EFFECTIVE 0901Z **30 NOVEMBER 2023** TO 0901Z 28 DECEMBER 2023

AIP CANADA

Aeronautical Information Circulars



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AERONAUTICAL INFORMATION CIRCULAR SUMMARY 6/23

(Supersedes all previous summaries)

The following Aeronautical Information Circulars are in effect:

28/18	Toronto/Lester B. Pearson International (CYYZ) New Night-Time Approach Procedures
10/21	Notice of Trial for Proposed Amended Preferential Runway System at Toronto/Lester B. Pearson International Airport (Replaces AIC 8/20)
15/21	Notice of Operational Trial: New Runway Hold Position Markings, Placement and Lighting Toronto/Lester B. Pearson International Airport
22/21	Canada/USA Border Computer Navigation Fixes
32/21	Pre-Taxi Clearance Implementation at Flight Service Staffed Airports in Canada
22/22	Use of Controller Pilot Data Link Communications Route Clearance Messages in the Moncton Flight Information Region
29/22	Established on RNP AR (EoR) Implementation at Toronto/Pearson International Airport (CYYZ)
2/23	Changes to the Iqaluit, NU (CYFB) Standard Instrument Departure
4/23	Update on Time Based Separation Implementation at Toronto/Lester B. Pearson International Airport (CYYZ)
6/23	Flight Planning Procedures for North Atlantic Westbound Flights Transiting From Gander OCA to Gander CTA and Montreal FIR Below FL290
11/23	Procedures for the Use of a Ground Advisory Frequency at Select Airports (Supersedes AICs 26/22 and AIC 27/22)
12/23	Assignment of ICAO Navigation Specifications to Canadian Area Navigation Standard Instrument Departures
15/23	Use of Controller Pilot Data Link Communications Route Clearance Messages in the Montreal Flight Information Region
16/23	Closure Of Toronto / Buttonville Municipal, ON (CYKZ)
18/23	Bagotville Airspace Changes
22/23	Transition from Aerodrome Geometric Centre Coordinates (AGCC) to Aerodrome Reference Point (ARP)
23/23	Notifications On Overflying Conflict Zones Issued By Transport Canada (replaces AIC 21/23)
24/23	NAVAID Modernization Program: Phase 11
25/23	Aviation Weather Web Site (AWWS) Decommissioning
26/23	ADS-B within Canadian Domestic Airspace (Replaces AIC 17/23)
27/23	Notice of Mandate to Apply Airport Collaborative Decision Making (A-CDM) Procedures at Toronto/Lester B. Pearson International Airport (Replaces AIC 9/21)

	28/23	NAVAID Modernization Program: Interim Phase
	29/23	Notice of Decommissioning of Canadian Aircraft Geometric Height Measurement Element (AGHME) Sites
	30/23	National Implementation of Trigger NOTAM Effective 30 Nov 2023
The follo	wing Aero	nautical Information Circulars have been cancelled:
	9/21	Notice of Mandate to Apply Airport Collaborative Decision Making (A-CDM) Procedures at Toronto/Lester B. Pearson International Airport (Replaces AIC 26/20)
	5/23	NAVAID Modernization Program: Interim Phase
	7/23	Commercial Broadcasting Stations
	9/23	NAVAID Modernization Program: Phase 10
	14/23	NAVAID Modernization Program: Interim Phase
	17/23	ADS-B Within Canadian Domestic Airspace (Replaces AIC 24/22, 30/22 and 10/23)
	20/23	NAVAID Modernization Program: Interim Phase

AERONAUTICAL INFORMATION CIRCULAR 30/23

NATIONAL IMPLEMENTATION OF TRIGGER NOTAM EFFECTIVE 30 NOV 2023

AIP Supplements, like NOTAMs, are used to make temporary changes to the information contained in AIP Canada. While NOTAMs are used for dynamic changes and are limited in message length, AIP Supplements are used for longer-term changes (3 months or more) or shorter events where the inclusion of an illustration or additional details are necessary to convey the change events more accurately. For example, airport construction projects can create several dynamic changes to surfaces, services, and procedures, often requiring dozens of NOTAMs relating to the activity, which can be difficult to accurately visualize.

NAV CANADA is working to modernize how AIP Supplements are published to increase their effectiveness and make them an option in situations where NOTAMs used to be the only choice. Changes include increasing the frequency of publication of AIP Supplements, updating the website to improve the overall experience when accessing AIP Supplements and AIC, and issuing Trigger NOTAM to advertise the issuance of an AIP Supplement.

Trigger NOTAMs include the word TRIGGER and identifies the AIP Supplement reference number as well as the general subject.

More information can be found on the NAV CANADA website < https://www.navcanada.ca/en/aip-supplement-aic-enhancements.pdf>

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AERONAUTICAL INFORMATION CIRCULAR 29/23

NOTICE OF DECOMMISSIONING OF CANADIAN AIRCRAFT GEOMETRIC HEIGHT MEASUREMENT ELEMENT (AGHME) SITES

Introduction

Operators of aircraft approved to fly with a 1,000-foot vertical separation in reduced vertical separation minimum (RVSM) airspace, which is all Canadian airspace between FL 290 and FL 410, are required to participate in the global RVSM height monitoring program. For North America, RVSM height monitoring is conducted via the North American Approvals Registry and Monitoring Organization (NAARMO), the official RVSM Regional Monitoring Agency (RMA) supporting implementation and continued safe use of the North American RVSM airspace. Monitoring requirements are described in Transport Canada Advisory Circular (AC) No. 700-039 (Requirements to obtain Reduced Vertical Separation Minimum (RVSM) Special Authorization).

Aircraft Geometric Height Measurement Element (AGHME)

RVSM height monitoring has been provided by the Aircraft Geometric Height Measurement Element (AGHME) system, a ground-based constellation positioned at fixed locations in the United States and Canada that generates estimates of height-keeping performance parameters for aircraft flying within its coverage area. Canadian AGHME sites are located at Ottawa, Ontario and Lethbridge, Alberta.

Automatic Dependent Surveillance – Broadcast (ADS-B) Height Monitoring

ADS-B has become the principle means for monitoring height-keeping performance for RVSM airspace in Canada, allowing for aircraft equipped with qualified ADS-B out systems to be automatically height-monitored each Monday during normal operations at RVSM altitudes. Aircraft that are due for periodic monitoring or that must verify performance can fly any Monday in Canadian airspace to obtain a monitoring result and no longer need to fly over the specific AGHME locations at Ottawa or Lethbridge. Effective 10 August 2023, Canada implemented an ADS-B Out Performance Requirements Mandate in Canadian Class A domestic airspace. This has resulted in the AGHME system no longer being required in Canada and its maintenance no longer feasible.

The purpose of this Circular is to inform air operators that, **effective 25 January 2024**, the Canadian AGHME sites will be decommissioned and taken out of service.

Further Information

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AERONAUTICAL INFORMATION CIRCULAR 28/23

NAVAID MODERNIZATION PROGRAM: INTERIM PHASE

NAV CANADA, the country's provider of civil air navigation services, conducted an aeronautical study that reviewed the requirements for non-directional beacons (NDB) and very-high frequency (VHF) omnidirectional range (VOR).

The study concluded that given the comprehensive radar surveillance coverage, and the capabilities of area navigation (RNAV) with global navigation satellite system (GNSS) equipped aircraft, many navigation aids (NAVAID) are no longer required and should be decommissioned.

Where a current NAVAID identified in the study serves as an instrument approach aid or anchors an airway segment, NAV CANADA will ensure that an RNAV (GNSS) instrument approach procedure (IAP) or RNAV airway segment is published, where required, before the identified NAVAID is removed.

Implementation is ongoing and will progress for the next several years. Subsequent aeronautical information circulars (AICs) will be published for each upcoming phase.

The following NAVAID will be decommissioned:

Indicator	NAVAID Facility Name		
YEG	Edmonton VOR		
OW	Ottawa NDB		
YOW	Ottawa VOR		
ZHU	Montreal/St-Hubert (Hauts-Bois) NDB		

These changes will take effect on 25 January 2024 at 0901Z Coordinated Universal Time (UTC). The appropriate aeronautical publications will be amended.

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AERONAUTICAL INFORMATION CIRCULAR 27/23

NOTICE OF MANDATE TO APPLY AIRPORT COLLABORATIVE DECISION MAKING (A-CDM) PROCEDURES AT TORONTO/LESTER B. PEARSON INTERNATIONAL AIRPORT

(Replaces AIC 9/21)

1.0 Date of Applicability

The airport collaborative decision making (A-CDM) procedures described in this aeronautical information circular (AIC) are applicable as follows:

A-CDM live operations will be effective as of 31 October 2023.

2.0 Purpose of the Circular

This AIC outlines the A-CDM procedures to be followed by operators at Toronto/Lester B. Pearson International Airport (CYYZ).

Additional information on the details of the A-CDM Project at CYYZ can be found at

<http://torontopearson.com/acdm/>.

For anything not covered in this circular, detailed explanation can be found in the *Transport Canada Aeronautical Information Manual* (TC AIM), Aerodromes chapter, section 10

https://tc.canada.ca/sites/default/files/2023-03/aim-2023-1 access e.pdf>.

The A-CDM web portal for operational purposes can be found at https://acdm.gtaa.com/>.

