

GENERAL INFORMATION

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PREFACE

The Canada Air Pilot (CAP) is a civil aeronautical information document published on behalf of NAV CANADA by Geomatics Canada and distributed by NAV CANADA'S Aeronautical Publications Sales and Distribution Unit. It is issued every 56 days in accordance with the International Civil Aviation Organization (ICAO) requirements.

The CAP GEN contains general and legend information pertinent to all CAP volumes (except Cap 6 which includes this information in French). The CAP GEN is amended and reissued as required. It's effective date may differ from other CAP volumes. The first page of CAP volumes 1 to 5 and 7 indicates the current CAP GEN effective date.

The information contained on each page is current only to the date of submission for printing. A NOTAM may amend or cancel the information in this document, therefore the NOTAM must be consulted to ensure that current information is used for flight operations.

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A realignment of the AIS branch will take place over a three-year period. Under the new structure, the Ottawa component of the AIS will remain unchanged. The six field offices will be realigned into three restructured AIS offices located in Montréal, Toronto and Vancouver ACC.

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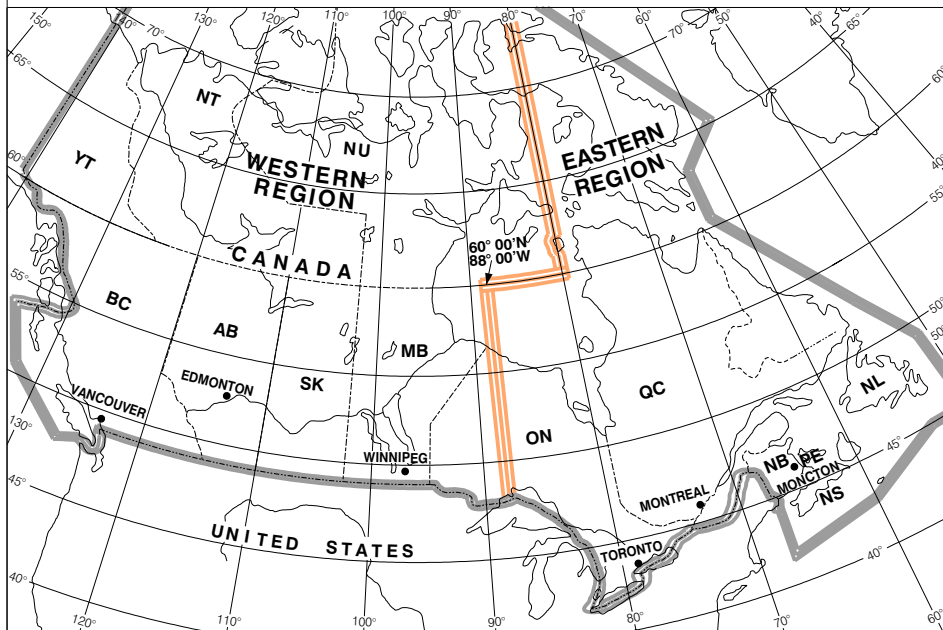
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(see next page for NAV CANADA REGIONS map)



NAV CANADA REGIONS and FIELD OFFICES



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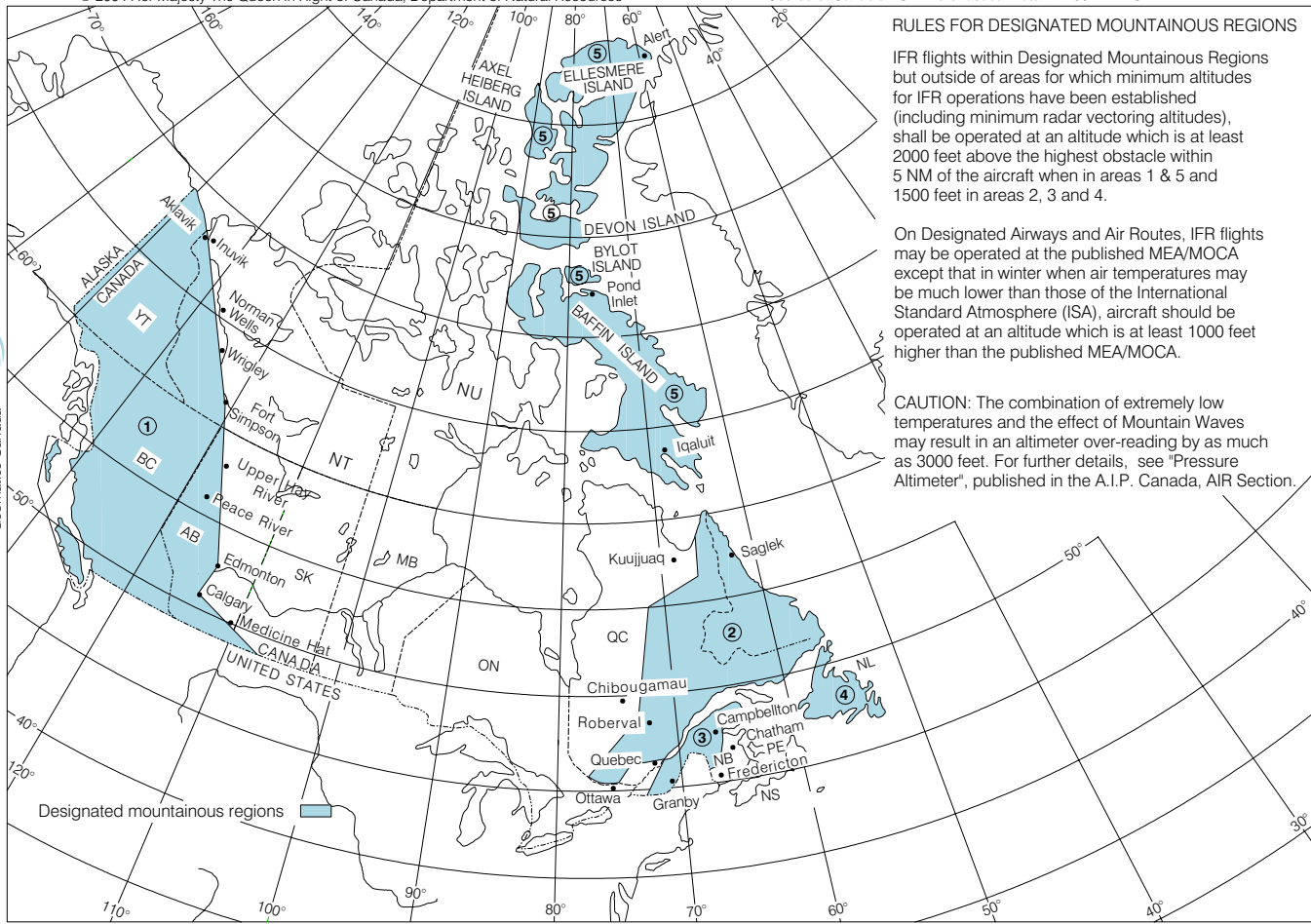
NAV CANADA IFR ATC CUSTOMER SERVICE

Pilots/dispatchers can now contact the IFR Shift Managers at all Area Control Centres to discuss Air Traffic Control situations by calling: 1-877-342-2276.



DESIGNATED MOUNTAINOUS REGIONS

Geomatics Canada



Designated mountainous regions

RULES FOR DESIGNATED MOUNTAINOUS REGIONS

IFR flights within Designated Mountainous Regions but outside of areas for which minimum altitudes for IFR operations have been established (including minimum radar vectoring altitudes), shall be operated at an altitude which is at least 2000 feet above the highest obstacle within 5 NM of the aircraft when in areas 1 & 5 and 1500 feet in areas 2, 3 and 4.

On Designated Airways and Air Routes, IFR flights may be operated at the published MEA/MOCA except that in winter when air temperatures may be much lower than those of the International Standard Atmosphere (ISA), aircraft should be operated at an altitude which is at least 1000 feet higher than the published MEA/MOCA.

CAUTION: The combination of extremely low temperatures and the effect of Mountain Waves may result in an altimeter over-reading by as much as 3000 feet. For further details, see "Pressure Altimeter", published in the A.I.P. Canada, AIR Section.

DESIGNATED MOUNTAINOUS REGIONS

CHANGE: Provinces and territories ident

EFF 10 JUN 04



AAE..... Above Aerodrome Elevation	BM..... Back Marker
AB..... Alberta	BPOC.... before proceeding on course
ACC..... Area Control Centre	brg..... bearing
acft..... aircraft	
A/D..... aerodrome	C..... Celsius
ADF..... Automatic Direction Finding	CAP..... Canada Air Pilot
adj..... adjacent	CAR..... Canadian Aviation Regulations
advsy.... advisory	cat/CAT... category
AFB..... Air Force Base	CDF..... Central De-Icing Facility
A/G..... Air/Ground	CFS..... Canada Flight Supplement
AGL..... Above Ground Level	ch..... channel
AIP..... Aeronautical Information Publication	clb..... climb
alt..... altitude	clnc..... clearance
altm..... altimeter	clsd..... closed
altn..... alternate	co..... county
APAPI... Abbreviated Precision Approach Path Indicator	comm..... communicate/communications
APGM... Airport General Manager	cont..... continuous/continue
apch..... approach	coord..... coordinate/coordinates/ coordination
aprt..... airport	crs..... course
aprx..... approximately	ctc..... contact
ARCAL... Aircraft Radio Control of Aerodrome Lighting	ctl..... control, controlled
ARP..... Aerodrome reference point	ctr..... centre
ARR..... arrival	cw..... clockwise
ASDA.... Accelerate Stop Distance Available	ccw..... counter-clockwise
ASDE.... Aerodrome surveillance detection equipment	CYA..... Advisory Area
ASL..... Above Sea Level	CYR..... Restricted Area
ASR..... Airport Surveillance Radar	cz..... Control Zone
ATB..... Airport Terminal Building	
ATC..... Air Traffic Control	DA..... Decision Altitude
ATD..... Along Track Distance	dct..... direct
ATF..... Aerodrome Traffic Frequency	del..... delivery
ATIS..... Automatic Terminal Information Service	dep..... departure
ATS..... Air Traffic Services	DH..... Decision Height
AU..... Approach UNICOM	dircc..... direct or directional
auth..... authorized/authorization	dist..... distance
AVASIS...Abbreviated Visual Approach Slope Indicator System	DME..... Distance Measuring Equipment
avbl..... available	DND..... Department of National Defence
AWOS.... Automated Weather Observation System	DRCO..... Dial-up Remote Communications Outlet
	DT..... Daylight Saving Time
BC..... back course or British Columbia	DTW..... Downwind Termination Waypoint
BCRS.... Back course	
bcst..... broadcast	E..... East
bil..... bilingual	eff..... effective
bldg..... building	elev..... elevation
	emerg..... emergency
	Eng..... English
	ETA..... estimated time of arrival



