

Toronto Pearson Noise Management Forums Public Meeting

December 2, 2021



Welcome + Introductions

Pearson Public Meetings

- The Pearson Public Meetings are part of the Noise Management Forums
- The meetings provide residents with:
 - A chance to learn more about airport operations and how your area is impacted
 - Hear updates from GTAA and NAV CANADA about noise management efforts
 - Ask questions or raise concerns related to airport operations
- Each meeting has a drop-in style session where residents can ask questions about operations in their area and a public meeting session which includes presentations and a public question period
- Both the drop-in session and public meetings will be held virtually until further notice



Noise Management Roles and Responsibilities

The **Greater Toronto Airports Authority** (GTAA) is a not-for-profit private business that has managed and operated the airport since 1996. The GTAA develops and manages a Noise Management Program and explores new opportunities for noise mitigation.

NAV CANADA is the air navigation provider in Canada, responsible for safe and efficient movement of aircraft. NAV CANADA designs and publishes a network of air routes to design criteria set by Transport Canada and ICAO. It also assigns runways at Toronto Pearson considering winds, weather, capacity and preferential runway system.

Airlines are responsible for conducting operations in accordance with the Transport Canada regulations and the airport's Noise Abatement Procedures and Noise Operating Restrictions.

Transport Canada is the regulator for aviation in Canada. It ensures Canadian aircraft are compliant with the international noise standards through the aircraft certification process, establishes flight path design criteria and land-use guidelines based on noise exposure. It approves proposed changes to and enforces the Noise Abatement Procedures and Noise Operating Restrictions. Transport Canada also audits the airport's Night Flight Restriction Program annually.

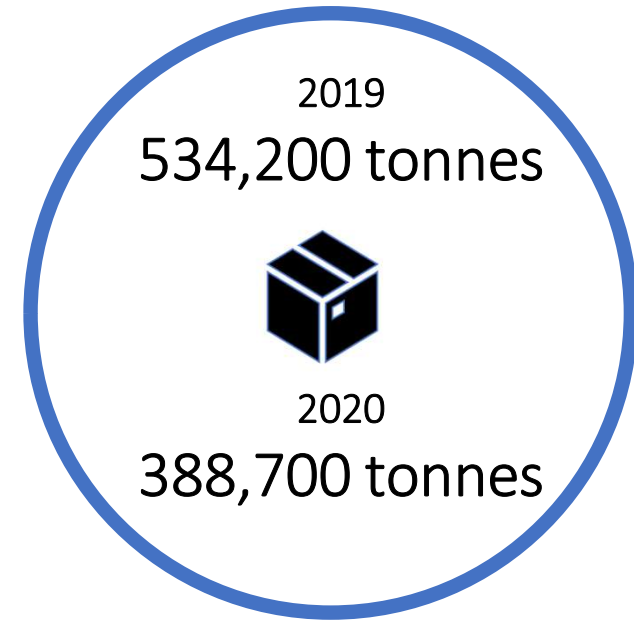
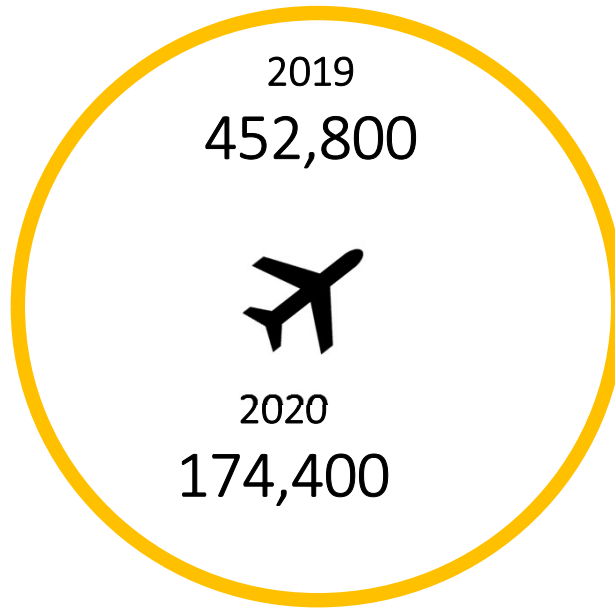
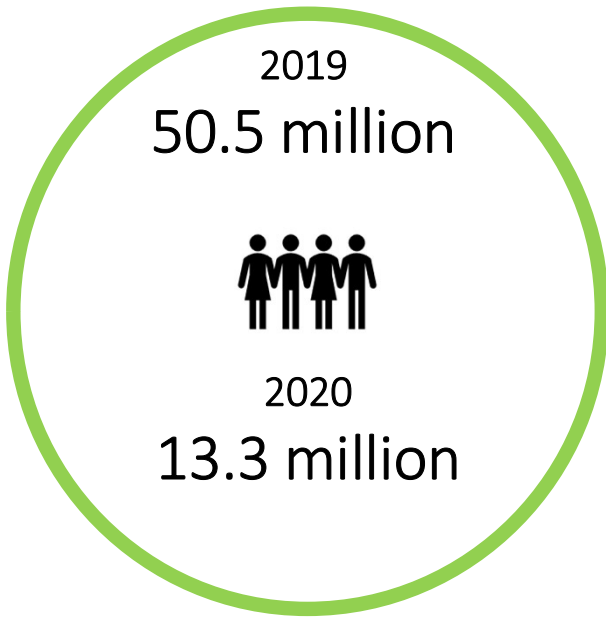
Greater Toronto Airports Authority

Established by the Government of Canada in 1996 to manage and operate **Toronto Pearson International Airport** – Canada's busiest airport.

The GTAA is a not-for-profit, non-share capital corporation.