3.0 A-CDM Single Point of Contact

The 24/7 dedicated single point of contact for A-CDM is the Manager Operations – Airport Flow (MO-AF):

Tel.: 416-776-ACDM (2236)

E-mail: manageroperationsairportflow@gtaa.com

4.0 Exemptions From A-CDM Procedures

Helicopters and flights identified by any one of the following designators in Item 18 of their flight plan, or by any other agreed means that may be applicable, are exempt from adhering to the A-CDM procedures:

STS/FFR	Firefighting
STS/HEAD	Flight with Head of State status
STS/HOSP	Flight on an actual medical mission
STS/MEDEVAC	Flight operated for life-critical medical emergency evacuation
STS/SAR	Flight engaged in a search and rescue mission

STS/STATE	Flight engaged in military, customs or police services
STS/FLTCK	Aircraft performing NAVAID flight check

5.0 Flight Crew Procedures

5.2 Adherence to TOBT/TSAT

To prevent unnecessary and potentially significant delays, all departing flights are reminded of the importance of keeping their Target Off Blocks Time (TOBT) accurate. Failure to comply with the full A-CDM procedures will result in departure delays.

5.3 TOBT/TSAT Visibility

- Where Advanced Visual Docking Guidance System (AVDGS) is available TSAT times will be displayed at TOBT -10 minutes, or TOBT -20 minutes if TSAT time is ≥ TOBT + 20 minutes.
- A-CDM web portal <https://acdm.gtaa.com/>.
- Through communication with the operator and their designated representative(s).

5.4 Call Ready Procedure

- TOBT +/- 5 minutes contact A-CDM Coordinator to confirm that the flight is ready with aircraft location.
- Monitor appropriate Apron frequency to await push-back and start-up approval.

5.5 Push-back / Start-Up Approval

- TSAT +/- 5 minutes Apron will provide push-back and start-up approval without a call from the flight crew.
- Sky Service midfield/3 Bay Hangar Apron aircraft shall start-up without requiring an instruction to do so from Apron within the TSAT +/- 5-minute window.
- Aircraft located at uncontrolled areas (Taxiway K, South FBO, Vista Cargo, Air Canada Hangar) must contact North or South Ground as appropriate within the TSAT +/- 5-minute window for taxi clearance.
- Failure to commence the push-back/start-up process within 2 minutes must be reported to the appropriate Apron or Ground frequency. Failure to report will be assumed that the TSAT is no longer valid and the operator needs to provide a new TOBT from which a new TSAT will be generated.
- If there is an issue after the aircraft has cleared the stand area that would mean a longer than normal start-up procedure, flight crew must request guidance from Apron frequency or Apron Coordinator if located at uncontrolled areas.

5.6 De-icing Operations

De-icing procedures will have a significant impact on taxi times, airport throughput and A-CDM planning.

- De-icing requirements must be communicated to Clearance Delivery.
- Requests for a change in de-icing requirements (including no longer requiring de-icing) later in the process must be communicated to A-CDM Coordinator as soon as practicable.

5.7 Managing TSAT Delays

Delays can occur for many reasons; a delta in TOBT and TSAT may be observed.

Flight crews at CYYZ can normally expect to remain at the gate while waiting for their TSAT. Should the gate be required for another purpose, flight crews can expect to be moved to a remote holding area to await departure clearance.

Flow restrictions enroute, or at destination airports, are calculated into a flight's TSAT.

6.0 Contingency Operations

If the A-CDM system fails or becomes unreliable, the A-CDM procedures will be suspended. The suspension and eventual restarting of the procedures will be announced via the automatic terminal information service (ATIS) broadcast and a NOTAM will be issued.

During suspension of the A-CDM procedures, no TOBT and TSAT will be provided. CYYZ will revert to first come, first serve for pushback.

All aircraft are to call ready with A-CDM Coordinator when they are ready to commence push-back/start-up procedures.

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AERONAUTICAL INFORMATION CIRCULAR 26/23

ADS-B WITHIN CANADIAN DOMESTIC AIRSPACE

(Replaces AIC 17/23)

Background

Effective 10 August 2023, Canada implemented the first phase of an automatic dependent surveillance – broadcast out (ADS-B Out) Performance Requirements Mandate in Canadian domestic airspace. This first phase mandates ADS-B Out throughout Class A airspace, and on **16 May 2024 the mandate will also become effective in Class B airspace**. ADS-B mandates in Class C, D and E airspace will commence no earlier than 2028, and the approach and timing for implementation in Class C, D and E will be determined pending further assessment and stakeholder engagement.

The Canadian ADS-B Out mandate is enabled through airspace classification designation and amendment to transponder airspace requirements, as described in the Designated Airspace Handbook, which is available on the NAV CANADA website: https://www.navcanada.ca/en/aeronautical-information/operational-guides.aspx.

Equipage Requirements

To demonstrate compliance with the Canadian ADS-B Out mandate, aircraft are required to:

- be equipped with an appropriate transponder with ADS-B Out capabilities that performs to the Minimum Operational Performance Standards of RTCA DO-260B, or newer; and
- have antenna capability for broadcast toward both ground-based as well as space-based ADS-B receivers. This requirement can be met either through antenna diversity (the use of a top and bottom antenna) or with a single antenna capable of transmitting both towards the ground and up towards satellites.

Aircraft equipment and installation requirements are defined in Airworthiness Chapter 551 – Aircraft Equipment and Installation – Canadian Aviation Regulations (CARs), section 551.103 – Transponder and Automatic Pressure Altitude Reporting Equipment, which is available at the Transport Canada website: <a href="https://tc.canada.ca/en/corporate-services/acts-regulations/list-regulations/canadian-aviation-regulations-sor-96-433/standards/airworthiness-chapter-551-aircraft-equipment-installation-canadian-aviation-regulations-cars#551 103

Flight Planning Requirements

Aircraft operators are expected to file the following ADS-B equipage in item 10b of the ICAO flight plan:

- B1 ADS-B with dedicated 1090 MHz ADS-B Out capability; or
- B2 ADS-B with dedicated 1090 MHz ADS-B Out and In capability.

In addition to the B1 or B2 code, aircraft equipped in accordance with the Canadian ADS-B Out mandate must also include CANMANDATE in item 18 of the flight plan following the SUR/ indicator, such as in the following two examples:

- SUR/CANMANDATE
- SUR/260B RSP180 A2 CANMANDATE

Aircraft operators planning flights in Canadian domestic Class A airspace require this new equipment identification in item 18 to indicate that the aircraft is equipped in accordance with the Canadian ADS-B Out mandate. However, even if the flight does not plan to enter airspace where ADS-B has been mandated, aircraft operators are encouraged to always begin including SUR/CANMANDATE as soon as the aircraft is appropriately equipped.

Aircraft that have filed flight plans that do not correctly include SUR/CANMANDATE in airspace where ADS-B has been mandated will be filtered from Air Traffic Services (ATS) surveillance displays. Therefore in areas where ADS-B is the only available form of surveillance, ADS-B surveillance services will not be available.

ADS-B Accommodation for Unequipped Aircraft

Due to supply-chain limitations experienced in the context of the global pandemic, some customers have identified that they may not be able to meet the equipage requirements in time for the mandate effective date and, in some cases, they may require additional time to comply. To help this small number of customers bridge the gap, so long as system capacity permits, NAV CANADA will strive to accommodate aircraft unable to transmit ADS-B in accordance with the Canadian ADS-B Out mandate, in a similar fashion as accommodations are handled today for aircraft without functioning transponders in transponder mandatory airspace.

The three principles NAV CANADA will apply for ADS-B accommodation requests will be: safety, type of ATC separation service available in a given airspace, and impacts to other airspace users.

Assessing ADS-B accommodation requests will be a manual process and will take time for each flight. NAV CANADA will need to assess alternative surveillance means for each flight and determine if all the affected air traffic control specialties will be able to adequately handle the procedural-separation needs of unequipped aircraft on requested routes and altitudes.

To provide enough time to perform each of these assessments, NAV CANADA will require ADS-B accommodation requests to be submitted at least three business days in advance. ADS-B accommodations for unequipped flights will generally be issued on a first-come, first-served basis, although NAV CANADA will ensure that requests for unequipped priority flights (such as MEDEVAC, VIP, Rescue, etc) will be prioritized.

NAV CANADA will always try to communicate the capability to accommodate the route and/or altitude as soon as possible, and in no case will it be later than four hours prior to the expected time of departure. In cases where routes and/or altitudes are not conducive to accommodate unequipped aircraft, NAV CANADA may be able to propose alternative flight planning options for the pilot to consider. For cases where NAV CANADA has agreed to accommodate a flight that is unequipped, details of what to include in item 18 of the flight plan will be provided. In-flight accommodation requests will not be considered and, if traffic conditions or other operational circumstances change, NAV CANADA may need to rescind already agreed upon ADS-B accommodations.

Individual ADS-B accommodation requests can be submitted online at the NAV CANADA website: https://aar.navcanada.ca

Blanket accommodations may be made available to air operators with regularly scheduled flights. Air operators wishing to request a blanket accommodation agreement should contact service@navcanada.ca

Further Information

Additional information on ADS-B can be found in AIP CANADA ENR section 1.6.3 available at the NAV CANADA website: https://www.navcanada.ca/en/aeronautical-information/aip-canada.aspx

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AERONAUTICAL INFORMATION CIRCULAR 24/23

NAVAID MODERNIZATION PROGRAM: PHASE 11

NAV CANADA, the country's provider of civil air navigation services, conducted an aeronautical study that reviewed the requirements for non-directional beacons (NDB) and very-high frequency (VHF) omnidirectional range (VOR).

The study concluded that given the comprehensive radar surveillance coverage, and the capabilities of area navigation (RNAV) with global navigation satellite system (GNSS) equipped aircraft, many navigation aids (NAVAID) are no longer required and should be decommissioned.

Where a current NAVAID identified in the study serves as an instrument approach aid or anchors an airway segment, NAV CANADA will ensure that an RNAV (GNSS) instrument approach procedure (IAP) or RNAV airway segment is published, where required, before the identified NAVAID is removed.

Implementation is ongoing and will progress for the next several years. The eleventh phase is described below. Subsequent aeronautical information circulars (AICs) will be published for each upcoming phase.