ABBREVIATIONS AND ACRONYMS

FACF..... Final Approach Course Fix	IRS..... Inertial Reference System
FAF..... Final Approach Fix	IRU..... Inertial Reference Unit
FAS..... Flight Advisory Service	ISA..... International Standard Atmosphere
FAWP..... Final Approach Waypoint	IWP..... Intermediate Waypoint
FL..... flight level	
FMS..... Flight Management System	kg..... kilograms
FOD..... Foreign Object Damage	KIAS..... Knots indicated airspeed
fpm..... feet per minute	kt..... knots
Fr..... French	
freq..... frequency	LB..... lead bearing
FSS..... Flight Service Station	lb..... pounds
ft..... feet	lczr..... localizer
	LDA..... Landing Distance Available
G..... grid	lgt..... light or lighting
GFA..... Graphic Area Forecast	lgtl..... lighted
gnd..... ground	LNAV..... Lateral Navigation
GNSS.... Global Navigation Satellite System	LO..... Enroute Low Altitude Chart
GP..... glide path	LOC..... Localizer (For non-precision approach procedures predicated on a localizer facility)
GPH..... DND Flight Information Publication	LPV..... Localizer Precision with Vertical Guidance
GPS..... Global Positioning System	
GS..... glide slope	LR..... Lead Radial
	lt..... left
HAA..... Height Above Aerodrome	ltd..... limited
HAT..... Height Above TDZE	LWIS..... Limited Weather Information System
hdg..... heading	
HI..... Enroute High Altitude Chart	m..... metres
HIAL..... High Intensity Approach Lighting	M or mag.... magnetic
HIRO.... High Intensity Runway Operations	MAHWP..... Missed Approach Holding Waypoint
HJ..... Sunrise to sunset	
HN..... Sunset to sunrise	maint..... maintenance
hr..... hours	MAP..... missed approach point
HRP..... Heliport reference point	MATWP..... Missed Approach Turning Waypoint
IAF..... Initial Approach Fix	MAWP..... Missed Approach Waypoint
IAP..... Instrument Approach Procedure	max..... maximum
IAWP..... Initial Approach Waypoint	MB..... Manitoba
ICAO..... International Civil Aviation Organization	MDA..... Minimum Descent Altitude
ident..... identification	MEA..... Minimum Enroute Altitude
IF..... Intermediate Fix	MF..... Mandatory Frequency
IFR..... Instrument Flight Rules	Mil..... military
ILS..... Instrument Landing System	min..... minimum
IMC..... Instrument Meteorological Conditions	min..... minutes of time
inbd/INBD... inbound	misd..... missed
inop..... inoperative	
INS..... Inertial Navigation System	
intl..... international	
INTRM.... interim	
intxn..... intersection	



MOCA..... Minimum Obstruction Clearance Altitude	R..... radial
MSA..... Minimum Sector Altitudes	RA..... Radio Altimeter
muni..... municipal	RCAP..... restricted Canada Air Pilot
N..... North	RCO..... Remote Communications Outlet
N/A..... Not Applicable	rdo..... radio
NAD..... North American Datum	RNAV..... Area Navigation
nav..... navigation	rt..... right
NAVAID..... Navigational Aid	RVR..... Runway Visual Range
NB..... New Brunswick	rwy..... runway
NDB..... non-Directional Beacon	S..... South
NDHQ..... National Defence Headquarters	SAC..... Strategic Air Command
NE..... North East	SDWP..... Step Down Waypoint
NL..... Newfoundland & Labrador	SE..... South East
NM..... Nautical Miles	sec..... seconds of time
nr..... number	SFC..... Surface
NS..... Nova Scotia	SID..... Standard Instrument Departure
NT..... Northwest Territories	simul..... simultaneous/ly
NU..... Nunavut	SK..... Saskatchewan
NW..... North West	sm..... statute miles
NWS..... North Warning System	spec..... specification
	SPEC..... specified
obd/OBD... outbound	SPEC VIS... Specified Take-off Minimum Visibility
obst..... obstruction	SR..... Sunrise
OCL..... Obstruction Clearance Limit	SS..... Sunset
OM..... Outer Marker	STAR..... Standard Terminal Arrival
ON..... Ontario	str..... straight
ops..... operations	SW..... South West
O/R..... On Request	
O/T..... Other Times	T..... True or Terminal Area Chart
	TACAN..... Tactical Air Navigation
PAL..... Peripheral station	TAF..... Aerodrome Forecast
PAPL..... Precision Approach Path Indicator	TC..... Transport Canada
PAR..... Precision Approach Radar	TCH..... Threshold Crossing Height
PE..... Prince Edward Island	TDZ..... Touchdown Zone
PPR..... Prior Permission Required	TDZE..... Touchdown Zone Elevation
proc..... procedure	TDZL..... Touchdown Zone Lighting
PSR..... Primary Surveillance Radar	temp..... temperature
PT..... Procedure Turn	tempo..... temporary/ily
pvt..... private	TFC..... Traffic
	thld..... threshold
QC..... Quebec	tml..... terminal
	TODA..... Take-off Distance Available
	TORA..... Take-off Run Available
	TP..... Transport Canada Publication
	trk..... track
	TWR/twr... control tower/tower
	twy..... taxiway



- UNICOM.... Universal communications
(Private Advisory Station)

- var..... variation
- VASIS..... Visual Approach Slope
Indicator System
- VFR..... Visual Flight Rules
- VHF..... Very High Frequency
- VIP..... Very Important Person
- vis..... visibility
- VLf..... very low frequency
- VNAP..... Vertical Noise Abatement Procedure
- VNAV..... Vertical Navigation
- VOR..... VHF Omnidirectional Range
- VORTAC.... Combination of VOR and TACAN
- VOT..... VOR Receiver Test Facility
- VPA..... Vertical Path Angle
- V2..... take-off safety speed
- V/V..... vertical velocity
- VZF..... zero flap minimum safe
manoeuvring speed

- W..... West
- WGS..... World Geodetic System
- win..... winter
- WP..... Waypoint
- wx..... weather

- YT..... Yukon Territory

- Z..... Coordinated Universal Time



AERODROME TRAFFIC FREQUENCY (ATF): A VHF frequency designated to ensure that all radio equipped aircraft operating on the ground or within the specified ATF area, are listening on a common frequency and following a common reporting procedure.

ASDA: Accelerate Stop Distance Available. The length of the take-off run available plus the length of the stopway, if provided.

BEFORE PROCEEDING ON COURSE (BPOC): A term used to indicate that a specified procedure must be completed prior to taking action to intercept the desired course.

CLEARWAY: A defined rectangular area on the ground or water under the control of the appropriate authority, selected or prepared as a suitable area over which an aeroplane may make a portion of its initial climb to a specified height (TODA-TORA).

DECISION ALTITUDE OR DECISION HEIGHT (DA/DH): Means an altitude or height specified in the Canada Air Pilot or the route and approach inventory at which a missed approach procedure shall be initiated during a precision approach or an approach procedure with vertical guidance, if the required visual reference necessary to continue the approach to land has not been established.

HEIGHT ABOVE AERODROME (HAA): The height in feet of the MDA (for circling approaches) above the aerodrome elevation.

HEIGHT ABOVE TOUCHDOWN ZONE ELEVATION (HAT): The height in feet of the DH and the MDA (for straight-in approaches) above the Touchdown Zone Elevation.

LDA: Landing Distance Available. The length of runway which is declared available and suitable for the ground run of an aeroplane landing.

MANDATORY FREQUENCY (MF): A VHF frequency which all pilots operating in the immediate vicinity of an uncontrolled aerodrome shall monitor, and on which shall be transmitted intentions, landing estimate and the appropriate approach, circuit, taxi and take-off reports as applicable. (See Canada Flight Supplement for details).

MINIMUM DESCENT ALTITUDE (MDA): A specified altitude referenced to sea level for a non-precision approach below which descent must not be made until the required visual reference to continue the approach to land has been established.



REQUIRED VISUAL REFERENCE: In respect of an aircraft on an approach to a runway, means that section of the approach area of the runway or those visual aids that, when viewed by the pilot of the aircraft, enables the pilot to make an assessment of the aircraft position and the rate of change of position, relative to the nominal flight path.

STEP-DOWN FIX: A fix permitting additional descent within a segment of an instrument approach procedure by identifying a point beyond which further descent can be made.

STOPWAY: A defined rectangular area on the ground at the end of the runway in the direction of take-off prepared as a suitable area in which an aeroplane can be stopped in the case of an abandoned take-off (ASDA-TORA).

THRESHOLD: The beginning of that portion of the runway usable for landing.

THRESHOLD CROSSING HEIGHT (TCH): The height of the glide path above the runway threshold.

TODA: Take-Off Distance Available. The length of the take-off run available plus the length of the clearway, if provided.

TORA: Take-Off Run Available. The length of runway declared available and suitable for the ground run of an aeroplane taking off.

TOUCHDOWN ZONE (TDZ): The first 3000 feet of the runway or the first third of the runway, whichever is less, measured from the threshold in the direction of landing.

TOUCHDOWN ZONE ELEVATION (TDZE): The highest elevation in the Touchdown Zone.

VERTICAL PATH ANGLE (VPA): A constant flight path angle defined by Barometric Vertical Navigation. See AIP Canada for system errors and limitations.



GENERAL

CAR 602 specifies take-offs for all Canadian aircraft as being governed by visibility only, approach restrictions by RVR values only, and landings by published DH/MDAs only.

TAKE-OFF MINIMA/DEPARTURE PROCEDURES

The minimum visibility for take-off shall be determined by the pilot-in-command consistent with aircraft performance, navigation equipment limitations and the requirement for the pilot to ensure obstacle clearance.

Notwithstanding, and unless otherwise authorized in accordance with CAR 602, IFR take-offs for all aircraft are prohibited when the visibility is below the applicable minimum visibility published in the Canada Air Pilot (CAP). IFR take-offs for rotorcraft are permitted when the take-off visibility is one-half the CAP value but not less than $\frac{1}{4}$ SM.

