11.6 W123 11.1	50	N49 11.7 W123 10.9	76, 77A, 78	N49 11.9 W123 10.5	E11 thru E13	N49 11.8 W123 09.9		
26, 27	N49 11.5 W123 11.0	51	N49 11.7 W123 10.8	79, 80	N49 11.9 W123 10.4	E14	N49 11.7 W123 09.8	W7 thru W9	N49 11.9 W123 11.3
29	N49 11.7 W123 10.9	52 thru 54	N49 11.8 W123 10.8	81 thru 83	N49 11.8 W123 10.5	E15	N49 11.7 W123 09.9	W11 thru W13	N49 12.0 W123 11.3
30 thru 33	N49 11.7 W123 11.0	55, 58	N49 11.9 W123 10.9	85, 86 thru 88, 90	N49 11.8 W123 10.6	E16 thru E18	N49 11.7 W123 10.0	W15	N49 12.0 W123 11.4
34, 35	N49 11.6 W123 11.1	62, 64	N49 11.9 W123 11.0	91, 92	N49 11.8 W123 10.5	E19	N49 11.7 W123 10.1	W17 thru W19	N49 11.9 W123 11.4

CHANGES: Start box 6P and 6Q added.

VANCOUVER, BC
VANCOUVER INTL



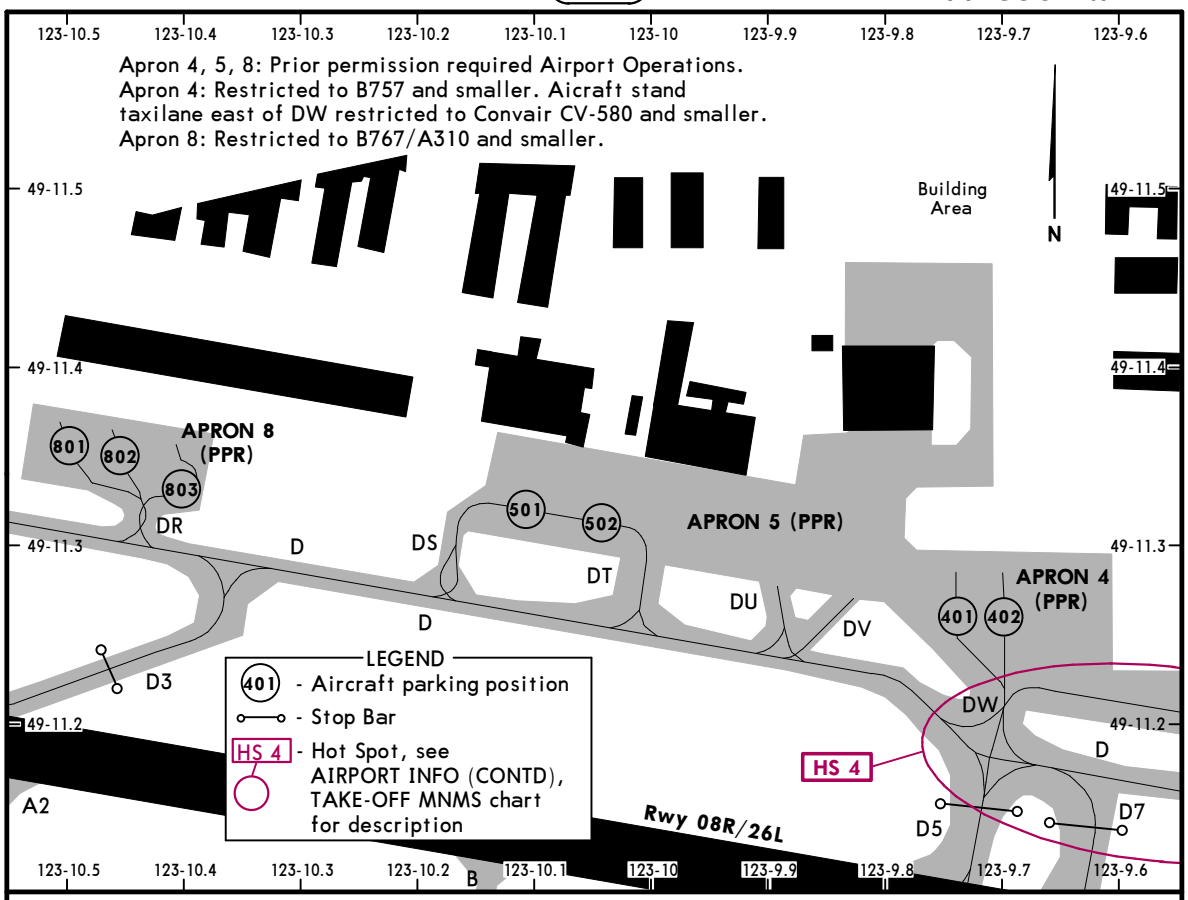
PARKING POSITION COORDINATES

POSITION No.	COORDINATES
1A, 1B, 1C	N49 10.9 W123 10.2
1D, 1E, 1F	N49 10.9 W123 10.3
1G	N49 10.9 W123 10.2
1H	N49 10.8 W123 10.2
1J, 1K, 1L, 1M, 1N	N49 10.8 W123 10.3
1P, 1R, 1S, 1T, 1U	N49 10.8 W123 10.3
2A	N49 10.9 W123 10.3
2B, 2C, 2D, 2E, 2F	N49 10.9 W123 10.2
2G, 2H, 2J	N49 10.9 W123 10.1
2K	N49 10.9 W123 10.0

CHANGES: None.

VANCOUVER, BC

VANCOUVER INTL



PARKING POSITION COORDINATES

POSITION No.	COORDINATES
401, 402	N49 11.3 W123 09.7
501	N49 11.3 W123 10.1
502	N49 11.3 W123 10.0
801, 802	N49 11.4 W123 10.5
803	N49 11.3 W123 10.4

CHANGES: Apron 4 note.

DE-ICING PROCEDURES

DE-ICING GENERAL:

1. De-icing at gates permitted for frost removal only, contact VANCOUVER DE-ICE on 129.95.
2. De-icing pad West is positively controlled when De-icing OPS are in effect, PAD CONTROL is providing control of all aircraft and vehicle movements on this surface.
3. 30 minutes prior to pushback or taxi, advise VANCOUVER DE-ICE on 129.95 that de-icing is required, the type(s) of fluids required and the aircraft type. VANCOUVER DE-ICE will designate de-ice pad.
4. When requesting pushback or taxi clearance, advise ATC that de-icing is required and designated de-ice pad.
5. When advised by ATC, contact PAD CONTROL on 131.975 for instructions in the de-icing center and assignment to a de-icing bay.
6. Follow PAD CONTROL instructions to de-icing bay.
7. When advised by PAD CONTROL, contact ICEMAN on 130.7 and confirm brakes set, aircraft configured, engines at idle, de-icing fluid requirements and any special de-icing instructions.
8. After de-icing is completed and the aircraft has been inspected, ICEMAN will confirm aircraft is clean, start time for HOLDOVER and types of fluids applied.
9. When advised by ICEMAN, contact PAD CONTROL on 131.975 for instructions.

UNDER NO CIRCUMSTANCES MAY THE AIRCRAFT BE MOVED BEFORE PAD CONTROL ADVISES THAT THE AIRCRAFT IS CLEARED TO TAXI OUT OF THE BAY.

WEST PAD:

1. Aircraft queuing is on Twy V at Twy K and on Twy M.
2. Narrow-body aircraft will use positions W1, W3, W4, W6, W7, W9, W17 and W19, indicated by yellow inset guidance lights.
3. When transferred from ATC, follow PAD CONTROL instructions to de-icing bays.

GROUND RUN-UP ENCLOSURE (GRE):

Operators must receive an orientation for the GRE facility prior to use. Crews may contact the Icehouse to schedule de-icing up to 120 minutes prior to departure. Information required:

- Aircraft type, flight number/call sign, and the type(s) of fluids required.

Parking position 2A, on Apron 1, is the only staging position for the facility.
Aircraft waiting to use the GRE must remain on their aprons until 2A becomes available.
All propeller aircraft and jet aircraft with a wingspan of 71' (21.6m) or less (Dassault Falcon 900 with winglets and smaller) may power in/out of the facility.
ICEMAN will advise if engines should be running during de-icing.

ENTRY PROCEDURE:

1. Before contacting ATC for taxi, contact ICEMAN 130.925 for position in de-icing queue.
2. When ICEMAN approves access to either the staging position (2A) or GRE, contact ATC 121.7 for taxi.
3. Proceed as instructed by ICEMAN. CAUTION: DO NOT enter GRE until instructed by ICEMAN.
4. Advise ICEMAN 130.925 when stopped in the GRE.

DE-ICING PROCEDURE:

5. Contact ICEMAN 130.925 to confirm brakes set, aircraft configured, engines idle, and provide fluid requirements.
6. After de-icing is complete and the aircraft has been inspected, ICEMAN will confirm aircraft is clean, start time for HOLDOVER and types of fluids applied.

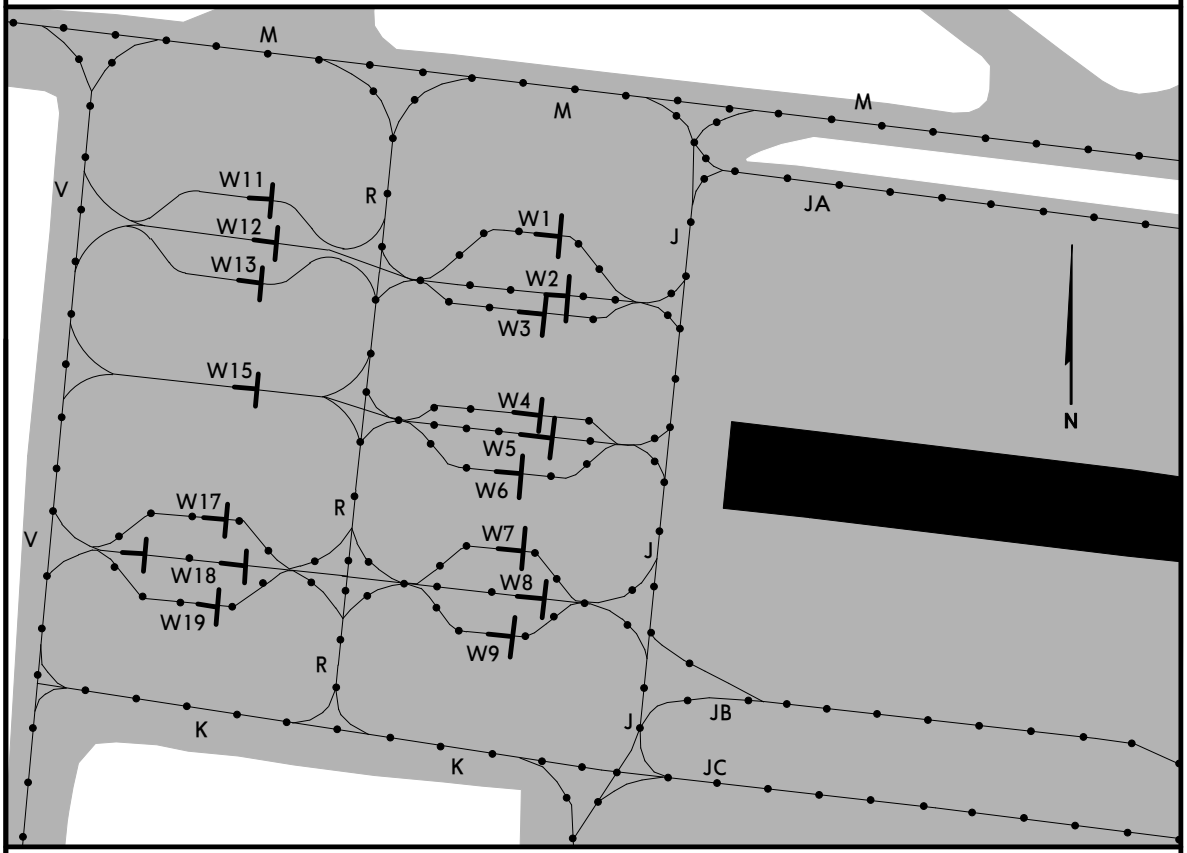
EXIT PROCEDURE:

7. When ready to taxi contact ICEMAN 130.925 for instructions.

CHANGES: De-icing general note deleted.

WEST DE-ICING PAD

Vancouver De-ice	Pad Control	Iceman	South Ground	North Ground
129.95	131.975	130.7	121.7	127.15

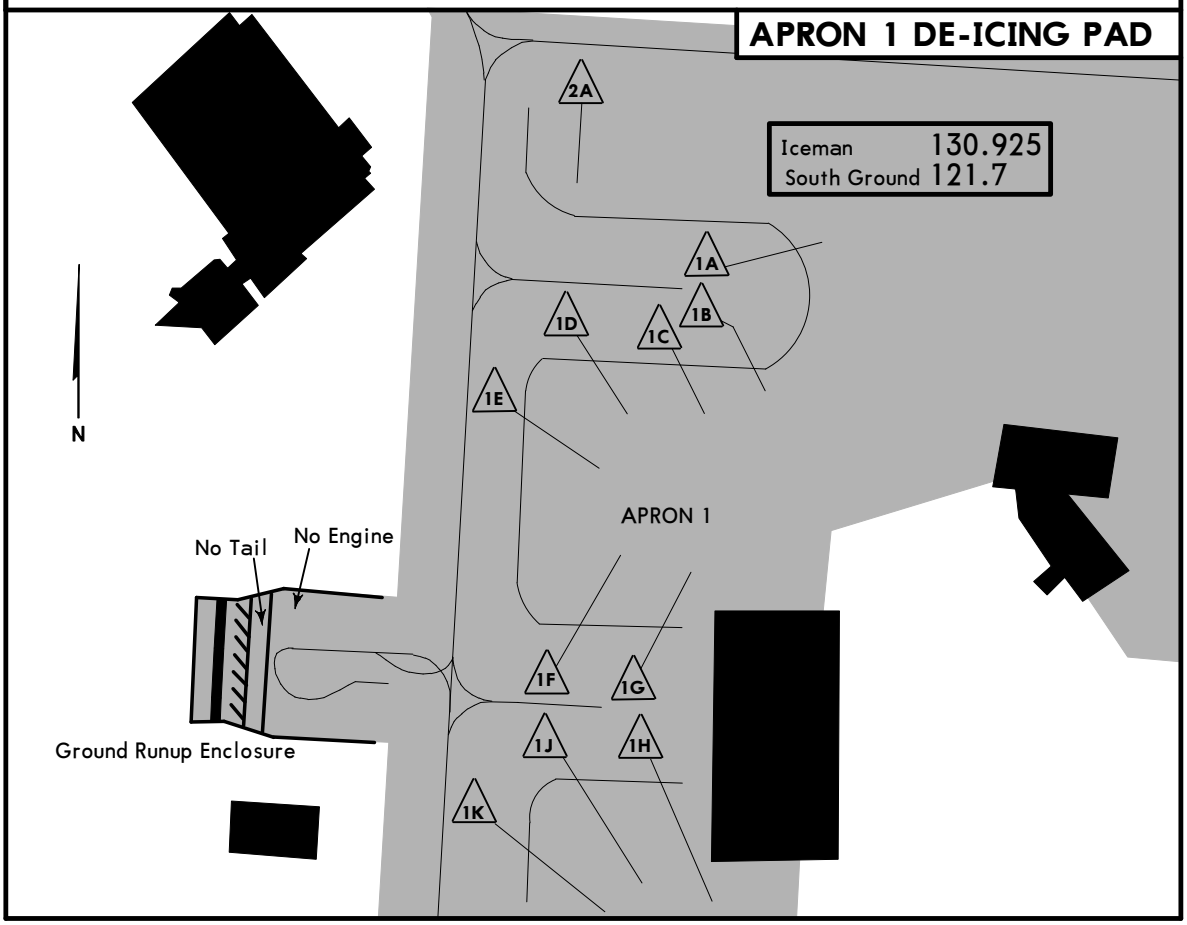


LEGEND

Hold line

Inset Guidance Lights

APRON 1 DE-ICING PAD



CHANGES: None.

LOW VISIBILITY PROCEDURES
(RVR LESS THAN 1200 TO 600 FT)

APPLICATION

These procedures apply to ground movements of aircraft arriving and departing under low visibility conditions. Arrivals and departures below RVR 600 are not authorized. When weather conditions indicate visibility below RVR 1200 is imminent, procedures will be implemented restricting aircraft and vehicle operations on the movement area. The following message will be added to the ATIS broadcast: Low visibility procedures in effect for (name of applicable runway).

GENERAL

Taxi Routes

Low Visibility Taxi Routes are equipped with green inset centerline lighting. Some taxiway/taxiway intersections have been indentified with three inset yellow centerline lights. Midfield crossings of 08R/26L are not permitted during low visibility operations.

Airport Surface Detection Equipment (ASDE)

Ground radar is used to monitor the position of aircraft operating on the maneuvering area. In the event of an ASDE failure, ATC may suspend, restrict or terminate low visibility operations.

DEPARTURES

The primary runways for departure are 08R/26L. Yellow flashing runway guard lights (wig-wags) and stop bars are installed abeam each hold line. Intersection take-offs are not permitted.

Sequencing of Aircraft Ground Movement for Take-off

Do not request start, push back or call for taxi clearance until the reported RVR is greater than:

Aircraft/Pilot Take-off Minima	Minimum RVR for Start
1200 RVR	1000 RVR
600 RVR	600 RVR

SMGCS Rwy 08L/26R and 08R/26L

Runway/taxiway intersections are equipped with yellow flashing runway guard lights and stop bars consisting of red inset lights and red elevated lights located at the taxi hold position. At runway entry points, M10, M8, M7, M9, N7, L4, L6, D, D5, D7, DY, C and A, when the red stop bar lights are illuminated, green lead-on lights beyond the stop bar are extinguished. When ATC issues a clearance to proceed onto the runway, the red stop bar lights will be extinguished and the green lead-on lights beyond the stop bar will be illuminated. The stop bar is reset automatically as the aircraft moves onto the runway.

"AT NO TIME SHALL A PILOT CROSS AN ILLUMINATED RED STOP BAR"

ARRIVALS

The primary runways for arrival are 08L/26R.

Plan to exit on the centerline lighted rapid exit taxiways and proceed beyond the alternating green and yellow centerline lights to the taxi intersection lights to ensure the aircraft is clear of the runway and the ILS sensitive area.

CYVR/YVR
VANCOUVER INTL

JEPPESEN
4 AUG 23
Eff 10 Aug
10-9H

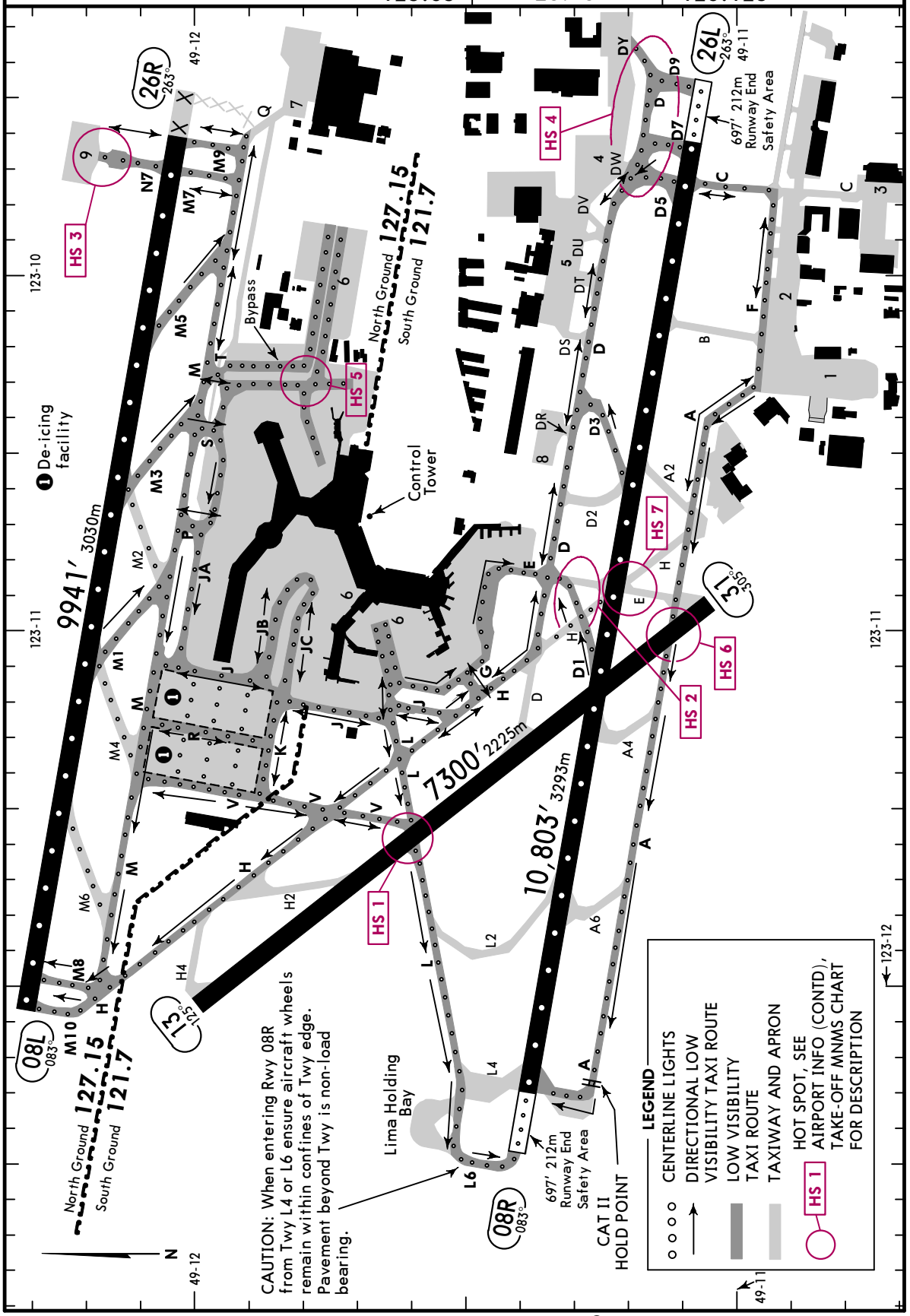
SMGCS

VANCOUVER, BC
LOW VISIBILITY TAXI CHART
LAND Rwy 08L/08R, DEPART Rwy 08L/08R
For Low Visibilty Procedures See 10-9D

LESS THAN RVR 1200 to 600

D-ATIS	Data Comm	VANCOUVER Clearance	Ground	
124.6	D-ATIS PDC	121.4	North 127.15	South 121.7

Tower				PACIFIC Radio	VANCOUVER Departure	
North 119.55	South 118.7	124.0	125.65	123.15	North 126.125	South 132.3



CHANGES: Twy L6, caution note.

CYVR/YVR
VANCOUVER INTL

JEPPESEN
4 AUG 23
Eff 10 Aug
10-9J

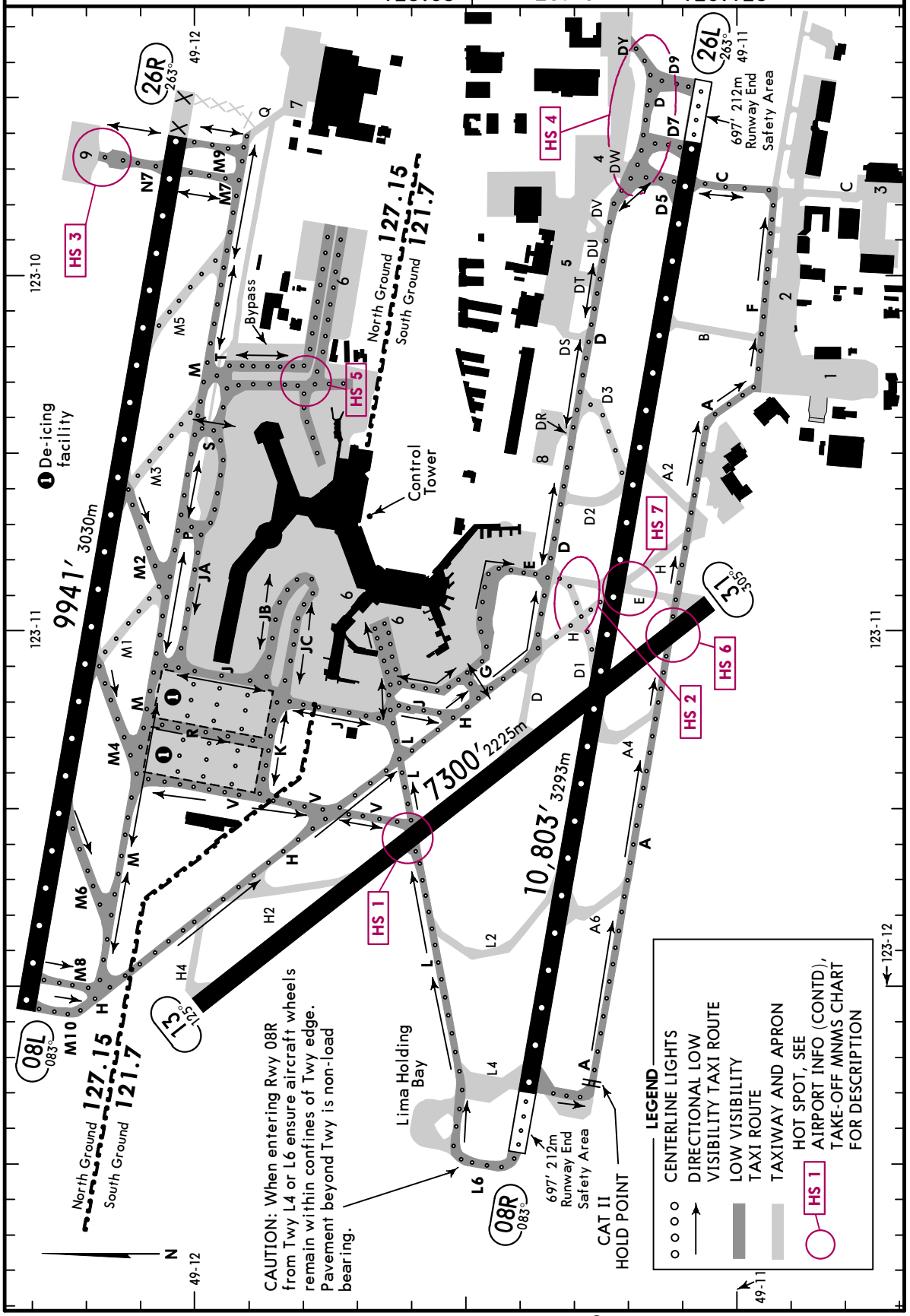
SMGCS

VANCOUVER, BC
LOW VISIBILITY TAXI CHART
LAND Rwy 26L/26R, DEPART Rwy 26L/26R
For Low Visibilty Procedures See 10-9D

LESS THAN RVR 1200 to 600

D-ATIS	Data Comm D-ATIS PDC	VANCOUVER Clearance	Ground	
124.6		121.4	North 127.15	South 121.7

Tower				PACIFIC Radio	VANCOUVER Departure	
North 119.55	South 118.7	124.0	125.65	123.15	North 126.125	South 132.3



CHANGES: Twy L6, caution note.

CYVR/YVR
VANCOUVER INTL

JEPPESEN
17 FEB 23 (11-1) Eff 23 Feb

VANCOUVER, BC
ILS Z Rwy 08L

BRIEFING STRIP ™

D-ATIS	PACIFIC Radio	VANCOUVER Arrival	
		Outer	Inner
124.6	123.15	128.17 128.6	133.1 134.225

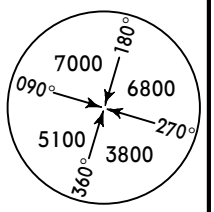
VANCOUVER Tower			Ground	
North		South	North	South
119.55	124.0	118.7	127.15	121.7

LOC ITL	Final Apch Crs	GS	ILS DA(H)	Apt Elev 13′
110.55	083°	OMRAD 2030′ (2017′)	Refer to Minimums	TDZE 13′

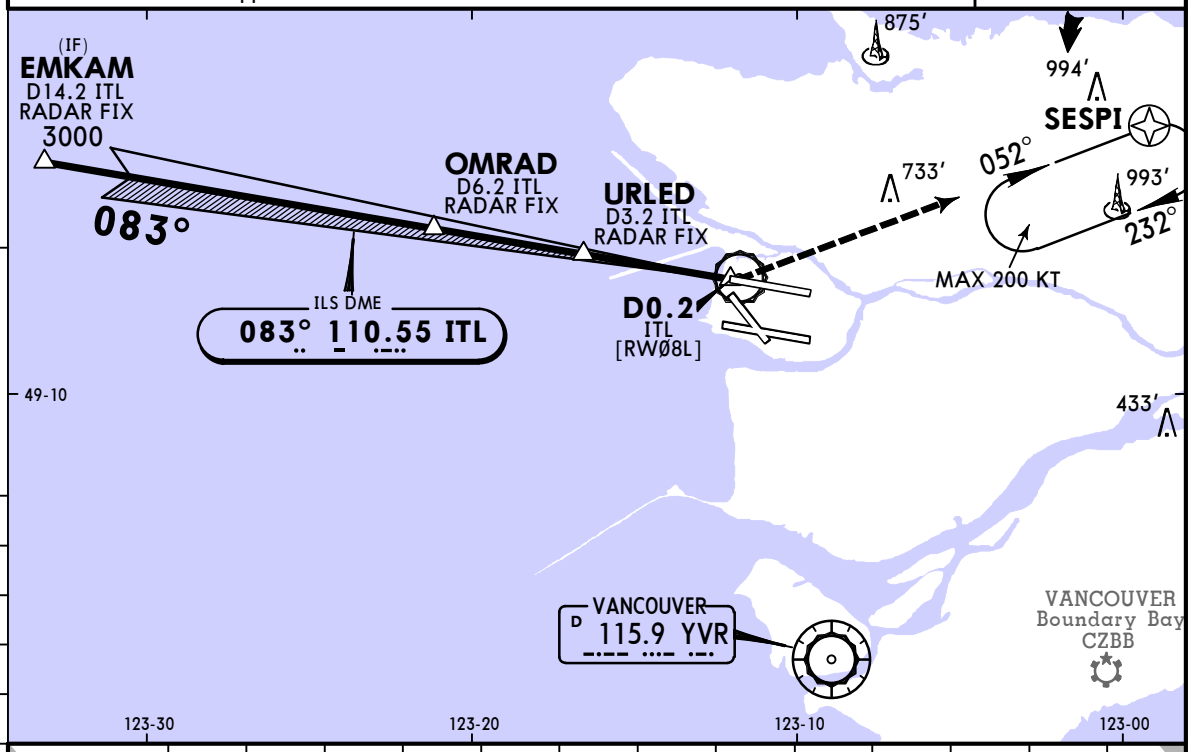
MISSED APCH: Do not exceed 230 KT until SESPI. Climbing LEFT turn to 3000′ direct to SESPI. As required shuttle climb.

Alt Set: INCHES | Trans level: FL180 | Trans alt: 18000′

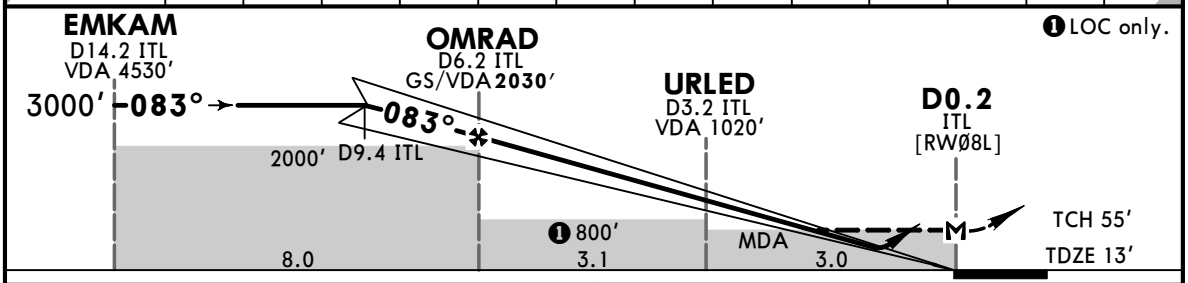
1. Radar or RNAV required. 2. SAFE ALTITUDE WITHIN 100 NM 12,800′. 3. Procedure turn NOT AUTHORIZED. 4. Simultaneous approach AUTHORIZED with Rwy 08R. 5. Localizer reliable only within 10° either side of centerline. 6. Non RNAV aircraft must obtain missed approach instructions from ATC.



MSA YVR VOR



NM to ITL DME	14.2	12.0	11.0	10.0	9.4	8.0	7.0	6.0	5.0	4.0	3.0	2.0	0.9
VDA ALTITUDE	4530′	3830′	3510′	3190′	3000′	2560′	2240′	1920′	1600′	1280′	970′	650′	300′



Gnd speed-Kts		70	90	100	120	140	160
GS/VDA	3.00°	372	478	531	637	743	849
MAP at D0.2 ITL							
OMRAD to MAP	6.1	5:14	4:04	3:40	3:03	2:37	2:17

ALSF-II | PAPI | 230 KT MAX UNTIL SESPI | 3000′ LT | D | SESPI

STRAIGHT-IN LANDING RWY 08L

	ILS DME or ILS RADAR		LOC (GS out) DME or LOC (GS out) RADAR	
	DA(H) 213′ (200′)	DA(H) 263′ (250′)	MDA(H) 300′ (287′)	
	FULL	HIALS out		HIALS out
A	RVR 26 or ½	RVR 50 or 1	RVR 50 or 1	
B				
C				
D				

CHANGES: Note, missed apch, waypoints, altitudes, distances, LOC angle.

CYVR/YVR VANCOUVER INTL

JEPPESEN

17 FEB 23
Eff 23 Feb

(11-1A)

VANCOUVER, BC
ILS CAT II or III Y Rwy 08L

BRIEFING STRIP ™

D-ATIS	PACIFIC Radio	VANCOUVER Arrival	
		Outer	Inner
124.6	123.15	128.17 128.6	133.1 134.225

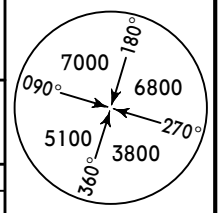
VANCOUVER Tower			Ground	
North		South	North	South
119.55	124.0	118.7	127.15	121.7

LOC ITL	Final Apch Crs	GS	CAT IIIC	CAT IIIB	CAT IIIA	CAT II ILS	Apt Elev
110.55	083°	OMRAD 2030′ (2017′)	NA	NA	Refer to Minimums	RA 113′ DA(H) 113′(100′)	13′ TDZE 13′

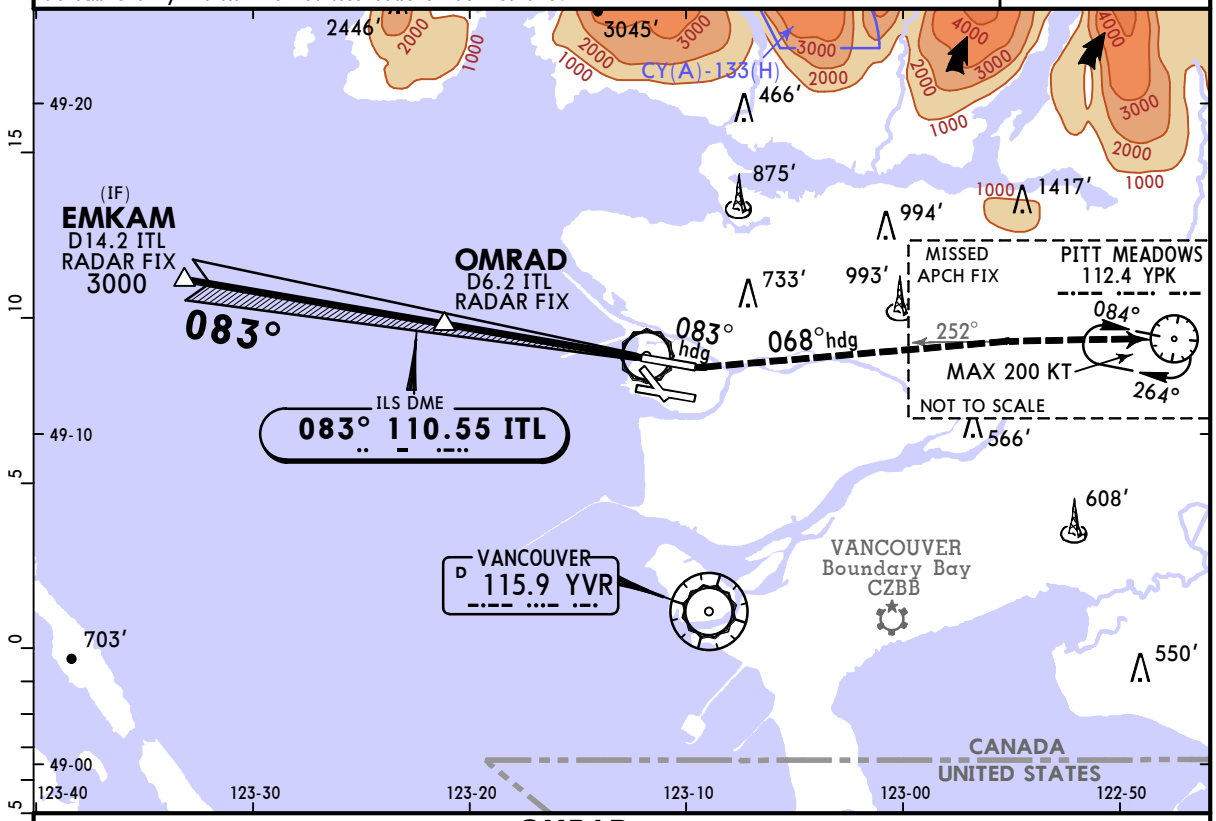
MISSED APCH: Climb to 420′ heading 083°. Then climbing LEFT turn to 3500′ heading 068°. Intercept inbound R-252 YPK to YPK VOR.

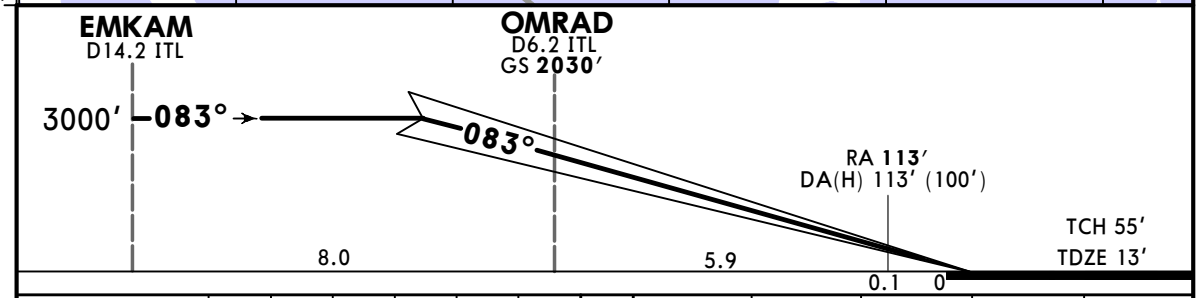
Alt Set: INCHES | Trans level: FL180 | Trans alt: 18000′

1. Radar or RNAV required. 2. PRIOR AUTHORIZATION REQUIRED FROM TRANSPORT CANADA. 3. SAFE ALTITUDE WITHIN 100 NM 12,800′. 4. Procedure turn NOT AUTHORIZED. 5. Simultaneous approach AUTHORIZED with Rwy 08R. 6. Localizer reliable only within 10° either side of centerline.



MSA YVR VOR





Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	372	478	531	637	743	849

ALSF-II PAPI | 420′ | 083° hdg | 3500′ LT | 068° hdg

STRAIGHT-IN LANDING RWY 08L

CAT IIIC ILS	CAT IIIB ILS	CAT IIIA ILS	CAT II ILS RA 113′ DA(H) 113′(100′)
NOT AUTHORIZED	NOT AUTHORIZED	RVR 6	RVR 12

CHANGES: Waypoints, GS altitude, distances.

CYVR/YVR
VANCOUVER INTL

JEPPESEN
17 FEB 23 (11-2) Eff 23 Feb

VANCOUVER, BC
ILS Rwy 08R

BRIEFING STRIP™

D-ATIS	PACIFIC Radio	VANCOUVER Arrival	
124.6	123.15	Outer 128.17 128.6	Inner 133.1 134.225

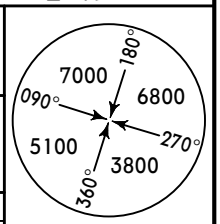
VANCOUVER Tower			Ground	
North		South	North	South
119.55	124.0	118.7	127.15	121.7

LOC IVR	Final Apch Crs	GS	ILS DME DA(H)	Apt Elev 13′
109.5	083°	TAVPI 2030′ (2021′)	Refer to Minimums	TDZE 9′

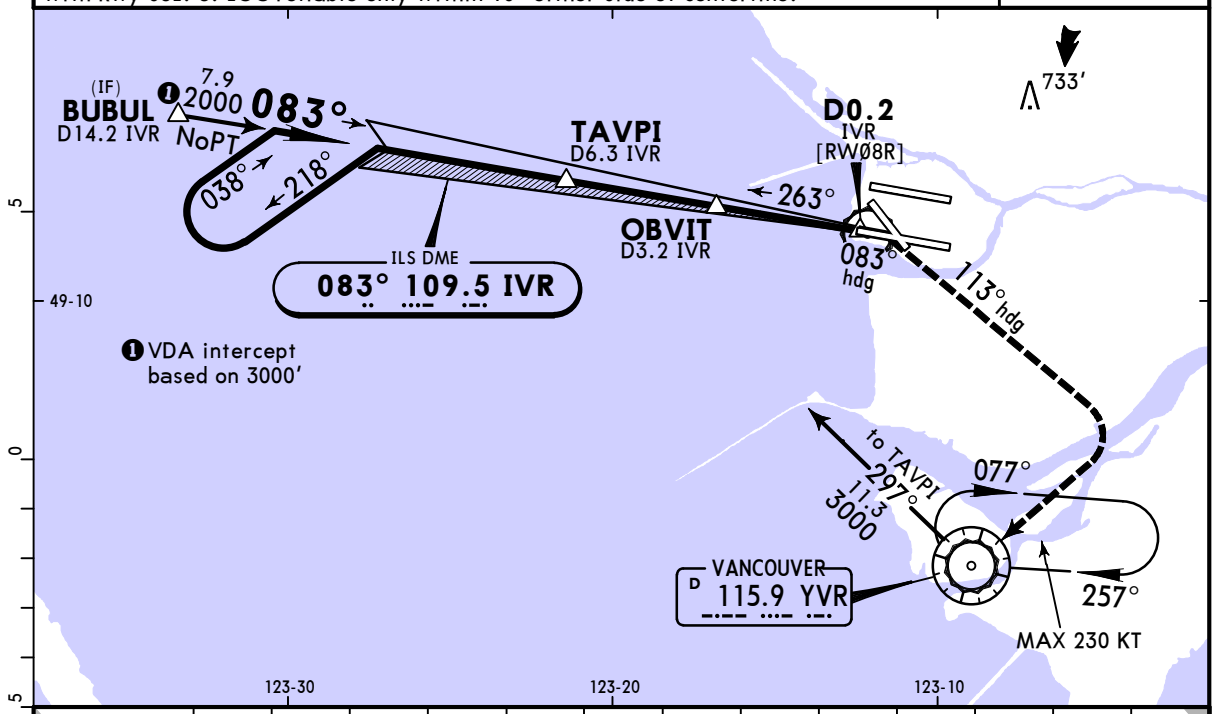
MISSED APCH: Climb to 420′ heading 083°. Then climbing RIGHT turn to 2000′ heading 113°. Then RIGHT turn direct to YVR VOR. Shuttle climb at YVR VOR to 5400′ before proceeding on course.

Alt Set: INCHES | Trans level: FL180 | Trans alt: 18000′

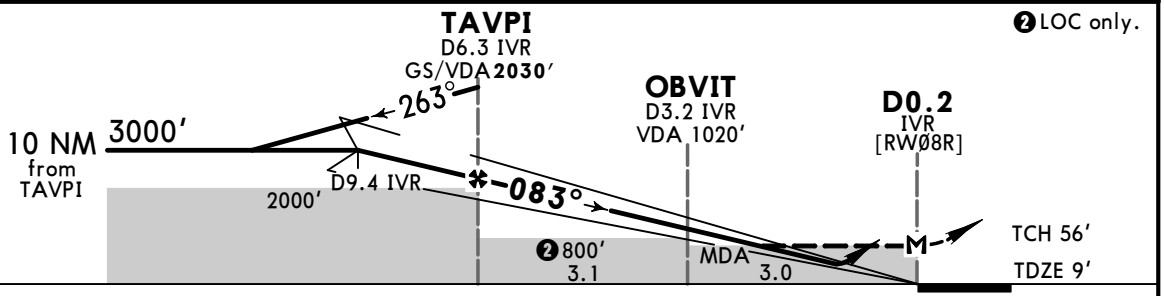
1. SAFE ALTITUDE WITHIN 100 NM 12,800′. 2. Simultaneous approach AUTHORIZED with Rwy 08L. 3. LOC reliable only within 10° either side of centerline.



MSA YVR VOR



NM to IVR DME	14.2	12.0	11.0	10.0	9.4	8.0	7.0	6.0	5.0	4.0	3.0	2.0	0.9
VDA ALTITUDE	4530′	3830′	3510′	3190′	3000′	2550′	2230′	1920′	1600′	1280′	960′	640′	280′



Gnd speed-Kts	70	90	100	120	140	160
GS/VDA 3.00°	372	478	531	637	743	849
MAP at D0.2 IVR						

ALSF-II
PAPI

420′ | 083° hdg | 2000′ RT | 113° hdg

STRAIGHT-IN LANDING RWY 08R

	ILS DME		LOC (GS out) DME	
	DA(H) 209′(200′)	DA(H) 259′(250′)	MDA(H) 280′(271′)	
	FULL	HIALS out		HIALS out
A	RVR 26 or ½	RVR 50 or 1	RVR 50 or 1	
B				
C				
D				

CHANGES: Missed apch, transition, waypoints, dist, alt, TCH, holding, LOC mnms.

CYVR/YVR VANCOUVER INTL

JEPPESEN
17 FEB 23
Eff 23 Feb
11-2A

VANCOUVER, BC ILS CAT II or III Rwy 08R

BRIEFING STRIP ™

D-ATIS	PACIFIC Radio	VANCOUVER Arrival Outer	VANCOUVER Arrival Inner
124.6	123.15	128.17 128.6	133.1 134.225

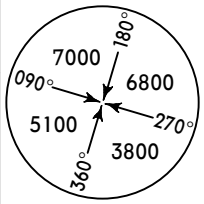
VANCOUVER Tower North	VANCOUVER Tower	VANCOUVER Tower South	Ground North	Ground South
119.55	124.0	118.7	127.15	121.7

LOC IVR	Final Apch Crs	GS	CAT IIIC	CAT IIIB	CAT IIIA	CAT II ILS	Apt Elev
109.5	083°	TAVPI 2030′ (2021′)	NA	NA	Refer to Minimums	RA 99′ DA(H) 109′ (100′)	13′ TDZE 9′

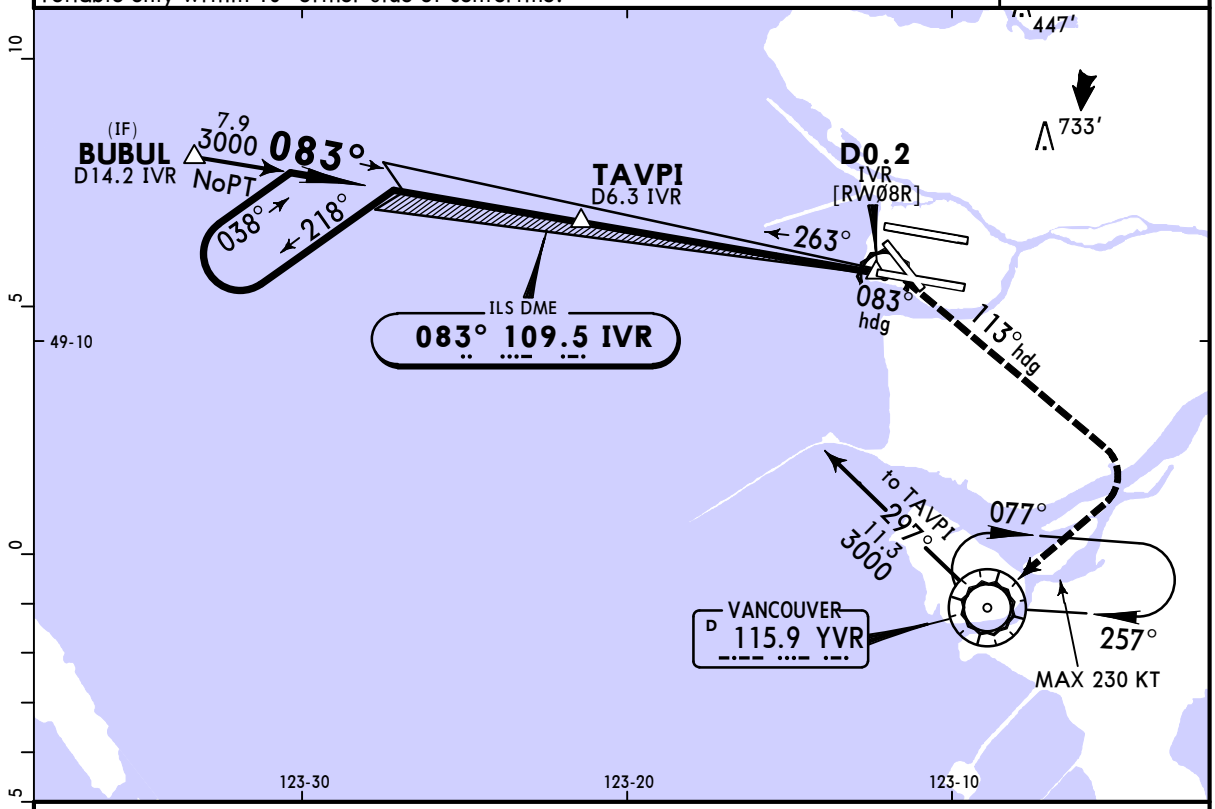
MISSED APCH: Climb to 420′ heading 083°. Then climbing RIGHT turn to 2000′ heading 113°. Then RIGHT turn direct to YVR VOR. Shuttle climb at YVR VOR to 5400′ before proceeding on course.

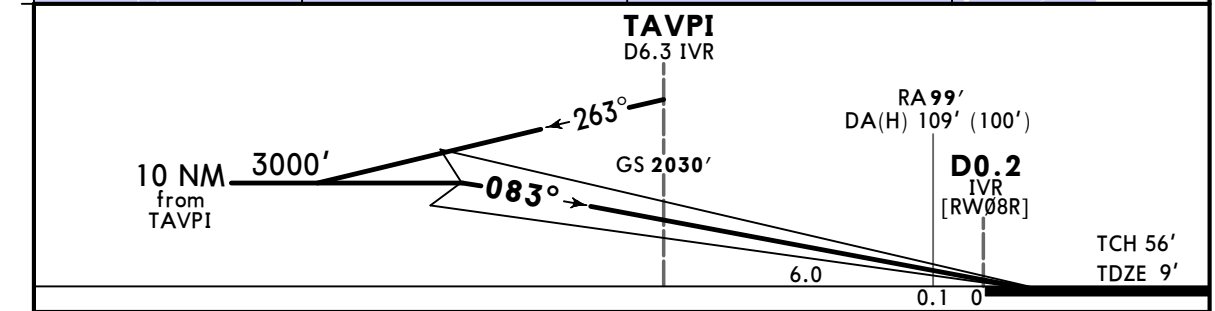
Alt Set: INCHES | Trans level: FL180 | Trans alt: 18000′

1. PRIOR AUTHORIZATION REQUIRED FROM TRANSPORT CANADA. 2. SAFE ALTITUDE WITHIN 100 NM 12,800′. 3. Simultaneous approach AUTHORIZED with Rwy 08L. 4. LOC reliable only within 10° either side of centerline.



MSA YVR VOR





Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	372	478	531	637	743	849

ALSF-II
PAPI

420′	083° hdg	2000′ RT	113° hdg

STRAIGHT-IN LANDING RWY 08R

CAT IIIC ILS	CAT IIIB ILS	CAT IIIA ILS	CAT II ILS RA 99′ DA(H) 109′ (100′)
NOT AUTHORIZED	NOT AUTHORIZED	RVR 6	RVR 12

CHANGES: Missed apch, transition, wpts, dist, alt, TCH, holding, CAT II mnm.

CYVR/YVR
VANCOUVER INTL

JEPPESEN
16 SEP 22 (11-3)

VANCOUVER, BC
ILS Rwy 13

BRIEFING STRIP ™

D-ATIS	PACIFIC Radio	VANCOUVER Arrival	
		Outer	Inner
124.6	123.15	128.17 128.6	133.1 134.225

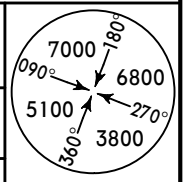
VANCOUVER Tower			Ground	
North		South	North	South
119.55	124.0	118.7	127.15	121.7

LOC IMK	Final Apch Crs	GS DATSI	ILS DME DA(H)	Apt Elev 13′ TDZE 8′
111.1	125°	2690′ (2682′)	258′ (250′)	

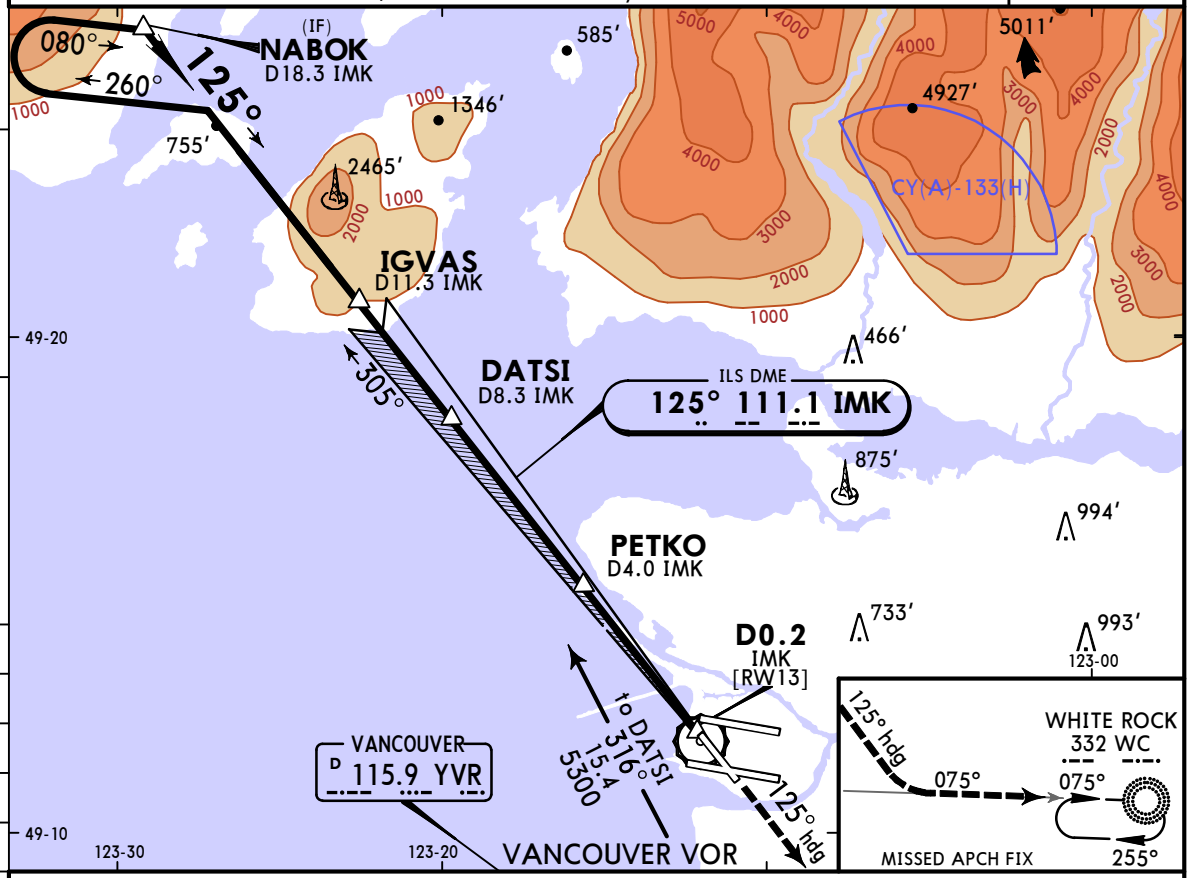
MISSED APCH: Climb to 3000′ heading 125°. Then LEFT turn direct to WC NDB. Shuttle to 7500′ before proceeding on course.

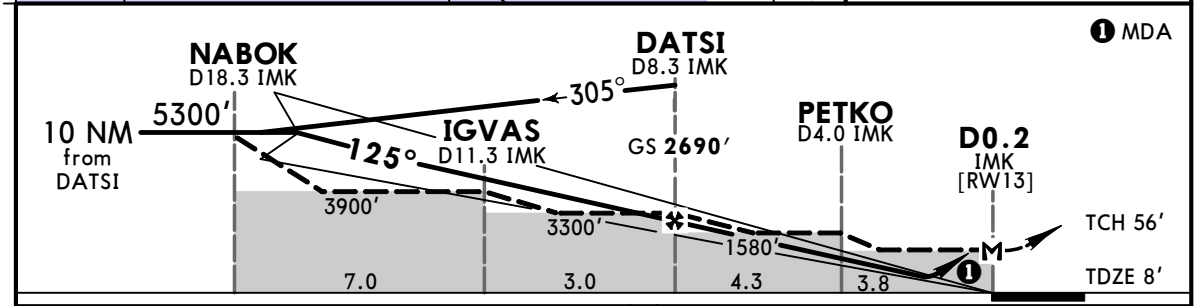
Alt Set: INCHES | Trans level: FL180 | Trans alt: 18000′

1. SAFE ALTITUDE WITHIN 100 NM 12,800′. 2. LOC reliable only within 10° either side of centerline.



MSA YVR VOR





Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	372	478	531	637	743	849
LOC Descent Angle 3.75°	465	597	664	796	929	1062
MAP at D0.2 IMK						

ODALS
PAPI

3000′ | 125° hdg | LT | WC 332

STRAIGHT-IN LANDING RWY 13

	ILS DME	LOC (GS out) DME
	DA(H) 258′ (250′)	MDA(H) 440′ (432′)
	ALS out	ALS out
A	1	1¼
B		
C		
D		

CHANGES: LOC descent angle.

CYVR/YVR
VANCOUVER INTL

JEPPESEN
17 FEB 23 (11-4) Eff 23 Feb

VANCOUVER, BC
ILS Rwy 26L

BRIEFING STRIP ™

D-ATIS	PACIFIC Radio	VANCOUVER Arrival	
		Outer	Inner
124.6	123.15	128.17 128.6	133.1 134.225

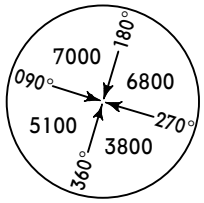
VANCOUVER Tower			Ground	
North		South	North	South
119.55	124.0	118.7	127.15	121.7

LOC	Final	GS	ILS	Apt Elev 13′
IFZ	Apch Crs	DUTOM	DA(H)	
110.7	263°	2030′ (2023′)	Refer to Minimums	TDZE 7′

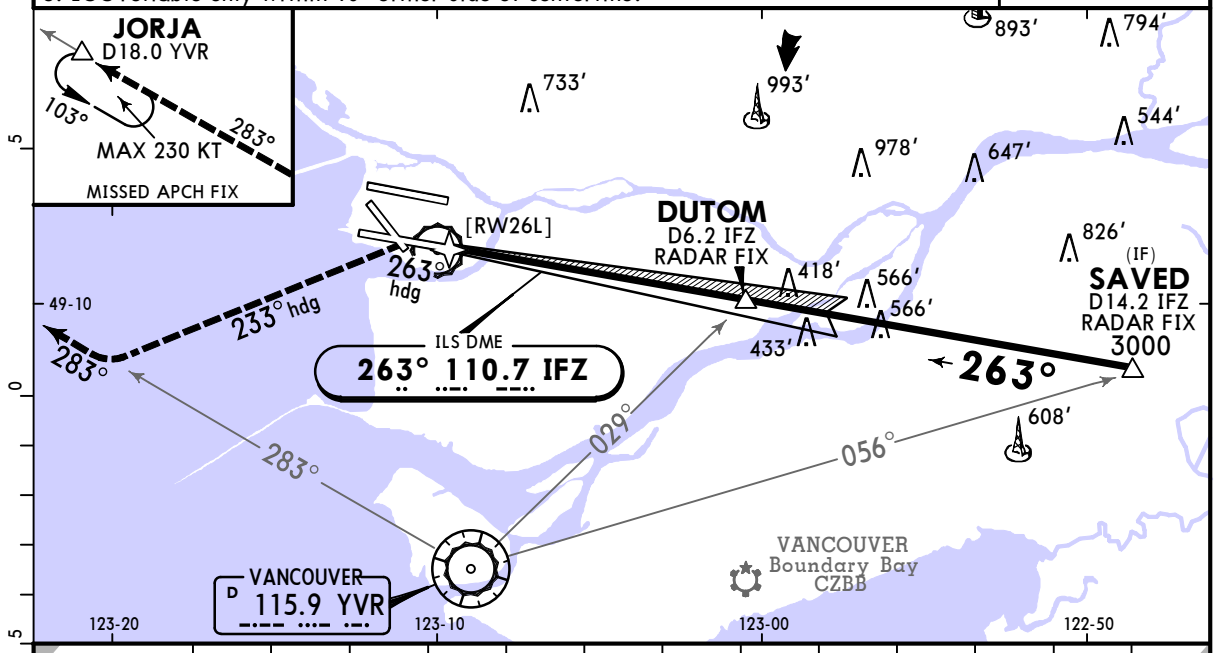
MISSED APCH: Climb to 420′ heading 263°. Then climbing LEFT turn to 2000′ heading 233°. Intercept outbound R-283 YVR VOR. Then climb to 3000′ to JORJA. Shuttle climb at JORJA to 4800′ before proceeding on course.

Alt Set: INCHES | Trans level: FL180 | Trans alt: 18000′

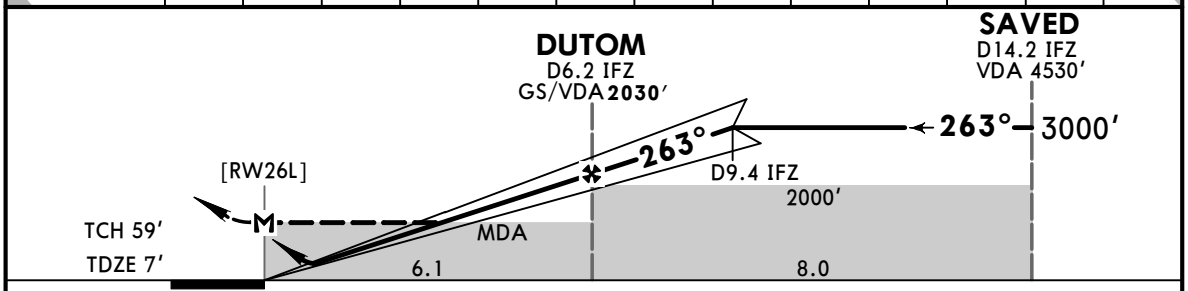
1. Radar or RNAV required. 2. SAFE ALTITUDE WITHIN 100 NM 12,800′. 3. Procedure turn NOT AUTHORIZED. 4. Simultaneous approach AUTHORIZED with Rwy 26R. 5. LOC reliable only within 10° either side of centerline.



MSA YVR VOR



NM to IFZ DME	1.7	3.0	4.0	5.0	6.0	7.0	8.0	9.4	10.0	11.0	12.0	13.0	14.2
VDA ALTITUDE	540′	960′	1280′	1600′	1920′	2230′	2550′	3000′	3190′	3510′	3830′	4140′	4530′



Gnd speed-Kts		70	90	100	120	140	160
GS/VDA	3.00°	372	478	531	637	743	849
DUTOM to MAP	6.1	5:14	4:04	3:40	3:03	2:37	2:17

ALSF-II
PAPI

420′	263° hdg	2000′ LT	233° hdg

STRAIGHT-IN LANDING RWY 26L

	ILS DME or ILS RADAR		LOC (GS out) DME or LOC (GS out) VOR	
	DA(H) 207′ (200′)	DA(H) 257′ (250′)	MDA(H) 540′ (533′)	
	FULL	HIALS out		HIALS out
A B C D	RVR 26 or 1/2	RVR 50 or 1	1 1/4	1 3/4

CHANGES: MSA, missed apch, wpts, distances, altitudes, holding, minimums.

CYVR/YVR
VANCOUVER INTL

JEPPESEN
17 FEB 23
Eff 23 Feb
11-4A

VANCOUVER, BC
ILS CAT II or III Rwy 26L

BRIEFING STRIP™

D-ATIS	PACIFIC Radio	VANCOUVER Arrival Outer	VANCOUVER Arrival Inner
124.6	123.15	128.17 128.6	133.1 134.225

VANCOUVER Tower North	VANCOUVER Tower	VANCOUVER Tower South	Ground North	Ground South
119.55	124.0	118.7	127.15	121.7

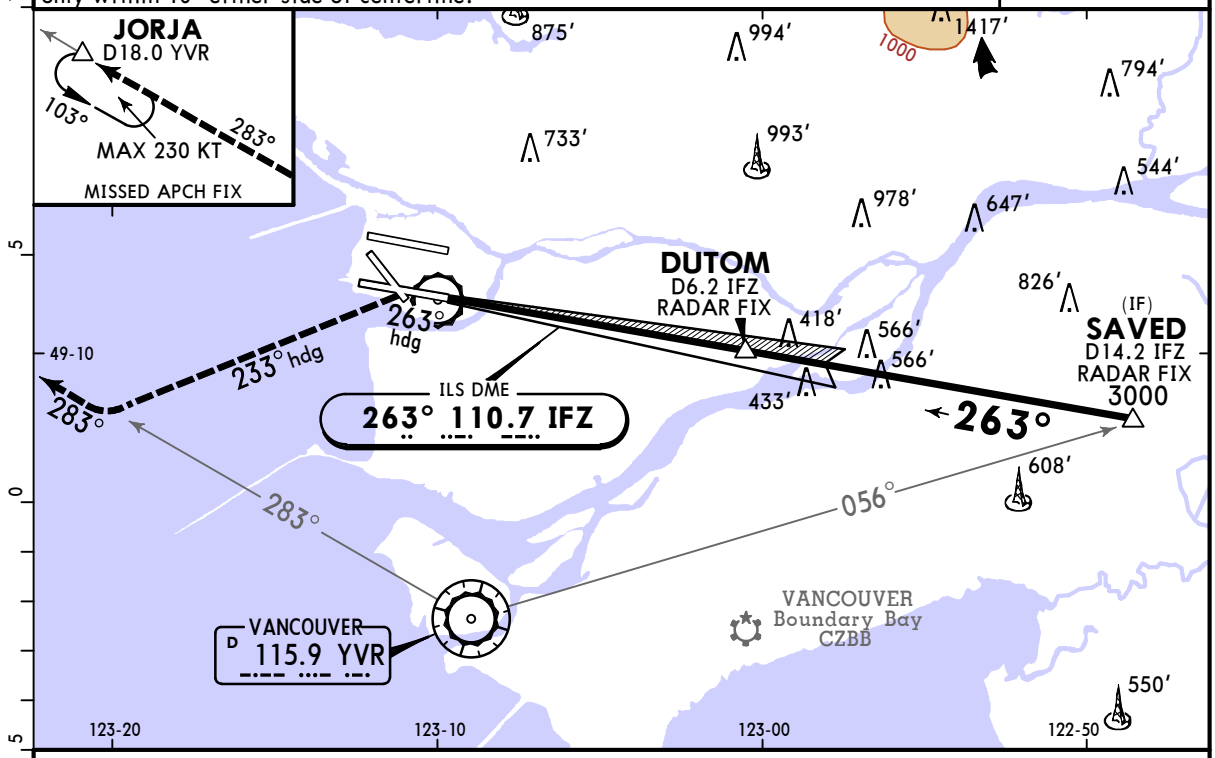
LOC IFZ	Final Apch Crs	GS	CAT IIIC	CAT IIIB	CAT IIIA	CAT II ILS	Apt Elev
110.7	263°	DUTOM 2030′ (2023′)	NA	NA	Refer to Minimums	RA 103′ DA(H) 107′(100′)	13′ TDZE 7′

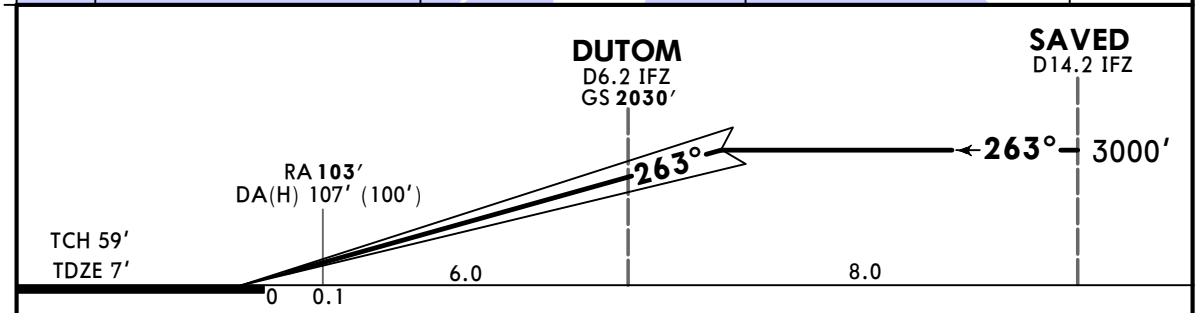
MISSED APCH: Climb to 420′ heading 263°. Then climbing LEFT turn to 2000′ heading 233°. Intercept outbound R-283 YVR VOR. Then climb to 3000′ to JORJA. Shuttle climb at JORJA to 4800′ before proceeding on course.

MSA YVR VOR
7000 (180°–090°)
6800 (090°–270°)
5100 (270°–360°)
3800 (360°–180°)

Alt Set: INCHES | Trans level: FL180 | Trans alt: 18000′

1. Radar or RNAV required. 2. PRIOR AUTHORIZATION REQUIRED FROM TRANSPORT CANADA 3. SAFE ALTITUDE WITHIN 100 NM 12,800′. 4. Procedure turn NOT AUTHORIZED. 5. Simultaneous approach AUTHORIZED with Rwy 26R. 6. LOC reliable only within 10° either side of centerline.





Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	372	478	531	637	743	849

ALSF-II
PAPI
420′
263° hdg
2000′ LT
233° hdg

STRAIGHT-IN LANDING RWY26L

CAT IIIC ILS	CAT IIIB ILS	CAT IIIA ILS	CAT II ILS RA 103′ DA(H) 107′(100′)
NOT AUTHORIZED	NOT AUTHORIZED	RVR 6	RVR 12

CHANGES: MSA, missed apch, wpts, distances, altitudes, holding, minimums.

CYVR/YVR
VANCOUVER INTL

JEPPESEN
17 FEB 23 (11-5) Eff 23 Feb

VANCOUVER, BC
ILS Rwy 26R

BRIEFING STRIP ™

D-ATIS	PACIFIC Radio	VANCOUVER Arrival	
124.6	123.15	Outer 128.175 128.6	Inner 133.1 134.225

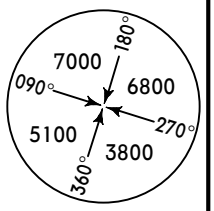
VANCOUVER Tower				Ground	
North			South	North	South
119.55	124.025	125.65	118.7	127.15	121.7

LOC IRD	Final Apch Crs	GS TOTIM	ILS DA(H)	Apt Elev 13'
111.95	263°	2030' (2021')	Refer to Minimums	TDZE 9'

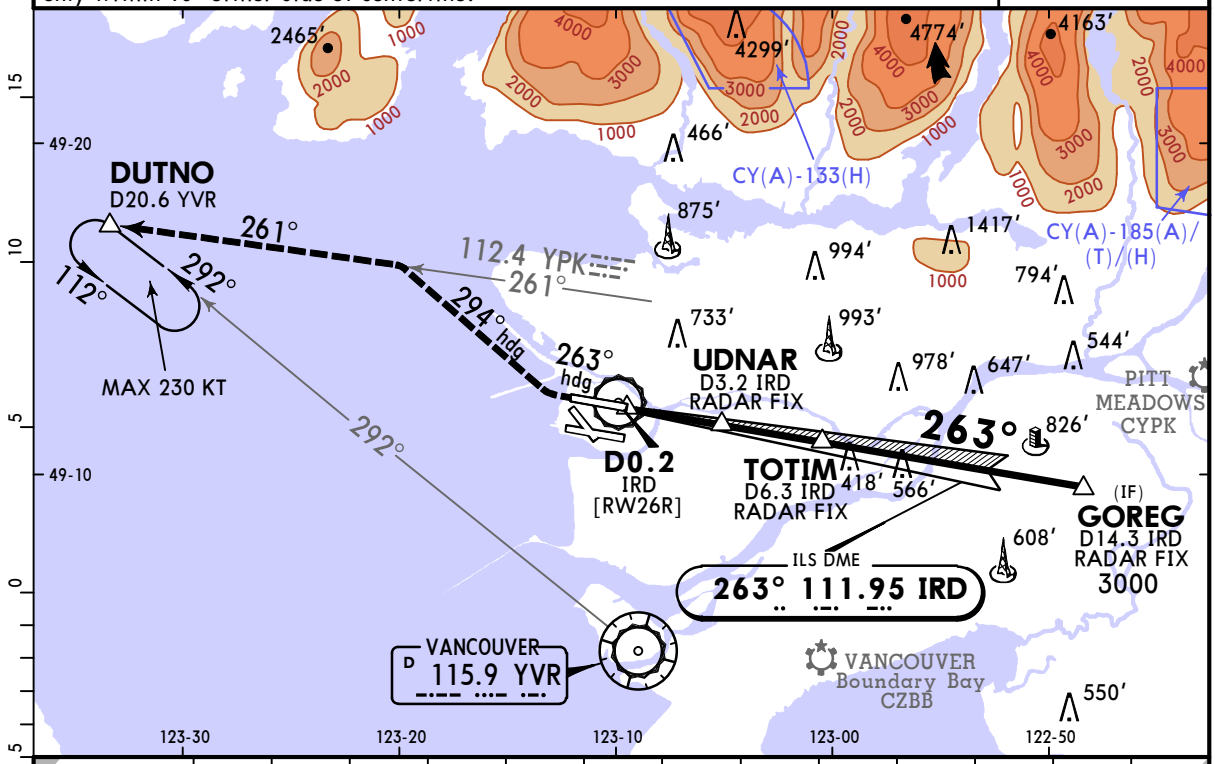
MISSED APCH: Climb to 420' heading 263°. Then climbing RIGHT turn to 3000' heading 294°. Intercept outbound YPK VOR R-261 to DUTNO. Shuttle climb at DUTNO to 5300' before proceeding on course.