Phase 11:

Indicator	NAVAID Facility Name			
QU	Grande Prairie NDB			
YYG	Charlottetown VOR			
YQY	Sydney VOR			
VBS	Saguenay VOR			
YFM	La Grande-4 NDB			
YZV	Sept-Iles VOR			
YGK	Kingston NDB			
YRI	Rivière-Du-Loup VOR			
VR	Vancouver NDB			
YAZ	Tofino NDB			
YNE	Norway House NDB			
ZSS	Saskatoon (Yellowhead) NDB			
XE	Saskatoon NDB			
YXE	Saskatoon VOR			
VIE	Coehill VOR			
YXZ	Wawa VOR			
YYB	North Bay VOR			
SB	Sudbury NDB			

Phase 11 will take effect on 30 November 2023 at 0901Z Coordinated Universal Time (UTC). The appropriate aeronautical publications will be amended.

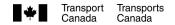
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AERONAUTICAL INFORMATION CIRCULAR 23/23

NOTIFICATIONS ON OVERFLYING CONFLICT ZONES ISSUED BY TRANSPORT CANADA

(Replaces AIC 21/23)

1. CONTEXT

- 1.1 The Minister of Transport (MOT) is responsible for the assessment of specific threats concerning flight operations within the framework of the *Aeronautics Act*. Transport Canada, on behalf of the MOT, monitors the security of flight routes used by passenger aircraft and conducts threat assessments when there are changes in the security situation in these routes.
- 1.2 When it is perceived or assessed the State responsible for managing its airspace is not properly mitigating existing risks to commercial aviation, Transport Canada can issue an airspace notification for a risk area, either informative, advisory or prohibitive in nature, under Section 5.1 of the *Aeronautics Act*. Transport Canada's threat assessment methodology is based on a tiered assessment of threat, as described in Section 3.
- 1.3 Airspace notifications issued by Transport Canada apply to Canadian Air Operators (CAO) and Owners of Aircraft Registered in Canada (OARC), and are intended to inform flight planning and operational decision-making.

2. PUBLICATION

- 2.1 NAV CANADA, the corporation that operates Canada's civil air navigation service, publishes airspace notifications on behalf of the MOT.
- 2.2 The reporting format follows the standards articulated in the International Civil Aviation Organisation's (ICAO) Annex 15 Aeronautical Information Services.
- 2.3 **Notice to Airmen (NOTAM):** when information to be distributed is temporary in nature or time-critical, notifications on conflict zones are published via NOTAM. As per Annex 15 (Standard 6.3.2.3 (n)), the notification is to include information that is as specific as possible regarding the nature and extent of threats of that conflict and its consequences for civil aviation. The NOTAM will either be cancelled once its validity ceases to apply, or incorporated into an Aeronautical Information Circular, if the information continues to be valid.
- Aeronautical Information Circular (AIC): if an airspace notification will remain valid for more than 90 days, it will be issued as, or transferred to, an AIC. The notification contained in the AIC remains valid until the MOT makes a change, based on a new risk assessment of the security situation. If a change is deemed necessary, it will be reflected in the next AIC editorial. If the change needs to be communicated before the publication of the editorial, it will be made via NOTAM, which will be rescinded upon issuance of the AIC editorial.

3. ISSUANCE

- 3.1 The issuance of airspace notifications for overflying conflict zones is a tiered-based risk system, as described below:
 - Level 1: Medium risk (INFORMATION / GENERAL ADVICE) Advised to take all potential risk information into account in risk assessment and flight routing decisions in the airspace of X country.
 - **Level 2:** High risk **(RECOMMENDATION)** Recommended to maintain a flight level of X / not to enter the airspace of X country.
 - Level 3: Critical risk (PROHIBITION) Prohibited to enter the airspace of X country.

4. EXEMPTIONS

- 4.1 Exceptional waivers for prohibitive notifications may be granted upon motivated request to the competent authority. Affected air operators wishing to obtain such an Authorization must apply to the department of transport at 1-877-992-6853 or 1-613-992-6853 or by email at Operations.aviation@tc.gc.ca
- 4.2 The notifications listed below apply without prejudice to emergency measures that the pilot in command may take in case of absolute necessity.

5. INVENTORY OF TRANSPORT CANADA ISSUED NOTIFICATIONS

5.1 Afghanistan – Level 2 – Issued July 28, 2021

SECURITY – HAZARDOUS SITUATION IN AFGHANISTAN. Canadian Air Operators and owners of aircraft registered in Canada are recommended not to enter FIR Kabul (OAKX). Potential risk from extremist and militant activity and limited risk mitigation capabilities. Excluded from this guidance are airways P500 and G500 for transiting overflights at or above flight level FL320.

5.2 Armenia/Azerbaijan – Level 1 – Issued September 15, 2022

SECURITY – HAZARDOUS SITUATION IN ARMENIA/AZERBAIJAN. Canadian air operators and owners of aircraft registered in Canada are advised to take all potential risk information into account in their risk assessment and routing decisions when operating in FIR Yerevan Zvartnots (UDDD), and FIR Baku (UBBA). Potential risk from anti-aviation weaponry and military activity along the border of Armenia and Azerbaijan.

5.3 Belarus – Level 3 – Issued February 24, 2022

SECURITY – HAZARDOUS SITUATION IN BELARUS. Canadian Air Operators and owners of aircraft registered in Canada are prohibited from entering FIR Minsk (UMMV). Potential risk from anti-aviation weaponry and military operations.

5.4 **Iran – Level 2 – Issued January 10, 2020**

SECURITY – HAZARDOUS SITUATION IN IRAN. Canadian Air Operators and owners of aircraft registered in Canada are recommended not to enter FIR Tehran (OIIX). Potential risk from anti-aviation weaponry and military operations.

5.5 **Iraq – Level 2 – Issued November 18, 2021**

SECURITY – HAZARDOUS SITUATION IN IRAQ. Canadian Air Operators and owners of aircraft registered in Canada are recommended to maintain a flight level equal to or above flight level FL320 in FIR Baghdad (ORBB). Potential risk from anti-aviation weaponry and military operations.

5.6 **Libya – Level 2 – Issued February 18, 2020**

SECURITY – HAZARDOUS SITUATION IN LIBYA. Canadian Air Operators and owners of aircraft registered in Canada are recommended not to enter FIR Tripoli (HLLL). Potential risk from anti-aviation weaponry and military operations created by the current level of internal instability.

5.7 Moldova – Level 3 – Issued February 24, 2022

SECURITY – HAZARDOUS SITUATION IN MOLDOVA. Canadian Air Operators and owners of aircraft registered in Canada are prohibited from entering FIR Chisinau (LUUU). Potential risk from anti-aviation weaponry and military operations.

5.8 North Korea – Level 2 – Issued October 19, 2022

SECURITY – HAZARDOUS SITUATION IN NORTH KOREA. Canadian Air Operators and owners of aircraft registered in Canada are recommended not to enter FIR Pyongyang (ZKKP). Potential risk to aviation from ballistic missile launches without prior notice.

5.9 Saudi Arabia – Level 1 – Issued August 10, 2023

SECURITY – HAZARDOUS SITUATION IN SAUDI ARABIA. Canadian Air Operators and owners of aircraft registered in Canada are advised to take all potential risk information into account in their risk assessment routing decisions within FIR Jeddah (OEJD). Potential risk from anti-aviation weaponry and military operations. ESCAT (Emergency Security Control of Air Traffic) rules may be activated by NOTAM from the Saudi authorities in the southwest area of FIR OEJD.

5.10 Somalia – Level 2 – Issued February 9, 2021

SECURITY – HAZARDOUS SITUATION IN SOMALIA. Canadian Air Operators and owners of aircraft registered in Canada are recommended to maintain a flight level equal to or above FL260, within FIR Mogadishu (HCSM). Potential risk from anti-aviation weaponry and military operations.

5.11 Sudan – Level 2 – Issued May 18, 2023

SECURITY – HAZARDOUS SITUATION IN SUDAN. Canadian Air Operators and owners of aircraft registered in Canada are recommended not to enter FIR Khartoum (HSSS). Potential risk from anti-aviation weaponry and military operations.

5.12 **Syria – Level 2 – Issued February 9, 2020**

SECURITY – HAZARDOUS SITUATION IN SYRIA. Canadian Air Operators and owners of aircraft registered in Canada are recommended not to enter FIR Damascus (OSTT), and to take all potential risk information into account in risk assessment and routing decisions when operating within 200 NM of FIR OSTT. Potential risk from anti-aviation weaponry and military operations.

5.13 Ukraine – Level 3 – Issued February 24, 2022

SECURITY – HAZARDOUS SITUATION IN UKRAINE. Canadian Air Operators and owners of aircraft registered in Canada are prohibited from entering FIR:

- Dnipropetrovsk (UKDV), Kiev (UKBV), L'viv (UKLV), Odesa (UKOV) and Simferopol (UKFV), in the airspace of Ukraine;
- FIR Rostov (URRV), in the airspace of Russia; and,
- Are prohibited from operating within 200nm of the boundaries of FIR UKDV and FIR UKBV in FIR Moscow (UUWV).

Potential risk from anti-aviation weaponry and military operations.

5.14 Yemen – Level 2 – Issued February 9, 2021

SECURITY – HAZARDOUS SITUATION IN YEMEN. Canadian Air Operators and owners of aircraft registered in Canada are recommended not to enter FIR Sana'a (OYSC), northwest of the line created by the waypoints TIMAD-IMPAG-NODMA on jet route T702. Potential risk from anti-aviation weaponry and military operations.