Take-off visibility, in order of precedence, is defined as:

- the reported RVR of the runway to be used (unless the RVR is fluctuating above and below the minimum or less than the minimum because of a localized phenomena); or
- the reported ground visibility of the aerodrome (if the RVR is unavailable, fluctuating above and below the minimum or less than the minimum because of localized phenomena. A local phenomenon is deemed to be occurring if the RVR readout is less than the reported ground visibility); or
- when neither (a) nor (b) above is available, the visibility for the runway of departure as observed by the pilot-in-command.

Departure procedures meet obstacle clearance requirements and are based on the premise that on departure an aircraft will:

- cross at least 35 feet above the departure end of the runway;
- climb on runway heading to 400 feet AAE before turning; and
- maintain a climb gradient of at least 200 feet per NM throughout the climb to the minimum altitude for enroute operations.

NOTE: For flight planning purposes, departure procedures assume normal aircraft performance.

Take-off Minima are shown as either:

- $\frac{1}{2}$ - (e.g. Rwy 02: $\frac{1}{2}$). IFR departures from the specified runway(s) will be assured of obstacle clearance in any direction if the aircraft complies with the above departure premises.
- *** - The asterisk (*****) following all or specific runways (e.g. Rwy 02: *****) refers the pilot to the applicable minimum take-off visibility ($\frac{1}{2}$ or SPEC VIS) and corresponding procedures which, if followed, will ensure obstacle clearance.



TAKE-OFF MINIMA/DEPARTURE PROCEDURES (continued)

Procedures may include specific climb gradients, routings, visual climb requirements or combinations thereof. All altitudes specified in these procedures are ASL. Where visual climb or maneuvering is stated in the departure procedure, pilots must comply with the Specified Take-off Minimum Visibility (SPEC VIS) corresponding to the appropriate aircraft category listed below:

AIRCRAFT CATEGORY	A	B	C	D
SPEC VIS (SM)	1	1 ½	2	2

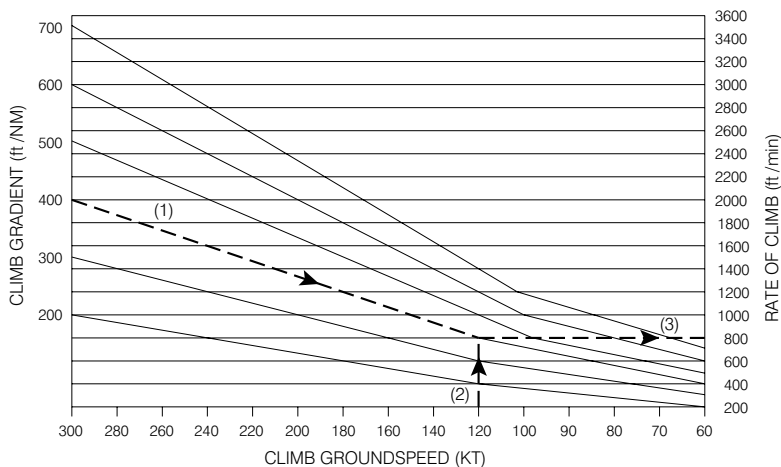
c) NOT ASSESSED - IFR departures have not been assessed for obstacles. Pilots-in-command are responsible for determining minimum climb gradients and/or routings for obstacle and terrain avoidance during an IMC departure from that particular runway(s).

In the absence of a published visibility for a particular runway, a pilot may depart IFR by using a take-off visibility that will allow avoidance of obstacles on departure. In no case should the take-off visibility be less than ½ SM (¼ SM for rotorcraft).

Where aircraft limitations or other factors preclude the pilot from following the published procedure, it is the pilot-in-command's responsibility to determine alternative procedures which will take into account obstacle avoidance.

Where departure procedures do not have a rate of climb matrix published, the following conversion table may be used to determine the required rate of climb.

CONVERSION TABLE - CLIMB GRADIENT TO RATE OF CLIMB



Enter table at required climb gradient (1) and groundspeed (2). Read required rate of climb at right (3).

Eg: Required Gradient: 400 ft/NM
Groundspeed: 120 KT
Rate of Climb: 800 ft/min

HELICOPTER MISSED APPROACH AND DEPARTURE CLIMB GRADIENT

The missed approach and departure segment criteria for all COPTER procedures (Helicopter only procedures) take advantage of the helicopter's climb capabilities at slow airspeeds resulting in high climb gradients. The Obstacle Clearance Surface used to evaluate the missed approach and departure is a 20:1 inclined plane. This surface is twice as steep for the helicopter as the OCS used to evaluate the airplane missed approach and departure segment. The helicopter climb performance on COPTER procedures is therefore anticipated to be double the airplane's gradient. A minimum climb gradient of at least 400 feet per NM is required. A helicopter with a ground speed of 70 KIAS is required to climb at a rate at 467 feet per minute (FPM)★. The advantage of using the 20:1 OCS for the COPTER missed approach segment instead of the 40:1 OCS used for the airplane is that obstacles in the 40:1 missed approach segment do not have to be considered, and the MDA may be lower for helicopters than for other aircraft. The minimum required climb gradient of 400 feet per NM for the helicopter in a missed approach and departure will provide 96 feet of required obstacle clearance (ROC) for each NM of flight path.

★467 FPM = 70 KIAS x 400 feet per NM/60 seconds



APPROACH BAN

See AIC 1/97 - exemption to subsection 602.129(3) of CARs.

With certain exceptions, pilots of all aircraft are prohibited from completing an instrument approach past the outer marker or final approach fix to a runway served by an RVR if the RVR values as measured for that runway are below the following minima:

MINIMUM RVR

MEASURED RVR *	FIXED WING	ROTORCRAFT
RVR "A" ONLY	1200	1200
RVR "A" AND "B"	1200/600	1200/0
RVR "B" ONLY	1200	1200

- * RVR "A" located adjacent to the runway threshold.
RVR "B" located adjacent to the runway mid-point.

The following exceptions to the above prohibitions apply to all aircraft:

- A) when the below-minima RVR report is received, the aircraft is inbound on approach and has passed the outer marker or the fix that serves as the outer marker,
- B) the pilot-in-command has informed the appropriate ATC unit that the aircraft is on a training flight and that the pilot-in-command intends to initiate a missed approach procedure at or above the DH or the minimum descent altitude, as appropriate;
- C) the RVR is fluctuating above and below the minimum RVR and the ground visibility of the aerodrome where the runway is located is reported to be at least $\frac{1}{4}$ mile; or
- D) the pilot-in-command is conducting a precision approach to CAT III minima.

With respect to approach restrictions, in the case of local phenomenon or any fluctuations that affect RVR validity, where the ground visibility is reported by ATC or FSS to be at or above $\frac{1}{4}$ mile, an approach may be completed.

In summary, an approach is authorized whenever:

- a) the lowest reported RVR for the runway is at or above minima (CAR 602.129), regardless of reported ground visibility;
- b) the RVR is reported to be fluctuating above and below minimum RVR, and the ground visibility is reported to be at least $\frac{1}{4}$ mile;
- c) the RVR for the runway is unavailable or not reported; or
- d) ATS is informed that an aircraft is on a training flight and will conduct a planned missed approach.



LANDING MINIMA

CAR 602 specifies that landings are governed by published DH/MDA's. Pilots of aircraft on instrument approaches are prohibited from continuing the descent below DH, or descending below MDA, as applicable, unless the required visual reference is established and maintained in order to complete a safe landing. When the required visual reference is not established or maintained, a missed approach must be initiated. Missed approaches initiated beyond the MAP may not be assured obstacle clearance.

The visual references required by the pilot in order to continue the approach to a safe landing should include at least one of the following references for the intended runway and should be distinctly visible and identifiable to the pilot:

- | | |
|--|---|
| a) the runway or runway markings; | f) the runway identification lights (RILS); |
| b) the runway threshold or threshold markings; | g) the threshold and runway end lights; |
| c) the TDZ or TDZ markings; | h) the touchdown zone lights (TDZL); |
| d) the approach lights; | i) the parallel runway edge lights; or |
| e) the approach slope indicator system; | j) the runway centreline lights. |

Published landing visibilities associated with all instrument approach procedures are advisory only. Their values are indicative of visibilities which, if prevailing at the time of approach, should result in the required visual reference being established and maintained to landing. They are not limiting and are intended to be used by pilots only to judge the probability of a successful landing when compared against available visibility reports at the aerodrome to which an instrument approach is being carried out.

ALTIMETER SETTING REQUIREMENTS

Before commencing an instrument approach procedure the pilot shall have set on the aircraft altimeter a current altimeter setting usable for the location where the approach is to be flown. The altimeter setting may be a local setting or a remote setting when so authorized on the instrument procedure chart. A current altimeter setting is one provided by approved direct reading or remoted equipment, or by the latest routine hourly weather report. These readings are considered current up to 90 minutes from the time of observation. **CAUTION:** Care should be exercised when using altimeter settings older than 60 minutes or when pressure has been reported as falling rapidly. In these instances a value may be added to the published DH/MDA in order to compensate for falling pressure tendency (0.01 inches mercury = 10 feet correction).

A correction factor is published in the top left corner of the approach chart plan view for those aerodromes where an authorized remote altimeter setting source is used during specified times. The correction factor is to be applied to the published procedures altitudes.



USE OF STRAIGHT-IN MINIMA

The use of a straight-in minima is predicated upon the pilot having wind direction and speed and runway condition reports required to conduct a safe landing. Where the pilot lacks any necessary information, the pilot is expected to make an aerial visual inspection of the runway prior to landing. In some cases, this can only be accomplished by conducting a circling approach utilizing the appropriate circling MDA.

Runway conditions, including any temporary obstructions such as vehicles, may be determined by the pilot by:

- a) contacting the UNICOM at the destination;
- b) a pre-flight telephone call to the destination to arrange for making the necessary information available when required for landing;
- c) an aerial visual inspection;
- d) NOTAM issued by the airport operator; or
- e) any other means available to the pilot, such as message relay from preceding aircraft at destination.

Regardless of wind direction or runway in use, pilots of rotorcraft may use the appropriate published straight-in landing minima for the runway they have selected for their approach.