Toronto Pearson – Pre and Post COVID



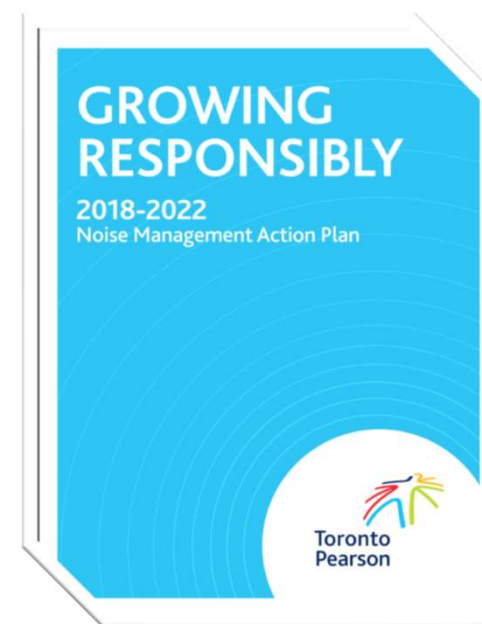
Toronto Pearson – Managing Impacts

Environmental Management: focused on 7 areas: Climate Change Resiliency, Carbon Neutrality & Emissions, Strategic Energy Use, Water Management, Natural Environment, Waste Management, and *Noise Management*

- Committed to net zero carbon emissions and waste from terminal buildings by 2050
- Signatory of the Clean Skies for Tomorrow initiative, which aims to support the adoption of Sustainable Aviation Fuel (SAF)
- First airport in North America to achieve ISO 14001 certification for its EMS.
- Awarded the 2020 Environmental Achievement Award in the Environmental Management Category from Airport Council International-North America (ACI-NA).

Noise Management Program

- A balanced approach to mitigate aircraft noise: reduction of noise at source, land use planning and management, noise abatement operational procedures and operating restrictions.
- The Noise Management Action Plan is developed every five years with initiatives to enhance the program and better manage our impacts.



Agenda

- Airport Updates
 - Overview of Airport Operations and overflow communities
 - Operations and Complaints
 - Airside Maintenance
- NAV CANADA Updates
 - Required Navigation Performance (RNP) Consultation
 - Industry Noise Management Board Update
- GTAA Noise Management Program Updates
 - Update: Noise Management Action Plan
- Questions



Airport Updates



About Toronto Pearson



Prior to COVID-19, Toronto Pearson was the sixth most connected airport in the world, facilitating almost 50 million passengers and 478,000 aircraft movements a year, directly employing 49,000 people and enabling \$42 billion of Ontario's GDP



Toronto Pearson is open 24 hours a day. A typical day is divided into normal operating hours (6:30 a.m. to midnight), preferential runway system hours and restricted hours



Preferential hours (midnight to 6:29 a.m.): prioritize runways that overfly the fewest people



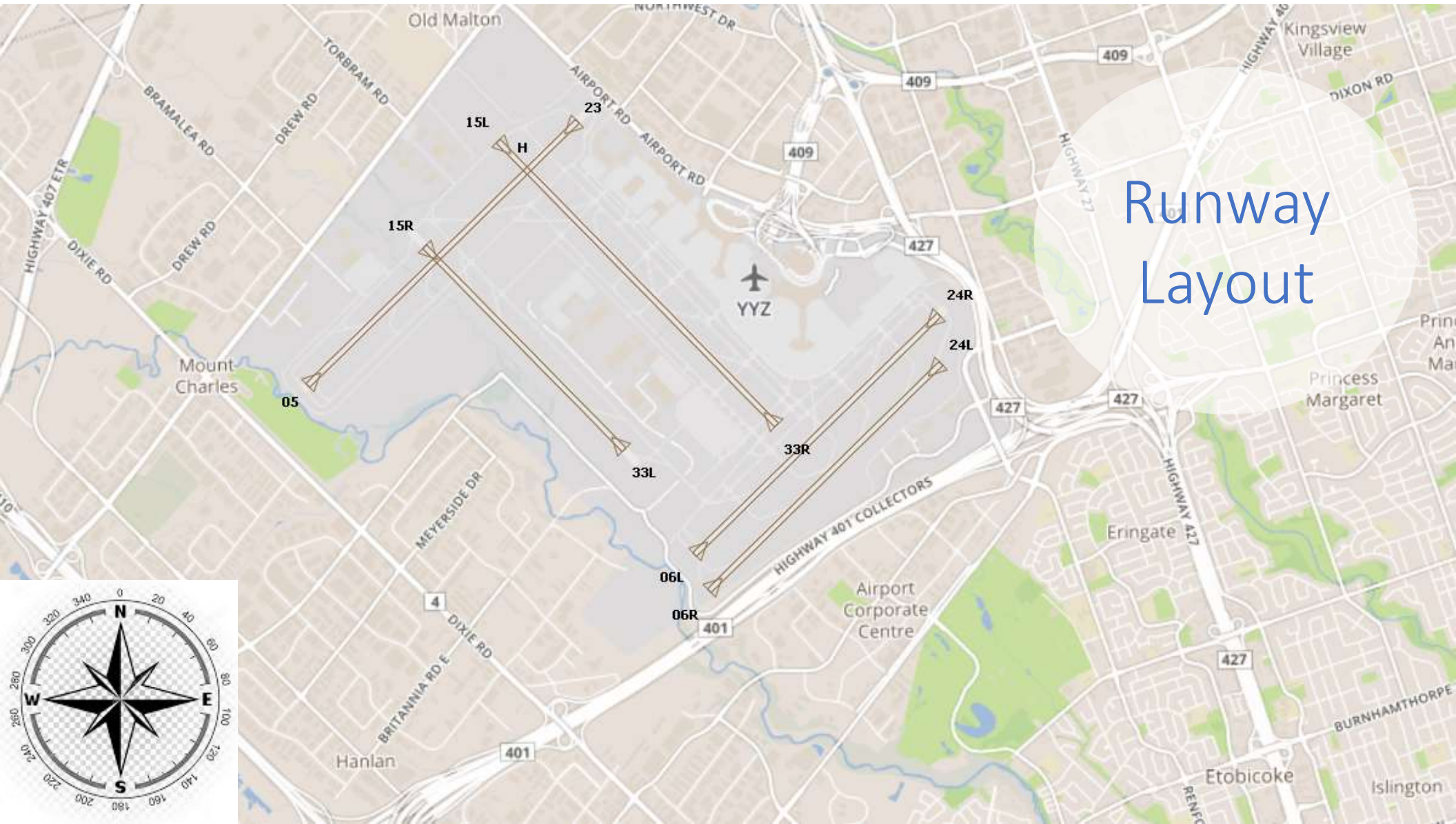
Restricted Hours (12:30 to 6:29 a.m.): governed by a Night Flight Restriction Program which limits number of movements. Runs from Nov 1 to Oct 31. Annual budget increases with passenger growth