6. FURTHER INFORMATION

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For further information, please contact:

Transport Canada Conflict Zone Information Office 330 Sparks St., Ottawa, ON K1A 0N8

E-mail: ConflictZoneInfoOffice-BureauInfoZonesConflit@tc.gc.ca

Shannon Hiegel

A/Director General, Aviation Security

NAV CANADA 07 SEP 23

AERONAUTICAL INFORMATION CIRCULAR 22/23

TRANSITION FROM AERODROME GEOMETRIC CENTRE COORDINATES (AGCC) TO AERODROME REFERENCE POINT (ARP)

Canada publishes the Aerodrome Geometric Centre Coordinates (AGCC) for aerodromes in the Canada Flight Supplement (CFS) and Canada Air Pilot (CAP).

An AGCC is a **calculated** point using the locations of runway thresholds or temporarily displaced runway thresholds.

An Aerodrome Reference Point (ARP) is a **designated** location of an aerodrome that does not normally change once established.

TP-312 5TH Edition Aerodrome Standards and Recommended Practices September 15th 2015 removed all references to AGCC and retained ARP as the only geographical location of an airport.

NAV CANADA will transition to the publication of ARP coordinates for all aerodromes to align with ICAO Standards and Recommended Practices (SARPs), national standards, and recommended practices (TP-312).

For the majority of aerodromes in Canada, the AGCC is the same as the ARP. However, some certified airports may have an ARP on the airport certificate that differs from the currently published AGCC. During the transition to the publication of ARPs, airports may submit to NAV CANADA (<u>aisdata@navcanada.ca</u>) an updated ARP that matches their current airport certificate. Airports are expected to submit their updated data by 7 February 2024. Following this date, the currently published AGCC will be the established ARP.

Expiry date:

This AIC expires on 16 May 2024

For further information, please contact:

NAV CANADA Customer Service Centre 151 Slater Street Ottawa, ON K1P 5H3

Tel.: 800-876-4693

E-mail: service@navcanada.ca

Chris Bowden

NAV CANADA 10 AUG 23

AERONAUTICAL INFORMATION CIRCULAR 18/23

BAGOTVILLE AIRSPACE CHANGES

NAV CANADA, the country's provider of civil air navigation services, conducted an aeronautical study that reviewed the airspace requirements within the Bagotville Military Terminal Control Area (MTCA).

The study concluded that the Bagotville MTCA, 12,500 feet above sea level (ASL) and below, should be modified, which includes changing some areas that are currently Class D airspace to Class E airspace.

The results of these changes to the Bagotville MTCA are described below.

3.5.3 TERMINAL CONTROL AREAS

3.5.3-1	Bagotville, QC MTCA:				
3.5.3-2	a)	Class A equivalent – 18,000' to FL600 inclusive			
3.5.3-3	b)	Class B equivalent – Above 12,500´ to below 18,000´			
3.5.3-4	c)	Class D equivalent – 6000' to 12,500'			
3.5.3-5	d)	Class E equivalent – Below 6000' unless otherwise specified			

3.5.3-6 e) from 700' AGL within the area bounded by a line beginning at:

3.5.3-7 f) Class D equivalent airspace from 1200' AGL to below 6000' within the area bounded by a line beginning at:

```
N48°24'35.42" W071°28'54.68"
                                 thence counter-clockwise along the arc of a circle of
                                 radius centred on
20 miles
N48°19'50.00" W070°59'47.00"
                                 (Bagotville, QC - AD) \ to
N48°39'48.39" W070°59'01.58"
N48°35'27.52" W070°58'58.84"
                                 thence counter-clockwise along the arc of a circle of
                                 radius centred on
5 miles
N48°31'15.00" W071°03'02.00"
                                 (St-Honoré, QC - AD) \ to
N48°26'43.14" W071°06'11.71"
N48°27'14.48" W071°09'50.54"
                                 thence counter-clockwise along the arc of a circle of
10 miles
                                 radius centred on
N48°19'50.00" W070°59'47.00"
                                 (Bagotville, QC - AD) \ to
N48°22'14.13" W071°14'20.16"
                                 to
N48°24'35.42" W071°28'54.68"
                                 point of beginning
```

This change will take effect 05 October 2023 at 0901 Coordinated Universal Time (UTC). The appropriate aeronautical publications will be amended.

For further information, please contact:

NAV CANADA Customer Service 151 Slater Street, Suite 120 Ottawa, ON K1P 5H3

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Chris Bowden

NAV CANADA 10 AUG 23

AERONAUTICAL INFORMATION CIRCULAR 16/23

CLOSURE OF TORONTO/BUTTONVILLE MUNI, ONTARIO MUNICIPAL AIRPORT, ON (CYKZ)

This AIC serves to advise that the operators of the Toronto / Buttonville Municipal Airport, ON (CYKZ) airport have announced their intention to cease operations as of November 30th, 2023, at the expiration of the land-lease agreement with the property owner.

NAV CANADA, the country's provider of civil air navigation services, has assessed the impact that the airport closure will have on the local and regional services currently being provided from the airport. NAV CANADA has determined that the removal of services, facilitated through equipment physically located at the airport, must commence as of October 5th, 2023.

NOTAMs will communicate specific service terminations, and impacts on operations, prior to November 30th, 2023. The tentative schedule is as follows:

- 1. On October 5th, 2023, a NOTAM will be published indicating the LOC/DME Instrument Approach Procedure (IAP) is unserviceable.
- 2. On October 23rd, 2023, a NOTAM will be published indicating the Limited Weather Information System (LWIS) is unserviceable.

The remaining Canada Air Pilot (CAP) approach and departure procedures will remain in effect until November 30th, 2023.

NOTAMs will communicate impacts on operations after November 30th, 2023. Removal of the Class E control zone will be accomplished following an Aeronautical Study.

The airport closure will take effect on November 30, 2023, at 0901 Coordinated Universal Time (UTC). The appropriate aeronautical publications will be amended.

For further information, please contact:

NAV CANADA Customer Service Centre 151 Slater Street Ottawa, ON K1P 5H3

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Chris Bowden

Director, Aeronautical Information Management

NAV CANADA 13 JUL 23

AERONAUTICAL INFORMATION CIRCULAR 15/23

USE OF CONTROLLER PILOT DATA LINK COMMUNICATIONS ROUTE CLEARANCE MESSAGES IN THE MONTREAL FLIGHT INFORMATION REGION

Introduction

Controller-Pilot Data Link Communications (CPDLC) has been in use in the Montreal flight information region (FIR) since 2012. Commencing on or soon after 13 July 2023, the available CPDLC message set will be expanded to include messages containing route clearances. Montreal air traffic controllers (ATCO) will be able to accept pilot-initiated CPDLC route requests and uplink the appropriate clearance using flight management system (FMS) loadable data, thereby reducing readback/hearback and transposition errors.

Implementation Plan

Implementation of CPDLC route clearance messages will be communicated via NOTAM prior to initiation.

Pilot-Initiated Route Requests	ATC Response or Initiation
REQUEST DIRECT TO [position]	PROCEED DIRECT TO [position]
REQUEST [route clearance]	 CLEARED TO [position] VIA [route clearance] CLEARED [route clearance] AT [position] CLEARED [route clearance]
DIVERTING TO [position] VIA [route clearance]	 CLEARED TO [position] VIA [route clearance] CLEARED [route clearance] AT [position] CLEARED [route clearance]

Pilots are to respond to a route clearance message with one of the following:

- WILCO
- UNABLE
- STANDBY

Controller-Initiated Route Clearances

Air traffic controllers may initiate a route clearance for separation purposes, to avoid restricted airspace or for other operational requirements.

Pilot Procedures

If a clearance is received that can be automatically loaded into the FMS, the pilot should load the clearance into the FMS and review it before responding with "WILCO" or "UNABLE".

Flight crews must be familiar with the proper loading and execution of the following CPDLC route clearance uplinks:

Pilot-Initiated Route Requests		ATC Response or Initiation
PROCEED DIRECT TO [position]	•	Instruction to proceed directly to the specified position.
CLEARED TO [position] VIA [route clearance]	•	Instruction to proceed to the specified position via the specified route.
	-	This uplink may not show the "VIA ROUTE CLEARANCE" until it is loaded.
	-	This is not a direct to the "CLEARED TO [waypoint]". It is a clearance to the waypoint via the route specified.
CLEARED [route clearance]	•	Instruction to proceed via the specified route.
	-	This uplink may not show the "ROUTE CLEARANCE" until it is loaded.
AT [position] CLEARED [route clearance]	-	Instruction to proceed from the specified position via the specified route.
-	•	This uplink may not show the "ROUTE CLEARANCE" until it is loaded.

- Note 1 Experience shows that flight crews often misunderstand the uplink message "CLEARED TO *[position]* VIA *[route clearance]*" when they fail to load the message into the FMS, with the result that they incorrectly fly directly to the "CLEARED TO *[position]*". In other cases, even after loading, they perceive the clearance as direct to the "CLEARED TO *[position]*".
- Note 2 FMS waypoint weather data (winds and temperature) may be lost depending on the route clearance message received. Flight crews should verify the weather data as they may need to re-enter the weather data for proper FMS predictions.
- **Note 3** For additional guidance on pilot procedures for uplink messages containing FMS-loadable data, refer to Section 4.3.5 of the International Civil Aviation Organization (ICAO) Doc 10037—Global Operational Data Link (GOLD) Manual.

Route Verification

To mitigate errors associated with pilots failing to promptly load or execute the new route clearances, controllers may verify the new route using automatic dependent surveillance – contract (ADS-C) reports, or by sending "CONFIRM ASSIGNED ROUTE". Pilots are to respond to the "CONFIRM ASSIGNED ROUTE" with "ASSIGNED ROUTE [route clearance]".

Note Some aircraft are unable to send "ASSIGNED ROUTE [route clearance]" due to system limitations. In this case, pilots should respond with the free text message "UNABLE TO SEND ROUTE".