ALTERNATE AERODROME WEATHER MINIMA REQUIREMENTS

Authorized weather minima for alternate aerodromes are to be determined using the information presented in the tables below. The "Alternate Weather Minima Requirements" tables supersedes all alternate weather minima published on the Aerodrome charts in the CAP. The minima derived for an alternate aerodrome shall be consistent with aircraft performance, navigation equipment limitations, functioning navigation aids, type of weather forecast and runway to be used.

Pilots may take credit for a GNSS (GPS or WAAS) approach at an alternate aerodrome, provided that:

- (a) An approach completely independent of GNSS at the planned destination is expected to be available at the ETA.
- (b) The published LNAV minima are the lowest landing limits for which credit may be taken when determining alternate aerodrome weather minima requirements. No credit may be taken for LNAV/VNAV or LPV minima;
- (c) The pilot-in-command verifies that LNAV approach-level RAIM or WAAS integrity is expected to be available at the planned alternate ETA, taking into account predicted satellite outages; and
- (d) For GPS TSO C129/C129a avionics, periodically during the flight, and at least once before the mid-point of the flight to the destination, the pilot-in-command verifies that approach-level RAIM is expected to be available at the planned alternate ETA.

Otherwise, when determining alternate aerodrome weather minima requirements, the pilot shall only take credit for functioning traditional aids at that aerodrome. In this case, if the alternate aerodrome has GNSS approaches only, the pilot shall use the alternate weather minima requirements for "No IFR approach available". Additional guidance on flight planning of GNSS-based approaches at alternate aerodromes is contained in the TC AIM COM 3.16.12.

ALTERNATE WEATHER MINIMA REQUIREMENTS	
FACILITIES AVAILABLE AT SUITABLE ALTERNATE	WEATHER REQUIREMENTS
TWO OR MORE USABLE PRECISION APPROACHES each providing straight-in minima to separate suitable runways	400 - 1 or 200 - ½ above the lowest usable HAT and visibility, whichever is greater
ONE USABLE PRECISION APPROACH	600 - 2* or 300-1 above the lowest usable HAT and visibility, whichever is greater
NON-PRECISION ONLY AVAILABLE	800 - 2* or 300-1 above the lowest usable HAT/HAA and visibility, whichever is greater
NO IFR APPROACH AVAILABLE	Forecast weather must be no lower than 500 feet above a minimum IFR altitude that will permit a VFR approach and landing
FOR HELICOPTERS Where instrument approach procedures are available	Ceiling 200 feet above the minima for the approach to be flown, and visibility at least 1 SM but never less than the minimum visibility for the approach to be flown

***600 - 2** and **800 - 2**, as appropriate, are considered to be STANDARD ALTERNATE MINIMA. Should the selected alternate weather requirements meet the standard minima, then the following minima are also authorized:



ALTERNATE AERODROME WEATHER MINIMA REQUIREMENTS

STANDARD ALTERNATE MINIMA		IF STANDARD IS APPLICABLE, THEN THE FOLLOWING MINIMA ARE ALSO AUTHORIZED	
CEILING	VISIBILITY	CEILING	VISIBILITY
600	2	700 800	1 ½ 1
800	2	900 1000	1 ½ 1

- NOTES 1: These requirements are predicated upon the aerodrome having an AERODROME FORECAST (TAF) available.
- 2: Aerodromes served with an AERODROME ADVISORY forecast may qualify as an alternate provided the forecast weather is no lower than 500 ft above the lowest usable HAT/HAA and the visibility is not less than 3 miles.
- 3: Aerodromes served with a GRAPHIC AREA FORECAST (GFA) may qualify as an alternate provided the forecast weather contains:
- a) no cloud lower than 1000 ft above the lowest useable HAT/HAA;
 - b) no cumulonimbus; and
 - c) a visibility is not less than 3 miles.
- 4: Ceiling minima are calculated by reference to the procedure HAA or HAT. Ceiling values in aviation forecasts are established in 100 ft increments. Up to 20 ft, use the lower 100 ft increment; above 20 ft, use the next higher 100 ft increment:

Examples: HAA 620 ft = ceiling value of 600 ft;
HAA 621 ft = ceiling value of 700 ft;
HAT 420 ft = ceiling value of 400 ft; and
HAT 421 ft = ceiling value of 500 ft.

- 5: Calculated visibilities should not exceed 3 miles.

Caution: All heights specified in a GFA are ASL, unless otherwise indicated.

The emphasis of these criteria is placed upon the availability of the lowest usable landing HAT/HAA and visibility for an aerodrome. In determining the lowest usable landing HAT/HAA and visibility, the pilot should consider:

- a) the operational availability of the ground navigational equipment by consulting NOTAM;
- b) the compatibility of the aircraft equipment with the ground navigational equipment;
- c) the forecast surface wind conditions could dictate the landing runway and associated approach minima;
- d) the operational applicability of terms BECMG, TEMPO, and PROB within the forecast (see RAC 3.14);
- e) all heights mentioned within a GFA are ASL heights, unless otherwise indicated, and the terrain elevation must be applied in order to determine the lowest forecast ceiling at a particular location; and
- f) alternate minima values determined from a previous flight operation may not be applicable to a subsequent flight operation.

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GENERAL

These aircraft operating procedures for the take-off climb have been developed so as to ensure that the necessary safety of flight operations is maintained while minimizing exposure to noise on the ground. One of the two procedures listed below should be applied routinely for all take-offs where noise abatement procedures are in effect.

Nothing in these procedures shall prevent the pilot-in command from exercising his/her authority for the safe operation of the aircraft, except that when a climb gradient is published it must be maintained, or alternate procedures must be adopted.

Noise Abatement Procedures. All aerodromes requiring specific Noise Abatement Procedures will have the procedures incorporated in the SID/departure procedure. Vertical requirements of Noise Abatement Procedures are described as Procedure A or Procedure B and published for each airport. Wherever possible, the aircraft operator will be given the choice of Procedure A or B.

The VNAP procedures hereunder describe the methods for noise abatement when a problem is shown to exist. They have been designed for application to turbo-jet aeroplanes.

Example:

RWY	VNAP
08	B
26	A or B
13	B

VNAP - VERTICAL NOISE ABATEMENT PROCEDURE

PROCEDURE A

Take-off to 1500' above aerodrome elevation:

- take-off power
- take-off flap
- climb at $V_2 + 10$ to 20 kt (or as limited by body angle).

At 1500':

- reduce thrust to not less than climb power/thrust.

1500' to 3000':

- climb at $V_2 + 10$ to 20 kt.

At 3000':

- accelerate smoothly to enroute climb speed with flap retraction on schedule.

NOTE: Pilots intending to use vertical noise abatement procedure VNAP A at Canadian airports are to notify ATC Clearance Delivery or Ground Control.

At airports where VNAP A is the only procedure to follow, ATC does not need to be notified.



PROCEDURE B

Take-off to 1000' above aerodrome elevation:

- take-off power/thrust
- take-off flap
- climb at $V_2 + 10$ to 20 kt

At 1000':

- maintain a positive rate of climb, accelerate to zero flap minimum safe manoeuvring speed (V_{ZF}) retracting flap on schedule;

thereafter:

reduce thrust consistent with the following:

- a) for high bypass ratio engines, reduce to normal climb power/thrust;
- b) for low bypass ratio engines, reduce power/thrust if practicable to below normal climb thrust but not less than that necessary to maintain the final take-off engine-out climb gradient; and
- c) for aircraft with slow flap retraction, reduce power/thrust at an intermediate flap setting;

thereafter:

From 1000' to 3000':

- continue climb at not greater than $V_{ZF} + 20$ kt.

At 3000':

- accelerate smoothly to enroute climb speed using normal climb power/thrust.

NOTE: Aircraft such as supersonic aircraft not using wing flap for take-off should reduce thrust before attaining 1000' but not lower than 500'.

ALTITUDE CORRECTION CHART

COLD TEMPERATURE CORRECTIONS

Pressure altimeters are calibrated to indicate true altitude under ISA conditions. Any deviation from ISA will result in an erroneous reading on the altimeter. In the case when the temperature is higher than ISA, the true altitude will be higher than the figure indicated by the altimeter and the true altitude will be lower when the temperature is lower than ISA. The altimeter error may be significant and becomes extremely important when considering obstacle clearances in very cold temperatures.

In conditions of extreme cold weather pilots should add the values derived from the altitude correction chart to the published procedure altitudes, including minimum sector altitudes and DME arcs, to ensure adequate obstacle clearance. Unless otherwise specified, the destination aerodrome elevation is used as the elevation of the altimeter source.

With respect to altitude corrections the following procedures apply:

1. IFR assigned altitudes may be either accepted or refused. Refusal in this case is based upon the pilot's assessment of temperature effect on obstruction clearance.
2. IFR assigned altitudes accepted by a pilot shall not be adjusted to compensate for cold temperatures i.e. if a pilot accepts "maintain 3000" an altitude correction shall not be applied to 3000'.
3. Radar vectoring altitudes assigned by ATC are temperature compensated and require no corrective action by pilots.
4. When altitude corrections are applied to published final approach fix crossing altitude, procedure turn or missed approach altitude, pilots should advise ATC how much of a correction is to be applied.

ALTITUDE CORRECTION CHART

A/D Temp °C	HEIGHT ABOVE THE ELEVATION OF THE ALTIMETER SETTING SOURCE (feet)														
	200	300	400	500	600	700	800	900	1000	1500	2000	3000	4000	5000	
0	20	20	30	30	40	40	50	50	60	90	120	170	230	290	
-10	20	30	40	50	60	70	80	90	100	150	200	290	390	490	
-20	30	50	60	70	90	100	120	130	140	210	280	430	570	710	
-30	40	60	80	100	120	130	150	170	190	280	380	570	760	950	
-40	50	80	100	120	150	170	190	220	240	360	480	720	970	1210	
-50	60	90	120	150	180	210	240	270	300	450	600	890	1190	1500	

Note: The corrections have been rounded up to the next 10 ft increment.

Note: Values should be added to published minimum IFR altitudes.

Note: Temperature values from the reporting station (normally the aerodrome) nearest to the position of the aircraft should be used.