Alt Set: INCHES | Trans level: FL180 | Trans alt: 18000'

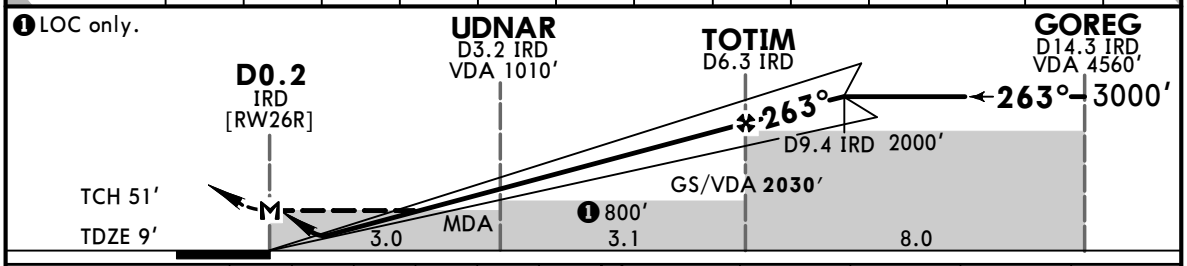
1. Radar or RNAV required. 2. SAFE ALTITUDE WITHIN 100 NM 12,800'. 3. Procedure turn NOT AUTHORIZED. 4. Simultaneous approach AUTHORIZED with Rwy 26L. 5. LOC reliable only within 10° either side of centerline.



MSA YVR VOR



NM to IRD DME	1.9	3.0	4.0	5.0	6.0	7.0	8.0	9.4	10.0	11.0	12.0	13.0	14.3
VDA ALTITUDE	600'	960'	1280'	1600'	1920'	2230'	2550'	3000'	3190'	3510'	3830'	4140'	4560'



Gnd speed-Kts		70	90	100	120	140	160
GS/VDA	3.00°	372	478	531	637	743	849
MAP at D0.2 IRD							
TOTIM to MAP	6.1	5:14	4:04	3:40	3:03	2:37	2:17

ALSF-II | PAPI | 420' | 263° hdg | 3000' RT | 294° hdg

STRAIGHT-IN LANDING RWY 26R

	ILS DME or ILS RADAR		LOC (GS out) DME or LOC (GS out) RADAR	
	DA(H) 209' (200')	DA(H) 259' (250')	MDA(H) 600' (591')	
	FULL	HIALS out		HIALS out
A B C D	RVR 26 or ½	RVR 50 or 1	1¼	1¾

CHANGES: Missed approach, waypoints, distances, altitudes, TCH, LOC angle.

CYVR/YVR VANCOUVER INTL

17 FEB 23
Eff 23 Feb

JEPPESEN

11-5A

VANCOUVER, BC ILS CAT II or III Rwy 26R

BRIEFING STRIP™

D-ATIS	PACIFIC Radio	VANCOUVER Arrival Outer	VANCOUVER Arrival Inner
124.6	123.15	128.175 128.6	133.1 134.225

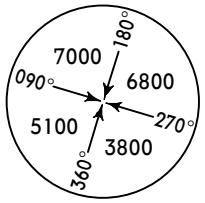
VANCOUVER Tower North	VANCOUVER Tower South	Ground North	Ground South
119.55 124.025 125.65	118.7	127.15	121.7

LOC IRD	Final Apch Crs	GS TOTIM	CAT IIIC	CAT IIIB	CAT IIIA	CAT II ILS	Apt Elev
111.95	263°	2030′ (2021′)	NA	NA	Refer to Minimums	RA 106′ DA(H) 109′(100′)	13′ TDZE 9′

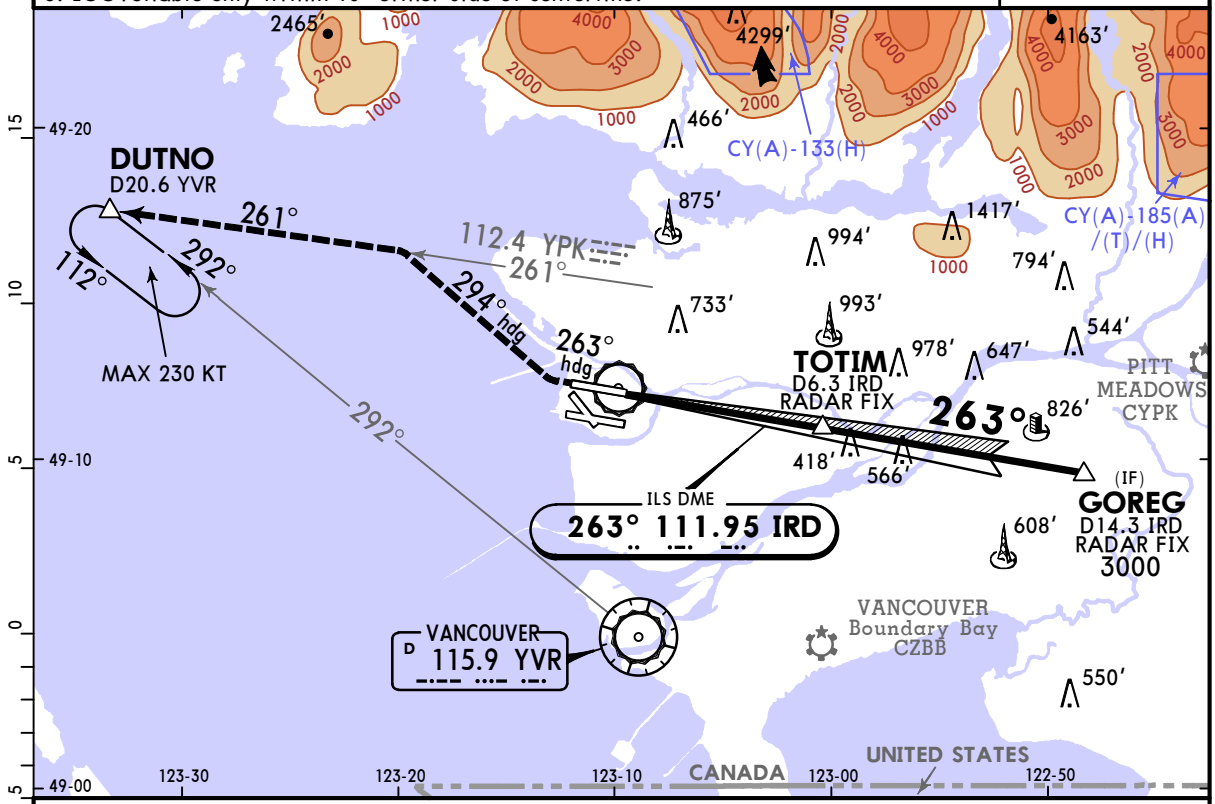
MISSED APCH: Climb to 420′ heading 263°. Then climbing RIGHT turn to 3000′ heading 294°. Intercept outbound R-261 YPK VOR to DUTNO. Shuttle climb at DUTNO to 5300′ before proceeding on course.

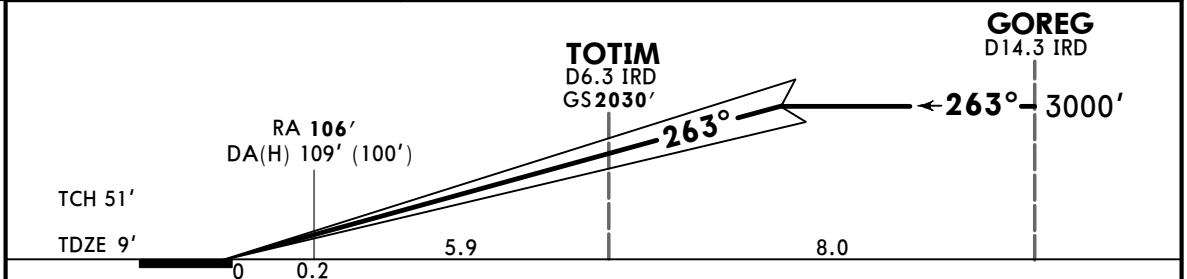
Alt Set: INCHES | Trans level: FL180 | Trans alt: 18000′

1. Radar or RNAV required. 2. PRIOR AUTHORIZATION REQUIRED FROM TRANSPORT CANADA. 3. SAFE ALTITUDE WITHIN 100 NM 12,800′. 4. Procedure turn NOT AUTHORIZED. 5. Simultaneous approach AUTHORIZED with Rwy 26L. 6. LOC reliable only within 10° either side of centerline.



MSA YVR VOR





Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	372	478	531	637	743	849

ALSF-II
PAPI

420′	263° hdg	3000′ RT	294° hdg

STRAIGHT-IN LANDING RWY 26R

CAT IIIC ILS	CAT IIIB ILS	CAT IIIA ILS	CAT II ILS
			RA 106′ DA(H) 109′(100′)
NOT AUTHORIZED	NOT AUTHORIZED	RVR 6	RVR 12

CHANGES: Missed approach, waypoints, distances, altitudes, TCH.

CYVR/YVR
VANCOUVER INTL

JEPPESEN
17 FEB 23
Eff 23 Feb
12-1

VANCOUVER, BC
RNAV (GNSS) Z Rwy 08L

BRIEFING STRIP ™

D-ATIS	PACIFIC Radio	VANCOUVER Arrival	
124.6	123.15	Outer 128.175 128.6	Inner 133.1 134.225

VANCOUVER Tower				Ground	
North			South	North	South
119.55	124.025	125.65	118.7	127.15	121.7

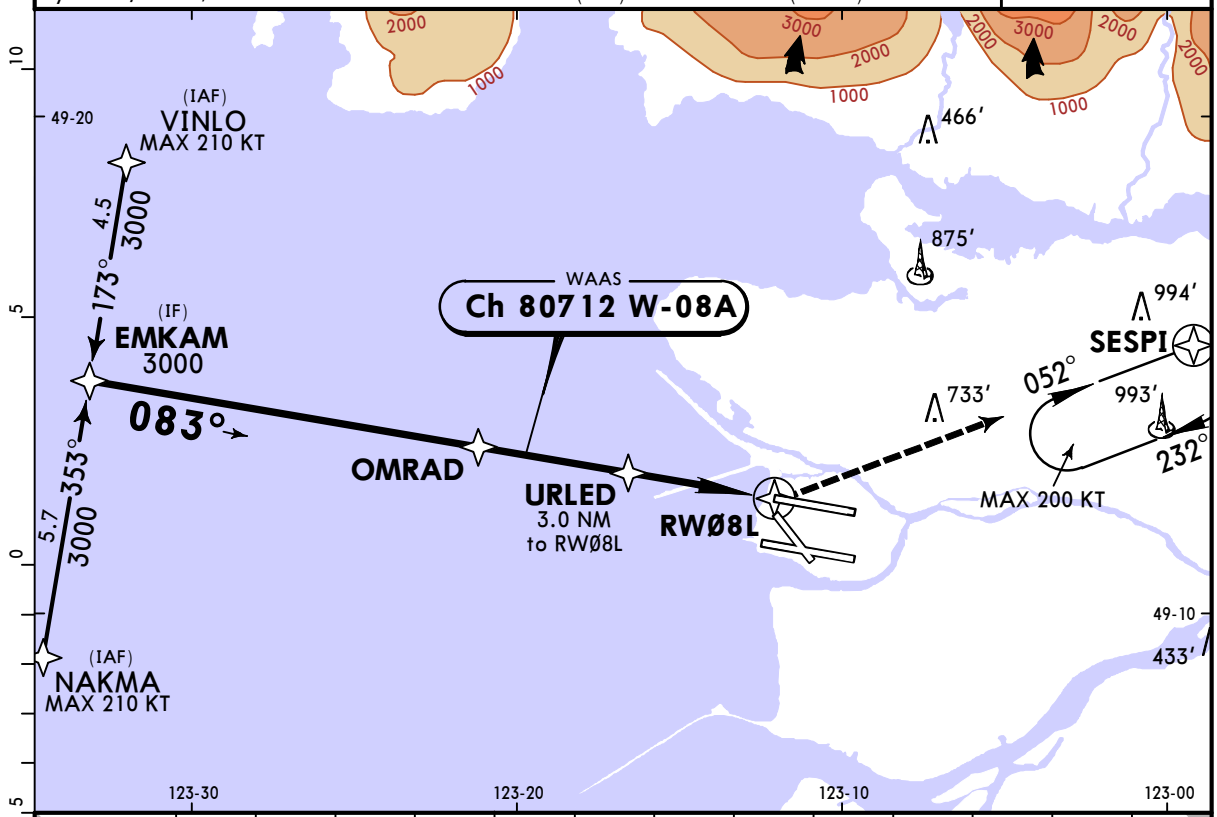
WAAS	Final Apch Crs	GPA	LPV DA(H) Refer to Minimums	Apt Elev 13′ Rwy 13′
Ch 80712 W-08A	083°	OMRAD 2000′ (1987′)		

MISSED APCH: Do not exceed 230 KT until SESPI. Climbing LEFT turn to 3000′ direct to SESPI. As required shuttle climb.

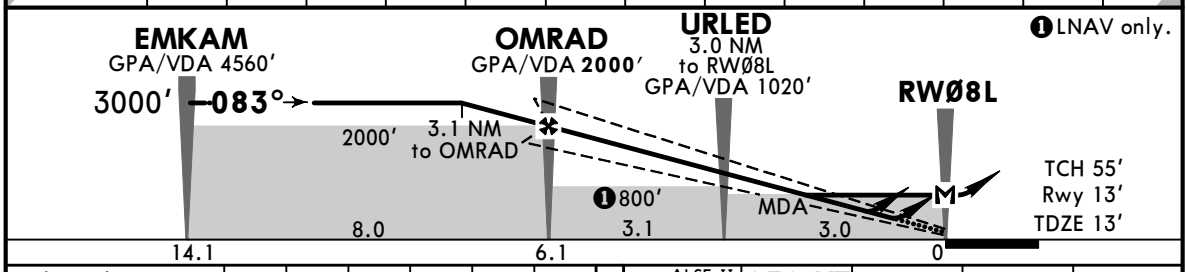
Alt Set: INCHES | Trans level: FL180 | Trans alt: 18000′

1. SAFE ALTITUDE WITHIN 100 NM 12,800′. 2. Simultaneous approach AUTHORIZED with Rwy 08R. 3. LNAV procedure NOT AUTHORIZED during simultaneous operations. 4. Advise ATC if unable to conduct LPV or LNAV/VNAV approach. 5. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -18°C (0°F) or above 54°C (129°F).

7800
MSA RW08L



NM to RW08L	14.1	12.0	11.0	10.0	9.2	8.0	7.0	6.0	5.0	4.0	3.0	2.0	1.0
VDA ALTITUDE	4560′	3890′	3570′	3250′	3000′	2620′	2300′	1980′	1660′	1340′	1020′	700′	380′



Gnd speed-Kts		70	90	100	120	140	160
GPA/VDA	3.00°	372	478	531	637	743	849
MAP at RW08L							

PAPI | ALSF-II | 230 KT MAX UNTIL SESPI | 3000′ LT | SESPI

STRAIGHT-IN LANDING RWY 08L

	LPV		LNAV/VNAV		LNAV	
	DA(H) 213′ (200′)	DA(H) 263′ (250′)	DA(H) 329′ (316′)		MDA(H) 380′ (367′)	
		HIALS out		HIALS out		HIALS out
A B C D	RVR 26 or ½	RVR 50 or 1	RVR 50 or 1		RVR 50 or 1	1¼

CHANGES: Missed approach, temp limit, VOR del, wpts, distances, altitude.

CYVR/YVR
VANCOUVER INTL

JEPPESEN
17 FEB 23 (12-2) Eff 23 Feb

VANCOUVER, BC
RNAV (GNSS) Rwy 08R

BRIEFING STRIP ™

D-ATIS	PACIFIC Radio	VANCOUVER Arrival	
124.6	123.15	Outer 128.175 128.6	Inner 133.1 134.225

VANCOUVER Tower				Ground	
North			South	North	South
119.55	124.025	125.65	118.7	127.15	121.7

WAAS	Final Apch Crs	GPA	LPV DA(H)	Apt Elev 13′
Ch 80922 W-08B	083°	TAVPI 2000′ (1991′)	Refer to Minimums	Rwy 9′

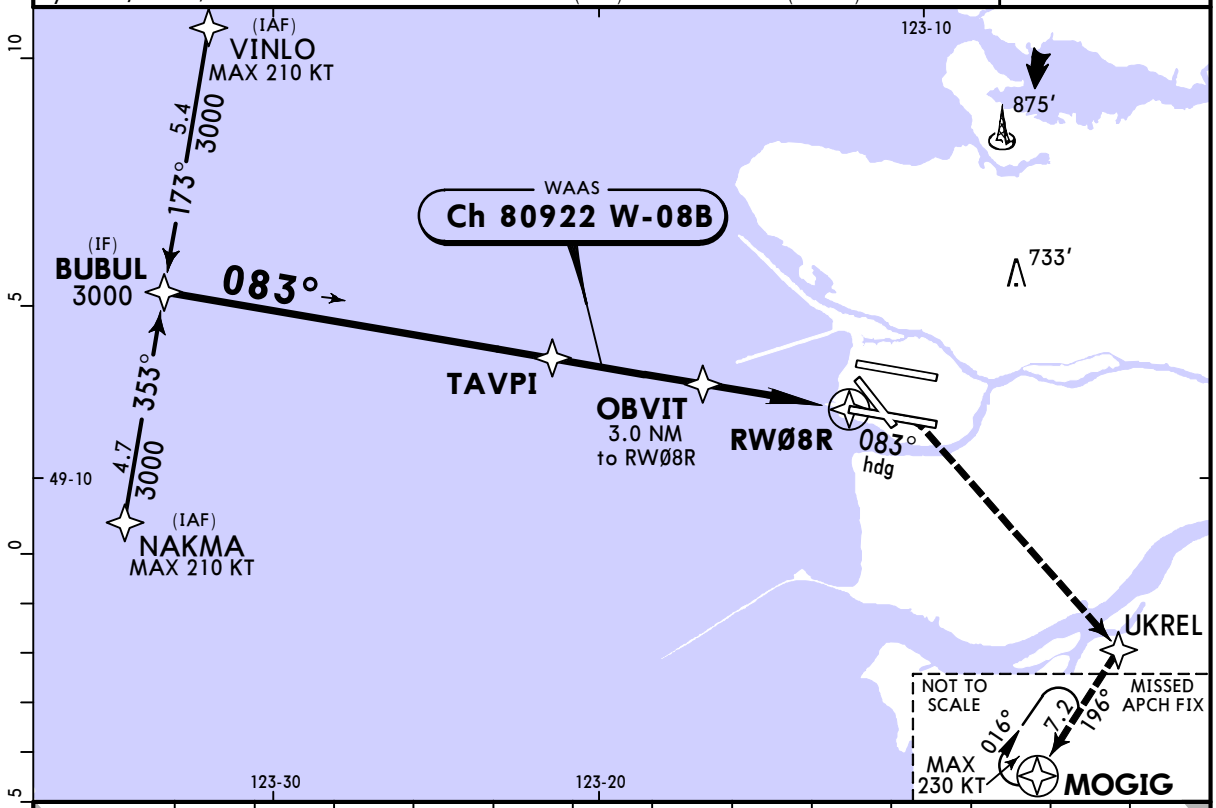
MISSED APCH: Do not exceed 200 KT until MOGIG. Climb to 600′ heading 083°. Climbing RIGHT turn to 2000′ direct to UKREL. Then track 196° to MOGIG. Shuttle climb at MOGIG to 5200′ before proceeding on course.

Alt Set: INCHES | Trans level: FL180 | Trans alt: 18000′

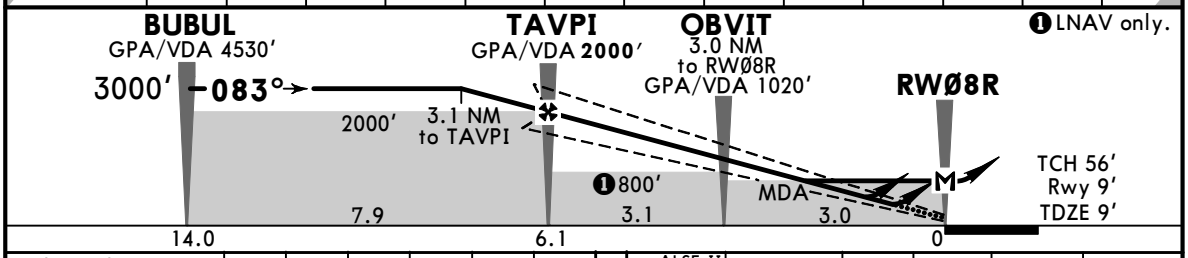
1. SAFE ALTITUDE WITHIN 100 NM 12,800′. 2. Simultaneous approach AUTHORIZED with Rwy 08L. 3. LNAV procedure NOT AUTHORIZED during simultaneous operations. 4. Advise ATC if unable to conduct LPV or LNAV/VNAV approach. 5. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -18°C (0°F) or above 54°C (129°F).

7800

MSA RWØ8R



NM to RWØ8R	14.0	12.0	11.0	10.0	9.2	8.0	7.0	6.0	5.0	4.0	3.0	2.0	1.0
VDA ALTITUDE	4530′	3890′	3570′	3250′	3000′	2610′	2290′	1980′	1660′	1340′	1020′	700′	380′



Gnd speed-Kts	70	90	100	120	140	160
GPA/VDA 3.00°	372	478	531	637	743	849
MAP at RWØ8R						

ALSF-II PAPI

200 KT MAX UNTIL MOGIG | **600′** | **083°** hdg | **2000′** RT | **UKREL**

STRAIGHT-IN LANDING RWY **08R**

	LPV		LNAV/VNAV	LNAV	
	DA(H) 209′ (200′)	DA(H) 259′ (250′)	DA(H) 283′ (274′)	MDA(H) 380′ (371′)	
		HIALS out	HIALS out		HIALS out
A B C D	RVR 26 or ½	RVR 50 or 1	RVR 50 or 1	RVR 50 or 1	1¼

CHANGES: Procedure revised.

CYVR/YVR
VANCOUVER INTL

JEPPESEN
17 FEB 23 (12-3) Eff 23 Feb

VANCOUVER, BC
RNAV (GNSS) Rwy 13

BRIEFING STRIP ™

D-ATIS	PACIFIC Radio	VANCOUVER Arrival	
124.6	123.15	Outer 128.175 128.6	Inner 133.1 134.225

VANCOUVER Tower				Ground	
North			South	North	South
119.55	124.025	125.65	118.7	127.15	121.7

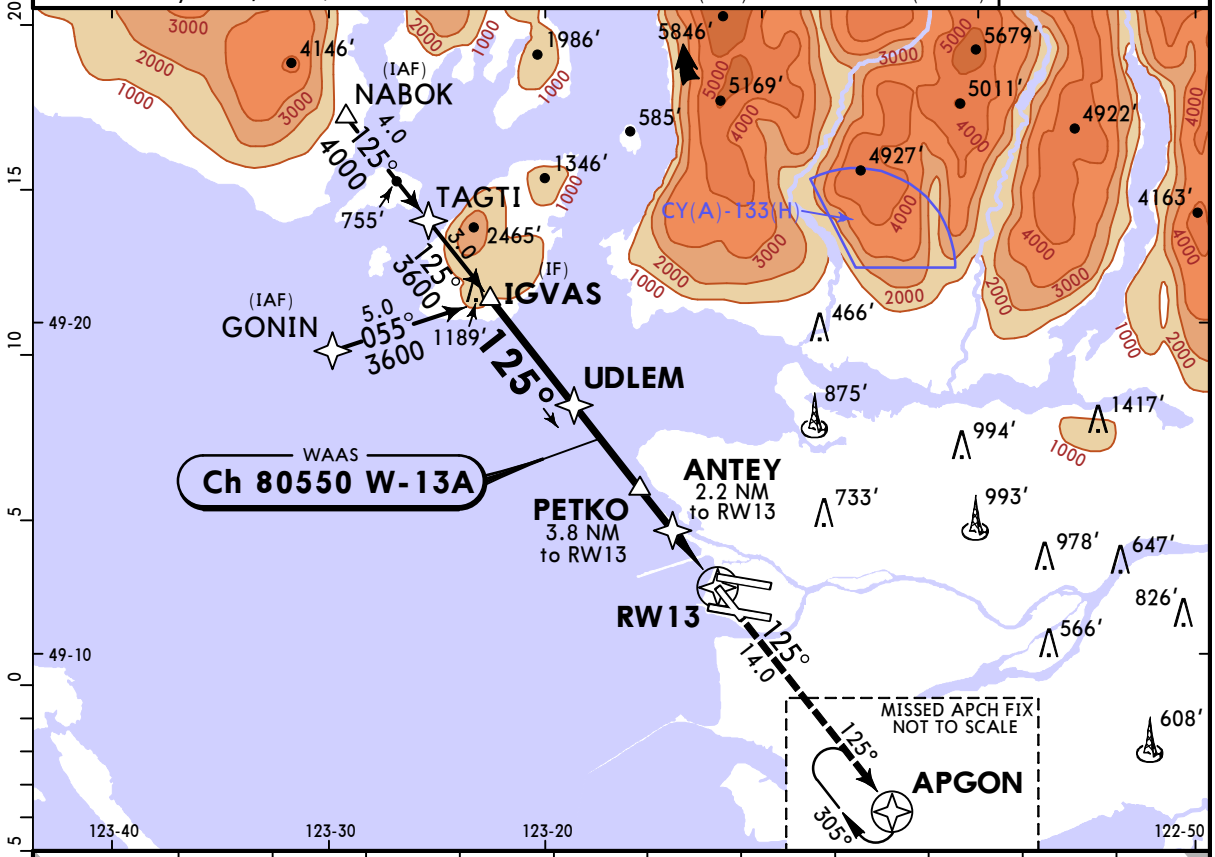
WAAS	Final Apch Crs	GPA	LPV DA(H)	Apt Elev 13′
Ch 80550 W-13A	125°	UDLEM 2300′ (2292′)	258′ (250′)	Rwy 8′

MISSED APCH: Climb to 3000′ track 125° to APGON. Shuttle to 5800′ before proceeding on course.

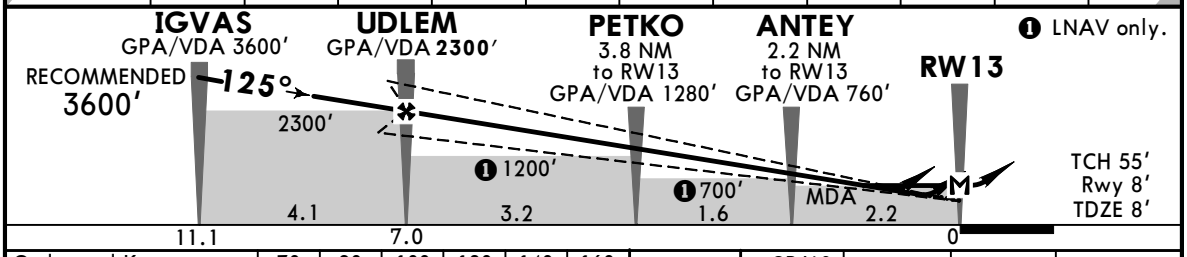
Alt Set: INCHES | Trans level: FL180 | Trans alt: 18000′

1. SAFE ALTITUDE WITHIN 100 NM 12,800′. 2. RADAR required. 3. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -18°C (0°F) or above 54°C (129°F).

7800
MSA RW13



NM to RW13	11.1	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0	1.1
VDA ALTITUDE	3600′	3250′	2930′	2610′	2290′	1970′	1660′	1340′	1020′	700′	400′



Gnd speed-Kts		70	90	100	120	140	160	ODALS	3000′	125°	APGON
GPA/VDA	3.00°	372	478	531	637	743	849	PAPI			
MAP at RW13											

STRAIGHT-IN LANDING RWY 13

	LPV	LNAV/VNAV	LNAV
	DA(H) 258′ (250′)	DA(H) 330′ (322′)	MDA(H) 400′ (392′)
	ALS out	ALS out	ALS out
A	1	1	1¼
B			
C			
D			

CHANGES: None.

CYVR/YVR
VANCOUVER INTL

JEPPESEN
17 FEB 23 (12-4) Eff 23 Feb

VANCOUVER, BC
RNAV (GNSS) Rwy 26L

BRIEFING STRIP™

D-ATIS	PACIFIC Radio	VANCOUVER Arrival	
124.6	123.15	Outer 128.175 128.6	Inner 133.1 134.225

VANCOUVER Tower				Ground	
North			South	North	South
119.55	124.025	125.65	118.7	127.15	121.7

WAAS	Final Apch Crs	GPA	LPV DA(H)	Apt Elev 13′
Ch 81035 W-26B	263°	DUTOM 2000′ (1993′)	Refer to Minimums	Rwy 7′

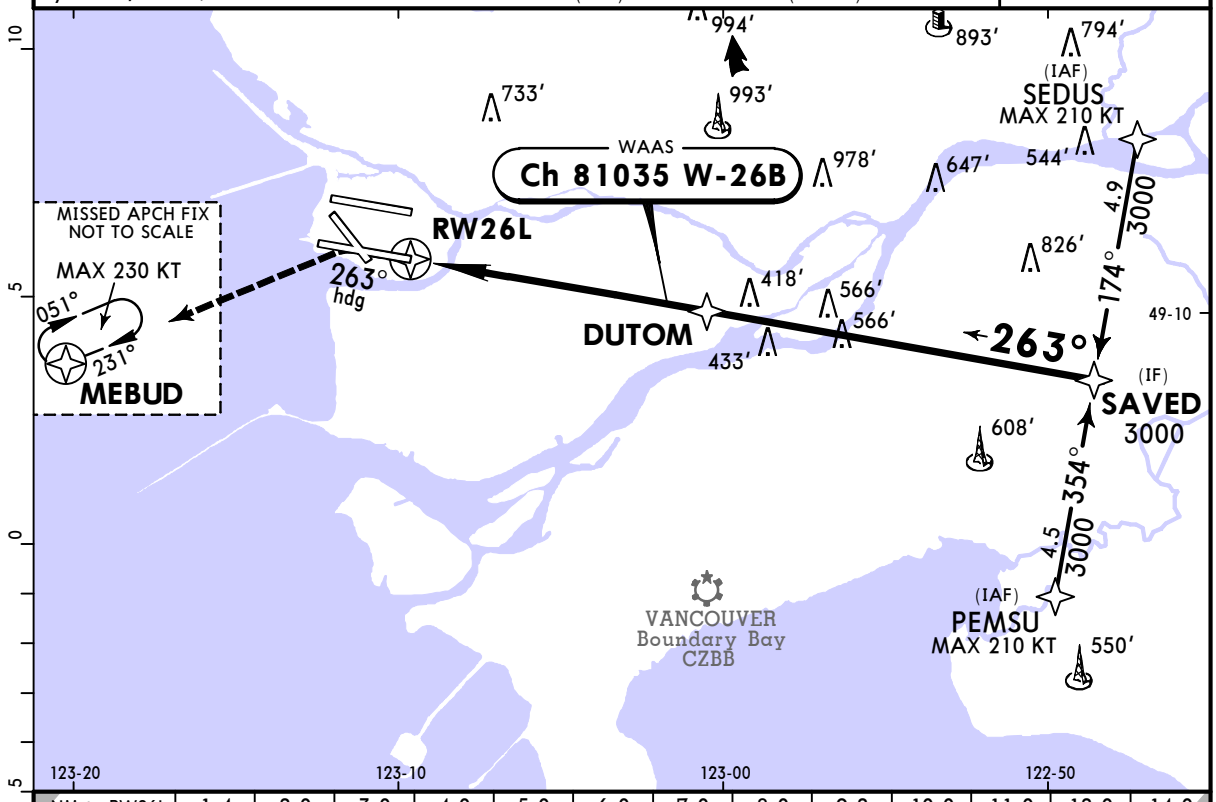
MISSED APCH: Climb to 600′ heading 263°. Then climbing LEFT turn to 2000′ direct to MEBUD. Shuttle climb at MEBUD to 5100′ before proceeding on course.

Alt Set: INCHES	Trans level: FL180	Trans alt: 18000′

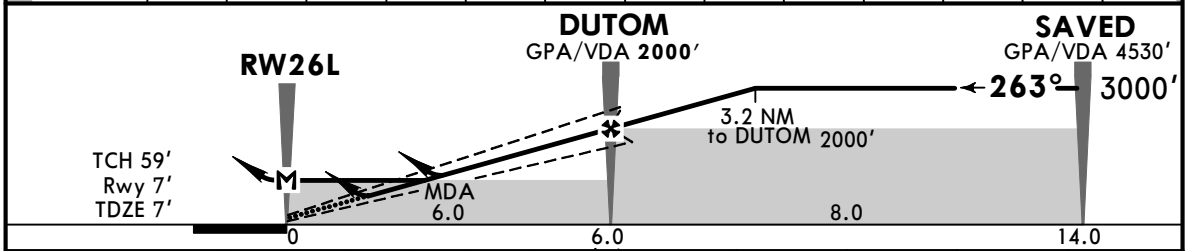
1. SAFE ALTITUDE WITHIN 100 NM 12,800′. 2. Simultaneous approach AUTHORIZED with Rwy 26R. 3. LNAV procedure NOT AUTHORIZED during simultaneous operations. 4. Advise ATC if unable to conduct LPV or LNAV/VNAV approach. 5. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -17°C (1°F) or above 54°C (129°F).

7800

MSA RW26L



NM to RW26L	1.4	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.2	10.0	11.0	12.0	14.0
VDA ALTITUDE	520′	700′	1020′	1340′	1660′	1980′	2300′	2610′	3000′	3250′	3570′	3890′	4530′



Gnd speed-Kts	70	90	100	120	140	160
GPA/VDA 3.00°	372	478	531	637	743	849
MAP at RW26L						

ALSF-II
PAPI
600′
263° hdg
2000′ LT
MEBUD

STRAIGHT-IN LANDING RWY 26L

	LPV		LNAV/VNAV		LNAV	
	DA(H) 207′ (200′)	DA(H) 257′ (250′)	DA(H) 566′ (559′)		MDA(H) 520′ (513′)	
		HIALS out		HIALS out		HIALS out
A B C D	RVR 26 or ½	RVR 50 or 1	1½	1¾	RVR 50 or 1	1½

CHANGES: Procedure revised.

CYVR/YVR
VANCOUVER INTL

JEPPESEN
17 FEB 23 (12-5) Eff 23 Feb

VANCOUVER, BC
RNAV (GNSS) Rwy 26R

BRIEFING STRIP™

D-ATIS	PACIFIC Radio	VANCOUVER Arrival	
124.6	123.15	Outer 128.175 128.6	Inner 133.1 134.225

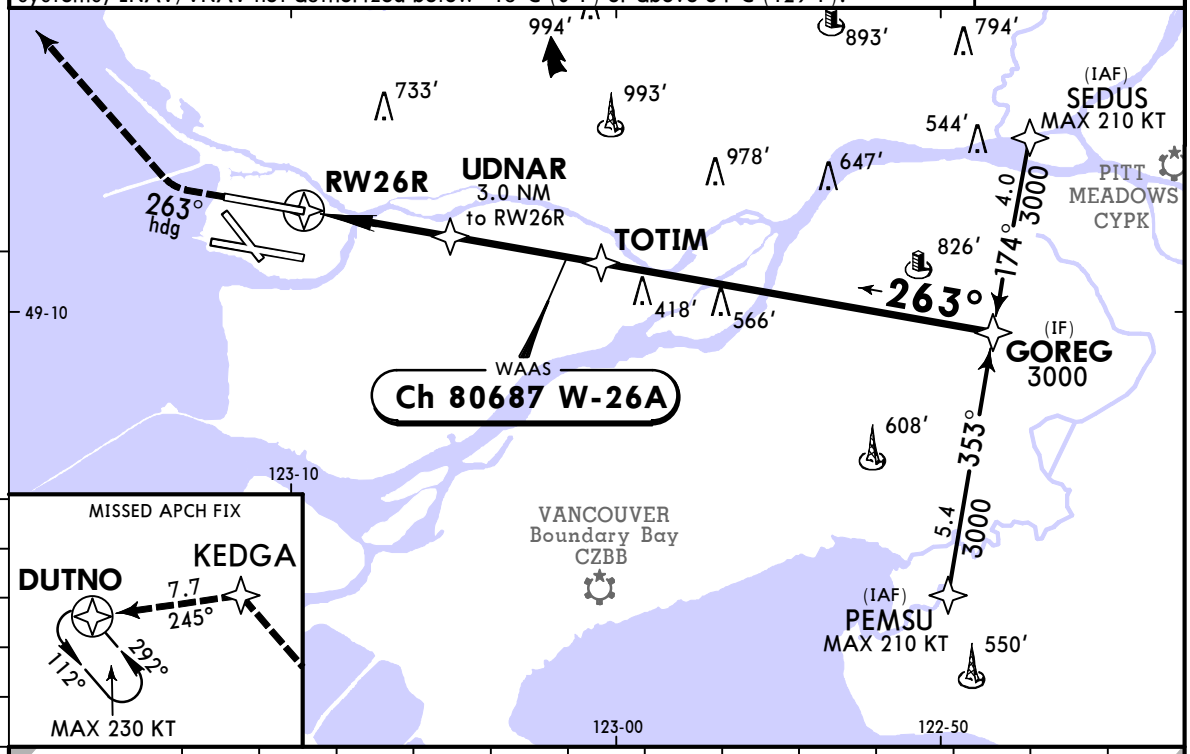
VANCOUVER Tower				Ground	
North			South	North	South
119.55	124.025	125.65	118.7	127.15	121.7

WAAS	Final Apch Crs	GPA	LPV DA(H)	Apt Elev 13′
Ch 80687 W-26A	263°	TOTIM 2000′ (1991′)	Refer to Minimums	Rwy 9′

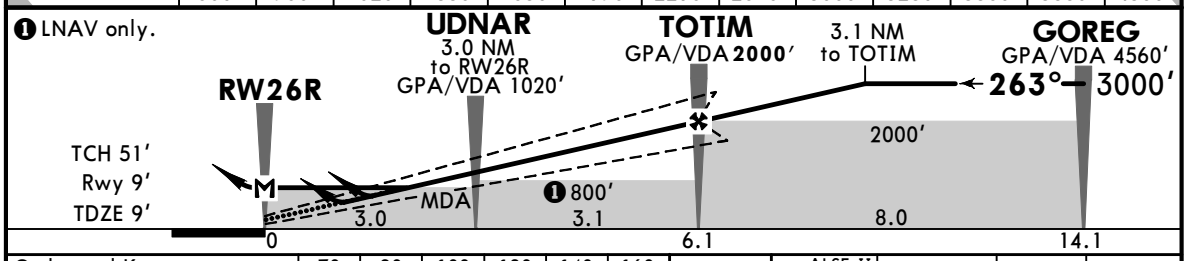
MISSED APCH: Do not exceed 230 KT until DUTNO. Climb to 700′ heading 263°. Climbing RIGHT turn to 3000′ direct to KEDGA. Then climb track 245° to DUTNO. Shuttle climb at DUTNO to 5300′ before proceeding on course.

Alt Set: INCHES | Trans level: FL180 | Trans alt: 18000′

1. SAFE ALTITUDE WITHIN 100 NM 12,800′. 2.Simultaneous approach AUTHORIZED with Rwy 26L. 3. LNAV procedure NOT AUTHORIZED during simultaneous operations. 4. Advise ATC if unable to conduct LPV or LNAV/VNAV approach. 5. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -18°C (0°F) or above 54°C (129°F).



NM to RW26R	1.7	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.2	10.0	11.0	12.0	14.1
VDA ALTITUDE	600′	700′	1020′	1330′	1650′	1970′	2290′	2610′	3000′	3250′	3560′	3880′	4560′



Gnd speed-Kts		70	90	100	120	140	160
GPA/VDA	3.00°	372	478	531	637	743	849
MAP at RW26R							

ALSF-II
PAPI

230 KT MAX UNTIL DUTNO

700′

263° hdg

STRAIGHT-IN LANDING RWY 26R

	LPV		LNAV/VNAV		LNAV	
	DA(H) 209′ (200′)	DA(H) 259′ (250′)	DA(H) 567′ (558′)		MDA(H) 600′ (591′)	
		HIALS out		HIALS out		HIALS out
A B C D	RVR 26 or ½	RVR 50 or 1	1½	1¾	1¼	1¾

CHANGES: Procedure revised.

CYVR/YVR VANCOUVER INTL

JEPPESEN 17 FEB 23 (12-6) Eff 23 Feb

VANCOUVER, BC RNAV (GNSS) Rwy 31

BRIEFING STRIP™

D-ATIS	PACIFIC Radio	VANCOUVER Arrival	
124.6	123.15	Outer 128.175 128.6	Inner 133.1 134.225

VANCOUVER Tower				Ground	
North			South	North	South
119.55	124.025	125.65	118.7	127.15	121.7

WAAS	Final Apch Crs	GPA	LPV DA(H)	Apt Elev 13′
Ch 80139 W-31A	305°	KEKTU 2000′ (1993′)	257′ (250′)	Rwy 7′

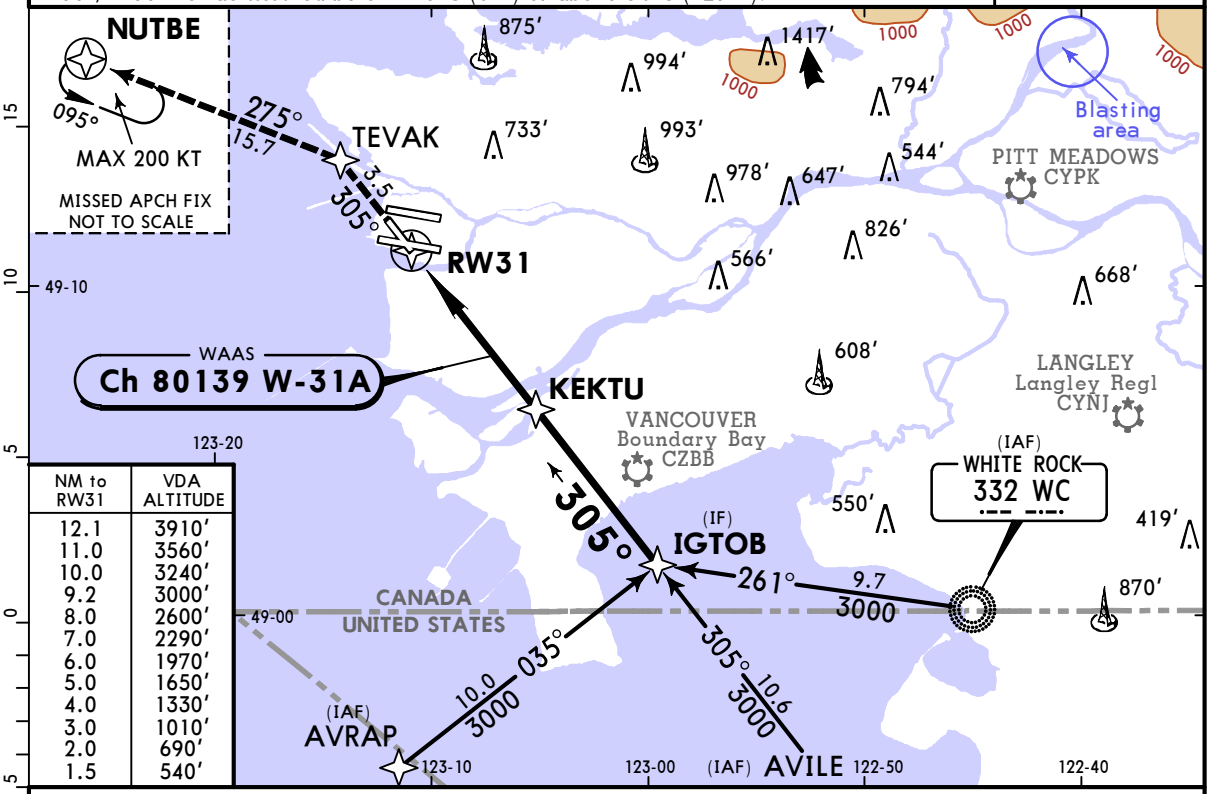
MISSED APCH: Climb track 305° to TEVAK, then climbing LEFT turn to 3000′ track 275° to NUTBE. Shuttle to 5600′ before proceeding on course.

Alt Set: INCHES | Trans level: FL180 | Trans alt: 18000′

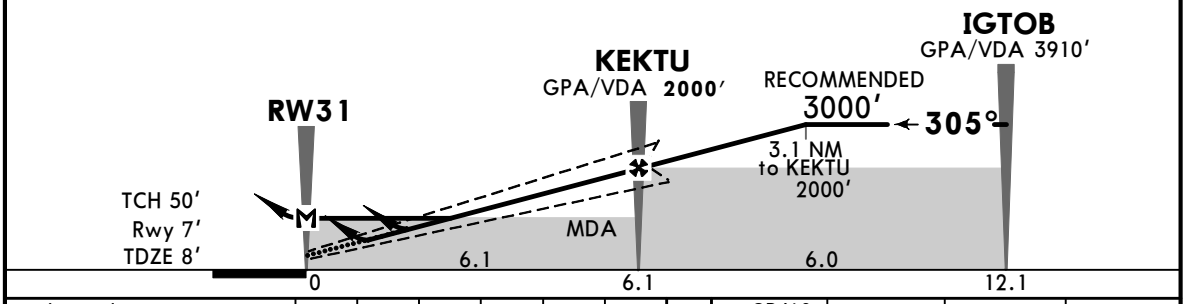
1. SAFE ALTITUDE WITHIN 100 NM 12,800′. 2. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -18°C (0°F) or above 54°C (129°F).

7800

MSA RW31



NM to RW31	VDA ALTITUDE
12.1	3910′
11.0	3560′
10.0	3240′
9.2	3000′
8.0	2600′
7.0	2290′
6.0	1970′
5.0	1650′
4.0	1330′
3.0	1010′
2.0	690′
1.5	540′



Gnd speed-Kts		70	90	100	120	140	160
GPA/VDA	3.00°	372	478	531	637	743	849
MAP at RW31							

ODALS PAPI

305° TEVAK

STRAIGHT-IN LANDING RWY 31

	LPV	LNAV/VNAV	LNAV
	DA(H) 257′ (250′)	DA(H) 353′ (346′)	MDA(H) 540′ (533′)
	ALS out	ALS out	ALS out
A	1	1¼	1¾
B			
C			
D			

CHANGES: None.

CYVR/YVR
VANCOUVER INTL

JEPPESEN
14 APR 23
Eff 20 Apr
12-20

VANCOUVER, BC
RNAV (RNP) Y Rwy 08L

BRIEFING STRIP ™

D-ATIS	PACIFIC Radio	VANCOUVER Arrival	
124.6	123.15	Outer 128.17 128.6	Inner 133.1 134.225
VANCOUVER Tower		**Ground**	
North 119.55	South 118.7	North 127.15	South 121.7

RNAV	Final Apch Crs **083°**	Minimum Alt **IMITU** **1300′** (1287′)	RNP 0.15 DA(H) **302′** (289′)	Apt Elev 13′ TDZE 13′

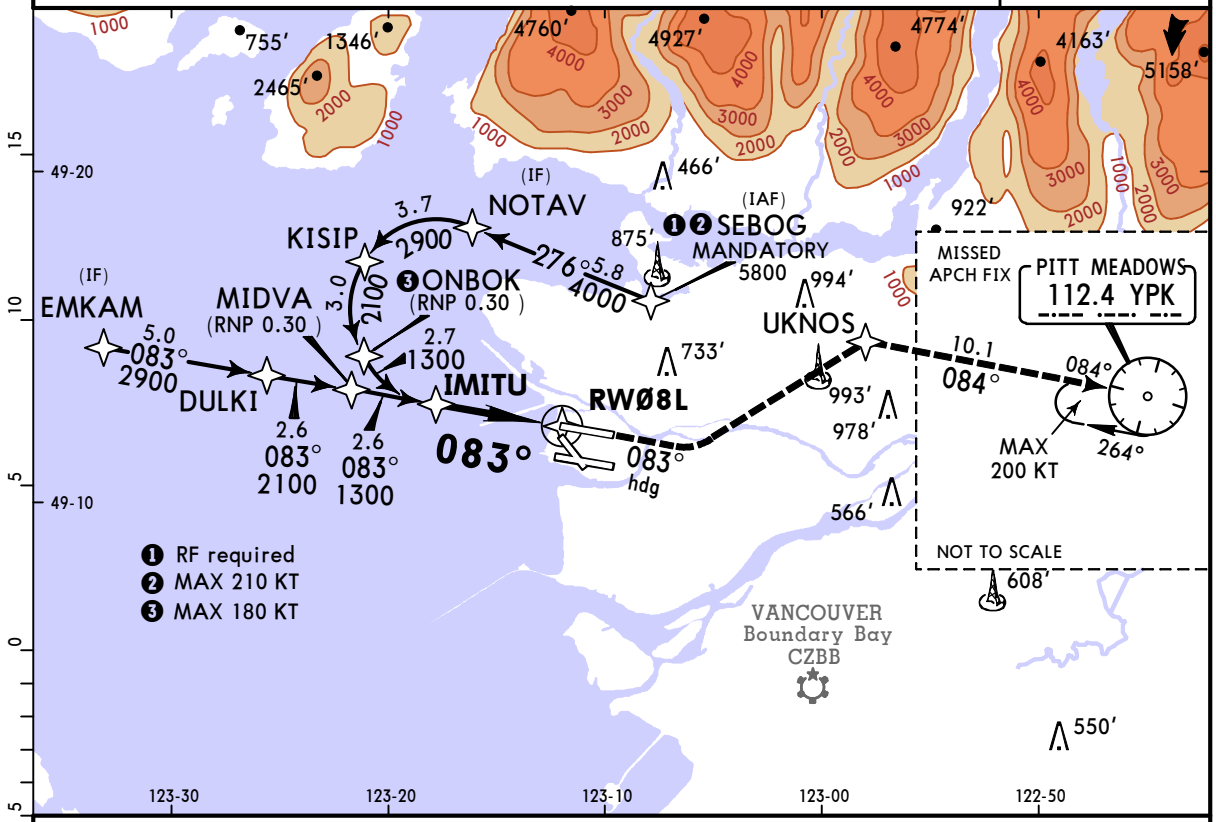
MISSED APCH: Climb to 420′ heading 083°. Then climbing LEFT turn to 3500′ direct to UKNOS.Then climb track 084° to YPK VOR.

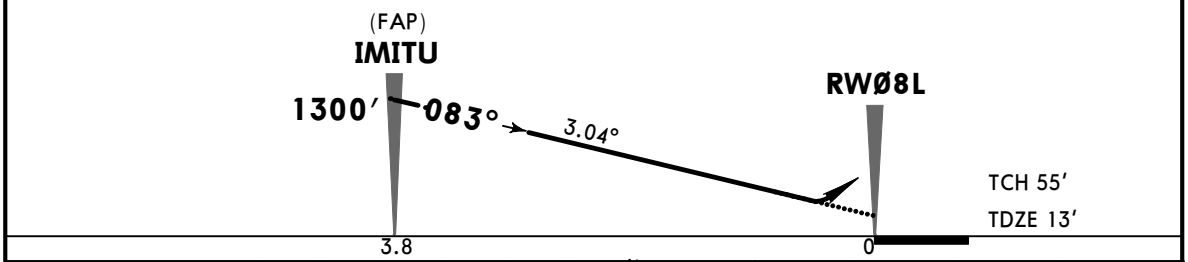
Alt Set: INCHES | Trans level: FL180 | Trans alt: 18000′

1. AUTHORIZATION REQUIRED. 2. SAFE ALTITUDE WITHIN 100 NM 12,800′.
3. Simultaneous approach AUTHORIZED with Rwy 08R. 4. For uncompensated Baro-VNAV systems, procedure not authorized below -20°C (-4°F) or above 54°C (129°F).

7800

MSA RWØ8L





Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.04°	376	484	538	645	753	861

ALSF-II
PAPI
420′
083° hdg
3500′ LT
UKNOS

STRAIGHT-IN LANDING RWY **08L**

	RNP 0.15 DA(H) **302′** (289′)		**RNP 0.30** DA(H) **334′** (321′)	
	HIALS out		HIALS out	
A	RVR 50 or 1		RVR 50 or 1	
B				
C				
D				

CHANGES: Waypoint ident, speed restriction changed.

Chart changes since cycle 18-2023

ADD = added chart, REV = revised chart, DEL = deleted chart.

ACT	PROCEDURE IDENT	INDEX	REV DATE	EFF DATE
SHENZHEN, (BAOAN - ZGSZ)				
REV	AIRPORT	10-9	08 Sep 2023	
REV	AIRPORT INFO, TAKE-OFF MN...	10-9A	08 Sep 2023	
REV	PARKING STANDS	10-9B	08 Sep 2023	
REV	PARKING STANDS (CONTD)	10-9C	08 Sep 2023	
VANCOUVER, BC (VANCOUVER INTL - CYVR)				

TERMINAL CHART CHANGE NOTICES

No Chart Change Notices for Airport CYVR

Chart Change Notices for Airport ZGSZ

Type: Terminal
Effectivity: Temporary
Begin Date: Immediately
End Date: 20231231

(10-3X) SIDs TOM 1XD, TOM 2XD, SIE 1XD MAINTAIN 170° track, at or above 830 (250m) turn RIGHT to NLG.

Type: Terminal
Effectivity: Temporary
Begin Date: Immediately
End Date: 20231231

(11-4A and 11-4B) SA CAT I RNP ILS DME Z RWY 16 and SA CAT I ILS DME Y RWY 16 procedure U/S, based on NOTAM G1743-23.

Chart Change Notices for Country CAN

Type: Gen Tmnl
Effectivity: Permanent
Begin Date: Immediately
End Date: No end date

At locations with approach charts depicting the Plan View Ball Flag Note: "Minimum VDA intercept [altitude]" or "Recommended VDA intercept [altitude]", it should read "VDA intercept based on [altitude]".

Communication Information For CZVR ACC

No communication information available

Communication Information For CZVR FIR

CPDLC Service: CPDLC SERVICES ARE AVAILABLE WITH LOGON ADDRESS OF CZVR IN VANCOUVER FIR. FLIGHTS ENTERING CANADIAN DOMESTIC AIRSPACE CPDLC AREA FROM A NON-CPDLC DATA LINK AREA SHOULD PERFORM A LOGON 45 TO 15 MINUTES PRIOR TO ENTERING AIRSPACE.
SATCOM Service: SATCOM VOICE DIRECT DIAL IS 1-604-507-7875 CONTACT VANCOUVER CENTER ON THE NEAREST PERIPHERAL FREQUENCY AT THE TIME OF CROSSING FIR BOUNDARY. TRANSPONDER ADJUSTED TO REPLY ON MODE A-3 CODE 2000.
INMARSAT Service: INMARSAT SECURITY NUMBER IS 431607

Callsign:	Frequency	Radar	ServiceIndicators
Type: ACC:			
VANCOUVER CENTRE:	123.87 MHz		
VANCOUVER CENTRE:	124.07 MHz		
VANCOUVER CENTRE:	128.4 MHz		
VANCOUVER CENTRE:	132.2 MHz		
VANCOUVER CENTRE:	132.35 MHz		
VANCOUVER CENTRE:	132.52 MHz		
VANCOUVER CENTRE:	132.9 MHz		
VANCOUVER CENTRE:	133.4 MHz		
VANCOUVER CENTRE:	133.5 MHz		
VANCOUVER CENTRE:	133.6 MHz		
VANCOUVER CENTRE:	133.67 MHz		
VANCOUVER CENTRE:	133.7 MHz		
VANCOUVER CENTRE:	133.77 MHz		
VANCOUVER CENTRE:	133.8 MHz		
VANCOUVER CENTRE:	134.0 MHz		
VANCOUVER CENTRE:	134.2 MHz		
VANCOUVER CENTRE:	134.4 MHz		
VANCOUVER CENTRE:	134.55 MHz		
VANCOUVER CENTRE:	134.6 MHz		
VANCOUVER CENTRE:	134.8 MHz		
VANCOUVER CENTRE:	135.0 MHz		
VANCOUVER CENTRE:	135.05 MHz		
VANCOUVER CENTRE:	135.5 MHz		

Communication Information For KZAK FIR

CPDLC Service: USE LOGON ADDRESS KZAK FOR ALL CPDLC COMMUNICATIONS IN THE OAKLAND OCEANIC FIR. WHEN MAKING HF VOICE CHECK-IN WITH SAN FRANCISCO RADIO UPON TRANSFERRING DATA LINK CONTACT TO SAN FRANCISCO, SFO RADIO REQUESTS YOU INCLUDE; POINT OF DEPARTURE, DESTINATION, A/C REGISTRATION AND SELCAL CODE. FOR AIRCRAFT DEPARTING FROM AIRPORTS ALONG THE WEST COAST OF NORTH AMERICA, GUAM AND HAWAII, OAKLAND OCEANIC CONTROL REQUIRES THAT DATA-LINK AIRCRAFT NOT LOGON TO OAKLAND OCEANIC (KZAK) UNTIL AFTER LEAVING 10,000' MSL. FOR AIRCRAFT ENTERING THE OAKLAND OCEANIC FIR FROM NON-CPDLC AIRSPACE: LOG ON TO CPDLC AT LEAST 15 BUT NOT MORE THAN 45 MINUTES PRIOR TO ENTERING. FOR AIRCRAFT ENTERING THE OAKLAND OCEANIC FIR FROM ADJACENT CPDLC AIRSPACE: IF KZAK IS THE ACTIVE CENTER CONTACT SAN FRANCISCO RADIO. IF KZAK IS NOT THE ACTIVE CENTER, TERMINATE THE CPDLC CONNECTION WITHIN 5 MINUTES AFTER THE BOUNDARY IS CROSSED, THEN LOG ON TO KZAK AND CONTACT SAN FRANCISCO RADIO. FOR AIRCRAFT OVER-FLYING HONOLULU CERAP: AIRCRAFT WILL RECEIVE AN END SERVICE MESSAGE THAT WILL RESULT IN TERMINATION OF CPDLC. AIRCRAFT SHALL RE-LOG ON TO CPDLC PRIOR TO REENTERING OAKLAND OCEANIC FIR. FOR AIRCRAFT ENTERING GUAM CERAP: CONTACT GUAM CERAP 250 MILES OUT ON 118.7, SQUAWK 2100. FOR AIRCRAFT OVER-FLYING GUAM CERAP: CPDLC CONNECTION WITH OAKLAND MAY BE TERMINATED WITHIN THE GUAM CERAP. IF THE CPDLC CONNECTION WITH KZAK IS NOT TERMINATED, DO NOT USE CPDLC FOR ATC UNTIL GUAM CERAP ADVISES YOU TO TO AGAIN CONTACT ENROUTE COMMUNICATIONS OR SAN FRANCISCO RADIO. IT MAY BE NECESSARY TO LOG BACK ON TO CPDLC WITH KZAK 10-15 MINUTES PRIOR TO EXITING GUAM CERAP IF THE CPDLC CONNECTION WAS TERMINATED.
SATCOM Service: SATCOM VOICE DIRECT DIAL FOR OAKLAND CENTER IS 1-510-745-3415
INMARSAT Service: INMARSAT SECURITY NUMBER FOR OAKLAND CENTER IS 436697 INMARSAT SECURITY NUMBER FOR SAN FRANCISCO RADIO IS 436625

Callsign:	Frequency	Radar	ServiceIndicators
Type: ACC:			
OAKLAND OCEANIC:	118.4 MHz	(R)	

OAKLAND OCEANIC:	118.7 MHz	(R)
OAKLAND OCEANIC:	120.5 MHz	(R)

Type: Radio:

SAN FRANCISCO ARINC:	10048 kHz
SAN FRANCISCO ARINC:	10057 kHz
SAN FRANCISCO ARINC:	11282 kHz
SAN FRANCISCO ARINC:	11342 kHz
SAN FRANCISCO ARINC:	11384 kHz
SAN FRANCISCO ARINC:	129.4 MHz
SAN FRANCISCO ARINC:	131.95 MHz
SAN FRANCISCO ARINC:	13261 kHz
SAN FRANCISCO ARINC:	13288 kHz
SAN FRANCISCO ARINC:	13300 kHz
SAN FRANCISCO ARINC:	13339 kHz
SAN FRANCISCO ARINC:	13348 kHz
SAN FRANCISCO ARINC:	17904 kHz
SAN FRANCISCO ARINC:	17925 kHz
SAN FRANCISCO ARINC:	17946 kHz
SAN FRANCISCO ARINC:	21925 kHz
SAN FRANCISCO ARINC:	21964 kHz
SAN FRANCISCO ARINC:	21985 kHz
SAN FRANCISCO ARINC:	2869 kHz
SAN FRANCISCO ARINC:	2998 kHz
SAN FRANCISCO ARINC:	3452 kHz
SAN FRANCISCO ARINC:	3455 kHz
SAN FRANCISCO ARINC:	3467 kHz
SAN FRANCISCO ARINC:	3494 kHz
SAN FRANCISCO ARINC:	4666 kHz
SAN FRANCISCO ARINC:	5547 kHz
SAN FRANCISCO ARINC:	5628 kHz
SAN FRANCISCO ARINC:	5643 kHz
SAN FRANCISCO ARINC:	5652 kHz
SAN FRANCISCO ARINC:	6532 kHz
SAN FRANCISCO ARINC:	6640 kHz
SAN FRANCISCO ARINC:	6655 kHz
SAN FRANCISCO ARINC:	6673 kHz
SAN FRANCISCO ARINC:	8867 kHz
SAN FRANCISCO ARINC:	8870 kHz
SAN FRANCISCO ARINC:	8903 kHz
SAN FRANCISCO ARINC:	8933 kHz
SAN FRANCISCO ARINC:	8951 kHz

Communication Information For KZSE FIR

CPDLC Service: CPDLC SERVICES ARE AVAILABLE WITH LOGON ADDRESS OF KUSA IN SEATTLE FIR CPDLC.

Callsign:	Frequency	Radar	ServiceIndicators
Type: ACC:			
SEATTLE:	119.65 MHz	(R)	
SEATTLE:	120.3 MHz	(R)	
SEATTLE:	123.95 MHz	(R)	
SEATTLE:	124.2 MHz	(R)	
SEATTLE:	124.85 MHz	(R)	
SEATTLE:	125.1 MHz	(R)	
SEATTLE:	125.8 MHz	(R)	
SEATTLE:	126.1 MHz	(R)	
SEATTLE:	126.15 MHz	(R)	
SEATTLE:	126.6 MHz	(R)	
SEATTLE:	127.05 MHz	(R)	
SEATTLE:	127.55 MHz	(R)	
SEATTLE:	127.6 MHz	(R)	
SEATTLE:	128.15 MHz	(R)	
SEATTLE:	128.3 MHz	(R)	
SEATTLE:	132.6 MHz	(R)	
SEATTLE:	134.95 MHz	(R)	
SEATTLE:	306.3 MHz	(R)	MIL

Communication Information For KZSE UIR

CPDLC Service: CPDLC SERVICES ARE AVAILABLE WITH LOGON ADDRESS OF KUSA IN SEATTLE FIR CPDLC.

Callsign:	Frequency	Radar	ServiceIndicators
Type: ACC:			
SEATTLE:	119.22 MHz	(R)	
SEATTLE:	120.3 MHz	(R)	
SEATTLE:	121.35 MHz	(R)	
SEATTLE:	124.75 MHz	(R)	
SEATTLE:	125.1 MHz	(R)	
SEATTLE:	126.6 MHz	(R)	
SEATTLE:	127.05 MHz	(R)	
SEATTLE:	128.3 MHz	(R)	
SEATTLE:	128.45 MHz	(R)	
SEATTLE:	132.07 MHz	(R)	
SEATTLE:	134.9 MHz	(R)	
SEATTLE:	134.95 MHz	(R)	
SEATTLE:	135.15 MHz	(R)	
SEATTLE:	135.35 MHz	(R)	
SEATTLE:	135.45 MHz	(R)	
SEATTLE:	360.7 MHz	(R)	MIL

Communication Information For PAZA FIR

CPDLC Service: USE LOGON ADDRESS PAZN FOR ALL CPDLC COMMUNICATIONS IN THE ANCHORAGE DOMESTIC FIR WEST OF 165W AND SOUTH OF 63N. USE LOGON ADDRESS PAZA FOR ALL CPDLC COMMUNICATIONS IN THE ANCHORAGE DOMESTIC FIR SOUTH OF 73N AND EAST OF 165W. AIRCRAFT ENTERING ANCHORAGE FIR AIRSPACE FROM THE MAGADAN, EDMONTON, VANCOUVER, OR OAKLAND FIRS WILL BE PROVIDED AUTOMATIC FANS ADDRESS FORWARDING FROM THE ATC GROUND COMPUTER. AIRCRAFT DEPARTING ALASKAN AIRPORTS SHOULD LOGON AFTER DEPARTURE, BUT BEFORE LEAVING FL180. AFTER LOGON, ANCHORAGE ARTCC AUTOMATION WILL PROVIDE AUTOMATIC FANS ADDRESS FORWARDING FOR FLIGHTS ENTERING THE MAGADAN, EDMONTON, VANCOUVER AND OAKLAND FIRS. NOTE: - THE USE OF CPDLC DOES NOT REMOVE REQUIREMENTS FOR MONITORING VHF/HF FREQUENCIES. - AIRCRAFT WITHIN VHF COVERAGE MAY MAKE POSITION REPORTS VIA CPDLC. - WEST OF 165W, ALL REQUESTS TO ATC MAY BE MADE VIA CPDLC. - EAST OF 165W, REQUESTS TO ATC SHOULD BE MADE VIA VHF IF WITHIN VHF COVERAGE.
SATCOM Service: SATCOM VOICE DIRECT DIAL FOR ANCHORAGE ATC IS 907-269-1103.
INMARSAT Service: INMARSAT SECURITY NUMBER FOR ANCHORAGE ATC IS 436602.

Callsign:	Frequency	Radar	ServiceIndicators
Type: ACC:			
ANCHORAGE:	118.0 MHz	(R)	
ANCHORAGE:	118.15 MHz	(R)	
ANCHORAGE:	118.5 MHz	(R)	
ANCHORAGE:	118.8 MHz	(R)	
ANCHORAGE:	119.0 MHz	(R)	
ANCHORAGE:	119.1 MHz	(R)	
ANCHORAGE:	119.2 MHz	(R)	
ANCHORAGE:	119.3 MHz	(R)	
ANCHORAGE:	119.4 MHz	(R)	
ANCHORAGE:	119.5 MHz	(R)	
ANCHORAGE:	119.65 MHz	(R)	
ANCHORAGE:	119.7 MHz	(R)	
ANCHORAGE:	120.6 MHz	(R)	
ANCHORAGE:	120.9 MHz	(R)	
ANCHORAGE:	121.4 MHz	(R)	
ANCHORAGE:	124.0 MHz	(R)	
ANCHORAGE:	124.5 MHz	(R)	
ANCHORAGE:	124.6 MHz	(R)	
ANCHORAGE:	124.8 MHz	(R)	
ANCHORAGE:	125.1 MHz	(R)	
ANCHORAGE:	125.2 MHz	(R)	
ANCHORAGE:	125.55 MHz	(R)	
ANCHORAGE:	125.7 MHz	(R)	

ANCHORAGE:	125.9 MHz	(R)	
ANCHORAGE:	126.1 MHz	(R)	
ANCHORAGE:	126.55 MHz	(R)	
ANCHORAGE:	127.0 MHz	(R)	
ANCHORAGE:	127.9 MHz	(R)	
ANCHORAGE:	128.1 MHz	(R)	
ANCHORAGE:	128.2 MHz	(R)	
ANCHORAGE:	128.5 MHz	(R)	
ANCHORAGE:	132.17 MHz	(R)	
ANCHORAGE:	132.2 MHz	(R)	
ANCHORAGE:	132.9 MHz	(R)	
ANCHORAGE:	133.1 MHz	(R)	
ANCHORAGE:	133.2 MHz	(R)	
ANCHORAGE:	133.3 MHz	(R)	
ANCHORAGE:	133.6 MHz	(R)	
ANCHORAGE:	133.7 MHz	(R)	
ANCHORAGE:	133.9 MHz	(R)	
ANCHORAGE:	134.4 MHz	(R)	
ANCHORAGE:	134.6 MHz	(R)	
ANCHORAGE:	135.3 MHz	(R)	
ANCHORAGE:	135.7 MHz	(R)	
ANCHORAGE:	282.35 MHz	(R)	MIL

Communication Information For PAZA UIR

CPDLC Service: USE LOGON ADDRESS PAZN FOR ALL CPDLC COMMUNICATIONS IN THE ANCHORAGE DOMESTIC FIR WEST OF 165W AND SOUTH OF 63N. USE LOGON ADDRESS PAZA FOR ALL CPDLC COMMUNICATIONS IN THE ANCHORAGE DOMESTIC FIR SOUTH OF 73N AND EAST OF 165W. AIRCRAFT ENTERING ANCHORAGE FIR AIRSPACE FROM THE MAGADAN, EDMONTON, VANCOUVER, OR OAKLAND FIRS WILL BE PROVIDED AUTOMATIC FANS ADDRESS FORWARDING FROM THE ATC GROUND COMPUTER. AIRCRAFT DEPARTING ALASKAN AIRPORTS SHOULD LOGON AFTER DEPARTURE, BUT BEFORE LEAVING FL180. AFTER LOGON, ANCHORAGE ARTCC AUTOMATION WILL PROVIDE AUTOMATIC FANS ADDRESS FORWARDING FOR FLIGHTS ENTERING THE MAGADAN, EDMONTON, VANCOUVER AND OAKLAND FIRS. NOTE: - THE USE OF CPDLC DOES NOT REMOVE REQUIREMENTS FOR MONITORING VHF/HF FREQUENCIES. - AIRCRAFT WITHIN VHF COVERAGE MAY MAKE POSITION REPORTS VIA CPDLC. - WEST OF 165W, ALL REQUESTS TO ATC MAY BE MADE VIA CPDLC. - EAST OF 165W, REQUESTS TO ATC SHOULD BE MADE VIA VHF IF WITHIN VHF COVERAGE.
SATCOM Service: SATCOM VOICE DIRECT DIAL FOR ANCHORAGE ATC IS 1-907-269-1103.
INMARSAT Service: INMARSAT SECURITY NUMBER FOR ANCHORAGE ATC IS 436602.