Our Runways

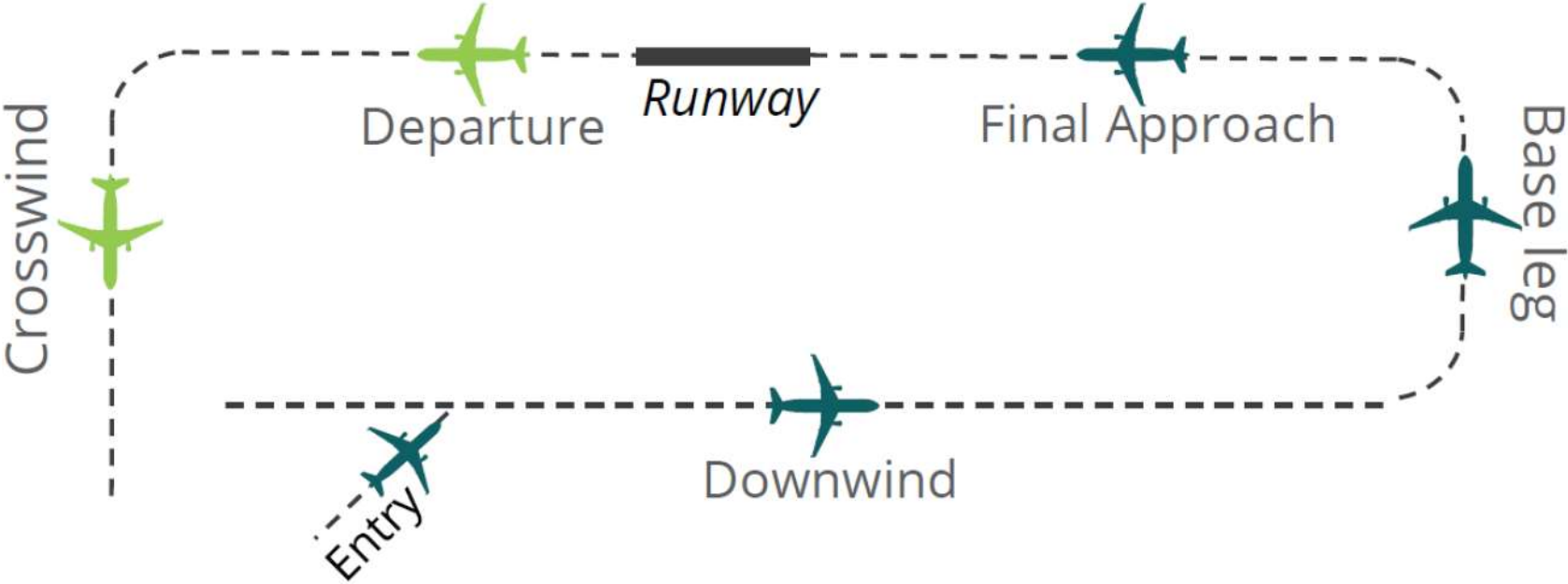
- Toronto Pearson has five runways
- Two runways go in the north-south direction:
 - Runway 15L/33R
 - Runway 15R/33L
- Three runways go in the east-west direction:
 - Runway 05/23
 - Runway 06L/24R
 - Runway 06R/24L
- Runways can be used from both ends, so while there are five runways, there are 10 operational ends for arrivals and departures