Example: Aerodrome Elevation 2262 Aerodrome Temperature -50° C

	ALTITUDE	HAA	CORRECTION	INDICATED ALTITUDE
Procedure Turn	4000 feet	1738 feet	+521.4 feet ¹	4600 feet ²
FAF	3300 feet	1038 feet	+311.4 feet	3700 feet
MDA Straight-in	2840 feet	578 feet	+173.4 feet	3020 feet
Circling MDA	2840 feet	578 feet	+173.4 feet	3020 feet

¹ CORRECTION derived as follows:

$$\begin{aligned}
 (2000 \text{ ft at } -50^\circ \text{ error}) \quad 600 - (1500 \text{ ft at } -50^\circ \text{ error}) \quad 450 &= 150 \\
 \text{Altitude difference of above } (2000 - 1500) &= 500 \\
 \text{Error per foot difference } (150/500) &= 0.3 \\
 \text{HAA} &= 1738 \\
 \text{Error at } 1738 &= \\
 (1738 - 1500) \star 0.3 = 71.4 + 450 \text{ (error } -50^\circ \text{ at } 1500) &= 521.4
 \end{aligned}$$

² INDICATED ALTITUDE derived as follows:

$$\begin{aligned}
 \text{Calculated error at } 1738 \text{ from above} &= 521.4 \\
 \text{Procedure Turn Altitude } (4000) + \text{error } (521.4) &= 4521.4 \\
 \text{INDICATED ALTITUDE rounded next higher } 100 \text{ ft increment} &= 4600
 \end{aligned}$$



APPROACH AND AERODROME CHARTS

GENERAL

Charts are arranged alphabetically by aerodrome name. All DISTANCES are in nautical miles except visibility data which is in statute miles. RUNWAY VISUAL RANGE (RVR) is in hundreds of feet. Runway dimensions are in feet. ELEVATIONS are in feet above sea level. BEARINGS are magnetic unless marked G for Grid or T for True. Altitudes are minimum altitudes and meet obstacle clearance requirements under ISA conditions.

AERODROMES

Main aerodrome



Others than main aerodrome



Land



Water



Heliport

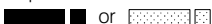
Aerodrome profile



MANOEUVERING AREAS



Displaced Thresholds



Under Construction
Closed or Abandoned



Sand, gravel, etc.



Steel mat



Ski strip



(labelled)

Taxiway, apron or holding bay



RADIO AIDS



NDB



VORTAC



VOR



TACAN



VOR/DME



ILS
LOCALIZER

LOCALIZER
COURSE




DME

**BACK COURSE
NO GLIDE PATH
IGNORE GLIDE
PATH INDICATIONS**

The front course glide path signal of certain ILS equipment cannot be shielded to prevent random signals from activating the aircraft glide path indicator during a Back Course Approach.

The warning flag retracts and glide path indicator shows erroneous fly-up or fly-down indications. Pilots MUST ignore any glide path indications when carrying out BACK COURSE - NO GLIDE PATH approaches.

SYMBOL LEGEND

PROCEDURES SYMBOLS		PROFILE		
<p style="text-align: center;">PLAN VIEW</p> <p>— 283° → Procedure Track</p> <p>↙ 060° / ← 240° Procedure Turn</p> <p>- - - → Missed Approach Track</p> <p>2100 — 171° → Transition 7.2 NM</p> <p>25 → DME Fix</p> <p>← Mileage</p> <p>4000 or 4000 Minimum altitude</p> <p>4000 Maximum altitude</p> <p>4000 Mandatory altitude</p> <p>Restricted or Advisory Area</p>  <p>For Circling restriction information see Approach Chart Legend (page 2)</p>	<p style="text-align: center;">PLAN VIEW</p> <p>↻ A Holding Pattern or a Shuttle if indicated</p> <p>* Final Approach Fix (FAF)</p> <p> Fix</p> <p>△ Intersection</p> <p>⊕ Fly - over Waypoint</p> <p>⊙ Fly - by Waypoint</p> <p>10000 4000 Block of altitudes</p>	<p style="text-align: center;">PROFILE</p> <p>••• Secondary Procedure Track</p> <p>↘ Missed Approach Track</p> <p>2000 Procedure Turn Altitude</p> <p>↘ 285° Primary Procedure Track</p> <p>* Final Approach Fix (FAF)</p> <p>▴ NDB</p> <p>▾ VOR</p> <p>VOR/DME</p> <p>VORTAC</p> <p>TACAN</p> <p>3.12° 3.12 degree VPA</p> <p>▴ ILS GLIDE PATH</p> <p>▾ Fix INTXN RADIAL</p>	<p style="text-align: center;">ADVISORY AREA ACTIVITY CODES</p> <p>(A) - Acrobatic (F) - Aircraft Test Area</p> <p>(H) - Hang Gliding (M) - Military Operations</p> <p>(P) - Parachute Dropping (S) - Soaring</p> <p>(T) - Training</p>	
LIGHTS				
<p>└ Landing direction indicator unlighted</p> <p>✦ Landing direction indicator lighted</p> <p style="text-align: center;">LIGHTING ANNOTATIONS</p> <p>F - Fixed FI - Flashing Occ - Occulting</p> <p>B - Blue R - Red G - Green</p> <p>Lights are white unless otherwise annotated</p>	<p>▶ Wind direction indicator unlighted</p> <p>➤ Wind direction indicator lighted</p> <p>★ Hazard beacon</p> <p>☆ Aerodrome beacon (rotating or strobe)</p> <p>* Obstruction light for Aerodrome Charts</p> <p>⊙ 2.5° Approach slope lights (slope given when other than 3.0°)</p>			
MISCELLANEOUS				
<p>↔ Bi-directional arrester cable</p> <p>└ Uni-directional arrester cable</p> <p>⋈ Arresting barrier</p> <p>- - - International Boundary</p> <p>⊕ Heliport and/or touchdown pad (see note)</p> <p>NOTE: Arr/dep, arr/dep hover and take-off/landing areas, and/or touchdown pads may be designated by name, numeral or letter.</p>	<p>⊙ RVR Sensor</p> <p>⋈ Transmission line</p> <p>SHUTTLE Descend or climb in a holding pattern</p> <p>0.8% down Runway Gradient</p> <p>△ Unmarked areas (see note)</p>	<p>★ Restriction</p> <p>⋈ Built Up Area</p> <p>△ Obstruction</p> <p>• Spot elevation</p> <p>615</p> <p>△ Marked areas (see note)</p>		

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PROCEDURE IDENTIFICATION

CONVENTIONAL PROCEDURES

ILS, NDB, VOR etc. indicate types of facilities on which the procedure is based. Pilots must determine in advance that the approach and missed approach can be accomplished utilizing the navigation equipment on board their particular aircraft.

ILS or NDB RWY 09 : Denotes two instrument approach procedures on one chart.

ILS/DME RWY 09 : Denotes one instrument approach procedure and describes the navigation equipment which provides final approach identification and guidance.

AREA NAVIGATION/RNAV PROCEDURES

RNAV indicates the procedure is based on Area Navigation. The equipment required to fly the procedure is indicated in brackets. Example: RNAV (GNSS) indicates an RNAV procedure requiring GNSS.

NOTES : (1) The procedure may be identified only by the primary navigation equipment when the fix has two or more designations. e.g. LOC(BC)/NDB or LOC(BC)/DME RWY 16 will be identified as LOC(BC) RWY 16.

(2) Procedures annotated (DND) were designed by the Department of National Defence using the same criteria as civilian approaches.

(3) Conventional procedures annotated (GNSS) denote that the instrument approach can be flown using approved GNSS equipment.

(4) Runway number is given when procedure can be used for straight-in minima.

(5) Instrument approach procedures authorized to circling minima only are identified by a letter. NDB A, NDB B, RNAV (GNSS) A, RNAV (GNSS) B.

PROCEDURE IDENTIFICATION

ILS or NDB RWY 15

COMMUNITY NAME

AERODROME NAME

AERODROME ELEVATION

SUMSPOT INTL
SUMSPOT AB

ELEV 569

ATIS 114.5 (Eng) 265.6 114.8 (Fr) 326.3	ARR 119.2 358.1	PAR 125.4 227T 247.5	TWR 118.7 236.6	GND 121.9 275.8	DEP 119.9 363.8	TDZE 15 557
--	------------------------------	-----------------------------------	------------------------------	------------------------------	------------------------------	--------------------

TOUCHDOWN ZONE ELEVATION

LOCATION INDICATOR

CYYZ

COMMUNICATION AGENCIES are listed from left to right in order of expected use on approach.

PAR frequencies shown only if runway indicated is served by PAR.

● means limited hrs of operation.

(5 NM) or (MF CZ) MANDATORY FREQUENCY procedure applicable within a specified distance of an A/D or within the bounds of the Control Zone.

See Canada Flight Supplement for actual hours of operations and lists of all available frequencies.



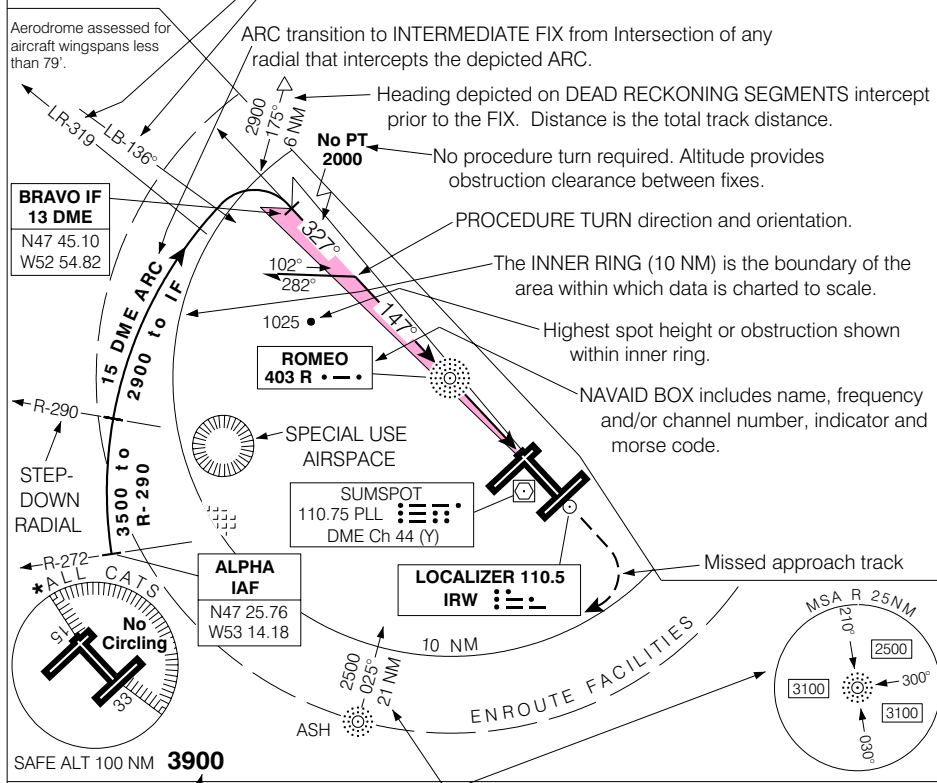
PLAN VIEW WITH NO CONTOUR LINES

Operational restrictions and cautionary notes are shown in the top left corner.