Further Information

For further information, please contact: NAV CANADA

Attn: Noel Dwyer, National Manager ATS Standards

Delivery

E-mail: noel.dwyer@navcanada.ca

Chris Bowden

NAV CANADA 18 MAY 23

AERONAUTICAL INFORMATION CIRCULAR 12/23

ASSIGNMENT OF ICAO NAVIGATION SPECIFICATIONS TO CANADIAN AREA NAVIGATION STANDARD INSTRUMENT DEPARTURES

Purpose of the Circular

The purpose of this Circular is to inform air operators that hold an air operator certificate issued under Part VI or Part VII of the Canadian Aviation Regulations, of a proposed International Civil Aviation Organisation (ICAO) navigation performance requirement applicable to Area Navigation (RNAV) Standard Instrument Departures (SIDs).

Body

Commencing late 2023, NAV CANADA will begin to annotate RNAV 1 navigation performance requirements on some RNAV SIDs, indicating PBN Navigation Specifications (NAV SPEC), sensor requirements, and/or any additional PBN requirements.

Air operators may obtain an authorisation to operate in accordance with these navigation performance requirements, via an amendment to their air operator certificate. Guidance can be found in Transport Canada Advisory Circular (AC) No. 700-019 (RNAV 1 and 2). Air operators already authorised to operate in accordance with AC 700-019 are not required to obtain additional approval.

Due to the volume of Canadian PBN approach procedures, this effort is expected to span numerous publication cycles.

Expiry Date

This AIC expires 31 DEC 2024.

For further information, please contact:

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Vanessa Robertson Director, ATS Standards NAV CANADA 18 MAY 23

AERONAUTICAL INFORMATION CIRCULAR 11/23

PROCEDURES FOR THE USE OF A GROUND ADVISORY FREQUENCY AT SELECT AIRPORTS

(Supersedes AICs 26/22 and 27/22)

Introduction

The purpose of this aeronautical information circular (AIC) is to inform pilots of the procedures associated with the ground advisory (GND ADV) frequency for use at select airports where mandatory frequency (MF) procedures are in place.

Background

To alleviate congestion on the MF at airports where traffic has increased, NAV CANADA has sought exemptions to allow pilots to use a GND ADV frequency while maneuvering on the ground. Airports such as Nanaimo and Mirabel have used the GND ADV frequency for some time. Rather than issuing a separate exemption for each airport, Transport Canada has granted NAV CANADA the ability to apply a global exemption to select airports for the purpose of mitigating the safety risks associated with increased congestion on the MF.

NAV CANADA will identify airports requiring the use of a GND ADV frequency. It will also indicate which frequency will be used, as well as any new procedures associated with the use of GND ADV in the appropriate aeronautical publications.

Pilots are reminded to review the exemption and adhere to the conditions listed in the most current version of "Exemption from Subsections 602.97 (2), 602.98 (1), and Section 602.99 of the Canadian Aviation Regulations." This can be found on the Transport Canada website under "Exemptions to the Canadian Aviation Regulations (CARs)":

https://tc.canada.ca/en/aviation/reference-centre/exemptions-canadian-aviation-regulations-cars>.

Procedures

NAV CANADA will provide ground traffic information, pre-taxi clearances (where available), and other advisory information on the GND ADV frequency at select airports.

Where applicable:

- The automatic terminal information service (ATIS) message will contain information to pilots regarding use of the GND ADV frequency.
- When the GND ADV frequency is operational, pilots operating on the apron and taxiways up to the hold line for runways in use will be exempt from maintaining a continuous listening watch and making reports on the mandatory frequency (MF) (refer to Canadian Aviation Regulations [CARs] subsections 602.97 (2), and 602.98 (1), and Section 602.99). While operating on the ground, flight service specialists will instruct pilots to make all frequency changes.
- The following aeronautical publications will reflect this additional frequency:
 - Canada Flight Supplement (CFS)
 - Canada Air Pilot, "Instrument Procedures General Pages" (CAP GEN)
 - Canada Air Pilot, Volume xx "Instrument Procedures ..." (Applicable CAP Volume)

New operating restrictions regarding communications on the MF and the GND ADV frequency will be specified by the Minister in the Canada Flight Supplement (CFS).

Refer to the CFS "General Section" and the CAP GEN for a definition of "ground advisory." Refer to the CFS, Section B "Aerodrome/Facility Directory" and respective volume of the CAP for more detailed information specific to each select MF airport, such as frequency and procedures.

Phraseology examples that pilots can expect from flight service specialists include:

• Instruction to change to the appropriate frequency (after receipt of advisory information):

Pilot:	GOLF ALFA BRAVO CHARLIE ON BRAVO FOR RUNWAY TWO THREE AT ALFA
GND ADV: ROGER, CONTACT [unit name] RADIO ON [frequency]	

• Recommended taxi routing during complex ground traffic situations:

SUGGEST TAXI VIA BRAVO, ECHO, JULIET, ALFA HOLD SHORT RUNWAY ONE ONE or

RECOMMEND TAXI VIA TANGO, BRAVO, RUNWAY TWO FOUR

• When transferring aircraft to either frequency (if the FSS positions are combined):

CHANGE TO MY FREQUENCY (frequency)

If you have any questions or concerns, please contact:

NAV CANADA Customer Service 151 Slater Street, Suite 120 Ottawa, ON K1P 5H3

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Vanessa Robertson

Director Air Traffic Services (ATS) Standards

NAV CANADA 23 MAR 23

AERONAUTICAL INFORMATION CIRCULAR 6/23

FLIGHT PLANNING PROCEDURES FOR NORTH ATLANTIC WESTBOUND FLIGHTS TRANSITING FROM GANDER OCA TO GANDER CTA AND MONTREAL FIR BELOW FL290

Introduction

This information is intended to provide better direction on flight planning procedures below FL290 between Gander OCA and Gander CTA/Montréal FIR. In addition, it identifies boundary reporting points and inland fixes for reference when flight planning into the Montréal FIR for westbound flights transiting through Gander Oceanic Transition Area (GOTA) from the North Atlantic (NAT).

These changes will be reflected in the next AIP publication for **20 April 2023**, and detailed procedures that follow will be found in section ENR 7.1.6 *Flight Planning Procedures*, 7.1.6.1 *Routes* of the AIP.

Background

Since the introduction of Data Link Mandate (DLM), there has been an exemption corridor over southern Greenland to allow non-DLM aircraft to transit through the Gander OCA at DLM levels. This was established due to the presence of ground-based ADS-B and VHF sites. On December 29, 2022, the ground-based sites were decommissioned. With the loss of VHF at these sites, that airspace no longer fulfils the requirements for DLM exemption in the NAT region.

With more aircraft now receiving Flight Levels below DLM airspace in that area, it was identified that the flight planning procedures below the GOTA needed to be clarified. This was to ensure accurate flight planning into Montréal FIR and northern Gander CTA airspace.

Procedures

ATS system parameters require all westbound flights in Gander OCA transiting to the Montréal FIR/CTA to flight plan:

Below FL290

- Via 060°W followed by both a Montréal boundary reporting point and an inland fix contained in Montreal CTA.
- Montréal boundary reporting fixes: NALDI, MUSVA, KAGLY, BERUS, IKMAN, GRIBS, MIBNO, MUSLO, PEPKI, SINGA.
- Montréal inland fixes: LAKES, LOPVI, RODBO, JELCO, FEDDY, TEFFO, DUTUM, or BEZED.
- KENKI and IRBIM are not to be used as boundary reporting points.

FL 290 up to and including FL 600

Via an oceanic entry point followed by a Montréal inland fix.

Flights operating below FL290 into Gander FIR north of HOIST must route via 050°W followed by a Gander CTA boundary fix (MOATT, PRAWN or PORGY) and an inland fix contained in Gander CTA.

Flights operating from FL 290 and above may flight plan a North American Route (NAR) to or from an oceanic entry point.

Further Information

For further information, please contact:

NAV CANADA Gander Area Control Centre P.O. Box 328 Gander, NL A1V 1W7

Attn: Robert Fleming, Manager ACC Operations

Direct line: 709-651-5280

E-mail: robert.fleming@navcanada.ca

Vanessa Robertson

Director, Air Traffic Services (ATS) Standards

NAV CANADA 23 FEB 23

AERONAUTICAL INFORMATION CIRCULAR 4/23

UPDATE ON TIME-BASED SEPARATION IMPLEMENTATION AT TORONTO/LESTER B. PEARSON INTERNATIONAL AIRPORT (CYYZ)

Time-Based Wake Turbulence Separation Standards

Time-Based Separation

In May 2022, Timed-Based Separation (TBS), was introduced to all runways at Toronto/Lester B. Pearson International Airport (CYYZ).

This AIC is published to provide an update to operators and as a reminder to highlight some operational aspects of TBS that are essential to safe and efficient operation at CYYZ.

Background

Prior to TBS, CYYZ experienced a decrease in the landing rate while using distance-based separation standards during medium to strong headwind conditions. When there is a strong headwind, an aircraft's movement relative to the ground is reduced, resulting in increased time separation for each arrival pair. This increased time separation between arrivals reduces the landing rate.

TBS dynamically adjusts separation distances using time, rather than distance, to keep landing rates consistent in strong headwinds. TBS minima for wake turbulence were developed to mitigate the loss of runway throughput in headwind conditions by delivering time intervals between arrivals that are consistent with distance-based separation in low wind conditions.

TBS at CYYZ on final approach is based on the ICAO Enhanced Wake Separation Groups (A-G) achieving improved management of wake risk over and above distance-based separations. Separation and spacing rules between arriving aircraft and departing aircraft remained unchanged.

Post-implementation feedback

Through collaboration and feedback received from operators at CYYZ and Air Traffic Control, the following operational items have been identified as opportunities to provide further context and operational expectations for TBS operations at CYYZ

Speed Compliance

Adherence to speeds assigned by ATC is mandatory and is key to achieving accurate separation and fully achieving TBS benefit. Thus, it is imperative that crews advise ATC if they are unable to comply with the speed and to state what speed can be used.