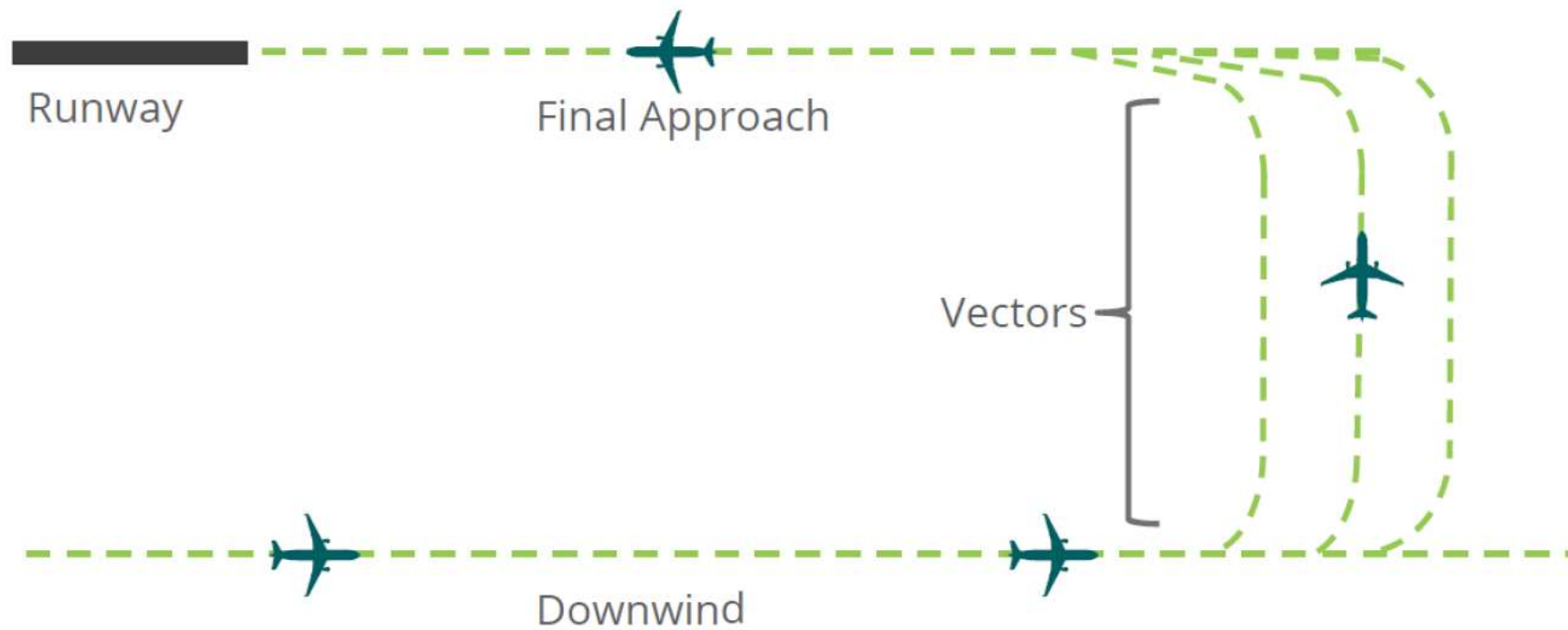
Runway Layout



Runway Circuit Pattern



Runway Circuit Pattern



Arrivals Runway 23

Departures Runway 05

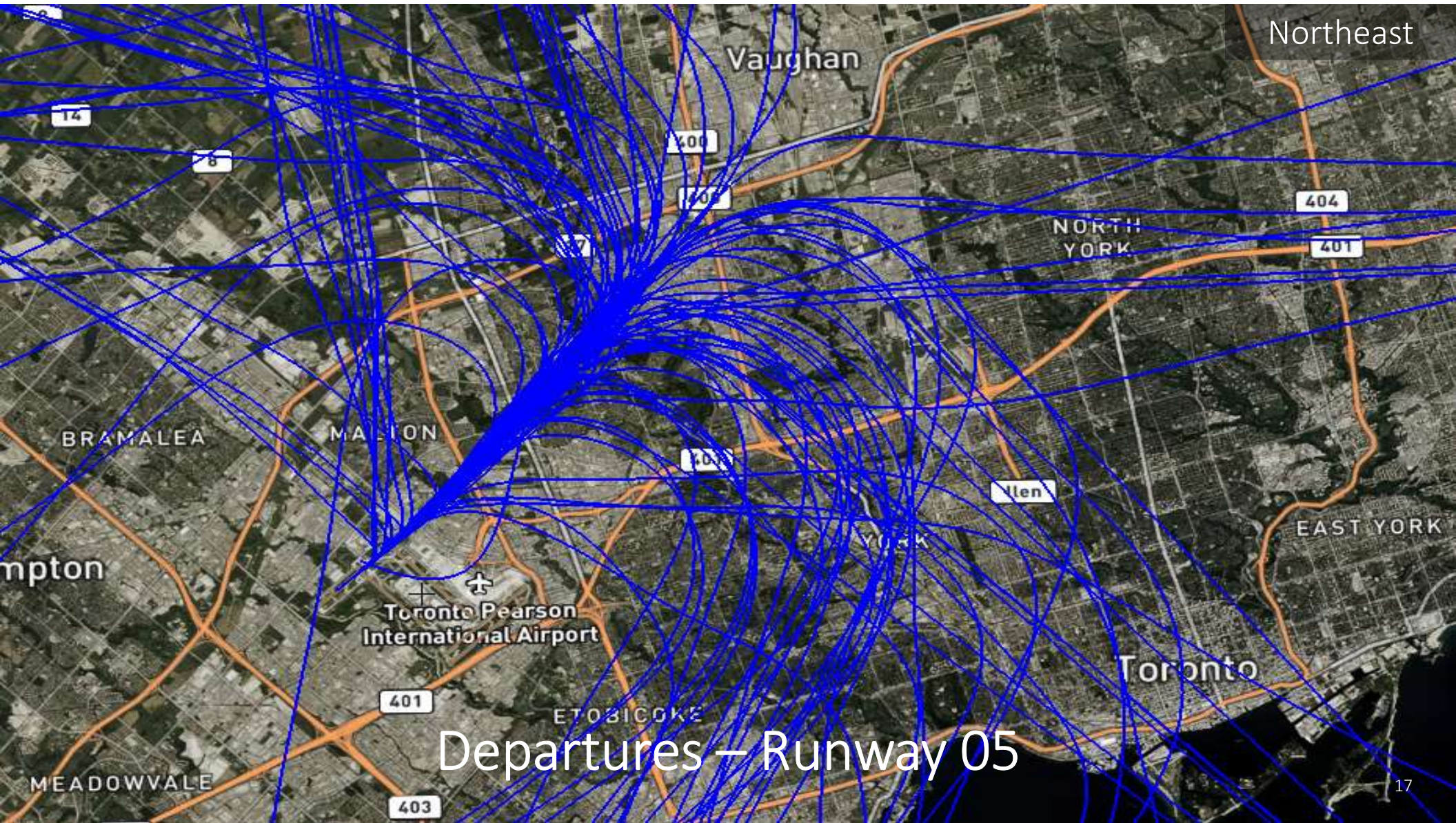
Communities impacted:

Maple/Vaughan, Richmond Hill, Thornhill, Rexdale





Arrivals - Runway 23

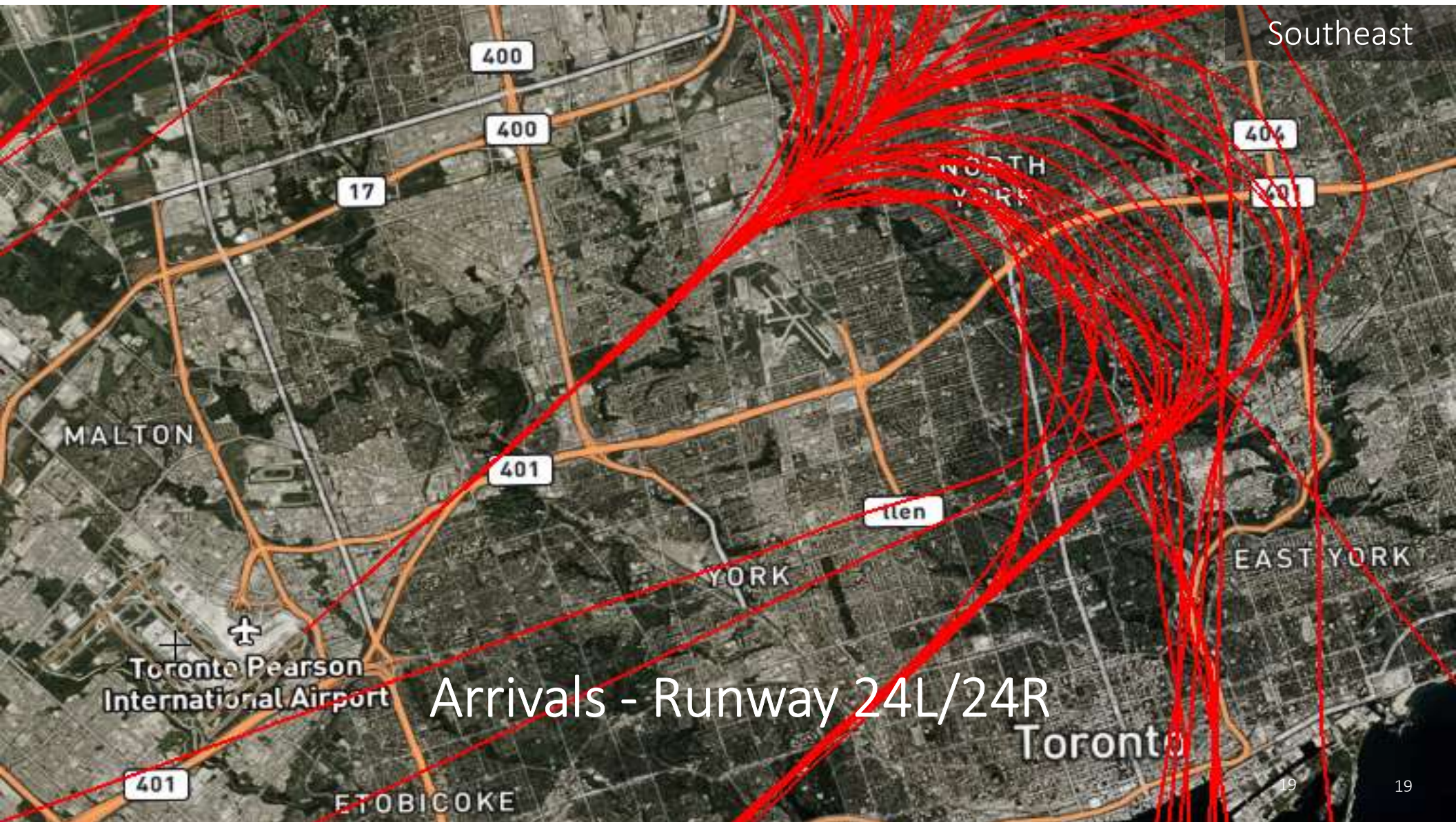


Arrivals Runway 24L/R Departures Runway 06L/R

Communities impacted:

Midtown Toronto, North York, Weston, Markham





Southeast

400

400

17

404

401

MALTON

401

Ilan

YORK

EAST YORK

Toronto Pearson International Airport

Arrivals - Runway 24L/24R

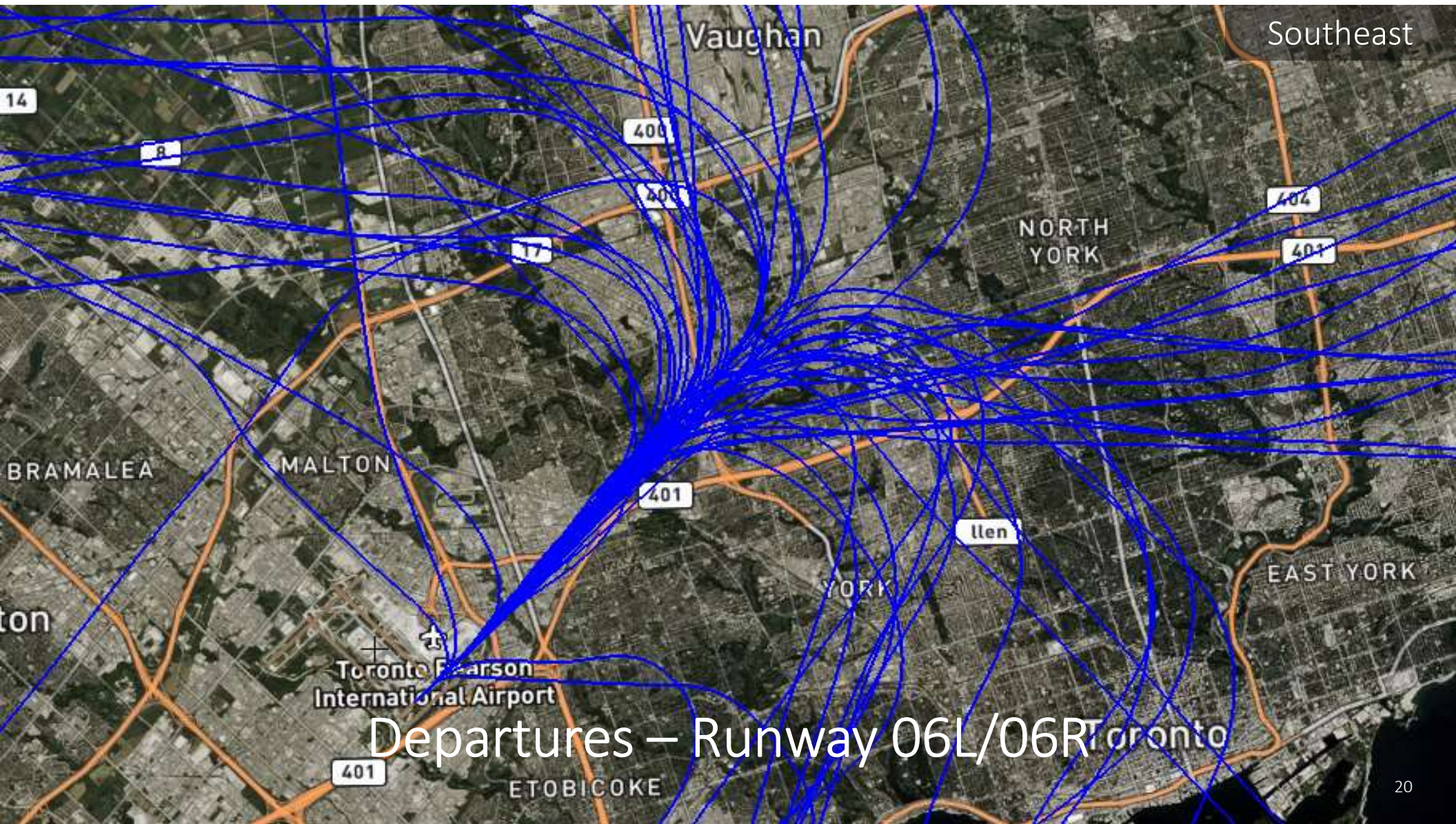
Toronto

401

ETOBICOKE

19

19



Departures - Runway 06L/06R Toronto

Arrivals Runway 05

Departures Runway 23

Communities impacted:

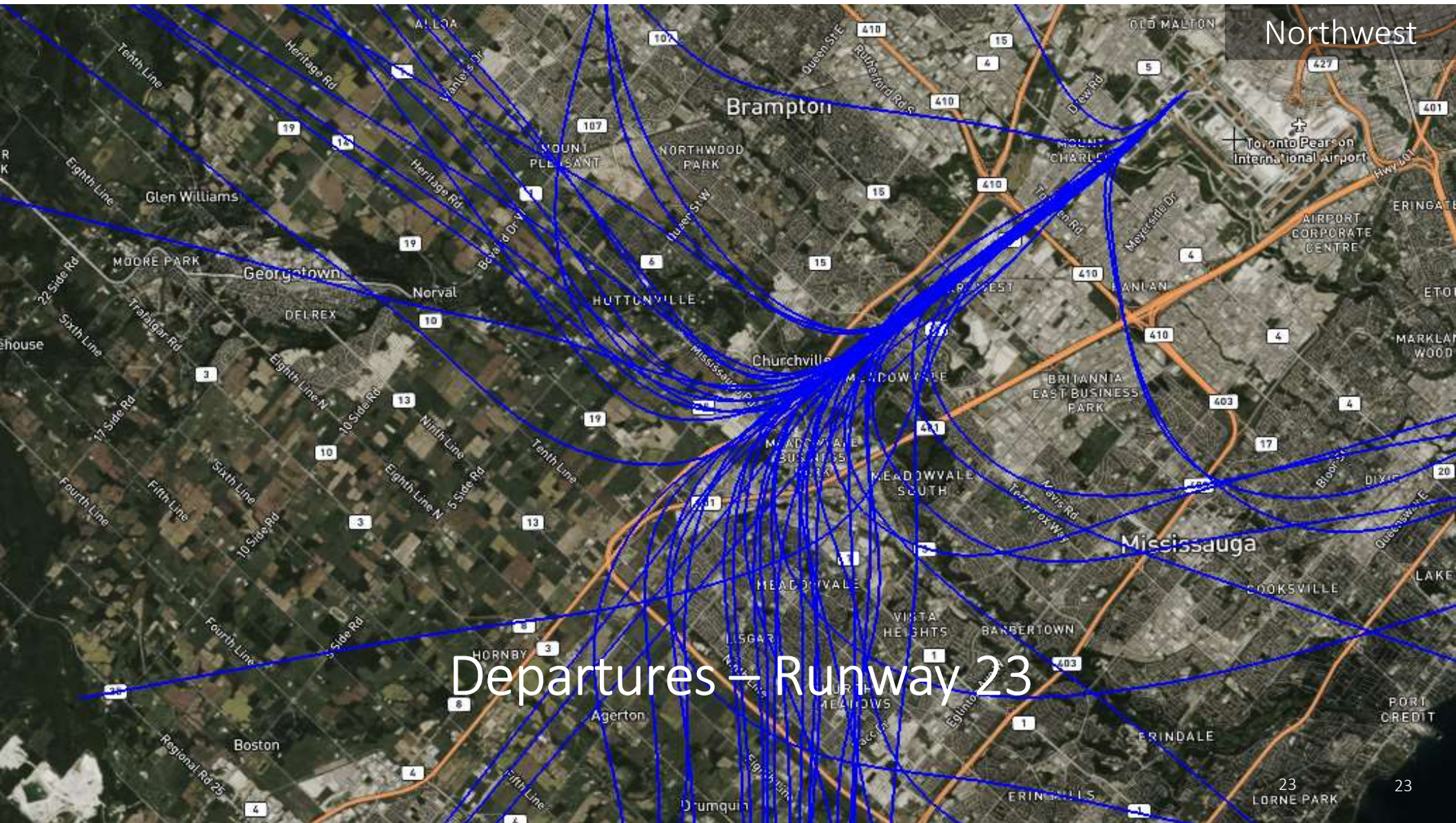
Brampton, Georgetown, Milton, Meadowvale, Streetsville