Callsign:	Frequency	Radar	ServiceIndicators
Type: ACC:			
ANCHORAGE:	118.0 MHz	(R)	
ANCHORAGE:	118.5 MHz	(R)	
ANCHORAGE:	119.1 MHz	(R)	
ANCHORAGE:	119.65 MHz	(R)	
ANCHORAGE:	119.7 MHz	(R)	
ANCHORAGE:	120.55 MHz	(R)	
ANCHORAGE:	120.9 MHz	(R)	
ANCHORAGE:	123.9 MHz	(R)	
ANCHORAGE:	124.05 MHz	(R)	
ANCHORAGE:	124.2 MHz	(R)	
ANCHORAGE:	124.5 MHz	(R)	
ANCHORAGE:	125.35 MHz	(R)	
ANCHORAGE:	125.7 MHz	(R)	
ANCHORAGE:	125.95 MHz	(R)	
ANCHORAGE:	126.4 MHz	(R)	
ANCHORAGE:	127.3 MHz	(R)	
ANCHORAGE:	127.5 MHz	(R)	
ANCHORAGE:	127.6 MHz	(R)	
ANCHORAGE:	128.2 MHz	(R)	
ANCHORAGE:	132.15 MHz	(R)	
ANCHORAGE:	132.17 MHz	(R)	
ANCHORAGE:	132.35 MHz	(R)	
ANCHORAGE:	132.5 MHz	(R)	
ANCHORAGE:	132.65 MHz	(R)	
ANCHORAGE:	132.7 MHz	(R)	
ANCHORAGE:	132.85 MHz		
ANCHORAGE:	133.1 MHz	(R)	
ANCHORAGE:	133.7 MHz	(R)	
ANCHORAGE:	133.8 MHz	(R)	

ANCHORAGE:	133.9 MHz	(R)
ANCHORAGE:	134.3 MHz	(R)
ANCHORAGE:	135.0 MHz	(R)
ANCHORAGE:	135.6 MHz	(R)

Communication Information For RJJJ ACC Both (ACC Sector)

Callsign:	Frequency	Radar	ServiceIndicators
Type: Radio:			
TOKYO:	10048 kHz		
TOKYO:	11330 kHz		
TOKYO:	11384 kHz		
TOKYO:	13273 kHz		
TOKYO:	13300 kHz		
TOKYO:	17904 kHz		
TOKYO:	17946 kHz		
TOKYO:	21925 kHz		
TOKYO:	2932 kHz		
TOKYO:	2998 kHz		
TOKYO:	3455 kHz		
TOKYO:	4666 kHz		
TOKYO:	5628 kHz		
TOKYO:	5667 kHz		
TOKYO:	6532 kHz		
TOKYO:	6655 kHz		
TOKYO:	8903 kHz		
TOKYO:	8915 kHz		
TOKYO:	8951 kHz		

Communication Information For RJJJ ACC High (ACC Sector High)

Callsign:	Frequency	Radar	ServiceIndicators
Type: ACC:			
TOKYO CONTROL:	123.9 MHz		
TOKYO CONTROL:	126.1 MHz		

Communication Information For RJJJ ACC Low (ACC Sector Low)

Callsign:	Frequency	Radar	ServiceIndicators
Type: ACC:			
TOKYO CONTROL:	120.5 MHz		
TOKYO CONTROL:	128.12 MHz		

Communication Information For RJJJ FIR

CPDLC Service: CPDLC SERVICES ARE AVAILABLE WITH LOGON ADDRESS OF RJJJ IN FUKUOKA FIR
SATCOM Service: SATCOM VOICE DIRECT DIAL IS 81-78-99-36-501
INMARSAT Service: INMARSAT SECURITY NUMBER IS 443101

Callsign:	Frequency	Radar	ServiceIndicators

Type: ACC:

TOKYO CONTROL:	118.9 MHz	(R)	
KOBE CONTROL:	119.3 MHz	(R)	
FUKUOKA CONTROL:	119.35 MHz	(R)	
TOKYO CONTROL:	120.5 MHz	(R)	
SAPPORO CONTROL:	120.57 MHz	(R)	Secondary
SAPPORO CONTROL:	120.75 MHz	(R)	
TOKYO CONTROL:	120.97 MHz	(R)	
TOKYO CONTROL:	123.7 MHz	(R)	
FUKUOKA CONTROL:	123.9 MHz	(R)	
TOKYO CONTROL:	124.1 MHz	(R)	
FUKUOKA CONTROL:	124.15 MHz	(R)	
FUKUOKA CONTROL:	124.5 MHz	(R)	
FUKUOKA CONTROL:	124.95 MHz	(R)	
TOKYO CONTROL:	125.6 MHz	(R)	
TOKYO CONTROL:	125.7 MHz	(R)	
TOKYO CONTROL:	125.9 MHz	(R)	
FUKUOKA CONTROL:	126.4 MHz	(R)	
FUKUOKA CONTROL:	127.5 MHz	(R)	
SAPPORO CONTROL:	127.57 MHz	(R)	
TOKYO CONTROL:	128.12 MHz	(R)	Secondary
TOKYO CONTROL:	128.2 MHz	(R)	
SAPPORO CONTROL:	128.32 MHz	(R)	
FUKUOKA CONTROL:	132.1 MHz	(R)	Secondary
TOKYO CONTROL:	132.25 MHz	(R)	
FUKUOKA CONTROL:	132.3 MHz	(R)	
KOBE CONTROL:	132.35 MHz	(R)	
TOKYO CONTROL:	132.45 MHz	(R)	
SAPPORO CONTROL:	132.6 MHz	(R)	
TOKYO CONTROL:	132.7 MHz	(R)	
FUKUOKA CONTROL:	132.9 MHz	(R)	Secondary
FUKUOKA CONTROL:	133.02 MHz	(R)	
FUKUOKA CONTROL:	133.15 MHz	(R)	
FUKUOKA CONTROL:	133.3 MHz	(R)	Secondary
TOKYO CONTROL:	133.35 MHz	(R)	
SAPPORO CONTROL:	133.5 MHz	(R)	
TOKYO CONTROL:	133.55 MHz	(R)	
FUKUOKA CONTROL:	133.6 MHz	(R)	
TOKYO CONTROL:	133.7 MHz	(R)	
TOKYO CONTROL:	133.8 MHz	(R)	
KOBE CONTROL:	133.85 MHz	(R)	
TOKYO CONTROL:	134.0 MHz	(R)	Secondary
TOKYO CONTROL:	134.15 MHz	(R)	Secondary
SAPPORO CONTROL:	134.25 MHz	(R)	Secondary
FUKUOKA CONTROL:	134.35 MHz	(R)	
FUKUOKA CONTROL:	134.4 MHz	(R)	Secondary
KOBE CONTROL:	134.6 MHz	(R)	Secondary
FUKUOKA CONTROL:	135.3 MHz	(R)	
TOKYO CONTROL:	135.9 MHz	(R)	Secondary

Type: Radio:

TOKYO:	10048 kHz
TOKYO:	11330 kHz
TOKYO:	11384 kHz
TOKYO:	13273 kHz
TOKYO:	13300 kHz
TOKYO:	17904 kHz
TOKYO:	17946 kHz
TOKYO:	21925 kHz
TOKYO:	2932 kHz
TOKYO:	2998 kHz
TOKYO:	3455 kHz
TOKYO:	4666 kHz
TOKYO:	5628 kHz
TOKYO:	5667 kHz
TOKYO:	6532 kHz
TOKYO:	6655 kHz
TOKYO:	8903 kHz
TOKYO:	8915 kHz
TOKYO:	8951 kHz

Communication Information For RKRR ACC Both (ACC Sector)

Callsign:	Frequency	Radar	ServiceIndicators
Type: ACC:			
DAEGU:	122.25 MHz		
DAEGU:	122.75 MHz		
DAEGU:	125.92 MHz		

Communication Information For RKRR ACC High (ACC Sector High)

Callsign:	Frequency	Radar	ServiceIndicators
Type: ACC:			
INCHEON:	132.2 MHz		
INCHEON:	133.42 MHz		
INCHEON:	134.15 MHz		

Communication Information For RKRR FIR

INMARSAT Service: INMARSAT SECURITY NUMBER FOR INCHEON ACC IS 444001 INMARSAT SECURITY NUMBER FOR DAEGU ACC IS 444002

Callsign:	Frequency	Radar	ServiceIndicators
Type: ACC:			
DAEGU:	118.92 MHz	(R)	Secondary
DAEGU:	119.32 MHz	(R)	Secondary
DAEGU:	119.37 MHz	(R)	Secondary
DAEGU:	120.52 MHz	(R)	Secondary
DAEGU:	120.57 MHz	(R)	
INCHEON:	120.72 MHz	(R)	
DAEGU:	122.25 MHz	(R)	
DAEGU:	122.75 MHz	(R)	
INCHEON:	123.55 MHz	(R)	Secondary
DAEGU:	123.65 MHz	(R)	Secondary
INCHEON:	123.72 MHz	(R)	
INCHEON:	124.5 MHz	(R)	Secondary
INCHEON:	124.52 MHz	(R)	
DAEGU:	124.57 MHz	(R)	Secondary
DAEGU:	125.37 MHz	(R)	
INCHEON:	125.72 MHz	(R)	
DAEGU:	125.77 MHz	(R)	Secondary
DAEGU:	125.92 MHz	(R)	Secondary
INCHEON:	126.17 MHz	(R)	
DAEGU:	128.17 MHz	(R)	
INCHEON:	128.3 MHz	(R)	Secondary
DAEGU:	128.32 MHz	(R)	Secondary
INCHEON:	128.37 MHz	(R)	Secondary
DAEGU:	128.7 MHz	(R)	
INCHEON:	132.15 MHz	(R)	
INCHEON:	132.2 MHz	(R)	
INCHEON:	132.42 MHz	(R)	Secondary
DAEGU:	132.8 MHz	(R)	
INCHEON:	132.82 MHz	(R)	Secondary
INCHEON:	133.42 MHz	(R)	
INCHEON:	134.15 MHz	(R)	Secondary
DAEGU:	134.17 MHz	(R)	

INCHEON:	134.37 MHz	(R)	Secondary
Type: Information:			
DAEGU:	126.9 MHz		
DAEGU:	135.72 MHz		
Type: Radio:			
SEOUL:	127.1 MHz		
SEOUL:	13300 kHz		
SEOUL:	13303 kHz		
SEOUL:	17904 kHz		
SEOUL:	3004 kHz		
SEOUL:	6532 kHz		
SEOUL:	8903 kHz		

Communication Information For VHHK FIR

INMARSAT Service: INMARSAT SECURITY NUMBER FOR HONG KONG ATC IS 441299

Callsign:	Frequency	Radar	ServiceIndicators
Type: ACC:			
HONG KONG RADAR:	118.92 MHz	(R)	
HONG KONG RADAR:	121.3 MHz	(R)	
HONG KONG RADAR:	122.95 MHz	(R)	
HONG KONG RADAR:	123.47 MHz	(R)	
HONG KONG RADAR:	123.7 MHz	(R)	Secondary
HONG KONG RADAR:	123.95 MHz	(R)	
HONG KONG RADAR:	125.17 MHz	(R)	
HONG KONG RADAR:	125.32 MHz	(R)	
HONG KONG RADAR:	125.8 MHz	(R)	
HONG KONG RADAR:	126.3 MHz	(R)	
HONG KONG RADAR:	126.5 MHz	(R)	
HONG KONG RADAR:	127.1 MHz	(R)	
HONG KONG RADAR:	127.55 MHz	(R)	
HONG KONG RADAR:	128.12 MHz	(R)	
HONG KONG RADAR:	128.75 MHz	(R)	Secondary
HONG KONG RADAR:	132.15 MHz	(R)	
HONG KONG RADAR:	132.52 MHz	(R)	Secondary
HONG KONG RADAR:	132.6 MHz	(R)	Secondary
HONG KONG RADAR:	132.77 MHz	(R)	Secondary
HONG KONG RADAR:	132.8 MHz	(R)	Secondary
HONG KONG RADAR:	134.3 MHz	(R)	Secondary
HONG KONG RADAR:	135.6 MHz	(R)	Secondary
Type: Information:			
HONG KONG:	121.0 MHz		FIS
HONG KONG:	122.07 MHz		FIS, Secondary
HONG KONG:	122.4 MHz		FIS
Type: Radar:			
HONG KONG:	126.3 MHz	(R)	
Type: Radio:			
HONG KONG:	13309 kHz		Secondary
HONG KONG:	5655 kHz		Secondary
HONG KONG:	8942 kHz		Secondary
Type: VOLMET:			
HONG KONG:	128.87 MHz		
HONG KONG:	13282 kHz		
HONG KONG:	6679 kHz		
HONG KONG:	8828 kHz		

Communication Information For ZGZU ACC Both (ACC Sector)

Callsign:	Frequency	Radar	ServiceIndicators
Type: ACC:			
GUANGZHOU CONTROL:	10066 kHz		
GUANGZHOU CONTROL:	133.47 MHz		
GUANGZHOU CONTROL:	134.25 MHz		
GUANGZHOU CONTROL:	3491 kHz		
GUANGZHOU CONTROL:	6556 kHz		

Communication Information For ZGZU ACC High (ACC Sector High)

Callsign:	Frequency	Radar	ServiceIndicators
Type: ACC:			
GUANGZHOU CONTROL:	10066 kHz		
GUANGZHOU CONTROL:	119.37 MHz		
GUANGZHOU CONTROL:	124.52 MHz		
GUANGZHOU CONTROL:	3491 kHz		
GUANGZHOU CONTROL:	6556 kHz		

Communication Information For ZGZU FIR

Callsign:	Frequency	Radar	ServiceIndicators
Type: ACC:			
GUANGZHOU CONTROL:	10066 kHz	(R)	
GUANGZHOU CONTROL:	118.95 MHz	(R)	
NANNING CONTROL:	118.97 MHz	(R)	
NANNING CONTROL:	119.32 MHz	(R)	
GUANGZHOU CONTROL:	119.37 MHz	(R)	
NANNING CONTROL:	120.55 MHz	(R)	Secondary
GUANGZHOU CONTROL:	120.75 MHz	(R)	
GUANGZHOU CONTROL:	120.95 MHz	(R)	
GUANGZHOU CONTROL:	122.5 MHz	(R)	Secondary
CHANGSHA CONTROL:	123.2 MHz	(R)	
CHANGSHA CONTROL:	123.72 MHz	(R)	Secondary
CHANGSHA CONTROL:	123.9 MHz	(R)	
GUANGZHOU CONTROL:	124.45 MHz	(R)	
GUANGZHOU CONTROL:	124.52 MHz	(R)	Secondary
NANNING CONTROL:	124.57 MHz	(R)	
GUANGZHOU CONTROL:	124.9 MHz	(R)	
GUANGZHOU CONTROL:	125.35 MHz	(R)	
GUANGZHOU CONTROL:	125.75 MHz	(R)	
GUANGZHOU CONTROL:	126.1 MHz	(R)	Secondary
GUANGZHOU CONTROL:	126.15 MHz	(R)	
GUANGZHOU CONTROL:	126.75 MHz	(R)	
CHANGSHA CONTROL:	127.15 MHz	(R)	
CHANGSHA CONTROL:	127.35 MHz	(R)	Secondary
GUANGZHOU CONTROL:	127.5 MHz	(R)	
GUANGZHOU CONTROL:	128.1 MHz	(R)	
GUANGZHOU CONTROL:	128.3 MHz	(R)	
NANNING CONTROL:	128.37 MHz	(R)	
CHANGSHA CONTROL:	128.55 MHz	(R)	
NANNING CONTROL:	128.7 MHz	(R)	
GUANGZHOU CONTROL:	128.72 MHz	(R)	
GUANGZHOU CONTROL:	132.1 MHz	(R)	Secondary
GUANGZHOU CONTROL:	132.3 MHz	(R)	

NANNING CONTROL:	132.35 MHz	(R)	Secondary
GUANGZHOU CONTROL:	132.4 MHz	(R)	Secondary
CHANGSHA CONTROL:	132.55 MHz	(R)	
GUANGZHOU CONTROL:	132.65 MHz	(R)	Secondary
NANNING CONTROL:	132.7 MHz	(R)	
GUANGZHOU CONTROL:	132.75 MHz	(R)	
GUANGZHOU CONTROL:	132.82 MHz	(R)	
GUANGZHOU CONTROL:	132.92 MHz	(R)	Secondary
NANNING CONTROL:	132.97 MHz	(R)	Secondary
GUANGZHOU CONTROL:	133.07 MHz	(R)	
NANNING CONTROL:	133.1 MHz	(R)	
CHANGSHA CONTROL:	133.15 MHz	(R)	Secondary
GUANGZHOU CONTROL:	133.25 MHz	(R)	
GUANGZHOU CONTROL:	133.27 MHz	(R)	
GUANGZHOU CONTROL:	133.37 MHz	(R)	
NANNING CONTROL:	133.4 MHz	(R)	Secondary
GUANGZHOU CONTROL:	133.47 MHz	(R)	
GUANGZHOU CONTROL:	133.52 MHz	(R)	
NANNING CONTROL:	133.6 MHz	(R)	
NANNING CONTROL:	133.75 MHz	(R)	
GUANGZHOU CONTROL:	133.77 MHz	(R)	Secondary
GUANGZHOU CONTROL:	133.85 MHz	(R)	
GUANGZHOU CONTROL:	133.9 MHz	(R)	
NANNING CONTROL:	133.95 MHz	(R)	
GUANGZHOU CONTROL:	133.97 MHz	(R)	
NANNING CONTROL:	134.02 MHz	(R)	
GUANGZHOU CONTROL:	134.15 MHz	(R)	Secondary
GUANGZHOU CONTROL:	134.2 MHz	(R)	Secondary
GUANGZHOU CONTROL:	134.25 MHz	(R)	Secondary
NANNING CONTROL:	134.37 MHz	(R)	
GUANGZHOU CONTROL:	134.5 MHz	(R)	
GUANGZHOU CONTROL:	134.8 MHz	(R)	
CHANGSHA CONTROL:	135.1 MHz	(R)	
GUANGZHOU CONTROL:	135.45 MHz	(R)	
CHANGSHA CONTROL:	3016 kHz	(R)	
GUANGZHOU CONTROL:	3491 kHz	(R)	
GUANGZHOU CONTROL:	6556 kHz	(R)	Secondary
CHANGSHA CONTROL:	6571 kHz	(R)	Secondary
CHANGSHA CONTROL:	8897 kHz	(R)	

Type: VOLMET:	
GUANGZHOU:	13285 kHz
GUANGZHOU:	3458 kHz
GUANGZHOU:	5673 kHz
GUANGZHOU:	8849 kHz

Communication Information For ZSHA ACC

No communication information available

Communication Information For ZSHA ACC Both (ACC Sector)

Callsign:	Frequency	Radar	ServiceIndicators
Type: ACC:			
SHANGHAI CONTROL:	127.55 MHz		
SHANGHAI CONTROL:	135.0 MHz		
SHANGHAI CONTROL:	3016 kHz		
SHANGHAI CONTROL:	6571 kHz		
SHANGHAI CONTROL:	8897 kHz		

Communication Information For ZSHA ACC High (ACC Sector High)

Callsign:	Frequency	Radar	ServiceIndicators
Type: ACC:			
SHANGHAI CONTROL:	123.7 MHz		
SHANGHAI CONTROL:	125.95 MHz		
SHANGHAI CONTROL:	3016 kHz		
SHANGHAI CONTROL:	6571 kHz		
SHANGHAI CONTROL:	8897 kHz		

Communication Information For ZSHA ACC Low (ACC Sector Low)

Callsign:	Frequency	Radar	ServiceIndicators
Type: ACC:			
NANCHANG CONTROL:	124.15 MHz		
NANCHANG CONTROL:	130.3 MHz		
JINAN CONTROL:	3016 kHz		
JINAN CONTROL:	6571 kHz		
JINAN CONTROL:	8897 kHz		

Communication Information For ZSHA FIR

Callsign:	Frequency	Radar	ServiceIndicators
Type: ACC:			
SHANGHAI CONTROL:	118.97 MHz	(R)	
SHANGHAI CONTROL:	119.3 MHz	(R)	Secondary
SHANGHAI CONTROL:	120.1 MHz	(R)	
NANCHANG CONTROL:	120.5 MHz	(R)	
XIAMEN CONTROL:	120.52 MHz	(R)	
SHANGHAI CONTROL:	120.55 MHz	(R)	
SHANGHAI CONTROL:	120.7 MHz	(R)	
SHANGHAI CONTROL:	120.75 MHz	(R)	
SHANGHAI CONTROL:	120.9 MHz	(R)	
SHANGHAI CONTROL:	120.95 MHz	(R)	
JINAN CONTROL:	122.9 MHz	(R)	
XIAMEN CONTROL:	123.22 MHz	(R)	
SHANGHAI CONTROL:	123.7 MHz	(R)	Secondary
SHANGHAI CONTROL:	123.77 MHz	(R)	
SHANGHAI CONTROL:	123.95 MHz	(R)	
NANCHANG CONTROL:	124.15 MHz	(R)	
XIAMEN CONTROL:	124.55 MHz	(R)	
SHANGHAI CONTROL:	124.57 MHz	(R)	Secondary
SHANGHAI CONTROL:	124.95 MHz	(R)	
XIAMEN CONTROL:	125.3 MHz	(R)	Secondary
SHANGHAI CONTROL:	125.32 MHz	(R)	
NANCHANG CONTROL:	125.37 MHz	(R)	
JINAN CONTROL:	125.7 MHz	(R)	
HEFEI CONTROL:	125.77 MHz	(R)	
NANCHANG CONTROL:	125.9 MHz	(R)	
SHANGHAI CONTROL:	125.95 MHz	(R)	
SHANGHAI CONTROL:	125.97 MHz	(R)	
HEFEI CONTROL:	126.12 MHz	(R)	
QINGDAO CONTROL:	126.15 MHz	(R)	Secondary
SHANGHAI CONTROL:	126.17 MHz	(R)	
SHANGHAI CONTROL:	126.9 MHz	(R)	
NANCHANG CONTROL:	127.52 MHz	(R)	
SHANGHAI CONTROL:	127.55 MHz	(R)	Secondary
SHANGHAI CONTROL:	128.12 MHz	(R)	

QINGDAO CONTROL:	128.15 MHz	(R)	
HEFEI CONTROL:	128.17 MHz	(R)	Secondary
SHANGHAI CONTROL:	128.32 MHz	(R)	
JINAN CONTROL:	128.35 MHz	(R)	
QINGDAO CONTROL:	128.55 MHz	(R)	
SHANGHAI CONTROL:	128.7 MHz	(R)	
SHANGHAI CONTROL:	128.75 MHz	(R)	
NANCHANG CONTROL:	130.3 MHz	(R)	Secondary
SHANGHAI CONTROL:	132.1 MHz	(R)	Secondary
QINGDAO CONTROL:	132.12 MHz	(R)	
SHANGHAI CONTROL:	132.27 MHz	(R)	Secondary
QINGDAO CONTROL:	132.3 MHz	(R)	Secondary
SHANGHAI CONTROL:	132.32 MHz	(R)	
JINAN CONTROL:	132.37 MHz	(R)	
SHANGHAI CONTROL:	132.4 MHz	(R)	
SHANGHAI CONTROL:	132.45 MHz	(R)	
SHANGHAI CONTROL:	132.5 MHz	(R)	
SHANGHAI CONTROL:	132.62 MHz	(R)	
XIAMEN CONTROL:	132.72 MHz	(R)	Secondary
SHANGHAI CONTROL:	132.75 MHz	(R)	Secondary
QINGDAO CONTROL:	132.82 MHz	(R)	Secondary
SHANGHAI CONTROL:	132.9 MHz	(R)	Secondary
QINGDAO CONTROL:	132.95 MHz	(R)	
SHANGHAI CONTROL:	133.0 MHz	(R)	
QINGDAO CONTROL:	133.05 MHz	(R)	
SHANGHAI CONTROL:	133.07 MHz	(R)	
QINGDAO CONTROL:	133.15 MHz	(R)	
XIAMEN CONTROL:	133.17 MHz	(R)	
SHANGHAI CONTROL:	133.22 MHz	(R)	
SHANGHAI CONTROL:	133.27 MHz	(R)	
SHANGHAI CONTROL:	133.32 MHz	(R)	Secondary
SHANGHAI CONTROL:	133.4 MHz	(R)	Secondary
JINAN CONTROL:	133.45 MHz	(R)	Secondary
GUANGZHOU CONTROL:	133.47 MHz	(R)	
HEFEI CONTROL:	133.55 MHz	(R)	Secondary
XIAMEN CONTROL:	133.65 MHz	(R)	
SHANGHAI CONTROL:	133.7 MHz	(R)	Secondary
QINGDAO CONTROL:	133.72 MHz	(R)	
SHANGHAI CONTROL:	133.8 MHz	(R)	
NANCHANG CONTROL:	133.82 MHz	(R)	
JINAN CONTROL:	133.85 MHz	(R)	Secondary
SHANGHAI CONTROL:	133.87 MHz	(R)	
QINGDAO CONTROL:	133.95 MHz	(R)	Secondary
SHANGHAI CONTROL:	133.97 MHz	(R)	
SHANGHAI CONTROL:	134.0 MHz	(R)	Secondary
SHANGHAI CONTROL:	134.05 MHz	(R)	Secondary
QINGDAO CONTROL:	134.12 MHz	(R)	
SHANGHAI CONTROL:	134.2 MHz	(R)	Secondary
GUANGZHOU CONTROL:	134.25 MHz	(R)	Secondary
SHANGHAI CONTROL:	134.3 MHz	(R)	
JINAN CONTROL:	134.37 MHz	(R)	
SHANGHAI CONTROL:	134.4 MHz	(R)	Secondary
HEFEI CONTROL:	134.42 MHz	(R)	
SHANGHAI CONTROL:	134.47 MHz	(R)	
HEFEI CONTROL:	134.7 MHz	(R)	
QINGDAO CONTROL:	134.85 MHz	(R)	
SHANGHAI CONTROL:	134.9 MHz	(R)	
SHANGHAI CONTROL:	135.0 MHz	(R)	
SHANGHAI CONTROL:	135.05 MHz	(R)	
HEFEI CONTROL:	135.4 MHz	(R)	
SHANGHAI CONTROL:	135.5 MHz	(R)	Secondary
HEFEI CONTROL:	135.65 MHz	(R)	
SHANGHAI CONTROL:	135.7 MHz	(R)	Secondary
NANCHANG CONTROL:	135.72 MHz	(R)	Secondary
SHANGHAI CONTROL:	135.75 MHz	(R)	
HEFEI CONTROL:	3016 kHz	(R)	
HEFEI CONTROL:	6571 kHz	(R)	Secondary
HEFEI CONTROL:	8897 kHz	(R)	

Operational Notes

Page 1 Strip Charts

VHHH Type: Airport
Notes: FLIGHTS WITHIN 50NM OF HONG KONG INTL AIRPORT SHALL NOT FLIGHT PLAN TO CRUISE AT LEVELS BETWEEN 9000' AND FL120.

GUEIREN Type: Class E Airspace
Notes: EAST TRAFFIC PATTERN IS USED FOR RCXY AD.

SINSHE Type: Class E Airspace
Notes: EAST TRAFFIC PATTERN IS USED FOR RCWK AD.

AIRSPACE BENEATH HONG KONG TMA Type: Class G Airspace
Notes: REQUIRES AIRCRAFT OPERATING IN SUCH CLASS G AIRSPACE TO HAVE EQUIPMENT CAPABLE OF MAINTAINING DIRECT TWO-WAY COMMUNICATION WITH ATC.

REQUIRES AIRCRAFT OPERATING IN SUCH CLASS G AIRSPACE TO HAVE EQUIPMENT CAPABLE OF MAINTAINING DIRECT TWO-WAY COMMUNICATION WITH ATC.

CHANGSHA CTA ZGHAAR01 Type: Control Area (Airport)
Notes: CONTACT ZGHAAR04 WHEN ZGHAAR01 U/S

CHANGSHA CTA ZGHAAR02 Type: Control Area (Airport)
Notes: CONTACT ZGHAAR04 WHEN ZGHAAR01 U/S

CHANGSHA CTA ZGHAAR03 Type: Control Area (Airport)
Notes: CONTACT ZGHAAR02 WHEN ZGHAAR03 U/S

CHANGSHA CTA ZGHAAR05 Type: Control Area (Airport)
Notes: CONTACT ZGHAAR01 WHEN ZGHAAR05 U/S

GUANGZHOU CTA ZGGGAR20 Type: Control Area (Airport)
Notes: EXCLUDE SECTOR ZGHAAR03

GUANGZHOU CTA ZGGGAR22 Type: Control Area (Airport)
Notes: CONTACT ZGGGAR11 WHEN ZGGGAR22 U/S

HEFEI CTA ZSOFAR02 Type: Control Area (Airport)
Notes: CONTACT ZSOFAR01 WHEN ZSOFAR02 U/S.

HEFEI CTA ZSOFAR03 Type: Control Area (Airport)
Notes: CONTACT ZSOFAR04 WHEN ZSOFAR03 U/S.

NANNING CTA ZGNNAR12 Type: Control Area (Airport)
Notes: CONTACT ZGNNAR10 WHEN ZGNNAR12 U/S

XIAMEN CTA ZSAMAR02 Type: Control Area (Airport)
Notes: CONTACT ZSAMAR04 WHEN ZSAMAR02 U/S.

XIAMEN CTA ZSAMAR03 Type: Control Area (Airport)
Notes: CONTACT ZSAMAR04 WHEN ZSAMAR03 U/S.

XIAMEN CTA ZSAMAR05 Type: Control Area (Airport)
Notes: CONTACT ZSAMAR01 WHEN ZSAMAR05 U/S.

XIAMEN CTA ZSAMAR06 Type: Control Area (Airport)
Notes: CONTACT ZSAMAR01 WHEN ZSAMAR06 U/S.

RCAA Type: FIR
Notes: TAIPEI RCTP FIR: UNLESS APPLIED IN ADVANCE WITH RELATED DOCUMENTS AND AUTHORIZED BY CAA, NO PERSON MAY OPERATE A CIVIL AIRCRAFT WHILE IN CONTROLLED AIRSPACE BELOW 10,000' FEET [MSL] AT AN INDICATED AIRSPEED OF MORE THAN 250 KNOTS. R-583 AUTHORIZED ONLY W-BND FL380 OR ABOVE WITHIN TAIPEI (RCAA) FIR. UNLESS OTHERWISE APPROVED BY ATC ARRIVAL AIRCRAFT INTO TAIPEI ARE PROHIBITED.

RJJJ Type: FIR

Notes: SPEED RESTRICTIONS WITHIN JAPAN AIRSPACE MAXIMUM IAS UNLESS OTHERWISE AUTHORIZED BY ATC. WITHIN AN APPROACH CONTROL AREA BELOW 10000' MSL 250 KIAS WITHIN A CONTROL ZONE 250 KTS PILOTS SHOULD MONITOR VHF EMERGENCY FREQUENCY 121.5 MHZ ON LONG OVERWATER ROUTES WHEN POSSIBLE. SEE VHF EMERGENCY FREQUENCY REQUIREMENT. CPDLC: CPDLC SERVICES ARE AVAILABLE WITH LOGON ADDRESS OF RJJJ IN FUKUOKA FIR CPDLC: INMARSAT: INMARSAT SECURITY NUMBER IS 443101 INMARSAT: SATCOM: SATCOM VOICE DIRECT DIAL IS 81-78-99-36-501 SATCOM:

RKRR Type: FIR
Notes: INMARSAT: INMARSAT SECURITY NUMBER FOR INCHEON ACC IS 444001 INMARSAT: INMARSAT: INMARSAT SECURITY NUMBER FOR DAEGU ACC IS 444002 INMARSAT: ALL AIRWAYS WITHIN INCHEON FIR FROM MEA TO FL200 ARE CLASS D, FROM ABOVE FL200 TO FL600 ARE CLASS A, AND ABOVE FL600 ARE CLASS G. SPEED RESTRICTIONS WITHIN KOREAN AIRSPACE ALL ARRIVALS INTO RKSS AND RKSI SHALL OPERATE IN ACCORDANCE WITH THE FLIGHT PROCEDURES FOR THAT AIRPORT. MAXIMUM IAS UNLESS OTHERWISE AUTHORIZED BY ATC: BELOW 10000' 250 KTS CLASS C AND D AIRSPACE: AT OR BELOW 2500' AGL WITHIN 4NM OF AN AIRPORT 200 KTS

RPHI Type: FIR
Notes: CPDLC: CPDLC: SERVICES ARE AVAILABLE WITH LOGON ADDRESS OF RPHI IN MANILA FIR. AIRCRAFT SHOULD LOG ON TO "RPHI" PRIOR TO DEPARTING FROM NINOY AQUINO INTERNATIONAL AIRPORT OR BETWEEN 10 - 25 MINUTES PRIOR TO ENTERING THE MANILA FIR. DATA LINK SERVICES ARE AVAILABLE TO FANS 1/A CAPABLE AIRCRAFT IN THE EAST SECTOR OF MANILA FIR ON THE FOLLOWING AIR ROUTES: 1. A582 2. A590 3. G578 4. M501 5. G467 INMARSAT: INMARSAT SECURITY NUMBERS FOR MANILLA ACC ARE 454801, 454802, AND 454803 INMARSAT: WITHIN THE MANILA FIR, THE AIRSPACE IS DIVIDED INTO THE FOLLOWING CLASSES: CLASS A FL200-UNL (MANILA FIR UPPER CONTROL AREA, EXCEPT SPECIAL USE AIRSPACE) CLASS A LOWER LIMIT - UNL (OCEANIC) CLASS A MEA - UNL (ATS ROUTES OUTSIDE TMA) CLASS E 1500' TO FL200 (TMA, EXCLUDING ATS ROUTES AT FL130 AND ABOVE)

VHHK Type: FIR
Notes: AIRCRAFT SHALL ESTABLISH TWO-WAY RADIO COMMUNICATION WITH HONG KONG RADAR WHEN SO PRESCRIBED BY THE RESPECTIVE ATC UNIT, AND MAINTAIN A LISTENING WATCH. SUCH AIRCRAFT SHALL MAKE POSITION REPORTS WHEN ENTERING AND LEAVING HONG KONG AIRSPACE, AND AT SUCH OTHER TIMES AND/OR POSITIONS AS DIRECTED BY HONG KONG ACC. PILOT SHALL REPORT THE AIRCRAFT CALL SIGN, POSITION (WITH REFERENCE TO A REPORTING POINT), LEVEL (INCLUDING PASSING AND CLEARED LEVELS IF NOT MAINTAINING THE CLEARED LEVEL), TRANSPONDER CODE AND OTHER PERTINENT INFORMATION (E.G. SPEED ASSIGNED BY LAST ATC, TRACKING IF IT DIFFERS FROM THE FLIGHT PLAN ROUTE) IN THE INITIAL CALL BEFORE ENTERING HONG KONG FIR. AIRCRAFT ENTERING HONG KONG FIR OUTSIDE CONTROLLED AIRSPACE, BUT WISHING TO JOIN CONTROLLED AIRSPACE, SHALL REQUEST CLEARANCE FROM HONG KONG ACC STATING FLIGHT LEVEL AND ESTIMATED TIME/POSITION OF JOINING, IN RELATION TO A REPORTING POINT. UNTIL SPECIFIC CLEARANCE IS RECEIVED FROM HONG KONG ACC, THE AIRCRAFT SHALL REMAIN CLEAR OF CONTROLLED AIRSPACE. WITHIN VHHK FIR ALL NON-COMPULSORY REPORTING POINTS ON CONVENTIONAL AND VICTOR ATS-ROUTES ARE COMPULSORY FOR NON-JET AIRCRAFT. RVSM AIRSPACE FL290-FL410 INCLUSIVE. INMARSAT: INMARSAT SECURITY NUMBER FOR HONG KONG ATC IS 441299 INMARSAT:

ZGZU Type: FIR
Notes: RVSM AIRSPACE FL291-FL411 INCLUSIVE. ALL AIRCRAFT ENTERING OR EXITING PR OF CHINA SHALL CONTACT ATC 15-20 MINUTES PRIOR TO FIR ENTRY OR EXIT AND OBTAIN A CLEARANCE TO CROSS THE FIR BOUNDARIES.

ZHWH Type: FIR
Notes: RVSM AIRSPACE FL291-FL411 INCLUSIVE.

ZSHA Type: FIR
Notes: RVSM AIRSPACE FL291-FL411 INCLUSIVE. ALL AIRCRAFT ENTERING OR EXITING PR OF CHINA SHALL CONTACT ATC 15-20 MINUTES PRIOR TO FIR ENTRY OR EXIT AND OBTAIN A CLEARANCE TO CROSS THE FIR BOUNDARIES.

16 Type: Special Use Airspace
Notes: NO FLIGHT IS PERMITTED BELOW 4000 FEET IN R16 UNLESS PERMISSION FROM AOC HAS BEEN OBTAINED. HELICOPTERS ON MEDICAL SERVICES MAY OPERATE IN THIS AREA WITH PERMISSION FROM SUNGSHAN TOWER. IFR AIRCRAFT APPROACHING TAIPEI/SUNGSHAN AIRPORT ARE RESTRICTED TO AN ALTITUDE WHILE CROSSING (APU) VOR AND (LK) LOCATOR NOT LOWER THAN 5000 FEET.

30 Type: Special Use Airspace
Notes: IF PRIOR COORDINATION WITH TAFU PROVING GROUND HAS BEEN COMPLETED, CIVIL AIRCRAFT OPERATIONS IN R30 MAY BE APPROVED BY ATC DURING ACTIVE HOURS.

41 Type: Special Use Airspace
Notes: TAITUNG TMA EXCLUDES RC(R)-41 AND RC(R)-42.

48 Type: Special Use Airspace
Notes: NO AIRCRAFT MAY ENTER THIS AREA WITHOUT PRIOR PERMISSION FROM APPROPRIATE AUTHORITY.

BEIDOU EA* Type: Special Use Airspace
Notes: IN THOSE PARTS WITH HIGH TERRAIN, THE UPPER LIMIT IS 500 FT AGL.

BULAO HOT* Type: Special Use Airspace
Notes: IN THOSE PARTS WITH HIGH TERRAIN, THE UPPER LIMIT IS 500 FT AGL.

DAHAN RIV* Type: Special Use Airspace
Notes: IN THOSE PARTS WITH HIGH TERRAIN, THE UPPER LIMIT IS 500 FT AGL.

DALI Type: Special Use Airspace
Notes: IN THOSE PARTS WITH HIGH TERRAIN, THE UPPER LIMIT IS 500 FT AGL.

IN THOSE PARTS WITH HIGH TERRAIN, THE UPPER LIMIT IS 500 FT AGL.

IN THOSE PARTS WITH HIGH TERRAIN, THE UPPER LIMIT IS 500 FT AGL. FOR ENTERING AND EXITING AREA B. OTHER ACT PROHIBITED.

GAOSHU Type: Special Use Airspace
Notes: IN THOSE PARTS WITH HIGH TERRAIN, THE UPPER LIMIT IS 500 FT AGL.

HUALIEN M* Type: Special Use Airspace
Notes: FOR ENTERING AND EXITING ULM HUATUNG AIRSPACE. OTHER ACT PROHIBITED.

HUATUNG Type: Special Use Airspace
Notes: IN THOSE PARTS WITH HIGH TERRAIN, THE UPPER LIMIT IS 1000 FT AGL.

IN THOSE PARTS WITH HIGH TERRAIN, THE UPPER LIMIT IS 1000 FT AGL.

LUODONG Type: Special Use Airspace
Notes: IN THOSE PARTS WITH HIGH TERRAIN, THE UPPER LIMIT IS 500 FT AGL.

MAOLUO RI* Type: Special Use Airspace
Notes: FOR ENTERING AND EXITING BEIDOU EAST. OTHER ACT PROHIBITED. IN THOSE PARTS WITH HIGH TERRAIN, THE UPPER LIMIT IS 500 FT AGL.

IN THOSE PARTS WITH HIGH TERRAIN, THE UPPER LIMIT IS 500 FT AGL. FOR ENTERING AND EXITING BEIDOU EAST. OTHER ACT PROHIBITED.

MIAOLI Type: Special Use Airspace
Notes: IN THOSE PARTS WITH HIGH TERRAIN, THE UPPER LIMIT IS 500 FT AGL.

NANHUA Type: Special Use Airspace
Notes: IN THOSE PARTS WITH HIGH TERRAIN, THE UPPER LIMIT IS 500 FT AGL.

NINGBO Type: Special Use Airspace
Notes: 9900' (3000M) QNH OR BELOW: BY ATC

RUEIFANG Type: Special Use Airspace
Notes: IN THOSE PARTS WITH HIGH TERRAIN, THE UPPER LIMIT IS 500 FT AGL.

SAIJIA Type: Special Use Airspace
Notes: IN THOSE PARTS WITH HIGH TERRAIN, THE UPPER LIMIT IS 500 FT AGL.

CHANGSHA APP CTL ZGHAAP02 Type: Terminal Area
Notes: CONTACT ZGHAAP01 WHEN ZGHAAP02 U/S

CHANGSHA APP CTL ZGHAAP03N Type: Terminal Area
Notes: CONTACT ZGHAAP01 WHEN ZGHAAP03 U/S RWY36L/36R IN USE AT ZGHA

CHANGSHA APP CTL ZGHAAP03S Type: Terminal Area
Notes: RWY18L/18R IN USE AT ZGHA CONTACT ZGHAAP01 WHEN ZGHAAP03 U/S

GUANGZHOU APP CTL ZGGGAP01N Type: Terminal Area
Notes: RWY01/02L/02R IN USE AT ZGGG

GUANGZHOU APP CTL ZGGGAP01S Type: Terminal Area
Notes: RWY19/20L/20R IN USE AT ZGGG

GUANGZHOU APP CTL ZGGGAP02N Type: Terminal Area
Notes: RWY01/02L/02R IN USE AT ZGGG

GUANGZHOU APP CTL ZGGGAP02S Type: Terminal Area
Notes: RWY19/20L/20R IN USE AT ZGGG

GUANGZHOU APP CTL ZGGGAP03N1 Type: Terminal Area
Notes: RWY01/02L/02R IN USE AT ZGGG EXCLUDE ZGGGAP02

GUANGZHOU APP CTL ZGGGAP03N2 Type: Terminal Area
Notes: RWY01/02L/02R IN USE AT ZGGG EXCLUDE ZGGGAP02

GUANGZHOU APP CTL ZGGGAP03N3 Type: Terminal Area
Notes: RWY01/02L/02R IN USE AT ZGGG EXCLUDE ZGGGAP02

GUANGZHOU APP CTL ZGGGAP03N4 Type: Terminal Area
Notes: RWY01/02L/02R IN USE AT ZGGG

GUANGZHOU APP CTL ZGGGAP03N5 Type: Terminal Area
Notes: RWY01/02L/02R IN USE AT ZGGG

GUANGZHOU APP CTL ZGGGAP03N6 Type: Terminal Area
Notes: RWY01/02L/02R IN USE AT ZGGG

GUANGZHOU APP CTL ZGGGAP03S1 Type: Terminal Area
Notes: RWY19/20L/20R IN USE AT ZGGG EXCLUDE ZGGGAP01 AND ZGGGAP06

GUANGZHOU APP CTL ZGGGAP03S2 Type: Terminal Area
Notes: EXCLUDE ZGGGAP01 AND ZGGGAP06 RWY19/20L/20R IN USE AT ZGGG

GUANGZHOU APP CTL ZGGGAP03S3 Type: Terminal Area
Notes: RWY19/20L/20R IN USE AT ZGGG EXCLUDE ZGGGAP01 AND ZGGG06

GUANGZHOU APP CTL ZGGGAP03S4 Type: Terminal Area
Notes: EXCLUDE ZGGGAP02 RWY19/20L/20R IN USE AT ZGGG

GUANGZHOU APP CTL ZGGGAP03S5 Type: Terminal Area
Notes: RWY19/20L/20R IN USE AT ZGGG

GUANGZHOU APP CTL ZGGGAP03S6 Type: Terminal Area
Notes: RWY19/20L/20R IN USE AT ZGGG

GUANGZHOU APP CTL ZGGGAP03S7 Type: Terminal Area
Notes: RWY19/20L/20R IN USE AT ZGGG

GUANGZHOU APP CTL ZGGGAP04N1 Type: Terminal Area
Notes: EXCLUDE ZHUHAI TMA RWY01/02L/02R IN USE AT ZGGG

GUANGZHOU APP CTL ZGGGAP04N2 Type: Terminal Area
Notes: RWY01/02L/02R IN USE AT ZGGG

GUANGZHOU APP CTL ZGGGAP04S1 Type: Terminal Area
Notes: RWY19/20L/20R IN USE AT ZGGG EXCLUDE ZHUHAI TMA

GUANGZHOU APP CTL ZGGGAP04S2 Type: Terminal Area
Notes: RWY19/20L/20R IN USE AT ZGGG

GUANGZHOU APP CTL ZGGGAP05N1 Type: Terminal Area
Notes: RWY01/02L/02R IN USE AT ZGGG

GUANGZHOU APP CTL ZGGGAP05N2 Type: Terminal Area
Notes: RWY01/02L/02R IN USE AT ZGGG

GUANGZHOU APP CTL ZGGGAP05N3 Type: Terminal Area
Notes: RWY01/02L/02R IN USE AT ZGGG EXCLUDE ZGGGAP01, ZGGGAP04, ZGGGAP06 AND ZHUHAI TMA

GUANGZHOU APP CTL ZGGGAP05N4 Type: Terminal Area
Notes: RWY01/02L/02R IN USE AT ZGGG

GUANGZHOU APP CTL ZGGGAP05S1 Type: Terminal Area
Notes: RWY19/20L/20R IN USE AT ZGGG

GUANGZHOU APP CTL ZGGGAP05S2 Type: Terminal Area
Notes: RWY19/20L/20R IN USE AT ZGGG

GUANGZHOU APP CTL ZGGGAP05S3 Type: Terminal Area
Notes: RWY19/20L/20R IN USE AT ZGGG

GUANGZHOU APP CTL ZGGGAP05S4 Type: Terminal Area
Notes: EXCLUDE ZGGGAP04 AND ZHUHAI TMA RWY19/20L/20R IN USE AT ZGGG

GUANGZHOU APP CTL ZGGGAP05S5 Type: Terminal Area
Notes: RWY19/20L/20R IN USE AT ZGGG

GUANGZHOU APP CTL ZGGGAP06N Type: Terminal Area
Notes: RWY01/02L/02R IN USE AT ZGGG

GUANGZHOU APP CTL ZGGGAP06S Type: Terminal Area
Notes: RWY19/20L/20R IN USE AT ZGGG

HANGZHOU APP CTL ZSHCAP01 Type: Terminal Area
Notes: CONTACT ZSHCAP04 WHEN ZSHCAP01 U/S EXCLUDE ZSHCAP02/04

HANGZHOU APP CTL ZSHCAP02 Type: Terminal Area
Notes: CONTACT ZSHCAP04 WHEN ZSHCAP02 U/S

HANGZHOU APP CTL ZSHCAP03 Type: Terminal Area
Notes: EXCLUDE ZSHCAP02/06/07

HANGZHOU APP CTL ZSHCAP04 Type: Terminal Area
Notes: CONTACT ZSHCAP03 WHEN ZSHCAP04 U/S

HANGZHOU APP CTL ZSHCAP05 Type: Terminal Area
Notes: CONTACT ZSHCAP03 WHEN ZSHCAP05 U/S EXCLUDE ZSHCAP06/08 AND NINGBO APP

HANGZHOU APP CTL ZSHCAP06 Type: Terminal Area
Notes: CONTACT ZSHCAP02 WHEN ZSHCAP006 U/S

HANGZHOU APP CTL ZSHCAP07 Type: Terminal Area
Notes: CONTACT ZSHCAP03 WHEN ZSHCAP07 U/S

HANGZHOU APP CTL ZSHCAP08 Type: Terminal Area
Notes: CONTACT ZSHCAP04 WHEN ZSHCAP08 U/S

HEFEI APP CTL AREA ZSOFAP03 Type: Terminal Area
Notes: CONTACT ZSOFAP01 WHEN ZSOFAP03 U/S

CONTACT ZSOFAP01 WHEN ZSOFAP03 U/S

HEFEI APP CTL AREA ZSOFAP04 Type: Terminal Area
Notes: CONTACT ZSOFAP03 WHEN ZSOFAP04 U/S.

CONTACT ZSOFAP03 WHEN ZSOFAP04 U/S.

JINJIANG APP CONTROL AREA Type: Terminal Area
Notes: CONTACT JINJIANG TWR WHEN JINJIANG APP U/S.

NINGBO APP CTL ZSNBAP01N Type: Terminal Area
Notes: RWY31 IN USE AT ZSNB

NINGBO APP CTL ZSNBAP01S Type: Terminal Area
Notes: RWY13 IN USE AT ZSNB

NINGBO APP CTL ZSNBAP02N Type: Terminal Area
Notes: RWY31 IN USE AT ZSNB

NINGBO APP CTL ZSNBAP02S Type: Terminal Area
Notes: RWY13 IN USE AT ZSNB

SHANGHAI APP CTL ZSSSAP01 Type: Terminal Area
Notes: EXCLUDE ZSSSAP05/07

SHANGHAI APP CTL ZSSSAP02N Type: Terminal Area
Notes: RWY34L/34R/35L/35R IN USE AT ZSPD

SHANGHAI APP CTL ZSSSAP02S Type: Terminal Area
Notes: RWY16L/16R/17L/17R IN USE AT ZSPD

SHANGHAI APP CTL ZSSSAP03 Type: Terminal Area
Notes: EXCLUDE ZSSSAP02/04/06/07

SHANGHAI APP CTL ZSSSAP04N Type: Terminal Area
Notes: RWY34L/34R/35L/35R IN USE AT ZSPD

SHANGHAI APP CTL ZSSSAP04S Type: Terminal Area
Notes: RWY16L/16R/17L/17R IN USE AT ZSPD

SHANGHAI APP CTL ZSSSAP06N Type: Terminal Area
Notes: RWY34L/34R/35L/35R IN USE AT ZSPD

SHANGHAI APP CTL ZSSSAP06S Type: Terminal Area
Notes: RWY16L/16R/17L/17R IN USE AT ZSPD

SHANGHAI APP CTL ZSSSAP08 Type: Terminal Area
Notes: EXCLUDE ZSSSAP02/04/06

SHANGHAI APP CTL ZSSSAP09 Type: Terminal Area
Notes: EXCLUDE NANTONG TWR AND WUXI APP

SHANGHAI APP CTL ZSSSAP10 Type: Terminal Area
Notes: EXCLUDE ZSSSAP02/04/06

SHANGHAI APP CTL ZSSSAP11 Type: Terminal Area
Notes: EXCLUDE WUXI APP

TAITUNG TMA Type: Terminal Area
Notes: EXCLUDING RC(R)-41

WENZHOU APP CTL AREA ZSWZAP01 Type: Terminal Area
Notes: EXCLUDE ZSWZAP02

WENZHOU APP CTL AREA ZSWZAP03 Type: Terminal Area
Notes: CONTACT ZSWZAP01 WHEN ZSWZAP03 U/S

WUHAN APP CTL ZHHH AP02 Type: Terminal Area
Notes: CONTACT ZHHH APP01 WHEN ZHHH APP02 U/S

CONTACT ZHHH APP01 WHEN ZHHH APP02 U/S

WUHAN APP CTL ZHHH AP03 Type: Terminal Area
Notes: CONTACT ZHHHAP01 WHEN ZHHHAP03 U/S RWY04L/04R IN USE AT ZHHH

CONTACT ZHHHAP02 WHEN ZHHHAP03 U/S RWY22L/22R IN USE AT ZHHH

WUXI APPROACH CONTROL AREA Type: Terminal Area
Notes: CONTACT WUXI TOWER WHEN WUXI APP U/S

XIAMEN APP CTL AREA ZSAMAP01 Type: Terminal Area
Notes: EXCLUDE JINJIANG APP CONTROL AREA

ZHUHAI TMA ZGJDTM01N1 Type: Terminal Area
Notes: CONTACT APP04 WHEN APP01 U/S RWY33/34 IN USE AT ZGSZ

ZHUHAI TMA ZGJDTM01N2 Type: Terminal Area
Notes: CONTACT APP04 WHEN APP01 U/S RWY33/34 IN USE AT ZGSZ

ZHUHAI TMA ZGJDTM01S1 Type: Terminal Area
Notes: RWY15/16 IN USE AT ZGSZ CONTACT APP04 WHEN APP01 U/S

ZHUHAI TMA ZGJDTM01S2 Type: Terminal Area
Notes: CONTACT APP04 WHEN APP01 U/S RWY15/16 IN USE AT ZGSZ

ZHUHAI TMA ZGJDTM03N1 Type: Terminal Area
Notes: CONTACT APP02 WHEN APP03 U/S RWY33/34 IN USE AT ZGSZ

ZHUHAI TMA ZGJDTM03N2 Type: Terminal Area
Notes: RWY33/34 IN USE AT ZGSZ CONTACT APP02 WHEN APP03 U/S

ZHUHAI TMA ZGJDTM03S Type: Terminal Area
Notes: RWY15/16 IN USE AT ZGSZ CONTACT APP02 WHEN APP03 U/S

ZHUHAI TMA ZGJDTM04N1 Type: Terminal Area
Notes: RWY33/34 IN USE AT ZGSZ CONTACT APP02 WHEN APP04 U/S

ZHUHAI TMA ZGJDTM04N2 Type: Terminal Area
Notes: RWY33/34 IN USE AT ZGSZ CONTACT APP02 WHEN APP04 U/S

ZHUHAI TMA ZGJDTM04S1 Type: Terminal Area
Notes: RWY15/16 IN USE AT ZGSZ

ZHUHAI TMA ZGJDTM04S2 Type: Terminal Area
Notes: RWY15/16 IN USE AT ZGSZ CONTACT APP02 WHEN APP04 U/S

ZHUHAI TMA ZGJDTM05N Type: Terminal Area
Notes: RWY33/34 IN USE AT ZGSZ CONTACT APP03 WHEN APP05 U/S

ZHUHAI TMA ZGJDTM05S Type: Terminal Area
Notes: CONTACT APP03 WHEN APP05 U/S RWY15/16 IN USE AT ZGSZ

LIG Type: VOR
Notes: TRAFFIC TO HONG KONG OR BEYOND REPORT ETO TAMOT OR SIERA INT TO GUANGZHOU ATC.

PLT Type: VOR
Notes: TRAFFIC TO HONG KONG OR BEYOND REPORT ETO TAMOT OR SIERA INT TO GUANGZHOU ATC.

BEKOL Type: Waypoint
Notes: CONTACT NEXT ATC UNIT AT LEAST 3 MINUTES PRIOR TO BEKOL.

DOTMI Type: Waypoint
Notes: CONTACT HONG KONG RADAR ON 121.300 AT LEAST 10NM PRIOR TO DOTMI.

ELAGO Type: Waypoint
Notes: AIRCRAFT FROM ZSHC IN DIRECTION OF ZSQD OR RJTG FIR AND VICE VERSA ROUTE W36 AND CROSS ELAGO AT FL197/FL6000M OR ABOVE. EXPECT REROUTING VIA W-37 BY ATC.

ELATO Type: Waypoint
Notes: CONTACT HONG KONG RADAR ON 121.300 AT LEAST 10NM PRIOR TO ELATO.

KABAM Type: Waypoint
Notes: DURING 2200-1600, TRANSIT FLIGHTS VIA KABAM SHALL FILE AIRWAY W4 FOR N-BND FLIGHTS & AWY B591/Q11 FOR S-BND FLIGHTS.

KAPLI Type: Waypoint
Notes: DURING 2200-1600, TRANSIT FLIGHTS VIA KAPLI SHALL FILE AIRWAY W4 FOR N-BND FLIGHTS & AWY B591/Q11 FOR S-BND FLIGHTS.
CONTACT HONG KONG RADAR ON 132.150 AT LEAST 10NM PRIOR TO KAPLI.

LELIM Type: Waypoint
Notes: CONTACT HONG KONG RADAR ON 121.300 AT LEAST 10NM PRIOR TO LELIM.

POTIB Type: Waypoint
Notes: DURING 2200-1600, TRANSIT FLIGHTS VIA POTIB SHALL FILE AIRWAY W4 FOR N-BND FLIGHTS & AWY B591/Q11 FOR S-BND FLIGHTS.

ROMEO Type: Waypoint
Notes: CONTACT HONG KONG RADAR ON 123.950 AT LEAST 3 MINUTES PRIOR TO ROMEO.

SIERA Type: Waypoint
Notes: CONTACT HONG KONG RADAR ON 127.550 AT LEAST 3 MINUTES PRIOR TO SIERA.

TAMOT Type: Waypoint
Notes: CONTACT HONG KONG RADAR ON 127.100 AT LEAST 10 NM PRIOR TO TAMOT.

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DALIAN CTA SECTOR ZYTLAR06 Type: Control Area (Airport)
Notes: CONTACT ZYTLAR03 WHEN ZYTLAR06 U/S

DALIAN CTA SECTOR ZYTLAR07 Type: Control Area (Airport)
Notes: CONTACT ZYTLAR02 WHEN ZYTLAR07 U/S

DALIAN CTA SECTOR ZYTLAR08 Type: Control Area (Airport)
Notes: CONTACT ZYTLAR07 OR ZYTLAR05 OR ZYTLAR02 WHEN ZYTLAR08 U/S

QINGDAO CTA SECTOR ZSQDAR05 Type: Control Area (Airport)
Notes: CONTACT ZYTLAR03 WHEN ZYTLAR05 U/S.

KZAK Type: FIR
Notes: CPDLC: USE LOGON ADDRESS KZAK FOR ALL CPDLC COMMUNICATIONS IN THE OAKLAND OCEANIC FIR. WHEN MAKING HF VOICE CHECK-IN WITH SAN FRANCISCO RADIO UPON TRANSFERRING DATA LINK CONTACT TO SAN FRANCISCO, SFO RADIO REQUESTS YOU INCLUDE; POINT OF DEPARTURE, DESTINATION, A/C REGISTRATION AND SELCAL CODE. FOR AIRCRAFT DEPARTING FROM AIRPORTS ALONG THE WEST COAST OF NORTH AMERICA, GUAM AND HAWAII, OAKLAND OCEANIC CONTROL REQUIRES THAT DATA-LINK AIRCRAFT NOT LOGON TO OAKLAND OCEANIC (KZAK) UNTIL AFTER LEAVING 10,000' MSL. FOR AIRCRAFT ENTERING THE OAKLAND OCEANIC FIR FROM NON-CPDLC AIRSPACE: LOG ON TO CPDLC AT LEAST 15 BUT NOT MORE THAN 45 MINUTES PRIOR TO ENTERING. FOR AIRCRAFT ENTERING THE OAKLAND OCEANIC FIR FROM ADJACENT CPDLC AIRSPACE: IF KZAK IS THE ACTIVE CENTER CONTACT SAN FRANCISCO RADIO. IF KZAK IS NOT THE ACTIVE CENTER, TERMINATE THE CPDLC CONNECTION WITHIN 5 MINUTES AFTER THE BOUNDARY IS CROSSED, THEN LOG ON TO KZAK AND CONTACT SAN FRANCISCO RADIO. FOR AIRCRAFT OVER-FLYING HONOLULU CERAP: AIRCRAFT WILL RECEIVE AN END SERVICE MESSAGE THAT WILL RESULT IN TERMINATION OF CPDLC. AIRCRAFT SHALL RE-LOG ON TO CPDLC PRIOR TO REENTERING OAKLAND OCEANIC FIR. FOR AIRCRAFT ENTERING GUAM CERAP: CONTACT GUAM CERAP 250 MILES OUT ON 118.7, SQUAWK 2100. FOR AIRCRAFT OVER-FLYING GUAM CERAP: CPDLC CONNECTION WITH OAKLAND MAY BE TERMINATED WITHIN THE GUAM CERAP. IF THE CPDLC CONNECTION WITH KZAK IS NOT TERMINATED, DO NOT USE CPDLC FOR ATC UNTIL GUAM CERAP ADVISES YOU TO TO AGAIN CONTACT ENROUTE COMMUNICATIONS OR SAN FRANCISCO RADIO. IT MAY BE NECESSARY TO LOG BACK ON TO CPDLC WITH KZAK 10-15 MINUTES PRIOR TO EXITING GUAM CERAP IF THE CPDLC CONNECTION WAS TERMINATED. CPDLC: INMARSAT: INMARSAT SECURITY NUMBER FOR OAKLAND CENTER IS 436697 INMARSAT: INMARSAT: INMARSAT SECURITY NUMBER FOR SAN FRANCISCO RADIO IS 436625 INMARSAT: SATCOM: SATCOM VOICE DIRECT DIAL FOR OAKLAND CENTER IS 1-510-745-3415 SATCOM: PILOTS SHOULD MONITOR VHF EMERGENCY FREQUENCY 121.5 MHZ ON LONG OVERWATER ROUTES WHEN POSSIBLE. SEE VHF EMERGENCY FREQUENCY REQUIREMENT. POSITION REPORTS OVER OAKLAND OCEANIC OCA/FIR 120 W BOUNDARIES A. AIRCRAFT ENTERING THE OAKLAND OCA/FIR OVER 120 DEGREES WEST LONGITUDE WITHOUT A KZAK ADS-C CONNECTION ARE REQUESTED TO FORWARD BOUNDARY POSIT

RCAA Type: FIR
Notes: TAIPEI RCTP FIR: UNLESS APPLIED IN ADVANCE WITH RELATED DOCUMENTS AND AUTHORIZED BY CAA, NO PERSON MAY OPERATE A CIVIL AIRCRAFT WHILE IN CONTROLLED AIRSPACE BELOW 10,000' FEET [MSL] AT AN INDICATED AIRSPEED OF MORE THAN 250 KNOTS. R-583 AUTHORIZED ONLY W-BND FL380 OR ABOVE WITHIN TAIPEI (RCAA) FIR. UNLESS OTHERWISE APPROVED BY ATC ARRIVAL AIRCRAFT INTO TAIPEI ARE PROHIBITED.

RJJJ Type: FIR
Notes: SPEED RESTRICTIONS WITHIN JAPAN AIRSPACE MAXIMUM IAS UNLESS OTHERWISE AUTHORIZED BY ATC. WITHIN AN APPROACH CONTROL AREA BELOW 10000' MSL 250 KIAS WITHIN A CONTROL ZONE 250 KTS PILOTS SHOULD MONITOR VHF EMERGENCY FREQUENCY 121.5 MHZ ON LONG OVERWATER ROUTES WHEN POSSIBLE. SEE VHF EMERGENCY FREQUENCY REQUIREMENT. CPDLC: CPDLC SERVICES ARE AVAILABLE WITH LOGON ADDRESS OF RJJJ IN FUKUOKA FIR CPDLC: INMARSAT: INMARSAT SECURITY NUMBER IS 443101 INMARSAT: SATCOM: SATCOM VOICE DIRECT DIAL IS 81-78-99-36-501 SATCOM:

RKRR Type: FIR
Notes: INMARSAT: INMARSAT SECURITY NUMBER FOR INCHEON ACC IS 444001 INMARSAT: INMARSAT: INMARSAT SECURITY NUMBER FOR DAEGU ACC IS 444002 INMARSAT: ALL AIRWAYS WITHIN INCHEON FIR FROM MEA TO FL200 ARE CLASS D, FROM ABOVE FL200 TO FL600 ARE CLASS A, AND ABOVE FL600 ARE CLASS G. SPEED RESTRICTIONS WITHIN KOREAN AIRSPACE ALL ARRIVALS INTO RKSS AND RKSI SHALL OPERATE IN ACCORDANCE WITH THE FLIGHT PROCEDURES FOR THAT AIRPORT. MAXIMUM IAS UNLESS OTHERWISE AUTHORIZED BY ATC: BELOW 10000' 250 KTS CLASS C AND D AIRSPACE: AT OR BELOW 2500' AGL WITHIN 4NM OF AN AIRPORT 200 KTS

ZKKP Type: FIR
Notes: RVSM AIRSPACE FL290-FL410 INCLUSIVE.

ZSHA Type: FIR

Notes: RVSM AIRSPACE FL291-FL411 INCLUSIVE. ALL AIRCRAFT ENTERING OR EXITING PR OF CHINA SHALL CONTACT ATC 15-20 MINUTES PRIOR TO FIR ENTRY OR EXIT AND OBTAIN A CLEARANCE TO CROSS THE FIR BOUNDARIES.

ZYSH Type: FIR

Notes: INMARSAT: INMARSAT SECURITY NUMBER FOR SHENYANG ACC IS 441207 INMARSAT: RVSM AIRSPACE FL291-FL411 INCLUSIVE. ALL AIRCRAFT ENTERING OR EXITING PR OF CHINA SHALL CONTACT ATC 15-20 MINUTES PRIOR TO FIR ENTRY OR EXIT AND OBTAIN A CLEARANCE TO CROSS THE FIR BOUNDARIES.

115 Type: Special Use Airspace
Notes: SURFACE TO SURFACE FIRING ROKN 3RD FLEET/DO BY NOTAM CONT VMC-IMC EXCLUDE A586/Y579 ATS ROUTES AREA DURING IT'S OPERATIONAL HOURS

120 Type: Special Use Airspace
Notes: SURFACE TO SURFACE HIGH ANGLE FIRING AND SURFACE TO AIR FIRING. ROKN 1ST FLEET BY NOTAM CONT VMC-IMC EXCLUDE A586/Y579 ATS ROUTES AREA DURING IT'S OPERATIONAL HOURS

12E Type: Special Use Airspace
Notes: EXCLUDE A586/Y579 ATS ROUTES AREA DURING IT'S OPERATIONAL HOURS

EXCLUDE A586/Y579 ATS ROUTES AREA DURING IT'S OPERATIONAL HOURS

13E Type: Special Use Airspace
Notes: EXCLUDE A586/Y579 ATS ROUTES AREA DURING IT'S OPERATIONAL HOURS

EXCLUDE A586/Y579 ATS ROUTES AREA DURING IT'S OPERATIONAL HOURS

13W Type: Special Use Airspace
Notes: EXCLUDE A586/Y579 ATS ROUTES AREA DURING IT'S OPERATIONAL HOURS

EXCLUDE A586/Y579 ATS ROUTES AREA DURING IT'S OPERATIONAL HOURS

144 Type: Special Use Airspace
Notes: UNTIL 0730Z 31 MAR 2024, DURING HOURS BETWEEN 0000Z - 0730Z DAILY, EXCEPT ON SUN AND SPECIFIED DAYS. SPECIFIED DAYS: 2023: 29 APR, 3 - 5 MAY, 17 JUL, 11 AUG, 18 SEP, 23 SEP, 9 OCT, 3 NOV, 23 NOV. 2024: 1 JAN, 8 JAN, 12 FEB, 23 FEB, 20 MAR. VMC ONLY.

31 Type: Special Use Airspace
Notes: EXCEPT YANGYANG CTR

32 Type: Special Use Airspace
Notes: EXCLUDE A586/Y579 ROUTES AREA DURING IT'S OPERATIONAL HOURS

33 Type: Special Use Airspace
Notes: EXCLUDE A586/Y579 ROUTES AREA DURING IT'S OPERATIONAL HOURS

518 Type: Special Use Airspace
Notes: THIS CORRIDOR MAY BE CLOSED WITHOUT PRIOR COORDINATION WITH ATC WHEN DEFCON- III IS DECLARED OR REQUIRED BY URGENT MILITARY SITUATION.

533 Type: Special Use Airspace
Notes: UNTIL 1000Z 31 MAR 2024, DURING HOURS BETWEEN 2200Z - 1000Z DAILY, EXCEPT FOR 2200Z ON SAT - 1000Z ON SUN, AND 2200Z ON THE DAY BEFORE SPECIFIED DAYS - 1000Z ON SPECIFIED DAYS. SPECIFIED DAYS: 2023: 29 APR, 3 - 5 MAY, 17 JUL, 11 AUG, 18 SEP, 23 SEP, 9 OCT, 3 NOV, 23 NOV. 2024: 1 JAN, 8 JAN, 12 FEB, 23 FEB, 20 MAR. VMC ONLY.

63B Type: Special Use Airspace
Notes: EXC RK P 63A AREA EXC SKED AND NON SKED CIVIL AIRLINES, AUTHORIZED BY ATC, OTHER ACFT AUTHORIZED BY MOLIT, LIFE GUARD, POLICE, SAR, MILITARY OPERATION FLIGHT AND FIRE FIGHTING ACFT.

64B Type: Special Use Airspace
Notes: EXC RK P-64A AREA EXC SKED AND NON SKED CIVIL AIRLINES, AUTHORIZED BY ATC, OTHER ACFT AUTHORIZED BY MOLIT, LIFE GUARD, POLICE, SAR, MILITARY OPERATION FLIGHT AND FIRE FIGHTING ACFT.

65A Type: Special Use Airspace
Notes: EXC ONLY ROKAF OPERATION ACFT WARNING RK(P)-61B, RK(P)-62B, RK(P)-63B, RK(P)-64B, RK(P)-65A, RK(P)-65B EXCLUDED SCHEDULED AND NON-SCHEDULED CIVIL AIRLINES, AUTHORIZED BY ATC, OTHER AIRCRAFT AUTHORIZED BY MLTM, LIFE GUARD, POLICE, SAR, MILITARY OPERATION FLIGHT AND FIRE FIGHTING AIRCRAFT.

65B Type: Special Use Airspace

Notes: EXC RK(P)-65A AREA EXC SKED AND NON SKED CIVIL AIRLINES, AUTHORIZED BY ATC, OTHER ACFT AUTHORIZED BY MOLIT, LIFE GUARD, POLICE, SAR, MILITARY OPERATION FLIGHT AND FIRE FIGHTING ACFT.

73 Type: Special Use Airspace
Notes: IF AN AIRCRAFT FLIES TOWARDS RK(P)-73 WITHOUT PROPER CLEARANCE, A TRACER WARNING SHOT WILL BE FIRED. IF THE AIRCRAFT CONTINUES INTO RK(P)-73, IT WILL BE SHOT DOWN WITHOUT FURTHER WARNING.

74 Type: Special Use Airspace
Notes: AIR TO AIR FIRING ROKAF AFOC/DOT CONT VMC EXCLUDE A586/Y579 ATS ROUTES AREA DURING IT'S OPERATIONAL HOURS

A1 Type: Special Use Airspace
Notes: EXCLUDING RJFY CTR. BETWEEN ALTITUDE 1000' & 6000' CONTACT KANOYA APP ON 122.15MHZ. ABOVE ALTITUDE 6000' 1031-1300Z, 2200-2259Z CONTACT KAGOSHIMA APP ON 126.0 MHZ; 2300-1030Z CONTACT KAGOSHIMA TCA ON 120.0MHZ.

A2 Type: Special Use Airspace
Notes: BETWEEN ALTITUDE 1000' & 5000' CONTACT KANOYA APP ON 122.15MHZ. ABOVE ALTITUDE 5000' 1031-1300Z, 2200-2259Z CONTACT KAGOSHIMA APP ON 126.0 MHZ; 2300-1030Z CONTACT KAGOSHIMA TCA ON 120.0MHZ. EXCLUDING RJFY CTR.

A3 Type: Special Use Airspace
Notes: EXCLUDING RJFY CTR. BETWEEN ALTITUDE 4000' & 5000' CONTACT KANOYA APP ON 122.15MHZ. ABOVE ALTITUDE 5000' 1031-1300Z, 2200-2259Z CONTACT KAGOSHIMA APP ON 126.0 MHZ; 2300-1030Z CONTACT KAGOSHIMA TCA ON 120.0MHZ.

A4 Type: Special Use Airspace
Notes: EXCLUDING JSDF TEMPO TRG AREA X-18-2 WHEN ACT. BETWEEN ALTITUDES 4000' & 5000' CONTACT KANOYA APP ON 122.15 MHZ.

AREA 3 Type: Special Use Airspace
Notes: EXCLUDING THE AIRSPACE OF SOUMAGAHARA CONTROL ZONE.

AREA 5 Type: Special Use Airspace
Notes: EXCLUDING THE AIRSPACES WITHIN 2NM RADIUS OF N35 45 15/E136 00 59, N35 44 25/E135 59 17, N35 45 02/E136 01 11 N35 45 10/E136 01 04, N35 42 07/E135 57 47, N35 42 08/E135 57 44 N35 42 14/E135 57 36 BELOW 2000 FT (AGL) RESPECTIVELY.

AREA A1 Type: Special Use Airspace
Notes: BELOW 5000' CONTACT YOKOTA APP/ASR ON 120.7 MHZ. BETWEEN 5000' - FL180 CONTACT YOKOTA APP/ASR ON 118.3 MHZ. EXCLUDING CIV TRG/TESTING AREA KK4-1.

AREA A2 Type: Special Use Airspace
Notes: BELOW 5000' CONTACT YOKOTA APP/ASR ON 120.7 MHZ. BETWEEN 5000' - FL180 CONTACT YOKOTA APP/ASR ON 118.3 MHZ. ABOVE FL180 TO FL240 CONTACT TOKYO ASR ON 123.6 MHZ. EXCLUDING RJTJ CTR.

AREA A3 Type: Special Use Airspace
Notes: BELOW 5000' CONTACT YOKOTA APP/ASR ON 120.7 MHZ. BETWEEN 5000' - FL180 CONTACT YOKOTA APP/ASR ON 118.3 MHZ.

AREA A4 Type: Special Use Airspace
Notes: BELOW 5000' CONTACT YOKOTA APP/ASR ON 120.7 MHZ. BETWEEN 5000' - 12000' CONTACT YOKOTA APP/ASR ON 118.3 MHZ. ABOVE 12000' TO FL240 CONTACT TOKYO ASR ON 123.6 MHZ. EXCLUDING RJTJ AND RJTC CTR.

AREA K Type: Special Use Airspace
Notes: AIRSPACE ABOVE FL240 WILL BE NOTIFIED BY NOTAM RJJJ

AIRSPACE ABOVE FL240 WILL BE NOTIFIED BY NOTAM RJJJ

AIRSPACE ABOVE FL260 WILL BE NOTIFIED BY NOTAM RJJJ

AIRSPACE ABOVE FL310 WILL BE NOTIFIED BY NOTAM RJJJ

AREA N Type: Special Use Airspace
Notes: EXCLUDING TRAINING/TESTING AREAS AREA 9 AND AREA 8.

B1 Type: Special Use Airspace
Notes: EXCLUDING JSDF TEMPO TRG AREA X-19-1 AND X-19-2 WHEN ACT.

B2 Type: Special Use Airspace
Notes: EXCLUDING JSDF TEMPO TRG AREA X-19-1 WHEN ACT.

C Type: Special Use Airspace
Notes: AT OR ABOVE ALTITUDE 4000' 1031-1300Z, 2200-2259Z CONTACT KAGOSHIMA APP ON 126.0 MHZ; 2300-1030Z CONTACT KAGOSHIMA TCA ON 120.0MHZ.

CK 21 2 Type: Special Use Airspace
Notes: EXCLUDING THE AIRSPACE WITHIN 2NM RADIUS OF N35 19 00 E133 56 25 BELOW 2000 FT (AGL).

CK 4 Type: Special Use Airspace
Notes: EXCLUDING THE AIRSPACE WITHIN 4NM RADIUS OF MAIZURU ARP.

ITRA E Type: Special Use Airspace
Notes: THE FOLLOWING FLIGHT PLANNED ROUTES SHALL NOT BE USED WHEN ITRA-E IS ACTIVE: G597 (FL250 OR BLW : BETWEEN DANJU AND LANAT) G585 (FL250 OR BLW : BETWEEN XZE AND SAPRA) Y38 (FL250 OR BLW : BETWEEN STAGE AND SAPRA)

ITRA N2 Type: Special Use Airspace
Notes: EXCLUDING THE AIRSPACE OF ITRA-N3.

ITRA S30 Type: Special Use Airspace
Notes: V71 (FL250 OR BLW: BETWEEN SABAN AND DEMPA) SHALL NOT BE FLIGHT PLANNED WHEN ITRA-S30 IS ACTIVE.

ITRA S31 Type: Special Use Airspace
Notes: V71 (FL250 OR BLW: BETWEEN SABAN AND DEMPA) SHALL NOT BE FLIGHT PLANNED WHEN ITRA-S31 IS ACTIVE.

ITRA S32 Type: Special Use Airspace
Notes: V71 (FL250 OR BLW: BETWEEN SABAN AND DEMPA) SHALL NOT BE FLIGHT PLANNED WHEN ITRA-S32 IS ACTIVE.

ITRA S33 Type: Special Use Airspace
Notes: V71 (FL250 OR BLW: BETWEEN SABAN AND DEMPA) SHALL NOT BE FLIGHT PLANNED WHEN ITRA-S33 IS ACTIVE.

KS 2 4 Type: Special Use Airspace
Notes: EXCLUDING THE AIRSPACES WITHIN 2 NM RADIUS OF N33 29 29 E132 18 31, N33 29 26 E132 18 31 AND N33 29 27 E132 18 39 BELOW 2000' AGL RESPECTIVELY.