All speed restrictions are to be flown as accurately as possible. Aircraft unable to conform to assigned speeds should inform ATC and state what speed can be used.

Spacing on Final Approach

In a TBS operation, ATC separates aircraft on final approach by time, not distance. In practice, this means that aircraft may appear closer on Traffic Alert and Collision Avoidance Systems (TCAS) or visually during headwind conditions, although the actual separation will be constant in time.

Pilots should expect to be positioned closer behind preceding aircraft on final approach as headwinds increase. The tables below give some example separations in different wind conditions. TBS minima are based on a conversion of the current Enhanced Wake Turbulence separation minima in a light headwind condition (5-7 knots.).

Examples of TBS conversion from distanced-based minima							
Nautical Miles 3 4 5 6 7 8							
TBS equivalent (seconds)	68	90	113	135	158	180	

Examples of TBS distances (NM) in different winds							
Headwind Heavy – Heavy Heavy – Lower Medium							
5 kts	4.0	5.0					
25 kts	3.5	4.4					
45 kts	3.0	3.8					

Wake Encounter Reporting

There have been extensive safety studies with the change from distance-based separations to time-based separations, particularly around the subject of wake turbulence encounters. However, as with any change to an operational concept, safety monitoring of events is being performed since the implementation of TBS.

Pilots must report wake encounters during TBS operations.

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Vanessa Robertson Director, ATS Standards NAV CANADA 26 JAN 23

AERONAUTICAL INFORMATION CIRCULAR 2/23

CHANGES TO THE IQALUIT, NU (CYFB) STANDARD INSTRUMENT DEPARTURE

The standard instrument departure (SID) published at CYFB Iqaluit, NU (CYFB) has been the subject of a trend of non-conformities by departing aircraft. Through collaboration with external stakeholders, NAV CANADA has identified that the non-conformities associated with the CYFB SID have involved transient aircraft that may not be familiar with operations at an airport that receives the services of a flight service station (FSS) as opposed to an air traffic control (ATC) tower.

The CYFB SID instruction requires aircraft to fly a prescribed heading to 5,000 feet until otherwise instructed by Montreal area control centre (ACC) to turn. However, a trend has developed where aircraft begin turning off the SID before contacting Montreal ACC.

NAV CANADA has amended the text description of the CYFB SID to emphasize the requirement for pilots to continue on the prescribed SID heading, initially for obstacle clearance requirements, then to continue on the same heading for operational requirements. The new CYFB SID text description will appear in the *Canada Air Pilot*, Volume 1 (CAP 1) as shown below:

SID (VECTOR) IQALUIT, NU - IQALUIT EIGHT DEP (CYFB8.)

Rwy 16: Climb hdg 161° to 1100. Then continue climb hdg 161° to 5000 or as assigned by ATC.

Rwy 34: Climb hdg 341° to 1000. Then continue climb hdg 341° to 5000 or as assigned by ATC.

Note: Elevated terrain to 300 ASL right of centreline, 2500' from departure end.

Note: Pursuant to the *Transport Canada Criteria for the Development of Instrument Approach Procedures* (TP308), obstacle clearance criteria of 1,000 feet for Runway 34, and 1,100 feet for Runway 16 are required to be included in the SID description.

This aeronautical information circular (AIC) will expire 31 December 2023.

For further information, please contact:

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Vanessa Robertson

Director Air Traffic Services (ATS) Standards

NAV CANADA 06 OCT 22

AERONAUTICAL INFORMATION CIRCULAR 29/22

ESTABLISHED ON RNP AR (EoR) IMPLEMENTATION AT TORONTO/PEARSON INTERNATIONAL AIRPORT (CYYZ)

Introduction

On 03 November 2022, NAV CANADA is implementing separation standards related to Required Navigation Performance Authorization Required approaches (RNP AR APCH), as described in the *Canadian Aviation Regulations* (CARs), Standard 821 "Canadian Domestic Air Traffic Control Separation."

The Established on RNP AR (EoR) procedure changes the requirement to separate aircraft conducting an RNP AR approach on one runway and an aircraft established on the instrument approach course or track on a parallel runway.

Background

EoR refers to a separation standard to be utilized during simultaneous parallel runway operations.

Using RNP AR vertical and lateral route containment, the new standard considers aircraft conducting these approaches to be established and stabilized on final after the initial approach fix (IAF). The existing requirement of 1,000 feet vertical or 3 miles lateral separation will not be required between an aircraft established on RNP AR approach prior to a designated point used by air traffic control (ATC), and an aircraft established on the approach course or track of an adjacent parallel runway.

EoR increases safety during close proximity parallel runway operations as a result of a significant reduction in the exposure time where both aircraft are "side by side," at the same altitude on final approach.

To support EoR operations, break-out procedures have been established to maintain separation in the event of a navigation error or approach irregularity. ATC instructions associated with a break-out procedure will involve radar vectors and altitude assignments.

If, after it has been determined an aircraft is established on an RNP AR procedure, the aircraft becomes unable to continue executing the procedure or adhere to the containment of the RNP AR procedure, the controller must be notified *immediately*, and the pilot shall be instructed to execute an appropriate break-out procedure.

Operational considerations

- Special authorization from Transport Canada is required to conduct RNP AR approaches in Canada.
- At Toronto/Pearson (CYYZ), RNP AR approach procedures are published for Runway 05 and Runway 23 only and are charted with the title RNAV (RNP) Y, with an associated transition.
- EoR will be used during simultaneous independent parallel runway operations when the
 ceiling is 1,000 feet and visibility is 3 statute miles, or greater. This weather minima may be
 reduced at a later date, after the completion of a collaborative safety and operational
 assessment. Automatic terminal information service (ATIS) shall indicate when simultaneous
 independent parallel runway operations are in effect.

- RNP AR capable aircraft will be identified to ATC by the ICAO PBN "T1" code on the
 operational flight plan therefore aircrews are not required to advise ATC of their RNP AR
 status.
- When an EoR operation is in use, RNAV Y approaches will be the only advertised approach
 to Runway 05 and Runway 23. RNP-AR capable aircraft that are assigned Runway 05/23 will
 be expected to plan and fly the RNAV Y approach.
- RNP AR (RNAV Y) approaches are ONLY available to Runway 05 via the BOXUM/DUVOS/IMEBA/VIBLI STARs.
- RNP AR (RNAV Y) approaches to Runway 23 are ONLY available via BOXUM/DUVOS/NUBER/NAKBO STARs.
- Non RNP AR capable aircraft assigned Runway 05/23 should anticipate radar vectors to an instrument landing system (ILS) approach.
- Aircraft that are RNP-AR capable but cannot fly the RNAV Y RNP AR approach must inform ATC immediately and can expect an ILS or visual approach.
- RNP AR capable aircraft that, for traffic or other reasons, are unable to be cleared using the RF transition will be advised by ATC to expect vectors to final. Aircraft should plan radar vectors to the RNAV Y RNP AR straight-in transition.
- When cleared for an RNAV Y RNP-AR approach, the aircraft is considered "established" on the approach procedure once it is on the defined lateral and vertical path and past the Intermediate Approach Waypoint (IWP)/intermediate approach fix (IF) for the procedure.
- The approach shall be flown using autopilot until the aircraft passes the final approach waypoint (FAWP).
- The planned RNAV (RNP) Y procedure and the associated TRANSITION must be retrieved from the flight management system (FMS) database. Manual construction of a procedure is not permitted.
- Breakout instructions and phraseology shall be briefed prior to approach clearance being received.
- Approach clearances and charted altitude and speed constraints must be complied with. The lateral and vertical path must be monitored to ensure precise navigation accuracy.
- If unable to comply with an ATC clearance or conduct the cleared approach, advise the controller as soon as possible. **Do not** attempt to manually correct or self-navigate an RNP AR approach procedure deviation.

Breakout Instructions

If an arrival is established on the cleared RNAV (RNP) Y approach procedure and the aircraft is unable to execute it, immediately advise the controller using the following phraseology, then comply with subsequent ATC instructions:

UNABLE (specific procedure), REQUEST (proposed course of action)

Example:

NAVCAN123 UNABLE ERBUS TRANSITION, REQUEST VECTORS TO FINAL

NOTE: When issued breakout instructions, reaction time is critical. If expeditious compliance is required, an ATC breakout instruction may include the word

"IMMEDIATELY."

If required, breakout instructions will be issued on the arrival or final approach monitor frequency. No dual-frequency monitoring is required.

EoR break-out procedures may be conducted with the autopilot on.

Further information will be published in an "Attention All Users" page in the *Canada Air Pilot*, Volume 4 (CAP 4) on 03 November 2022.

For further information, please contact:

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Chris Bowden

NAV CANADA 11 AUG 22

AERONAUTICAL INFORMATION CIRCULAR 22/22

USE OF CONTROLLER PILOT DATA LINK COMMUNICATIONS ROUTE CLEARANCE MESSAGES IN THE MONCTON FLIGHT INFORMATION REGION

Introduction

Controller pilot data link communications (CPDLC) has been in use in the Moncton flight information region (FIR) since 2012. Commencing on or soon after 28 June 2022, the available CPDLC message set will be expanded to include messages containing route clearances. Moncton air traffic controllers (ATCO) will be able to accept pilot-initiated CPDLC route requests and uplink the appropriate clearance using flight management system (FMS) loadable data, thereby reducing readback/hearback and transposition errors.

Implementation Plan

Implementation of CPDLC route clearance messages will be communicated via NOTAM prior to initiation.