This information advises pilots intending to conduct an instrument approach procedure that the obstacle free airspace for the visual segment of the procedure for the specific runway meets recognized safety parameters only for aircraft of a wingspan up to the dimensions specified in the note. This advisory information ties the instrument procedure to the aerodrome and provides the pilot with information to make an informed decision regarding use of the procedure.

Facilities and fixes which are beyond the distance of the Inner Ring are located on the ENROUTE FACILITIES RING when they are designated as part of the procedure for any segments of the approach. Facilities upon which the procedure track is based are depicted in darker print. Other facilities and/or DME distances not essential for the approach but considered useful information may be depicted in lighter print.

LEAD BEARING or LEAD RADIAL. Shown only where turn exceeds 90°.



MINIMUM SECTOR ALTITUDES and SAFE ALTITUDES 100 NM. The Safe Altitude 100 NM is centred on the geographic centre of the aerodrome.

MEA, TRACK and DISTANCE to FAF, IAF or IF.

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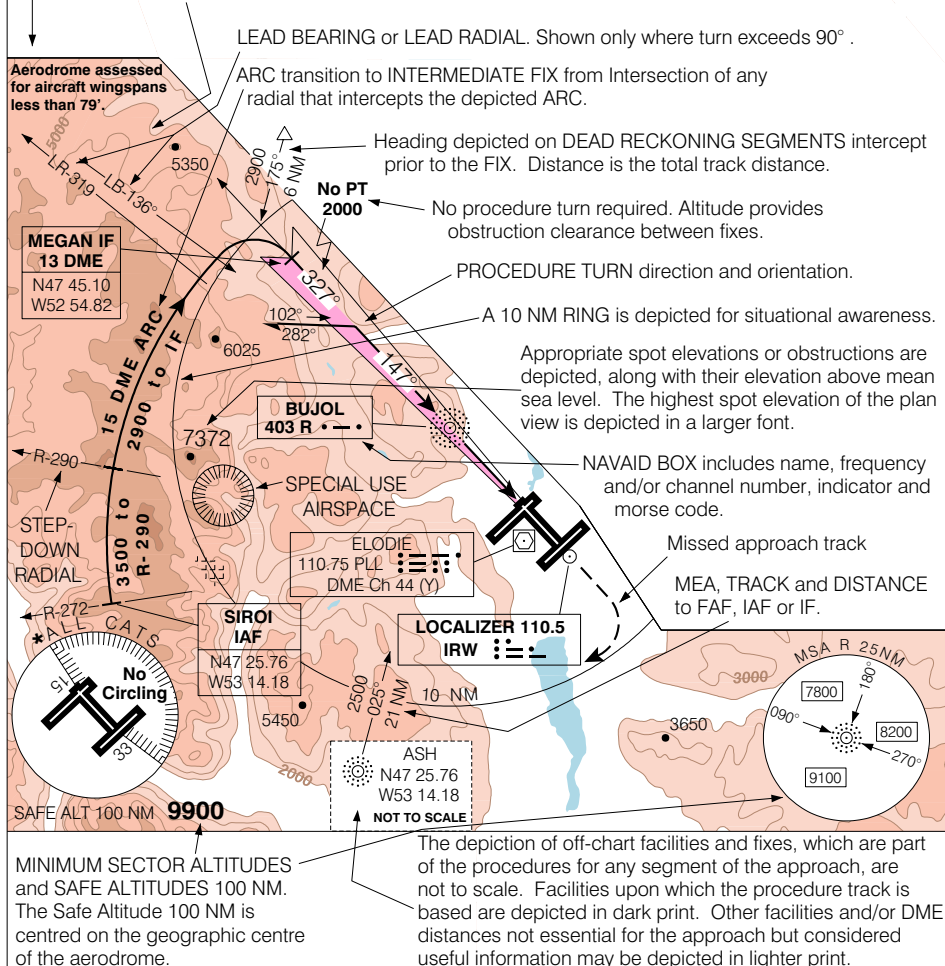


PLAN VIEW WITH CONTOUR LINES

Operational restrictions and cautionary notes are shown in the top left corner.

This information advises pilots intending to conduct an instrument approach procedure that the obstacle free airspace for the visual segment of the procedure for the specific runway meets recognized safety parameters only for aircraft of a wingspan up to the dimensions specified in the note. This advisory information ties the instrument procedure to the aerodrome and provides the pilot with information to make an informed decision regarding use of the procedure.

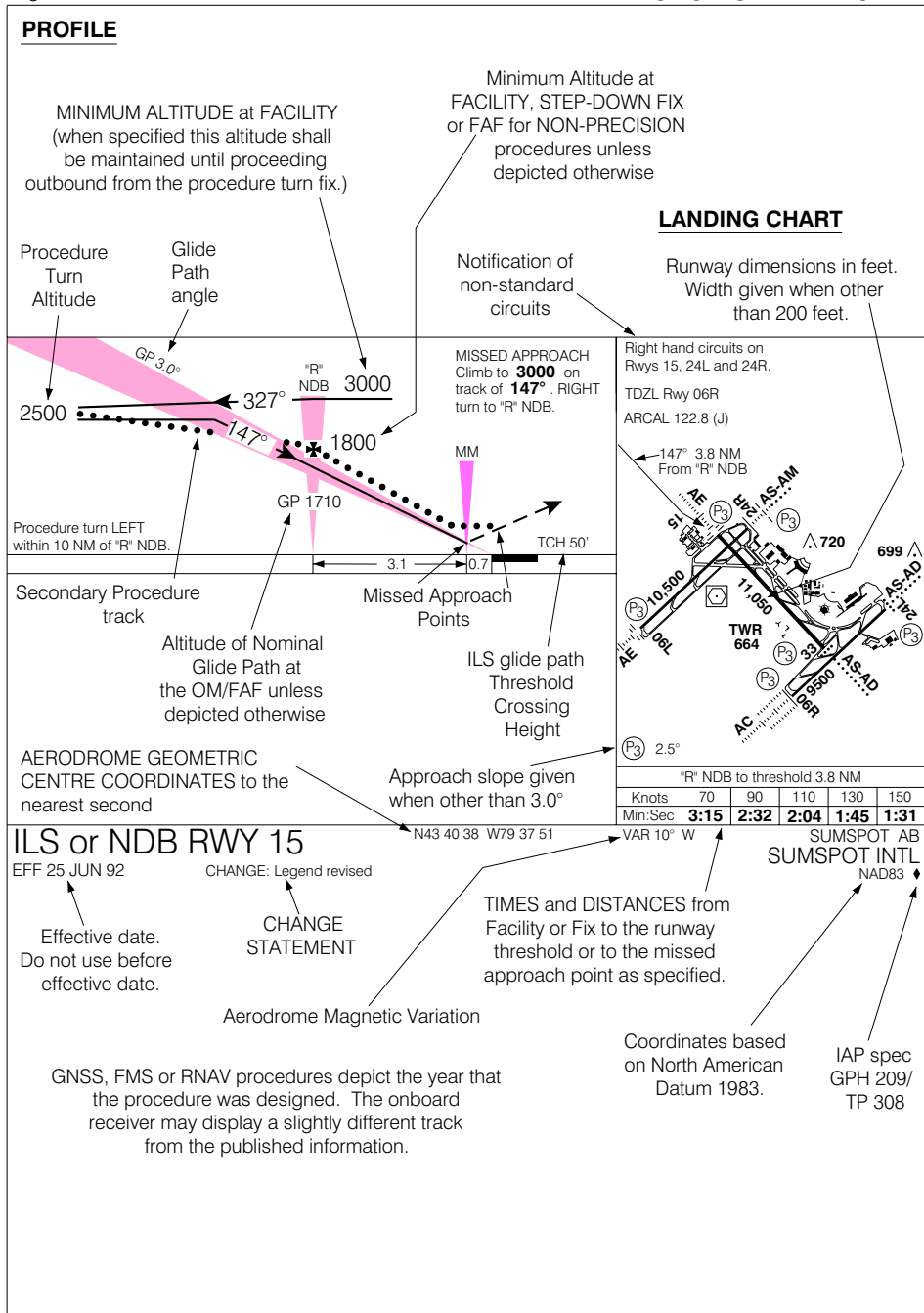
SMOOTHED CONTOUR LINES are depicted in 1000 foot intervals when terrain exceeds 4000 feet above the airport elevation, or when terrain within 6 NM of the Aerodrome Reference Point (ARP) rises to a least 2000 feet above the aerodrome elevation. Gradient tints indicate the elevation change between contour intervals. Contour lines, values and tints are printed in brown and will begin at 500 feet above the aerodrome elevation. The absence of terrain contour information does not ensure the absence of terrain or structures.



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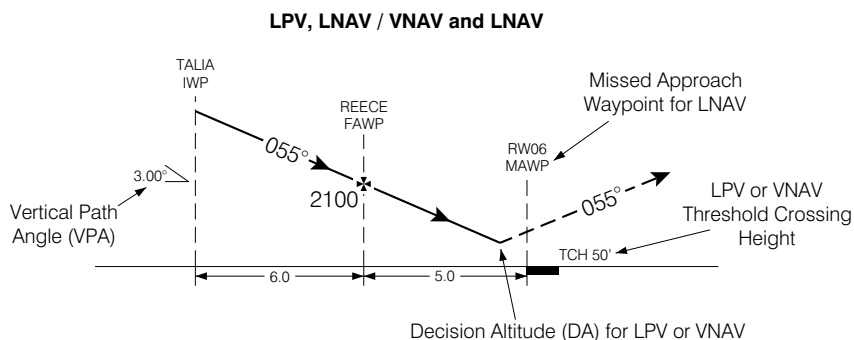
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APPROACH CHART LEGEND

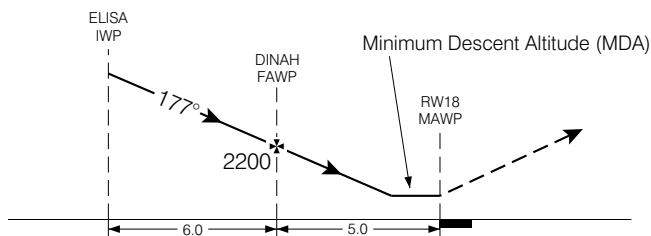


PROFILE

RNAV (GNSS)



LNAV and CIRCLING only



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MINIMA BOX

AIRCRAFT CATEGORIES:

- A - Speed(s) to 90 kt (including rotorcraft)
- B - 91 kt to 120 kt
- C - 121 kt to 140 kt
- D - 141 kt to 165 kt
- E - Speed(s) over 165 kt

The appropriate aircraft category and resultant approach minima are determined by the airspeed at which the aircraft is to be manoeuvred.