KS 3 3 Type: Special Use Airspace
Notes: EXCLUDING AREA KS3-1

KS 3 4 15 Type: Special Use Airspace
Notes: EXCLUDING AREA KS3-1

KS 3 4 5 Type: Special Use Airspace
Notes: EXCLUDING AREA KS3-1

MTFUJI Type: Special Use Airspace
Notes: AIRCRAFT OPERATING IFR MUST MAINTAIN FL160 OR HIGHER FOR TERRAIN CLEARANCE

UA31 Type: Special Use Airspace
Notes: UNMANNED AERIAL VEHICLES ONLY.

UA32 Type: Special Use Airspace
Notes: UNMANNED AERIAL VEHICLES ONLY.

UA33 Type: Special Use Airspace
Notes: UNMANNED AERIAL VEHICLES ONLY.

UA34 Type: Special Use Airspace
Notes: UNMANNED AERIAL VEHICLES ONLY.

UA35 Type: Special Use Airspace
Notes: UNMANNED AERIAL VEHICLES ONLY.

UA36 Type: Special Use Airspace
Notes: UNMANNED AERIAL VEHICLES ONLY.

UA37 Type: Special Use Airspace
Notes: UNMANNED AERIAL VEHICLES ONLY.

UA38 Type: Special Use Airspace
Notes: UNMANNED AERIAL VEHICLES ONLY.

UA39 Type: Special Use Airspace
Notes: UNMANNED AERIAL VEHICLES ONLY.

UA40 Type: Special Use Airspace
Notes: UNMANNED AERIAL VEHICLES ONLY.

UA41 Type: Special Use Airspace
Notes: UNMANNED AERIAL VEHICLES ONLY.

UA42 Type: Special Use Airspace
Notes: UNMANNED AERIAL VEHICLES ONLY.

UA43 Type: Special Use Airspace
Notes: UNMANNED AERIAL VEHICLES ONLY.

UA47 Type: Special Use Airspace
Notes: UNMANNED AERIAL VEHICLES ONLY.

UA48 Type: Special Use Airspace
Notes: UNMANNED AERIAL VEHICLES ONLY.

UA49 Type: Special Use Airspace
Notes: UNMANNED AERIAL VEHICLES ONLY.

UA50 Type: Special Use Airspace
Notes: UNMANNED AERIAL VEHICLES ONLY.

UA51 Type: Special Use Airspace
Notes: UNMANNED AERIAL VEHICLES ONLY.

UA52 Type: Special Use Airspace
Notes: UNMANNED AERIAL VEHICLES ONLY.

UA53 Type: Special Use Airspace
Notes: UNMANNED AERIAL VEHICLES ONLY.

UA54 Type: Special Use Airspace
Notes: UNMANNED AERIAL VEHICLES ONLY.

UA55 Type: Special Use Airspace
Notes: UNMANNED AERIAL VEHICLES ONLY.

UA56 Type: Special Use Airspace
Notes: UNMANNED AERIAL VEHICLES ONLY.

UA57 Type: Special Use Airspace
Notes: UNMANNED AERIAL VEHICLES ONLY.

UA58 Type: Special Use Airspace
Notes: UNMANNED AERIAL VEHICLES ONLY.

UNDESIGN6* Type: Special Use Airspace
Notes: EXC TESTING AREA CK1-1

YOUNGWEOL Type: Special Use Airspace
Notes: EXC UA43 WHEN ACTIVE

DAEGU TMA Type: Terminal Area
Notes: ATS ROUTES ARE EXCLUDED.

ATS ROUTES ARE EXCLUDED.

ATS ROUTES ARE EXCLUDED.

ATS ROUTES ARE EXCLUDED.

HAEMI TMA Type: Terminal Area
Notes: ATS ROUTES ARE EXCLUDED.

ATS ROUTES ARE EXCLUDED.

ATS ROUTES ARE EXCLUDED.

ATS ROUTES ARE EXCLUDED.

ATS ROUTES ARE EXCLUDED.

INCHEON IFR PROCEDURES PROTECT Type: Terminal Area
Notes: SPEED RESTRICTIONS WITHIN KOREAN AIRSPACE ALL ARRIVALS INTO RKSS AND RKSI SHALL OPERATE IN ACCORDANCE WITH THE FLIGHT PROCEDURES FOR THAT AIRPORT. MAXIMUM IAS UNLESS OTHERWISE AUTHORIZED BY ATC: BELOW 10000' 250 KTS AT OR BELOW 2500' AGL WITHIN 4NM OF AN AIRPORT 200 KTS CONTROLLED IFR AIRCRAFT BY SEOUL APPROACH CAN ONLY USE THIS AREA. VFR AIRCRAFT DO NOT USE THIS AREA.

INCHEON TMA Type: Terminal Area
Notes: AIRSPACE FROM ABOVE 10000FT MSL TO FL200 WITHIN SEOUL TMA, EXCLUDING CLASS B.

JEJU TMA Type: Terminal Area
Notes: 1000 FT MSL IS APPLIED OVER THE TERRITORIAL WATERS. 5500 FT MSL IS APPLIED OVER THE HIGH SEAS.

POHANG TMA Type: Terminal Area
Notes: ATS ROUTES ARE EXCLUDED.

ATS ROUTES ARE EXCLUDED.

ATS ROUTES ARE EXCLUDED.

ATS ROUTES ARE EXCLUDED.

ATS ROUTES ARE EXCLUDED.

PYEONGTAEK TMA Type: Terminal Area
Notes: AIRSPACE FROM ABOVE 10000FT MSL TO FL200 WITHIN SEOUL TMA, EXCLUDING CLASS B.

SACHEON TMA Type: Terminal Area
Notes: ATS ROUTES ARE EXCLUDED.

ATS ROUTES ARE EXCLUDED.

SEOUL APPROACH EAST Type: Terminal Area
Notes: SPEED RESTRICTIONS WITHIN KOREAN AIRSPACE ALL ARRIVALS INTO RKSS AND RKSI SHALL OPERATE IN ACCORDANCE WITH THE FLIGHT PROCEDURES FOR THAT AIRPORT. MAXIMUM IAS UNLESS OTHERWISE AUTHORIZED BY ATC: BELOW 10000' 250 KTS AT OR BELOW 2500' AGL WITHIN 4NM OF AN AIRPORT 200 KTS

SEOUL APPROACH WEST Type: Terminal Area
Notes: SPEED RESTRICTIONS WITHIN KOREAN AIRSPACE ALL ARRIVALS INTO RKSS AND RKSI SHALL OPERATE IN ACCORDANCE WITH THE FLIGHT PROCEDURES FOR THAT AIRPORT. MAXIMUM IAS UNLESS OTHERWISE AUTHORIZED BY ATC: BELOW 10000' 250 KTS AT OR BELOW 2500' AGL WITHIN 4NM OF AN AIRPORT 200 KTS

SEOUL TMA Type: Terminal Area
Notes: SPEED RESTRICTIONS WITHIN KOREAN AIRSPACE ALL ARRIVALS INTO RKSS AND RKSI SHALL OPERATE IN ACCORDANCE WITH THE FLIGHT PROCEDURES FOR THAT AIRPORT. MAXIMUM IAS UNLESS OTHERWISE AUTHORIZED BY ATC: BELOW 10000' .... 250 KTS AT OR BELOW 2500' AGL WITHIN 4NM OF AN AIRPORT ...... 200 KTS

SPEED RESTRICTIONS WITHIN KOREAN AIRSPACE ALL ARRIVALS INTO RKSS AND RKSI SHALL OPERATE IN ACCORDANCE WITH THE FLIGHT PROCEDURES FOR THAT AIRPORT. MAXIMUM IAS UNLESS OTHERWISE AUTHORIZED BY ATC: BELOW 10000' 250 KTS AT OR BELOW 2500' AGL WITHIN 4NM OF AN AIRPORT 200 KTS

SPEED RESTRICTIONS WITHIN KOREAN AIRSPACE ALL ARRIVALS INTO RKSS AND RKSI SHALL OPERATE IN ACCORDANCE WITH THE FLIGHT PROCEDURES FOR THAT AIRPORT. MAXIMUM IAS UNLESS OTHERWISE AUTHORIZED BY ATC: BELOW 10000' 250 KTS AT OR BELOW 2500' AGL WITHIN 4NM OF AN AIRPORT 200 KTS

SPEED RESTRICTIONS WITHIN KOREAN AIRSPACE ALL ARRIVALS INTO RKSS AND RKSI SHALL OPERATE IN ACCORDANCE WITH THE FLIGHT PROCEDURES FOR THAT AIRPORT. MAXIMUM IAS UNLESS OTHERWISE AUTHORIZED BY ATC: BELOW 10000' 250 KTS AT OR BELOW 2500' AGL WITHIN 4NM OF AN AIRPORT 200 KTS

SPEED RESTRICTIONS WITHIN KOREAN AIRSPACE ALL ARRIVALS INTO RKSS AND RKSI SHALL OPERATE IN ACCORDANCE WITH THE FLIGHT PROCEDURES FOR THAT AIRPORT. MAXIMUM IAS UNLESS OTHERWISE AUTHORIZED BY ATC: BELOW 10000' 250 KTS AT OR BELOW 2500' AGL WITHIN 4NM OF AN AIRPORT 200 KTS

SPEED RESTRICTIONS WITHIN KOREAN AIRSPACE ALL ARRIVALS INTO RKSS AND RKSI SHALL OPERATE IN ACCORDANCE WITH THE FLIGHT PROCEDURES FOR THAT AIRPORT. MAXIMUM IAS UNLESS OTHERWISE AUTHORIZED BY ATC: BELOW 10000' 250 KTS AT OR BELOW 2500' AGL WITHIN 4NM OF AN AIRPORT 200 KTS

SPEED RESTRICTIONS WITHIN KOREAN AIRSPACE ALL ARRIVALS INTO RKSS AND RKSI SHALL OPERATE IN ACCORDANCE WITH THE FLIGHT PROCEDURES FOR THAT AIRPORT. MAXIMUM IAS UNLESS OTHERWISE AUTHORIZED BY ATC: BELOW 10000' 250 KTS AT OR BELOW 2500' AGL WITHIN 4NM OF AN AIRPORT 200 KTS

SPEED RESTRICTIONS WITHIN KOREAN AIRSPACE ALL ARRIVALS INTO RKSS AND RKSI SHALL OPERATE IN ACCORDANCE WITH THE FLIGHT PROCEDURES FOR THAT AIRPORT. MAXIMUM IAS UNLESS OTHERWISE AUTHORIZED BY ATC: BELOW 10000' 250 KTS AT OR BELOW 2500' AGL WITHIN 4NM OF AN AIRPORT 200 KTS

SPEED RESTRICTIONS WITHIN KOREAN AIRSPACE ALL ARRIVALS INTO RKSS AND RKSI SHALL OPERATE IN ACCORDANCE WITH THE FLIGHT PROCEDURES FOR THAT AIRPORT. MAXIMUM IAS UNLESS OTHERWISE AUTHORIZED BY ATC: BELOW 10000' 250 KTS AT OR BELOW 2500' AGL WITHIN 4NM OF AN AIRPORT 200 KTS

SPEED RESTRICTIONS WITHIN KOREAN AIRSPACE ALL ARRIVALS INTO RKSS AND RKSI SHALL OPERATE IN ACCORDANCE WITH THE FLIGHT PROCEDURES FOR THAT AIRPORT. MAXIMUM IAS UNLESS OTHERWISE AUTHORIZED BY ATC: BELOW 10000' 250 KTS AT OR BELOW 2500' AGL WITHIN 4NM OF AN AIRPORT 200 KTS

WONJU TMA Type: Terminal Area
Notes: ATS ROUTES ARE EXCLUDED.

ATS ROUTES ARE EXCLUDED.

ATS ROUTES ARE EXCLUDED.

ATS ROUTES ARE EXCLUDED.

NEU Type: VOR
Notes: ON REQUEST BELOW FL240.

KANSU Type: Waypoint
Notes: CROSS KANSU BETWEEN FL266 AND FL397.

LAMEN Type: Waypoint
Notes: EASTBOUND TRAFFIC DEPARTING FROM SHANGHAI PUDONG AND HONGQIAO AIRPORTS UNABLE TO REACH LAMEN OR 124E LONGITUDE AT FL250 MAY BE INSTRUCTED TO CROSS LAMEN OR 124E LONGITUDE AT OR ABOVE FL230 IN ORDER TO REACH AND MAINTAIN FL250 OR ABOVE BY 20NM WEST OF SADLI OR 125E LONGITUDE.

ONIKU Type: Waypoint
Notes: AKARA - FUKUE CORRIDOR: WESTBOUND FLIGHTS SHALL FLIGHT PLAN FL240, FL280, FL300 OR FL400. REQUEST ATC CLEARANCE TO CROSS ONIKU INT AT THESE FLIGHT LEVELS WELL BEFORE CROSSING ONIKU INT.

SADLI Type: Waypoint
Notes: ATC SERVICE FOR WESTBOUND TRAFFIC WILL BE TRANSFERRED FROM INCHEON ACC TO SHANGHAI ACC AT FIX SADLI ON FREQUENCY 120.95MHZ (PRIMARY) OR 134.00MHZ (SECONDARY). ATC SERVICE FOR EASTBOUND TRAFFIC WILL BE TRANSFERRED FROM SHANGHAI ACC TO INCHEON ACC AT FIX SADLI OR 125E LONGITUDE ON FREQUENCY 125.725MHZ (PRIMARY) OR 132.825MHZ (SECONDARY).

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KHABAROVSK/NOVY CTA Type: Control Area (Airport)
Notes: CLASS A AIRSPACE OUTSIDE THE TERRITORY OF THE RUSSIAN FEDERATION IS ON ATS ROUTES ONLY.

CLASS C AIRSPACE OUTSIDE THE TERRITORY OF THE RUSSIAN FEDERATION IS ON ATS ROUTES ONLY.

YOKOTA CTR Type: Control Zone (CTZ/CTR)
Notes: EXCLUDING TACHIKAWA AND IRUMA CTR.

KZAK Type: FIR
Notes: CPDLC: USE LOGON ADDRESS KZAK FOR ALL CPDLC COMMUNICATIONS IN THE OAKLAND OCEANIC FIR. WHEN MAKING HF VOICE CHECK-IN WITH SAN FRANCISCO RADIO UPON TRANSFERRING DATA LINK CONTACT TO SAN FRANCISCO, SFO RADIO REQUESTS YOU INCLUDE; POINT OF DEPARTURE, DESTINATION, A/C REGISTRATION AND SELCAL CODE. FOR AIRCRAFT DEPARTING FROM AIRPORTS ALONG THE WEST COAST OF NORTH AMERICA,

GUAM AND HAWAII, OAKLAND OCEANIC CONTROL REQUIRES THAT DATA-LINK AIRCRAFT NOT LOGON TO OAKLAND OCEANIC (KZAK) UNTIL AFTER LEAVING 10,000' MSL. FOR AIRCRAFT ENTERING THE OAKLAND OCEANIC FIR FROM NON-CPDLC AIRSPACE: LOG ON TO CPDLC AT LEAST 15 BUT NOT MORE THAN 45 MINUTES PRIOR TO ENTERING. FOR AIRCRAFT ENTERING THE OAKLAND OCEANIC FIR FROM ADJACENT CPDLC AIRSPACE: IF KZAK IS THE ACTIVE CENTER CONTACT SAN FRANCISCO RADIO. IF KZAK IS NOT THE ACTIVE CENTER, TERMINATE THE CPDLC CONNECTION WITHIN 5 MINUTES AFTER THE BOUNDARY IS CROSSED, THEN LOG ON TO KZAK AND CONTACT SAN FRANCISCO RADIO. FOR AIRCRAFT OVER-FLYING HONOLULU CERAP: AIRCRAFT WILL RECEIVE AN END SERVICE MESSAGE THAT WILL RESULT IN TERMINATION OF CPDLC. AIRCRAFT SHALL RE-LOG ON TO CPDLC PRIOR TO REENTERING OAKLAND OCEANIC FIR. FOR AIRCRAFT ENTERING GUAM CERAP: CONTACT GUAM CERAP 250 MILES OUT ON 118.7, SQUAWK 2100. FOR AIRCRAFT OVER-FLYING GUAM CERAP: CPDLC CONNECTION WITH OAKLAND MAY BE TERMINATED WITHIN THE GUAM CERAP. IF THE CPDLC CONNECTION WITH KZAK IS NOT TERMINATED, DO NOT USE CPDLC FOR ATC UNTIL GUAM CERAP ADVISES YOU TO TO AGAIN CONTACT ENROUTE COMMUNICATIONS OR SAN FRANCISCO RADIO. IT MAY BE NECESSARY TO LOG BACK ON TO CPDLC WITH KZAK 10-15 MINUTES PRIOR TO EXITING GUAM CERAP IF THE CPDLC CONNECTION WAS TERMINATED. CPDLC: INMARSAT: INMARSAT SECURITY NUMBER FOR OAKLAND CENTER IS 436697 INMARSAT: INMARSAT: INMARSAT SECURITY NUMBER FOR SAN FRANCISCO RADIO IS 436625 INMARSAT: SATCOM: SATCOM VOICE DIRECT DIAL FOR OAKLAND CENTER IS 1-510-745-3415 SATCOM: PILOTS SHOULD MONITOR VHF EMERGENCY FREQUENCY 121.5 MHZ ON LONG OVERWATER ROUTES WHEN POSSIBLE. SEE VHF EMERGENCY FREQUENCY REQUIREMENT. POSITION REPORTS OVER OAKLAND OCEANIC OCA/FIR 120 W BOUNDARIES A. AIRCRAFT ENTERING THE OAKLAND OCA/FIR OVER 120 DEGREES WEST LONGITUDE WITHOUT A KZAK ADS-C CONNECTION ARE REQUESTED TO FORWARD BOUNDARY POSIT

RJJJ Type: FIR
Notes: SPEED RESTRICTIONS WITHIN JAPAN AIRSPACE MAXIMUM IAS UNLESS OTHERWISE AUTHORIZED BY ATC. WITHIN AN APPROACH CONTROL AREA BELOW 10000' MSL 250 KIAS WITHIN A CONTROL ZONE 250 KTS PILOTS SHOULD MONITOR VHF EMERGENCY FREQUENCY 121.5 MHZ ON LONG OVERWATER ROUTES WHEN POSSIBLE. SEE VHF EMERGENCY FREQUENCY REQUIREMENT. CPDLC: CPDLC SERVICES ARE AVAILABLE WITH LOGON ADDRESS OF RJJJ IN FUKUOKA FIR CPDLC: INMARSAT: INMARSAT SECURITY NUMBER IS 443101 INMARSAT: SATCOM: SATCOM VOICE DIRECT DIAL IS 81-78-99-36-501 SATCOM:

UHHH Type: FIR
Notes: INMARSAT: INMARSAT SECURITY NUMBER FOR KHABAROVSK ACC IS 427324 INMARSAT: RVSM AIRSPACE FL290-FL410 INCLUSIVE.

UHMM Type: FIR
Notes: CPDLC: CPDLC SERVICES ARE AVAILABLE WITH LOGON ADDRESS OF GDXB IN MAGADAN FIR CPDLC: INMARSAT: INMARSAT SECURITY NUMBER FOR MAGADAN ACC IS 427336 INMARSAT: INMARSAT: INMARSAT SECURITY NUMBER FOR PETROPAVLOVSK-KAMCHATSKY ACC IS 427354 INMARSAT: SATCOM: SATCOM VOICE DIRECT DIAL FOR MAGADAN ACC IS 74-13-260-6719 SATCOM: SATCOM: SATCOM VOICE DIRECT DIAL FOR PETROPAVLOVSK-KAMCHATSKY ACC IS 74-15-319-9395 SATCOM: PILOTS SHOULD MONITOR VHF EMERGENCY FREQUENCY 121.5 MHZ ON LONG OVERWATER ROUTES WHEN POSSIBLE. SEE VHF EMERGENCY FREQUENCY REQUIREMENT. RVSM AIRSPACE FL290-FL410 INCLUSIVE.

1592 Type: Special Use Airspace
Notes: THE RESTRICTION IS NOT APPLICABLE TO FLIGHTS CARRIED OUT ACCORDING TO SID AND APCH PROCEDURES OF YUZHNO-KURILSK/MENDELEEVO AD.

532 Type: Special Use Airspace
Notes: UNTIL 0900Z 31 MAR 2024, DURING HOURS BETWEEN 2200Z - 0900Z DAILY, EXCEPT FOR 2200Z ON SAT - 0900Z ON SUN, AND 2200Z ON THE DAY BEFORE SPECIFIED DAYS - 0900Z ON SPECIFIED DAYS. SPECIFIED DAYS: 2023: 29 APR, 3 - 5 MAY, 17 JUL, 11 AUG, 18 SEP, 23 SEP, 9 OCT, 3 NOV, 23 NOV. 2024: 1 JAN, 8 JAN, 12 FEB, 23 FEB, 20 MAR. VMC ONLY.

AREA 3 Type: Special Use Airspace
Notes: EXCLUDING THE AIRSPACE OF SOUMAGAHARA CONTROL ZONE.

AREA A1 Type: Special Use Airspace
Notes: BELOW 5000' CONTACT YOKOTA APP/ASR ON 120.7 MHZ. BETWEEN 5000' - FL180 CONTACT YOKOTA APP/ASR ON 118.3 MHZ. EXCLUDING CIV TRG/TESTING AREA KK4-1.

AREA A2 Type: Special Use Airspace
Notes: BELOW 5000' CONTACT YOKOTA APP/ASR ON 120.7 MHZ. BETWEEN 5000' - FL180 CONTACT YOKOTA APP/ASR ON 118.3 MHZ. ABOVE FL180 TO FL240 CONTACT TOKYO ASR ON 123.6 MHZ. EXCLUDING RJTJ CTR.

AREA A3 Type: Special Use Airspace
Notes: BELOW 5000' CONTACT YOKOTA APP/ASR ON 120.7 MHZ. BETWEEN 5000' - FL180 CONTACT YOKOTA APP/ASR ON 118.3 MHZ.

AREA A4 Type: Special Use Airspace
Notes: BELOW 5000' CONTACT YOKOTA APP/ASR ON 120.7 MHZ. BETWEEN 5000' - 12000' CONTACT YOKOTA APP/ASR ON 118.3 MHZ. ABOVE 12000' TO FL240 CONTACT TOKYO ASR ON 123.6 MHZ. EXCLUDING RJTJ AND RJTC CTR.

AREA E Type: Special Use Airspace
Notes: EXCLUDING R-121.

HK 2 11 Type: Special Use Airspace
Notes: EXCLUDING THE AIRSPACE WITHIN 5NM RADIUS OF OBIHIRO AIRPORT/RJCB (424400N/1431302E)

HK 2 2 Type: Special Use Airspace
Notes: EXCLUDING AREA HK2-13.

HK 2 4 Type: Special Use Airspace
Notes: EXC THE AIRSPACE WITHIN 5NM RADIUS OF TOKACHI AERODROME/RJCT (425325N/1430930E).

HK 2 5 Type: Special Use Airspace
Notes: EXC THE AIRSPACE WITHIN 5NM RADIUS OF TOKACHI AERODROME/RJCT (425325N/1430930E) AND THE AIRSPACE WITHIN 5NM RADIUS OF OBIHIRO AIRPORT/RJCB (424400N/1431302E).

HK 2 7 Type: Special Use Airspace
Notes: EXC THE AIRSPACE WITHIN 5NM RADIUS OF TOKACHI AERODROME/RJCT (425325N/1430930E) AND THE AIRSPACE WITHIN 5NM RADIUS OF OBIHIRO AIRPORT/RJCB (424400N/1431302E).

HK 2 9 Type: Special Use Airspace
Notes: EXCLUDING THE AIRSPACE WITHIN 5NM RADIUS OF OBIHIRO AIRPORT/RJCB (424400N/1431302E)

MTFUJI Type: Special Use Airspace
Notes: AIRCRAFT OPERATING IFR MUST MAINTAIN FL160 OR HIGHER FOR TERRAIN CLEARANCE

UNDESIGN1 Type: Special Use Airspace
Notes: CONTACT MISAWA APP/ASR ON 120.7 MHZ AT OR BELOW 20,000 FEET.

OJT Type: VOR
Notes: ON REQUEST BELOW FL240.

KAGIS Type: Waypoint
Notes: HUC MRA 11000

OBCHI Type: Waypoint
Notes: ON REQUEST AT AND ABOVE FL240.

PABBA Type: Waypoint
Notes: HUC MRA FL280

VACKY Type: Waypoint
Notes: XAC MRA FL290

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KZAK Type: FIR
Notes: CPDLC: USE LOGON ADDRESS KZAK FOR ALL CPDLC COMMUNICATIONS IN THE OAKLAND OCEANIC FIR. WHEN MAKING HF VOICE CHECK-IN WITH SAN FRANCISCO RADIO UPON TRANSFERRING DATA LINK CONTACT TO SAN FRANCISCO, SFO RADIO REQUESTS YOU INCLUDE; POINT OF DEPARTURE, DESTINATION, A/C REGISTRATION AND SELCAL CODE. FOR AIRCRAFT DEPARTING FROM AIRPORTS ALONG THE WEST COAST OF NORTH AMERICA, GUAM AND HAWAII, OAKLAND OCEANIC CONTROL REQUIRES THAT DATA-LINK AIRCRAFT NOT LOGON TO OAKLAND OCEANIC (KZAK) UNTIL AFTER LEAVING 10,000' MSL. FOR AIRCRAFT ENTERING THE OAKLAND OCEANIC FIR FROM NON-CPDLC AIRSPACE: LOG ON TO CPDLC AT LEAST 15 BUT NOT MORE THAN 45 MINUTES PRIOR TO ENTERING. FOR AIRCRAFT ENTERING THE OAKLAND OCEANIC FIR FROM ADJACENT CPDLC AIRSPACE: IF KZAK IS THE ACTIVE CENTER CONTACT SAN FRANCISCO RADIO. IF KZAK IS NOT THE ACTIVE CENTER, TERMINATE THE CPDLC CONNECTION WITHIN 5 MINUTES AFTER THE BOUNDARY IS CROSSED, THEN LOG ON TO KZAK AND CONTACT SAN FRANCISCO RADIO. FOR AIRCRAFT OVER-FLYING HONOLULU CERAP: AIRCRAFT WILL RECEIVE AN END SERVICE MESSAGE THAT WILL RESULT IN TERMINATION OF CPDLC. AIRCRAFT SHALL RE-LOG ON TO CPDLC PRIOR TO REENTERING OAKLAND OCEANIC FIR. FOR AIRCRAFT ENTERING GUAM CERAP: CONTACT GUAM CERAP 250 MILES OUT ON 118.7, SQUAWK 2100. FOR AIRCRAFT OVER-FLYING GUAM CERAP: CPDLC CONNECTION WITH OAKLAND MAY BE TERMINATED WITHIN THE GUAM CERAP. IF THE CPDLC CONNECTION WITH KZAK IS NOT TERMINATED, DO NOT USE CPDLC FOR ATC UNTIL GUAM CERAP ADVISES YOU TO TO AGAIN CONTACT ENROUTE COMMUNICATIONS OR SAN FRANCISCO RADIO. IT MAY BE NECESSARY TO LOG BACK ON TO CPDLC WITH KZAK 10-15 MINUTES PRIOR TO EXITING GUAM CERAP IF THE CPDLC CONNECTION WAS TERMINATED. CPDLC: INMARSAT: INMARSAT SECURITY NUMBER FOR OAKLAND CENTER IS 436697 INMARSAT: INMARSAT: INMARSAT SECURITY NUMBER FOR SAN FRANCISCO RADIO IS 436625 INMARSAT: SATCOM: SATCOM VOICE DIRECT DIAL FOR OAKLAND CENTER IS 1-510-745-3415 SATCOM: PILOTS SHOULD MONITOR VHF EMERGENCY FREQUENCY 121.5 MHZ ON LONG OVERWATER ROUTES WHEN POSSIBLE. SEE VHF EMERGENCY FREQUENCY REQUIREMENT. POSITION REPORTS OVER OAKLAND OCEANIC OCA/FIR 120 W BOUNDARIES A. AIRCRAFT ENTERING THE OAKLAND OCA/FIR OVER 120 DEGREES WEST LONGITUDE WITHOUT A KZAK ADS-C CONNECTION ARE REQUESTED TO FORWARD BOUNDARY POSIT

PAZA Type: FIR
Notes: CPDLC: USE LOGON ADDRESS PAZN FOR ALL CPDLC COMMUNICATIONS IN THE ANCHORAGE DOMESTIC FIR WEST OF 165W AND SOUTH OF 63N. USE LOGON ADDRESS PAZA FOR ALL CPDLC COMMUNICATIONS IN THE ANCHORAGE DOMESTIC FIR SOUTH OF 73N AND EAST OF 165W. AIRCRAFT ENTERING ANCHORAGE FIR AIRSPACE FROM THE MAGADAN, EDMONTON, VANCOUVER, OR OAKLAND FIRS WILL BE PROVIDED AUTOMATIC FANS ADDRESS FORWARDING FROM THE ATC GROUND COMPUTER. AIRCRAFT DEPARTING ALASKAN AIRPORTS SHOULD LOGON AFTER DEPARTURE, BUT BEFORE LEAVING FL180. AFTER LOGON, ANCHORAGE ARTCC AUTOMATION WILL PROVIDE AUTOMATIC FANS ADDRESS FORWARDING FOR FLIGHTS ENTERING THE MAGADAN, EDMONTON, VANCOUVER AND OAKLAND FIRS. NOTE: - THE USE OF CPDLC DOES NOT REMOVE REQUIREMENTS FOR MONITORING VHF/HF FREQUENCIES. - AIRCRAFT WITHIN VHF COVERAGE MAY MAKE POSITION REPORTS VIA CPDLC. - WEST OF 165W, ALL REQUESTS

TO ATC MAY BE MADE VIA CPDLC. - EAST OF 165W, REQUESTS TO ATC SHOULD BE MADE VIA VHF IF WITHIN VHF COVERAGE. CPDLC: INMARSAT: INMARSAT SECURITY NUMBER FOR ANCHORAGE ATC IS 436602. INMARSAT: SATCOM: SATCOM VOICE DIRECT DIAL FOR ANCHORAGE ATC IS 907-269-1103. SATCOM:

CPDLC: USE LOGON ADDRESS PAZN FOR ALL CPDLC COMMUNICATIONS IN THE ANCHORAGE OCEANIC FIR. AIRCRAFT ENTERING ANCHORAGE FIR AIRSPACE FROM THE MAGADAN, OAKLAND OR FUKUOKA FIRS WILL BE PROVIDED AUTOMATIC FANS ADDRESS FORWARDING FROM THE ATC GROUND COMPUTER. AIRCRAFT DEPARTING ALASKAN AIRPORTS SHOULD LOGON AFTER DEPARTURE, BUT BEFORE LEAVING FL180. AFTER LOGON, ANCHORAGE ARTCC AUTOMATION WILL PROVIDE AUTOMATIC FANS ADDRESS FORWARDING FOR FLIGHTS ENTERING THE MAGADAN, OAKLAND, AND FUKUOKA FIRS. NOTE: - THE USE OF CPDLC DOES NOT REMOVE REQUIREMENTS FOR MONITORING VHF/HF FREQUENCIES. - AIRCRAFT WITHIN VHF COVERAGE MAY MAKE POSITION REPORTS VIA CPDLC. CPDLC: PILOTS SHOULD MONITOR VHF EMERGENCY FREQUENCY 121.5 MHZ ON LONG OVERWATER ROUTES WHEN POSSIBLE. SEE VHF EMERGENCY FREQUENCY REQUIREMENT. INMARSAT: INMARSAT SECURITY NUMBER FOR ANCHORAGE ATC IS 436602 INMARSAT: INMARSAT: INMARSAT SECURITY NUMBER FOR SAN FRANCISCO RADIO IS 436625 INMARSAT: SATCOM: SATCOM VOICE DIRECT DIAL FOR ANCHORAGE ATC IS 1-907-269-2590. SATCOM: HF SERVICE IN THE ANCHORAGE OCEANIC FIR IS PROVIDED VIA ARINC. PILOTS MUST MAINTAIN HF COMMUNICATIONS CAPABILITY WITH ARINC AT ALL TIMES WITHIN THE ANCHORAGE OCEANIC FIR.

RJJJ Type: FIR
Notes: SPEED RESTRICTIONS WITHIN JAPAN AIRSPACE MAXIMUM IAS UNLESS OTHERWISE AUTHORIZED BY ATC. WITHIN AN APPROACH CONTROL AREA BELOW 10000' MSL 250 KIAS WITHIN A CONTROL ZONE 250 KTS PILOTS SHOULD MONITOR VHF EMERGENCY FREQUENCY 121.5 MHZ ON LONG OVERWATER ROUTES WHEN POSSIBLE. SEE VHF EMERGENCY FREQUENCY REQUIREMENT. CPDLC: CPDLC SERVICES ARE AVAILABLE WITH LOGON ADDRESS OF RJJJ IN FUKUOKA FIR CPDLC: INMARSAT: INMARSAT SECURITY NUMBER IS 443101 INMARSAT: SATCOM: SATCOM VOICE DIRECT DIAL IS 81-78-99-36-501 SATCOM:

UHMM Type: FIR
Notes: CPDLC: CPDLC SERVICES ARE AVAILABLE WITH LOGON ADDRESS OF GDXB IN MAGADAN FIR CPDLC: INMARSAT: INMARSAT SECURITY NUMBER FOR MAGADAN ACC IS 427336 INMARSAT: INMARSAT: INMARSAT SECURITY NUMBER FOR PETROPAVLOVSK-KAMCHATSKY ACC IS 427354 INMARSAT: SATCOM: SATCOM VOICE DIRECT DIAL FOR MAGADAN ACC IS 74-13-260-6719 SATCOM: SATCOM: SATCOM VOICE DIRECT DIAL FOR PETROPAVLOVSK-KAMCHATSKY ACC IS 74-15-319-9395 SATCOM: PILOTS SHOULD MONITOR VHF EMERGENCY FREQUENCY 121.5 MHZ ON LONG OVERWATER ROUTES WHEN POSSIBLE. SEE VHF EMERGENCY FREQUENCY REQUIREMENT. RVSM AIRSPACE FL290-FL410 INCLUSIVE.

1522 Type: Special Use Airspace
Notes: THE RESTRICTION IS NOT APPLICABLE TO AIRCRAFT CARRYING OUT TAKE-OFF/LANDING FROM/ON PETROPAVLOVSK-KAMCHATSKY/YELIZOVO AD AT 1500 M/4900 FT AMSL OR ABOVE, EXCEPT FOR THE TIME OF BLASTING OPERATIONS NOTIFIED BY NOTAM.

325 Type: Special Use Airspace
Notes: FLIGHTS OF ACFT ARE ALLOWED FROM/TO PETROPAVLOVSK-KAMCHATSKY/YELIZOVO AD.

362 Type: Special Use Airspace
Notes: THE RESTRICTION IS NOT APPLICABLE TO FLIGHTS OF STATE AVIATION ACFT.

PAZA Type: UIR
Notes: CPDLC: USE LOGON ADDRESS PAZN FOR ALL CPDLC COMMUNICATIONS IN THE ANCHORAGE DOMESTIC FIR WEST OF 165W AND SOUTH OF 63N. USE LOGON ADDRESS PAZA FOR ALL CPDLC COMMUNICATIONS IN THE ANCHORAGE DOMESTIC FIR SOUTH OF 73N AND EAST OF 165W. AIRCRAFT ENTERING ANCHORAGE FIR AIRSPACE FROM THE MAGADAN, EDMONTON, VANCOUVER, OR OAKLAND FIRS WILL BE PROVIDED AUTOMATIC FANS ADDRESS FORWARDING FROM THE ATC GROUND COMPUTER. AIRCRAFT DEPARTING ALASKAN AIRPORTS SHOULD LOGON AFTER DEPARTURE, BUT BEFORE LEAVING FL180. AFTER LOGON, ANCHORAGE ARTCC AUTOMATION WILL PROVIDE AUTOMATIC FANS ADDRESS FORWARDING FOR FLIGHTS ENTERING THE MAGADAN, EDMONTON, VANCOUVER AND OAKLAND FIRS. NOTE: - THE USE OF CPDLC DOES NOT REMOVE REQUIREMENTS FOR MONITORING VHF/HF FREQUENCIES. - AIRCRAFT WITHIN VHF COVERAGE MAY MAKE POSITION REPORTS VIA CPDLC. - WEST OF 165W, ALL REQUESTS TO ATC MAY BE MADE VIA CPDLC. - EAST OF 165W, REQUESTS TO ATC SHOULD BE MADE VIA VHF IF WITHIN VHF COVERAGE. CPDLC: INMARSAT: INMARSAT SECURITY NUMBER FOR ANCHORAGE ATC IS 436602. INMARSAT: SATCOM: SATCOM VOICE DIRECT DIAL FOR ANCHORAGE ATC IS 1-907-269-1103. SATCOM:

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KIPNUK Type: Class E5 Airspace
Notes: EXCLUDES THAT AREA OUTSIDE 12 MILES FROM THE SHORELINE WITHIN NORTON SOUND LOW AND CONTROL 1234L.

MAGADAN CTA Type: Control Area (Airport)
Notes: CLASS C AIRSPACE OUTSIDE THE TERRITORY OF THE RUSSIAN FEDERATION IS ON ATS ROUTES ONLY.

ST PETERSBURG CTA Type: Control Area (Airport)
Notes: CLASS A AIRSPACE OUTSIDE THE TERRITORY OF THE RUSSIAN FEDERATION IS ON ATS ROUTES ONLY.

CLASS C AIRSPACE OUTSIDE THE TERRITORY OF THE RUSSIAN FEDERATION IS ON ATS ROUTES ONLY.

KZAK Type: FIR
Notes: CPDLC: USE LOGON ADDRESS KZAK FOR ALL CPDLC COMMUNICATIONS IN THE OAKLAND OCEANIC FIR. WHEN MAKING HF VOICE CHECK-IN WITH SAN FRANCISCO RADIO UPON TRANSFERRING DATA LINK CONTACT TO SAN FRANCISCO, SFO RADIO REQUESTS YOU INCLUDE; POINT OF DEPARTURE, DESTINATION, A/C REGISTRATION AND SELCAL CODE. FOR AIRCRAFT DEPARTING FROM AIRPORTS ALONG THE WEST COAST OF NORTH AMERICA, GUAM AND HAWAII, OAKLAND OCEANIC CONTROL REQUIRES THAT DATA-LINK AIRCRAFT NOT LOGON TO OAKLAND OCEANIC (KZAK) UNTIL AFTER LEAVING 10,000' MSL. FOR AIRCRAFT ENTERING THE OAKLAND OCEANIC FIR FROM NON-CPDLC AIRSPACE: LOG ON TO CPDLC AT LEAST 15 BUT NOT MORE THAN 45 MINUTES PRIOR TO ENTERING. FOR AIRCRAFT ENTERING THE OAKLAND OCEANIC FIR FROM ADJACENT CPDLC AIRSPACE: IF KZAK IS

THE ACTIVE CENTER CONTACT SAN FRANCISCO RADIO. IF KZAK IS NOT THE ACTIVE CENTER, TERMINATE THE CPDLC CONNECTION WITHIN 5 MINUTES AFTER THE BOUNDARY IS CROSSED, THEN LOG ON TO KZAK AND CONTACT SAN FRANCISCO RADIO. FOR AIRCRAFT OVER-FLYING HONOLULU CERAP: AIRCRAFT WILL RECEIVE AN END SERVICE MESSAGE THAT WILL RESULT IN TERMINATION OF CPDLC. AIRCRAFT SHALL RE-LOG ON TO CPDLC PRIOR TO REENTERING OAKLAND OCEANIC FIR. FOR AIRCRAFT ENTERING GUAM CERAP: CONTACT GUAM CERAP 250 MILES OUT ON 118.7, SQUAWK 2100. FOR AIRCRAFT OVER-FLYING GUAM CERAP: CPDLC CONNECTION WITH OAKLAND MAY BE TERMINATED WITHIN THE GUAM CERAP. IF THE CPDLC CONNECTION WITH KZAK IS NOT TERMINATED, DO NOT USE CPDLC FOR ATC UNTIL GUAM CERAP ADVISES YOU TO TO AGAIN CONTACT ENROUTE COMMUNICATIONS OR SAN FRANCISCO RADIO. IT MAY BE NECESSARY TO LOG BACK ON TO CPDLC WITH KZAK 10-15 MINUTES PRIOR TO EXITING GUAM CERAP IF THE CPDLC CONNECTION WAS TERMINATED. CPDLC: INMARSAT: INMARSAT SECURITY NUMBER FOR OAKLAND CENTER IS 436697 INMARSAT: INMARSAT: INMARSAT SECURITY NUMBER FOR SAN FRANCISCO RADIO IS 436625 INMARSAT: SATCOM: SATCOM VOICE DIRECT DIAL FOR OAKLAND CENTER IS 1-510-745-3415 SATCOM: PILOTS SHOULD MONITOR VHF EMERGENCY FREQUENCY 121.5 MHZ ON LONG OVERWATER ROUTES WHEN POSSIBLE. SEE VHF EMERGENCY FREQUENCY REQUIREMENT. POSITION REPORTS OVER OAKLAND OCEANIC OCA/FIR 120 W BOUNDARIES A. AIRCRAFT ENTERING THE OAKLAND OCA/FIR OVER 120 DEGREES WEST LONGITUDE WITHOUT A KZAK ADS-C CONNECTION ARE REQUESTED TO FORWARD BOUNDARY POSIT

PAZA Type: FIR
Notes: CPDLC: USE LOGON ADDRESS PAZN FOR ALL CPDLC COMMUNICATIONS IN THE ANCHORAGE DOMESTIC FIR WEST OF 165W AND SOUTH OF 63N. USE LOGON ADDRESS PAZA FOR ALL CPDLC COMMUNICATIONS IN THE ANCHORAGE DOMESTIC FIR SOUTH OF 73N AND EAST OF 165W. AIRCRAFT ENTERING ANCHORAGE FIR AIRSPACE FROM THE MAGADAN, EDMONTON, VANCOUVER, OR OAKLAND FIRS WILL BE PROVIDED AUTOMATIC FANS ADDRESS FORWARDING FROM THE ATC GROUND COMPUTER. AIRCRAFT DEPARTING ALASKAN AIRPORTS SHOULD LOGON AFTER DEPARTURE, BUT BEFORE LEAVING FL180. AFTER LOGON, ANCHORAGE ARTCC AUTOMATION WILL PROVIDE AUTOMATIC FANS ADDRESS FORWARDING FOR FLIGHTS ENTERING THE MAGADAN, EDMONTON, VANCOUVER AND OAKLAND FIRS. NOTE: - THE USE OF CPDLC DOES NOT REMOVE REQUIREMENTS FOR MONITORING VHF/HF FREQUENCIES. - AIRCRAFT WITHIN VHF COVERAGE MAY MAKE POSITION REPORTS VIA CPDLC. - WEST OF 165W, ALL REQUESTS TO ATC MAY BE MADE VIA CPDLC. - EAST OF 165W, REQUESTS TO ATC SHOULD BE MADE VIA VHF IF WITHIN VHF COVERAGE. CPDLC: INMARSAT: INMARSAT SECURITY NUMBER FOR ANCHORAGE ATC IS 436602. INMARSAT: SATCOM: SATCOM VOICE DIRECT DIAL FOR ANCHORAGE ATC IS 907-269-1103. SATCOM:

CPDLC: USE LOGON ADDRESS PAZN FOR ALL CPDLC COMMUNICATIONS IN THE ANCHORAGE OCEANIC FIR. AIRCRAFT ENTERING ANCHORAGE FIR AIRSPACE FROM THE MAGADAN, OAKLAND OR FUKUOKA FIRS WILL BE PROVIDED AUTOMATIC FANS ADDRESS FORWARDING FROM THE ATC GROUND COMPUTER. AIRCRAFT DEPARTING ALASKAN AIRPORTS SHOULD LOGON AFTER DEPARTURE, BUT BEFORE LEAVING FL180. AFTER LOGON, ANCHORAGE ARTCC AUTOMATION WILL PROVIDE AUTOMATIC FANS ADDRESS FORWARDING FOR FLIGHTS ENTERING THE MAGADAN, OAKLAND, AND FUKUOKA FIRS. NOTE: - THE USE OF CPDLC DOES NOT REMOVE REQUIREMENTS FOR MONITORING VHF/HF FREQUENCIES. - AIRCRAFT WITHIN VHF COVERAGE MAY MAKE POSITION REPORTS VIA CPDLC. CPDLC: PILOTS SHOULD MONITOR VHF EMERGENCY FREQUENCY 121.5 MHZ ON LONG OVERWATER ROUTES WHEN POSSIBLE. SEE VHF EMERGENCY FREQUENCY REQUIREMENT. INMARSAT: INMARSAT SECURITY NUMBER FOR ANCHORAGE ATC IS 436602 INMARSAT: INMARSAT: INMARSAT SECURITY NUMBER FOR SAN FRANCISCO RADIO IS 436625 INMARSAT: SATCOM: SATCOM VOICE DIRECT DIAL FOR ANCHORAGE ATC IS 1-907-269-2590. SATCOM: HF SERVICE IN THE ANCHORAGE OCEANIC FIR IS PROVIDED VIA ARINC. PILOTS MUST MAINTAIN HF COMMUNICATIONS CAPABILITY WITH ARINC AT ALL TIMES WITHIN THE ANCHORAGE OCEANIC FIR.

UHMM Type: FIR
Notes: CPDLC: CPDLC SERVICES ARE AVAILABLE WITH LOGON ADDRESS OF GDXB IN MAGADAN FIR CPDLC: INMARSAT: INMARSAT SECURITY NUMBER FOR MAGADAN ACC IS 427336 INMARSAT: INMARSAT: INMARSAT SECURITY NUMBER FOR PETROPAVLOVSK-KAMCHATSKY ACC IS 427354 INMARSAT: SATCOM: SATCOM VOICE DIRECT DIAL FOR MAGADAN ACC IS 74-13-260-6719 SATCOM: SATCOM: SATCOM VOICE DIRECT DIAL FOR PETROPAVLOVSK-KAMCHATSKY ACC IS 74-15-319-9395 SATCOM: PILOTS SHOULD MONITOR VHF EMERGENCY FREQUENCY 121.5 MHZ ON LONG OVERWATER ROUTES WHEN POSSIBLE. SEE VHF EMERGENCY FREQUENCY REQUIREMENT. RVSM AIRSPACE FL290-FL410 INCLUSIVE.

ULLL Type: FIR
Notes: INMARSAT: INMARSAT SECURITY NUMBER FOR ARCHANGELSK ACC IS 427305 INMARSAT: INMARSAT: INMARSAT SECURITY NUMBER FOR MURMANSK ACC IS 427341 INMARSAT: INMARSAT: INMARSAT SECURITY NUMBER FOR SYKTYVKAR ACC IS 427366 INMARSAT: RVSM AIRSPACE FL290-FL410 INCLUSIVE.

PAZA Type: UIR
Notes: CPDLC: USE LOGON ADDRESS PAZN FOR ALL CPDLC COMMUNICATIONS IN THE ANCHORAGE DOMESTIC FIR WEST OF 165W AND SOUTH OF 63N. USE LOGON ADDRESS PAZA FOR ALL CPDLC COMMUNICATIONS IN THE ANCHORAGE DOMESTIC FIR SOUTH OF 73N AND EAST OF 165W. AIRCRAFT ENTERING ANCHORAGE FIR AIRSPACE FROM THE MAGADAN, EDMONTON, VANCOUVER, OR OAKLAND FIRS WILL BE PROVIDED AUTOMATIC FANS ADDRESS FORWARDING FROM THE ATC GROUND COMPUTER. AIRCRAFT DEPARTING ALASKAN AIRPORTS SHOULD LOGON AFTER DEPARTURE, BUT BEFORE LEAVING FL180. AFTER LOGON, ANCHORAGE ARTCC AUTOMATION WILL PROVIDE AUTOMATIC FANS ADDRESS FORWARDING FOR FLIGHTS ENTERING THE MAGADAN, EDMONTON, VANCOUVER AND OAKLAND FIRS. NOTE: - THE USE OF CPDLC DOES NOT REMOVE REQUIREMENTS FOR MONITORING VHF/HF FREQUENCIES. - AIRCRAFT WITHIN VHF COVERAGE MAY MAKE POSITION REPORTS VIA CPDLC. - WEST OF 165W, ALL REQUESTS TO ATC MAY BE MADE VIA CPDLC. - EAST OF 165W, REQUESTS TO ATC SHOULD BE MADE VIA VHF IF WITHIN VHF COVERAGE. CPDLC: INMARSAT: INMARSAT SECURITY NUMBER FOR ANCHORAGE ATC IS 436602. INMARSAT: SATCOM: SATCOM VOICE DIRECT DIAL FOR ANCHORAGE ATC IS 1-907-269-1103. SATCOM:

SYA Type: VOR
Notes: VHF COMMUNICATIONS: THE NORMAL VHF (119.1 MHZ) INITIAL CONTACT POINTS WITH ANCHORAGE ARTCC FOR EASTBOUND FLIGHTS ESTABLISHED IN THE NOPAC ARE: ON R-591, 150NM WEST OF SHEMYA (SYA). NOTE: INITIAL CONTACT MAY BE ATTEMPTED ON 128.2 MHZ AS A BACKUP TO 119.1.

CHIPT Type: Waypoint
Notes: VHF COMMUNICATIONS: THE NORMAL VHF (119.1 MHZ) INITIAL CONTACT POINTS WITH ANCHORAGE ARTCC FOR EASTBOUND FLIGHTS ESTABLISHED IN THE NOPAC ARE: ON G-344, 150NM WEST OF CHIPT. NOTE: INITIAL CONTACT MAY BE ATTEMPTED ON 128.2 MHZ AS A BACKUP TO 119.1.

PINSO Type: Waypoint
Notes: VHF COMMUNICATIONS: THE NORMAL VHF (119.1 MHZ) INITIAL CONTACT POINTS WITH ANCHORAGE ARTCC FOR EASTBOUND FLIGHTS ESTABLISHED IN THE NOPAC ARE: ON A-590, 150NM WEST OF PINSO. NOTE: INITIAL CONTACT MAY BE ATTEMPTED ON 128.2 MHZ AS A BACKUP TO

119.1.

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CHIGNIK Type: Class E5 Airspace
Notes: EXCLUDING THAT AIRSPACE MORE THAN 12 NAUTICAL MILES FROM THE SHORELINE.

KIPNUK Type: Class E5 Airspace
Notes: EXCLUDES THAT AREA OUTSIDE 12 MILES FROM THE SHORELINE WITHIN NORTON SOUND LOW AND CONTROL 1234L.

MAGADAN CTA Type: Control Area (Airport)
Notes: CLASS C AIRSPACE OUTSIDE THE TERRITORY OF THE RUSSIAN FEDERATION IS ON ATS ROUTES ONLY.

KZAK Type: FIR
Notes: CPDLC: USE LOGON ADDRESS KZAK FOR ALL CPDLC COMMUNICATIONS IN THE OAKLAND OCEANIC FIR. WHEN MAKING HF VOICE CHECK-IN WITH SAN FRANCISCO RADIO UPON TRANSFERRING DATA LINK CONTACT TO SAN FRANCISCO, SFO RADIO REQUESTS YOU INCLUDE; POINT OF DEPARTURE, DESTINATION, A/C REGISTRATION AND SELCAL CODE. FOR AIRCRAFT DEPARTING FROM AIRPORTS ALONG THE WEST COAST OF NORTH AMERICA, GUAM AND HAWAII, OAKLAND OCEANIC CONTROL REQUIRES THAT DATA-LINK AIRCRAFT NOT LOGON TO OAKLAND OCEANIC (KZAK) UNTIL AFTER LEAVING 10,000' MSL. FOR AIRCRAFT ENTERING THE OAKLAND OCEANIC FIR FROM NON-CPDLC AIRSPACE: LOG ON TO CPDLC AT LEAST 15 BUT NOT MORE THAN 45 MINUTES PRIOR TO ENTERING. FOR AIRCRAFT ENTERING THE OAKLAND OCEANIC FIR FROM ADJACENT CPDLC AIRSPACE: IF KZAK IS THE ACTIVE CENTER CONTACT SAN FRANCISCO RADIO. IF KZAK IS NOT THE ACTIVE CENTER, TERMINATE THE CPDLC CONNECTION WITHIN 5 MINUTES AFTER THE BOUNDARY IS CROSSED, THEN LOG ON TO KZAK AND CONTACT SAN FRANCISCO RADIO. FOR AIRCRAFT OVER-FLYING HONOLULU CERAP: AIRCRAFT WILL RECEIVE AN END SERVICE MESSAGE THAT WILL RESULT IN TERMINATION OF CPDLC. AIRCRAFT SHALL RE-LOG ON TO CPDLC PRIOR TO REENTERING OAKLAND OCEANIC FIR. FOR AIRCRAFT ENTERING GUAM CERAP: CONTACT GUAM CERAP 250 MILES OUT ON 118.7, SQUAWK 2100. FOR AIRCRAFT OVER-FLYING GUAM CERAP: CPDLC CONNECTION WITH OAKLAND MAY BE TERMINATED WITHIN THE GUAM CERAP. IF THE CPDLC CONNECTION WITH KZAK IS NOT TERMINATED, DO NOT USE CPDLC FOR ATC UNTIL GUAM CERAP ADVISES YOU TO TO AGAIN CONTACT ENROUTE COMMUNICATIONS OR SAN FRANCISCO RADIO. IT MAY BE NECESSARY TO LOG BACK ON TO CPDLC WITH KZAK 10-15 MINUTES PRIOR TO EXITING GUAM CERAP IF THE CPDLC CONNECTION WAS TERMINATED. CPDLC: INMARSAT: INMARSAT SECURITY NUMBER FOR OAKLAND CENTER IS 436697 INMARSAT: INMARSAT: INMARSAT SECURITY NUMBER FOR SAN FRANCISCO RADIO IS 436625 INMARSAT: SATCOM: SATCOM VOICE DIRECT DIAL FOR OAKLAND CENTER IS 1-510-745-3415 SATCOM: PILOTS SHOULD MONITOR VHF EMERGENCY FREQUENCY 121.5 MHZ ON LONG OVERWATER ROUTES WHEN POSSIBLE. SEE VHF EMERGENCY FREQUENCY REQUIREMENT. POSITION REPORTS OVER OAKLAND OCEANIC OCA/FIR 120 W BOUNDARIES A. AIRCRAFT ENTERING THE OAKLAND OCA/FIR OVER 120 DEGREES WEST LONGITUDE WITHOUT A KZAK ADS-C CONNECTION ARE REQUESTED TO FORWARD BOUNDARY POSIT

PAZA Type: FIR
Notes: CPDLC: USE LOGON ADDRESS PAZN FOR ALL CPDLC COMMUNICATIONS IN THE ANCHORAGE DOMESTIC FIR WEST OF 165W AND SOUTH OF 63N. USE LOGON ADDRESS PAZA FOR ALL CPDLC COMMUNICATIONS IN THE ANCHORAGE DOMESTIC FIR SOUTH OF 73N AND EAST OF 165W. AIRCRAFT ENTERING ANCHORAGE FIR AIRSPACE FROM THE MAGADAN, EDMONTON, VANCOUVER, OR OAKLAND FIRS WILL BE PROVIDED AUTOMATIC FANS ADDRESS FORWARDING FROM THE ATC GROUND COMPUTER. AIRCRAFT DEPARTING ALASKAN AIRPORTS SHOULD LOGON AFTER DEPARTURE, BUT BEFORE LEAVING FL180. AFTER LOGON, ANCHORAGE ARTCC AUTOMATION WILL PROVIDE AUTOMATIC FANS ADDRESS FORWARDING FOR FLIGHTS ENTERING THE MAGADAN, EDMONTON, VANCOUVER AND OAKLAND FIRS. NOTE: - THE USE OF CPDLC DOES NOT REMOVE REQUIREMENTS FOR MONITORING VHF/HF FREQUENCIES. - AIRCRAFT WITHIN VHF COVERAGE MAY MAKE POSITION REPORTS VIA CPDLC. - WEST OF 165W, ALL REQUESTS TO ATC MAY BE MADE VIA CPDLC. - EAST OF 165W, REQUESTS TO ATC SHOULD BE MADE VIA VHF IF WITHIN VHF COVERAGE. CPDLC: INMARSAT: INMARSAT SECURITY NUMBER FOR ANCHORAGE ATC IS 436602. INMARSAT: SATCOM: SATCOM VOICE DIRECT DIAL FOR ANCHORAGE ATC IS 907-269-1103. SATCOM:

UHMM Type: FIR
Notes: CPDLC: CPDLC SERVICES ARE AVAILABLE WITH LOGON ADDRESS OF GDXB IN MAGADAN FIR CPDLC: INMARSAT: INMARSAT SECURITY NUMBER FOR MAGADAN ACC IS 427336 INMARSAT: INMARSAT: INMARSAT SECURITY NUMBER FOR PETROPAVLOVSK-KAMCHATSKY ACC IS 427354 INMARSAT: SATCOM: SATCOM VOICE DIRECT DIAL FOR MAGADAN ACC IS 74-13-260-6719 SATCOM: SATCOM: SATCOM VOICE DIRECT DIAL FOR PETROPAVLOVSK-KAMCHATSKY ACC IS 74-15-319-9395 SATCOM: PILOTS SHOULD MONITOR VHF EMERGENCY FREQUENCY 121.5 MHZ ON LONG OVERWATER ROUTES WHEN POSSIBLE. SEE VHF EMERGENCY FREQUENCY REQUIREMENT. RVSM AIRSPACE FL290-FL410 INCLUSIVE.

ULLL Type: FIR
Notes: INMARSAT: INMARSAT SECURITY NUMBER FOR ARCHANGELSK ACC IS 427305 INMARSAT: INMARSAT: INMARSAT SECURITY NUMBER FOR MURMANSK ACC IS 427341 INMARSAT: INMARSAT: INMARSAT SECURITY NUMBER FOR SYKTYVKAR ACC IS 427366 INMARSAT: RVSM AIRSPACE FL290-FL410 INCLUSIVE.

PAZA Type: UIR
Notes: CPDLC: USE LOGON ADDRESS PAZN FOR ALL CPDLC COMMUNICATIONS IN THE ANCHORAGE DOMESTIC FIR WEST OF 165W AND SOUTH OF 63N. USE LOGON ADDRESS PAZA FOR ALL CPDLC COMMUNICATIONS IN THE ANCHORAGE DOMESTIC FIR SOUTH OF 73N AND EAST OF 165W. AIRCRAFT ENTERING ANCHORAGE FIR AIRSPACE FROM THE MAGADAN, EDMONTON, VANCOUVER, OR OAKLAND FIRS WILL BE PROVIDED AUTOMATIC FANS ADDRESS FORWARDING FROM THE ATC GROUND COMPUTER. AIRCRAFT DEPARTING ALASKAN AIRPORTS SHOULD LOGON AFTER DEPARTURE, BUT BEFORE LEAVING FL180. AFTER LOGON, ANCHORAGE ARTCC AUTOMATION WILL PROVIDE AUTOMATIC FANS ADDRESS FORWARDING FOR FLIGHTS ENTERING THE MAGADAN, EDMONTON, VANCOUVER AND OAKLAND FIRS. NOTE: - THE USE OF CPDLC DOES NOT REMOVE REQUIREMENTS FOR MONITORING VHF/HF FREQUENCIES. - AIRCRAFT WITHIN VHF COVERAGE MAY MAKE POSITION REPORTS VIA CPDLC. - WEST OF 165W, ALL REQUESTS TO ATC MAY BE MADE VIA CPDLC. - EAST OF 165W, REQUESTS TO ATC SHOULD BE MADE VIA VHF IF WITHIN VHF COVERAGE. CPDLC: INMARSAT: INMARSAT SECURITY NUMBER FOR ANCHORAGE ATC IS 436602. INMARSAT: SATCOM: SATCOM VOICE DIRECT DIAL FOR ANCHORAGE ATC IS 1-907-269-1103. SATCOM:

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CZVR Type: ACC
Notes: EXCLUDING FL255.

PAZA Type: ARTCC
Notes: CLASS G BELOW 14500 FT.

JOHNSON PETERSBURG Type: Class E5 Airspace
Notes: EXCLUDING THAT AIRSPACE WITHIN THE WRANGELL, AK, AND SITKA, AK, CLASS E AIRSPACE AREAS.

EXCLUDING THAT AIRSPACE WITHIN THE WRANGELL, AK, AND SITKA, AK, CLASS E AIRSPACE AREAS.

EXCLUDING THAT AIRSPACE WITHIN THE WRANGELL, AK, AND SITKA, AK, CLASS E AIRSPACE AREAS.

EXCLUDING THAT AIRSPACE WITHIN THE WRANGELL, AK, AND SITKA, AK, CLASS E AIRSPACE AREAS.

EXCLUDING THAT AIRSPACE WITHIN THE WRANGELL, AK, AND SITKA, AK, CLASS E AIRSPACE AREAS.

SOUTHEAST E6 Type: Class E5 Airspace
Notes: EXCLUDING THAT AIRSPACE DESIGNATED FOR FEDERAL AIRWAYS AND EXCLUDING THAT AIRSPACE WITHIN KETCHIKAN, AK CLASS E5, THE KLAWOCK, AK CLASS E5, THE WRANGELL, AK CLASS E5, THE PETERSBURG, AK CLASS E5, THE KAKE, AK CLASS E5, THE SITKA, AK CLASS E5, AND THE JUNEAU, AK CLASS E5 AIRSPACE AREAS.

WRANGELL Type: Class E5 Airspace
Notes: EXCLUDES AIRSPACE WITHIN THE PETERSBURG, AK CLASS E AIRSPACE AREA.

CZEG Type: FIR
Notes: AIRSPACE-ZONES, AREAS, AND REGIONS 1. DOMESTIC CLEARANCE - NORTH ATLANTIC (NAT) WEST-BOUND TRAFFIC. A) PILOTS PROCEEDING WESTBOUND ACROSS THE NORTH ATLANTIC (NAT) AND ENTERING CDA WITHIN THE GANDER, MONCTON AND MONTREAL FIRS SHALL COMPLY WITH THE FOLLOWING PROCEDURES: I) FLIGHTS CLEARED BY ATC VIA THE FLIGHT PLANNED ROUTE PRIOR TO REACHING CDA WILL NOT BE ISSUED EN-ROUTE CLEARANCES UPON ENTERING DOMESTIC AIRSPACE, AND ARE TO FOLLOW THE FLIGHT PLANNED ROUTE AS CLEARED. DOMESTIC EN-ROUTE CLEARANCES WILL BE ISSUED: A) FOR FLIGHTS THAT HAVE BEEN REROUTED AND EXIT OCEANIC AIRSPACE AT OTHER THAN THE FLIGHT PLANNED EXIT FIX: B) AT A PILOT'S REQUEST FOR ANOTHER ROUTING OR C) IF A FLIGHT PLAN HAS NOT BEEN RECEIVED BY THE ACC. B) IF ENTERING CANADIAN DOMESTIC AIRSPACE WITHIN THE EDMONTON FLIGHT INFORMATION REGION (FIR) THE ONWARD DOMESTIC ROUTING WILL HAVE BEEN ESTABLISHED IN COORDINATION BETWEEN THE REYKJAVIK AND EDMONTON ACCS, AND ADDITIONAL DOMESTIC CLEARANCE IS NOT NORMALLY REQUIRED. HOWEVER, IF THERE HAS BEEN A CHANGE IN ROUTE FROM FILED FLIGHT PLAN, CLARIFICATION OF THE ONWARD ROUTING MAY BE OBTAINED FROM EDMONTON ACC ON REQUEST. CPDLC: CPDLC SERVICES ARE AVAILABLE WITH LOGON ADDRESS OF CZEG IN EDMONTON FIR CPDLC: INMARSAT: INMARSAT SECURITY NUMBER IS 431601 INMARSAT: SATCOM: SATCOM VOICE DIRECT DIAL IS 1-780-890-2775 SATCOM: INMARSAT: INMARSAT SECURITY NUMBER FOR ARCTIC RADIO IS 431610 INMARSAT:

CZVR Type: FIR
Notes: THE VANCOUVER FIR WEST OF TOFINO, CAPE SCOTT, PORT HARDY, AND SANDSPIT NDB IS UNCONTROLLED BELOW 6000' AGL. CPDLC: CPDLC SERVICES ARE AVAILABLE WITH LOGON ADDRESS OF CZVR IN VANCOUVER FIR. FLIGHTS ENTERING CANADIAN DOMESTIC AIRSPACE CPDLC AREA FROM A NON-CPDLC DATA LINK AREA SHOULD PERFORM A LOGON 45 TO 15 MINUTES PRIOR TO ENTERING AIRSPACE. CPDLC: INMARSAT: INMARSAT SECURITY NUMBER IS 431607 INMARSAT: SATCOM: SATCOM VOICE DIRECT DIAL IS 1-604-507-7875 SATCOM: SATCOM: CONTACT VANCOUVER CENTER ON THE NEAREST PERIPHERAL FREQUENCY AT THE TIME OF CROSSING FIR BOUNDARY. TRANSPONDER ADJUSTED TO REPLY ON MODE A-3 CODE 2000. SATCOM:

KZAK Type: FIR
Notes: CPDLC: USE LOGON ADDRESS KZAK FOR ALL CPDLC COMMUNICATIONS IN THE OAKLAND OCEANIC FIR. WHEN MAKING HF VOICE CHECK-IN WITH SAN FRANCISCO RADIO UPON TRANSFERRING DATA LINK CONTACT TO SAN FRANCISCO, SFO RADIO REQUESTS YOU INCLUDE; POINT OF DEPARTURE, DESTINATION, A/C REGISTRATION AND SELCAL CODE. FOR AIRCRAFT DEPARTING FROM AIRPORTS ALONG THE WEST COAST OF NORTH AMERICA, GUAM AND HAWAII, OAKLAND OCEANIC CONTROL REQUIRES THAT DATA-LINK AIRCRAFT NOT LOGON TO OAKLAND OCEANIC (KZAK) UNTIL AFTER LEAVING 10,000' MSL. FOR AIRCRAFT ENTERING THE OAKLAND OCEANIC FIR FROM NON-CPDLC AIRSPACE: LOG ON TO CPDLC AT LEAST 15 BUT NOT MORE THAN 45 MINUTES PRIOR TO ENTERING. FOR AIRCRAFT ENTERING THE OAKLAND OCEANIC FIR FROM ADJACENT CPDLC AIRSPACE: IF KZAK IS THE ACTIVE CENTER CONTACT SAN FRANCISCO RADIO. IF KZAK IS NOT THE ACTIVE CENTER, TERMINATE THE CPDLC CONNECTION WITHIN 5 MINUTES AFTER THE BOUNDARY IS CROSSED, THEN LOG ON TO KZAK AND CONTACT SAN FRANCISCO RADIO. FOR AIRCRAFT OVER-FLYING HONOLULU CERAP: AIRCRAFT WILL RECEIVE AN END SERVICE MESSAGE THAT WILL RESULT IN TERMINATION OF CPDLC. AIRCRAFT SHALL RE-LOG ON TO CPDLC PRIOR TO REENTERING OAKLAND OCEANIC FIR. FOR AIRCRAFT ENTERING GUAM CERAP: CONTACT GUAM CERAP 250 MILES OUT ON 118.7, SQUAWK 2100. FOR AIRCRAFT OVER-FLYING GUAM CERAP: CPDLC CONNECTION WITH OAKLAND MAY BE TERMINATED WITHIN THE GUAM CERAP. IF THE CPDLC CONNECTION WITH KZAK IS NOT TERMINATED, DO NOT USE CPDLC FOR ATC UNTIL GUAM CERAP ADVISES YOU TO TO AGAIN CONTACT ENROUTE COMMUNICATIONS OR SAN FRANCISCO RADIO. IT MAY BE NECESSARY TO LOG BACK ON TO CPDLC WITH KZAK 10-15 MINUTES PRIOR TO EXITING

GUAM CERAP IF THE CPDLC CONNECTION WAS TERMINATED. CPDLC: INMARSAT: INMARSAT SECURITY NUMBER FOR OAKLAND CENTER IS 436697 INMARSAT: INMARSAT: INMARSAT SECURITY NUMBER FOR SAN FRANCISCO RADIO IS 436625 INMARSAT: SATCOM: SATCOM VOICE DIRECT DIAL FOR OAKLAND CENTER IS 1-510-745-3415 SATCOM: PILOTS SHOULD MONITOR VHF EMERGENCY FREQUENCY 121.5 MHZ ON LONG OVERWATER ROUTES WHEN POSSIBLE. SEE VHF EMERGENCY FREQUENCY REQUIREMENT. POSITION REPORTS OVER OAKLAND OCEANIC OCA/FIR 120 W BOUNDARIES A. AIRCRAFT ENTERING THE OAKLAND OCA/FIR OVER 120 DEGREES WEST LONGITUDE WITHOUT A KZAK ADS-C CONNECTION ARE REQUESTED TO FORWARD BOUNDARY POSIT

PAZA Type: FIR
Notes: CPDLC: USE LOGON ADDRESS PAZN FOR ALL CPDLC COMMUNICATIONS IN THE ANCHORAGE DOMESTIC FIR WEST OF 165W AND SOUTH OF 63N. USE LOGON ADDRESS PAZA FOR ALL CPDLC COMMUNICATIONS IN THE ANCHORAGE DOMESTIC FIR SOUTH OF 73N AND EAST OF 165W. AIRCRAFT ENTERING ANCHORAGE FIR AIRSPACE FROM THE MAGADAN, EDMONTON, VANCOUVER, OR OAKLAND FIRS WILL BE PROVIDED AUTOMATIC FANS ADDRESS FORWARDING FROM THE ATC GROUND COMPUTER. AIRCRAFT DEPARTING ALASKAN AIRPORTS SHOULD LOGON AFTER DEPARTURE, BUT BEFORE LEAVING FL180. AFTER LOGON, ANCHORAGE ARTCC AUTOMATION WILL PROVIDE AUTOMATIC FANS ADDRESS FORWARDING FOR FLIGHTS ENTERING THE MAGADAN, EDMONTON, VANCOUVER AND OAKLAND FIRS. NOTE: - THE USE OF CPDLC DOES NOT REMOVE REQUIREMENTS FOR MONITORING VHF/HF FREQUENCIES. - AIRCRAFT WITHIN VHF COVERAGE MAY MAKE POSITION REPORTS VIA CPDLC. - WEST OF 165W, ALL REQUESTS TO ATC MAY BE MADE VIA CPDLC. - EAST OF 165W, REQUESTS TO ATC SHOULD BE MADE VIA VHF IF WITHIN VHF COVERAGE. CPDLC: INMARSAT: INMARSAT SECURITY NUMBER FOR ANCHORAGE ATC IS 436602. INMARSAT: SATCOM: SATCOM VOICE DIRECT DIAL FOR ANCHORAGE ATC IS 907-269-1103. SATCOM:

N961 Type: Special Use Airspace
Notes: Two-way radio contact required prior to entry and while operating within the SATR. CTC KETCHIKAN AFIS 134.450 MHz / ot KETCHIKAN FSS 123.600 MHz.

PAZA Type: UIR
Notes: CPDLC: USE LOGON ADDRESS PAZN FOR ALL CPDLC COMMUNICATIONS IN THE ANCHORAGE DOMESTIC FIR WEST OF 165W AND SOUTH OF 63N. USE LOGON ADDRESS PAZA FOR ALL CPDLC COMMUNICATIONS IN THE ANCHORAGE DOMESTIC FIR SOUTH OF 73N AND EAST OF 165W. AIRCRAFT ENTERING ANCHORAGE FIR AIRSPACE FROM THE MAGADAN, EDMONTON, VANCOUVER, OR OAKLAND FIRS WILL BE PROVIDED AUTOMATIC FANS ADDRESS FORWARDING FROM THE ATC GROUND COMPUTER. AIRCRAFT DEPARTING ALASKAN AIRPORTS SHOULD LOGON AFTER DEPARTURE, BUT BEFORE LEAVING FL180. AFTER LOGON, ANCHORAGE ARTCC AUTOMATION WILL PROVIDE AUTOMATIC FANS ADDRESS FORWARDING FOR FLIGHTS ENTERING THE MAGADAN, EDMONTON, VANCOUVER AND OAKLAND FIRS. NOTE: - THE USE OF CPDLC DOES NOT REMOVE REQUIREMENTS FOR MONITORING VHF/HF FREQUENCIES. - AIRCRAFT WITHIN VHF COVERAGE MAY MAKE POSITION REPORTS VIA CPDLC. - WEST OF 165W, ALL REQUESTS TO ATC MAY BE MADE VIA CPDLC. - EAST OF 165W, REQUESTS TO ATC SHOULD BE MADE VIA VHF IF WITHIN VHF COVERAGE. CPDLC: INMARSAT: INMARSAT SECURITY NUMBER FOR ANCHORAGE ATC IS 436602. INMARSAT: SATCOM: SATCOM VOICE DIRECT DIAL FOR ANCHORAGE ATC IS 1-907-269-1103. SATCOM:

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CZVR Type: ACC
Notes: EXCLUDING FL255.

PAZA Type: ARTCC
Notes: CLASS G BELOW 14500 FT.

BOARDMAN E6 Type: Class E5 Airspace
Notes: EXCLUDING THE PORTION WITHIN RESTRICTED AREA R-5704 DURING ITS PUBLISHED HOURS OF DESIGNATION.

CASCADE RANGE E6 Type: Class E5 Airspace
Notes: EXCLUDING FEDERAL AIRWAYS, WENATCHEE, WA, ELLENSBURG, WA, AND YAKIMA, WA, CLASS E AIRSPACE AREAS.

COLVILLE E6 Type: Class E5 Airspace
Notes: THAT AIRSPACE BELOW 1,200 FEET AGL IS EXCLUDED.

LA GRANDE/UNION CO Type: Class E5 Airspace
Notes: EXCLUDING THAT AIRSPACE WITHIN FEDERAL AIRWAYS.

LEXINGTON Type: Class E5 Airspace
Notes: EXCLUDING THAT AIRSPACE WITHIN FEDERAL AIRWAYS.

NEWPORT MUN Type: Class E5 Airspace
Notes: EXCLUDING THAT AIRSPACE WITHIN FEDERAL AIRWAYS.

OLYMPIC PENINSULA E6 Type: Class E5 Airspace
Notes: THAT AIRSPACE BELOW 1,200 FEET AGL IS EXCLUDED.