Pilot-Initiated Route Requests	ATC Response or Initiation
REQUEST DIRECT TO [position]	PROCEED DIRECT TO [position]
REQUEST [route clearance]	CLEARED TO [position] VIA [route clearance]
	CLEARED [route clearance]
	AT [position] CLEARED [route clearance]
DIVERTING TO [position] VIA [route	CLEARED TO [position] VIA [route clearance]
clearance]	CLEARED [route clearance]
	AT [position] CLEARED [route clearance]

Pilots are to respond to a route clearance message with one of the following:

- WILCO
- UNABLE
- STANDBY

Controller-Initiated Route Clearances

Air traffic controllers may initiate a route clearance for separation purposes, to avoid restricted airspace or for other operational requirements.

Pilot Procedures

If a clearance is received that can be automatically loaded into the FMS, the pilot should load the clearance into the FMS and review it before responding with "WILCO" or "UNABLE".

Flight crews must be familiar with the proper loading and execution of the following CPDLC route clearance uplinks:

PROCEED DIRECT TO [position]	-	Instruction to proceed directly to the specified position
CLEARED TO [position] VIA [route clearance]	 Instruction to proceed to the specified position via t specified route 	
	-	This uplink may not show the "VIA ROUTE CLEARANCE" until it is loaded
	•	This is not a direct to the "CLEARED TO <i>[waypoint]</i> ". It is a clearance to the waypoint via the route specified.
CLEARED [route clearance]	•	Instruction to proceed via the specified route
	•	This uplink may not show the "ROUTE CLEARANCE" until it is loaded
AT [position] CLEARED [route clearance]	•	Instruction to proceed from the specified position via the specified route
	•	This uplink may not show the "ROUTE CLEARANCE" until it is loaded

Note 1:	Experience shows that flight crews often misunderstand the uplink message "CLEARED TO [position] VIA [route clearance]" when they fail to load the message into the FMS, with the result that they incorrectly fly directly to the "CLEARED TO [position]". In other cases, even after loading, they perceive the clearance as direct to the "CLEARED TO [position]".
Note 2:	FMS waypoint weather data (winds and temperature) may be lost depending on the route clearance message received. Flight crews should verify the weather data as they may need to re-enter the weather data for proper FMS predictions.
Note 3:	For additional guidance on pilot procedures for uplink messages containing FMS-loadable data, refer to Section 4.3.5 of the International Civil Aviation Organization (ICAO) Doc 10037—Global Operational Data Link (GOLD) Manual.

Route Verification

To mitigate errors associated with pilots failing to promptly load or execute the new route clearances, controllers may verify the new route using automatic dependent surveillance – contract (ADS-C) reports, or by sending "CONFIRM ASSIGNED ROUTE". Pilots are to respond to the "CONFIRM ASSIGNED ROUTE" with "ASSIGNED ROUTE [route clearance]".

Note:	Some aircraft are unable to send "ASSIGNED ROUTE [route clearance]" due to
	system limitations. In this case, pilots should respond with the free text message
	"UNABLE TO SEND ROUTE"

Further Information

For further information, please contact:

NAV CANADA Attn: Noel Dwyer, National Manager ATS Standards Delivery

E-mail: noel.dwyer@navcanada.ca

Chris Bowden

NAV CANADA 04 NOV 21

AERONAUTICAL INFORMATION CIRCULAR 32/21

PRE-TAXI CLEARANCE IMPLEMENTATION AT FLIGHT SERVICE STAFFED AIRPORTS IN CANADA

As a result of various stakeholder feedback sessions, NAV CANADA is continuing its endeavour to implement pre-taxi clearance (PTC) availability at staffed flight service station (FSS) sites in the country, where applicable. As part of this initiative, PTC is currently available at the following sites as of 31 August 2021:

FIR	Site	Code
CZQX	Deer Lake FSS	CYDF
CZQM	Saint John FSS	CYSJ
	Charlottetown FSS	CYYG
CZUL	Gatineau FSS	CYND
	Iqaluit FSS	CYFB
	Mirabel FSS	CYMX
	Sept-Iles FSS	CYZV
CZYZ	Kingston FSS	CYGK
	North Bay FSS	CYYB
	St. Catherines FSS	CYSN
	Sudbury FSS	CYSB
	Timmins FSS	CYTS
CZEG	Fort Nelson FSS	CYYE
	Fort St. John FSS	CYXJ
	Grande Prairie FSS	CYQU
	High Level FSS	CYOJ
	Inuvik FSS	CYEV
	Lethbridge FSS CYQL	
	Lloydminster FSS	CYLL
	Medicine Hat FSS	CYXH
	Norman Wells FSS	CYVQ
	Peace River FSS	CYPE
	Whitecourt FSS CYZL	
	Yellowknife FSS	CYZF
CZVR	Castlegar FSS	CYCG
	Cranbrook FSS	CYXC
	Port Hardy FSS	CYZT
	Smithers FSS CY	
	Terrace FSS	CYXT

It is imperative that operators understand that the delivery of a PTC is **NOT** an authorization to depart when ready.

PTC clearances will be appended with the following instruction – "DO NOT DEPART UNTIL DEPARTURE VALIDATION IS RECEIVED".

When taxiing for departure, operators will receive a clearance validation relayed by the flight service specialist in the form of "(ACID) valid (SID, if applicable) DEPARTURE RUNWAY (XX)," for example.

Should a PTC clearance require an amendment prior to departure, the flight service specialist will relay a new clearance for which a departure validation will be required. Due to their lengthy nature and complexity, PTC will not be available for pilots filing instrument flight rules (IFR) flight itineraries.

The Canada Flight Supplement (CFS) will be amended to indicate the availability of PTC at an airport through a flight service station in the near future.

For further information, please contact:

NAV CANADA Customer Service 77 Metcalfe Street Ottawa, ON K1P 5L6

Tel.: 800-876-4693 Fax: 877-663-6656

E-mail: service@navcanada.ca

Stephanie Castonguay

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NAV CANADA 12 AUG 21

AERONAUTICAL INFORMATION CIRCULAR 22/21

CANADA/USA BORDER COMPUTER NAVIGATION FIXES

Background

Computer navigation fixes (CNF) are depicted on some area charts located on airways that cross the Canada/USA boundary. CNFs usually begin with the letters "CF" followed by three consonants, such as CFZDK, and differ from regular pronounceable waypoints.

Some chart producers may choose to include CNFs on aeronautical charts in parentheses/square brackets. As such, these CNFs are depicted on some third-party charts and have been included in Canada/USA boundary flight management system (FMS) airway definitions and aircraft databases.

Issue

While Canada/USA boundary CNFs are charted and contained in some FMS navigation databases, pilots and dispatch personnel should be aware of the following:

- They are not to be used in the definition of an airway for flight planning purposes.
- They are not needed by flight management systems to define and navigate airways.
- They are not to be used by pilots for navigation purposes. Pilots are not to ask for a clearance to these points even if they are contained in the FMS routing.

NAV CANADA is actively working with the Federal Aviation Administration (FAA) and chart producers on a solution to eliminate CNFs at the Canada/USA boundary.

For further information, please contact:

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Vanessa Robertson

Director Air Traffic Services (ATS) Standards

NAV CANADA 22 APR 21

AERONAUTICAL INFORMATION CIRCULAR 15/21

NOTICE OF OPERATIONAL TRIAL: NEW RUNWAY HOLD POSITION MARKINGS, PLACEMENT AND LIGHTING TORONTO/LESTER B. PEARSON INTERNATIONAL AIRPORT

Purpose of the Circular

This circular is to advise pilots of an operational test of new hold position markings, placement and lighting at the airport and confirm method of operation.

Background

To reduce the risk of runway incursions, an operational trial of angled mandatory hold positions (see illustration on the following page) will be undertaken on Taxiway D4 and Taxiway D5 on the south side of Runway 06L/24R, commencing in April 22, 2021. The trial will also be further advertised via NOTAM.

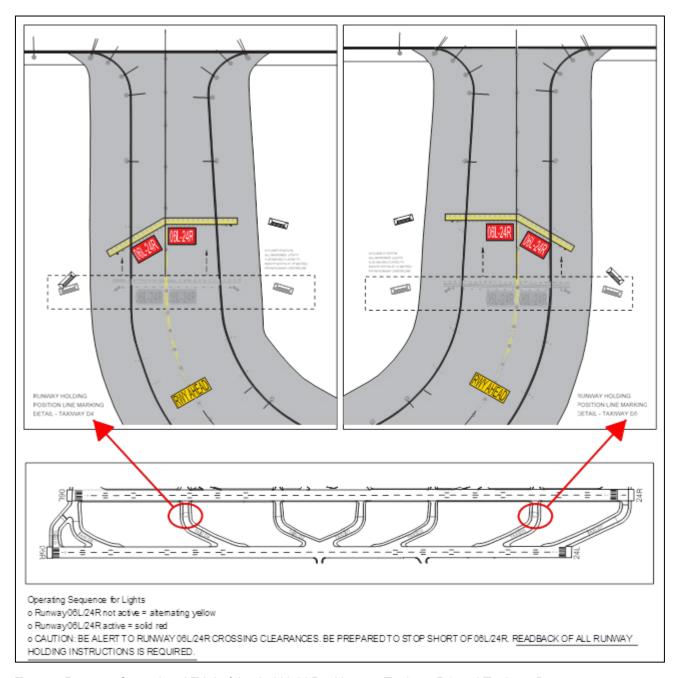
This design concept results from a collaborative effort of the Toronto Pearson local runway safety team, which consists of industry safety experts, to address recommendations from a Transportation Safety Board safety issues investigation.