CATEGORY	A	B	C	D
ILS	767	(203)	½ RVR 26	
LOC	880	(311)	1 RVR 50	
NDB	980	(411)	1 RVR 50	
* CIRCLING	1080	(511) 1 ½	1080 (511) 2	1180 (611) 2

When High Intensity Approach Lighting is inoperative, the Advisory Visibility is ¾ RVR 40.

Advisory Visibility in statute miles and RVR value.

Circling Minimum Descent Altitude

CIRCLING MINIMA

* means circling restriction. See plan view for more details.

HEIGHT OF CIRCLING MDA above aerodrome elevation (HAA)

STRAIGHT-IN MINIMA

† means LNAV / VNAV temperature restriction. See plan view for more details.

CATEGORY	A	B	C	D
LPV	720	(258)	½ RVR 26	
† LNAV / VNAV	800	(338)	1 RVR 50	
LNAV	840	(378)	1 ¼	
* CIRCLING	980	(503) 1 ½	980 (503) 2	1080 (603) 2

Advisory Visibility in statute miles and RVR value.

CIRCLING MINIMA

* means circling restriction. See plan view for more details.

Circling Minimum Descent Altitude

HEIGHT OF CIRCLING MDA above aerodrome elevation (HAA)

STRAIGHT-IN MINIMA

MINIMA BOX (DIFFERENT CIRCLING MINIMA)

CATEGORY	A	B	C	D
VOR/DME	1380 (471)		1	
CIRCLING	1420 (508) 1 ½	1420 (508) 2	1520 (608) 2	
VOR	1580 (671)		1 ¼	
CIRCLING	1580 (668) 1 ½	1580 (668) 2		

Indicates that different circling minima exist depending on type of nav. equipment used.

VOR/DME or VOR RWY 08

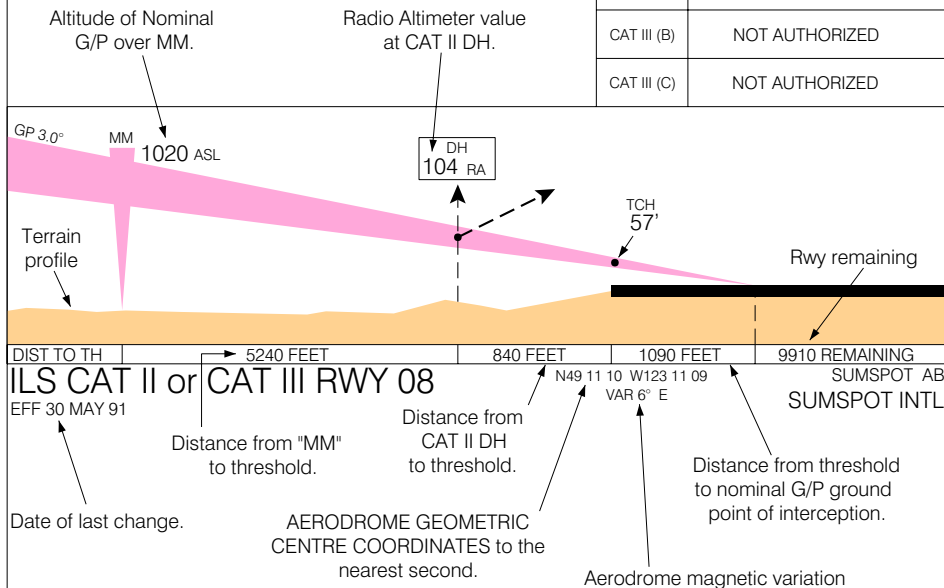
ILS CAT II or CAT III TERRAIN PROFILE VIEW and MINIMA BOX

OPERATION TO CATEGORY II or CATEGORY III MINIMA IS NOT APPROVED UNLESS SPECIFIC AUTHORIZATION HAS BEEN OBTAINED FROM TRANSPORT CANADA (MIL:NDHQ)

TERRAIN PROFILE VIEW

MINIMA BOX

HAT	PRIOR AUTH REQUIRED FROM TC		VIS
DH	CAT II	878	(100) RVR 12
	CAT III (A)	RVR 6	
	CAT III (B)	NOT AUTHORIZED	
	CAT III (C)	NOT AUTHORIZED	



AERODROME CHART LEGEND

AERODROME NAME → SUMSPOT INTL
COMMUNITY NAME → SUMSPOT AB

AERODROME CHART

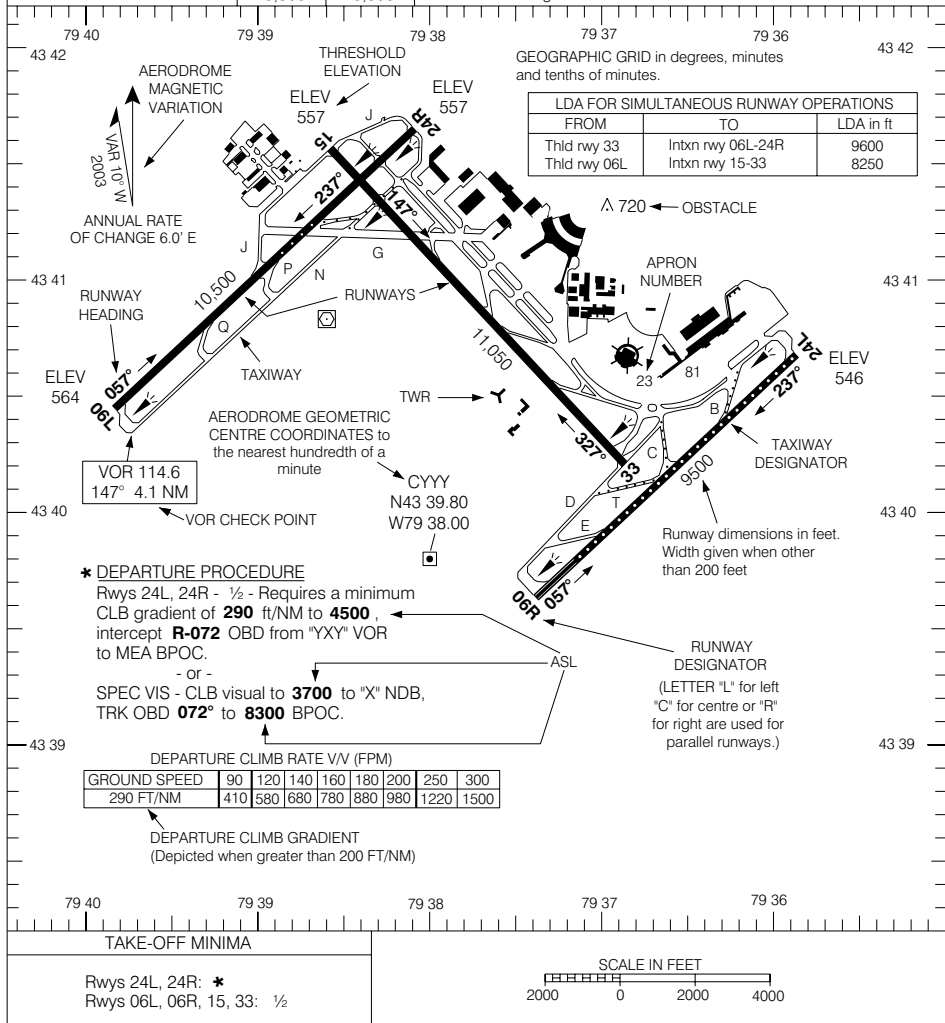
VOT 114.8	ATIS 114.5 (Eng) 265.6 114.8 (Fr) 326.3	CLNC DEL 121.3	GND 121.9 121.65 275.8	TORONTO TWR 118.35 118.7 236.6	DEP 128.8 127.575 363.8
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COMMUNICATION AGENCIES with PRIMARY FREQUENCIES are listed from left to right in order of expected use on departure. ● means limited hours of operation. See Canada Flight Supplement for actual hours of operation and of all available frequencies.