SEATTLE-TACOMA INTL Type: Class E5 Airspace
Notes: EXCLUDING THAT AIRSPACE WITHIN THE WENATCHEE PANGBORN MEMORIAL AIRPORT, WA, CLASS E AIRSPACE AREA.

SOUTHEAST E6 Type: Class E5 Airspace

Notes: EXCLUDING THAT AIRSPACE DESIGNATED FOR FEDERAL AIRWAYS AND EXCLUDING THAT AIRSPACE WITHIN KETCHIKAN, AK CLASS E5, THE KLAWOCK, AK CLASS E5, THE WRANGELL, AK CLASS E5, THE PETERSBURG, AK CLASS E5, THE KAKE, AK CLASS E5, THE SITKA, AK CLASS E5, AND THE JUNEAU, AK CLASS E5 AIRSPACE AREAS.

TILLAMOOK Type: Class E5 Airspace
Notes: EXCLUDING THAT AIRSPACE WITHIN FEDERAL AIRWAYS; THE ASTORIA, OR; THE PORTLAND- HILLSBORO, OR; AND THE PORTLAND, OR, CLASS E AIRSPACE AREAS.

EXCLUDING THAT AIRSPACE WITHIN FEDERAL AIRWAYS; THE ASTORIA, OR; THE PORTLAND- HILLSBORO, OR; AND THE PORTLAND, OR, CLASS E AIRSPACE AREAS.

CZEG Type: FIR
Notes: AIRSPACE-ZONES, AREAS, AND REGIONS 1. DOMESTIC CLEARANCE - NORTH ATLANTIC (NAT) WEST-BOUND TRAFFIC. A) PILOTS PROCEEDING WESTBOUND ACROSS THE NORTH ATLANTIC (NAT) AND ENTERING CDA WITHIN THE GANDER, MONCTON AND MONTREAL FIRS SHALL COMPLY WITH THE FOLLOWING PROCEDURES: I) FLIGHTS CLEARED BY ATC VIA THE FLIGHT PLANNED ROUTE PRIOR TO REACHING CDA WILL NOT BE ISSUED EN-ROUTE CLEARANCES UPON ENTERING DOMESTIC AIRSPACE, AND ARE TO FOLLOW THE FLIGHT PLANNED ROUTE AS CLEARED. DOMESTIC EN-ROUTE CLEARANCES WILL BE ISSUED: A) FOR FLIGHTS THAT HAVE BEEN REROUTED AND EXIT OCEANIC AIRSPACE AT OTHER THAN THE FLIGHT PLANNED EXIT FIX: B) AT A PILOT'S REQUEST FOR ANOTHER ROUTING OR C) IF A FLIGHT PLAN HAS NOT BEEN RECEIVED BY THE ACC. B) IF ENTERING CANADIAN DOMESTIC AIRSPACE WITHIN THE EDMONTON FLIGHT INFORMATION REGION (FIR) THE ONWARD DOMESTIC ROUTING WILL HAVE BEEN ESTABLISHED IN COORDINATION BETWEEN THE REYKJAVIK AND EDMONTON ACCS, AND ADDITIONAL DOMESTIC CLEARANCE IS NOT NORMALLY REQUIRED. HOWEVER, IF THERE HAS BEEN A CHANGE IN ROUTE FROM FILED FLIGHT PLAN, CLARIFICATION OF THE ONWARD ROUTING MAY BE OBTAINED FROM EDMONTON ACC ON REQUEST. CPDLC: CPDLC SERVICES ARE AVAILABLE WITH LOGON ADDRESS OF CZEG IN EDMONTON FIR CPDLC: INMARSAT: INMARSAT SECURITY NUMBER IS 431601 INMARSAT: SATCOM: SATCOM VOICE DIRECT DIAL IS 1-780-890-2775 SATCOM: INMARSAT: INMARSAT SECURITY NUMBER FOR ARCTIC RADIO IS 431610 INMARSAT:

CZVR Type: FIR
Notes: THE VANCOUVER FIR WEST OF TOFINO, CAPE SCOTT, PORT HARDY, AND SANDSPIT NDB IS UNCONTROLLED BELOW 6000' AGL. CPDLC: CPDLC SERVICES ARE AVAILABLE WITH LOGON ADDRESS OF CZVR IN VANCOUVER FIR. FLIGHTS ENTERING CANADIAN DOMESTIC AIRSPACE CPDLC AREA FROM A NON-CPDLC DATA LINK AREA SHOULD PERFORM A LOGON 45 TO 15 MINUTES PRIOR TO ENTERING AIRSPACE. CPDLC: INMARSAT: INMARSAT SECURITY NUMBER IS 431607 INMARSAT: SATCOM: SATCOM VOICE DIRECT DIAL IS 1-604-507-7875 SATCOM: SATCOM: CONTACT VANCOUVER CENTER ON THE NEAREST PERIPHERAL FREQUENCY AT THE TIME OF CROSSING FIR BOUNDARY. TRANSPONDER ADJUSTED TO REPLY ON MODE A-3 CODE 2000. SATCOM:

KZAK Type: FIR
Notes: CPDLC: USE LOGON ADDRESS KZAK FOR ALL CPDLC COMMUNICATIONS IN THE OAKLAND OCEANIC FIR. WHEN MAKING HF VOICE CHECK-IN WITH SAN FRANCISCO RADIO UPON TRANSFERRING DATA LINK CONTACT TO SAN FRANCISCO, SFO RADIO REQUESTS YOU INCLUDE; POINT OF DEPARTURE, DESTINATION, A/C REGISTRATION AND SELCAL CODE. FOR AIRCRAFT DEPARTING FROM AIRPORTS ALONG THE WEST COAST OF NORTH AMERICA, GUAM AND HAWAII, OAKLAND OCEANIC CONTROL REQUIRES THAT DATA-LINK AIRCRAFT NOT LOGON TO OAKLAND OCEANIC (KZAK) UNTIL AFTER LEAVING 10,000' MSL. FOR AIRCRAFT ENTERING THE OAKLAND OCEANIC FIR FROM NON-CPDLC AIRSPACE: LOG ON TO CPDLC AT LEAST 15 BUT NOT MORE THAN 45 MINUTES PRIOR TO ENTERING. FOR AIRCRAFT ENTERING THE OAKLAND OCEANIC FIR FROM ADJACENT CPDLC AIRSPACE: IF KZAK IS THE ACTIVE CENTER CONTACT SAN FRANCISCO RADIO. IF KZAK IS NOT THE ACTIVE CENTER, TERMINATE THE CPDLC CONNECTION WITHIN 5 MINUTES AFTER THE BOUNDARY IS CROSSED, THEN LOG ON TO KZAK AND CONTACT SAN FRANCISCO RADIO. FOR AIRCRAFT OVER-FLYING HONOLULU CERAP: AIRCRAFT WILL RECEIVE AN END SERVICE MESSAGE THAT WILL RESULT IN TERMINATION OF CPDLC. AIRCRAFT SHALL RE-LOG ON TO CPDLC PRIOR TO REENTERING OAKLAND OCEANIC FIR. FOR AIRCRAFT ENTERING GUAM CERAP: CONTACT GUAM CERAP 250 MILES OUT ON 118.7, SQUAWK 2100. FOR AIRCRAFT OVER-FLYING GUAM CERAP: CPDLC CONNECTION WITH OAKLAND MAY BE TERMINATED WITHIN THE GUAM CERAP. IF THE CPDLC CONNECTION WITH KZAK IS NOT TERMINATED, DO NOT USE CPDLC FOR ATC UNTIL GUAM CERAP ADVISES YOU TO TO AGAIN CONTACT ENROUTE COMMUNICATIONS OR SAN FRANCISCO RADIO. IT MAY BE NECESSARY TO LOG BACK ON TO CPDLC WITH KZAK 10-15 MINUTES PRIOR TO EXITING GUAM CERAP IF THE CPDLC CONNECTION WAS TERMINATED. CPDLC: INMARSAT: INMARSAT SECURITY NUMBER FOR OAKLAND CENTER IS 436697 INMARSAT: INMARSAT: INMARSAT SECURITY NUMBER FOR SAN FRANCISCO RADIO IS 436625 INMARSAT: SATCOM: SATCOM VOICE DIRECT DIAL FOR OAKLAND CENTER IS 1-510-745-3415 SATCOM: PILOTS SHOULD MONITOR VHF EMERGENCY FREQUENCY 121.5 MHZ ON LONG OVERWATER ROUTES WHEN POSSIBLE. SEE VHF EMERGENCY FREQUENCY REQUIREMENT. POSITION REPORTS OVER OAKLAND OCEANIC OCA/FIR 120 W BOUNDARIES A. AIRCRAFT ENTERING THE OAKLAND OCA/FIR OVER 120 DEGREES WEST LONGITUDE WITHOUT A KZAK ADS-C CONNECTION ARE REQUESTED TO FORWARD BOUNDARY POSIT

KZLC Type: FIR
Notes: CPDLC: CPDLC SERVICES ARE AVAILABLE WITH LOGON ADDRESS OF KUSA IN SALT LAKE CITY FIR CPDLC.

KZSE Type: FIR
Notes: CPDLC: CPDLC SERVICES ARE AVAILABLE WITH LOGON ADDRESS OF KUSA IN SEATTLE FIR CPDLC.

PAZA Type: FIR
Notes: CPDLC: USE LOGON ADDRESS PAZN FOR ALL CPDLC COMMUNICATIONS IN THE ANCHORAGE DOMESTIC FIR WEST OF 165W AND SOUTH OF 63N. USE LOGON ADDRESS PAZA FOR ALL CPDLC COMMUNICATIONS IN THE ANCHORAGE DOMESTIC FIR SOUTH OF 73N AND EAST OF 165W. AIRCRAFT ENTERING ANCHORAGE FIR AIRSPACE FROM THE MAGADAN, EDMONTON, VANCOUVER, OR OAKLAND FIRS WILL BE PROVIDED AUTOMATIC FANS ADDRESS FORWARDING FROM THE ATC GROUND COMPUTER. AIRCRAFT DEPARTING ALASKAN AIRPORTS SHOULD LOGON AFTER DEPARTURE, BUT BEFORE LEAVING FL180. AFTER LOGON, ANCHORAGE ARTCC AUTOMATION WILL PROVIDE AUTOMATIC FANS ADDRESS FORWARDING FOR FLIGHTS

ENTERING THE MAGADAN, EDMONTON, VANCOUVER AND OAKLAND FIRS. NOTE: - THE USE OF CPDLC DOES NOT REMOVE REQUIREMENTS FOR MONITORING VHF/HF FREQUENCIES. - AIRCRAFT WITHIN VHF COVERAGE MAY MAKE POSITION REPORTS VIA CPDLC. - WEST OF 165W, ALL REQUESTS TO ATC MAY BE MADE VIA CPDLC. - EAST OF 165W, REQUESTS TO ATC SHOULD BE MADE VIA VHF IF WITHIN VHF COVERAGE. CPDLC: INMARSAT: INMARSAT SECURITY NUMBER FOR ANCHORAGE ATC IS 436602. INMARSAT: SATCOM: SATCOM VOICE DIRECT DIAL FOR ANCHORAGE ATC IS 907-269-1103. SATCOM:

113 Type: Special Use Airspace
Notes: THE RULES FOR CLASS G AIRSPACE APPLY WHEN THE AREA IS ACTIVE. WHEN NOT ACTIVE, THE RULES FOR THE APPLICABLE SURROUNDING AIRSPACE APPLY.

116 Type: Special Use Airspace
Notes: RULES FOR CLASS G AIRSPACE APPLY WHEN THE AREA IS ACTIVE. WHEN NOT ACTIVE, THE RULES FOR THE APPLICABLE SURROUNDING AIRSPACE APPLY.

117 Type: Special Use Airspace
Notes: RULES FOR CLASS G AIRSPACE APPLY WHEN AREA IS ACTIVE. WHEN NOT ACTIVE, THE RULES FOR THE APPLICABLE SURROUNDING AIRSPACE APPLY.

118 Type: Special Use Airspace
Notes: THE RULES FOR CLASS G AIRSPACE APPLY WHEN THE AREA IS ACTIVE. WHEN NOT ACTIVE, THE RULES FOR THE APPLICABLE SURROUNDING AIRSPACE APPLY.

184 Type: Special Use Airspace
Notes: THE RULES FOR CLASS G AIRSPACE APPLY WHEN THE AREA IS ACTIVE. WHEN NOT ACTIVE, THE RULES FOR THE APPLICABLE SURROUNDING AIRSPACE APPLY.

186 Type: Special Use Airspace
Notes: THE RULES FOR CLASS G AIRSPACE APPLY WHEN THE AREA IS ACTIVE. WHEN NOT ACTIVE, THE RULES FOR THE APPLICABLE SURROUNDING AIRSPACE APPLY.

187 Type: Special Use Airspace
Notes: THE RULES FOR CLASS G AIRSPACE APPLY WHEN THE AREA IS ACTIVE. WHEN NOT ACTIVE, THE RULES FOR THE APPLICABLE SURROUNDING AIRSPACE APPLY.

188 Type: Special Use Airspace
Notes: THE RULES FOR CLASS G AIRSPACE APPLY WHEN THE AREA IS ACTIVE. WHEN NOT ACTIVE, THE RULES FOR THE APPLICABLE SURROUNDING AIRSPACE APPLY.

BOARDMAN Type: Special Use Airspace
Notes: EXCLUDING THAT AIRSPACE WITHIN R-5701 AND R-5706 WHEN ACTIVE.

BOARDMANL* Type: Special Use Airspace
Notes: EXCLUDING THAT AIRSPACE WITHIN R-5701 AND R-5706 WHEN ACTIVE.

N2561 Type: Special Use Airspace
Notes: Obtain Pearson Field weather & establish two-way radio CTC with CTAF 119.000 prior entering the SFRA.

OLYMPIC Type: Special Use Airspace
Notes: EXCLUDING THAT AIRSPACE BELOW 1,200 FEET AGL.

RAINIER 1 Type: Special Use Airspace
Notes: EXCLUDES THE AIRSPACE OF R-6703A, B, C, D, E, F, H AND J, WHEN ACTIVE.

RAINIER 2 Type: Special Use Airspace
Notes: EXCLUDES THE AIRSPACE OF R-6703F, G, H AND I, WHEN ACTIVE.

KZLC Type: UIR
Notes: CPDLC: CPDLC SERVICES ARE AVAILABLE WITH LOGON ADDRESS OF KUSA IN SALT LAKE CITY FIR CPDLC.

KZSE Type: UIR
Notes: CPDLC: CPDLC SERVICES ARE AVAILABLE WITH LOGON ADDRESS OF KUSA IN SEATTLE FIR CPDLC.

PAZA Type: UIR
Notes: CPDLC: USE LOGON ADDRESS PAZN FOR ALL CPDLC COMMUNICATIONS IN THE ANCHORAGE DOMESTIC FIR WEST OF 165W AND SOUTH OF 63N. USE LOGON ADDRESS PAZA FOR ALL CPDLC COMMUNICATIONS IN THE ANCHORAGE DOMESTIC FIR SOUTH OF 73N AND EAST OF 165W. AIRCRAFT ENTERING ANCHORAGE FIR AIRSPACE FROM THE MAGADAN, EDMONTON, VANCOUVER, OR OAKLAND FIRS WILL BE PROVIDED AUTOMATIC FANS ADDRESS FORWARDING FROM THE ATC GROUND COMPUTER. AIRCRAFT DEPARTING ALASKAN AIRPORTS SHOULD LOGON AFTER DEPARTURE, BUT BEFORE LEAVING FL180. AFTER LOGON, ANCHORAGE ARTCC AUTOMATION WILL PROVIDE AUTOMATIC FANS ADDRESS FORWARDING FOR FLIGHTS ENTERING THE MAGADAN, EDMONTON, VANCOUVER AND OAKLAND FIRS. NOTE: - THE USE OF CPDLC DOES NOT REMOVE REQUIREMENTS FOR MONITORING VHF/HF FREQUENCIES. - AIRCRAFT WITHIN VHF COVERAGE MAY MAKE POSITION REPORTS VIA CPDLC. - WEST OF 165W, ALL REQUESTS TO ATC MAY BE MADE VIA CPDLC. - EAST OF 165W, REQUESTS TO ATC SHOULD BE MADE VIA VHF IF WITHIN VHF COVERAGE. CPDLC: INMARSAT: INMARSAT SECURITY NUMBER FOR ANCHORAGE ATC IS 436602. INMARSAT: SATCOM: SATCOM VOICE DIRECT DIAL FOR ANCHORAGE ATC IS 1-907-269-

1103. SATCOM:

JAWBN Type: Waypoint
Notes: MINIMUM TURNING ALTITUDE V495 SE TO V4 W 8000'.

Regional Notes

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RJJJ Type: FIR
JDA AREAS, JDA CORRIDORS, AND JAPAN TRAINING AND TESTING AREAS
JDA AREAS Aircraft flying for purposes other than training/testing should not enter this airspace without prior coordination with Controlling Unit. Aircraft entering airspace inevitably for emergencies or avoidance of thunderclouds etc., should make a report to Controlling Unit on 121.5 MHz or 243.0 MHz (emergencies) or on the published frequency of the Controlling Unit (all other situations).
JDA CORRIDORS Aircraft should not penetrate corridors without permission by ACC controlling corridors.
JAPAN TRAINING AND TESTING AREAS EXCLUDES: Airways, ATS routes, SIDs, STARs, instrument approach routes, radar vectoring routes and holding areas and their protective airspace.

ZGZU Type: FIR
ALTIMETER SETTING Use QNH (where transition altitude established) for Take-off and climb until passing transition altitude. Use QFE (where transition height established) for Take-off and climb until passing transition height. Use QFE (where no transition altitude or transition height established) for Take-off and climb until passing 600m/1970'. Descent and landing as soon as passing transition level where established or after crossing ACA boundary or as instructed by ATC.

CRUISING LEVEL PROCEDURES
CRUISING LEVELS CHINA ATC will issue the Flight Level clearance in meters. Pilots shall use the PR of China RVSM FLAS Diagram to determine the corresponding Flight Level in feet. The aircraft shall be flown using the Flight Level in FEET. Pilots should be aware that due to the rounding differences, the metric readout of the onboard avionics will not necessarily correspond to the cleared Flight Level in meters however the difference will never be more than 30 meters.

ZHWH Type: FIR
ALTIMETER SETTING Use QNH (where transition altitude established) for Take-off and climb until passing transition altitude. Use QFE (where transition height established) for Take-off and climb until passing transition height. Use QFE (where no transition altitude or transition height established) for Take-off and climb until passing 600m/1970'. Descent and landing as soon as passing transition level where established or after crossing ACA boundary or as instructed by ATC.

CRUISING LEVEL PROCEDURES
CRUISING LEVELS CHINA ATC will issue the Flight Level clearance in meters. Pilots shall use the PR of China RVSM FLAS Diagram to determine the corresponding Flight Level in feet. The aircraft shall be flown using the Flight Level in FEET. Pilots should be aware that due to the rounding differences, the metric readout of the onboard avionics will not necessarily correspond to the cleared Flight Level in meters however the difference will never be more than 30 meters.

ZSHA Type: FIR
ALTIMETER SETTING Use QNH (where transition altitude established) for Take-off and climb until passing transition altitude. Use QFE (where transition height established) for Take-off and climb until passing transition height. Use QFE (where no transition altitude or transition height established) for Take-off and climb until passing 600m/1970'. Descent and landing as soon as passing transition level where established or after crossing ACA boundary or as instructed by ATC.

CRUISING LEVEL PROCEDURES
CRUISING LEVELS CHINA ATC will issue the Flight Level clearance in meters. Pilots shall use the PR of China RVSM FLAS Diagram to determine the corresponding Flight Level in feet. The aircraft shall be flown using the Flight Level in FEET. Pilots should be aware that due to the rounding differences, the metric readout of the onboard avionics will not necessarily correspond to the cleared Flight Level in meters however the difference will never be more than 30 meters.

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KZAK Type: FIR
VHF EMERGENCY FREQUENCY REQUIREMENTS
VHF EMERGENCY FREQUENCY REQUIREMENT Pilots should remember that there is a need to continuously guard the VHF emergency frequency 121.5 MHz when on long over-water flights, except when communications on other VHF channels, equipment limitations, or cockpit duties prevent simultaneous guarding of two channels. Guarding of 121.5 MHz is particularly critical when operating in proximity to flight information region (FIR) boundaries since it serves to facilitate communications with regard to aircraft which may experience in-flight emergencies, communications, or navigational difficulties.

CPDLC LOGON
Controller Pilot Data Link Communications (CPDLC) aircraft entering Guam ARTCC contact Guam CERAP 250NM out on 118.7, squawk 2100.

REGIONAL WARNINGS
All pilots should avoid the Kaena Point Satellite Tracking Station. Electromagnetic radiation will continuously exist 2800' above antenna systems along a 3 mile stretch of mountain ridge. Aircraft flying within this airspace will be exposed to direct radiation which may produce harmful effects to personnel and equipment.

REGIONAL WARNINGS
All pilots should avoid the Kokee NASA Telemetry Station. Electromagnetic radiation will continuously exist within a 2500' radius and 2500' above antenna. Aircraft flying within this airspace will be exposed to direct radiation which may produce harmful effects to personnel and equipment.

RJJJ Type: FIR
JDA AREAS, JDA CORRIDORS, AND JAPAN TRAINING AND TESTING AREAS
JDA AREAS Aircraft flying for purposes other than training/testing should not enter this airspace without prior coordination with Controlling Unit. Aircraft entering airspace inevitably for emergencies or avoidance of thunderclouds etc., should make a report to Controlling Unit on 121.5 MHz or 243.0 MHz (emergencies) or on the published frequency of the Controlling Unit (all other situations).
JDA CORRIDORS Aircraft should not penetrate corridors without permission by ACC controlling corridors.
JAPAN TRAINING AND TESTING AREAS EXCLUDES: Airways, ATS routes, SIDs, STARs, instrument approach routes, radar vectoring routes and holding areas and their protective airspace.

ZSHA Type: FIR
ALTIMETER SETTING Use QNH (where transition altitude established) for Take-off and climb until passing transition altitude. Use QFE (where transition height established) for Take-off and climb until passing transition height. Use QFE (where no transition altitude or transition height established) for Take-off and climb until passing 600m/1970'. Descent and landing as soon as passing transition level where established or after crossing ACA boundary or as instructed by ATC.

CRUISING LEVEL PROCEDURES
CRUISING LEVELS CHINA ATC will issue the Flight Level clearance in meters. Pilots shall use the PR of China RVSM FLAS Diagram to determine the corresponding Flight Level in feet. The aircraft shall be flown using the Flight Level in FEET. Pilots should be aware that due to the rounding differences, the metric readout of the onboard avionics will not necessarily correspond to the cleared Flight Level in meters however the difference will never be more than 30 meters.

ZYSH Type: FIR
ALTIMETER SETTING Use QNH (where transition altitude established) for Take-off and climb until passing transition altitude. Use QFE (where transition height established) for Take-off and climb until passing transition height. Use QFE (where no transition altitude or transition height established) for Take-off and climb until passing 600m/1970'. Descent and landing as soon as passing transition level where established or after crossing ACA boundary or as instructed by ATC.

CRUISING LEVEL PROCEDURES
CRUISING LEVELS CHINA ATC will issue the Flight Level clearance in meters. Pilots shall use the PR of China RVSM FLAS Diagram to determine the corresponding Flight Level in feet. The aircraft shall be flown using the Flight Level in FEET. Pilots should be aware that due to the rounding differences, the metric readout of the onboard avionics will not necessarily correspond to the cleared Flight Level in meters however the difference will never be more than 30 meters.

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KZAK Type: FIR
VHF EMERGENCY FREQUENCY REQUIREMENTS
VHF EMERGENCY FREQUENCY REQUIREMENT Pilots should remember that there is a need to continuously guard the VHF emergency frequency 121.5 MHz when on long over-water flights, except when communications on other VHF channels, equipment limitations, or cockpit duties prevent simultaneous guarding of two channels. Guarding of 121.5 MHz is particularly critical when operating in proximity to flight information region (FIR) boundaries since it serves to facilitate communications with regard to aircraft which may experience in-flight emergencies, communications, or navigational difficulties.

CPDLC LOGON
Controller Pilot Data Link Communications (CPDLC) aircraft entering Guam ARTCC contact Guam CERAP 250NM out on 118.7, squawk 2100.

REGIONAL WARNINGS
All pilots should avoid the Kaena Point Satellite Tracking Station. Electromagnetic radiation will continuously exist 2800' above antenna systems along a 3 mile stretch of mountain ridge. Aircraft flying within this airspace will be exposed to direct radiation which may produce harmful effects to personnel and equipment.

REGIONAL WARNINGS
All pilots should avoid the Kokee NASA Telemetry Station. Electromagnetic radiation will continuously exist within a 2500' radius and 2500' above antenna. Aircraft flying within this airspace will be exposed to direct radiation which may produce harmful effects to personnel and equipment.

RJJJ Type: FIR
JDA AREAS, JDA CORRIDORS, AND JAPAN TRAINING AND TESTING AREAS
JDA AREAS Aircraft flying for purposes other than training/testing should not enter this airspace without prior coordination with Controlling Unit. Aircraft entering airspace inevitably for emergencies or avoidance of thunderclouds etc., should make a report to Controlling Unit on 121.5 MHz or 243.0 MHz (emergencies) or on the published frequency of the Controlling Unit (all other situations).
JDA CORRIDORS Aircraft should not penetrate corridors without permission by ACC controlling corridors.
JAPAN TRAINING AND TESTING AREAS EXCLUDES: Airways, ATS routes, SIDs, STARs, instrument approach routes, radar vectoring routes and holding areas and their protective airspace.

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KZAK Type: FIR
VHF EMERGENCY FREQUENCY REQUIREMENTS
VHF EMERGENCY FREQUENCY REQUIREMENT Pilots should remember that there is a need to continuously guard the VHF emergency frequency 121.5 MHz when on long over-water flights, except when communications on other VHF channels, equipment limitations, or cockpit duties prevent simultaneous guarding of two channels. Guarding of 121.5 MHz is particularly critical when operating in proximity to flight information region (FIR) boundaries since it serves to facilitate communications with regard to aircraft which may experience in-flight emergencies, communications, or navigational difficulties.

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REGIONAL WARNINGS
All pilots should avoid the Kaena Point Satellite Tracking Station. Electromagnetic radiation will continuously exist 2800' above antenna systems along a 3 mile stretch of mountain ridge. Aircraft flying within this airspace will be exposed to direct radiation which may produce harmful effects to personnel and equipment.

REGIONAL WARNINGS
All pilots should avoid the Kokee NASA Telemetry Station. Electromagnetic radiation will continuously exist within a 2500' radius and 2500' above antenna. Aircraft flying within this airspace will be exposed to direct radiation which may produce harmful effects to personnel and equipment.

PAZA Type: FIR
VHF EMERGENCY FREQUENCY REQUIREMENTS
VHF EMERGENCY FREQUENCY REQUIREMENT Pilots should remember that there is a need to continuously guard the VHF emergency frequency 121.5 MHz when on long over-water flights, except when communications on other VHF channels, equipment limitations, or cockpit duties prevent simultaneous guarding of two channels. Guarding of 121.5 MHz is particularly critical when operating in proximity to flight information region (FIR) boundaries since it serves to facilitate communications with regard to aircraft which may experience in-flight emergencies, communications, or navigational difficulties.

CPDLC LOGON (Alaska)
Controller/Pilot Data Link Communications (CPDLC) service is operational throughout the Anchorage Oceanic and Domestic flight Information Regions (FIRs). Anchorage ARTCC utilizes two separate enroute automation systems each having a different CPDLC (FANS) logon address. Use logon address PAZN for all CPDLC communications In the Anchorage Oceanic FIR and in that portion of the Anchorage Domestic FIR west of W165Â° longitude and south of N63Â° latitude . Use logon address PAZA for all other areas of the Anchorage Domestic FIR and the Anchorage Arctic FIR. Aircraft entering Anchorage FIR airspace from Canadian or Russian airspace are requested to logon at or prior to crossing the FIR boundary. Aircraft entering Anchorage FIR airspace from the Oakland or Fukuoka FIR will be provided automatic FANS addressing. Aircraft departing Alaskan airports are requested to logon after departure, but before leaving Flight Level 180. Flight crews are reminded that use of CPDLC does not remove requirements to monitor VHF/ HF frequencies . Aircraft within VHF coverage may make position reports via CPDLC. Requests to ATC Should be made via VHF if within VHF coverage. After logon, Anchorage ARTCC automation will provide automatic FANS address forwarding for fights entering the Magadan, Fukuoka and Oakland FIRs.

FAA Q Routes (Alaska)
"Alaska Q routes require GNSS and radar surveillance. For CONUS DME/DME/IRU RNAV required, unless otherwise indicated. DME/DME/IRU aircraft "

RJJJ Type: FIR
JDA AREAS, JDA CORRIDORS, AND JAPAN TRAINING AND TESTING AREAS
JDA AREAS Aircraft flying for purposes other than training/testing should not enter this airspace without prior coordination with Controlling Unit. Aircraft entering airspace inevitably for emergencies or avoidance of thunderclouds etc., should make a report to Controlling Unit on 121.5 MHz or 243.0 MHz (emergencies) or on the published frequency of the Controlling Unit (all other situations).
JDA CORRIDORS Aircraft should not penetrate corridors without permission by ACC controlling corridors.
JAPAN TRAINING AND TESTING AREAS EXCLUDES: Airways, ATS routes, SIDs, STARs, instrument approach routes, radar vectoring routes and holding areas and their protective airspace.

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KZAK Type: FIR
VHF EMERGENCY FREQUENCY REQUIREMENTS
VHF EMERGENCY FREQUENCY REQUIREMENT Pilots should remember that there is a need to continuously guard the VHF emergency frequency 121.5 MHz when on long over-water flights, except when communications on other VHF channels, equipment limitations, or cockpit duties prevent simultaneous guarding of two channels. Guarding of 121.5 MHz is particularly critical when operating in proximity to flight information region (FIR) boundaries since it serves to facilitate communications with regard to aircraft which may experience in-flight emergencies, communications, or navigational difficulties.

CPDLC LOGON
Controller Pilot Data Link Communications (CPDLC) aircraft entering Guam ARTCC contact Guam CERAP 250NM out on 118.7, squawk 2100.

REGIONAL WARNINGS
All pilots should avoid the Kaena Point Satellite Tracking Station. Electromagnetic radiation will continuously exist 2800' above antenna systems along a 3 mile stretch of mountain ridge. Aircraft flying within this airspace will be exposed to direct radiation which may produce harmful effects to personnel and equipment.

REGIONAL WARNINGS
All pilots should avoid the Kokee NASA Telemetry Station. Electromagnetic radiation will continuously exist within a 2500' radius and 2500' above antenna. Aircraft flying within this airspace will be exposed to direct radiation which may produce harmful effects to personnel and equipment.

PAZA Type: FIR
VHF EMERGENCY FREQUENCY REQUIREMENTS
VHF EMERGENCY FREQUENCY REQUIREMENT Pilots should remember that there is a need to continuously guard the VHF emergency frequency 121.5 MHz when on long over-water flights, except when communications on other VHF channels, equipment limitations, or cockpit duties prevent simultaneous guarding of two channels. Guarding of 121.5 MHz is particularly critical when operating in proximity to flight information region (FIR) boundaries since it serves to facilitate communications with regard to aircraft which may experience in-flight emergencies, communications, or navigational difficulties.

CPDLC LOGON (Alaska)
Controller/Pilot Data Link Communications (CPDLC) service is operational throughout the Anchorage Oceanic and Domestic flight Information Regions (FIRs). Anchorage ARTCC utilizes two separate enroute automation systems each having a different CPDLC (FANS) logon address. Use logon address PAZN for all CPDLC communications In the Anchorage Oceanic FIR and in that portion of the Anchorage Domestic FIR west of W165Â° longitude and south of N63Â° latitude . Use logon address PAZA for all other areas of the Anchorage Domestic FIR and the Anchorage Arctic FIR. Aircraft entering Anchorage FIR airspace from Canadian or Russian airspace are requested to logon at or prior to crossing the FIR boundary. Aircraft entering Anchorage FIR airspace from the Oakland or Fukuoka FIR will be provided automatic FANS addressing. Aircraft departing Alaskan airports are requested to logon after departure, but before leaving Flight Level 180. Flight crews are reminded that use of CPDLC does not remove requirements to monitor VHF/ HF frequencies . Aircraft within VHF coverage may make position reports via CPDLC. Requests to ATC Should be made via VHF if within VHF coverage. After logon, Anchorage ARTCC automation will provide automatic FANS address forwarding for fights entering the Magadan, Fukuoka and Oakland FIRs.

FAA Q Routes (Alaska)
"Alaska Q routes require GNSS and radar surveillance. For CONUS DME/DME/IRU RNAV required, unless otherwise indicated. DME/DME/IRU aircraft "

Page 6 Strip Charts

KZAK Type: FIR
VHF EMERGENCY FREQUENCY REQUIREMENTS
VHF EMERGENCY FREQUENCY REQUIREMENT Pilots should remember that there is a need to continuously guard the VHF emergency frequency 121.5 MHz when on long over-water flights, except when communications on other VHF channels, equipment limitations, or cockpit duties prevent simultaneous guarding of two channels. Guarding of 121.5 MHz is particularly critical when operating in proximity to flight information region (FIR) boundaries since it serves to facilitate communications with regard to aircraft which may experience in-flight emergencies, communications, or navigational difficulties.

CPDLC LOGON
Controller Pilot Data Link Communications (CPDLC) aircraft entering Guam ARTCC contact Guam CERAP 250NM out on 118.7, squawk 2100.

REGIONAL WARNINGS
All pilots should avoid the Kaena Point Satellite Tracking Station. Electromagnetic radiation will continuously exist 2800' above antenna systems along a 3 mile stretch of mountain ridge. Aircraft flying within this airspace will be exposed to direct radiation which may produce harmful effects to personnel and equipment.

REGIONAL WARNINGS
All pilots should avoid the Kokee NASA Telemetry Station. Electromagnetic radiation will continuously exist within a 2500' radius and 2500' above antenna. Aircraft flying within this airspace will be exposed to direct radiation which may produce harmful effects to personnel and equipment.

PAZA Type: FIR
VHF EMERGENCY FREQUENCY REQUIREMENTS
VHF EMERGENCY FREQUENCY REQUIREMENT Pilots should remember that there is a need to continuously guard the VHF emergency frequency 121.5 MHz when on long over-water flights, except when communications on other VHF channels, equipment limitations, or cockpit duties prevent simultaneous guarding of two channels. Guarding of 121.5 MHz is particularly critical when operating in proximity to flight information region (FIR) boundaries since it serves to facilitate communications with regard to aircraft which may experience in-flight emergencies, communications, or navigational difficulties.

CPDLC LOGON (Alaska)
Controller/Pilot Data Link Communications (CPDLC) service is operational throughout the Anchorage Oceanic and Domestic flight Information Regions (FIRs). Anchorage ARTCC utilizes two separate enroute automation systems each having a different CPDLC (FANS) logon address. Use logon address PAZN for all CPDLC communications In the Anchorage Oceanic FIR and in that portion of the Anchorage Domestic FIR west of W165Â° longitude and south of N63Â° latitude . Use logon address PAZA for all other areas of the Anchorage Domestic FIR and the Anchorage Arctic FIR. Aircraft entering Anchorage FIR airspace from Canadian or Russian airspace are requested to logon at or prior to crossing the FIR boundary. Aircraft entering Anchorage FIR airspace from the Oakland or Fukuoka FIR will be provided automatic FANS addressing. Aircraft departing Alaskan airports are requested to logon after departure, but before leaving Flight Level 180. Flight crews are reminded that use of CPDLC does not remove requirements to monitor VHF/ HF frequencies . Aircraft within VHF coverage may make position reports via CPDLC. Requests to ATC Should be made via VHF if within VHF coverage. After logon, Anchorage ARTCC automation will provide automatic FANS address forwarding for fights entering the Magadan, Fukuoka and Oakland FIRs.

FAA Q Routes (Alaska)
"Alaska Q routes require GNSS and radar surveillance. For CONUS DME/DME/IRU RNAV required, unless otherwise indicated. DME/DME/IRU aircraft "

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CZEG Type: FIR
RNP PROCEDURES
Within RNPC (Required Navigation Performance Capability) airspace aircraft may use established RNAV Routes, provided the aircraft is certificated in accordance with the RNPC concept.

KZAK Type: FIR
VHF EMERGENCY FREQUENCY REQUIREMENTS
VHF EMERGENCY FREQUENCY REQUIREMENT Pilots should remember that there is a need to continuously guard the VHF emergency frequency 121.5 MHz when on long over-water flights, except when communications on other VHF channels, equipment limitations, or cockpit duties prevent simultaneous guarding of two channels. Guarding of 121.5 MHz is particularly critical when operating in proximity to flight information region (FIR) boundaries since it serves to facilitate communications with regard to aircraft which may experience in-flight emergencies, communications, or navigational difficulties.

CPDLC LOGON
Controller Pilot Data Link Communications (CPDLC) aircraft entering Guam ARTCC contact Guam CERAP 250NM out on 118.7, squawk 2100.

REGIONAL WARNINGS
All pilots should avoid the Kaena Point Satellite Tracking Station. Electromagnetic radiation will continuously exist 2800' above antenna systems along a 3 mile stretch of mountain ridge. Aircraft flying within this airspace will be exposed to direct radiation which may produce harmful effects to personnel and equipment.

REGIONAL WARNINGS
All pilots should avoid the Kokee NASA Telemetry Station. Electromagnetic radiation will continuously exist within a 2500' radius and 2500' above antenna. Aircraft flying within this airspace will be exposed to direct radiation which may produce harmful effects to personnel and equipment.

PAZA Type: FIR
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VHF EMERGENCY FREQUENCY REQUIREMENT Pilots should remember that there is a need to continuously guard the VHF emergency frequency 121.5 MHz when on long over-water flights, except when communications on other VHF channels, equipment limitations, or cockpit duties prevent simultaneous guarding of two channels. Guarding of 121.5 MHz is particularly critical when operating in proximity to flight information region (FIR) boundaries since it serves to facilitate communications with regard to aircraft which may experience in-flight emergencies, communications, or navigational difficulties.

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FAA Q Routes (Alaska)
"Alaska Q routes require GNSS and radar surveillance. For CONUS DME/DME/IRU RNAV required, unless otherwise indicated. DME/DME/IRU aircraft "

Page 8 Strip Charts

CZEG Type: FIR
RNP PROCEDURES
Within RNPC (Required Navigation Performance Capability) airspace aircraft may use established RNAV Routes, provided the aircraft is certificated in accordance with the RNPC concept.

KZAK Type: FIR
VHF EMERGENCY FREQUENCY REQUIREMENTS
VHF EMERGENCY FREQUENCY REQUIREMENT Pilots should remember that there is a need to continuously guard the VHF emergency frequency 121.5 MHz when on long over-water flights, except when communications on other VHF channels, equipment limitations, or cockpit duties prevent simultaneous guarding of two channels. Guarding of 121.5 MHz is particularly critical when operating in proximity to flight information region (FIR) boundaries since it serves to facilitate communications with regard to aircraft which may experience in-flight emergencies, communications, or navigational difficulties.

CPDLC LOGON
Controller Pilot Data Link Communications (CPDLC) aircraft entering Guam ARTCC contact Guam CERAP 250NM out on 118.7, squawk 2100.

REGIONAL WARNINGS
All pilots should avoid the Kaena Point Satellite Tracking Station. Electromagnetic radiation will continuously exist 2800' above antenna systems along a 3 mile stretch of mountain ridge. Aircraft flying within this airspace will be exposed to direct radiation which may produce harmful effects to personnel and equipment.

REGIONAL WARNINGS
All pilots should avoid the Kokee NASA Telemetry Station. Electromagnetic radiation will continuously exist within a 2500' radius and 2500' above antenna. Aircraft flying within this airspace will be exposed to direct radiation which may produce harmful effects to personnel and equipment.

KZLC Type: FIR
MILITARY OPERATIONS
Military operations south of J-58-80 and west of J-9-107, direct routings normally unavailable.

FAA Q Routes (CONUS)
Not including Q routes in the Gulf of Mexico - GNSS or DME/DME/IRU RNAV required, unless otherwise indicated. DME/DME/IRU aircraft require radar surveillance. Refer to Jeppesen Enroute pages for DME information.

KZSE Type: FIR
FAA Q Routes (CONUS)
Not including Q routes in the Gulf of Mexico - GNSS or DME/DME/IRU RNAV required, unless otherwise indicated. DME/DME/IRU aircraft require radar surveillance. Refer to Jeppesen Enroute pages for DME information.

MAGNETIC DISTURBANCE
VFR Operations: Magnetic disturbance of as much as 6Â° exists at ground level between Maple Valley and Cedar Grove.

PAZA Type: FIR
VHF EMERGENCY FREQUENCY REQUIREMENTS
VHF EMERGENCY FREQUENCY REQUIREMENT Pilots should remember that there is a need to continuously guard the VHF emergency frequency 121.5 MHz when on long over-water flights, except when communications on other VHF channels, equipment limitations, or cockpit duties prevent simultaneous guarding of two channels. Guarding of 121.5 MHz is particularly critical when operating in proximity to flight information region (FIR) boundaries since it serves to facilitate communications with regard to aircraft which may experience in-flight emergencies, communications, or navigational difficulties.

CPDLC LOGON (Alaska)
Controller/Pilot Data Link Communications (CPDLC) service is operational throughout the Anchorage Oceanic and Domestic flight Information Regions (FIRs). Anchorage ARTCC utilizes two separate enroute automation systems each having a different CPDLC (FANS) logon address. Use logon address PAZN for all CPDLC communications In the Anchorage Oceanic FIR and in that portion of the Anchorage Domestic FIR west of W165Â° longitude and south of N63Â° latitude . Use logon address PAZA for all other areas of the Anchorage Domestic FIR and the Anchorage Arctic FIR. Aircraft entering Anchorage FIR airspace from Canadian or Russian airspace are requested to logon at or prior to crossing the FIR boundary. Aircraft entering Anchorage FIR airspace from the Oakland or Fukuoka FIR will be provided automatic FANS addressing. Aircraft departing Alaskan airports are requested to logon after departure, but before leaving Flight Level 180. Flight crews are reminded that use of CPDLC does not remove requirements to monitor VHF/ HF frequencies . Aircraft within VHF coverage may make position reports via CPDLC. Requests to ATC Should be made via VHF if within VHF coverage. After logon, Anchorage ARTCC automation will provide automatic FANS address forwarding for fights entering the Magadan, Fukuoka and Oakland FIRs.

FAA Q Routes (Alaska)
"Alaska Q routes require GNSS and radar surveillance. For CONUS DME/DME/IRU RNAV required, unless otherwise indicated. DME/DME/IRU aircraft "

Reference Notes

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RCAA Type: FIR
TRANSPONDER SETTING (Secondary Surveillance Radar-SSR) For Beacon Code procedures see Enroute Tab.

ADIZ REQUIREMENTS
FOR ADIZ REQUIREMENTS See Enroute Tab.

REQUIRED NAVIGATION PERFORMANCE (RNP)
For procedures and equipment requirements, see Air Traffic Control pages and/or Air Traffic Control State pages for detailed information.

CRUISING LEVEL PROCEDURES
CRUISING LEVELS: For Flight Level Transition Procedures refer to Enroute section.

RJJJ Type: FIR
REQUIRED NAVIGATION PERFORMANCE (RNP)
For procedures and equipment requirements, see Air Traffic Control pages and/or Air Traffic Control State pages for detailed information.

TRANSPONDER REQUIRED
Transponder (Mode A/3 & Mode C) required in Approach Control Area and Control Zones.

TRANSPONDER REQUIRED
Transponder (Mode A/3 & Mode C) required in Approach Control Area and Control Zones.

FLIGHT PLANNING AND OVERFLIGHT ROUTES within the Pacific region: For complete Information see Enroute Tab.

TRANSPONDER SETTING (Secondary Surveillance Radar-SSR) For Beacon Code procedures see Enroute Tab.

ADIZ REQUIREMENTS
FOR ADIZ REQUIREMENTS See Enroute Tab.

CRUISING LEVEL PROCEDURES
CRUISING LEVELS: For Flight Level Transition Procedures refer to Enroute section.

NORTH PACIFIC (NOPAC) ROUTE PROCEDURES

a. The NOPAC Route System is comprised of five Air Traffic Service (ATS) routes which transit the North Pacific between Alaska and Japan. The two northern routes are used for westbound traffic. The three southern routes are used for eastbound traffic, except that R-591 or G-344 may be used for westbound aircraft crossing the Fukuoka/Anchorage FIR between 0000UTC and 0600UTC. The routes are as follows: R-220, R-580, A-590, R-591 and G-344.

b. Transition Routes

1. Within the Fukuoka FIR, Oceanic Transition Routes (OTRs) and, in one case, a Victor route, have been established for aircraft transitioning to or from the NOPAC Route System.

2. Within the Anchorage FIR, certain ATS routes are used for the same purpose. They are as follows: B-327 (For Westbound use only between BAMOK and SELDM), R-341, G-469, A-342, G-215, R-330, R-451, R-336, R-338, G-583 and G-349.

c. Separation Standards

1. The primary form of lateral separation within the NOPAC Route System is 25NM lateral either side of the centerline, based on Required Navigation Performance 10 (RNP-10) and 1000' vertical separation (FL290 - FL410) based on Reduced Vertical Separation Minimums (RVSM).

2. Lateral separation for Non-RNP10 aircraft and aircraft operating below FL180 is 50NM lateral either side of the centerline.

3. Standard longitudinal separation within the Anchorage Oceanic FIR is 15 minutes "in trail".

d. Flight Plans

1. Aircraft shall enter "R" in item 10 of the ICAO flight plan if the aircraft and operator have been approved for RNP 10 operations for the route of flight.

2. Aircraft shall enter "W" in item 10 of the ICAO flight plan if the aircraft and operator have been approved for RVSM.

3. Aircraft not approved for RNP 10 and/or RVSM shall not enter "R" and/or "W" in item 10.

4. Aircraft approved for both RNP 10 and RVSM may flight plan any of the NOPAC routes with the following altitude restrictions:

(a) R-220: Even Altitudes FL180 to FL400, also FL330, FL350, FL370, FL390, FL410

(b) R-580: Even Altitudes FL180 to FL400, also FL350, FL370

(c) A-590: Odd Altitudes FL190 to FL410, also FL300, FL320, FL340

(d) R-591: Eastbound, Odd Altitudes FL190 to FL410

(e) R-591: Westbound, Even Altitudes FL300 to FL400

(f) G-344: Eastbound, Odd Altitudes FL190 to FL410

(g) G-344: Westbound, Even Altitudes FL300 to FL400

(h) R-591 and G-344 are Eastbound routes unless designated as Westbound PACOTS. Traffic flows are either Eastbound or Westbound with the tracks being emptied of traffic before changing direction.

5. Non-RNP-10 aircraft shall flight plan as follows:

(a) Westbound: R-220 at all times.

(b) Eastbound: A-590 at all times.

(c) Eastbound: G-344 when available for eastbound flights.

(d) The altitudes available on these routes are at or below FL280 and at or above FL430.

e. Procedures

1. Peak traffic periods:

(a) Eastbound - 0700UTC to 2100UTC

(b) Westbound - 1200UTC to 1900UTC and 2200UTC to 0800UTC

(c) Due to traffic volume, flights desiring to operate contrary to the predominant traffic flow can expect to be rerouted or assigned less than optimum flight levels. If feasible, users planning to operate in the NOPAC Route System at airspeeds below MACH 0.78 should use other than the peak hours for their flights. This will reduce congestion and expedite traffic.

f. Aircraft cannot always be accommodated on their flight planned NOPAC route. In an effort to reduce coordination time and errors between ATC and flight crews, JCAB (Fukuoka ATMC) and FAA (Anchorage ARTCC) have agreed on a common procedure to accommodate most reroutes. Aircraft rerouted from one NOPAC ATC route to another NOPAC ATC route will be given short range clearances into the adjoining FIR's RADAR coverage airspace. The receiving ATC facility will then issue further routing to the aircraft prior to the aircraft reaching the clearance limit.

1. Example 1: aircraft ABC101 is routed via R-220 to RJTT but can not be accommodated on R-220. The aircraft may be re-cleared as follows: "ABC101 cleared to OATIS via R-580, expect further clearance from ATMC after OMOTO."

2. Example 2: aircraft ABC102 is routed via A-590 to PAFA but can not be accommodated on A-590. The aircraft may be re-cleared as follows: "ABC102 cleared to SYA via R-591, expect further routing from Anchorage ARTCC after AKISU."

FLIGHT PROCEDURES Okinawa Approach Control provides full time Stage III Service (RADAR sequencing and separation service for VFR aircraft) within the Okinawa TCA. No aircraft may operate within the TCA unless appropriate authorization is received from TAC prior to the operation.

a. VFR aircraft enroute to destination airports within the Okinawa TCA, should contact Okinawa Approach Control 50NM from the Kadena VORTAC.

1. Aircraft operating southeast of Kadena 050/230 radials use 258.3/126.5 MHz.

2. Aircraft operating northwest of Kadena 230/050 radials use 335.8/119.1 MHz.

3. Monitor ATIS broadcasts of destination airport prior to contacting Approach Control and advise ATIS code received on initial contact.

b. VFR aircraft departing Kadena AB will advise Ground Control prior to taxi, of intended direction of flight and proposed altitude to depart the TCA. VFR aircraft departing other airports that desire ATC service, will advise the appropriate tower prior to departure. The tower will then advise when to contact Departure Control and assign a frequency and beacon code.

c. The procedures used in this program are not to be interpreted as relieving pilots of their responsibilities to:

1. See, and avoid other traffic operating in VFR conditions,
2. Maintain appropriate terrain and obstruction clearance,
3. Remain in weather conditions equal to, or better than, the minimum required by pertinent regulations, and
4. Whenever compliance with an assigned route or heading is likely to compromise any of the above, Okinawa Approach Control shall be so advised.

d. Except in the case of inflight failure, no person may operate an aircraft within the TCA unless equipped with the following:

1. VOR or TACAN receiver (except helicopters),
2. Two-way radio capable of communicating with ATC on the appropriate frequencies for the TCA, or
3. Coded RADAR Beacon Transponder having at least a Mode A/3 & Mode C, 64 code capability, replying to A/3 interrogation with the code specfied by ATC.

RKRR Type: FIR
CRUISING LEVEL PROCEDURES
CRUISING LEVELS: For Flight Level Transition Procedures refer to Enroute section.

CRUISING LEVELS
Cruising levels for flight level transition procedures refer to ENROUTE CH-201 and consecutive pages.

REQUIRED NAVIGATION PERFORMANCE (RNP)
For procedures and equipment requirements, see Air Traffic Control pages and/or Air Traffic Control State pages for detailed information.

TRANSPONDER SETTING (Secondary Surveillance Radar-SSR) For Beacon Code procedures see Enroute Tab.

ADIZ REQUIREMENTS
FOR ADIZ REQUIREMENTS See Enroute Tab.

TRANSPONDER SETTING (Secondary Surveillance Radar-SSR) For Beacon Code procedures see Enroute Tab.

CRUISING LEVEL PROCEDURES
CRUISING LEVELS: For Flight Level Transition Procedures refer to Enroute section.

RPHI Type: FIR
TRANSPONDER SETTING (Secondary Surveillance Radar-SSR) For Beacon Code procedures see Enroute Tab.

ADIZ REQUIREMENTS
FOR ADIZ REQUIREMENTS See Enroute Tab.

REQUIRED NAVIGATION PERFORMANCE (RNP)
For procedures and equipment requirements, see Air Traffic Control pages and/or Air Traffic Control State pages for detailed information.

FLIGHT PROCEDURES AIRCRAFT SPEED CONTROL PROCEDURES Maximum IAS unless otherwise authorized by ATC. For arriving aircraft: 250KTS.
VFR OPERATIONS:

a. Be equipped with 118.1 MHz transceivers and approach frequency 119.7 MHz.

b. Prior to entering the designated VFR areas, contact Manila Tower on 118.1 MHz.

c. Adhere to the established MIA VFR arrival/departure routings.

d. Maintain the required altitude of 2500FT or below within 15NM from the ARP. Cruise/climb to higher altitude shall be on a prior approval from Manila Approach.

e. When intending to transit the IFR climb/descend areas, contact Manila Approach on 119.7 MHz for the necessary clearance.

f. When requesting radar vector within 15NM radius maintain 2500FT unless otherwise instructed by Manila Approach Control.

IFR OPERATIONS:

a. The radar traffic circuit shall not penetrate the aerodrome traffic zone.

b. IFR traffic radar vector to final approach of runways 06/24 shall maintain 3500FT prior to entering the IFR climb/descend area. Descent shall be made without violating the radar minimum vectoring altitude.

c. In the event of radar and/or communication failure, descent to 3000FT shall be effected only in the designated VFR areas-10 miles from the ARP. Otherwise, follow the Lost Communication Procedures.

d. All arriving IFR flights shall maintain an indicated airspeed (IAS) of 150KTS or more up to 5 DME final of Rwy 06/24.

e. Arriving aircraft on radar vector to Manila shall not cancel clearance within 20NM.

VHHK Type: FIR
FLIGHT PLANNING AND OVERFLIGHT ROUTES within the Pacific region: For complete Information see Enroute Tab.

ATS ROUTE RESTRICTIONS: For information regarding flight planning purposes refer to Enroute section.

FLIGHT PLANNING AND OVERFLIGHT ROUTES within the Pacific region: For complete information see Enroute section.

TRANSPONDER SETTING (Secondary Surveillance Radar-SSR): For Beacon Code procedures see ENROUTE section.

ATS ROUTE RESTRICTION NOTES
ATS ROUTE RESTRICTIONS For information regarding flight planning purposes refer to Enroute EE-101 and consecutive pages.

VHHK Transition Routes
For complete information of Terminal Transition Routes within VHHK FIR see VHHH Terminal charts.

REQUIRED NAVIGATION PERFORMANCE (RNP)
For procedures and equipment requirements, see Air Traffic Control pages and/or Air Traffic Control State pages for detailed information.

TRANSPONDER SETTING (Secondary Surveillance Radar-SSR) For Beacon Code procedures see Enroute Tab.

RVSM PROCEDURES
REDUCED VERTICAL SEPARATION MINIMUMS (FL290 - FL410) For RVSM procedures and equipment requirements see AIR TRAFFIC CONTROL pages series.

ZGZU Type: FIR
RVSM PROCEDURES
REDUCED VERTICAL SEPARATION MINIMUMS (FL290 - FL410) For RVSM procedures and equipment requirements see AIR TRAFFIC CONTROL pages series.

REQUIRED NAVIGATION PERFORMANCE (RNP)
For procedures and equipment requirements, see Air Traffic Control pages and/or Air Traffic Control State pages for detailed information.

CRUISING LEVEL PROCEDURES
CRUISING LEVELS: For Flight Level Transition Procedures refer to Enroute section.

TRANSPONDER SETTING (Secondary Surveillance Radar-SSR): For Beacon Code procedures see ENROUTE section.

ATS ROUTE RESTRICTIONS: For information regarding flight planning purposes refer to Enroute section.

ZHWH Type: FIR
ATS ROUTE RESTRICTIONS: For information regarding flight planning purposes refer to Enroute section.

TRANSPONDER SETTING (Secondary Surveillance Radar-SSR): For Beacon Code procedures see ENROUTE section.

RVSM PROCEDURES
REDUCED VERTICAL SEPARATION MINIMUMS (FL290 - FL410) For RVSM procedures and equipment requirements see AIR TRAFFIC CONTROL pages series.

ZSHA Type: FIR
ATS ROUTE RESTRICTIONS: For information regarding flight planning purposes refer to Enroute section.

TRANSPONDER SETTING (Secondary Surveillance Radar-SSR): For Beacon Code procedures see ENROUTE section.

CRUISING LEVEL PROCEDURES
CRUISING LEVELS: For Flight Level Transition Procedures refer to Enroute section.

REQUIRED NAVIGATION PERFORMANCE (RNP)
For procedures and equipment requirements, see Air Traffic Control pages and/or Air Traffic Control State pages for detailed information.

TRANSPONDER SETTING (Secondary Surveillance Radar-SSR) For Beacon Code procedures see Enroute Tab.

RVSM PROCEDURES
REDUCED VERTICAL SEPARATION MINIMUMS (FL290 - FL410) For RVSM procedures and equipment requirements see AIR TRAFFIC CONTROL pages series.

Page 2 Strip Charts

KZAK Type: FIR
FLIGHT PLANNING AND OVERFLIGHT ROUTES within the Pacific region: For complete Information see Enroute Tab.

ADIZ REQUIREMENTS
FOR ADIZ REQUIREMENTS See Enroute Tab.

EXTENDED RANGE OPERATIONS BY AIRCRAFT WITH TWO-TURBINE POWER-UNITS (ETOPS) 1. If the contingency procedures are employed by a twin-engine aircraft as a result of an engine shutdown or failure of an ETOPS critical system, the pilot should advise ATC as soon as practicable of the situation, reminding ATC of the type of aircraft involved, and request expeditious handling.

OCEANIC POSITION REPORTING PROCEDURES OAKLAND OCEANIC FIR
1. For non ADS equipped aircraft, any waypoint filed in the route of flight (ItemÂ 15 of the ICAO flight plan) must be reported as a position report whether the filed waypoint is compulsory or not. If a noncompulsory waypoint is not filed in item 15, it does not need to be reported.

2. POSITION REPORTS

a. When operating on a published ATS Route or a temporary route established by NOTAM, report and estimate the designated reporting points using the specified waypoint names or geographic coordinates as specified in the NOTAM.

b. When operating on a random route:

1. Flights whose tracks are predominantly east and west shall report over each 5Â degrees or 10Â degrees (10Â degrees will be used if the speed of the aircraft is such that 10Â degrees will be traversed within 80 minutes or less) meridian longitude extending east and west from 180Â degrees.

2. Flights whose tracks are predominantly north and south shall report over each 5Â degrees or 10Â degrees (10Â degrees if traversed within 80Â minutes) parallel of latitude extending north and south of the equator.

c. ATC may require specific flights to report more frequently than each 5Â degrees for aircraft with slow ground speeds.

d. Position reports shall be transmitted at the time of crossing the designated reporting point or as soon thereafter as possible.

3. Position reports shall include information on present position, estimated next position, and ensuing position in sequence as indicated below.

a. PRESENT POSITION - Information shall include:

1. The word â€œpositionâ€ .

2. Aircraft identification.

3. Reporting point name, or if not named:

(a) Latitude (2 digits or more) and,

(b) Longitude (3 digits or more).

b. Time over reporting point (4 digits UTC).

c. Altitude (Flight Level). When forwarding an altitude report within the Oakland OCA/FIR, pilots should report their present altitude and their assigned altitude exactly as cleared if the present and assigned altitudes differ. Aircraft assigned a block altitude must report their current altitude and the assigned block altitude. A restriction to cross a point at an altitude is not a block altitude assignment and should not be reported as a block of altitudes.

d. ESTIMATED NEXT POSITION

(1) Reporting point name, or if not named, latitude and longitude as in a.3 above and,

(2) Estimated time over next position (4 digits UTC).

e. ENSUING FIX

(1) Name only of the next succeeding fix whether compulsory or not, or if not named, latitude and longitude as in a.3 above.

4. WEATHER REPORTS:

a. Weather reports shall be included as provided in SectionÂ 3 of Standard AIREP Form by all flights unless exempted from weather reporting by the Weather Service and/or ATC.

5. ADHERENCE TO ATC APPROVED ROUTE

a. If an aircraft, notwithstanding all action taken to adhere to the route specified in the ATC clearance, inadvertently deviates from this route, action shall be taken to regain it as soon as reasonable and not further ahead than 200 nautical miles from the DR position at which the heading was altered to regain the route specified in the ATC clearance. Action to regain this route shall not be delayed in anticipation of obtaining a requested re-clearance.

6. EXCEPTIONS TO POSITION REPORTS PROCEDURES

a. Within Oakland OCA/FIR, no 5Â degree report need be made that would fall within 100Â NM of Guam. Aircraft cleared via terminal area routes report compulsory reporting fixes. Other aircraft report 100Â NM from Nimitz VORTAC. Where other island destinations within the Oakland Oceanic FIR are not more than one-degree latitude-longitude from a 5Â degrees fixed line reporting point, the ETA and arrival report may be substituted in lieu of the adjacent fixed line report.

b. To the east of the Hawaiian Islands it will not be necessary to report the 155Â degree west position if position will be reported at the entry/exit fixes on the Honolulu Control Facility boundary. To the west of the Hawaiian Islands, the 160Â degree west need not be reported.

NORTH PACIFIC (NOPAC) ROUTE PROCEDURES

a. The NOPAC Route System is comprised of five Air Traffic Service (ATS) routes which transit the North Pacific between Alaska and Japan. The two northern routes are used for westbound traffic. The three southern routes are used for eastbound traffic, except that R-591 or G-344 may be used for westbound aircraft crossing the Fukuoka/Anchorage FIR between 0000UTC and 0600UTC. The routes are as follows: R-220, R-580, A-590, R-591 and G-344.

b. Transition Routes

1. Within the Fukuoka FIR, Oceanic Transition Routes (OTRs) and, in one case, a Victor route, have been established for aircraft transitioning to or from the NOPAC Route System.

2. Within the Anchorage FIR, certain ATS routes are used for the same purpose. They are as follows: B-327 (For Westbound use only between BAMOK and SELDM), R-341, G-469, A-342, G-215, R-330, R-451, R-336, R-338, G-583 and G-349.

c. Separation Standards

1. The primary form of lateral separation within the NOPAC Route System is 25NM lateral either side of the centerline, based on Required Navigation Performance 10 (RNP-10) and 1000' vertical separation (FL290 - FL410) based on Reduced Vertical Separation Minimums (RVSM).

2. Lateral separation for Non-RNP10 aircraft and aircraft operating below FL180 is 50NM lateral either side of the centerline.

3. Standard longitudinal separation within the Anchorage Oceanic FIR is 15 minutes "in trail".

d. Flight Plans

1. Aircraft shall enter "R" in item 10 of the ICAO flight plan if the aircraft and operator have been approved for RNP 10 operations for the route of flight.

2. Aircraft shall enter "W" in item 10 of the ICAO flight plan if the aircraft and operator have been approved for RVSM.

3. Aircraft not approved for RNP 10 and/or RVSM shall not enter "R" and/or "W" in item 10.

4. Aircraft approved for both RNP 10 and RVSM may flight plan any of the NOPAC routes with the following altitude restrictions:

(a) R-220: Even Altitudes FL180 to FL400, also FL330, FL350, FL370, FL390, FL410

(b) R-580: Even Altitudes FL180 to FL400, also FL350, FL370

(c) A-590: Odd Altitudes FL190 to FL410, also FL300, FL320, FL340

(d) R-591: Eastbound, Odd Altitudes FL190 to FL410

(e) R-591: Westbound, Even Altitudes FL300 to FL400

(f) G-344: Eastbound, Odd Altitudes FL190 to FL410

(g) G-344: Westbound, Even Altitudes FL300 to FL400

(h) R-591 and G-344 are Eastbound routes unless designated as Westbound PACOTS. Traffic flows are either Eastbound or Westbound with the tracks being emptied of traffic before changing direction.

5. Non-RNP-10 aircraft shall flight plan as follows:

(a) Westbound: R-220 at all times.

(b) Eastbound: A-590 at all times.

(c) Eastbound: G-344 when available for eastbound flights.

(d) The altitudes available on these routes are at or below FL280 and at or above FL430.

e. Procedures

1. Peak traffic periods:

(a) Eastbound - 0700UTC to 2100UTC

(b) Westbound - 1200UTC to 1900UTC and 2200UTC to 0800UTC

(c) Due to traffic volume, flights desiring to operate contrary to the predominant traffic flow can expect to be rerouted or assigned less than optimum flight levels. If feasible, users planning to operate in the NOPAC Route System at airspeeds below MACH 0.78 should use other than the peak hours for their flights. This will reduce congestion and expedite traffic.

f. Aircraft cannot always be accommodated on their flight planned NOPAC route. In an effort to reduce coordination time and errors between ATC and flight crews, JCAB (Fukuoka ATMC) and FAA (Anchorage ARTCC) have agreed on a common procedure to accommodate most reroutes. Aircraft rerouted from one NOPAC ATC route to another NOPAC ATC route will be given short range clearances into the adjoining FIR's RADAR coverage airspace. The receiving ATC facility will then issue further routing to the aircraft prior to the aircraft reaching the clearance limit.

1. Example 1: aircraft ABC101 is routed via R-220 to RJTT but can not be accommodated on R-220. The aircraft may be re-cleared as follows: "ABC101 cleared to OATIS via R-580, expect further clearance from ATMC after OMOTO."

2. Example 2: aircraft ABC102 is routed via A-590 to PAFA but can not be accommodated on A-590. The aircraft may be re-cleared as follows: "ABC102 cleared to SYA via R-591, expect further routing from Anchorage ARTCC after AKISU."

CENTRAL EAST PACIFIC ROUTE SYSTEM (HAWAII â€“ U.S. MAINLAND)

a. The Central East Pacific (CEP) is the organized route system between Hawaii and California. Seven ATS routes, R-463, R-464, R-465, R-585, R-576, R-577 and R-578 are the primary routes within the CEP.

b. Reduced Vertical Separation Minimum (RVSM) and Required Navigation Performance 10 (RNP-10) are required for aircraft operating within the CEP Route System at FL290 through FL410. Non-approved aircraft can expect FL280 and below or FL430 and above, traffic permitting.

c. Operators show approval for RVSM and RNP-10 by annotating block 10 of the ICAO flight plan (equipment) with the letter W and R respectively.

d. Flight Levels normally assigned in the CEP are in accordance with ICAO Appendix 3a (East odd, West even).

ATS ROUTE RESTRICTION NOTES

ATS Route Restriction Notes for information regarding flight planning purposes see Enroute Tab.

RNP-10 SEPARATION

RNP-10 lateral separation (50 NM) may be applied wthin the Oakland Oceanic FIR between RNP-10 approved aircraft. RNP-10 approval is required for all PACOTS and for all aircraft operating within the CEP at FL290 through FL410. Non-RNP approved aircraft can expect FL280 and below or FL430 and above, traffic permitting.

MACH NUMBER TECHNIQUE For information about routes and/or areas affected, see Air Traffic Control Tab.

RVSM PROCEDURES

REDUCED VERTICAL SEPARATION MINIMUMS (RVSM) For procedures and equipment requirements see Air Traffic Control Tab.

REQUIRED NAVIGATION PERFORMANCE (RNP)

For procedures and equipment requirements, see Air Traffic Control pages and/or Air Traffic Control State pages for detailed information.

SPECIAL PROCEDURES FOR IN-FLIGHT CONTINGENCIES IN OCEANIC AIRSPACE ICAO DOC 4444, SECTION 15.2

Introduction

1. Although all possible contingencies cannot be covered, these procedures provide for the more frequent cases such as:

a. Inability to comply with assigned clearance due to meteorological conditions.

b. En-route diversion across the prevailing traffic flow; and

c. Loss of, or significant reduction in, the required navigation capability when operating in an airspace where the navigation performance accuracy is a prerequisite to the safe conduct of flight operations, or pressurization failure.

2. General Procedures

1. If an aircraft is unable to continue the flight in accordance with its ATC clearance, a revised clearance shall be obtained, whenever possible, prior to initiating any action.

2. If prior clearance cannot be obtained, the following contingency procedures should be employed until a revised clearance is received. In general terms, the aircraft should be flown at an offset level and on an offset track where other aircraft are less likely to be encountered. Specifically, the pilot shall:

a. Leave the cleared track or ATS route by initially turning at least 30 degrees to the right or to the left, in order to establish and maintain a parallel, same direction track or ATS route offset 5 NM (9.3 km). The direction of the turn should be based on one or more of the following factors:

1) aircraft position relative to any organized track or ATS route system;

2) the direction of flights and flight levels allocated on adjacent tracks;

3) the direction to an alternate airport;

4) any strategic lateral offset being flown; and

5) terrain clearance.

b. Maintain a watch for conflicting traffic both visually and by reference to ACAS (if equipped), leaving ACAS in RA mode at all times, unless aircraft operating limitations dictate otherwise;

c. turn on all aircraft exterior lights (commensurate with appropriate operating limitations);

d. keep the SSR transponder on at all times and, when able, squawk 7700, as appropriate and, if equipped with ADS-B or ADS-C, select the appropriate emergency functionality;

e. as soon as practicable, advise air traffic control of any deviation from their assigned clearance;

f. use means as appropriate (ie. voice and/or CPDLC) to communicate during a contingency or emergency;

g. if voice communications are used, the radiotelephony distress signal (MAYDAY) or urgency signal (PAN PAN) preferably spoken three times, shall be used, as appropriate;

h. when emergency situations are communicated via CPDLC, the controller may respond via CPDLC. However, the controller may also attempt to make voice contact with the aircraft;

i. establish communications with and alert nearby aircraft by broadcasting on the frequencies in use and at suitable intervals on 121.5 MHz (or, as a backup, on the inter-pilot air-to-air frequency 123.45 MHz): aircraft identification, the nature of the distress condition, intention of the pilot, position (including the ATS route designator or the track code, as appropriate) and flight level; and

j. the controller should attempt to determine the nature of the emergency and ascertain any assistance that may be required. Subsequent ATC action with respect to that aircraft shall be based on the intentions or the pilot and overall traffic situation.

3. Actions to be taken once offset from track:

a) operation within a parallel track system;

b) the potential for user preferred routes (UPR's) parallel to the aircraft's track or ATS route;

c) the nature of the contingency (e.g. aircraft system malfunction; and

d) weather factors (e.g. convective weather at lower flight levels).

4. If possible, maintain the assigned flight level until established on the 9.3 km (5.0 NM) parallel, same direction track or ATS route offset. If unable, initially minimize the rate of descent to the extent that is operationally feasible.

5. Once established on a parallel, same direction track or ATS route offset by 9.3km (5.0 NM), either:

a) descend below FL 290, and establish a 150 m (500 ft) vertical offset from those flight levels normally used, and proceed as required by the operational situation or if an ATC clearance has been obtained, in accordance with the clearance; or

b) establish a 150 m (500 ft) vertical offset (or 300 m (1000 ft) vertical offset if above FL 410) from those flight levels normally used, and proceed as required by the operational situation, or if ATC clearance has been obtained, in accordance with the clearance.

WEATHER DEVIATION PROCEDURES FOR OCEANIC CONTROLLED AIRSPACE â€" PACIFIC

When weather deviation is required, the pilot should initiate communications with ATC via voice or CPDLC. A rapid response may be obtained by either:

1. stating "WEATHER DEVIATION REQUIRED" to indicate that priority is desired on the frequency and for ATC response; or
2. requesting a weather deviation using a CPDLC lateral downlink message.

When necessary, the pilot should initiate the communications using the urgency call "PAN PAN PAN" (preferably spoken three times) or by using a CPDLC urgency downlink message.
The pilot shall inform ATC when weather deviation is no longer required, or when a weather deviation has been completed and the aircraft has returned to its cleared route.

The pilot should notify ATC and request clearance to deviate from track or ATS route, advising, when possible, the extent of the deviation requested. The flight crew will use whatever means are appropriate (i.e. voice and/or CPDLC) to communicate during a weather deviation.
ATC should take one of the following actions:

1. when appropriate separation can be applied, issue clearance to deviate from track; or
2. if there is conflicting traffic and ATC is unable to establish appropriate separation, ATC shall:
   1. advise the pilot of inability to issue clearance for the requested deviation;
   2. advise the pilot of conflicting traffic; and
   3. request the pilot's intentions.

The pilot should take the following actions:

1. comply with the ATC clearance issued; or
2. advise ATC of intentions and execute the procedures detailed in the Action to be Taken if a Revised ATC Clearance Cannot Be Obtained procedure section.

If the aircraft is required to deviate from track or ATC route to avoid adverse meteorological conditions and prior clearance cannot be obtained, an ATC clearance shall be obtained at the earliest possible time. Until an ATC clearance is received, the pilot shall take the following actions:

1. if possible, deviate away from an organized track or ATS route system;
2. establish communications with and alert nearby aircraft by broadcasting, at suitable intervals: aircraft identification, flight level, position (including ATS route designator or the track code) and intentions, on the frequency in use and on 121.5 MHz (or, as a backup, on the inter-pilot air-to-air frequency 123.45 MHz);
3. watch for conflicting traffic both visually and by reference to ACAS (if equipped);
4. turn on all aircraft exterior lights (commensurate with appropriate operating limitations);
5. for deviations of less than 9.3 km (5.0 NM) from the originally cleared track or ATS route, remain at a level assigned by ATC;
6. for deviations greater than, or equal to 9.3 km (5.0 NM) from the originally cleared track or ATS route, when the aircraft is approximately 9.3 km (5.0 NM) from track, initiate a level change in accordance with the Originally Cleared Track or ATS Route Center Line / Deviations / Level Change section.
7. if the pilot receives clearance to deviate from cleared track or ATS route for a specified distance and, subsequently, requests, but cannot obtain a clearance to deviate beyond that distance, the pilot should apply an altitude offset in accordance with the Originally Cleared Track or ATS Route Center Line / Deviations / Level Change section before deviating beyond the cleared distance;
8. when returning to track or ATS route, be at its assigned flight level when the aircraft is within approximately 9.3 km (5.0 NM) of the center line; and
9. if contact was not established prior to deviating, continue to attempt to contact ATC to obtain a clearance. If contact was established, continue to keep ATC advised of intentions and obtain essential traffic information.

EAST 000Â° -179Â° magnetic

1. DESCEND 300 ft (90 m)
2. CLIMB 300 ft (90 m)

WEST 180Â° - 359Â° magnetic
1. CLIMB 300 ft (90 m)

2. DESCEND 300 ft (90 m)

RCAA Type: FIR
TRANSPONDER SETTING (Secondary Surveillance Radar-SSR) For Beacon Code procedures see Enroute Tab.

ADIZ REQUIREMENTS
FOR ADIZ REQUIREMENTS See Enroute Tab.

CRUISING LEVEL PROCEDURES
CRUISING LEVELS: For Flight Level Transition Procedures refer to Enroute section.

REQUIRED NAVIGATION PERFORMANCE (RNP)
For procedures and equipment requirements, see Air Traffic Control pages and/or Air Traffic Control State pages for detailed information.