Characteristics of the trial of angled hold positions designs are as follows:

- One half of the hold position marking is angled 30 degrees toward the path of the approaching aircraft;
- Inset LED wide-angle lens combination runway guard lights (i.e., flashing yellow) / stop bar (i.e., solid red) spaced at 1.5 metres along the entire span of the hold position for a total of 26 fixtures, as compared to the current 10 fixture design at 3.0 metres spacing;
- These lights will flash yellow in an alternating pattern when Runway 06L/24R is not in use and show solid red when Runway 06L/24R is in operation; and
- The entire mandatory hold position has been moved from a distance 115 metres from the centerline of Runway 06L/24R to 90 metres, the more common international standard.

These changes have been tested with aircraft and flight crews in a controlled environment and evaluated by the members of Toronto Pearson's Local Runway Safety Team to provide superior visibility and indication of the required holding point to flight crews exiting Runway 06R/24L.

For the duration of the operational trial (specific end time yet to be determined), the Greater Toronto Airports Authority (GTAA) welcomes and encourages all flight crews using these rapid exit taxiways to provide feedback to air traffic controllers (ATCs), or more detailed observations directly to the GTAA at report-it@gtaa.com.



Toronto Pearson Operational Trial of Angled Hold Positions at Taxiway D4 and Taxiway D5

Stephanie Castonguay

NAV CANADA 25 MAR 21

AERONAUTICAL INFORMATION CIRCULAR 10/21

NOTICE OF TRIAL FOR PROPOSED AMENDED PREFERENTIAL RUNWAY SYSTEM AT TORONTO/LESTER B. PEARSON INTERNATIONAL AIRPORT

(Replaces AIC 8/20)

Purpose of the Circular

This circular is to advise pilots of the trial start for the proposed amended Preferential Runway System at Toronto/Lester B. Pearson International Airport (CYYZ), effective **27 February 2020 at 00:00 local time**.

Background

As part of the Toronto Noise Mitigation Initiatives (Six Ideas) and the 2018–2022 Noise Management Action Plan, the Greater Toronto Airports Authority (GTAA) is proposing an amendment to the existing Preferential Runway System in place at CYYZ (nightly from 00:00 local time to 06:29 local time). A trial is being conducted beginning 27 February 2020 at 00:00 local time. On the start date, the amended preferential runway system will replace the existing preferential runway system. The GTAA will assess the trial and collect feedback throughout. Should the trial be deemed successful, the GTAA will apply to Transport Canada for a permanent amendment.

The objective of a preferential runway system is to direct aircraft away from noise-sensitive areas during the initial departure and final approach phases of flights (*Transport Canada Aeronautical Information Manual* (TC AIM) TP 14371E, section RAC 7.6.1, "Noise Abatement Procedures—Departure — General"). The current system is decades old, surrounding communities have grown significantly since then, and the airport has added two new runways in that time. The GTAA believed it was necessary to ensure that the existing preferential runway system was still meeting the intended objective as defined by Transport Canada in the TC AIM.

After an extensive analysis of population numbers and the noise levels that communities were experiencing, the GTAA determined that the existing first and second choice runways (Runway 05 and Runway 15L for arrivals, and Runway 23 and Runway 33R for departures), were still the best options for directing aircraft away from noise sensitive, highly populated areas. The existing third choice, Runway 06L/24R, is no longer a preferential runway: however, it is available as an alternate when Runway 05/23 is unavailable.

Amended Preferential Runway System

The amended system will package the runways differently. Rather than a system that lists three options for departures and three for arrivals in order of preference, the GTAA has developed runway pairings (arrival/departure configurations) and provisioned for one runway in each direction. This will allow NAV CANADA to still adhere to the system while selecting optimal runways based on weather conditions and infrastructure availability.

The proposed amended preferential runway system is illustrated in Figure 1:

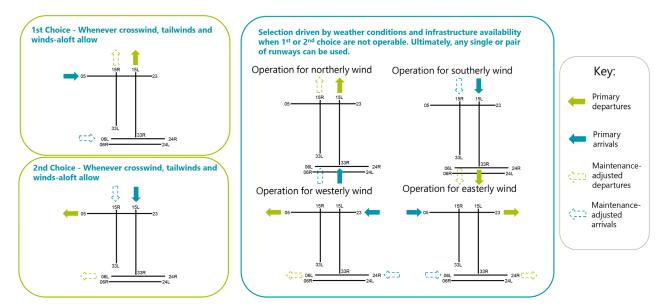


Figure 1: Proposed Amended Preferential Runway System

The following tables provide a comparison of the existing and amended systems:

Existing Preferential Runway System			
Preference	Arrivals	Departures	
1	05	23	
2	15L	33R	
3	06L	24R	

Amended Preferential Runway System			
Preference	Arrivals	Departures	Notes
1	05 (06L/R)*	33R (33L)	Use as a Pair
2	15L (15R)	23 (24L/R)	Use as a Pair

^{*} Runways in brackets are available when the corresponding preferential runway is not available.

Provision for Weather and Infrastructure Availability**			
Option	Arrivals	Departures	Notes
Northerly	33R (33L)	33R (33L)	Single Runway Operation
Southerly	15L (15R)	15L (15R)	Single Runway Operation
Westerly	23 (24R/L)	23 (24R/L)	Single Runway Operation
Easterly	05 (06L/R)	05 (06L/R)	Single Runway Operation

^{**} NAV CANADA may use any of these runways, as required, when the first and second preference pairs are unavailable or not an appropriate choice.

The amendment to the preferential runway system is part of a commitment that the GTAA has made to surrounding communities to continue to meet the objectives of the preferential runway system, improve the reliability of the system, and be transparent through publicly available usage reports.

The GTAA's Noise Management Action Plan is available on Toronto Pearson's website at: https://www.torontopearson.com/noisemanagement/#>. When available, further details or links to information relating to the trial can be found on the Toronto Pearson website at: www.torontopearson.com/conversations>.

Expected Action

Operators shall comply with the amended nighttime preferential runway system, which is in effect every day from 00:00 to 06:29 local time. Approval during this time is required for any requests for non-preferential runway departures, arrivals, or both. These requests are to be directed to:

GTAA Airport Duty Manager

Tel.: 416-776-3030

Stephanie Castonguay

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NAV CANADA 11 OCT 18

AERONAUTICAL INFORMATION CIRCULAR 28/18

TORONTO/LESTER B. PEARSON INTERNATIONAL (CYYZ) NEW NIGHT-TIME APPROACH PROCEDURES

Purpose of Circular

This circular advises pilots of new night-time instrument approach procedures at Toronto/Lester B. Pearson International Airport (CYYZ).

Background

While traffic levels are significantly lower at night than during the day, aircraft noise can be more noticeable for some residents during these periods as ambient community and household noise levels are typically lower. Lower demand and fewer aircraft at night provide the opportunity to employ routes that impact fewer people.

New Procedures

Effective 8 November 2018, NAV CANADA will publish six new night-time approach procedures for CYYZ that better avoid residential areas. The new procedures will include:

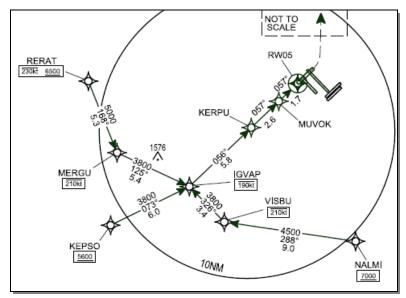
- RNAV (GNSS) X RWY 05
- RNAV (GNSS) X RWY 06L
- RNAV (GNSS) X RWY 06R
- RNAV (GNSS) X RWY 23
- RNAV (GNSS) X RWY 24L
- RNAV (GNSS) X RWY 24R

Rather than using straight-in or "T" transitions, these approach procedures employ transitions to final that, in some cases, could include multiple legs in the initial approach segment. Pilots can expect to be cleared directly to the initial approach waypoint, then subsequently cleared for the approach including the appropriate transition.

Example clearance:

"GENERIC AIRLINES 123 PROCEED DIRECT RERAT. CLEARED RNAV X RWY 05 APPROACH, RERAT TRANSITION."

Pilots would be expected to fly by RERAT and then follow the lateral and vertical profile of the area navigation (RNAV) approach procedure.



Example of multiple leg segments on the new night-time approach for runway 05

Vertical Profile Considerations

The flight path for these approaches has been designed to minimize the noise footprint for the approach phase of the arrival. Therefore, their vertical profile has not been optimized for the transition from the standard terminal arrival (STAR) procedures for CYYZ. As the clearance to the initial approach waypoint (IAWP) will typically be issued in the terminal area, pilots should anticipate a possible change in vertical profile, after setting direct, that may leave the aircraft high. In some instances, pilots may need to use additional drag to regain the vertical profile or request additional spacing from air traffic control (ATC) in some STAR/runway pairings.

Times of Use

The new CYYZ night-time approaches will be used between the hours of 12:30 a.m. and 6:30 a.m. local time. These procedures require relatively low traffic levels to be operationally feasible; spikes in traffic increase complexity and may result in vectors to final or other approach types to be used. If possible, usage would start earlier, but use will be limited to very low traffic periods overnight.

When the night-time approaches are in use, the CYYZ automatic terminal information service (ATIS) will advertise the appropriate RNAV (GNSS) X as the primary instrument flight rules (IFR) approach, and ATC will expect the aircraft to be set up for that approach. If unable to fly the approach advertised on ATIS, pilots are reminded of the requirement to advise Toronto Arrival on first contact that they are unable to comply with the ATIS, and that an alternate approach is necessary.

The night-time RNAV (GNSS) X approaches will only be advertised as the primary approach when conditions permit (cloud ceilings of 1,000 feet or more, visibility of 3 statute miles (SM) or better, GNSS expected to be available, etc.).

Further Information

For further information, please contact:

NAV CANADA Customer Service 77 Metcalfe Street Ottawa, ON K1P 5L6

Tel.: 800-876-4693 Fax: 877-663-6656

E-mail: <u>service@navcanada.ca</u>

James Ferrier

Director, Aeronautical Information Management