DECLARED DISTANCES

	06L	24R
TORA	10,500	10,500
TODA	11,300	11,500
ASDA	10,500	10,500
LDA	10,500	10,500

← TORA - Take Off Run Available
← TODA - Take Off Distance Available
← ASDA - Accelerate Stop Distance Available
← LDA - Landing Distance Available



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AERODROME CHART

EFF 13 APR 06

CHANGE: Editorial

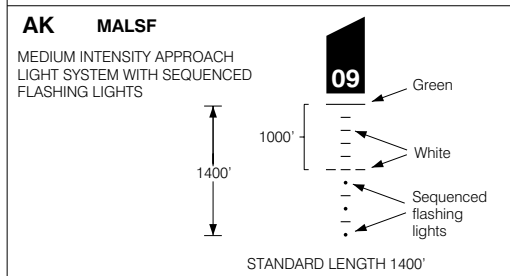
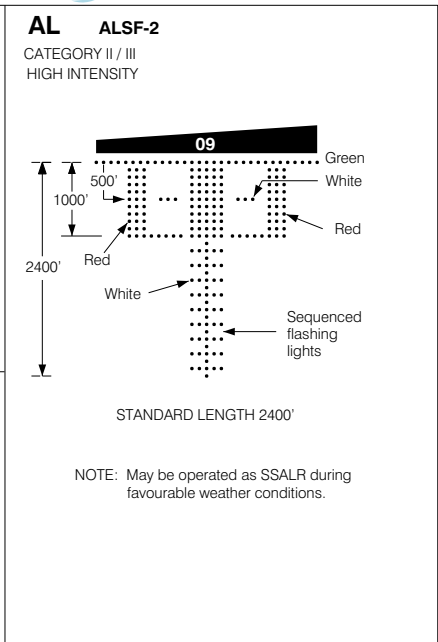
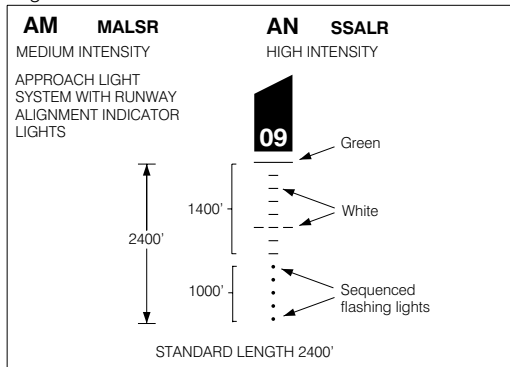
AERODROME CHART LEGEND



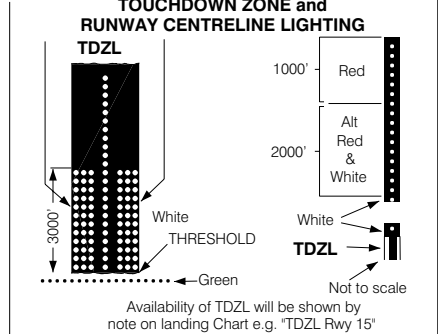
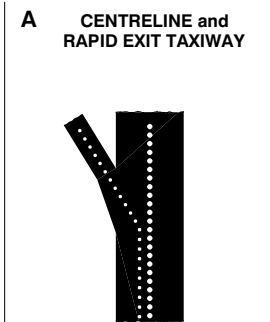
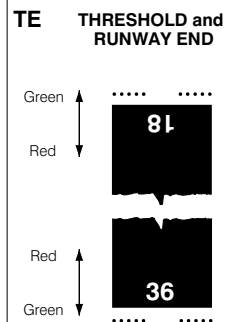
<p>AA LEFT SINGLE ROW</p> <p>200' SPACING LOW INTENSITY</p>	<p>AC CENTRE ROW</p> <p>CATEGORY II HIGH INTENSITY (Combined high intensity and AD system)</p> <p>1000'</p> <p>MINIMUM LENGTH 2400'</p>	<p>AD CENTRE ROW</p> <p>LOW INTENSITY</p> <p>MINIMUM LENGTH 2400'</p>
<p>AE CENTRE ROW</p> <p>CATEGORY I HIGH INTENSITY (Combined high intensity and AD system)</p> <p>1000'</p> <p>MINIMUM LENGTH 2400'</p>	<p>AF CENTRE ROW</p> <p>MODIFIED CALVERT HIGH INTENSITY (Combined high intensity and AD system)</p> <p>1000'</p> <p>Note: Threshold outline in GREEN at DND Bases only.</p> <p>MINIMUM LENGTH 2400' SF lights may or may not be installed in outer 2000'</p>	<p>AJ CENTRE ROW</p> <p>LOW INTENSITY</p> <p>1000'</p> <p>MINIMUM LENGTH 2400' SF lights may or may not be installed in outer 2000'</p>
<p>AO ODALS</p> <p>OMNI-DIRECTIONAL APPROACH LIGHTING SYSTEM</p> <p>1500'</p> <p>Sequenced flashing lights</p> <p>STANDARD LENGTH 1500'</p>	<p>AS RUNWAY IDENTIFICATION LIGHTS</p> <p>(UNI-DIRECTIONAL FLASHING STROBE LIGHTS)</p>	<p>SF</p> <p>Sequenced flashing strobe lights installed in the approach lighting at some aerodromes. System includes runway identification lights.</p> <hr/> <p>* A small asterisk after system identification letters on the landing chart indicates a modification to the basic system. See CFS for details.</p>

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THRESHOLD AND RUNWAY LIGHTING



AIRCRAFT RADIO CONTROL OF AERODROME LIGHTING (ARCAL)

Type J To operate all aerodrome lighting for duration of approximately 15 minutes key mike 5 times within 5 seconds. The timing cycle may be restarted at anytime by repeating the keying sequence.

Note: Some systems will indicate when the duration period is over by flashing once, then remaining on for a further 2 minutes before extinguishing completely. Other systems offer no indication that the period is ending. The control system may operate H24 or between sunset and sunrise.

Type K To operate all aerodrome lighting for a duration of approximately 15 minutes, key mike 7 times initially. This will ensure all lights are on maximum intensity. The intensity may be adjusted up or down to anyone of three settings by keying the mike 7, 5, or 3 times within 5 seconds for high, medium, or low intensity settings respectively. The timing cycle may be restarted at any time by repeating the initial keying sequence. Where Runway Identification Lights (code AS) are available, keying the microphone three times on the appropriate frequency will turn them off.

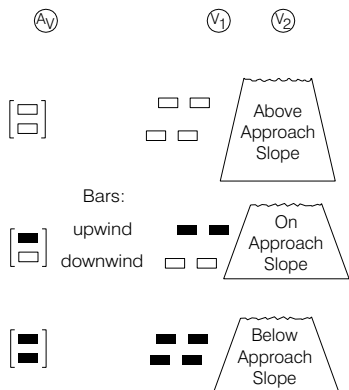


VISUAL APPROACH SLOPE INDICATOR SYSTEM (VASIS)

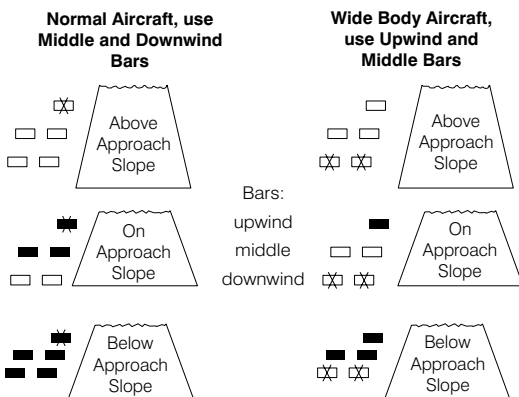
BARS MAY BE LOCATED ON EITHER OR BOTH SIDES OF THE RUNWAY (Ref AIP AGA).

- V₁ 2 - BAR VASIS for aircraft with eye-to-wheel height up to 10'.
- V₂ 2 - BAR VASIS for aircraft with eye-to-wheel height up to 25'.
- V₃ 3 - BAR VASIS for wide bodied aircraft with eye-to-wheel height up to 45' (B-747 and smaller).
- Av AVASIS - Abbreviated VASIS for aircraft with eye-to-wheel height up to 10' (shown in brackets, 2 light units).

TWO BAR VASIS



THREE BAR VASIS

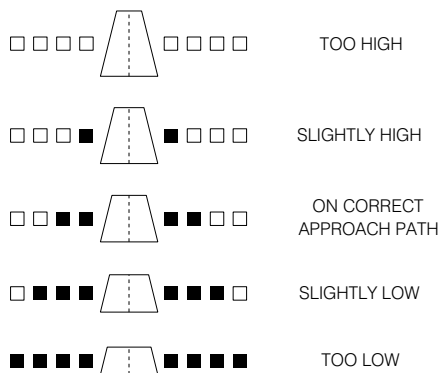


LEGEND: White □ Red ■ Do not use ⊗

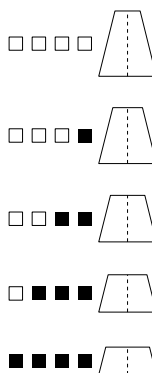
PRECISION APPROACH PATH INDICATOR (PAPI)

- P₁ PAPI for aircraft with eye-to wheel height up to 10'.
- P₂ PAPI for aircraft with eye-to-wheel height up to 25'.
- P₃ PAPI for aircraft with eye-to-wheel height up to 45'.
- A_p APAPI - Abbreviated PAPI for aircraft with eye-to-wheel height up to 10'.

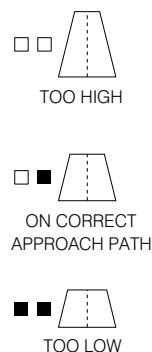
Military PAPI



Civil PAPI



APAPI



LEGEND: White □ Red ■

MILITARY PSR/PAR

All military PSR/PAR operates continuously during IFR unless otherwise noted.

Note: PSR/PAR will be automatically alerted during actual or forecast IFR upon receipt of a flight plan.

★ PSR/PAR instructions will be broadcast on the indicated frequency in the event of VHF communications failure.

These DH's apply to civil pilots except when radar controller's limits are higher than those published below.

CIVIL MINIMA

LOCATION	RUNWAY	TDZE	DH or MDA	HAT or HAA	VIS & RVR	FREQUENCIES	
Bagotville, QC	PAR-11	519	719	200	½ RVR 26	119.0	134.1
	PAR-29	511	711	200	½	283.7	289.4
Cold Lake, AB	PAR-13L	1772	1972	200	½	119.4	134.1
	PAR-22	1767	1967	200	½	279.8	289.4
	PAR-31R	1775	1975	200	½ RVR 26	294.6	336.0
						378.5	★ 356P
Comox, BC	PAR-11	77	277	200	½ RVR 26	127.0	128.1
	PAR-29	84	284	200	½	134.1	283.7
						289.4	335.9
						342.9	378.5
						384.5	★ 400P
Goose Bay, NL	PAR-08	160	360	200	½ RVR 26	118.1	121.2
	PAR-26	153	353	200	¾	269.6	279.8
						289.4	336.5
Greenwood, NS	PAR-08	85	285	200	½	118.1	134.1
	PAR-26	88	288	200	½ RVR 26	258.6	283.9
	PAR-31	92	292	200	½	289.4	378.5
							★ 257P
Moose Jaw, SK	PAR-11L	1882	2100	218	½	129.1	136.5
	PAR-29R	1880	2080	200	½ RVR 26	378.5	381.3
Shearwater, NS (Halifax)	Copter 104	167	267	100	¼	128.1	134.1
	Copter 157	136	236	100	¼	289.4	346.6
	PAR-28	132	332	200	¾		
	PAR-34	127	327	200	½		
Trenton, ON	PAR-06	275	475	200	½	124.35	125.25
	PAR-24	282	482	200	½ RVR 26	127.95	286.4
						289.4	367.8
						★ 215P	

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