RJJJ Type: FIR
FLIGHT PLANNING AND OVERFLIGHT ROUTES within the Pacific region: For complete Information see Enroute Tab.

TRANSPONDER SETTING (Secondary Surveillance Radar-SSR) For Beacon Code procedures see Enroute Tab.

ADIZ REQUIREMENTS
FOR ADIZ REQUIREMENTS See Enroute Tab.

CRUISING LEVEL PROCEDURES
CRUISING LEVELS: For Flight Level Transition Procedures refer to Enroute section.

NORTH PACIFIC (NOPAC) ROUTE PROCEDURES
a. The NOPAC Route System is comprised of five Air Traffic Service (ATS) routes which transit the North Pacific between Alaska and Japan. The two northern routes are used for westbound traffic. The three southern routes are used for eastbound traffic, except that R-591 or G-344 may be used for westbound aircraft crossing the Fukuoka/Anchorage FIR between 0000UTC and 0600UTC. The routes are as follows: R-220, R-580, A-590, R-591 and G-344.

b. Transition Routes

1. Within the Fukuoka FIR, Oceanic Transition Routes (OTRs) and, in one case, a Victor route, have been established for aircraft transitioning to or from the NOPAC Route System.

2. Within the Anchorage FIR, certain ATS routes are used for the same purpose. They are as follows: B-327 (For Westbound use only between BAMOK and SELDM), R-341, G-469, A-342, G-215, R-330, R-451, R-336, R-338, G-583 and G-349.

c. Separation Standards

1. The primary form of lateral separation within the NOPAC Route System is 25NM lateral either side of the centerline, based on Required Navigation Performance 10 (RNP-10) and 1000' vertical separation (FL290 - FL410) based on Reduced Vertical Separation Minimums (RVSM).

2. Lateral separation for Non-RNP10 aircraft and aircraft operating below FL180 is 50NM lateral either side of the centerline.

3. Standard longitudinal separation within the Anchorage Oceanic FIR is 15 minutes "in trail".

d. Flight Plans

1. Aircraft shall enter "R" in item 10 of the ICAO flight plan if the aircraft and operator have been approved for RNP 10 operations for the route of flight.

2. Aircraft shall enter "W" in item 10 of the ICAO flight plan if the aircraft and operator have been approved for RVSM.

3. Aircraft not approved for RNP 10 and/or RVSM shall not enter "R" and/or "W" in item 10.

4. Aircraft approved for both RNP 10 and RVSM may flight plan any of the NOPAC routes with the following altitude restrictions:

(a) R-220: Even Altitudes FL180 to FL400, also FL330, FL350, FL370, FL390, FL410

(b) R-580: Even Altitudes FL180 to FL400, also FL350, FL370

(c) A-590: Odd Altitudes FL190 to FL410, also FL300, FL320, FL340

(d) R-591: Eastbound, Odd Altitudes FL190 to FL410

(e) R-591: Westbound, Even Altitudes FL300 to FL400

(f) G-344: Eastbound, Odd Altitudes FL190 to FL410

(g) G-344: Westbound, Even Altitudes FL300 to FL400

(h) R-591 and G-344 are Eastbound routes unless designated as Westbound PACOTS. Traffic flows are either Eastbound or Westbound with the tracks being emptied of traffic before changing direction.

5. Non-RNP-10 aircraft shall flight plan as follows:

(a) Westbound: R-220 at all times.

(b) Eastbound: A-590 at all times.

(c) Eastbound: G-344 when available for eastbound flights.

(d) The altitudes available on these routes are at or below FL280 and at or above FL430.

e. Procedures

1. Peak traffic periods:

(a) Eastbound - 0700UTC to 2100UTC

(b) Westbound - 1200UTC to 1900UTC and 2200UTC to 0800UTC

(c) Due to traffic volume, flights desiring to operate contrary to the predominant traffic flow can expect to be rerouted or assigned less than optimum flight levels. If feasible, users planning to operate in the NOPAC Route System at airspeeds below MACH 0.78 should use other than the peak hours for their flights. This will reduce congestion and expedite traffic.

f. Aircraft cannot always be accommodated on their flight planned NOPAC route. In an effort to reduce coordination time and errors between ATC and flight crews, JCAB (Fukuoka ATMC) and FAA (Anchorage ARTCC) have agreed on a common procedure to accommodate most reroutes. Aircraft rerouted from one NOPAC ATC route to another NOPAC ATC route will be given short range clearances into the adjoining FIR's RADAR coverage airspace. The receiving ATC facility will then issue further routing to the aircraft prior to the aircraft reaching the clearance limit.

1. Example 1: aircraft ABC101 is routed via R-220 to RJTT but can not be accommodated on R-220. The aircraft may be re-cleared as follows: "ABC101 cleared to OATIS via R-580, expect further clearance from ATMC after OMOTO."

2. Example 2: aircraft ABC102 is routed via A-590 to PAFA but can not be accommodated on A-590. The aircraft may be re-cleared as follows: "ABC102 cleared to SYA via R-591, expect further routing from Anchorage ARTCC after AKISU."

REQUIRED NAVIGATION PERFORMANCE (RNP)
For procedures and equipment requirements, see Air Traffic Control pages and/or Air Traffic Control State pages for detailed information.

TRANSPONDER REQUIRED
Transponder (Mode A/3 & Mode C) required in Approach Control Area and Control Zones.

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FLIGHT PROCEDURES Okinawa Approach Control provides full time Stage III Service (RADAR sequencing and separation service for VFR aircraft) within the Okinawa TCA. No aircraft may operate within the TCA unless appropriate authorization is received from TAC prior to the operation.

a. VFR aircraft enroute to destination airports within the Okinawa TCA, should contact Okinawa Approach Control 50NM from the Kadena VORTAC.

1. Aircraft operating southeast of Kadena 050/230 radials use 258.3/126.5 MHz.

2. Aircraft operating northwest of Kadena 230/050 radials use 335.8/119.1 MHz.

3. Monitor ATIS broadcasts of destination airport prior to contacting Approach Control and advise ATIS code received on initial contact.

b. VFR aircraft departing Kadena AB will advise Ground Control prior to taxi, of intended direction of flight and proposed altitude to depart the TCA. VFR aircraft departing other airports that desire ATC service, will advise the appropriate tower prior to departure. The tower will then advise when to contact Departure Control and assign a frequency and beacon code.

c. The procedures used in this program are not to be interpreted as relieving pilots of their responsibilities to:

1. See, and avoid other traffic operating in VFR conditions,
2. Maintain appropriate terrain and obstruction clearance,
3. Remain in weather conditions equal to, or better than, the minimum required by pertinent regulations, and
4. Whenever compliance with an assigned route or heading is likely to compromise any of the above, Okinawa Approach Control shall be so advised.

d. Except in the case of inflight failure, no person may operate an aircraft within the TCA unless equipped with the following:

1. VOR or TACAN receiver (except helicopters),
2. Two-way radio capable of communicating with ATC on the appropriate frequencies for the TCA, or
3. Coded RADAR Beacon Transponder having at least a Mode A/3 & Mode C, 64 code capability, replying to A/3 interrogation with the code specfied by ATC.

RKRR Type: FIR
TRANSPONDER SETTING (Secondary Surveillance Radar-SSR) For Beacon Code procedures see Enroute Tab.

ADIZ REQUIREMENTS
FOR ADIZ REQUIREMENTS See Enroute Tab.

CRUISING LEVEL PROCEDURES
CRUISING LEVELS: For Flight Level Transition Procedures refer to Enroute section.

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CRUISING LEVELS
Cruising levels for flight level transition procedures refer to ENROUTE CH-201 and consecutive pages.

REQUIRED NAVIGATION PERFORMANCE (RNP)
For procedures and equipment requirements, see Air Traffic Control pages and/or Air Traffic Control State pages for detailed information.

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ZKKP Type: FIR
ATS ROUTE RESTRICTIONS: For information regarding flight planning purposes refer to Enroute section.

TRANSPONDER SETTING (Secondary Surveillance Radar-SSR): For Beacon Code procedures see ENROUTE section.

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RVSM PROCEDURES
REDUCED VERTICAL SEPARATION MINIMUMS (FL290 - FL410) For RVSM procedures and equipment requirements see AIR TRAFFIC CONTROL pages series.

ZSHA Type: FIR
TRANSPONDER SETTING (Secondary Surveillance Radar-SSR): For Beacon Code procedures see ENROUTE section.

CRUISING LEVEL PROCEDURES
CRUISING LEVELS: For Flight Level Transition Procedures refer to Enroute section.

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Page 3 Strip Charts

KZAK Type: FIR
FLIGHT PLANNING AND OVERFLIGHT ROUTES within the Pacific region: For complete Information see Enroute Tab.

ADIZ REQUIREMENTS
FOR ADIZ REQUIREMENTS See Enroute Tab.

EXTENDED RANGE OPERATIONS BY AIRCRAFT WITH TWO-TURBINE POWER-UNITS (ETOPS) 1. If the contingency procedures are employed by a twin-engine aircraft as a result of an engine shutdown or failure of an ETOPS critical system, the pilot should advise ATC as soon as practicable of the situation, reminding ATC of the type of aircraft involved, and request expeditious handling.

OCEANIC POSITION REPORTING PROCEDURES OAKLAND OCEANIC FIR
1. For non ADS equipped aircraft, any waypoint filed in the route of flight (ItemÂ 15 of the ICAO flight plan) must be reported as a position report whether the filed waypoint is compulsory or not. If a noncompulsory waypoint is not filed in item 15, it does not need to be reported.

2. POSITION REPORTS

a. When operating on a published ATS Route or a temporary route established by NOTAM, report and estimate the designated reporting points using the specified waypoint names or geographic coordinates as specified in the NOTAM.

b. When operating on a random route:

1. Flights whose tracks are predominantly east and west shall report over each 5Â degrees or 10Â degrees (10Â degrees will be used if the speed of the aircraft is such that 10Â degrees will be traversed within 80 minutes or less) meridian longitude extending east and west from 180Â degrees.

2. Flights whose tracks are predominantly north and south shall report over each 5Â degrees or 10Â degrees (10Â degrees if traversed within 80Â minutes) parallel of latitude extending north and south of the equator.

c. ATC may require specific flights to report more frequently than each 5Â degrees for aircraft with slow ground speeds.

d. Position reports shall be transmitted at the time of crossing the designated reporting point or as soon thereafter as possible.

3. Position reports shall include information on present position, estimated next position, and ensuing position in sequence as indicated below.

a. PRESENT POSITION - Information shall include:

1. The word â€œpositionâ€ .

2. Aircraft identification.

3. Reporting point name, or if not named:

(a) Latitude (2 digits or more) and,

(b) Longitude (3 digits or more).

b. Time over reporting point (4 digits UTC).

c. Altitude (Flight Level). When forwarding an altitude report within the Oakland OCA/FIR, pilots should report their present altitude and their assigned altitude exactly as cleared if the present and assigned altitudes differ. Aircraft assigned a block altitude must report their current altitude and the assigned block altitude. A restriction to cross a point at an altitude is not a block altitude assignment and should not be reported as a block of altitudes.

d. ESTIMATED NEXT POSITION

(1) Reporting point name, or if not named, latitude and longitude as in a.3 above and,

(2) Estimated time over next position (4 digits UTC).

e. ENSUING FIX

(1) Name only of the next succeeding fix whether compulsory or not, or if not named, latitude and longitude as in a.3 above.

4. WEATHER REPORTS:

a. Weather reports shall be included as provided in SectionÂ 3 of Standard AIREP Form by all flights unless exempted from weather reporting by the Weather Service and/or ATC.

5. ADHERENCE TO ATC APPROVED ROUTE

a. If an aircraft, notwithstanding all action taken to adhere to the route specified in the ATC clearance, inadvertently deviates from this route, action shall be taken to regain it as soon as reasonable and not further ahead than 200 nautical miles from the DR position at which the heading was altered to regain the route specified in the ATC clearance. Action to regain this route shall not be delayed in anticipation of obtaining a requested re-clearance.

6. EXCEPTIONS TO POSITION REPORTS PROCEDURES

a. Within Oakland OCA/FIR, no 5Â degree report need be made that would fall within 100Â NM of Guam. Aircraft cleared via terminal area routes report compulsory reporting fixes. Other aircraft report 100Â NM from Nimitz VORTAC. Where other island destinations within the Oakland Oceanic FIR are not more than one-degree latitude-longitude from a 5Â degrees fixed line reporting point, the ETA and arrival report may be substituted in lieu of the adjacent fixed line report.

b. To the east of the Hawaiian Islands it will not be necessary to report the 155Â degree west position if position will be reported at the entry/exit fixes on the Honolulu Control Facility boundary. To the west of the Hawaiian Islands, the 160Â degree west need not be reported.

NORTH PACIFIC (NOPAC) ROUTE PROCEDURES

a. The NOPAC Route System is comprised of five Air Traffic Service (ATS) routes which transit the North Pacific between Alaska and Japan. The two northern routes are used for westbound traffic. The three southern routes are used for eastbound traffic, except that R-591 or G-344 may be used for westbound aircraft crossing the Fukuoka/Anchorage FIR between 0000UTC and 0600UTC. The routes are as follows: R-220, R-580, A-590, R-591 and G-344.

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1. Within the Fukuoka FIR, Oceanic Transition Routes (OTRs) and, in one case, a Victor route, have been established for aircraft transitioning to or from the NOPAC Route System.

2. Within the Anchorage FIR, certain ATS routes are used for the same purpose. They are as follows: B-327 (For Westbound use only between BAMOK and SELDM), R-341, G-469, A-342, G-215, R-330, R-451, R-336, R-338, G-583 and G-349.

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2. Lateral separation for Non-RNP10 aircraft and aircraft operating below FL180 is 50NM lateral either side of the centerline.

3. Standard longitudinal separation within the Anchorage Oceanic FIR is 15 minutes "in trail".

d. Flight Plans

1. Aircraft shall enter "R" in item 10 of the ICAO flight plan if the aircraft and operator have been approved for RNP 10 operations for the route of flight.

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3. Aircraft not approved for RNP 10 and/or RVSM shall not enter "R" and/or "W" in item 10.

4. Aircraft approved for both RNP 10 and RVSM may flight plan any of the NOPAC routes with the following altitude restrictions:

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(b) R-580: Even Altitudes FL180 to FL400, also FL350, FL370

(c) A-590: Odd Altitudes FL190 to FL410, also FL300, FL320, FL340

(d) R-591: Eastbound, Odd Altitudes FL190 to FL410

(e) R-591: Westbound, Even Altitudes FL300 to FL400

(f) G-344: Eastbound, Odd Altitudes FL190 to FL410

(g) G-344: Westbound, Even Altitudes FL300 to FL400

(h) R-591 and G-344 are Eastbound routes unless designated as Westbound PACOTS. Traffic flows are either Eastbound or Westbound with the tracks being emptied of traffic before changing direction.

5. Non-RNP-10 aircraft shall flight plan as follows:

(a) Westbound: R-220 at all times.

(b) Eastbound: A-590 at all times.

(c) Eastbound: G-344 when available for eastbound flights.

(d) The altitudes available on these routes are at or below FL280 and at or above FL430.

e. Procedures

1. Peak traffic periods:

(a) Eastbound - 0700UTC to 2100UTC

(b) Westbound - 1200UTC to 1900UTC and 2200UTC to 0800UTC

(c) Due to traffic volume, flights desiring to operate contrary to the predominant traffic flow can expect to be rerouted or assigned less than optimum flight levels. If feasible, users planning to operate in the NOPAC Route System at airspeeds below MACH 0.78 should use other than the peak hours for their flights. This will reduce congestion and expedite traffic.

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1. Example 1: aircraft ABC101 is routed via R-220 to RJTT but can not be accommodated on R-220. The aircraft may be re-cleared as follows: "ABC101 cleared to OATIS via R-580, expect further clearance from ATMC after OMOTO."

2. Example 2: aircraft ABC102 is routed via A-590 to PAFA but can not be accommodated on A-590. The aircraft may be re-cleared as follows: "ABC102 cleared to SYA via R-591, expect further routing from Anchorage ARTCC after AKISU."

CENTRAL EAST PACIFIC ROUTE SYSTEM (HAWAII â€“ U.S. MAINLAND)

a. The Central East Pacific (CEP) is the organized route system between Hawaii and California. Seven ATS routes, R-463, R-464, R-465, R-585, R-576, R-577 and R-578 are the primary routes within the CEP.

b. Reduced Vertical Separation Minimum (RVSM) and Required Navigation Performance 10 (RNP-10) are required for aircraft operating within the CEP Route System at FL290 through FL410. Non-approved aircraft can expect FL280 and below or FL430 and above, traffic permitting.

c. Operators show approval for RVSM and RNP-10 by annotating block 10 of the ICAO flight plan (equipment) with the letter W and R respectively.

d. Flight Levels normally assigned in the CEP are in accordance with ICAO Appendix 3a (East odd, West even).

ATS ROUTE RESTRICTION NOTES
ATS Route Restriction Notes for information regarding flight planning purposes see Enroute Tab.

RNP-10 SEPARATION
RNP-10 lateral separation (50 NM) may be applied wthin the Oakland Oceanic FIR between RNP-10 approved aircraft. RNP-10 approval is required for all PACOTS and for all aircraft operating within the CEP at FL290 through FL410. Non-RNP approved aircraft can expect FL280 and below or FL430 and above, traffic permitting.

MACH NUMBER TECHNIQUE For information about routes and/or areas affected, see Air Traffic Control Tab.

RVSM PROCEDURES
REDUCED VERTICAL SEPARATION MINIMUMS (RVSM) For procedures and equipment requirements see Air Traffic Control Tab.

REQUIRED NAVIGATION PERFORMANCE (RNP)
For procedures and equipment requirements, see Air Traffic Control pages and/or Air Traffic Control State pages for detailed information.

SPECIAL PROCEDURES FOR IN-FLIGHT CONTINGENCIES IN OCEANIC AIRSPACE ICAO DOC 4444, SECTION 15.2
Introduction

1. Although all possible contingencies cannot be covered, these procedures provide for the more frequent cases such as:

a. Inability to comply with assigned clearance due to meteorological conditions.

b. En-route diversion across the prevailing traffic flow; and

c. Loss of, or significant reduction in, the required navigation capability when operating in an airspace where the navigation performance accuracy is a prerequisite to the safe conduct of flight operations, or pressurization failure.

2. General Procedures

1. If an aircraft is unable to continue the flight in accordance with its ATC clearance, a revised clearance shall be obtained, whenever possible, prior to initiating any action.

2. If prior clearance cannot be obtained, the following contingency procedures should be employed until a revised clearance is received. In general terms, the aircraft should be flown at an offset level and on an offset track where other aircraft are less likely to be encountered. Specifically, the pilot shall:

a. Leave the cleared track or ATS route by initially turning at least 30 degrees to the right or to the left, in order to establish and maintain a parallel, same direction track or ATS route offset 5 NM (9.3 km). The direction of the turn should be based on one or more of the following factors:

1) aircraft position relative to any organized track or ATS route system;

2) the direction of flights and flight levels allocated on adjacent tracks;

3) the direction to an alternate airport;

4) any strategic lateral offset being flown; and

5) terrain clearance.

b. Maintain a watch for conflicting traffic both visually and by reference to ACAS (if equipped), leaving ACAS in RA mode at all times, unless aircraft operating limitations dictate otherwise;

c. turn on all aircraft exterior lights (commensurate with appropriate operating limitations);

d. keep the SSR transponder on at all times and, when able, squawk 7700, as appropriate and, if equipped with ADS-B or ADS-C, select the appropriate emergency functionality;

e. as soon as practicable, advise air traffic control of any deviation from their assigned clearance;

f. use means as appropriate (ie. voice and/or CPDLC) to communicate during a contingency or emergency;

g. if voice communications are used, the radiotelephony distress signal (MAYDAY) or urgency signal (PAN PAN) preferably spoken three times, shall be used, as appropriate;

h. when emergency situations are communicated via CPDLC, the controller may respond via CPDLC. However, the controller may also attempt to make voice contact with the aircraft;

i. establish communications with and alert nearby aircraft by broadcasting on the frequencies in use and at suitable intervals on 121.5 MHz (or, as a backup, on the inter-pilot air-to-air frequency 123.45 MHz): aircraft identification, the nature of the distress condition, intention of the pilot, position (including the ATS route

designator or the track code, as appropriate) and flight level; and

j. the controller should attempt to determine the nature of the emergency and ascertain any assistance that may be required. Subsequent ATC action with respect to that aircraft shall be based on the intentions or the pilot and overall traffic situation.

3. Actions to be taken once offset from track:

a) operation within a parallel track system;

b) the potential for user preferred routes (UPR's) parallel to the aircraft's track or ATS route;

c) the nature of the contingency (e.g. aircraft system malfunction; and

d) weather factors (e.g. convective weather at lower flight levels).

4. If possible, maintain the assigned flight level until established on the 9.3 km (5.0 NM) parallel, same direction track or ATS route offset. If unable, initially minimize the rate of descent to the extent that is operationally feasible.

5. Once established on a parallel, same direction track or ATS route offset by 9.3km (5.0 NM), either:

a) descend below FL 290, and establish a 150 m (500 ft) vertical offset from those flight levels normally used, and proceed as required by the operational situation or if an ATC clearance has been obtained, in accordance with the clearance; or

b) establish a 150 m (500 ft) vertical offset (or 300 m (1000 ft) vertical offset if above FL 410) from those flight levels normally used, and proceed as required by the operational situation, or if ATC clearance has been obtained, in accordance with the clearance.

WEATHER DEVIATION PROCEDURES FOR OCEANIC CONTROLLED AIRSPACE â€” PACIFIC

When weather deviation is required, the pilot should initiate communications with ATC via voice or CPDLC. A rapid response may be obtained by either:

1. stating "WEATHER DEVIATION REQUIRED" to indicate that priority is desired on the frequency and for ATC response; or

2. requesting a weather deviation using a CPDLC lateral downlink message.

When necessary, the pilot should initiate the communications using the urgency call "PAN PAN PAN" (preferably spoken three times) or by using a CPDLC urgency downlink message.
The pilot shall inform ATC when weather deviation is no longer required, or when a weather deviation has been completed and the aircraft has returned to its cleared route.

The pilot should notify ATC and request clearance to deviate from track or ATS route, advising, when possible, the extent of the deviation requested. The flight crew will use whatever means are appropriate (i.e. voice and/or CPDLC) to communicate during a weather deviation.
ATC should take one of the following actions:

1. when appropriate separation can be applied, issue clearance to deviate from track; or

2. if there is conflicting traffic and ATC is unable to establish appropriate separation, ATC shall:

1. advise the pilot of inability to issue clearance for the requested deviation;

2. advise the pilot of conflicting traffic; and

3. request the pilot's intentions.

The pilot should take the following actions:

1. comply with the ATC clearance issued; or

2. advise ATC of intentions and execute the procedures detailed in the Action to be Taken if a Revised ATC Clearance Cannot Be Obtained procedure section.

If the aircraft is required to deviate from track or ATC route to avoid adverse meteorological conditions and prior clearance cannot be obtained, an ATC clearance shall be obtained at the earliest possible time. Until an ATC clearance is received, the pilot shall take the following actions:

1. if possible, deviate away from an organized track or ATS route system;

2. establish communications with and alert nearby aircraft by broadcasting, at suitable intervals: aircraft identification, flight level, position (including ATS route designator or the track code) and intentions, on the frequency in use and on 121.5 MHz (or, as a backup, on the inter-pilot air-to-air frequency 123.45 MHz);

3. watch for conflicting traffic both visually and by reference to ACAS (if equipped);

4. turn on all aircraft exterior lights (commensurate with appropriate operating limitations);

5. for deviations of less than 9.3 km (5.0 NM) from the originally cleared track or ATS route, remain at a level assigned by ATC;

6. for deviations greater than, or equal to 9.3 km (5.0 NM) from the originally cleared track or ATS route, when the aircraft is approximately 9.3 km (5.0 NM) from track, initiate a level change in accordance with the Originally Cleared Track or ATS Route Center Line / Deviations / Level Change section.

7. if the pilot receives clearance to deviate from cleared track or ATS route for a specified distance and, subsequently, requests, but cannot obtain a clearance to deviate beyond that distance, the pilot should apply an altitude offset in accordance with the Originally Cleared Track or ATS Route Center Line / Deviations / Level Change section before deviating beyond the cleared distance;

8. when returning to track or ATS route, be at its assigned flight level when the aircraft is within approximately 9.3 km (5.0 NM) of the center line; and

9. if contact was not established prior to deviating, continue to attempt to contact ATC to obtain a clearance. If contact was established, continue to keep ATC advised of intentions and obtain essential traffic information.

EAST 000Â° -179Â° magnetic
1. DESCEND 300 ft (90 m)

2. CLIMB 300 ft (90 m)

WEST 180Â° - 359Â° magnetic
1. CLIMB 300 ft (90 m)

2. DESCEND 300 ft (90 m)

RJJJ Type: FIR
FLIGHT PLANNING AND OVERFLIGHT ROUTES within the Pacific region: For complete Information see Enroute Tab.

TRANSPONDER SETTING (Secondary Surveillance Radar-SSR) For Beacon Code procedures see Enroute Tab.

ADIZ REQUIREMENTS
FOR ADIZ REQUIREMENTS See Enroute Tab.

CRUISING LEVEL PROCEDURES
CRUISING LEVELS: For Flight Level Transition Procedures refer to Enroute section.

NORTH PACIFIC (NOPAC) ROUTE PROCEDURES
a. The NOPAC Route System is comprised of five Air Traffic Service (ATS) routes which transit the North Pacific between Alaska and Japan. The two northern routes are used for westbound traffic. The three southern routes are used for eastbound traffic, except that R-591 or G-344 may be used for westbound aircraft crossing the Fukuoka/Anchorage FIR between 0000UTC and 0600UTC. The routes are as follows: R-220, R-580, A-590, R-591 and G-344.

b. Transition Routes

1. Within the Fukuoka FIR, Oceanic Transition Routes (OTRs) and, in one case, a Victor route, have been established for aircraft transitioning to or from the NOPAC Route System.

2. Within the Anchorage FIR, certain ATS routes are used for the same purpose. They are as follows: B-327 (For Westbound use only between BAMOK and SELDM), R-341, G-469, A-342, G-215, R-330, R-451, R-336, R-338, G-583 and G-349.

c. Separation Standards

1. The primary form of lateral separation within the NOPAC Route System is 25NM lateral either side of the centerline, based on Required Navigation Performance 10 (RNP-10) and 1000' vertical separation (FL290 - FL410) based on Reduced Vertical Separation Minimums (RVSM).

2. Lateral separation for Non-RNP10 aircraft and aircraft operating below FL180 is 50NM lateral either side of the centerline.

3. Standard longitudinal separation within the Anchorage Oceanic FIR is 15 minutes "in trail".

d. Flight Plans

1. Aircraft shall enter "R" in item 10 of the ICAO flight plan if the aircraft and operator have been approved for RNP 10 operations for the route of flight.

2. Aircraft shall enter "W" in item 10 of the ICAO flight plan if the aircraft and operator have been approved for RVSM.

3. Aircraft not approved for RNP 10 and/or RVSM shall not enter "R" and/or "W" in item 10.

4. Aircraft approved for both RNP 10 and RVSM may flight plan any of the NOPAC routes with the following altitude restrictions:

(a) R-220: Even Altitudes FL180 to FL400, also FL330, FL350, FL370, FL390, FL410

(b) R-580: Even Altitudes FL180 to FL400, also FL350, FL370

(c) A-590: Odd Altitudes FL190 to FL410, also FL300, FL320, FL340

(d) R-591: Eastbound, Odd Altitudes FL190 to FL410

(e) R-591: Westbound, Even Altitudes FL300 to FL400

(f) G-344: Eastbound, Odd Altitudes FL190 to FL410

(g) G-344: Westbound, Even Altitudes FL300 to FL400

(h) R-591 and G-344 are Eastbound routes unless designated as Westbound PACOTS. Traffic flows are either Eastbound or Westbound with the tracks being emptied of traffic before changing direction.

5. Non-RNP-10 aircraft shall flight plan as follows:

(a) Westbound: R-220 at all times.

(b) Eastbound: A-590 at all times.

(c) Eastbound: G-344 when available for eastbound flights.

(d) The altitudes available on these routes are at or below FL280 and at or above FL430.

e. Procedures

1. Peak traffic periods:

(a) Eastbound - 0700UTC to 2100UTC

(b) Westbound - 1200UTC to 1900UTC and 2200UTC to 0800UTC

(c) Due to traffic volume, flights desiring to operate contrary to the predominant traffic flow can expect to be rerouted or assigned less than optimum flight levels. If feasible, users planning to operate in the NOPAC Route System at airspeeds below MACH 0.78 should use other than the peak hours for their flights. This will reduce congestion and expedite traffic.

f. Aircraft cannot always be accommodated on their flight planned NOPAC route. In an effort to reduce coordination time and errors between ATC and flight crews, JCAB (Fukuoka ATMC) and FAA (Anchorage ARTCC) have agreed on a common procedure to accommodate most reroutes. Aircraft rerouted from one NOPAC ATC route to another NOPAC ATC route will be given short range clearances into the adjoining FIR's RADAR coverage airspace. The receiving ATC facility will then issue further routing to the aircraft prior to the aircraft reaching the clearance limit.

1. Example 1: aircraft ABC101 is routed via R-220 to RJTT but can not be accommodated on R-220. The aircraft may be re-cleared as follows: "ABC101 cleared to OATIS via R-580, expect further clearance from ATMC after OMOTO."

2. Example 2: aircraft ABC102 is routed via A-590 to PAFA but can not be accommodated on A-590. The aircraft may be re-cleared as follows: "ABC102 cleared to SYA via R-591, expect further routing from Anchorage ARTCC after AKISU."

REQUIRED NAVIGATION PERFORMANCE (RNP)
For procedures and equipment requirements, see Air Traffic Control pages and/or Air Traffic Control State pages for detailed information.

TRANSPONDER REQUIRED
Transponder (Mode A/3 & Mode C) required in Approach Control Area and Control Zones.

TRANSPONDER REQUIRED
Transponder (Mode A/3 & Mode C) required in Approach Control Area and Control Zones.

FLIGHT PROCEDURES Okinawa Approach Control provides full time Stage III Service (RADAR sequencing and separation service for VFR aircraft) within the Okinawa TCA. No aircraft may operate within the TCA unless appropriate authorization is received from TAC prior to the operation.

a. VFR aircraft enroute to destination airports within the Okinawa TCA, should contact Okinawa Approach Control 50NM from the Kadena VORTAC.

1. Aircraft operating southeast of Kadena 050/230 radials use 258.3/126.5 MHz.

2. Aircraft operating northwest of Kadena 230/050 radials use 335.8/119.1 MHz.

3. Monitor ATIS broadcasts of destination airport prior to contacting Approach Control and advise ATIS code received on initial contact.

b. VFR aircraft departing Kadena AB will advise Ground Control prior to taxi, of intended direction of flight and proposed altitude to depart the TCA. VFR aircraft departing other airports that desire ATC service, will advise the appropriate tower prior to departure. The tower will then advise when to contact Departure Control and assign a frequency and beacon code.

c. The procedures used in this program are not to be interpreted as relieving pilots of their responsibilities to:

1. See, and avoid other traffic operating in VFR conditions,

2. Maintain appropriate terrain and obstruction clearance,

3. Remain in weather conditions equal to, or better than, the minimum required by pertinent regulations, and

4. Whenever compliance with an assigned route or heading is likely to compromise any of the above, Okinawa Approach Control shall be so advised.

d. Except in the case of inflight failure, no person may operate an aircraft within the TCA unless equipped with the following:

1. VOR or TACAN receiver (except helicopters),

2. Two-way radio capable of communicating with ATC on the appropriate frequencies for the TCA, or

3. Coded RADAR Beacon Transponder having at least a Mode A/3 & Mode C, 64 code capability, replying to A/3 interrogation with the code specfied by ATC.

UHHH Type: FIR
ATS ROUTE RESTRICTIONS: For information regarding flight planning purposes refer to Enroute section.

TRANSPONDER SETTING (Secondary Surveillance Radar-SSR): For Beacon Code procedures see ENROUTE section.

CRUISING LEVEL PROCEDURES
CRUISING LEVELS: For Flight Level Transition Procedures refer to Enroute section.

CRUISING LEVEL PROCEDURES
CRUISING LEVELS: For Flight Level Transition Procedures refer to Enroute section.

CRUISING LEVELS
Cruising levels for flight level transition procedures refer to ENROUTE CH-201 and consecutive pages.

POSITION REPORTING PROCEDURES
a. Unless otherwise requested by ATC , position reports for flights on routes not defined by designated reporting points should be made at the significant points listed in the flight plan.

b. ATC may require any flight operating in a North/South direction to report its position at any intermediate parallel of latitude when deemed necessary.

c. In requiring aircraft to report their position at intermediate points, ATC is guided by the requirement to have positional information at approximately hourly intervals and also by the need to accommodate varying types of aircraft and varying traffic and MET conditions.

d. Unless providing position reports via ADS-C, if the Estimated Time for the "next position", as last reported to ATC has changed by 2 minutes or more, a revised Estimate must be transmitted to the ATS unit concerned as soon as possible.

e. Flight Crews must always report to ATC as soon as possible on reaching any new cruising level.

f. For flights outside domestic ATS route networks, positions should be expressed in terms of latitude and longitude except when flying over named reporting points. For flights whose tracks are predominantly east or west, latitude should be expressed in degrees and minutes, longitude in degrees only. For flights whose tracks are predominantly north or south, latitude should be expressed in degrees only, longitude in degrees and minutes. However, it should be noted that when such minutes are zero then the position report may refer solely to degrees.

TRANSPONDER SETTING (Secondary Surveillance Radar-SSR) For Beacon Code procedures see Enroute Tab.

RVSM PROCEDURES
REDUCED VERTICAL SEPARATION MINIMUMS (FL290 - FL410) For RVSM procedures and equipment requirements see AIR TRAFFIC CONTROL pages series.

UHMM Type: FIR
ATS ROUTE RESTRICTIONS: For information regarding flight planning purposes refer to Enroute section.

TRANSPONDER SETTING (Secondary Surveillance Radar-SSR): For Beacon Code procedures see ENROUTE section.

CRUISING LEVEL PROCEDURES
CRUISING LEVELS: For Flight Level Transition Procedures refer to Enroute section.

TRACK ADVISORY (TA) PROGRAM FOR FLIGHTS CROSSING ANCHORAGE ARTCC/RUSSIAN FIRs
a. The TA program is similar to that used by Oakland for PACOTS traffic. It is designed to assist ATC in sequencing same altitude aircraft proceeding westbound over the Russian FIR entry fixes. Flights participating in the TA program will receive preference over non-participants.

b. All Westbound flights crossing the Anchorage/Russian FIR boundary at or above FL 280 (8600 meters) shall participate in the TA program.

POSITION REPORTING PROCEDURES
a. Unless otherwise requested by ATC , position reports for flights on routes not defined by designated reporting points should be made at the significant points listed in the flight plan.

b. ATC may require any flight operating in a North/South direction to report its position at any intermediate parallel of latitude when deemed necessary.

c. In requiring aircraft to report their position at intermediate points, ATC is guided by the requirement to have positional information at approximately hourly intervals and also by the need to accommodate varying types of aircraft and varying traffic and MET conditions.

d. Unless providing position reports via ADS-C, if the Estimated Time for the "next position", as last reported to ATC has changed by 2 minutes or more, a revised Estimate must be transmitted to the ATS unit concerned as soon as possible.

e. Flight Crews must always report to ATC as soon as possible on reaching any new cruising level.

f. For flights outside domestic ATS route networks, positions should be expressed in terms of latitude and longitude except when flying over named reporting points. For flights whose tracks are predominantly east or west, latitude should be expressed in degrees and minutes, longitude in degrees only. For flights whose tracks are predominantly north or south, latitude should be expressed in degrees only, longitude in degrees and minutes. However, it should be noted that when such minutes are zero then the position report may refer solely to degrees.

TRANSPONDER SETTING (Secondary Surveillance Radar-SSR) For Beacon Code procedures see Enroute Tab.

RVSM PROCEDURES
REDUCED VERTICAL SEPARATION MINIMUMS (FL290 - FL410) For RVSM procedures and equipment requirements see AIR TRAFFIC CONTROL pages series.

Page 4 Strip Charts

KZAK Type: FIR
FLIGHT PLANNING AND OVERFLIGHT ROUTES within the Pacific region: For complete Information see Enroute Tab.

ADIZ REQUIREMENTS
FOR ADIZ REQUIREMENTS See Enroute Tab.

EXTENDED RANGE OPERATIONS BY AIRCRAFT WITH TWO-TURBINE POWER-UNITS (ETOPS) 1. If the contingency procedures are employed by a twin-engine aircraft as a result of an engine shutdown or failure of an ETOPS critical system, the pilot should advise ATC as soon as practicable of the situation, reminding ATC of the type of aircraft involved, and request expeditious handling.

OCEANIC POSITION REPORTING PROCEDURES OAKLAND OCEANIC FIR
1. For non ADS equipped aircraft, any waypoint filed in the route of flight (ItemÂ 15 of the ICAO flight plan) must be reported as a position report whether the filed waypoint is compulsory or not. If a noncompulsory waypoint is not filed in item 15, it does not need to be reported.

2. POSITION REPORTS

a. When operating on a published ATS Route or a temporary route established by NOTAM, report and estimate the designated reporting points using the specified waypoint names or geographic coordinates as specified in the NOTAM.

b. When operating on a random route:

1. Flights whose tracks are predominantly east and west shall report over each 5Â degrees or 10Â degrees (10Â degrees will be used if the speed of the aircraft is such that 10Â degrees will be traversed within 80 minutes or less) meridian longitude extending east and west from 180Â degrees.

2. Flights whose tracks are predominantly north and south shall report over each 5Â degrees or 10Â degrees (10Â degrees if traversed within 80Â minutes) parallel of latitude extending north and south of the equator.

c. ATC may require specific flights to report more frequently than each 5Â degrees for aircraft with slow ground speeds.

d. Position reports shall be transmitted at the time of crossing the designated reporting point or as soon thereafter as possible.

3. Position reports shall include information on present position, estimated next position, and ensuing position in sequence as indicated below.

a. PRESENT POSITION - Information shall include:

1. The word â€œpositionâ€ .

2. Aircraft identification.

3. Reporting point name, or if not named:

(a) Latitude (2 digits or more) and,

(b) Longitude (3 digits or more).

b. Time over reporting point (4 digits UTC).

c. Altitude (Flight Level). When forwarding an altitude report within the Oakland OCA/FIR, pilots should report their present altitude and their assigned altitude exactly as cleared if the present and assigned altitudes differ. Aircraft assigned a block altitude must report their current altitude and the assigned block altitude. A restriction to cross a point at an altitude is not a block altitude assignment and should not be reported as a block of altitudes.

d. ESTIMATED NEXT POSITION

(1) Reporting point name, or if not named, latitude and longitude as in a.3 above and,

(2) Estimated time over next position (4 digits UTC).

e. ENSUING FIX

(1) Name only of the next succeeding fix whether compulsory or not, or if not named, latitude and longitude as in a.3 above.

4. WEATHER REPORTS:

a. Weather reports shall be included as provided in SectionÂ 3 of Standard AIREP Form by all flights unless exempted from weather reporting by the Weather Service and/or ATC.

5. ADHERENCE TO ATC APPROVED ROUTE

a. If an aircraft, notwithstanding all action taken to adhere to the route specified in the ATC clearance, inadvertently deviates from this route, action shall be taken to regain it as soon as reasonable and not further ahead than 200 nautical miles from the DR position at which the heading was altered to regain the route specified in the ATC clearance. Action to regain this route shall not be delayed in anticipation of obtaining a requested re-clearance.

6. EXCEPTIONS TO POSITION REPORTS PROCEDURES

a. Within Oakland OCA/FIR, no 5Â degree report need be made that would fall within 100Â NM of Guam. Aircraft cleared via terminal area routes report compulsory reporting fixes. Other aircraft report 100Â NM from Nimitz VORTAC. Where other island destinations within the Oakland Oceanic FIR are not more than one-degree latitude-longitude from a 5Â degrees fixed line reporting point, the ETA and arrival report may be substituted in lieu of the adjacent fixed line report.

b. To the east of the Hawaiian Islands it will not be necessary to report the 155Â degree west position if position will be reported at the entry/exit fixes on the Honolulu Control Facility boundary. To the west of the Hawaiian Islands, the 160Â degree west need not be reported.

NORTH PACIFIC (NOPAC) ROUTE PROCEDURES

a. The NOPAC Route System is comprised of five Air Traffic Service (ATS) routes which transit the North Pacific between Alaska and Japan. The two northern routes are used for westbound traffic. The three southern routes are used for eastbound traffic, except that R-591 or G-344 may be used for westbound aircraft crossing the Fukuoka/Anchorage FIR between 0000UTC and 0600UTC. The routes are as follows: R-220, R-580, A-590, R-591 and G-344.

b. Transition Routes

1. Within the Fukuoka FIR, Oceanic Transition Routes (OTRs) and, in one case, a Victor route, have been established for aircraft transitioning to or from the NOPAC Route System.

2. Within the Anchorage FIR, certain ATS routes are used for the same purpose. They are as follows: B-327 (For Westbound use only between BAMOK and SELDM), R-341, G-469, A-342, G-215, R-330, R-451, R-336, R-338, G-583 and G-349.

c. Separation Standards

1. The primary form of lateral separation within the NOPAC Route System is 25NM lateral either side of the centerline, based on Required Navigation Performance 10 (RNP-10) and 1000' vertical separation (FL290 - FL410) based on Reduced Vertical Separation Minimums (RVSM).

2. Lateral separation for Non-RNP10 aircraft and aircraft operating below FL180 is 50NM lateral either side of the centerline.

3. Standard longitudinal separation within the Anchorage Oceanic FIR is 15 minutes "in trail".

d. Flight Plans

1. Aircraft shall enter "R" in item 10 of the ICAO flight plan if the aircraft and operator have been approved for RNP 10 operations for the route of flight.

2. Aircraft shall enter "W" in item 10 of the ICAO flight plan if the aircraft and operator have been approved for RVSM.

3. Aircraft not approved for RNP 10 and/or RVSM shall not enter "R" and/or "W" in item 10.

4. Aircraft approved for both RNP 10 and RVSM may flight plan any of the NOPAC routes with the following altitude restrictions:

(a) R-220: Even Altitudes FL180 to FL400, also FL330, FL350, FL370, FL390, FL410

(b) R-580: Even Altitudes FL180 to FL400, also FL350, FL370

(c) A-590: Odd Altitudes FL190 to FL410, also FL300, FL320, FL340

(d) R-591: Eastbound, Odd Altitudes FL190 to FL410

(e) R-591: Westbound, Even Altitudes FL300 to FL400

(f) G-344: Eastbound, Odd Altitudes FL190 to FL410

(g) G-344: Westbound, Even Altitudes FL300 to FL400

(h) R-591 and G-344 are Eastbound routes unless designated as Westbound PACOTS. Traffic flows are either Eastbound or Westbound with the tracks being emptied of traffic before changing direction.

5. Non-RNP-10 aircraft shall flight plan as follows:

(a) Westbound: R-220 at all times.

(b) Eastbound: A-590 at all times.

(c) Eastbound: G-344 when available for eastbound flights.

(d) The altitudes available on these routes are at or below FL280 and at or above FL430.

e. Procedures

1. Peak traffic periods:

(a) Eastbound - 0700UTC to 2100UTC

(b) Westbound - 1200UTC to 1900UTC and 2200UTC to 0800UTC

(c) Due to traffic volume, flights desiring to operate contrary to the predominant traffic flow can expect to be rerouted or assigned less than optimum flight levels. If feasible, users planning to operate in the NOPAC Route System at airspeeds below MACH 0.78 should use other than the peak hours for their flights. This will reduce congestion and expedite traffic.

f. Aircraft cannot always be accommodated on their flight planned NOPAC route. In an effort to reduce coordination time and errors between ATC and flight crews, JCAB (Fukuoka ATMC) and FAA (Anchorage ARTCC) have agreed on a common procedure to accommodate most reroutes. Aircraft rerouted from one NOPAC ATC route to another NOPAC ATC route will be given short range clearances into the adjoining FIR's RADAR coverage airspace. The receiving ATC facility will then issue further routing to the aircraft prior to the aircraft reaching the clearance limit.

1. Example 1: aircraft ABC101 is routed via R-220 to RJTT but can not be accommodated on R-220. The aircraft may be re-cleared as follows: "ABC101 cleared to OATIS via R-580, expect further clearance from ATMC after OMOTO."

2. Example 2: aircraft ABC102 is routed via A-590 to PAFA but can not be accommodated on A-590. The aircraft may be re-cleared as follows: "ABC102 cleared to SYA via R-591, expect further routing from Anchorage ARTCC after AKISU."

CENTRAL EAST PACIFIC ROUTE SYSTEM (HAWAII â€“ U.S. MAINLAND)

a. The Central East Pacific (CEP) is the organized route system between Hawaii and California. Seven ATS routes, R-463, R-464, R-465, R-585, R-576, R-577 and R-578 are the primary routes within the CEP.

b. Reduced Vertical Separation Minimum (RVSM) and Required Navigation Performance 10 (RNP-10) are required for aircraft operating within the CEP Route System at FL290 through FL410. Non-approved aircraft can expect FL280 and below or FL430 and above, traffic permitting.

c. Operators show approval for RVSM and RNP-10 by annotating block 10 of the ICAO flight plan (equipment) with the letter W and R respectively.

d. Flight Levels normally assigned in the CEP are in accordance with ICAO Appendix 3a (East odd, West even).

ATS ROUTE RESTRICTION NOTES

ATS Route Restriction Notes for information regarding flight planning purposes see Enroute Tab.

RNP-10 SEPARATION

RNP-10 lateral separation (50 NM) may be applied wthin the Oakland Oceanic FIR between RNP-10 approved aircraft. RNP-10 approval is required for all PACOTS and for all aircraft operating within the CEP at FL290 through FL410. Non-RNP approved aircraft can expect FL280 and below or FL430 and above, traffic permitting.

MACH NUMBER TECHNIQUE For information about routes and/or areas affected, see Air Traffic Control Tab.

RVSM PROCEDURES

REDUCED VERTICAL SEPARATION MINIMUMS (RVSM) For procedures and equipment requirements see Air Traffic Control Tab.

REQUIRED NAVIGATION PERFORMANCE (RNP)

For procedures and equipment requirements, see Air Traffic Control pages and/or Air Traffic Control State pages for detailed information.

SPECIAL PROCEDURES FOR IN-FLIGHT CONTINGENCIES IN OCEANIC AIRSPACE ICAO DOC 4444, SECTION 15.2

Introduction

1. Although all possible contingencies cannot be covered, these procedures provide for the more frequent cases such as:

a. Inability to comply with assigned clearance due to meteorological conditions.

b. En-route diversion across the prevailing traffic flow; and

c. Loss of, or significant reduction in, the required navigation capability when operating in an airspace where the navigation performance accuracy is a prerequisite to the safe conduct of flight operations, or pressurization failure.

2. General Procedures

1. If an aircraft is unable to continue the flight in accordance with its ATC clearance, a revised clearance shall be obtained, whenever possible, prior to initiating any action.

2. If prior clearance cannot be obtained, the following contingency procedures should be employed until a revised clearance is received. In general terms, the aircraft should be flown at an offset level and on an offset track where other aircraft are less likely to be encountered. Specifically, the pilot shall:

a. Leave the cleared track or ATS route by initially turning at least 30 degrees to the right or to the left, in order to establish and maintain a parallel, same direction track or ATS route offset 5 NM (9.3 km). The direction of the turn should be based on one or more of the following factors:

1) aircraft position relative to any organized track or ATS route system;

2) the direction of flights and flight levels allocated on adjacent tracks;

3) the direction to an alternate airport;

4) any strategic lateral offset being flown; and

5) terrain clearance.

b. Maintain a watch for conflicting traffic both visually and by reference to ACAS (if equipped), leaving ACAS in RA mode at all times, unless aircraft operating limitations dictate otherwise;

c. turn on all aircraft exterior lights (commensurate with appropriate operating limitations);

d. keep the SSR transponder on at all times and, when able, squawk 7700, as appropriate and, if equipped with ADS-B or ADS-C, select the appropriate emergency functionality;

e. as soon as practicable, advise air traffic control of any deviation from their assigned clearance;

f. use means as appropriate (ie. voice and/or CPDLC) to communicate during a contingency or emergency;

g. if voice communications are used, the radiotelephony distress signal (MAYDAY) or urgency signal (PAN PAN) preferably spoken three times, shall be used, as appropriate;

h. when emergency situations are communicated via CPDLC, the controller may respond via CPDLC. However, the controller may also attempt to make voice contact with the aircraft;

i. establish communications with and alert nearby aircraft by broadcasting on the frequencies in use and at suitable intervals on 121.5 MHz (or, as a backup, on the inter-pilot air-to-air frequency 123.45 MHz): aircraft identification, the nature of the distress condition, intention of the pilot, position (including the ATS route designator or the track code, as appropriate) and flight level; and

j. the controller should attempt to determine the nature of the emergency and ascertain any assistance that may be required. Subsequent ATC action with respect to that aircraft shall be based on the intentions or the pilot and overall traffic situation.

3. Actions to be taken once offset from track:

a) operation within a parallel track system;

b) the potential for user preferred routes (UPR's) parallel to the aircraft's track or ATS route;

c) the nature of the contingency (e.g. aircraft system malfunction; and

d) weather factors (e.g. convective weather at lower flight levels).

4. If possible, maintain the assigned flight level until established on the 9.3 km (5.0 NM) parallel, same direction track or ATS route offset. If unable, initially minimize the rate of descent to the extent that is operationally feasible.

5. Once established on a parallel, same direction track or ATS route offset by 9.3km (5.0 NM), either:

a) descend below FL 290, and establish a 150 m (500 ft) vertical offset from those flight levels normally used, and proceed as required by the operational situation or if an ATC clearance has been obtained, in accordance with the clearance; or

b) establish a 150 m (500 ft) vertical offset (or 300 m (1000 ft) vertical offset if above FL 410) from those flight levels normally used, and proceed as required by the operational situation, or if ATC clearance has been obtained, in accordance with the clearance.

WEATHER DEVIATION PROCEDURES FOR OCEANIC CONTROLLED AIRSPACE â€" PACIFIC

When weather deviation is required, the pilot should initiate communications with ATC via voice or CPDLC. A rapid response may be obtained by either:

1. stating "WEATHER DEVIATION REQUIRED" to indicate that priority is desired on the frequency and for ATC response; or

2. requesting a weather deviation using a CPDLC lateral downlink message.

When necessary, the pilot should initiate the communications using the urgency call "PAN PAN PAN" (preferably spoken three times) or by using a CPDLC urgency downlink message.
The pilot shall inform ATC when weather deviation is no longer required, or when a weather deviation has been completed and the aircraft has returned to its cleared route.

The pilot should notify ATC and request clearance to deviate from track or ATS route, advising, when possible, the extent of the deviation requested. The flight crew will use whatever means are appropriate (i.e. voice and/or CPDLC) to communicate during a weather deviation.
ATC should take one of the following actions:

1. when appropriate separation can be applied, issue clearance to deviate from track; or

2. if there is conflicting traffic and ATC is unable to establish appropriate separation, ATC shall:

1. advise the pilot of inability to issue clearance for the requested deviation;

2. advise the pilot of conflicting traffic; and

3. request the pilot's intentions.

The pilot should take the following actions:

1. comply with the ATC clearance issued; or

2. advise ATC of intentions and execute the procedures detailed in the Action to be Taken if a Revised ATC Clearance Cannot Be Obtained procedure section.

If the aircraft is required to deviate from track or ATC route to avoid adverse meteorological conditions and prior clearance cannot be obtained, an ATC clearance shall be obtained at the earliest possible time. Until an ATC clearance is received, the pilot shall take the following actions:

1. if possible, deviate away from an organized track or ATS route system;

2. establish communications with and alert nearby aircraft by broadcasting, at suitable intervals: aircraft identification, flight level, position (including ATS route designator or the track code) and intentions, on the frequency in use and on 121.5 MHz (or, as a backup, on the inter-pilot air-to-air frequency 123.45 MHz);

3. watch for conflicting traffic both visually and by reference to ACAS (if equipped);

4. turn on all aircraft exterior lights (commensurate with appropriate operating limitations);

5. for deviations of less than 9.3 km (5.0 NM) from the originally cleared track or ATS route, remain at a level assigned by ATC;

6. for deviations greater than, or equal to 9.3 km (5.0 NM) from the originally cleared track or ATS route, when the aircraft is approximately 9.3 km (5.0 NM) from track, initiate a level change in accordance with the Originally Cleared Track or ATS Route Center Line / Deviations / Level Change section.

7. if the pilot receives clearance to deviate from cleared track or ATS route for a specified distance and, subsequently, requests, but cannot obtain a clearance to deviate beyond that distance, the pilot should apply an altitude offset in accordance with the Originally Cleared Track or ATS Route Center Line / Deviations / Level Change section before deviating beyond the cleared distance;

8. when returning to track or ATS route, be at its assigned flight level when the aircraft is within approximately 9.3 km (5.0 NM) of the center line; and

9. if contact was not established prior to deviating, continue to attempt to contact ATC to obtain a clearance. If contact was established, continue to keep ATC advised of intentions and obtain essential traffic information.

EAST 000Â° -179Â° magnetic

1. DESCEND 300 ft (90 m)

2. CLIMB 300 ft (90 m)

WEST 180Â° - 359Â° magnetic

1. CLIMB 300 ft (90 m)

2. DESCEND 300 ft (90 m)

PAZA Type: FIR

EXTENDED RANGE OPERATIONS BY AIRCRAFT WITH TWO-TURBINE POWER-UNITS (ETOPS) 1. If the contingency procedures are employed by a twin-engine aircraft as a result of an engine shutdown or failure of an ETOPS critical system, the pilot should advise ATC as soon as practicable of the situation, reminding ATC of the type of aircraft involved, and request expeditious handling.

OCEANIC POSITION REPORTING PROCEDURES OAKLAND OCEANIC FIR

1. For non ADS equipped aircraft, any waypoint filed in the route of flight (ItemÂ 15 of the ICAO flight plan) must be reported as a position report whether the filed waypoint is compulsory or not. If a noncompulsory waypoint is not filed in item 15, it does not need to be reported.

2. POSITION REPORTS

a. When operating on a published ATS Route or a temporary route established by NOTAM, report and estimate the designated reporting points using the specified waypoint names or geographic coordinates as specified in the NOTAM.

b. When operating on a random route:

1. Flights whose tracks are predominantly east and west shall report over each 5Â degrees or 10Â degrees (10Â degrees will be used if the speed of the aircraft is such that 10Â degrees will be traversed within 80 minutes or less) meridian longitude extending east and west from 180Â degrees.

2. Flights whose tracks are predominantly north and south shall report over each 5Â degrees or 10Â degrees (10Â degrees if traversed within 80Â minutes) parallel of latitude extending north and south of the equator.

c. ATC may require specific flights to report more frequently than each 5Â degrees for aircraft with slow ground speeds.

d. Position reports shall be transmitted at the time of crossing the designated reporting point or as soon thereafter as possible.

3. Position reports shall include information on present position, estimated next position, and ensuing position in sequence as indicated below.

a. PRESENT POSITION - Information shall include:

1. The word â€œpositionâ€ .

2. Aircraft identification.

3. Reporting point name, or if not named:

(a) Latitude (2 digits or more) and,

(b) Longitude (3 digits or more).

b. Time over reporting point (4 digits UTC).

c. Altitude (Flight Level). When forwarding an altitude report within the Oakland OCA/FIR, pilots should report their present altitude and their assigned altitude exactly as cleared if the present and assigned altitudes differ. Aircraft assigned a block altitude must report their current altitude and the assigned block altitude. A restriction to cross a point at an altitude is not a block altitude assignment and should not be reported as a block of altitudes.

d. ESTIMATED NEXT POSITION

(1) Reporting point name, or if not named, latitude and longitude as in a.3 above and,

(2) Estimated time over next position (4 digits UTC).

e. ENSUING FIX

(1) Name only of the next succeeding fix whether compulsory or not, or if not named, latitude and longitude as in a.3 above.

4. WEATHER REPORTS:

a. Weather reports shall be included as provided in SectionÂ 3 of Standard AIREP Form by all flights unless exempted from weather reporting by the Weather Service and/or ATC.

5. ADHERENCE TO ATC APPROVED ROUTE

a. If an aircraft, notwithstanding all action taken to adhere to the route specified in the ATC clearance, inadvertently deviates from this route, action shall be taken to regain it as soon as reasonable and not further ahead than 200 nautical miles from the DR position at which the heading was altered to regain the route specified in the ATC clearance. Action to regain this route shall not be delayed in anticipation of obtaining a requested re-clearance.

6. EXCEPTIONS TO POSITION REPORTS PROCEDURES

a. Within Oakland OCA/FIR, no 5Â degree report need be made that would fall within 100Â NM of Guam. Aircraft cleared via terminal area routes report compulsory reporting fixes. Other aircraft report 100Â NM from Nimitz VORTAC. Where other island destinations within the Oakland Oceanic FIR are not more than one-degree latitude-longitude from a 5Â degrees fixed line reporting point, the ETA and arrival report may be substituted in lieu of the adjacent fixed line report.

b. To the east of the Hawaiian Islands it will not be necessary to report the 155Â degree west position if position will be reported at the entry/exit fixes on the Honolulu Control Facility boundary. To the west of the Hawaiian Islands, the 160Â degree west need not be reported.

NORTH PACIFIC (NOPAC) ROUTE PROCEDURES

a. The NOPAC Route System is comprised of five Air Traffic Service (ATS) routes which transit the North Pacific between Alaska and Japan. The two northern routes are used for westbound traffic. The three southern routes are used for eastbound traffic, except that R-591 or G-344 may be used for westbound aircraft crossing the Fukuoka/Anchorage FIR between 0000UTC and 0600UTC. The routes are as follows: R-220, R-580, A-590, R-591 and G-344.

b. Transition Routes

1. Within the Fukuoka FIR, Oceanic Transition Routes (OTRs) and, in one case, a Victor route, have been established for aircraft transitioning to or from the NOPAC Route System.

2. Within the Anchorage FIR, certain ATS routes are used for the same purpose. They are as follows: B-327 (For Westbound use only between BAMOK and SELDM), R-341, G-469, A-342, G-215, R-330, R-451, R-336, R-338, G-583 and G-349.

c. Separation Standards

1. The primary form of lateral separation within the NOPAC Route System is 25NM lateral either side of the centerline, based on Required Navigation Performance 10 (RNP-10) and 1000' vertical separation (FL290 - FL410) based on Reduced Vertical Separation Minimums (RVSM).

2. Lateral separation for Non-RNP10 aircraft and aircraft operating below FL180 is 50NM lateral either side of the centerline.

3. Standard longitudinal separation within the Anchorage Oceanic FIR is 15 minutes "in trail".

d. Flight Plans

1. Aircraft shall enter "R" in item 10 of the ICAO flight plan if the aircraft and operator have been approved for RNP 10 operations for the route of flight.

2. Aircraft shall enter "W" in item 10 of the ICAO flight plan if the aircraft and operator have been approved for RVSM.

3. Aircraft not approved for RNP 10 and/or RVSM shall not enter "R" and/or "W" in item 10.

4. Aircraft approved for both RNP 10 and RVSM may flight plan any of the NOPAC routes with the following altitude restrictions:

(a) R-220: Even Altitudes FL180 to FL400, also FL330, FL350, FL370, FL390, FL410

(b) R-580: Even Altitudes FL180 to FL400, also FL350, FL370

(c) A-590: Odd Altitudes FL190 to FL410, also FL300, FL320, FL340

(d) R-591: Eastbound, Odd Altitudes FL190 to FL410

(e) R-591: Westbound, Even Altitudes FL300 to FL400

(f) G-344: Eastbound, Odd Altitudes FL190 to FL410

(g) G-344: Westbound, Even Altitudes FL300 to FL400

(h) R-591 and G-344 are Eastbound routes unless designated as Westbound PACOTS. Traffic flows are either Eastbound or Westbound with the tracks being emptied of traffic before changing direction.

5. Non-RNP-10 aircraft shall flight plan as follows:

(a) Westbound: R-220 at all times.

(b) Eastbound: A-590 at all times.

(c) Eastbound: G-344 when available for eastbound flights.

(d) The altitudes available on these routes are at or below FL280 and at or above FL430.

e. Procedures

1. Peak traffic periods:

(a) Eastbound - 0700UTC to 2100UTC

(b) Westbound - 1200UTC to 1900UTC and 2200UTC to 0800UTC

(c) Due to traffic volume, flights desiring to operate contrary to the predominant traffic flow can expect to be rerouted or assigned less than optimum flight levels. If feasible, users planning to operate in the NOPAC Route System at airspeeds below MACH 0.78 should use other than the peak hours for their flights. This will reduce congestion and expedite traffic.

f. Aircraft cannot always be accommodated on their flight planned NOPAC route. In an effort to reduce coordination time and errors between ATC and flight crews, JCAB (Fukuoka ATMC) and FAA (Anchorage ARTCC) have agreed on a common procedure to accommodate most reroutes. Aircraft rerouted from one NOPAC ATC route to another NOPAC ATC route will be given short range clearances into the adjoining FIR's RADAR coverage airspace. The receiving ATC facility will then issue further routing to the aircraft prior to the aircraft reaching the clearance limit.

1. Example 1: aircraft ABC101 is routed via R-220 to RJTT but can not be accommodated on R-220. The aircraft may be re-cleared as follows: "ABC101 cleared to OATIS via R-580, expect further clearance from ATMC after OMOTO."

2. Example 2: aircraft ABC102 is routed via A-590 to PAFA but can not be accommodated on A-590. The aircraft may be re-cleared as follows: "ABC102 cleared to SYA via R-591, expect further routing from Anchorage ARTCC after AKISU."

TRACK ADVISORY (TA) PROGRAM FOR FLIGHTS CROSSING ANCHORAGE ARTCC/RUSSIAN FIRs

a. The TA program is similar to that used by Oakland for PACOTS traffic. It is designed to assist ATC in sequencing same altitude aircraft proceeding westbound over the Russian FIR entry fixes. Flights participating in the TA program will receive preference over non-participants.

b. All Westbound flights crossing the Anchorage/Russian FIR boundary at or above FL 280 (8600 meters) shall participate in the TA program.

ATS ROUTE RESTRICTION NOTES
ATS Route Restriction Notes for information regarding flight planning purposes see Enroute Tab.

MACH NUMBER TECHNIQUE For information about routes and/or areas affected, see Air Traffic Control Tab.

TRANSPONDER SETTING (Secondary Surveillance Radar-SSR) For Beacon Code procedures see Enroute Tab.

SPECIAL PROCEDURES FOR IN-FLIGHT CONTINGENCIES IN OCEANIC AIRSPACE ICAO DOC 4444, SECTION 15.2
Introduction

1. Although all possible contingencies cannot be covered, these procedures provide for the more frequent cases such as:

a. Inability to comply with assigned clearance due to meteorological conditions.

b. En-route diversion across the prevailing traffic flow; and

c. Loss of, or significant reduction in, the required navigation capability when operating in an airspace where the navigation performance accuracy is a prerequisite to the safe conduct of flight operations, or pressurization failure.

2. General Procedures

1. If an aircraft is unable to continue the flight in accordance with its ATC clearance, a revised clearance shall be obtained, whenever possible, prior to initiating any action.

2. If prior clearance cannot be obtained, the following contingency procedures should be employed until a revised clearance is received. In general terms, the aircraft should be flown at an offset level and on an offset track where other aircraft are less likely to be encountered. Specifically, the pilot shall:

a. Leave the cleared track or ATS route by initially turning at least 30 degrees to the right or to the left, in order to establish and maintain a parallel, same direction track or ATS route offset 5 NM (9.3 km). The direction of the turn should be based on one or more of the following factors:

1) aircraft position relative to any organized track or ATS route system;

2) the direction of flights and flight levels allocated on adjacent tracks;

3) the direction to an alternate airport;

4) any strategic lateral offset being flown; and

5) terrain clearance.

b. Maintain a watch for conflicting traffic both visually and by reference to ACAS (if equipped), leaving ACAS in RA mode at all times, unless aircraft operating limitations dictate otherwise;

c. turn on all aircraft exterior lights (commensurate with appropriate operating limitations);

d. keep the SSR transponder on at all times and, when able, squawk 7700, as appropriate and, if equipped with ADS-B or ADS-C, select the appropriate emergency functionality;

e. as soon as practicable, advise air traffic control of any deviation from their assigned clearance;

f. use means as appropriate (ie. voice and/or CPDLC) to communicate during a contingency or emergency;

g. if voice communications are used, the radiotelephony distress signal (MAYDAY) or urgency signal (PAN PAN) preferably spoken three times, shall be used, as appropriate;

h. when emergency situations are communicated via CPDLC, the controller may respond via CPDLC. However, the controller may also attempt to make voice contact with the aircraft;

i. establish communications with and alert nearby aircraft by broadcasting on the frequencies in use and at suitable intervals on 121.5 MHz (or, as a backup, on the inter-pilot air-to-air frequency 123.45 MHz): aircraft identification, the nature of the distress condition, intention of the pilot, position (including the ATS route designator or the track code, as appropriate) and flight level; and

j. the controller should attempt to determine the nature of the emergency and ascertain any assistance that may be required. Subsequent ATC action with respect to that aircraft shall be based on the intentions or the pilot and overall traffic situation.

3. Actions to be taken once offset from track:

a) operation within a parallel track system;

b) the potential for user preferred routes (UPR's) parallel to the aircraft's track or ATS route;

c) the nature of the contingency (e.g. aircraft system malfunction; and

d) weather factors (e.g. convective weather at lower flight levels).

4. If possible, maintain the assigned flight level until established on the 9.3 km (5.0 NM) parallel, same direction track or ATS route offset. If unable, initially minimize the rate of descent to the extent that is operationally feasible.

5. Once established on a parallel, same direction track or ATS route offset by 9.3km (5.0 NM), either:

a) descend below FL 290, and establish a 150 m (500 ft) vertical offset from those flight levels normally used, and proceed as required by the operational situation or if an ATC clearance has been obtained, in accordance with the clearance; or

b) establish a 150 m (500 ft) vertical offset (or 300 m (1000 ft) vertical offset if above FL 410) from those flight levels normally used, and proceed as required by the operational situation, or if ATC clearance has been obtained, in accordance with the clearance.

WEATHER DEVIATION PROCEDURES FOR OCEANIC CONTROLLED AIRSPACE â€" PACIFIC

When weather deviation is required, the pilot should initiate communications with ATC via voice or CPDLC. A rapid response may be obtained by either:

1. stating "WEATHER DEVIATION REQUIRED" to indicate that priority is desired on the frequency and for ATC response; or

2. requesting a weather deviation using a CPDLC lateral downlink message.

When necessary, the pilot should initiate the communications using the urgency call "PAN PAN PAN" (preferably spoken three times) or by using a CPDLC urgency downlink message.
The pilot shall inform ATC when weather deviation is no longer required, or when a weather deviation has been completed and the aircraft has returned to its cleared route.

The pilot should notify ATC and request clearance to deviate from track or ATS route, advising, when possible, the extent of the deviation requested. The flight crew will use whatever means are appropriate (i.e. voice and/or CPDLC) to communicate during a weather deviation.
ATC should take one of the following actions:

1. when appropriate separation can be applied, issue clearance to deviate from track; or

2. if there is conflicting traffic and ATC is unable to establish appropriate separation, ATC shall:

1. advise the pilot of inability to issue clearance for the requested deviation;

2. advise the pilot of conflicting traffic; and

3. request the pilot's intentions.

The pilot should take the following actions:

1. comply with the ATC clearance issued; or

2. advise ATC of intentions and execute the procedures detailed in the Action to be Taken if a Revised ATC Clearance Cannot Be Obtained procedure section.

If the aircraft is required to deviate from track or ATC route to avoid adverse meteorological conditions and prior clearance cannot be obtained, an ATC clearance shall be obtained at the earliest possible time. Until an ATC clearance is received, the pilot shall take the following actions:

1. if possible, deviate away from an organized track or ATS route system;

2. establish communications with and alert nearby aircraft by broadcasting, at suitable intervals: aircraft identification, flight level, position (including ATS route designator or the track code) and intentions, on the frequency in use and on 121.5 MHz (or, as a backup, on the inter-pilot air-to-air frequency 123.45 MHz);

3. watch for conflicting traffic both visually and by reference to ACAS (if equipped);

4. turn on all aircraft exterior lights (commensurate with appropriate operating limitations);

5. for deviations of less than 9.3 km (5.0 NM) from the originally cleared track or ATS route, remain at a level assigned by ATC;

6. for deviations greater than, or equal to 9.3 km (5.0 NM) from the originally cleared track or ATS route, when the aircraft is approximately 9.3 km (5.0 NM) from track, initiate a level change in accordance with the Originally Cleared Track or ATS Route Center Line / Deviations / Level Change section.

7. if the pilot receives clearance to deviate from cleared track or ATS route for a specified distance and, subsequently, requests, but cannot obtain a clearance to

deviate beyond that distance, the pilot should apply an altitude offset in accordance with the Originally Cleared Track or ATS Route Center Line / Deviations / Level Change section before deviating beyond the cleared distance;

8. when returning to track or ATS route, be at its assigned flight level when the aircraft is within approximately 9.3 km (5.0 NM) of the center line; and

9. if contact was not established prior to deviating, continue to attempt to contact ATC to obtain a clearance. If contact was established, continue to keep ATC advised of intentions and obtain essential traffic information.

EAST 000Â° -179Â° magnetic
1. DESCEND 300 ft (90 m)

2. CLIMB 300 ft (90 m)

WEST 180Â° - 359Â° magnetic
1. CLIMB 300 ft (90 m)

2. DESCEND 300 ft (90 m)

RJJJ Type: FIR
FLIGHT PLANNING AND OVERFLIGHT ROUTES within the Pacific region: For complete Information see Enroute Tab.

TRANSPONDER SETTING (Secondary Surveillance Radar-SSR) For Beacon Code procedures see Enroute Tab.

ADIZ REQUIREMENTS
FOR ADIZ REQUIREMENTS See Enroute Tab.

CRUISING LEVEL PROCEDURES
CRUISING LEVELS: For Flight Level Transition Procedures refer to Enroute section.

NORTH PACIFIC (NOPAC) ROUTE PROCEDURES
a. The NOPAC Route System is comprised of five Air Traffic Service (ATS) routes which transit the North Pacific between Alaska and Japan. The two northern routes are used for westbound traffic. The three southern routes are used for eastbound traffic, except that R-591 or G-344 may be used for westbound aircraft crossing the Fukuoka/Anchorage FIR between 0000UTC and 0600UTC. The routes are as follows: R-220, R-580, A-590, R-591 and G-344.

b. Transition Routes

1. Within the Fukuoka FIR, Oceanic Transition Routes (OTRs) and, in one case, a Victor route, have been established for aircraft transitioning to or from the NOPAC Route System.

2. Within the Anchorage FIR, certain ATS routes are used for the same purpose. They are as follows: B-327 (For Westbound use only between BAMOK and SELDM), R-341, G-469, A-342, G-215, R-330, R-451, R-336, R-338, G-583 and G-349.

c. Separation Standards

1. The primary form of lateral separation within the NOPAC Route System is 25NM lateral either side of the centerline, based on Required Navigation Performance 10 (RNP-10) and 1000' vertical separation (FL290 - FL410) based on Reduced Vertical Separation Minimums (RVSM).

2. Lateral separation for Non-RNP10 aircraft and aircraft operating below FL180 is 50NM lateral either side of the centerline.

3. Standard longitudinal separation within the Anchorage Oceanic FIR is 15 minutes "in trail".

d. Flight Plans

1. Aircraft shall enter "R" in item 10 of the ICAO flight plan if the aircraft and operator have been approved for RNP 10 operations for the route of flight.

2. Aircraft shall enter "W" in item 10 of the ICAO flight plan if the aircraft and operator have been approved for RVSM.

3. Aircraft not approved for RNP 10 and/or RVSM shall not enter "R" and/or "W" in item 10.

4. Aircraft approved for both RNP 10 and RVSM may flight plan any of the NOPAC routes with the following altitude restrictions:

(a) R-220: Even Altitudes FL180 to FL400, also FL330, FL350, FL370, FL390, FL410

(b) R-580: Even Altitudes FL180 to FL400, also FL350, FL370

(c) A-590: Odd Altitudes FL190 to FL410, also FL300, FL320, FL340

(d) R-591: Eastbound, Odd Altitudes FL190 to FL410

(e) R-591: Westbound, Even Altitudes FL300 to FL400

(f) G-344: Eastbound, Odd Altitudes FL190 to FL410

(g) G-344: Westbound, Even Altitudes FL300 to FL400

(h) R-591 and G-344 are Eastbound routes unless designated as Westbound PACOTS. Traffic flows are either Eastbound or Westbound with the tracks being emptied of traffic before changing direction.

5. Non-RNP-10 aircraft shall flight plan as follows:

(a) Westbound: R-220 at all times.

(b) Eastbound: A-590 at all times.

(c) Eastbound: G-344 when available for eastbound flights.

(d) The altitudes available on these routes are at or below FL280 and at or above FL430.

e. Procedures

1. Peak traffic periods:

(a) Eastbound - 0700UTC to 2100UTC

(b) Westbound - 1200UTC to 1900UTC and 2200UTC to 0800UTC

(c) Due to traffic volume, flights desiring to operate contrary to the predominant traffic flow can expect to be rerouted or assigned less than optimum flight levels. If feasible, users planning to operate in the NOPAC Route System at airspeeds below MACH 0.78 should use other than the peak hours for their flights. This will reduce congestion and expedite traffic.

f. Aircraft cannot always be accommodated on their flight planned NOPAC route. In an effort to reduce coordination time and errors between ATC and flight crews, JCAB (Fukuoka ATMC) and FAA (Anchorage ARTCC) have agreed on a common procedure to accommodate most reroutes. Aircraft rerouted from one NOPAC ATC route to another NOPAC ATC route will be given short range clearances into the adjoining FIR's RADAR coverage airspace. The receiving ATC facility will then issue further routing to the aircraft prior to the aircraft reaching the clearance limit.

1. Example 1: aircraft ABC101 is routed via R-220 to RJTT but can not be accommodated on R-220. The aircraft may be re-cleared as follows: "ABC101 cleared to OATIS via R-580, expect further clearance from ATMC after OMOTO."

2. Example 2: aircraft ABC102 is routed via A-590 to PAFA but can not be accommodated on A-590. The aircraft may be re-cleared as follows: "ABC102 cleared to SYA via R-591, expect further routing from Anchorage ARTCC after AKISU."

REQUIRED NAVIGATION PERFORMANCE (RNP)
For procedures and equipment requirements, see Air Traffic Control pages and/or Air Traffic Control State pages for detailed information.

TRANSPONDER REQUIRED
Transponder (Mode A/3 & Mode C) required in Approach Control Area and Control Zones.

TRANSPONDER REQUIRED
Transponder (Mode A/3 & Mode C) required in Approach Control Area and Control Zones.

FLIGHT PROCEDURES Okinawa Approach Control provides full time Stage III Service (RADAR sequencing and separation service for VFR aircraft) within the Okinawa TCA. No aircraft may operate within the TCA unless appropriate authorization is received from TAC prior to the operation.

a. VFR aircraft enroute to destination airports within the Okinawa TCA, should contact Okinawa Approach Control 50NM from the Kadena VORTAC.

1. Aircraft operating southeast of Kadena 050/230 radials use 258.3/126.5 MHz.

2. Aircraft operating northwest of Kadena 230/050 radials use 335.8/119.1 MHz.

3. Monitor ATIS broadcasts of destination airport prior to contacting Approach Control and advise ATIS code received on initial contact.

b. VFR aircraft departing Kadena AB will advise Ground Control prior to taxi, of intended direction of flight and proposed altitude to depart the TCA. VFR aircraft departing other airports that desire ATC service, will advise the appropriate tower prior to departure. The tower will then advise when to contact Departure Control and assign a frequency and beacon code.

c. The procedures used in this program are not to be interpreted as relieving pilots of their responsibilities to:

1. See, and avoid other traffic operating in VFR conditions,

2. Maintain appropriate terrain and obstruction clearance,

3. Remain in weather conditions equal to, or better than, the minimum required by pertinent regulations, and

4. Whenever compliance with an assigned route or heading is likely to compromise any of the above, Okinawa Approach Control shall be so advised.

d. Except in the case of inflight failure, no person may operate an aircraft within the TCA unless equipped with the following:

1. VOR or TACAN receiver (except helicopters),

2. Two-way radio capable of communicating with ATC on the appropriate frequencies for the TCA, or

3. Coded RADAR Beacon Transponder having at least a Mode A/3 & Mode C, 64 code capability, replying to A/3 interrogation with the code specfied by ATC.

UHMM Type: FIR
POSITION REPORTING PROCEDURES
a. Unless otherwise requested by ATC , position reports for flights on routes not defined by designated reporting points should be made at the significant points listed in the flight plan.

b. ATC may require any flight operating in a North/South direction to report its position at any intermediate parallel of latitude when deemed necessary.

c. In requiring aircraft to report their position at intermediate points, ATC is guided by the requirement to have positional information at approximately hourly intervals and also by the need to accommodate varying types of aircraft and varying traffic and MET conditions.

d. Unless providing position reports via ADS-C, if the Estimated Time for the "next position", as last reported to ATC has changed by 2 minutes or more, a revised Estimate must be transmitted to the ATS unit concerned as soon as possible.

e. Flight Crews must always report to ATC as soon as possible on reaching any new cruising level.

f. For flights outside domestic ATS route networks, positions should be expressed in terms of latitude and longitude except when flying over named reporting points. For flights whose tracks are predominantly east or west, latitude should be expressed in degrees and minutes, longitude in degrees only. For flights whose tracks are predominantly north or south, latitude should be expressed in degrees only, longitude in degrees and minutes. However, it should be noted that when such minutes are zero then the position report may refer solely to degrees.

TRANSPONDER SETTING (Secondary Surveillance Radar-SSR) For Beacon Code procedures see Enroute Tab.

RVSM PROCEDURES
REDUCED VERTICAL SEPARATION MINIMUMS (FL290 - FL410) For RVSM procedures and equipment requirements see AIR TRAFFIC CONTROL pages series.

ATS ROUTE RESTRICTIONS: For information regarding flight planning purposes refer to Enroute section.

TRANSPONDER SETTING (Secondary Surveillance Radar-SSR): For Beacon Code procedures see ENROUTE section.

CRUISING LEVEL PROCEDURES
CRUISING LEVELS: For Flight Level Transition Procedures refer to Enroute section.

TRACK ADVISORY (TA) PROGRAM FOR FLIGHTS CROSSING ANCHORAGE ARTCC/RUSSIAN FIRs
a. The TA program is similar to that used by Oakland for PACOTS traffic. It is designed to assist ATC in sequencing same altitude aircraft proceeding westbound over the Russian FIR entry fixes. Flights participating in the TA program will receive preference over non-participants.

b. All Westbound flights crossing the Anchorage/Russian FIR boundary at or above FL 280 (8600 meters) shall participate in the TA program.

Page 5 Strip Charts

KZAK Type: FIR
FLIGHT PLANNING AND OVERFLIGHT ROUTES within the Pacific region: For complete Information see Enroute Tab.

ADIZ REQUIREMENTS
FOR ADIZ REQUIREMENTS See Enroute Tab.

EXTENDED RANGE OPERATIONS BY AIRCRAFT WITH TWO-TURBINE POWER-UNITS (ETOPS) 1. If the contingency procedures are employed by a twin-engine aircraft as a result of an engine shutdown or failure of an ETOPS critical system, the pilot should advise ATC as soon as practicable of the situation, reminding ATC of the type of aircraft involved, and request expeditious handling.

OCEANIC POSITION REPORTING PROCEDURES OAKLAND OCEANIC FIR
1. For non ADS equipped aircraft, any waypoint filed in the route of flight (ItemÂ 15 of the ICAO flight plan) must be reported as a position report whether the filed waypoint is compulsory or not. If a noncompulsory waypoint is not filed in item 15, it does not need to be reported.

2. POSITION REPORTS

a. When operating on a published ATS Route or a temporary route established by NOTAM, report and estimate the designated reporting points using the specified waypoint names or geographic coordinates as specified in the NOTAM.

b. When operating on a random route:

1. Flights whose tracks are predominantly east and west shall report over each 5Â degrees or 10Â degrees (10Â degrees will be used if the speed of the aircraft is such that 10Â degrees will be traversed within 80 minutes or less) meridian longitude extending east and west from 180Â degrees.

2. Flights whose tracks are predominantly north and south shall report over each 5Â degrees or 10Â degrees (10Â degrees if traversed within 80Â minutes) parallel of latitude extending north and south of the equator.

c. ATC may require specific flights to report more frequently than each 5Â degrees for aircraft with slow ground speeds.

d. Position reports shall be transmitted at the time of crossing the designated reporting point or as soon thereafter as possible.

3. Position reports shall include information on present position, estimated next position, and ensuing position in sequence as indicated below.

a. PRESENT POSITION - Information shall include:

1. The word â€œpositionâ€ .

2. Aircraft identification.

3. Reporting point name, or if not named:

(a) Latitude (2 digits or more) and,

(b) Longitude (3 digits or more).

b. Time over reporting point (4 digits UTC).

c. Altitude (Flight Level). When forwarding an altitude report within the Oakland OCA/FIR, pilots should report their present altitude and their assigned altitude exactly as cleared if the present and assigned altitudes differ. Aircraft assigned a block altitude must report their current altitude and the assigned block altitude. A restriction to cross a point at an altitude is not a block altitude assignment and should not be reported as a block of altitudes.

d. ESTIMATED NEXT POSITION

(1) Reporting point name, or if not named, latitude and longitude as in a.3 above and,

(2) Estimated time over next position (4 digits UTC).

e. ENSUING FIX

(1) Name only of the next succeeding fix whether compulsory or not, or if not named, latitude and longitude as in a.3 above.

4. WEATHER REPORTS:

a. Weather reports shall be included as provided in SectionÂ 3 of Standard AIREP Form by all flights unless exempted from weather reporting by the Weather Service and/or ATC.

5. ADHERENCE TO ATC APPROVED ROUTE

a. If an aircraft, notwithstanding all action taken to adhere to the route specified in the ATC clearance, inadvertently deviates from this route, action shall be taken to regain it as soon as reasonable and not further ahead than 200 nautical miles from the DR position at which the heading was altered to regain the route specified in the ATC clearance. Action to regain this route shall not be delayed in anticipation of obtaining a requested re-clearance.

6. EXCEPTIONS TO POSITION REPORTS PROCEDURES

a. Within Oakland OCA/FIR, no 5Â degree report need be made that would fall within 100Â NM of Guam. Aircraft cleared via terminal area routes report compulsory reporting fixes. Other aircraft report 100Â NM from Nimitz VORTAC. Where other island destinations within the Oakland Oceanic FIR are not more than one-degree latitude-longitude from a 5Â degrees fixed line reporting point, the ETA and arrival report may be substituted in lieu of the adjacent fixed line report.

b. To the east of the Hawaiian Islands it will not be necessary to report the 155Â degree west position if position will be reported at the entry/exit fixes on the Honolulu Control Facility boundary. To the west of the Hawaiian Islands, the 160Â degree west need not be reported.

NORTH PACIFIC (NOPAC) ROUTE PROCEDURES

a. The NOPAC Route System is comprised of five Air Traffic Service (ATS) routes which transit the North Pacific between Alaska and Japan. The two northern routes are used for westbound traffic. The three southern routes are used for eastbound traffic, except that R-591 or G-344 may be used for westbound aircraft crossing the Fukuoka/Anchorage FIR between 0000UTC and 0600UTC. The routes are as follows: R-220, R-580, A-590, R-591 and G-344.

b. Transition Routes

1. Within the Fukuoka FIR, Oceanic Transition Routes (OTRs) and, in one case, a Victor route, have been established for aircraft transitioning to or from the NOPAC Route System.

2. Within the Anchorage FIR, certain ATS routes are used for the same purpose. They are as follows: B-327 (For Westbound use only between BAMOK and SELDM), R-341, G-469, A-342, G-215, R-330, R-451, R-336, R-338, G-583 and G-349.

c. Separation Standards

1. The primary form of lateral separation within the NOPAC Route System is 25NM lateral either side of the centerline, based on Required Navigation Performance 10 (RNP-10) and 1000' vertical separation (FL290 - FL410) based on Reduced Vertical Separation Minimums (RVSM).

2. Lateral separation for Non-RNP10 aircraft and aircraft operating below FL180 is 50NM lateral either side of the centerline.

3. Standard longitudinal separation within the Anchorage Oceanic FIR is 15 minutes "in trail".

d. Flight Plans

1. Aircraft shall enter "R" in item 10 of the ICAO flight plan if the aircraft and operator have been approved for RNP 10 operations for the route of flight.

2. Aircraft shall enter "W" in item 10 of the ICAO flight plan if the aircraft and operator have been approved for RVSM.

3. Aircraft not approved for RNP 10 and/or RVSM shall not enter "R" and/or "W" in item 10.

4. Aircraft approved for both RNP 10 and RVSM may flight plan any of the NOPAC routes with the following altitude restrictions:

(a) R-220: Even Altitudes FL180 to FL400, also FL330, FL350, FL370, FL390, FL410

(b) R-580: Even Altitudes FL180 to FL400, also FL350, FL370

(c) A-590: Odd Altitudes FL190 to FL410, also FL300, FL320, FL340

(d) R-591: Eastbound, Odd Altitudes FL190 to FL410

(e) R-591: Westbound, Even Altitudes FL300 to FL400

(f) G-344: Eastbound, Odd Altitudes FL190 to FL410

(g) G-344: Westbound, Even Altitudes FL300 to FL400

(h) R-591 and G-344 are Eastbound routes unless designated as Westbound PACOTS. Traffic flows are either Eastbound or Westbound with the tracks being emptied of traffic before changing direction.

5. Non-RNP-10 aircraft shall flight plan as follows:

(a) Westbound: R-220 at all times.

(b) Eastbound: A-590 at all times.

(c) Eastbound: G-344 when available for eastbound flights.

(d) The altitudes available on these routes are at or below FL280 and at or above FL430.

e. Procedures

1. Peak traffic periods:

(a) Eastbound - 0700UTC to 2100UTC

(b) Westbound - 1200UTC to 1900UTC and 2200UTC to 0800UTC

(c) Due to traffic volume, flights desiring to operate contrary to the predominant traffic flow can expect to be rerouted or assigned less than optimum flight levels. If feasible, users planning to operate in the NOPAC Route System at airspeeds below MACH 0.78 should use other than the peak hours for their flights. This will reduce congestion and expedite traffic.

f. Aircraft cannot always be accommodated on their flight planned NOPAC route. In an effort to reduce coordination time and errors between ATC and flight crews, JCAB (Fukuoka ATMC) and FAA (Anchorage ARTCC) have agreed on a common procedure to accommodate most reroutes. Aircraft rerouted from one NOPAC ATC route to another NOPAC ATC route will be given short range clearances into the adjoining FIR's RADAR coverage airspace. The receiving ATC facility will then issue further routing to the aircraft prior to the aircraft reaching the clearance limit.

1. Example 1: aircraft ABC101 is routed via R-220 to RJTT but can not be accommodated on R-220. The aircraft may be re-cleared as follows: "ABC101 cleared to OATIS via R-580, expect further clearance from ATMC after OMOTO."

2. Example 2: aircraft ABC102 is routed via A-590 to PAFA but can not be accommodated on A-590. The aircraft may be re-cleared as follows: "ABC102 cleared to SYA via R-591, expect further routing from Anchorage ARTCC after AKISU."

CENTRAL EAST PACIFIC ROUTE SYSTEM (HAWAII â€“ U.S. MAINLAND)

a. The Central East Pacific (CEP) is the organized route system between Hawaii and California. Seven ATS routes, R-463, R-464, R-465, R-585, R-576, R-577 and R-578 are the primary routes within the CEP.

b. Reduced Vertical Separation Minimum (RVSM) and Required Navigation Performance 10 (RNP-10) are required for aircraft operating within the CEP Route System at FL290 through FL410. Non-approved aircraft can expect FL280 and below or FL430 and above, traffic permitting.

c. Operators show approval for RVSM and RNP-10 by annotating block 10 of the ICAO flight plan (equipment) with the letter W and R respectively.

d. Flight Levels normally assigned in the CEP are in accordance with ICAO Appendix 3a (East odd, West even).

ATS ROUTE RESTRICTION NOTES

ATS Route Restriction Notes for information regarding flight planning purposes see Enroute Tab.

RNP-10 SEPARATION

RNP-10 lateral separation (50 NM) may be applied wthin the Oakland Oceanic FIR between RNP-10 approved aircraft. RNP-10 approval is required for all PACOTS and for all aircraft operating within the CEP at FL290 through FL410. Non-RNP approved aircraft can expect FL280 and below or FL430 and above, traffic permitting.

MACH NUMBER TECHNIQUE For information about routes and/or areas affected, see Air Traffic Control Tab.

RVSM PROCEDURES

REDUCED VERTICAL SEPARATION MINIMUMS (RVSM) For procedures and equipment requirements see Air Traffic Control Tab.

REQUIRED NAVIGATION PERFORMANCE (RNP)

For procedures and equipment requirements, see Air Traffic Control pages and/or Air Traffic Control State pages for detailed information.

SPECIAL PROCEDURES FOR IN-FLIGHT CONTINGENCIES IN OCEANIC AIRSPACE ICAO DOC 4444, SECTION 15.2

Introduction

1. Although all possible contingencies cannot be covered, these procedures provide for the more frequent cases such as:

a. Inability to comply with assigned clearance due to meteorological conditions.

b. En-route diversion across the prevailing traffic flow; and

c. Loss of, or significant reduction in, the required navigation capability when operating in an airspace where the navigation performance accuracy is a prerequisite to the safe conduct of flight operations, or pressurization failure.

2. General Procedures

1. If an aircraft is unable to continue the flight in accordance with its ATC clearance, a revised clearance shall be obtained, whenever possible, prior to initiating any action.

2. If prior clearance cannot be obtained, the following contingency procedures should be employed until a revised clearance is received. In general terms, the aircraft should be flown at an offset level and on an offset track where other aircraft are less likely to be encountered. Specifically, the pilot shall:

a. Leave the cleared track or ATS route by initially turning at least 30 degrees to the right or to the left, in order to establish and maintain a parallel, same direction track or ATS route offset 5 NM (9.3 km). The direction of the turn should be based on one or more of the following factors:

1) aircraft position relative to any organized track or ATS route system;

2) the direction of flights and flight levels allocated on adjacent tracks;

3) the direction to an alternate airport;

4) any strategic lateral offset being flown; and

5) terrain clearance.

b. Maintain a watch for conflicting traffic both visually and by reference to ACAS (if equipped), leaving ACAS in RA mode at all times, unless aircraft operating limitations dictate otherwise;

c. turn on all aircraft exterior lights (commensurate with appropriate operating limitations);

d. keep the SSR transponder on at all times and, when able, squawk 7700, as appropriate and, if equipped with ADS-B or ADS-C, select the appropriate emergency functionality;

e. as soon as practicable, advise air traffic control of any deviation from their assigned clearance;

f. use means as appropriate (ie. voice and/or CPDLC) to communicate during a contingency or emergency;

g. if voice communications are used, the radiotelephony distress signal (MAYDAY) or urgency signal (PAN PAN) preferably spoken three times, shall be used, as appropriate;

h. when emergency situations are communicated via CPDLC, the controller may respond via CPDLC. However, the controller may also attempt to make voice contact with the aircraft;

i. establish communications with and alert nearby aircraft by broadcasting on the frequencies in use and at suitable intervals on 121.5 MHz (or, as a backup, on the inter-pilot air-to-air frequency 123.45 MHz): aircraft identification, the nature of the distress condition, intention of the pilot, position (including the ATS route designator or the track code, as appropriate) and flight level; and

j. the controller should attempt to determine the nature of the emergency and ascertain any assistance that may be required. Subsequent ATC action with respect to that aircraft shall be based on the intentions or the pilot and overall traffic situation.

3. Actions to be taken once offset from track:

a) operation within a parallel track system;

b) the potential for user preferred routes (UPR's) parallel to the aircraft's track or ATS route;

c) the nature of the contingency (e.g. aircraft system malfunction; and

d) weather factors (e.g. convective weather at lower flight levels).

4. If possible, maintain the assigned flight level until established on the 9.3 km (5.0 NM) parallel, same direction track or ATS route offset. If unable, initially minimize the rate of descent to the extent that is operationally feasible.

5. Once established on a parallel, same direction track or ATS route offset by 9.3km (5.0 NM), either:

a) descend below FL 290, and establish a 150 m (500 ft) vertical offset from those flight levels normally used, and proceed as required by the operational situation or if an ATC clearance has been obtained, in accordance with the clearance; or

b) establish a 150 m (500 ft) vertical offset (or 300 m (1000 ft) vertical offset if above FL 410) from those flight levels normally used, and proceed as required by the operational situation, or if ATC clearance has been obtained, in accordance with the clearance.

WEATHER DEVIATION PROCEDURES FOR OCEANIC CONTROLLED AIRSPACE â€" PACIFIC

When weather deviation is required, the pilot should initiate communications with ATC via voice or CPDLC. A rapid response may be obtained by either:

1. stating "WEATHER DEVIATION REQUIRED" to indicate that priority is desired on the frequency and for ATC response; or

2. requesting a weather deviation using a CPDLC lateral downlink message.

When necessary, the pilot should initiate the communications using the urgency call "PAN PAN PAN" (preferably spoken three times) or by using a CPDLC urgency downlink message.
The pilot shall inform ATC when weather deviation is no longer required, or when a weather deviation has been completed and the aircraft has returned to its cleared route.

The pilot should notify ATC and request clearance to deviate from track or ATS route, advising, when possible, the extent of the deviation requested. The flight crew will use whatever means are appropriate (i.e. voice and/or CPDLC) to communicate during a weather deviation.
ATC should take one of the following actions:

1. when appropriate separation can be applied, issue clearance to deviate from track; or

2. if there is conflicting traffic and ATC is unable to establish appropriate separation, ATC shall:

1. advise the pilot of inability to issue clearance for the requested deviation;

2. advise the pilot of conflicting traffic; and

3. request the pilot's intentions.

The pilot should take the following actions:

1. comply with the ATC clearance issued; or

2. advise ATC of intentions and execute the procedures detailed in the Action to be Taken if a Revised ATC Clearance Cannot Be Obtained procedure section.

If the aircraft is required to deviate from track or ATC route to avoid adverse meteorological conditions and prior clearance cannot be obtained, an ATC clearance shall be obtained at the earliest possible time. Until an ATC clearance is received, the pilot shall take the following actions:

1. if possible, deviate away from an organized track or ATS route system;

2. establish communications with and alert nearby aircraft by broadcasting, at suitable intervals: aircraft identification, flight level, position (including ATS route designator or the track code) and intentions, on the frequency in use and on 121.5 MHz (or, as a backup, on the inter-pilot air-to-air frequency 123.45 MHz);

3. watch for conflicting traffic both visually and by reference to ACAS (if equipped);

4. turn on all aircraft exterior lights (commensurate with appropriate operating limitations);

5. for deviations of less than 9.3 km (5.0 NM) from the originally cleared track or ATS route, remain at a level assigned by ATC;

6. for deviations greater than, or equal to 9.3 km (5.0 NM) from the originally cleared track or ATS route, when the aircraft is approximately 9.3 km (5.0 NM) from track, initiate a level change in accordance with the Originally Cleared Track or ATS Route Center Line / Deviations / Level Change section.

7. if the pilot receives clearance to deviate from cleared track or ATS route for a specified distance and, subsequently, requests, but cannot obtain a clearance to deviate beyond that distance, the pilot should apply an altitude offset in accordance with the Originally Cleared Track or ATS Route Center Line / Deviations / Level Change section before deviating beyond the cleared distance;

8. when returning to track or ATS route, be at its assigned flight level when the aircraft is within approximately 9.3 km (5.0 NM) of the center line; and

9. if contact was not established prior to deviating, continue to attempt to contact ATC to obtain a clearance. If contact was established, continue to keep ATC advised of intentions and obtain essential traffic information.

EAST 000Â° -179Â° magnetic

1. DESCEND 300 ft (90 m)

2. CLIMB 300 ft (90 m)

WEST 180Â° - 359Â° magnetic

1. CLIMB 300 ft (90 m)

2. DESCEND 300 ft (90 m)

PAZA Type: FIR

EXTENDED RANGE OPERATIONS BY AIRCRAFT WITH TWO-TURBINE POWER-UNITS (ETOPS) 1. If the contingency procedures are employed by a twin-engine aircraft as a result of an engine shutdown or failure of an ETOPS critical system, the pilot should advise ATC as soon as practicable of the situation, reminding ATC of the type of aircraft involved, and request expeditious handling.

OCEANIC POSITION REPORTING PROCEDURES OAKLAND OCEANIC FIR

1. For non ADS equipped aircraft, any waypoint filed in the route of flight (ItemÂ 15 of the ICAO flight plan) must be reported as a position report whether the filed waypoint is compulsory or not. If a noncompulsory waypoint is not filed in item 15, it does not need to be reported.

2. POSITION REPORTS

a. When operating on a published ATS Route or a temporary route established by NOTAM, report and estimate the designated reporting points using the specified waypoint names or geographic coordinates as specified in the NOTAM.

b. When operating on a random route:

1. Flights whose tracks are predominantly east and west shall report over each 5Â degrees or 10Â degrees (10Â degrees will be used if the speed of the aircraft is such that 10Â degrees will be traversed within 80 minutes or less) meridian longitude extending east and west from 180Â degrees.

2. Flights whose tracks are predominantly north and south shall report over each 5Â degrees or 10Â degrees (10Â degrees if traversed within 80Â minutes) parallel of latitude extending north and south of the equator.

c. ATC may require specific flights to report more frequently than each 5Â degrees for aircraft with slow ground speeds.

d. Position reports shall be transmitted at the time of crossing the designated reporting point or as soon thereafter as possible.

3. Position reports shall include information on present position, estimated next position, and ensuing position in sequence as indicated below.

a. PRESENT POSITION - Information shall include:

1. The word â€œpositionâ€ .

2. Aircraft identification.

3. Reporting point name, or if not named:

(a) Latitude (2 digits or more) and,

(b) Longitude (3 digits or more).

b. Time over reporting point (4 digits UTC).

c. Altitude (Flight Level). When forwarding an altitude report within the Oakland OCA/FIR, pilots should report their present altitude and their assigned altitude exactly as cleared if the present and assigned altitudes differ. Aircraft assigned a block altitude must report their current altitude and the assigned block altitude. A restriction to cross a point at an altitude is not a block altitude assignment and should not be reported as a block of altitudes.

d. ESTIMATED NEXT POSITION

(1) Reporting point name, or if not named, latitude and longitude as in a.3 above and,

(2) Estimated time over next position (4 digits UTC).

e. ENSUING FIX

(1) Name only of the next succeeding fix whether compulsory or not, or if not named, latitude and longitude as in a.3 above.

4. WEATHER REPORTS:

a. Weather reports shall be included as provided in SectionÂ 3 of Standard AIREP Form by all flights unless exempted from weather reporting by the Weather Service and/or ATC.

5. ADHERENCE TO ATC APPROVED ROUTE

a. If an aircraft, notwithstanding all action taken to adhere to the route specified in the ATC clearance, inadvertently deviates from this route, action shall be taken to regain it as soon as reasonable and not further ahead than 200 nautical miles from the DR position at which the heading was altered to regain the route specified in the ATC clearance. Action to regain this route shall not be delayed in anticipation of obtaining a requested re-clearance.

6. EXCEPTIONS TO POSITION REPORTS PROCEDURES

a. Within Oakland OCA/FIR, no 5Â degree report need be made that would fall within 100Â NM of Guam. Aircraft cleared via terminal area routes report compulsory reporting fixes. Other aircraft report 100Â NM from Nimitz VORTAC. Where other island destinations within the Oakland Oceanic FIR are not more than one-degree latitude-longitude from a 5Â degrees fixed line reporting point, the ETA and arrival report may be substituted in lieu of the adjacent fixed line report.

b. To the east of the Hawaiian Islands it will not be necessary to report the 155Â degree west position if position will be reported at the entry/exit fixes on the Honolulu Control Facility boundary. To the west of the Hawaiian Islands, the 160Â degree west need not be reported.

NORTH PACIFIC (NOPAC) ROUTE PROCEDURES

a. The NOPAC Route System is comprised of five Air Traffic Service (ATS) routes which transit the North Pacific between Alaska and Japan. The two northern routes are used for westbound traffic. The three southern routes are used for eastbound traffic, except that R-591 or G-344 may be used for westbound aircraft crossing the Fukuoka/Anchorage FIR between 0000UTC and 0600UTC. The routes are as follows: R-220, R-580, A-590, R-591 and G-344.

b. Transition Routes

1. Within the Fukuoka FIR, Oceanic Transition Routes (OTRs) and, in one case, a Victor route, have been established for aircraft transitioning to or from the NOPAC Route System.

2. Within the Anchorage FIR, certain ATS routes are used for the same purpose. They are as follows: B-327 (For Westbound use only between BAMOK and SELDM), R-341, G-469, A-342, G-215, R-330, R-451, R-336, R-338, G-583 and G-349.

c. Separation Standards

1. The primary form of lateral separation within the NOPAC Route System is 25NM lateral either side of the centerline, based on Required Navigation Performance 10 (RNP-10) and 1000' vertical separation (FL290 - FL410) based on Reduced Vertical Separation Minimums (RVSM).

2. Lateral separation for Non-RNP10 aircraft and aircraft operating below FL180 is 50NM lateral either side of the centerline.

3. Standard longitudinal separation within the Anchorage Oceanic FIR is 15 minutes "in trail".

d. Flight Plans

1. Aircraft shall enter "R" in item 10 of the ICAO flight plan if the aircraft and operator have been approved for RNP 10 operations for the route of flight.

2. Aircraft shall enter "W" in item 10 of the ICAO flight plan if the aircraft and operator have been approved for RVSM.

3. Aircraft not approved for RNP 10 and/or RVSM shall not enter "R" and/or "W" in item 10.

4. Aircraft approved for both RNP 10 and RVSM may flight plan any of the NOPAC routes with the following altitude restrictions:

(a) R-220: Even Altitudes FL180 to FL400, also FL330, FL350, FL370, FL390, FL410

(b) R-580: Even Altitudes FL180 to FL400, also FL350, FL370

(c) A-590: Odd Altitudes FL190 to FL410, also FL300, FL320, FL340

(d) R-591: Eastbound, Odd Altitudes FL190 to FL410

(e) R-591: Westbound, Even Altitudes FL300 to FL400

(f) G-344: Eastbound, Odd Altitudes FL190 to FL410

(g) G-344: Westbound, Even Altitudes FL300 to FL400

(h) R-591 and G-344 are Eastbound routes unless designated as Westbound PACOTS. Traffic flows are either Eastbound or Westbound with the tracks being emptied of traffic before changing direction.

5. Non-RNP-10 aircraft shall flight plan as follows:

(a) Westbound: R-220 at all times.

(b) Eastbound: A-590 at all times.

(c) Eastbound: G-344 when available for eastbound flights.

(d) The altitudes available on these routes are at or below FL280 and at or above FL430.

e. Procedures

1. Peak traffic periods:

(a) Eastbound - 0700UTC to 2100UTC

(b) Westbound - 1200UTC to 1900UTC and 2200UTC to 0800UTC

(c) Due to traffic volume, flights desiring to operate contrary to the predominant traffic flow can expect to be rerouted or assigned less than optimum flight levels. If feasible, users planning to operate in the NOPAC Route System at airspeeds below MACH 0.78 should use other than the peak hours for their flights. This will reduce congestion and expedite traffic.

f. Aircraft cannot always be accommodated on their flight planned NOPAC route. In an effort to reduce coordination time and errors between ATC and flight crews, JCAB (Fukuoka ATMC) and FAA (Anchorage ARTCC) have agreed on a common procedure to accommodate most reroutes. Aircraft rerouted from one NOPAC ATC route to another NOPAC ATC route will be given short range clearances into the adjoining FIR's RADAR coverage airspace. The receiving ATC facility will then issue further routing to the aircraft prior to the aircraft reaching the clearance limit.

1. Example 1: aircraft ABC101 is routed via R-220 to RJTT but can not be accommodated on R-220. The aircraft may be re-cleared as follows: "ABC101 cleared to OATIS via R-580, expect further clearance from ATMC after OMOTO."

2. Example 2: aircraft ABC102 is routed via A-590 to PAFA but can not be accommodated on A-590. The aircraft may be re-cleared as follows: "ABC102 cleared to SYA via R-591, expect further routing from Anchorage ARTCC after AKISU."

TRACK ADVISORY (TA) PROGRAM FOR FLIGHTS CROSSING ANCHORAGE ARTCC/RUSSIAN FIRs

a. The TA program is similar to that used by Oakland for PACOTS traffic. It is designed to assist ATC in sequencing same altitude aircraft proceeding westbound over the Russian FIR entry fixes. Flights participating in the TA program will receive preference over non-participants.

b. All Westbound flights crossing the Anchorage/Russian FIR boundary at or above FL 280 (8600 meters) shall participate in the TA program.

ATS ROUTE RESTRICTION NOTES

ATS Route Restriction Notes for information regarding flight planning purposes see Enroute Tab.

MACH NUMBER TECHNIQUE For information about routes and/or areas affected, see Air Traffic Control Tab.

TRANSPONDER SETTING (Secondary Surveillance Radar-SSR) For Beacon Code procedures see Enroute Tab.

SPECIAL PROCEDURES FOR IN-FLIGHT CONTINGENCIES IN OCEANIC AIRSPACE ICAO DOC 4444, SECTION 15.2

Introduction

1. Although all possible contingencies cannot be covered, these procedures provide for the more frequent cases such as:

a. Inability to comply with assigned clearance due to meteorological conditions.

b. En-route diversion across the prevailing traffic flow; and

c. Loss of, or significant reduction in, the required navigation capability when operating in an airspace where the navigation performance accuracy is a prerequisite to the safe conduct of flight operations, or pressurization failure.

2. General Procedures

1. If an aircraft is unable to continue the flight in accordance with its ATC clearance, a revised clearance shall be obtained, whenever possible, prior to initiating any action.

2. If prior clearance cannot be obtained, the following contingency procedures should be employed until a revised clearance is received. In general terms, the aircraft should be flown at an offset level and on an offset track where other aircraft are less likely to be encountered. Specifically, the pilot shall:

a. Leave the cleared track or ATS route by initially turning at least 30 degrees to the right or to the left, in order to establish and maintain a parallel, same direction track or ATS route offset 5 NM (9.3 km). The direction of the turn should be based on one or more of the following factors:

1) aircraft position relative to any organized track or ATS route system;

2) the direction of flights and flight levels allocated on adjacent tracks;

3) the direction to an alternate airport;

4) any strategic lateral offset being flown; and

5) terrain clearance.

b. Maintain a watch for conflicting traffic both visually and by reference to ACAS (if equipped), leaving ACAS in RA mode at all times, unless aircraft operating limitations dictate otherwise;

c. turn on all aircraft exterior lights (commensurate with appropriate operating limitations);

d. keep the SSR transponder on at all times and, when able, squawk 7700, as appropriate and, if equipped with ADS-B or ADS-C, select the appropriate emergency functionality;

e. as soon as practicable, advise air traffic control of any deviation from their assigned clearance;

f. use means as appropriate (ie. voice and/or CPDLC) to communicate during a contingency or emergency;

g. if voice communications are used, the radiotelephony distress signal (MAYDAY) or urgency signal (PAN PAN) preferably spoken three times, shall be used, as appropriate;

h. when emergency situations are communicated via CPDLC, the controller may respond via CPDLC. However, the controller may also attempt to make voice contact with the aircraft;

i. establish communications with and alert nearby aircraft by broadcasting on the frequencies in use and at suitable intervals on 121.5 MHz (or, as a backup, on the inter-pilot air-to-air frequency 123.45 MHz): aircraft identification, the nature of the distress condition, intention of the pilot, position (including the ATS route designator or the track code, as appropriate) and flight level; and

j. the controller should attempt to determine the nature of the emergency and ascertain any assistance that may be required. Subsequent ATC action with respect to that aircraft shall be based on the intentions or the pilot and overall traffic situation.

3. Actions to be taken once offset from track:

a) operation within a parallel track system;

b) the potential for user preferred routes (UPR's) parallel to the aircraft's track or ATS route;

c) the nature of the contingency (e.g. aircraft system malfunction; and

d) weather factors (e.g. convective weather at lower flight levels).

4. If possible, maintain the assigned flight level until established on the 9.3 km (5.0 NM) parallel, same direction track or ATS route offset. If unable, initially minimize the rate of descent to the extent that is operationally feasible.

5. Once established on a parallel, same direction track or ATS route offset by 9.3km (5.0 NM), either:

a) descend below FL 290, and establish a 150 m (500 ft) vertical offset from those flight levels normally used, and proceed as required by the operational situation or if an ATC clearance has been obtained, in accordance with the clearance; or

b) establish a 150 m (500 ft) vertical offset (or 300 m (1000 ft) vertical offset if above FL 410) from those flight levels normally used, and proceed as required by the operational situation, or if ATC clearance has been obtained, in accordance with the clearance.

WEATHER DEVIATION PROCEDURES FOR OCEANIC CONTROLLED AIRSPACE â€" PACIFIC

When weather deviation is required, the pilot should initiate communications with ATC via voice or CPDLC. A rapid response may be obtained by either:

1. stating "WEATHER DEVIATION REQUIRED" to indicate that priority is desired on the frequency and for ATC response; or

2. requesting a weather deviation using a CPDLC lateral downlink message.

When necessary, the pilot should initiate the communications using the urgency call "PAN PAN PAN" (preferably spoken three times) or by using a CPDLC urgency downlink message.
The pilot shall inform ATC when weather deviation is no longer required, or when a weather deviation has been completed and the aircraft has returned to its cleared route.

The pilot should notify ATC and request clearance to deviate from track or ATS route, advising, when possible, the extent of the deviation requested. The flight crew will use whatever means are appropriate (i.e. voice and/or CPDLC) to communicate during a weather deviation.
ATC should take one of the following actions:

1. when appropriate separation can be applied, issue clearance to deviate from track; or

2. if there is conflicting traffic and ATC is unable to establish appropriate separation, ATC shall:

1. advise the pilot of inability to issue clearance for the requested deviation;

2. advise the pilot of conflicting traffic; and

3. request the pilot's intentions.

The pilot should take the following actions:

1. comply with the ATC clearance issued; or

2. advise ATC of intentions and execute the procedures detailed in the Action to be Taken if a Revised ATC Clearance Cannot Be Obtained procedure section.

If the aircraft is required to deviate from track or ATC route to avoid adverse meteorological conditions and prior clearance cannot be obtained, an ATC clearance shall be obtained at the earliest possible time. Until an ATC clearance is received, the pilot shall take the following actions:

1. if possible, deviate away from an organized track or ATS route system;

2. establish communications with and alert nearby aircraft by broadcasting, at suitable intervals: aircraft identification, flight level, position (including ATS route designator or the track code) and intentions, on the frequency in use and on 121.5 MHz (or, as a backup, on the inter-pilot air-to-air frequency 123.45 MHz);

3. watch for conflicting traffic both visually and by reference to ACAS (if equipped);

4. turn on all aircraft exterior lights (commensurate with appropriate operating limitations);

5. for deviations of less than 9.3 km (5.0 NM) from the originally cleared track or ATS route, remain at a level assigned by ATC;

6. for deviations greater than, or equal to 9.3 km (5.0 NM) from the originally cleared track or ATS route, when the aircraft is approximately 9.3 km (5.0 NM) from track, initiate a level change in accordance with the Originally Cleared Track or ATS Route Center Line / Deviations / Level Change section.

7. if the pilot receives clearance to deviate from cleared track or ATS route for a specified distance and, subsequently, requests, but cannot obtain a clearance to deviate beyond that distance, the pilot should apply an altitude offset in accordance with the Originally Cleared Track or ATS Route Center Line / Deviations / Level Change section before deviating beyond the cleared distance;

8. when returning to track or ATS route, be at its assigned flight level when the aircraft is within approximately 9.3 km (5.0 NM) of the center line; and

9. if contact was not established prior to deviating, continue to attempt to contact ATC to obtain a clearance. If contact was established, continue to keep ATC advised of intentions and obtain essential traffic information.

EAST 000Â° -179Â° magnetic

1. DESCEND 300 ft (90 m)

2. CLIMB 300 ft (90 m)

WEST 180Â° - 359Â° magnetic

1. CLIMB 300 ft (90 m)

2. DESCEND 300 ft (90 m)

UHMM Type: FIR

CRUISING LEVEL PROCEDURES
CRUISING LEVELS: For Flight Level Transition Procedures refer to Enroute section.

TRACK ADVISORY (TA) PROGRAM FOR FLIGHTS CROSSING ANCHORAGE ARTCC/RUSSIAN FIRs

a. The TA program is similar to that used by Oakland for PACOTS traffic. It is designed to assist ATC in sequencing same altitude aircraft proceeding westbound over the Russian FIR entry fixes. Flights participating in the TA program will receive preference over non-participants.

b. All Westbound flights crossing the Anchorage/Russian FIR boundary at or above FL 280 (8600 meters) shall participate in the TA program.

POSITION REPORTING PROCEDURES

a. Unless otherwise requested by ATC , position reports for flights on routes not defined by designated reporting points should be made at the significant points listed in the flight plan.

b. ATC may require any flight operating in a North/South direction to report its position at any intermediate parallel of latitude when deemed necessary.

c. In requiring aircraft to report their position at intermediate points, ATC is guided by the requirement to have positional information at approximately hourly intervals and also by the need to accommodate varying types of aircraft and varying traffic and MET conditions.

d. Unless providing position reports via ADS-C, if the Estimated Time for the "next position", as last reported to ATC has changed by 2 minutes or more, a revised Estimate must be transmitted to the ATS unit concerned as soon as possible.

e. Flight Crews must always report to ATC as soon as possible on reaching any new cruising level.

f. For flights outside domestic ATS route networks, positions should be expressed in terms of latitude and longitude except when flying over named reporting points. For flights whose tracks are predominantly east or west, latitude should be expressed in degrees and minutes, longitude in degrees only. For flights whose tracks are

predominantly north or south, latitude should be expressed in degrees only, longitude in degrees and minutes. However, it should be noted that when such minutes are zero then the position report may refer solely to degrees.

TRANSPONDER SETTING (Secondary Surveillance Radar-SSR) For Beacon Code procedures see Enroute Tab.

RVSM PROCEDURES
REDUCED VERTICAL SEPARATION MINIMUMS (FL290 - FL410) For RVSM procedures and equipment requirements see AIR TRAFFIC CONTROL pages series.

ATS ROUTE RESTRICTIONS: For information regarding flight planning purposes refer to Enroute section.

TRANSPONDER SETTING (Secondary Surveillance Radar-SSR): For Beacon Code procedures see ENROUTE section.

ULLL Type: FIR
ATS ROUTE RESTRICTIONS: For information regarding flight planning purposes refer to Enroute section.

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TRANSPONDER SETTING (Secondary Surveillance Radar-SSR): For Beacon Code procedures see ENROUTE section.

CRUISING LEVEL PROCEDURES
CRUISING LEVELS: For Flight Level Transition Procedures refer to Enroute section.

RVSM PROCEDURES
REDUCED VERTICAL SEPARATION MINIMUMS (FL290 - FL410) For RVSM procedures and equipment requirements see AIR TRAFFIC CONTROL pages series.

Page 6 Strip Charts

KZAK Type: FIR
FLIGHT PLANNING AND OVERFLIGHT ROUTES within the Pacific region: For complete Information see Enroute Tab.

ADIZ REQUIREMENTS
FOR ADIZ REQUIREMENTS See Enroute Tab.

EXTENDED RANGE OPERATIONS BY AIRCRAFT WITH TWO-TURBINE POWER-UNITS (ETOPS) 1. If the contingency procedures are employed by a twin-engine aircraft as a result of an engine shutdown or failure of an ETOPS critical system, the pilot should advise ATC as soon as practicable of the situation, reminding ATC of the type of aircraft involved, and request expeditious handling.

OCEANIC POSITION REPORTING PROCEDURES OAKLAND OCEANIC FIR
1. For non ADS equipped aircraft, any waypoint filed in the route of flight (ItemÂ 15 of the ICAO flight plan) must be reported as a position report whether the filed waypoint is compulsory or not. If a noncompulsory waypoint is not filed in item 15, it does not need to be reported.

2. POSITION REPORTS

a. When operating on a published ATS Route or a temporary route established by NOTAM, report and estimate the designated reporting points using the specified waypoint names or geographic coordinates as specified in the NOTAM.

b. When operating on a random route:

1. Flights whose tracks are predominantly east and west shall report over each 5Â degrees or 10Â degrees (10Â degrees will be used if the speed of the aircraft is such that 10Â degrees will be traversed within 80 minutes or less) meridian longitude extending east and west from 180Â degrees.

2. Flights whose tracks are predominantly north and south shall report over each 5Â degrees or 10Â degrees (10Â degrees if traversed within 80Â minutes) parallel of latitude extending north and south of the equator.

c. ATC may require specific flights to report more frequently than each 5Â degrees for aircraft with slow ground speeds.

d. Position reports shall be transmitted at the time of crossing the designated reporting point or as soon thereafter as possible.

3. Position reports shall include information on present position, estimated next position, and ensuing position in sequence as indicated below.

a. PRESENT POSITION - Information shall include:

1. The word â€œpositionâ€ .

2. Aircraft identification.

3. Reporting point name, or if not named:

(a) Latitude (2 digits or more) and,

(b) Longitude (3 digits or more).

b. Time over reporting point (4 digits UTC).

c. Altitude (Flight Level). When forwarding an altitude report within the Oakland OCA/FIR, pilots should report their present altitude and their assigned altitude exactly as cleared if the present and assigned altitudes differ. Aircraft assigned a block altitude must report their current altitude and the assigned block altitude. A restriction to cross a point at an altitude is not a block altitude assignment and should not be reported as a block of altitudes.

d. ESTIMATED NEXT POSITION

(1) Reporting point name, or if not named, latitude and longitude as in a.3 above and,

(2) Estimated time over next position (4 digits UTC).

e. ENSUING FIX

(1) Name only of the next succeeding fix whether compulsory or not, or if not named, latitude and longitude as in a.3 above.

4. WEATHER REPORTS:

a. Weather reports shall be included as provided in SectionÂ 3 of Standard AIREP Form by all flights unless exempted from weather reporting by the Weather Service and/or ATC.

5. ADHERENCE TO ATC APPROVED ROUTE

a. If an aircraft, notwithstanding all action taken to adhere to the route specified in the ATC clearance, inadvertently deviates from this route, action shall be taken to regain it as soon as reasonable and not further ahead than 200 nautical miles from the DR position at which the heading was altered to regain the route specified in the ATC clearance. Action to regain this route shall not be delayed in anticipation of obtaining a requested re-clearance.

6. EXCEPTIONS TO POSITION REPORTS PROCEDURES

a. Within Oakland OCA/FIR, no 5Â degree report need be made that would fall within 100Â NM of Guam. Aircraft cleared via terminal area routes report compulsory reporting fixes. Other aircraft report 100Â NM from Nimitz VORTAC. Where other island destinations within the Oakland Oceanic FIR are not more than one-degree latitude-longitude from a 5Â degrees fixed line reporting point, the ETA and arrival report may be substituted in lieu of the adjacent fixed line report.

b. To the east of the Hawaiian Islands it will not be necessary to report the 155Â degree west position if position will be reported at the entry/exit fixes on the Honolulu Control Facility boundary. To the west of the Hawaiian Islands, the 160Â degree west need not be reported.

NORTH PACIFIC (NOPAC) ROUTE PROCEDURES

a. The NOPAC Route System is comprised of five Air Traffic Service (ATS) routes which transit the North Pacific between Alaska and Japan. The two northern routes are used for westbound traffic. The three southern routes are used for eastbound traffic, except that R-591 or G-344 may be used for westbound aircraft crossing the Fukuoka/Anchorage FIR between 0000UTC and 0600UTC. The routes are as follows: R-220, R-580, A-590, R-591 and G-344.

b. Transition Routes

1. Within the Fukuoka FIR, Oceanic Transition Routes (OTRs) and, in one case, a Victor route, have been established for aircraft transitioning to or from the NOPAC Route System.

2. Within the Anchorage FIR, certain ATS routes are used for the same purpose. They are as follows: B-327 (For Westbound use only between BAMOK and SELDM), R-341, G-469, A-342, G-215, R-330, R-451, R-336, R-338, G-583 and G-349.

c. Separation Standards

1. The primary form of lateral separation within the NOPAC Route System is 25NM lateral either side of the centerline, based on Required Navigation Performance 10 (RNP-10) and 1000' vertical separation (FL290 - FL410) based on Reduced Vertical Separation Minimums (RVSM).

2. Lateral separation for Non-RNP10 aircraft and aircraft operating below FL180 is 50NM lateral either side of the centerline.

3. Standard longitudinal separation within the Anchorage Oceanic FIR is 15 minutes "in trail".

d. Flight Plans

1. Aircraft shall enter "R" in item 10 of the ICAO flight plan if the aircraft and operator have been approved for RNP 10 operations for the route of flight.

2. Aircraft shall enter "W" in item 10 of the ICAO flight plan if the aircraft and operator have been approved for RVSM.

3. Aircraft not approved for RNP 10 and/or RVSM shall not enter "R" and/or "W" in item 10.

4. Aircraft approved for both RNP 10 and RVSM may flight plan any of the NOPAC routes with the following altitude restrictions:

(a) R-220: Even Altitudes FL180 to FL400, also FL330, FL350, FL370, FL390, FL410

(b) R-580: Even Altitudes FL180 to FL400, also FL350, FL370

(c) A-590: Odd Altitudes FL190 to FL410, also FL300, FL320, FL340

(d) R-591: Eastbound, Odd Altitudes FL190 to FL410

(e) R-591: Westbound, Even Altitudes FL300 to FL400

(f) G-344: Eastbound, Odd Altitudes FL190 to FL410

(g) G-344: Westbound, Even Altitudes FL300 to FL400

(h) R-591 and G-344 are Eastbound routes unless designated as Westbound PACOTS. Traffic flows are either Eastbound or Westbound with the tracks being emptied of traffic before changing direction.

5. Non-RNP-10 aircraft shall flight plan as follows:

(a) Westbound: R-220 at all times.

(b) Eastbound: A-590 at all times.

(c) Eastbound: G-344 when available for eastbound flights.

(d) The altitudes available on these routes are at or below FL280 and at or above FL430.

e. Procedures

1. Peak traffic periods:

(a) Eastbound - 0700UTC to 2100UTC

(b) Westbound - 1200UTC to 1900UTC and 2200UTC to 0800UTC

(c) Due to traffic volume, flights desiring to operate contrary to the predominant traffic flow can expect to be rerouted or assigned less than optimum flight levels. If feasible, users planning to operate in the NOPAC Route System at airspeeds below MACH 0.78 should use other than the peak hours for their flights. This will reduce congestion and expedite traffic.

f. Aircraft cannot always be accommodated on their flight planned NOPAC route. In an effort to reduce coordination time and errors between ATC and flight crews, JCAB (Fukuoka ATMC) and FAA (Anchorage ARTCC) have agreed on a common procedure to accommodate most reroutes. Aircraft rerouted from one NOPAC ATC route to another NOPAC ATC route will be given short range clearances into the adjoining FIR's RADAR coverage airspace. The receiving ATC facility will then issue further routing to the aircraft prior to the aircraft reaching the clearance limit.

1. Example 1: aircraft ABC101 is routed via R-220 to RJTT but can not be accommodated on R-220. The aircraft may be re-cleared as follows: "ABC101 cleared to OATIS via R-580, expect further clearance from ATMC after OMOTO."

2. Example 2: aircraft ABC102 is routed via A-590 to PAFA but can not be accommodated on A-590. The aircraft may be re-cleared as follows: "ABC102 cleared to SYA via R-591, expect further routing from Anchorage ARTCC after AKISU."

CENTRAL EAST PACIFIC ROUTE SYSTEM (HAWAII â€“ U.S. MAINLAND)

a. The Central East Pacific (CEP) is the organized route system between Hawaii and California. Seven ATS routes, R-463, R-464, R-465, R-585, R-576, R-577 and R-578 are the primary routes within the CEP.

b. Reduced Vertical Separation Minimum (RVSM) and Required Navigation Performance 10 (RNP-10) are required for aircraft operating within the CEP Route System at FL290 through FL410. Non-approved aircraft can expect FL280 and below or FL430 and above, traffic permitting.

c. Operators show approval for RVSM and RNP-10 by annotating block 10 of the ICAO flight plan (equipment) with the letter W and R respectively.

d. Flight Levels normally assigned in the CEP are in accordance with ICAO Appendix 3a (East odd, West even).

ATS ROUTE RESTRICTION NOTES
ATS Route Restriction Notes for information regarding flight planning purposes see Enroute Tab.

RNP-10 SEPARATION
RNP-10 lateral separation (50 NM) may be applied wthin the Oakland Oceanic FIR between RNP-10 approved aircraft. RNP-10 approval is required for all PACOTS and for all aircraft operating within the CEP at FL290 through FL410. Non-RNP approved aircraft can expect FL280 and below or FL430 and above, traffic permitting.

MACH NUMBER TECHNIQUE For information about routes and/or areas affected, see Air Traffic Control Tab.

RVSM PROCEDURES
REDUCED VERTICAL SEPARATION MINIMUMS (RVSM) For procedures and equipment requirements see Air Traffic Control Tab.

REQUIRED NAVIGATION PERFORMANCE (RNP)
For procedures and equipment requirements, see Air Traffic Control pages and/or Air Traffic Control State pages for detailed information.

SPECIAL PROCEDURES FOR IN-FLIGHT CONTINGENCIES IN OCEANIC AIRSPACE ICAO DOC 4444, SECTION 15.2
Introduction

1. Although all possible contingencies cannot be covered, these procedures provide for the more frequent cases such as:

a. Inability to comply with assigned clearance due to meteorological conditions.

b. En-route diversion across the prevailing traffic flow; and

c. Loss of, or significant reduction in, the required navigation capability when operating in an airspace where the navigation performance accuracy is a prerequisite to the safe conduct of flight operations, or pressurization failure.

2. General Procedures

1. If an aircraft is unable to continue the flight in accordance with its ATC clearance, a revised clearance shall be obtained, whenever possible, prior to initiating any action.

2. If prior clearance cannot be obtained, the following contingency procedures should be employed until a revised clearance is received. In general terms, the aircraft should be flown at an offset level and on an offset track where other aircraft are less likely to be encountered. Specifically, the pilot shall:

a. Leave the cleared track or ATS route by initially turning at least 30 degrees to the right or to the left, in order to establish and maintain a parallel, same direction track or ATS route offset 5 NM (9.3 km). The direction of the turn should be based on one or more of the following factors:

1) aircraft position relative to any organized track or ATS route system;

2) the direction of flights and flight levels allocated on adjacent tracks;

3) the direction to an alternate airport;

4) any strategic lateral offset being flown; and

5) terrain clearance.

b. Maintain a watch for conflicting traffic both visually and by reference to ACAS (if equipped), leaving ACAS in RA mode at all times, unless aircraft operating limitations dictate otherwise;

c. turn on all aircraft exterior lights (commensurate with appropriate operating limitations);

d. keep the SSR transponder on at all times and, when able, squawk 7700, as appropriate and, if equipped with ADS-B or ADS-C, select the appropriate emergency functionality;

e. as soon as practicable, advise air traffic control of any deviation from their assigned clearance;

f. use means as appropriate (ie. voice and/or CPDLC) to communicate during a contingency or emergency;

g. if voice communications are used, the radiotelephony distress signal (MAYDAY) or urgency signal (PAN PAN) preferably spoken three times, shall be used, as appropriate;

h. when emergency situations are communicated via CPDLC, the controller may respond via CPDLC. However, the controller may also attempt to make voice contact with the aircraft;

i. establish communications with and alert nearby aircraft by broadcasting on the frequencies in use and at suitable intervals on 121.5 MHz (or, as a backup, on the inter-pilot air-to-air frequency 123.45 MHz): aircraft identification, the nature of the distress condition, intention of the pilot, position (including the ATS route

designator or the track code, as appropriate) and flight level; and

j. the controller should attempt to determine the nature of the emergency and ascertain any assistance that may be required. Subsequent ATC action with respect to that aircraft shall be based on the intentions or the pilot and overall traffic situation.

3. Actions to be taken once offset from track:

a) operation within a parallel track system;

b) the potential for user preferred routes (UPR's) parallel to the aircraft's track or ATS route;

c) the nature of the contingency (e.g. aircraft system malfunction; and

d) weather factors (e.g. convective weather at lower flight levels).

4. If possible, maintain the assigned flight level until established on the 9.3 km (5.0 NM) parallel, same direction track or ATS route offset. If unable, initially minimize the rate of descent to the extent that is operationally feasible.

5. Once established on a parallel, same direction track or ATS route offset by 9.3km (5.0 NM), either:

a) descend below FL 290, and establish a 150 m (500 ft) vertical offset from those flight levels normally used, and proceed as required by the operational situation or if an ATC clearance has been obtained, in accordance with the clearance; or

b) establish a 150 m (500 ft) vertical offset (or 300 m (1000 ft) vertical offset if above FL 410) from those flight levels normally used, and proceed as required by the operational situation, or if ATC clearance has been obtained, in accordance with the clearance.

WEATHER DEVIATION PROCEDURES FOR OCEANIC CONTROLLED AIRSPACE â€” PACIFIC

When weather deviation is required, the pilot should initiate communications with ATC via voice or CPDLC. A rapid response may be obtained by either:

1. stating "WEATHER DEVIATION REQUIRED" to indicate that priority is desired on the frequency and for ATC response; or

2. requesting a weather deviation using a CPDLC lateral downlink message.

When necessary, the pilot should initiate the communications using the urgency call "PAN PAN PAN" (preferably spoken three times) or by using a CPDLC urgency downlink message.
The pilot shall inform ATC when weather deviation is no longer required, or when a weather deviation has been completed and the aircraft has returned to its cleared route.

The pilot should notify ATC and request clearance to deviate from track or ATS route, advising, when possible, the extent of the deviation requested. The flight crew will use whatever means are appropriate (i.e. voice and/or CPDLC) to communicate during a weather deviation.
ATC should take one of the following actions:

1. when appropriate separation can be applied, issue clearance to deviate from track; or

2. if there is conflicting traffic and ATC is unable to establish appropriate separation, ATC shall:

1. advise the pilot of inability to issue clearance for the requested deviation;

2. advise the pilot of conflicting traffic; and

3. request the pilot's intentions.

The pilot should take the following actions:

1. comply with the ATC clearance issued; or

2. advise ATC of intentions and execute the procedures detailed in the Action to be Taken if a Revised ATC Clearance Cannot Be Obtained procedure section.

If the aircraft is required to deviate from track or ATC route to avoid adverse meteorological conditions and prior clearance cannot be obtained, an ATC clearance shall be obtained at the earliest possible time. Until an ATC clearance is received, the pilot shall take the following actions:

1. if possible, deviate away from an organized track or ATS route system;

2. establish communications with and alert nearby aircraft by broadcasting, at suitable intervals: aircraft identification, flight level, position (including ATS route designator or the track code) and intentions, on the frequency in use and on 121.5 MHz (or, as a backup, on the inter-pilot air-to-air frequency 123.45 MHz);

3. watch for conflicting traffic both visually and by reference to ACAS (if equipped);

4. turn on all aircraft exterior lights (commensurate with appropriate operating limitations);

5. for deviations of less than 9.3 km (5.0 NM) from the originally cleared track or ATS route, remain at a level assigned by ATC;

6. for deviations greater than, or equal to 9.3 km (5.0 NM) from the originally cleared track or ATS route, when the aircraft is approximately 9.3 km (5.0 NM) from track, initiate a level change in accordance with the Originally Cleared Track or ATS Route Center Line / Deviations / Level Change section.

7. if the pilot receives clearance to deviate from cleared track or ATS route for a specified distance and, subsequently, requests, but cannot obtain a clearance to deviate beyond that distance, the pilot should apply an altitude offset in accordance with the Originally Cleared Track or ATS Route Center Line / Deviations / Level Change section before deviating beyond the cleared distance;

8. when returning to track or ATS route, be at its assigned flight level when the aircraft is within approximately 9.3 km (5.0 NM) of the center line; and

9. if contact was not established prior to deviating, continue to attempt to contact ATC to obtain a clearance. If contact was established, continue to keep ATC advised of intentions and obtain essential traffic information.

EAST 000Â° -179Â° magnetic
1. DESCEND 300 ft (90 m)

2. CLIMB 300 ft (90 m)

WEST 180Â° - 359Â° magnetic
1. CLIMB 300 ft (90 m)

2. DESCEND 300 ft (90 m)

PAZA Type: FIR
EXTENDED RANGE OPERATIONS BY AIRCRAFT WITH TWO-TURBINE POWER-UNITS (ETOPS) 1. If the contingency procedures are employed by a twin-engine aircraft as a result of an engine shutdown or failure of an ETOPS critical system, the pilot should advise ATC as soon as practicable of the situation, reminding ATC of the type of aircraft involved, and request expeditious handling.

OCEANIC POSITION REPORTING PROCEDURES OAKLAND OCEANIC FIR
1. For non ADS equipped aircraft, any waypoint filed in the route of flight (ItemÂ 15 of the ICAO flight plan) must be reported as a position report whether the filed waypoint is compulsory or not. If a noncompulsory waypoint is not filed in item 15, it does not need to be reported.

2. POSITION REPORTS

a. When operating on a published ATS Route or a temporary route established by NOTAM, report and estimate the designated reporting points using the specified waypoint names or geographic coordinates as specified in the NOTAM.

b. When operating on a random route:

1. Flights whose tracks are predominantly east and west shall report over each 5Â degrees or 10Â degrees (10Â degrees will be used if the speed of the aircraft is such that 10Â degrees will be traversed within 80 minutes or less) meridian longitude extending east and west from 180Â degrees.

2. Flights whose tracks are predominantly north and south shall report over each 5Â degrees or 10Â degrees (10Â degrees if traversed within 80Â minutes) parallel of latitude extending north and south of the equator.

c. ATC may require specific flights to report more frequently than each 5Â degrees for aircraft with slow ground speeds.

d. Position reports shall be transmitted at the time of crossing the designated reporting point or as soon thereafter as possible.

3. Position reports shall include information on present position, estimated next position, and ensuing position in sequence as indicated below.

a. PRESENT POSITION - Information shall include:

1. The word â€œpositionâ€ .

2. Aircraft identification.

3. Reporting point name, or if not named:

(a) Latitude (2 digits or more) and,

(b) Longitude (3 digits or more).

b. Time over reporting point (4 digits UTC).

c. Altitude (Flight Level). When forwarding an altitude report within the Oakland OCA/FIR, pilots should report their present altitude and their assigned altitude exactly as cleared if the present and assigned altitudes differ. Aircraft assigned a block altitude must report their current altitude and the assigned block altitude. A restriction to cross a point at an altitude is not a block altitude assignment and should not be reported as a block of altitudes.

d. ESTIMATED NEXT POSITION

(1) Reporting point name, or if not named, latitude and longitude as in a.3 above and,

(2) Estimated time over next position (4 digits UTC).

e. ENSUING FIX

(1) Name only of the next succeeding fix whether compulsory or not, or if not named, latitude and longitude as in a.3 above.

4. WEATHER REPORTS:

a. Weather reports shall be included as provided in SectionÂ 3 of Standard AIREP Form by all flights unless exempted from weather reporting by the Weather Service and/or ATC.

5. ADHERENCE TO ATC APPROVED ROUTE

a. If an aircraft, notwithstanding all action taken to adhere to the route specified in the ATC clearance, inadvertently deviates from this route, action shall be taken to regain it as soon as reasonable and not further ahead than 200 nautical miles from the DR position at which the heading was altered to regain the route specified in the ATC clearance. Action to regain this route shall not be delayed in anticipation of obtaining a requested re-clearance.

6. EXCEPTIONS TO POSITION REPORTS PROCEDURES

a. Within Oakland OCA/FIR, no 5Â degree report need be made that would fall within 100Â NM of Guam. Aircraft cleared via terminal area routes report compulsory reporting fixes. Other aircraft report 100Â NM from Nimitz VORTAC. Where other island destinations within the Oakland Oceanic FIR are not more than one-degree latitude-longitude from a 5Â degrees fixed line reporting point, the ETA and arrival report may be substituted in lieu of the adjacent fixed line report.

b. To the east of the Hawaiian Islands it will not be necessary to report the 155Â degree west position if position will be reported at the entry/exit fixes on the Honolulu Control Facility boundary. To the west of the Hawaiian Islands, the 160Â degree west need not be reported.

NORTH PACIFIC (NOPAC) ROUTE PROCEDURES

a. The NOPAC Route System is comprised of five Air Traffic Service (ATS) routes which transit the North Pacific between Alaska and Japan. The two northern routes are used for westbound traffic. The three southern routes are used for eastbound traffic, except that R-591 or G-344 may be used for westbound aircraft crossing the Fukuoka/Anchorage FIR between 0000UTC and 0600UTC. The routes are as follows: R-220, R-580, A-590, R-591 and G-344.

b. Transition Routes

1. Within the Fukuoka FIR, Oceanic Transition Routes (OTRs) and, in one case, a Victor route, have been established for aircraft transitioning to or from the NOPAC Route System.

2. Within the Anchorage FIR, certain ATS routes are used for the same purpose. They are as follows: B-327 (For Westbound use only between BAMOK and SELDM), R-341, G-469, A-342, G-215, R-330, R-451, R-336, R-338, G-583 and G-349.

c. Separation Standards

1. The primary form of lateral separation within the NOPAC Route System is 25NM lateral either side of the centerline, based on Required Navigation Performance 10 (RNP-10) and 1000' vertical separation (FL290 - FL410) based on Reduced Vertical Separation Minimums (RVSM).

2. Lateral separation for Non-RNP10 aircraft and aircraft operating below FL180 is 50NM lateral either side of the centerline.

3. Standard longitudinal separation within the Anchorage Oceanic FIR is 15 minutes "in trail".

d. Flight Plans

1. Aircraft shall enter "R" in item 10 of the ICAO flight plan if the aircraft and operator have been approved for RNP 10 operations for the route of flight.

2. Aircraft shall enter "W" in item 10 of the ICAO flight plan if the aircraft and operator have been approved for RVSM.

3. Aircraft not approved for RNP 10 and/or RVSM shall not enter "R" and/or "W" in item 10.

4. Aircraft approved for both RNP 10 and RVSM may flight plan any of the NOPAC routes with the following altitude restrictions:

(a) R-220: Even Altitudes FL180 to FL400, also FL330, FL350, FL370, FL390, FL410

(b) R-580: Even Altitudes FL180 to FL400, also FL350, FL370

(c) A-590: Odd Altitudes FL190 to FL410, also FL300, FL320, FL340

(d) R-591: Eastbound, Odd Altitudes FL190 to FL410

(e) R-591: Westbound, Even Altitudes FL300 to FL400

(f) G-344: Eastbound, Odd Altitudes FL190 to FL410

(g) G-344: Westbound, Even Altitudes FL300 to FL400

(h) R-591 and G-344 are Eastbound routes unless designated as Westbound PACOTS. Traffic flows are either Eastbound or Westbound with the tracks being emptied of traffic before changing direction.

5. Non-RNP-10 aircraft shall flight plan as follows:

(a) Westbound: R-220 at all times.

(b) Eastbound: A-590 at all times.

(c) Eastbound: G-344 when available for eastbound flights.

(d) The altitudes available on these routes are at or below FL280 and at or above FL430.

e. Procedures

1. Peak traffic periods:

(a) Eastbound - 0700UTC to 2100UTC

(b) Westbound - 1200UTC to 1900UTC and 2200UTC to 0800UTC

(c) Due to traffic volume, flights desiring to operate contrary to the predominant traffic flow can expect to be rerouted or assigned less than optimum flight levels. If feasible, users planning to operate in the NOPAC Route System at airspeeds below MACH 0.78 should use other than the peak hours for their flights. This will reduce congestion and expedite traffic.

f. Aircraft cannot always be accommodated on their flight planned NOPAC route. In an effort to reduce coordination time and errors between ATC and flight crews, JCAB (Fukuoka ATMC) and FAA (Anchorage ARTCC) have agreed on a common procedure to accommodate most reroutes. Aircraft rerouted from one NOPAC ATC route to another NOPAC ATC route will be given short range clearances into the adjoining FIR's RADAR coverage airspace. The receiving ATC facility will then issue further routing to the aircraft prior to the aircraft reaching the clearance limit.

1. Example 1: aircraft ABC101 is routed via R-220 to RJTT but can not be accommodated on R-220. The aircraft may be re-cleared as follows: "ABC101 cleared to OATIS via R-580, expect further clearance from ATMC after OMOTO."

2. Example 2: aircraft ABC102 is routed via A-590 to PAFA but can not be accommodated on A-590. The aircraft may be re-cleared as follows: "ABC102 cleared to SYA via R-591, expect further routing from Anchorage ARTCC after AKISU."

TRACK ADVISORY (TA) PROGRAM FOR FLIGHTS CROSSING ANCHORAGE ARTCC/RUSSIAN FIRs

a. The TA program is similar to that used by Oakland for PACOTS traffic. It is designed to assist ATC in sequencing same altitude aircraft proceeding westbound over the Russian FIR entry fixes. Flights participating in the TA program will receive preference over non-participants.

b. All Westbound flights crossing the Anchorage/Russian FIR boundary at or above FL 280 (8600 meters) shall participate in the TA program.

ATS ROUTE RESTRICTION NOTES

ATS Route Restriction Notes for information regarding flight planning purposes see Enroute Tab.

MACH NUMBER TECHNIQUE For information about routes and/or areas affected, see Air Traffic Control Tab.

TRANSPONDER SETTING (Secondary Surveillance Radar-SSR) For Beacon Code procedures see Enroute Tab.

SPECIAL PROCEDURES FOR IN-FLIGHT CONTINGENCIES IN OCEANIC AIRSPACE ICAO DOC 4444, SECTION 15.2

Introduction

1. Although all possible contingencies cannot be covered, these procedures provide for the more frequent cases such as:

a. Inability to comply with assigned clearance due to meteorological conditions.

b. En-route diversion across the prevailing traffic flow; and

c. Loss of, or significant reduction in, the required navigation capability when operating in an airspace where the navigation performance accuracy is a prerequisite to the safe conduct of flight operations, or pressurization failure.

2. General Procedures

1. If an aircraft is unable to continue the flight in accordance with its ATC clearance, a revised clearance shall be obtained, whenever possible, prior to initiating any action.

2. If prior clearance cannot be obtained, the following contingency procedures should be employed until a revised clearance is received. In general terms, the aircraft should be flown at an offset level and on an offset track where other aircraft are less likely to be encountered. Specifically, the pilot shall:

a. Leave the cleared track or ATS route by initially turning at least 30 degrees to the right or to the left, in order to establish and maintain a parallel, same direction track or ATS route offset 5 NM (9.3 km). The direction of the turn should be based on one or more of the following factors:

1) aircraft position relative to any organized track or ATS route system;

2) the direction of flights and flight levels allocated on adjacent tracks;

3) the direction to an alternate airport;

4) any strategic lateral offset being flown; and

5) terrain clearance.

b. Maintain a watch for conflicting traffic both visually and by reference to ACAS (if equipped), leaving ACAS in RA mode at all times, unless aircraft operating limitations dictate otherwise;

c. turn on all aircraft exterior lights (commensurate with appropriate operating limitations);

d. keep the SSR transponder on at all times and, when able, squawk 7700, as appropriate and, if equipped with ADS-B or ADS-C, select the appropriate emergency functionality;

e. as soon as practicable, advise air traffic control of any deviation from their assigned clearance;

f. use means as appropriate (ie. voice and/or CPDLC) to communicate during a contingency or emergency;

g. if voice communications are used, the radiotelephony distress signal (MAYDAY) or urgency signal (PAN PAN) preferably spoken three times, shall be used, as appropriate;

h. when emergency situations are communicated via CPDLC, the controller may respond via CPDLC. However, the controller may also attempt to make voice contact with the aircraft;

i. establish communications with and alert nearby aircraft by broadcasting on the frequencies in use and at suitable intervals on 121.5 MHz (or, as a backup, on the inter-pilot air-to-air frequency 123.45 MHz): aircraft identification, the nature of the distress condition, intention of the pilot, position (including the ATS route designator or the track code, as appropriate) and flight level; and

j. the controller should attempt to determine the nature of the emergency and ascertain any assistance that may be required. Subsequent ATC action with respect to that aircraft shall be based on the intentions or the pilot and overall traffic situation.

3. Actions to be taken once offset from track:

a) operation within a parallel track system;

b) the potential for user preferred routes (UPR's) parallel to the aircraft's track or ATS route;

c) the nature of the contingency (e.g. aircraft system malfunction; and

d) weather factors (e.g. convective weather at lower flight levels).

4. If possible, maintain the assigned flight level until established on the 9.3 km (5.0 NM) parallel, same direction track or ATS route offset. If unable, initially minimize the rate of descent to the extent that is operationally feasible.

5. Once established on a parallel, same direction track or ATS route offset by 9.3km (5.0 NM), either:

a) descend below FL 290, and establish a 150 m (500 ft) vertical offset from those flight levels normally used, and proceed as required by the operational situation or if an ATC clearance has been obtained, in accordance with the clearance; or

b) establish a 150 m (500 ft) vertical offset (or 300 m (1000 ft) vertical offset if above FL 410) from those flight levels normally used, and proceed as required by the operational situation, or if ATC clearance has been obtained, in accordance with the clearance.

WEATHER DEVIATION PROCEDURES FOR OCEANIC CONTROLLED AIRSPACE â€" PACIFIC

When weather deviation is required, the pilot should initiate communications with ATC via voice or CPDLC. A rapid response may be obtained by either:

1. stating "WEATHER DEVIATION REQUIRED" to indicate that priority is desired on the frequency and for ATC response; or
2. requesting a weather deviation using a CPDLC lateral downlink message.

When necessary, the pilot should initiate the communications using the urgency call "PAN PAN PAN" (preferably spoken three times) or by using a CPDLC urgency downlink message.
The pilot shall inform ATC when weather deviation is no longer required, or when a weather deviation has been completed and the aircraft has returned to its cleared route.

The pilot should notify ATC and request clearance to deviate from track or ATS route, advising, when possible, the extent of the deviation requested. The flight crew will use whatever means are appropriate (i.e. voice and/or CPDLC) to communicate during a weather deviation.
ATC should take one of the following actions:

1. when appropriate separation can be applied, issue clearance to deviate from track; or
2. if there is conflicting traffic and ATC is unable to establish appropriate separation, ATC shall:

1. advise the pilot of inability to issue clearance for the requested deviation;
2. advise the pilot of conflicting traffic; and
3. request the pilot's intentions.

The pilot should take the following actions:

1. comply with the ATC clearance issued; or
2. advise ATC of intentions and execute the procedures detailed in the Action to be Taken if a Revised ATC Clearance Cannot Be Obtained procedure section.

If the aircraft is required to deviate from track or ATC route to avoid adverse meteorological conditions and prior clearance cannot be obtained, an ATC clearance shall be obtained at the earliest possible time. Until an ATC clearance is received, the pilot shall take the following actions:

1. if possible, deviate away from an organized track or ATS route system;
2. establish communications with and alert nearby aircraft by broadcasting, at suitable intervals: aircraft identification, flight level, position (including ATS route designator or the track code) and intentions, on the frequency in use and on 121.5 MHz (or, as a backup, on the inter-pilot air-to-air frequency 123.45 MHz);
3. watch for conflicting traffic both visually and by reference to ACAS (if equipped);
4. turn on all aircraft exterior lights (commensurate with appropriate operating limitations);
5. for deviations of less than 9.3 km (5.0 NM) from the originally cleared track or ATS route, remain at a level assigned by ATC;
6. for deviations greater than, or equal to 9.3 km (5.0 NM) from the originally cleared track or ATS route, when the aircraft is approximately 9.3 km (5.0 NM) from track, initiate a level change in accordance with the Originally Cleared Track or ATS Route Center Line / Deviations / Level Change section.
7. if the pilot receives clearance to deviate from cleared track or ATS route for a specified distance and, subsequently, requests, but cannot obtain a clearance to deviate beyond that distance, the pilot should apply an altitude offset in accordance with the Originally Cleared Track or ATS Route Center Line / Deviations / Level Change section before deviating beyond the cleared distance;
8. when returning to track or ATS route, be at its assigned flight level when the aircraft is within approximately 9.3 km (5.0 NM) of the center line; and
9. if contact was not established prior to deviating, continue to attempt to contact ATC to obtain a clearance. If contact was established, continue to keep ATC advised of intentions and obtain essential traffic information.

EAST 000Â° -179Â° magnetic

1. DESCEND 300 ft (90 m)

2. CLIMB 300 ft (90 m)

WEST 180Â° - 359Â° magnetic
1. CLIMB 300 ft (90 m)

2. DESCEND 300 ft (90 m)

UHMM Type: FIR
CRUISING LEVEL PROCEDURES
CRUISING LEVELS: For Flight Level Transition Procedures refer to Enroute section.

TRACK ADVISORY (TA) PROGRAM FOR FLIGHTS CROSSING ANCHORAGE ARTCC/RUSSIAN FIRs
a. The TA program is similar to that used by Oakland for PACOTS traffic. It is designed to assist ATC in sequencing same altitude aircraft proceeding westbound over the Russian FIR entry fixes. Flights participating in the TA program will receive preference over non-participants.

b. All Westbound flights crossing the Anchorage/Russian FIR boundary at or above FL 280 (8600 meters) shall participate in the TA program.

POSITION REPORTING PROCEDURES
a. Unless otherwise requested by ATC , position reports for flights on routes not defined by designated reporting points should be made at the significant points listed in the flight plan.

b. ATC may require any flight operating in a North/South direction to report its position at any intermediate parallel of latitude when deemed necessary.

c. In requiring aircraft to report their position at intermediate points, ATC is guided by the requirement to have positional information at approximately hourly intervals and also by the need to accommodate varying types of aircraft and varying traffic and MET conditions.

d. Unless providing position reports via ADS-C, if the Estimated Time for the "next position", as last reported to ATC has changed by 2 minutes or more, a revised Estimate must be transmitted to the ATS unit concerned as soon as possible.

e. Flight Crews must always report to ATC as soon as possible on reaching any new cruising level.

f. For flights outside domestic ATS route networks, positions should be expressed in terms of latitude and longitude except when flying over named reporting points. For flights whose tracks are predominantly east or west, latitude should be expressed in degrees and minutes, longitude in degrees only. For flights whose tracks are predominantly north or south, latitude should be expressed in degrees only, longitude in degrees and minutes. However, it should be noted that when such minutes are zero then the position report may refer solely to degrees.

TRANSPONDER SETTING (Secondary Surveillance Radar-SSR) For Beacon Code procedures see Enroute Tab.

RVSM PROCEDURES
REDUCED VERTICAL SEPARATION MINIMUMS (FL290 - FL410) For RVSM procedures and equipment requirements see AIR TRAFFIC CONTROL pages series.

ATS ROUTE RESTRICTIONS: For information regarding flight planning purposes refer to Enroute section.

TRANSPONDER SETTING (Secondary Surveillance Radar-SSR): For Beacon Code procedures see ENROUTE section.

ULLL Type: FIR
ATS ROUTE RESTRICTIONS: For information regarding flight planning purposes refer to Enroute section.

ATS ROUTE RESTRICTIONS: For information regarding flight planning purposes refer to Enroute section.

TRANSPONDER SETTING (Secondary Surveillance Radar-SSR): For Beacon Code procedures see ENROUTE section.

CRUISING LEVEL PROCEDURES
CRUISING LEVELS: For Flight Level Transition Procedures refer to Enroute section.

RVSM PROCEDURES
REDUCED VERTICAL SEPARATION MINIMUMS (FL290 - FL410) For RVSM procedures and equipment requirements see AIR TRAFFIC CONTROL pages series.

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CZEG Type: FIR
USE OF DND AND CIVIL HIGH ARCTIC AERODROMES
USE OF DND and CIVIL HIGH ARCTIC AERODROMES: Civil operators must obtain permission from DND to use High Arctic Aerodromes in Canada. See Entry Requirements Tab.

CANADIAN DOMESTIC AIRSPACE (DOMESTIC CLEARANCE)
a. North Atlantic (NAT) West-bound Traffic.

1. Pilots proceeding westbound across the North Atlantic (NAT) and entering Canadian Domestic Airspace (CDA) within the Gander, Moncton and Montreal FIRs should comply with the following procedures:

(a) Flights cleared by ATC via the flight planned route prior to reaching CDA will not be issued en-route clearances upon entering domestic airspace, and are to follow the flight planned route as cleared.

(b) Domestic en-route clearances will be issued for flights that have been rerouted and exit oceanic airspace at other than the flight planned exit fix, at a pilot's request for another routing or if a flight plan has not been received by the ACC.

2. If entering Canadian Domestic Airspace within the Edmonton FIR, the onward domestic routing will have been established in coordination between the Reykjavik and Edmonton ACCs, and additional domestic clearance is not normally required. However, if there has been a change in route from the filed flight plan, clarification of the onward routing may be obtained from Edmonton ACC on request.

TRANSPONDER SETTING (Secondary Surveillance Radar-SSR) For Beacon Code procedures see Enroute Tab.

CZVR Type: FIR
MACH NUMBER TECHNIQUE For information about routes and/or areas affected, see Air Traffic Control Tab.

TRANSPONDER SETTING (Secondary Surveillance Radar-SSR) For Beacon Code procedures see Enroute Tab.

KZAK Type: FIR
FLIGHT PLANNING AND OVERFLIGHT ROUTES within the Pacific region: For complete Information see Enroute Tab.

ADIZ REQUIREMENTS
FOR ADIZ REQUIREMENTS See Enroute Tab.

EXTENDED RANGE OPERATIONS BY AIRCRAFT WITH TWO-TURBINE POWER-UNITS (ETOPS) 1. If the contingency procedures are employed by a twin-engine aircraft as a result of an engine shutdown or failure of an ETOPS critical system, the pilot should advise ATC as soon as practicable of the situation, reminding ATC of the type of aircraft involved, and request expeditious handling.

OCEANIC POSITION REPORTING PROCEDURES OAKLAND OCEANIC FIR
1. For non ADS equipped aircraft, any waypoint filed in the route of flight (ItemÂ 15 of the ICAO flight plan) must be reported as a position report whether the filed waypoint is compulsory or not. If a noncompulsory waypoint is not filed in item 15, it does not need to be reported.

2. POSITION REPORTS

a. When operating on a published ATS Route or a temporary route established by NOTAM, report and estimate the designated reporting points using the specified waypoint names or geographic coordinates as specified in the NOTAM.

b. When operating on a random route:

1. Flights whose tracks are predominantly east and west shall report over each 5Â degrees or 10Â degrees (10Â degrees will be used if the speed of the aircraft is such that 10Â degrees will be traversed within 80 minutes or less) meridian longitude extending east and west from 180Â degrees.

2. Flights whose tracks are predominantly north and south shall report over each 5Â degrees or 10Â degrees (10Â degrees if traversed within 80Â minutes) parallel of latitude extending north and south of the equator.

c. ATC may require specific flights to report more frequently than each 5Â degrees for aircraft with slow ground speeds.

d. Position reports shall be transmitted at the time of crossing the designated reporting point or as soon thereafter as possible.

3. Position reports shall include information on present position, estimated next position, and ensuing position in sequence as indicated below.

a. PRESENT POSITION - Information shall include:

1. The word â€œpositionâ€ .

2. Aircraft identification.

3. Reporting point name, or if not named:

(a) Latitude (2 digits or more) and,

(b) Longitude (3 digits or more).

b. Time over reporting point (4 digits UTC).

c. Altitude (Flight Level). When forwarding an altitude report within the Oakland OCA/FIR, pilots should report their present altitude and their assigned altitude exactly as cleared if the present and assigned altitudes differ. Aircraft assigned a block altitude must report their current altitude and the assigned block altitude. A restriction to cross a point at an altitude is not a block altitude assignment and should not be reported as a block of altitudes.

d. ESTIMATED NEXT POSITION

(1) Reporting point name, or if not named, latitude and longitude as in a.3 above and,

(2) Estimated time over next position (4 digits UTC).

e. ENSUING FIX

(1) Name only of the next succeeding fix whether compulsory or not, or if not named, latitude and longitude as in a.3 above.

4. WEATHER REPORTS:

a. Weather reports shall be included as provided in SectionÂ 3 of Standard AIREP Form by all flights unless exempted from weather reporting by the Weather Service and/or ATC.

5. ADHERENCE TO ATC APPROVED ROUTE

a. If an aircraft, notwithstanding all action taken to adhere to the route specified in the ATC clearance, inadvertently deviates from this route, action shall be taken to regain it as soon as reasonable and not further ahead than 200 nautical miles from the DR position at which the heading was altered to regain the route specified in the ATC clearance. Action to regain this route shall not be delayed in anticipation of obtaining a requested re-clearance.

6. EXCEPTIONS TO POSITION REPORTS PROCEDURES

a. Within Oakland OCA/FIR, no 5Â degree report need be made that would fall within 100Â NM of Guam. Aircraft cleared via terminal area routes report compulsory reporting fixes. Other aircraft report 100Â NM from Nimitz VORTAC. Where other island destinations within the Oakland Oceanic FIR are not more than one-degree latitude-longitude from a 5Â degrees fixed line reporting point, the ETA and arrival report may be substituted in lieu of the adjacent fixed line report.

b. To the east of the Hawaiian Islands it will not be necessary to report the 155Â degree west position if position will be reported at the entry/exit fixes on the Honolulu Control Facility boundary. To the west of the Hawaiian Islands, the 160Â degree west need not be reported.

NORTH PACIFIC (NOPAC) ROUTE PROCEDURES

a. The NOPAC Route System is comprised of five Air Traffic Service (ATS) routes which transit the North Pacific between Alaska and Japan. The two northern routes are used for westbound traffic. The three southern routes are used for eastbound traffic, except that R-591 or G-344 may be used for westbound aircraft crossing the Fukuoka/Anchorage FIR between 0000UTC and 0600UTC. The routes are as follows: R-220, R-580, A-590, R-591 and G-344.

b. Transition Routes

1. Within the Fukuoka FIR, Oceanic Transition Routes (OTRs) and, in one case, a Victor route, have been established for aircraft transitioning to or from the NOPAC Route System.

2. Within the Anchorage FIR, certain ATS routes are used for the same purpose. They are as follows: B-327 (For Westbound use only between BAMOK and SELDM), R-341, G-469, A-342, G-215, R-330, R-451, R-336, R-338, G-583 and G-349.

c. Separation Standards

1. The primary form of lateral separation within the NOPAC Route System is 25NM lateral either side of the centerline, based on Required Navigation Performance 10 (RNP-10) and 1000' vertical separation (FL290 - FL410) based on Reduced Vertical Separation Minimums (RVSM).

2. Lateral separation for Non-RNP10 aircraft and aircraft operating below FL180 is 50NM lateral either side of the centerline.

3. Standard longitudinal separation within the Anchorage Oceanic FIR is 15 minutes "in trail".

d. Flight Plans

1. Aircraft shall enter "R" in item 10 of the ICAO flight plan if the aircraft and operator have been approved for RNP 10 operations for the route of flight.

2. Aircraft shall enter "W" in item 10 of the ICAO flight plan if the aircraft and operator have been approved for RVSM.

3. Aircraft not approved for RNP 10 and/or RVSM shall not enter "R" and/or "W" in item 10.

4. Aircraft approved for both RNP 10 and RVSM may flight plan any of the NOPAC routes with the following altitude restrictions:

(a) R-220: Even Altitudes FL180 to FL400, also FL330, FL350, FL370, FL390, FL410

(b) R-580: Even Altitudes FL180 to FL400, also FL350, FL370

(c) A-590: Odd Altitudes FL190 to FL410, also FL300, FL320, FL340

(d) R-591: Eastbound, Odd Altitudes FL190 to FL410

(e) R-591: Westbound, Even Altitudes FL300 to FL400

(f) G-344: Eastbound, Odd Altitudes FL190 to FL410

(g) G-344: Westbound, Even Altitudes FL300 to FL400

(h) R-591 and G-344 are Eastbound routes unless designated as Westbound PACOTS. Traffic flows are either Eastbound or Westbound with the tracks being emptied of traffic before changing direction.

5. Non-RNP-10 aircraft shall flight plan as follows:

(a) Westbound: R-220 at all times.

(b) Eastbound: A-590 at all times.

(c) Eastbound: G-344 when available for eastbound flights.

(d) The altitudes available on these routes are at or below FL280 and at or above FL430.

e. Procedures

1. Peak traffic periods:

(a) Eastbound - 0700UTC to 2100UTC

(b) Westbound - 1200UTC to 1900UTC and 2200UTC to 0800UTC

(c) Due to traffic volume, flights desiring to operate contrary to the predominant traffic flow can expect to be rerouted or assigned less than optimum flight levels. If feasible, users planning to operate in the NOPAC Route System at airspeeds below MACH 0.78 should use other than the peak hours for their flights. This will reduce congestion and expedite traffic.

f. Aircraft cannot always be accommodated on their flight planned NOPAC route. In an effort to reduce coordination time and errors between ATC and flight crews, JCAB (Fukuoka ATMC) and FAA (Anchorage ARTCC) have agreed on a common procedure to accommodate most reroutes. Aircraft rerouted from one NOPAC ATC route to another NOPAC ATC route will be given short range clearances into the adjoining FIR's RADAR coverage airspace. The receiving ATC facility will then issue further routing to the aircraft prior to the aircraft reaching the clearance limit.

1. Example 1: aircraft ABC101 is routed via R-220 to RJTT but can not be accommodated on R-220. The aircraft may be re-cleared as follows: "ABC101 cleared to OATIS via R-580, expect further clearance from ATMC after OMOTO."

2. Example 2: aircraft ABC102 is routed via A-590 to PAFA but can not be accommodated on A-590. The aircraft may be re-cleared as follows: "ABC102 cleared to SYA via R-591, expect further routing from Anchorage ARTCC after AKISU."

CENTRAL EAST PACIFIC ROUTE SYSTEM (HAWAII â€“ U.S. MAINLAND)

a. The Central East Pacific (CEP) is the organized route system between Hawaii and California. Seven ATS routes, R-463, R-464, R-465, R-585, R-576, R-577 and R-578 are the primary routes within the CEP.

b. Reduced Vertical Separation Minimum (RVSM) and Required Navigation Performance 10 (RNP-10) are required for aircraft operating within the CEP Route System at FL290 through FL410. Non-approved aircraft can expect FL280 and below or FL430 and above, traffic permitting.

c. Operators show approval for RVSM and RNP-10 by annotating block 10 of the ICAO flight plan (equipment) with the letter W and R respectively.

d. Flight Levels normally assigned in the CEP are in accordance with ICAO Appendix 3a (East odd, West even).

ATS ROUTE RESTRICTION NOTES
ATS Route Restriction Notes for information regarding flight planning purposes see Enroute Tab.

RNP-10 SEPARATION
RNP-10 lateral separation (50 NM) may be applied wthin the Oakland Oceanic FIR between RNP-10 approved aircraft. RNP-10 approval is required for all PACOTS and for all aircraft operating within the CEP at FL290 through FL410. Non-RNP approved aircraft can expect FL280 and below or FL430 and above, traffic permitting.

MACH NUMBER TECHNIQUE For information about routes and/or areas affected, see Air Traffic Control Tab.

RVSM PROCEDURES
REDUCED VERTICAL SEPARATION MINIMUMS (RVSM) For procedures and equipment requirements see Air Traffic Control Tab.

REQUIRED NAVIGATION PERFORMANCE (RNP)
For procedures and equipment requirements, see Air Traffic Control pages and/or Air Traffic Control State pages for detailed information.

SPECIAL PROCEDURES FOR IN-FLIGHT CONTINGENCIES IN OCEANIC AIRSPACE ICAO DOC 4444, SECTION 15.2
Introduction

1. Although all possible contingencies cannot be covered, these procedures provide for the more frequent cases such as:

a. Inability to comply with assigned clearance due to meteorological conditions.

b. En-route diversion across the prevailing traffic flow; and

c. Loss of, or significant reduction in, the required navigation capability when operating in an airspace where the navigation performance accuracy is a prerequisite to the safe conduct of flight operations, or pressurization failure.

2. General Procedures

1. If an aircraft is unable to continue the flight in accordance with its ATC clearance, a revised clearance shall be obtained, whenever possible, prior to initiating any action.

2. If prior clearance cannot be obtained, the following contingency procedures should be employed until a revised clearance is received. In general terms, the aircraft should be flown at an offset level and on an offset track where other aircraft are less likely to be encountered. Specifically, the pilot shall:

a. Leave the cleared track or ATS route by initially turning at least 30 degrees to the right or to the left, in order to establish and maintain a parallel, same direction track or ATS route offset 5 NM (9.3 km). The direction of the turn should be based on one or more of the following factors:

1) aircraft position relative to any organized track or ATS route system;

2) the direction of flights and flight levels allocated on adjacent tracks;

3) the direction to an alternate airport;

4) any strategic lateral offset being flown; and

5) terrain clearance.

b. Maintain a watch for conflicting traffic both visually and by reference to ACAS (if equipped), leaving ACAS in RA mode at all times, unless aircraft operating limitations dictate otherwise;

c. turn on all aircraft exterior lights (commensurate with appropriate operating limitations);

d. keep the SSR transponder on at all times and, when able, squawk 7700, as appropriate and, if equipped with ADS-B or ADS-C, select the appropriate emergency functionality;

e. as soon as practicable, advise air traffic control of any deviation from their assigned clearance;

f. use means as appropriate (ie. voice and/or CPDLC) to communicate during a contingency or emergency;

g. if voice communications are used, the radiotelephony distress signal (MAYDAY) or urgency signal (PAN PAN) preferably spoken three times, shall be used, as appropriate;

h. when emergency situations are communicated via CPDLC, the controller may respond via CPDLC. However, the controller may also attempt to make voice contact with the aircraft;

i. establish communications with and alert nearby aircraft by broadcasting on the frequencies in use and at suitable intervals on 121.5 MHz (or, as a backup, on the inter-pilot air-to-air frequency 123.45 MHz): aircraft identification, the nature of the distress condition, intention of the pilot, position (including the ATS route designator or the track code, as appropriate) and flight level; and

j. the controller should attempt to determine the nature of the emergency and ascertain any assistance that may be required. Subsequent ATC action with respect to that aircraft shall be based on the intentions or the pilot and overall traffic situation.

3. Actions to be taken once offset from track:

a) operation within a parallel track system;

b) the potential for user preferred routes (UPR's) parallel to the aircraft's track or ATS route;

c) the nature of the contingency (e.g. aircraft system malfunction; and

d) weather factors (e.g. convective weather at lower flight levels).

4. If possible, maintain the assigned flight level until established on the 9.3 km (5.0 NM) parallel, same direction track or ATS route offset. If unable, initially minimize the rate of descent to the extent that is operationally feasible.

5. Once established on a parallel, same direction track or ATS route offset by 9.3km (5.0 NM), either:

a) descend below FL 290, and establish a 150 m (500 ft) vertical offset from those flight levels normally used, and proceed as required by the operational situation or if an ATC clearance has been obtained, in accordance with the clearance; or

b) establish a 150 m (500 ft) vertical offset (or 300 m (1000 ft) vertical offset if above FL 410) from those flight levels normally used, and proceed as required by the operational situation, or if ATC clearance has been obtained, in accordance with the clearance.

WEATHER DEVIATION PROCEDURES FOR OCEANIC CONTROLLED AIRSPACE â€" PACIFIC

When weather deviation is required, the pilot should initiate communications with ATC via voice or CPDLC. A rapid response may be obtained by either:

1. stating "WEATHER DEVIATION REQUIRED" to indicate that priority is desired on the frequency and for ATC response; or

2. requesting a weather deviation using a CPDLC lateral downlink message.

When necessary, the pilot should initiate the communications using the urgency call "PAN PAN PAN" (preferably spoken three times) or by using a CPDLC urgency downlink message.
The pilot shall inform ATC when weather deviation is no longer required, or when a weather deviation has been completed and the aircraft has returned to its cleared route.

The pilot should notify ATC and request clearance to deviate from track or ATS route, advising, when possible, the extent of the deviation requested. The flight crew will use whatever means are appropriate (i.e. voice and/or CPDLC) to communicate during a weather deviation.
ATC should take one of the following actions:

1. when appropriate separation can be applied, issue clearance to deviate from track; or

2. if there is conflicting traffic and ATC is unable to establish appropriate separation, ATC shall:

1. advise the pilot of inability to issue clearance for the requested deviation;

2. advise the pilot of conflicting traffic; and

3. request the pilot's intentions.

The pilot should take the following actions:

1. comply with the ATC clearance issued; or

2. advise ATC of intentions and execute the procedures detailed in the Action to be Taken if a Revised ATC Clearance Cannot Be Obtained procedure section.

If the aircraft is required to deviate from track or ATC route to avoid adverse meteorological conditions and prior clearance cannot be obtained, an ATC clearance shall be obtained at the earliest possible time. Until an ATC clearance is received, the pilot shall take the following actions:

1. if possible, deviate away from an organized track or ATS route system;

2. establish communications with and alert nearby aircraft by broadcasting, at suitable intervals: aircraft identification, flight level, position (including ATS route designator or the track code) and intentions, on the frequency in use and on 121.5 MHz (or, as a backup, on the inter-pilot air-to-air frequency 123.45 MHz);

3. watch for conflicting traffic both visually and by reference to ACAS (if equipped);

4. turn on all aircraft exterior lights (commensurate with appropriate operating limitations);

5. for deviations of less than 9.3 km (5.0 NM) from the originally cleared track or ATS route, remain at a level assigned by ATC;

6. for deviations greater than, or equal to 9.3 km (5.0 NM) from the originally cleared track or ATS route, when the aircraft is approximately 9.3 km (5.0 NM) from track, initiate a level change in accordance with the Originally Cleared Track or ATS Route Center Line / Deviations / Level Change section.

7. if the pilot receives clearance to deviate from cleared track or ATS route for a specified distance and, subsequently, requests, but cannot obtain a clearance to deviate beyond that distance, the pilot should apply an altitude offset in accordance with the Originally Cleared Track or ATS Route Center Line / Deviations / Level Change section before deviating beyond the cleared distance;

8. when returning to track or ATS route, be at its assigned flight level when the aircraft is within approximately 9.3 km (5.0 NM) of the center line; and

9. if contact was not established prior to deviating, continue to attempt to contact ATC to obtain a clearance. If contact was established, continue to keep ATC advised of intentions and obtain essential traffic information.

EAST 000Â° -179Â° magnetic
1. DESCEND 300 ft (90 m)

2. CLIMB 300 ft (90 m)

WEST 180Â° - 359Â° magnetic
1. CLIMB 300 ft (90 m)

2. DESCEND 300 ft (90 m)

PAZA Type: FIR
EXTENDED RANGE OPERATIONS BY AIRCRAFT WITH TWO-TURBINE POWER-UNITS (ETOPS) 1. If the contingency procedures are employed by a twin-engine aircraft as a result of an engine shutdown or failure of an ETOPS critical system, the pilot should advise ATC as soon as practicable of the situation, reminding ATC of the type of aircraft involved, and request expeditious handling.

OCEANIC POSITION REPORTING PROCEDURES OAKLAND OCEANIC FIR
1. For non ADS equipped aircraft, any waypoint filed in the route of flight (ItemÂ 15 of the ICAO flight plan) must be reported as a position report whether the filed waypoint is compulsory or not. If a noncompulsory waypoint is not filed in item 15, it does not need to be reported.

2. POSITION REPORTS

a. When operating on a published ATS Route or a temporary route established by NOTAM, report and estimate the designated reporting points using the specified waypoint names or geographic coordinates as specified in the NOTAM.

b. When operating on a random route:

1. Flights whose tracks are predominantly east and west shall report over each 5Â degrees or 10Â degrees (10Â degrees will be used if the speed of the aircraft is such that 10Â degrees will be traversed within 80 minutes or less) meridian longitude extending east and west from 180Â degrees.

2. Flights whose tracks are predominantly north and south shall report over each 5Â degrees or 10Â degrees (10Â degrees if traversed within 80Â minutes) parallel of latitude extending north and south of the equator.

c. ATC may require specific flights to report more frequently than each 5Â degrees for aircraft with slow ground speeds.

d. Position reports shall be transmitted at the time of crossing the designated reporting point or as soon thereafter as possible.

3. Position reports shall include information on present position, estimated next position, and ensuing position in sequence as indicated below.

a. PRESENT POSITION - Information shall include:

1. The word â€œpositionâ€ .

2. Aircraft identification.

3. Reporting point name, or if not named:

(a) Latitude (2 digits or more) and,

(b) Longitude (3 digits or more).

b. Time over reporting point (4 digits UTC).

c. Altitude (Flight Level). When forwarding an altitude report within the Oakland OCA/FIR, pilots should report their present altitude and their assigned altitude exactly as cleared if the present and assigned altitudes differ. Aircraft assigned a block altitude must report their current altitude and the assigned block altitude. A restriction to cross a point at an altitude is not a block altitude assignment and should not be reported as a block of altitudes.

d. ESTIMATED NEXT POSITION

(1) Reporting point name, or if not named, latitude and longitude as in a.3 above and,

(2) Estimated time over next position (4 digits UTC).

e. ENSUING FIX

(1) Name only of the next succeeding fix whether compulsory or not, or if not named, latitude and longitude as in a.3 above.

4. WEATHER REPORTS:

a. Weather reports shall be included as provided in SectionÂ 3 of Standard AIREP Form by all flights unless exempted from weather reporting by the Weather Service and/or ATC.

5. ADHERENCE TO ATC APPROVED ROUTE

a. If an aircraft, notwithstanding all action taken to adhere to the route specified in the ATC clearance, inadvertently deviates from this route, action shall be taken to regain it as soon as reasonable and not further ahead than 200 nautical miles from the DR position at which the heading was altered to regain the route specified in the ATC clearance. Action to regain this route shall not be delayed in anticipation of obtaining a requested re-clearance.

6. EXCEPTIONS TO POSITION REPORTS PROCEDURES

a. Within Oakland OCA/FIR, no 5Â degree report need be made that would fall within 100Â NM of Guam. Aircraft cleared via terminal area routes report compulsory reporting fixes. Other aircraft report 100Â NM from Nimitz VORTAC. Where other island destinations within the Oakland Oceanic FIR are not more than one-degree latitude-longitude from a 5Â degrees fixed line reporting point, the ETA and arrival report may be substituted in lieu of the adjacent fixed line report.

b. To the east of the Hawaiian Islands it will not be necessary to report the 155Â degree west position if position will be reported at the entry/exit fixes on the Honolulu Control Facility boundary. To the west of the Hawaiian Islands, the 160Â degree west need not be reported.

NORTH PACIFIC (NOPAC) ROUTE PROCEDURES

a. The NOPAC Route System is comprised of five Air Traffic Service (ATS) routes which transit the North Pacific between Alaska and Japan. The two northern routes are used for westbound traffic. The three southern routes are used for eastbound traffic, except that R-591 or G-344 may be used for westbound aircraft crossing the Fukuoka/Anchorage FIR between 0000UTC and 0600UTC. The routes are as follows: R-220, R-580, A-590, R-591 and G-344.

b. Transition Routes

1. Within the Fukuoka FIR, Oceanic Transition Routes (OTRs) and, in one case, a Victor route, have been established for aircraft transitioning to or from the NOPAC Route System.

2. Within the Anchorage FIR, certain ATS routes are used for the same purpose. They are as follows: B-327 (For Westbound use only between BAMOK and SELDM), R-341, G-469, A-342, G-215, R-330, R-451, R-336, R-338, G-583 and G-349.

c. Separation Standards

1. The primary form of lateral separation within the NOPAC Route System is 25NM lateral either side of the centerline, based on Required Navigation Performance 10 (RNP-10) and 1000' vertical separation (FL290 - FL410) based on Reduced Vertical Separation Minimums (RVSM).

2. Lateral separation for Non-RNP10 aircraft and aircraft operating below FL180 is 50NM lateral either side of the centerline.

3. Standard longitudinal separation within the Anchorage Oceanic FIR is 15 minutes "in trail".

d. Flight Plans

1. Aircraft shall enter "R" in item 10 of the ICAO flight plan if the aircraft and operator have been approved for RNP 10 operations for the route of flight.

2. Aircraft shall enter "W" in item 10 of the ICAO flight plan if the aircraft and operator have been approved for RVSM.

3. Aircraft not approved for RNP 10 and/or RVSM shall not enter "R" and/or "W" in item 10.

4. Aircraft approved for both RNP 10 and RVSM may flight plan any of the NOPAC routes with the following altitude restrictions:

(a) R-220: Even Altitudes FL180 to FL400, also FL330, FL350, FL370, FL390, FL410

(b) R-580: Even Altitudes FL180 to FL400, also FL350, FL370

(c) A-590: Odd Altitudes FL190 to FL410, also FL300, FL320, FL340

(d) R-591: Eastbound, Odd Altitudes FL190 to FL410

(e) R-591: Westbound, Even Altitudes FL300 to FL400

(f) G-344: Eastbound, Odd Altitudes FL190 to FL410

(g) G-344: Westbound, Even Altitudes FL300 to FL400

(h) R-591 and G-344 are Eastbound routes unless designated as Westbound PACOTS. Traffic flows are either Eastbound or Westbound with the tracks being emptied of traffic before changing direction.

5. Non-RNP-10 aircraft shall flight plan as follows:

(a) Westbound: R-220 at all times.

(b) Eastbound: A-590 at all times.

(c) Eastbound: G-344 when available for eastbound flights.

(d) The altitudes available on these routes are at or below FL280 and at or above FL430.

e. Procedures

1. Peak traffic periods:

(a) Eastbound - 0700UTC to 2100UTC

(b) Westbound - 1200UTC to 1900UTC and 2200UTC to 0800UTC

(c) Due to traffic volume, flights desiring to operate contrary to the predominant traffic flow can expect to be rerouted or assigned less than optimum flight levels. If feasible, users planning to operate in the NOPAC Route System at airspeeds below MACH 0.78 should use other than the peak hours for their flights. This will reduce congestion and expedite traffic.

f. Aircraft cannot always be accommodated on their flight planned NOPAC route. In an effort to reduce coordination time and errors between ATC and flight crews, JCAB (Fukuoka ATMC) and FAA (Anchorage ARTCC) have agreed on a common procedure to accommodate most reroutes. Aircraft rerouted from one NOPAC ATC route to another NOPAC ATC route will be given short range clearances into the adjoining FIR's RADAR coverage airspace. The receiving ATC facility will then issue further routing to the aircraft prior to the aircraft reaching the clearance limit.

1. Example 1: aircraft ABC101 is routed via R-220 to RJTT but can not be accommodated on R-220. The aircraft may be re-cleared as follows: "ABC101 cleared to OATIS via R-580, expect further clearance from ATMC after OMOTO."

2. Example 2: aircraft ABC102 is routed via A-590 to PAFA but can not be accommodated on A-590. The aircraft may be re-cleared as follows: "ABC102 cleared to SYA via R-591, expect further routing from Anchorage ARTCC after AKISU."

TRACK ADVISORY (TA) PROGRAM FOR FLIGHTS CROSSING ANCHORAGE ARTCC/RUSSIAN FIRs

a. The TA program is similar to that used by Oakland for PACOTS traffic. It is designed to assist ATC in sequencing same altitude aircraft proceeding westbound over the Russian FIR entry fixes. Flights participating in the TA program will receive preference over non-participants.

b. All Westbound flights crossing the Anchorage/Russian FIR boundary at or above FL 280 (8600 meters) shall participate in the TA program.

ATS ROUTE RESTRICTION NOTES

ATS Route Restriction Notes for information regarding flight planning purposes see Enroute Tab.

MACH NUMBER TECHNIQUE For information about routes and/or areas affected, see Air Traffic Control Tab.

TRANSPONDER SETTING (Secondary Surveillance Radar-SSR) For Beacon Code procedures see Enroute Tab.

SPECIAL PROCEDURES FOR IN-FLIGHT CONTINGENCIES IN OCEANIC AIRSPACE ICAO DOC 4444, SECTION 15.2

Introduction

1. Although all possible contingencies cannot be covered, these procedures provide for the more frequent cases such as:

a. Inability to comply with assigned clearance due to meteorological conditions.

b. En-route diversion across the prevailing traffic flow; and

c. Loss of, or significant reduction in, the required navigation capability when operating in an airspace where the navigation performance accuracy is a prerequisite to the safe conduct of flight operations, or pressurization failure.

2. General Procedures

1. If an aircraft is unable to continue the flight in accordance with its ATC clearance, a revised clearance shall be obtained, whenever possible, prior to initiating any action.

2. If prior clearance cannot be obtained, the following contingency procedures should be employed until a revised clearance is received. In general terms, the aircraft should be flown at an offset level and on an offset track where other aircraft are less likely to be encountered. Specifically, the pilot shall:

a. Leave the cleared track or ATS route by initially turning at least 30 degrees to the right or to the left, in order to establish and maintain a parallel, same direction track or ATS route offset 5 NM (9.3 km). The direction of the turn should be based on one or more of the following factors:

1) aircraft position relative to any organized track or ATS route system;

2) the direction of flights and flight levels allocated on adjacent tracks;

3) the direction to an alternate airport;

4) any strategic lateral offset being flown; and

5) terrain clearance.

b. Maintain a watch for conflicting traffic both visually and by reference to ACAS (if equipped), leaving ACAS in RA mode at all times, unless aircraft operating limitations dictate otherwise;

c. turn on all aircraft exterior lights (commensurate with appropriate operating limitations);

d. keep the SSR transponder on at all times and, when able, squawk 7700, as appropriate and, if equipped with ADS-B or ADS-C, select the appropriate emergency functionality;

e. as soon as practicable, advise air traffic control of any deviation from their assigned clearance;

f. use means as appropriate (ie. voice and/or CPDLC) to communicate during a contingency or emergency;

g. if voice communications are used, the radiotelephony distress signal (MAYDAY) or urgency signal (PAN PAN) preferably spoken three times, shall be used, as appropriate;

h. when emergency situations are communicated via CPDLC, the controller may respond via CPDLC. However, the controller may also attempt to make voice contact with the aircraft;

i. establish communications with and alert nearby aircraft by broadcasting on the frequencies in use and at suitable intervals on 121.5 MHz (or, as a backup, on the inter-pilot air-to-air frequency 123.45 MHz): aircraft identification, the nature of the distress condition, intention of the pilot, position (including the ATS route designator or the track code, as appropriate) and flight level; and

j. the controller should attempt to determine the nature of the emergency and ascertain any assistance that may be required. Subsequent ATC action with respect to that aircraft shall be based on the intentions or the pilot and overall traffic situation.

3. Actions to be taken once offset from track:

a) operation within a parallel track system;

b) the potential for user preferred routes (UPR's) parallel to the aircraft's track or ATS route;

c) the nature of the contingency (e.g. aircraft system malfunction; and

d) weather factors (e.g. convective weather at lower flight levels).

4. If possible, maintain the assigned flight level until established on the 9.3 km (5.0 NM) parallel, same direction track or ATS route offset. If unable, initially minimize the rate of descent to the extent that is operationally feasible.

5. Once established on a parallel, same direction track or ATS route offset by 9.3km (5.0 NM), either:

a) descend below FL 290, and establish a 150 m (500 ft) vertical offset from those flight levels normally used, and proceed as required by the operational situation or if an ATC clearance has been obtained, in accordance with the clearance; or

b) establish a 150 m (500 ft) vertical offset (or 300 m (1000 ft) vertical offset if above FL 410) from those flight levels normally used, and proceed as required by the operational situation, or if ATC clearance has been obtained, in accordance with the clearance.

WEATHER DEVIATION PROCEDURES FOR OCEANIC CONTROLLED AIRSPACE â€" PACIFIC

When weather deviation is required, the pilot should initiate communications with ATC via voice or CPDLC. A rapid response may be obtained by either:

1. stating "WEATHER DEVIATION REQUIRED" to indicate that priority is desired on the frequency and for ATC response; or
2. requesting a weather deviation using a CPDLC lateral downlink message.

When necessary, the pilot should initiate the communications using the urgency call "PAN PAN PAN" (preferably spoken three times) or by using a CPDLC urgency downlink message.
The pilot shall inform ATC when weather deviation is no longer required, or when a weather deviation has been completed and the aircraft has returned to its cleared route.

The pilot should notify ATC and request clearance to deviate from track or ATS route, advising, when possible, the extent of the deviation requested. The flight crew will use whatever means are appropriate (i.e. voice and/or CPDLC) to communicate during a weather deviation.
ATC should take one of the following actions:

1. when appropriate separation can be applied, issue clearance to deviate from track; or
2. if there is conflicting traffic and ATC is unable to establish appropriate separation, ATC shall:
   1. advise the pilot of inability to issue clearance for the requested deviation;
   2. advise the pilot of conflicting traffic; and
   3. request the pilot's intentions.

The pilot should take the following actions:

1. comply with the ATC clearance issued; or
2. advise ATC of intentions and execute the procedures detailed in the Action to be Taken if a Revised ATC Clearance Cannot Be Obtained procedure section.

If the aircraft is required to deviate from track or ATC route to avoid adverse meteorological conditions and prior clearance cannot be obtained, an ATC clearance shall be obtained at the earliest possible time. Until an ATC clearance is received, the pilot shall take the following actions:

1. if possible, deviate away from an organized track or ATS route system;
2. establish communications with and alert nearby aircraft by broadcasting, at suitable intervals: aircraft identification, flight level, position (including ATS route designator or the track code) and intentions, on the frequency in use and on 121.5 MHz (or, as a backup, on the inter-pilot air-to-air frequency 123.45 MHz);
3. watch for conflicting traffic both visually and by reference to ACAS (if equipped);
4. turn on all aircraft exterior lights (commensurate with appropriate operating limitations);
5. for deviations of less than 9.3 km (5.0 NM) from the originally cleared track or ATS route, remain at a level assigned by ATC;
6. for deviations greater than, or equal to 9.3 km (5.0 NM) from the originally cleared track or ATS route, when the aircraft is approximately 9.3 km (5.0 NM) from track, initiate a level change in accordance with the Originally Cleared Track or ATS Route Center Line / Deviations / Level Change section.
7. if the pilot receives clearance to deviate from cleared track or ATS route for a specified distance and, subsequently, requests, but cannot obtain a clearance to deviate beyond that distance, the pilot should apply an altitude offset in accordance with the Originally Cleared Track or ATS Route Center Line / Deviations / Level Change section before deviating beyond the cleared distance;
8. when returning to track or ATS route, be at its assigned flight level when the aircraft is within approximately 9.3 km (5.0 NM) of the center line; and
9. if contact was not established prior to deviating, continue to attempt to contact ATC to obtain a clearance. If contact was established, continue to keep ATC advised of intentions and obtain essential traffic information.

EAST 000Â° -179Â° magnetic

1. DESCEND 300 ft (90 m)
2. CLIMB 300 ft (90 m)

WEST 180Â° - 359Â° magnetic
1. CLIMB 300 ft (90 m)

2. DESCEND 300 ft (90 m)

Page 8 Strip Charts

CZEG Type: FIR
USE OF DND AND CIVIL HIGH ARCTIC AERODROMES
USE OF DND and CIVIL HIGH ARCTIC AERODROMES: Civil operators must obtain permission from DND to use High Arctic Aerodromes in Canada. See Entry Requirements Tab.

CANADIAN DOMESTIC AIRSPACE (DOMESTIC CLEARANCE)
a. North Atlantic (NAT) West-bound Traffic.

1. Pilots proceeding westbound across the North Atlantic (NAT) and entering Canadian Domestic Airspace (CDA) within the Gander, Moncton and Montreal FIRs should comply with the following procedures:

(a) Flights cleared by ATC via the flight planned route prior to reaching CDA will not be issued en-route clearances upon entering domestic airspace, and are to follow the flight planned route as cleared.

(b) Domestic en-route clearances will be issued for flights that have been rerouted and exit oceanic airspace at other than the flight planned exit fix, at a pilot's request for another routing or if a flight plan has not been received by the ACC.

2. If entering Canadian Domestic Airspace within the Edmonton FIR, the onward domestic routing will have been established in coordination between the Reykjavik and Edmonton ACCs, and additional domestic clearance is not normally required. However, if there has been a change in route from the filed flight plan, clarification of the onward routing may be obtained from Edmonton ACC on request.

TRANSPONDER SETTING (Secondary Surveillance Radar-SSR) For Beacon Code procedures see Enroute Tab.

CZVR Type: FIR
MACH NUMBER TECHNIQUE For information about routes and/or areas affected, see Air Traffic Control Tab.

TRANSPONDER SETTING (Secondary Surveillance Radar-SSR) For Beacon Code procedures see Enroute Tab.

KZAK Type: FIR
FLIGHT PLANNING AND OVERFLIGHT ROUTES within the Pacific region: For complete Information see Enroute Tab.

ADIZ REQUIREMENTS
FOR ADIZ REQUIREMENTS See Enroute Tab.

EXTENDED RANGE OPERATIONS BY AIRCRAFT WITH TWO-TURBINE POWER-UNITS (ETOPS) 1. If the contingency procedures are employed by a twin-engine aircraft as a result of an engine shutdown or failure of an ETOPS critical system, the pilot should advise ATC as soon as practicable of the situation, reminding ATC of the type of aircraft involved, and request expeditious handling.

OCEANIC POSITION REPORTING PROCEDURES OAKLAND OCEANIC FIR
1. For non ADS equipped aircraft, any waypoint filed in the route of flight (ItemÂ 15 of the ICAO flight plan) must be reported as a position report whether the filed waypoint is compulsory or not. If a noncompulsory waypoint is not filed in item 15, it does not need to be reported.

2. POSITION REPORTS

a. When operating on a published ATS Route or a temporary route established by NOTAM, report and estimate the designated reporting points using the specified waypoint names or geographic coordinates as specified in the NOTAM.

b. When operating on a random route:

1. Flights whose tracks are predominantly east and west shall report over each 5Â degrees or 10Â degrees (10Â degrees will be used if the speed of the aircraft is such that 10Â degrees will be traversed within 80 minutes or less) meridian longitude extending east and west from 180Â degrees.

2. Flights whose tracks are predominantly north and south shall report over each 5Â degrees or 10Â degrees (10Â degrees if traversed within

80Â minutes) parallel of latitude extending north and south of the equator.

c. ATC may require specific flights to report more frequently than each 5Â degrees for aircraft with slow ground speeds.

d. Position reports shall be transmitted at the time of crossing the designated reporting point or as soon thereafter as possible.

3. Position reports shall include information on present position, estimated next position, and ensuing position in sequence as indicated below.

a. PRESENT POSITION - Information shall include:

1. The word â€œpositionâ€ .

2. Aircraft identification.

3. Reporting point name, or if not named:

(a) Latitude (2 digits or more) and,

(b) Longitude (3 digits or more).

b. Time over reporting point (4 digits UTC).

c. Altitude (Flight Level). When forwarding an altitude report within the Oakland OCA/FIR, pilots should report their present altitude and their assigned altitude exactly as cleared if the present and assigned altitudes differ. Aircraft assigned a block altitude must report their current altitude and the assigned block altitude. A restriction to cross a point at an altitude is not a block altitude assignment and should not be reported as a block of altitudes.

d. ESTIMATED NEXT POSITION

(1) Reporting point name, or if not named, latitude and longitude as in a.3 above and,

(2) Estimated time over next position (4 digits UTC).

e. ENSUING FIX

(1) Name only of the next succeeding fix whether compulsory or not, or if not named, latitude and longitude as in a.3 above.

4. WEATHER REPORTS:

a. Weather reports shall be included as provided in SectionÂ 3 of Standard AIREP Form by all flights unless exempted from weather reporting by the Weather Service and/or ATC.

5. ADHERENCE TO ATC APPROVED ROUTE

a. If an aircraft, notwithstanding all action taken to adhere to the route specified in the ATC clearance, inadvertently deviates from this route, action shall be taken to regain it as soon as reasonable and not further ahead than 200 nautical miles from the DR position at which the heading was altered to regain the route specified in the ATC clearance. Action to regain this route shall not be delayed in anticipation of obtaining a requested re-clearance.

6. EXCEPTIONS TO POSITION REPORTS PROCEDURES

a. Within Oakland OCA/FIR, no 5Â degree report need be made that would fall within 100Â NM of Guam. Aircraft cleared via terminal area routes report compulsory reporting fixes. Other aircraft report 100Â NM from Nimitz VORTAC. Where other island destinations within the Oakland Oceanic FIR are not more than one-degree latitude-longitude from a 5Â degrees fixed line reporting point, the ETA and arrival report may be substituted in lieu of the adjacent fixed line report.

b. To the east of the Hawaiian Islands it will not be necessary to report the 155Â degree west position if position will be reported at the entry/exit fixes on the Honolulu Control Facility boundary. To the west of the Hawaiian Islands, the 160Â degree west need not be reported.

NORTH PACIFIC (NOPAC) ROUTE PROCEDURES

a. The NOPAC Route System is comprised of five Air Traffic Service (ATS) routes which transit the North Pacific between Alaska and Japan. The two northern routes are used for westbound traffic. The three southern routes are used for eastbound traffic, except that R-591 or G-344 may be used for westbound aircraft crossing the Fukuoka/Anchorage FIR between 0000UTC and 0600UTC. The routes are as follows: R-220, R-580, A-590, R-591 and G-344.

b. Transition Routes

1. Within the Fukuoka FIR, Oceanic Transition Routes (OTRs) and, in one case, a Victor route, have been established for aircraft transitioning to or from the NOPAC Route System.

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c. Separation Standards

1. The primary form of lateral separation within the NOPAC Route System is 25NM lateral either side of the centerline, based on Required Navigation Performance 10 (RNP-10) and 1000' vertical separation (FL290 - FL410) based on Reduced Vertical Separation Minimums (RVSM).

2. Lateral separation for Non-RNP10 aircraft and aircraft operating below FL180 is 50NM lateral either side of the centerline.

3. Standard longitudinal separation within the Anchorage Oceanic FIR is 15 minutes "in trail".

d. Flight Plans

1. Aircraft shall enter "R" in item 10 of the ICAO flight plan if the aircraft and operator have been approved for RNP 10 operations for the route of flight.

2. Aircraft shall enter "W" in item 10 of the ICAO flight plan if the aircraft and operator have been approved for RVSM.

3. Aircraft not approved for RNP 10 and/or RVSM shall not enter "R" and/or "W" in item 10.

4. Aircraft approved for both RNP 10 and RVSM may flight plan any of the NOPAC routes with the following altitude restrictions:

(a) R-220: Even Altitudes FL180 to FL400, also FL330, FL350, FL370, FL390, FL410

(b) R-580: Even Altitudes FL180 to FL400, also FL350, FL370

(c) A-590: Odd Altitudes FL190 to FL410, also FL300, FL320, FL340

(d) R-591: Eastbound, Odd Altitudes FL190 to FL410

(e) R-591: Westbound, Even Altitudes FL300 to FL400

(f) G-344: Eastbound, Odd Altitudes FL190 to FL410

(g) G-344: Westbound, Even Altitudes FL300 to FL400

(h) R-591 and G-344 are Eastbound routes unless designated as Westbound PACOTS. Traffic flows are either Eastbound or Westbound with the tracks being emptied of traffic before changing direction.

5. Non-RNP-10 aircraft shall flight plan as follows:

(a) Westbound: R-220 at all times.

(b) Eastbound: A-590 at all times.

(c) Eastbound: G-344 when available for eastbound flights.

(d) The altitudes available on these routes are at or below FL280 and at or above FL430.

e. Procedures

1. Peak traffic periods:

(a) Eastbound - 0700UTC to 2100UTC

(b) Westbound - 1200UTC to 1900UTC and 2200UTC to 0800UTC

(c) Due to traffic volume, flights desiring to operate contrary to the predominant traffic flow can expect to be rerouted or assigned less than optimum flight levels. If feasible, users planning to operate in the NOPAC Route System at airspeeds below MACH 0.78 should use other than the peak hours for their flights. This will reduce congestion and expedite traffic.

f. Aircraft cannot always be accommodated on their flight planned NOPAC route. In an effort to reduce coordination time and errors between ATC and flight crews, JCAB (Fukuoka ATMC) and FAA (Anchorage ARTCC) have agreed on a common procedure to accommodate most reroutes. Aircraft rerouted from one NOPAC ATC route to another NOPAC ATC route will be given short range clearances into the adjoining FIR's RADAR coverage airspace. The receiving ATC facility will then issue further routing to the aircraft prior to the aircraft reaching the clearance limit.

1. Example 1: aircraft ABC101 is routed via R-220 to RJTT but can not be accommodated on R-220. The aircraft may be re-cleared as follows: "ABC101 cleared to OATIS via R-580, expect further clearance from ATMC after OMOTO."

2. Example 2: aircraft ABC102 is routed via A-590 to PAFA but can not be accommodated on A-590. The aircraft may be re-cleared as follows: "ABC102 cleared to SYA via R-591, expect further routing from Anchorage ARTCC after AKISU."

CENTRAL EAST PACIFIC ROUTE SYSTEM (HAWAII â€“ U.S. MAINLAND)

a. The Central East Pacific (CEP) is the organized route system between Hawaii and California. Seven ATS routes, R-463, R-464, R-465, R-585, R-576, R-577 and R-578 are the primary routes within the CEP.

b. Reduced Vertical Separation Minimum (RVSM) and Required Navigation Performance 10 (RNP-10) are required for aircraft operating within the CEP Route System at FL290 through FL410. Non-approved aircraft can expect FL280 and below or FL430 and above, traffic permitting.

c. Operators show approval for RVSM and RNP-10 by annotating block 10 of the ICAO flight plan (equipment) with the letter W and R respectively.

d. Flight Levels normally assigned in the CEP are in accordance with ICAO Appendix 3a (East odd, West even).

ATS ROUTE RESTRICTION NOTES

ATS Route Restriction Notes for information regarding flight planning purposes see Enroute Tab.

RNP-10 SEPARATION

RNP-10 lateral separation (50 NM) may be applied wthin the Oakland Oceanic FIR between RNP-10 approved aircraft. RNP-10 approval is required for all PACOTS and for all aircraft operating within the CEP at FL290 through FL410. Non-RNP approved aircraft can expect FL280 and below or FL430 and above, traffic permitting.

MACH NUMBER TECHNIQUE For information about routes and/or areas affected, see Air Traffic Control Tab.

RVSM PROCEDURES

REDUCED VERTICAL SEPARATION MINIMUMS (RVSM) For procedures and equipment requirements see Air Traffic Control Tab.

REQUIRED NAVIGATION PERFORMANCE (RNP)

For procedures and equipment requirements, see Air Traffic Control pages and/or Air Traffic Control State pages for detailed information.

SPECIAL PROCEDURES FOR IN-FLIGHT CONTINGENCIES IN OCEANIC AIRSPACE ICAO DOC 4444, SECTION 15.2

Introduction

1. Although all possible contingencies cannot be covered, these procedures provide for the more frequent cases such as:

a. Inability to comply with assigned clearance due to meteorological conditions.

b. En-route diversion across the prevailing traffic flow; and

c. Loss of, or significant reduction in, the required navigation capability when operating in an airspace where the navigation performance accuracy is a prerequisite to the safe conduct of flight operations, or pressurization failure.

2. General Procedures

1. If an aircraft is unable to continue the flight in accordance with its ATC clearance, a revised clearance shall be obtained, whenever possible, prior to initiating any action.

2. If prior clearance cannot be obtained, the following contingency procedures should be employed until a revised clearance is received. In general terms, the aircraft should be flown at an offset level and on an offset track where other aircraft are less likely to be encountered. Specifically, the pilot shall:

a. Leave the cleared track or ATS route by initially turning at least 30 degrees to the right or to the left, in order to establish and maintain a parallel, same direction track or ATS route offset 5 NM (9.3 km). The direction of the turn should be based on one or more of the following factors:

1) aircraft position relative to any organized track or ATS route system;

2) the direction of flights and flight levels allocated on adjacent tracks;

3) the direction to an alternate airport;

4) any strategic lateral offset being flown; and

5) terrain clearance.

b. Maintain a watch for conflicting traffic both visually and by reference to ACAS (if equipped), leaving ACAS in RA mode at all times, unless aircraft operating limitations dictate otherwise;

c. turn on all aircraft exterior lights (commensurate with appropriate operating limitations);

d. keep the SSR transponder on at all times and, when able, squawk 7700, as appropriate and, if equipped with ADS-B or ADS-C, select the appropriate emergency functionality;

e. as soon as practicable, advise air traffic control of any deviation from their assigned clearance;

f. use means as appropriate (ie. voice and/or CPDLC) to communicate during a contingency or emergency;

g. if voice communications are used, the radiotelephony distress signal (MAYDAY) or urgency signal (PAN PAN) preferably spoken three times, shall be used, as appropriate;

h. when emergency situations are communicated via CPDLC, the controller may respond via CPDLC. However, the controller may also attempt to make voice contact with the aircraft;

i. establish communications with and alert nearby aircraft by broadcasting on the frequencies in use and at suitable intervals on 121.5 MHz (or, as a backup, on the inter-pilot air-to-air frequency 123.45 MHz): aircraft identification, the nature of the distress condition, intention of the pilot, position (including the ATS route designator or the track code, as appropriate) and flight level; and

j. the controller should attempt to determine the nature of the emergency and ascertain any assistance that may be required. Subsequent ATC action with respect to that aircraft shall be based on the intentions or the pilot and overall traffic situation.

3. Actions to be taken once offset from track:

a) operation within a parallel track system;

b) the potential for user preferred routes (UPR's) parallel to the aircraft's track or ATS route;

c) the nature of the contingency (e.g. aircraft system malfunction; and

d) weather factors (e.g. convective weather at lower flight levels).

4. If possible, maintain the assigned flight level until established on the 9.3 km (5.0 NM) parallel, same direction track or ATS route offset. If unable, initially minimize the rate of descent to the extent that is operationally feasible.

5. Once established on a parallel, same direction track or ATS route offset by 9.3km (5.0 NM), either:

a) descend below FL 290, and establish a 150 m (500 ft) vertical offset from those flight levels normally used, and proceed as required by the operational situation or if an ATC clearance has been obtained, in accordance with the clearance; or

b) establish a 150 m (500 ft) vertical offset (or 300 m (1000 ft) vertical offset if above FL 410) from those flight levels normally used, and proceed as required by the operational situation, or if ATC clearance has been obtained, in accordance with the clearance.

WEATHER DEVIATION PROCEDURES FOR OCEANIC CONTROLLED AIRSPACE â€” PACIFIC

When weather deviation is required, the pilot should initiate communications with ATC via voice or CPDLC. A rapid response may be obtained by either:
1. stating "WEATHER DEVIATION REQUIRED" to indicate that priority is desired on the frequency and for ATC response; or

2. requesting a weather deviation using a CPDLC lateral downlink message.

When necessary, the pilot should initiate the communications using the urgency call "PAN PAN PAN" (preferably spoken three times) or by using a CPDLC urgency downlink message.
The pilot shall inform ATC when weather deviation is no longer required, or when a weather deviation has been completed and the aircraft has returned to its cleared route.

The pilot should notify ATC and request clearance to deviate from track or ATS route, advising, when possible, the extent of the deviation requested. The flight crew will use whatever means are appropriate (i.e. voice and/or CPDLC) to communicate during a weather deviation.
ATC should take one of the following actions:
1. when appropriate separation can be applied, issue clearance to deviate from track; or

2. if there is conflicting traffic and ATC is unable to establish appropriate separation, ATC shall:

1. advise the pilot of inability to issue clearance for the requested deviation;

2. advise the pilot of conflicting traffic; and

3. request the pilot's intentions.

The pilot should take the following actions:
1. comply with the ATC clearance issued; or

2. advise ATC of intentions and execute the procedures detailed in the Action to be Taken if a Revised ATC Clearance Cannot Be Obtained procedure section.

If the aircraft is required to deviate from track or ATC route to avoid adverse meteorological conditions and prior clearance cannot be obtained, an ATC clearance shall be obtained at the earliest possible time. Until an ATC clearance is received, the pilot shall take the following actions:

1. if possible, deviate away from an organized track or ATS route system;

2. establish communications with and alert nearby aircraft by broadcasting, at suitable intervals: aircraft identification, flight level, position (including ATS route designator or the track code) and intentions, on the frequency in use and on 121.5 MHz (or, as a backup, on the inter-pilot air-to-air frequency 123.45 MHz);

3. watch for conflicting traffic both visually and by reference to ACAS (if equipped);

4. turn on all aircraft exterior lights (commensurate with appropriate operating limitations);

5. for deviations of less than 9.3 km (5.0 NM) from the originally cleared track or ATS route, remain at a level assigned by ATC;

6. for deviations greater than, or equal to 9.3 km (5.0 NM) from the originally cleared track or ATS route, when the aircraft is approximately 9.3 km (5.0 NM) from track, initiate a level change in accordance with the Originally Cleared Track or ATS Route Center Line / Deviations / Level Change section.

7. if the pilot receives clearance to deviate from cleared track or ATS route for a specified distance and, subsequently, requests, but cannot obtain a clearance to deviate beyond that distance, the pilot should apply an altitude offset in accordance with the Originally Cleared Track or ATS Route Center Line / Deviations / Level Change section before deviating beyond the cleared distance;

8. when returning to track or ATS route, be at its assigned flight level when the aircraft is within approximately 9.3 km (5.0 NM) of the center line; and

9. if contact was not established prior to deviating, continue to attempt to contact ATC to obtain a clearance. If contact was established, continue to keep ATC advised of intentions and obtain essential traffic information.

EAST 000Â° -179Â° magnetic

1. DESCEND 300 ft (90 m)

2. CLIMB 300 ft (90 m)

WEST 180Â° - 359Â° magnetic

1. CLIMB 300 ft (90 m)

2. DESCEND 300 ft (90 m)

PAZA Type: FIR

EXTENDED RANGE OPERATIONS BY AIRCRAFT WITH TWO-TURBINE POWER-UNITS (ETOPS) 1. If the contingency procedures are employed by a twin-engine aircraft as a result of an engine shutdown or failure of an ETOPS critical system, the pilot should advise ATC as soon as practicable of the situation, reminding ATC of the type of aircraft involved, and request expeditious handling.

OCEANIC POSITION REPORTING PROCEDURES OAKLAND OCEANIC FIR

1. For non ADS equipped aircraft, any waypoint filed in the route of flight (ItemÂ 15 of the ICAO flight plan) must be reported as a position report whether the filed waypoint is compulsory or not. If a noncompulsory waypoint is not filed in item 15, it does not need to be reported.

2. POSITION REPORTS

a. When operating on a published ATS Route or a temporary route established by NOTAM, report and estimate the designated reporting points using the specified waypoint names or geographic coordinates as specified in the NOTAM.

b. When operating on a random route:

1. Flights whose tracks are predominantly east and west shall report over each 5Â degrees or 10Â degrees (10Â degrees will be used if the speed of the aircraft is such that 10Â degrees will be traversed within 80 minutes or less) meridian longitude extending east and west from 180Â degrees.

2. Flights whose tracks are predominantly north and south shall report over each 5Â degrees or 10Â degrees (10Â degrees if traversed within 80Â minutes) parallel of latitude extending north and south of the equator.

c. ATC may require specific flights to report more frequently than each 5Â degrees for aircraft with slow ground speeds.

d. Position reports shall be transmitted at the time of crossing the designated reporting point or as soon thereafter as possible.

3. Position reports shall include information on present position, estimated next position, and ensuing position in sequence as indicated below.

a. PRESENT POSITION - Information shall include:

1. The word â€œpositionâ€ .

2. Aircraft identification.

3. Reporting point name, or if not named:

(a) Latitude (2 digits or more) and,

(b) Longitude (3 digits or more).

b. Time over reporting point (4 digits UTC).

c. Altitude (Flight Level). When forwarding an altitude report within the Oakland OCA/FIR, pilots should report their present altitude and their assigned altitude exactly as cleared if the present and assigned altitudes differ. Aircraft assigned a block altitude must report their current altitude and the assigned block altitude. A restriction to cross a point at an altitude is not a block altitude assignment and should not be reported as a block of altitudes.

d. ESTIMATED NEXT POSITION

(1) Reporting point name, or if not named, latitude and longitude as in a.3 above and,

(2) Estimated time over next position (4 digits UTC).

e. ENSUING FIX

(1) Name only of the next succeeding fix whether compulsory or not, or if not named, latitude and longitude as in a.3 above.

4. WEATHER REPORTS:

a. Weather reports shall be included as provided in SectionÂ 3 of Standard AIREP Form by all flights unless exempted from weather reporting by the Weather Service and/or ATC.

5. ADHERENCE TO ATC APPROVED ROUTE

a. If an aircraft, notwithstanding all action taken to adhere to the route specified in the ATC clearance, inadvertently deviates from this route, action shall be taken to regain it as soon as reasonable and not further ahead than 200 nautical miles from the DR position at which the heading was altered to regain the route specified in the ATC clearance. Action to regain this route shall not be delayed in anticipation of obtaining a requested re-clearance.

6. EXCEPTIONS TO POSITION REPORTS PROCEDURES

a. Within Oakland OCA/FIR, no 5Â degree report need be made that would fall within 100Â NM of Guam. Aircraft cleared via terminal area routes report compulsory reporting fixes. Other aircraft report 100Â NM from Nimitz VORTAC. Where other island destinations within the Oakland Oceanic FIR are not more than one-degree latitude-longitude from a 5Â degrees fixed line reporting point, the ETA and arrival report may be substituted in lieu of the adjacent fixed line report.

b. To the east of the Hawaiian Islands it will not be necessary to report the 155Â degree west position if position will be reported at the entry/exit fixes on the Honolulu Control Facility boundary. To the west of the Hawaiian Islands, the 160Â degree west need not be reported.

NORTH PACIFIC (NOPAC) ROUTE PROCEDURES

a. The NOPAC Route System is comprised of five Air Traffic Service (ATS) routes which transit the North Pacific between Alaska and Japan. The two northern routes are used for westbound traffic. The three southern routes are used for eastbound traffic, except that R-591 or G-344 may be used for westbound aircraft crossing the Fukuoka/Anchorage FIR between 0000UTC and 0600UTC. The routes are as follows: R-220, R-580, A-590, R-591 and G-344.

b. Transition Routes

1. Within the Fukuoka FIR, Oceanic Transition Routes (OTRs) and, in one case, a Victor route, have been established for aircraft transitioning to or from the NOPAC Route System.

2. Within the Anchorage FIR, certain ATS routes are used for the same purpose. They are as follows: B-327 (For Westbound use only between BAMOK and SELDM), R-341, G-469, A-342, G-215, R-330, R-451, R-336, R-338, G-583 and G-349.

c. Separation Standards

1. The primary form of lateral separation within the NOPAC Route System is 25NM lateral either side of the centerline, based on Required Navigation Performance 10 (RNP-10) and 1000' vertical separation (FL290 - FL410) based on Reduced Vertical Separation Minimums (RVSM).

2. Lateral separation for Non-RNP10 aircraft and aircraft operating below FL180 is 50NM lateral either side of the centerline.

3. Standard longitudinal separation within the Anchorage Oceanic FIR is 15 minutes "in trail".

d. Flight Plans

1. Aircraft shall enter "R" in item 10 of the ICAO flight plan if the aircraft and operator have been approved for RNP 10 operations for the route of flight.

2. Aircraft shall enter "W" in item 10 of the ICAO flight plan if the aircraft and operator have been approved for RVSM.

3. Aircraft not approved for RNP 10 and/or RVSM shall not enter "R" and/or "W" in item 10.

4. Aircraft approved for both RNP 10 and RVSM may flight plan any of the NOPAC routes with the following altitude restrictions:

(a) R-220: Even Altitudes FL180 to FL400, also FL330, FL350, FL370, FL390, FL410

(b) R-580: Even Altitudes FL180 to FL400, also FL350, FL370

(c) A-590: Odd Altitudes FL190 to FL410, also FL300, FL320, FL340

(d) R-591: Eastbound, Odd Altitudes FL190 to FL410

(e) R-591: Westbound, Even Altitudes FL300 to FL400

(f) G-344: Eastbound, Odd Altitudes FL190 to FL410

(g) G-344: Westbound, Even Altitudes FL300 to FL400

(h) R-591 and G-344 are Eastbound routes unless designated as Westbound PACOTS. Traffic flows are either Eastbound or Westbound with the tracks being emptied of traffic before changing direction.

5. Non-RNP-10 aircraft shall flight plan as follows:

(a) Westbound: R-220 at all times.

(b) Eastbound: A-590 at all times.

(c) Eastbound: G-344 when available for eastbound flights.

(d) The altitudes available on these routes are at or below FL280 and at or above FL430.

e. Procedures

1. Peak traffic periods:

(a) Eastbound - 0700UTC to 2100UTC

(b) Westbound - 1200UTC to 1900UTC and 2200UTC to 0800UTC

(c) Due to traffic volume, flights desiring to operate contrary to the predominant traffic flow can expect to be rerouted or assigned less than optimum flight levels. If feasible, users planning to operate in the NOPAC Route System at airspeeds below MACH 0.78 should use other than the peak hours for their flights. This will reduce congestion and expedite traffic.

f. Aircraft cannot always be accommodated on their flight planned NOPAC route. In an effort to reduce coordination time and errors between ATC and flight crews, JCAB (Fukuoka ATMC) and FAA (Anchorage ARTCC) have agreed on a common procedure to accommodate most reroutes. Aircraft rerouted from one NOPAC ATC route to another NOPAC ATC route will be given short range clearances into the adjoining FIR's RADAR coverage airspace. The receiving ATC facility will then issue further routing to the aircraft prior to the aircraft reaching the clearance limit.

1. Example 1: aircraft ABC101 is routed via R-220 to RJTT but can not be accommodated on R-220. The aircraft may be re-cleared as follows: "ABC101 cleared to OATIS via R-580, expect further clearance from ATMC after OMOTO."

2. Example 2: aircraft ABC102 is routed via A-590 to PAFA but can not be accommodated on A-590. The aircraft may be re-cleared as follows: "ABC102 cleared to SYA via R-591, expect further routing from Anchorage ARTCC after AKISU."

TRACK ADVISORY (TA) PROGRAM FOR FLIGHTS CROSSING ANCHORAGE ARTCC/RUSSIAN FIRs

a. The TA program is similar to that used by Oakland for PACOTS traffic. It is designed to assist ATC in sequencing same altitude aircraft proceeding westbound over the Russian FIR entry fixes. Flights participating in the TA program will receive preference over non-participants.

b. All Westbound flights crossing the Anchorage/Russian FIR boundary at or above FL 280 (8600 meters) shall participate in the TA program.

ATS ROUTE RESTRICTION NOTES
ATS Route Restriction Notes for information regarding flight planning purposes see Enroute Tab.

MACH NUMBER TECHNIQUE For information about routes and/or areas affected, see Air Traffic Control Tab.

TRANSPONDER SETTING (Secondary Surveillance Radar-SSR) For Beacon Code procedures see Enroute Tab.

SPECIAL PROCEDURES FOR IN-FLIGHT CONTINGENCIES IN OCEANIC AIRSPACE ICAO DOC 4444, SECTION 15.2
Introduction

1. Although all possible contingencies cannot be covered, these procedures provide for the more frequent cases such as:

a. Inability to comply with assigned clearance due to meteorological conditions.

b. En-route diversion across the prevailing traffic flow; and

c. Loss of, or significant reduction in, the required navigation capability when operating in an airspace where the navigation performance accuracy is a prerequisite to the safe conduct of flight operations, or pressurization failure.

2. General Procedures

1. If an aircraft is unable to continue the flight in accordance with its ATC clearance, a revised clearance shall be obtained, whenever possible, prior to initiating any action.

2. If prior clearance cannot be obtained, the following contingency procedures should be employed until a revised clearance is received. In general terms, the aircraft should be flown at an offset level and on an offset track where other aircraft are less likely to be encountered. Specifically, the pilot shall:

a. Leave the cleared track or ATS route by initially turning at least 30 degrees to the right or to the left, in order to establish and maintain a parallel, same direction track or ATS route offset 5 NM (9.3 km). The direction of the turn should be based on one or more of the following factors:

1) aircraft position relative to any organized track or ATS route system;

2) the direction of flights and flight levels allocated on adjacent tracks;

3) the direction to an alternate airport;

4) any strategic lateral offset being flown; and

5) terrain clearance.

b. Maintain a watch for conflicting traffic both visually and by reference to ACAS (if equipped), leaving ACAS in RA mode at all times, unless aircraft operating limitations dictate otherwise;

c. turn on all aircraft exterior lights (commensurate with appropriate operating limitations);

d. keep the SSR transponder on at all times and, when able, squawk 7700, as appropriate and, if equipped with ADS-B or ADS-C, select the appropriate emergency functionality;

e. as soon as practicable, advise air traffic control of any deviation from their assigned clearance;

f. use means as appropriate (ie. voice and/or CPDLC) to communicate during a contingency or emergency;

g. if voice communications are used, the radiotelephony distress signal (MAYDAY) or urgency signal (PAN PAN) preferably spoken three times, shall be used, as appropriate;

h. when emergency situations are communicated via CPDLC, the controller may respond via CPDLC. However, the controller may also attempt to make voice contact with the aircraft;

i. establish communications with and alert nearby aircraft by broadcasting on the frequencies in use and at suitable intervals on 121.5 MHz (or, as a backup, on the inter-pilot air-to-air frequency 123.45 MHz): aircraft identification, the nature of the distress condition, intention of the pilot, position (including the ATS route designator or the track code, as appropriate) and flight level; and

j. the controller should attempt to determine the nature of the emergency and ascertain any assistance that may be required. Subsequent ATC action with respect to that aircraft shall be based on the intentions or the pilot and overall traffic situation.

3. Actions to be taken once offset from track:

a) operation within a parallel track system;

b) the potential for user preferred routes (UPR's) parallel to the aircraft's track or ATS route;

c) the nature of the contingency (e.g. aircraft system malfunction; and

d) weather factors (e.g. convective weather at lower flight levels).

4. If possible, maintain the assigned flight level until established on the 9.3 km (5.0 NM) parallel, same direction track or ATS route offset. If unable, initially minimize the rate of descent to the extent that is operationally feasible.

5. Once established on a parallel, same direction track or ATS route offset by 9.3km (5.0 NM), either:

a) descend below FL 290, and establish a 150 m (500 ft) vertical offset from those flight levels normally used, and proceed as required by the operational situation or if an ATC clearance has been obtained, in accordance with the clearance; or

b) establish a 150 m (500 ft) vertical offset (or 300 m (1000 ft) vertical offset if above FL 410) from those flight levels normally used, and proceed as required by the operational situation, or if ATC clearance has been obtained, in accordance with the clearance.

WEATHER DEVIATION PROCEDURES FOR OCEANIC CONTROLLED AIRSPACE â€" PACIFIC

When weather deviation is required, the pilot should initiate communications with ATC via voice or CPDLC. A rapid response may be obtained by either:
1. stating "WEATHER DEVIATION REQUIRED" to indicate that priority is desired on the frequency and for ATC response; or

2. requesting a weather deviation using a CPDLC lateral downlink message.

When necessary, the pilot should initiate the communications using the urgency call "PAN PAN PAN" (preferably spoken three times) or by using a CPDLC urgency downlink message.
The pilot shall inform ATC when weather deviation is no longer required, or when a weather deviation has been completed and the aircraft has returned to its cleared route.

The pilot should notify ATC and request clearance to deviate from track or ATS route, advising, when possible, the extent of the deviation requested. The flight crew will use whatever means are appropriate (i.e. voice and/or CPDLC) to communicate during a weather deviation.
ATC should take one of the following actions:
1. when appropriate separation can be applied, issue clearance to deviate from track; or

2. if there is conflicting traffic and ATC is unable to establish appropriate separation, ATC shall:

1. advise the pilot of inability to issue clearance for the requested deviation;

2. advise the pilot of conflicting traffic; and

3. request the pilot's intentions.

The pilot should take the following actions:
1. comply with the ATC clearance issued; or

2. advise ATC of intentions and execute the procedures detailed in the Action to be Taken if a Revised ATC Clearance Cannot Be Obtained procedure section.

If the aircraft is required to deviate from track or ATC route to avoid adverse meteorological conditions and prior clearance cannot be obtained, an ATC clearance shall be obtained at the earliest possible time. Until an ATC clearance is received, the pilot shall take the following actions:
1. if possible, deviate away from an organized track or ATS route system;

2. establish communications with and alert nearby aircraft by broadcasting, at suitable intervals: aircraft identification, flight level, position (including ATS route designator or the track code) and intentions, on the frequency in use and on 121.5 MHz (or, as a backup, on the inter-pilot air-to-air frequency 123.45 MHz);

3. watch for conflicting traffic both visually and by reference to ACAS (if equipped);

4. turn on all aircraft exterior lights (commensurate with appropriate operating limitations);

5. for deviations of less than 9.3 km (5.0 NM) from the originally cleared track or ATS route, remain at a level assigned by ATC;

6. for deviations greater than, or equal to 9.3 km (5.0 NM) from the originally cleared track or ATS route, when the aircraft is approximately 9.3 km (5.0 NM) from track, initiate a level change in accordance with the Originally Cleared Track or ATS Route Center Line / Deviations / Level Change section.

7. if the pilot receives clearance to deviate from cleared track or ATS route for a specified distance and, subsequently, requests, but cannot obtain a clearance to deviate beyond that distance, the pilot should apply an altitude offset in accordance with the Originally Cleared Track or ATS Route Center Line / Deviations / Level Change section before deviating beyond the cleared distance;

8. when returning to track or ATS route, be at its assigned flight level when the aircraft is within approximately 9.3 km (5.0 NM) of the center line; and

9. if contact was not established prior to deviating, continue to attempt to contact ATC to obtain a clearance. If contact was established, continue to keep ATC advised of intentions and obtain essential traffic information.

EAST 000Â° -179Â° magnetic
1. DESCEND 300 ft (90 m)

2. CLIMB 300 ft (90 m)

WEST 180Â° - 359Â° magnetic
1. CLIMB 300 ft (90 m)

2. DESCEND 300 ft (90 m)