Arrivals - Runway 05

Northwest



Northwest

Brampton

Georgetown

Mississauga

Departures - Runway 23

23

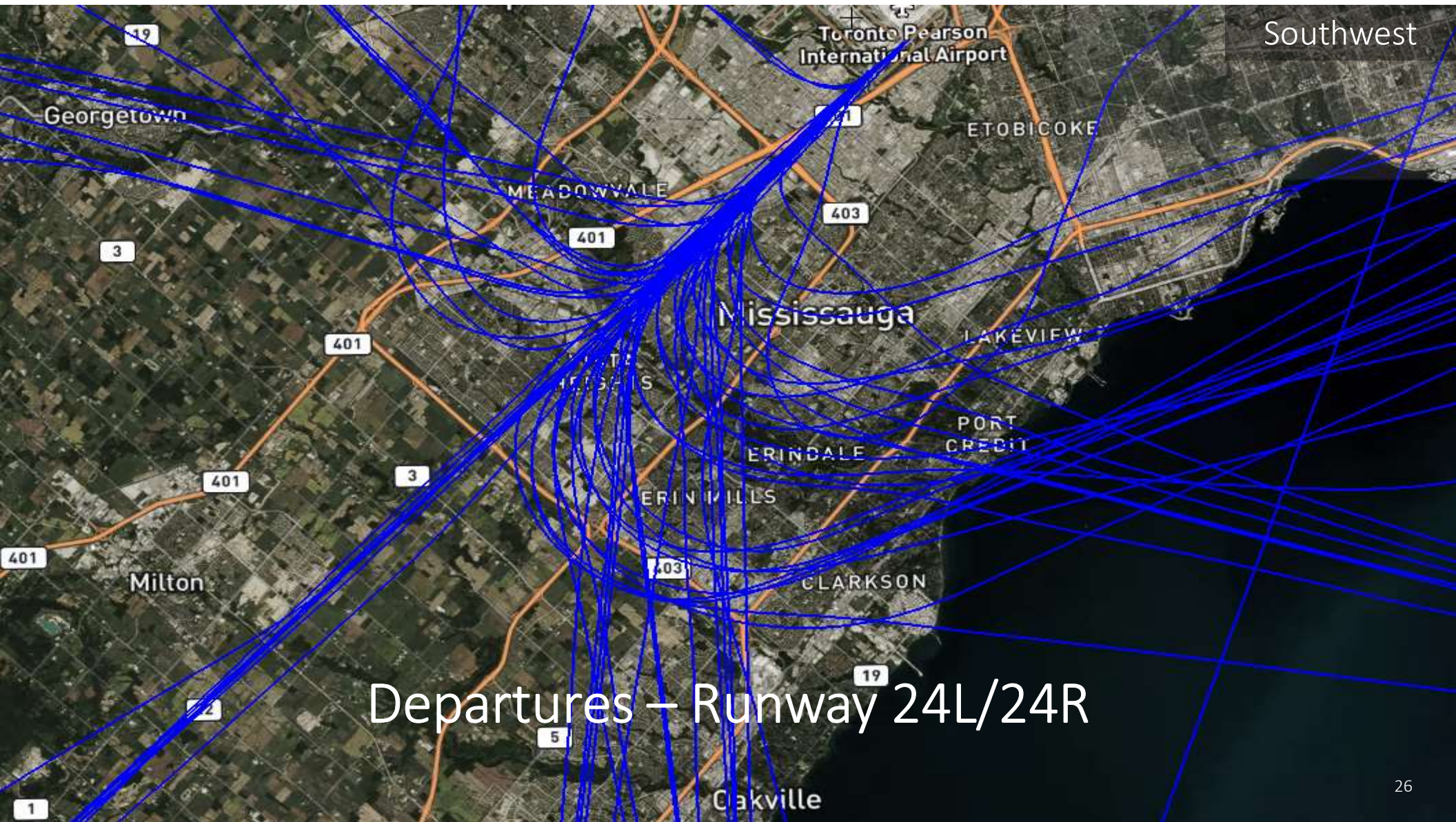
Arrivals Runway 06L/R Departures Runway 24L/R

Communities impacted:

Meadowvale, Alderwood, Erin Mills, Streetsville, Clarkson, Port Credit, Oakville







Departures – Runway 24L/24R

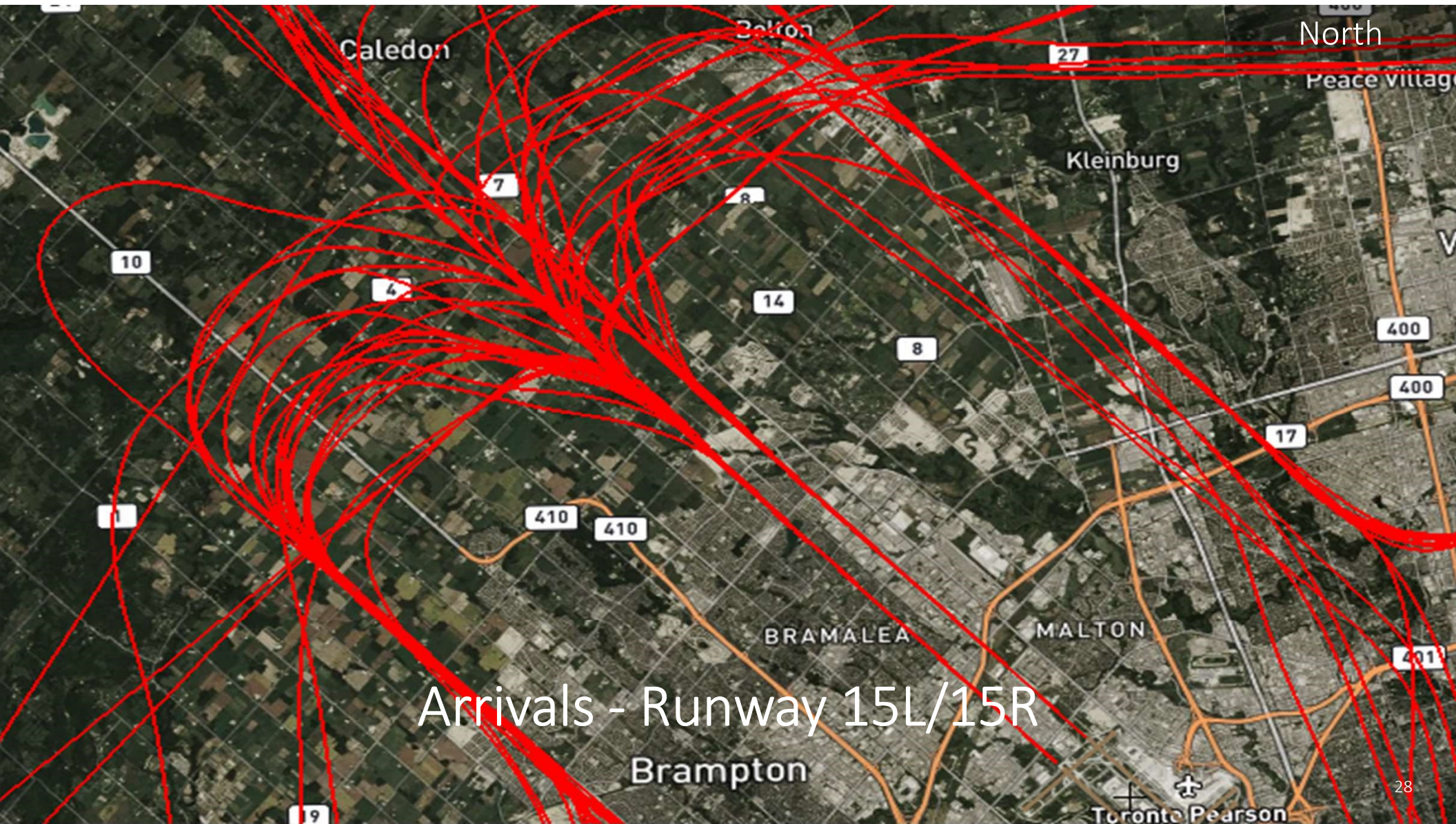
Arrivals Runway 15L/R

Departures Runway 33L/R

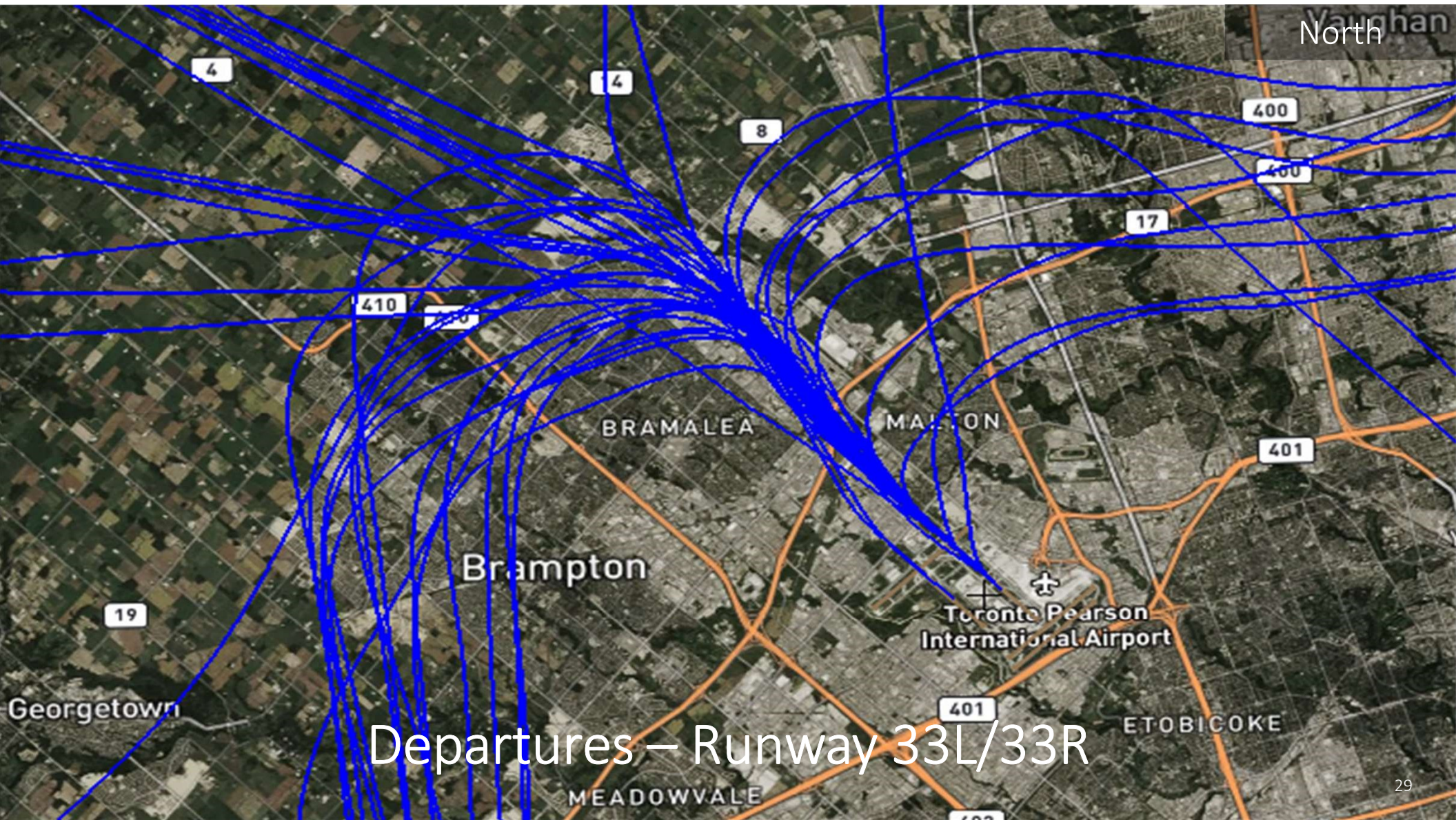
Communities impacted:

Brampton, Malton





Arrivals - Runway 15L/15R



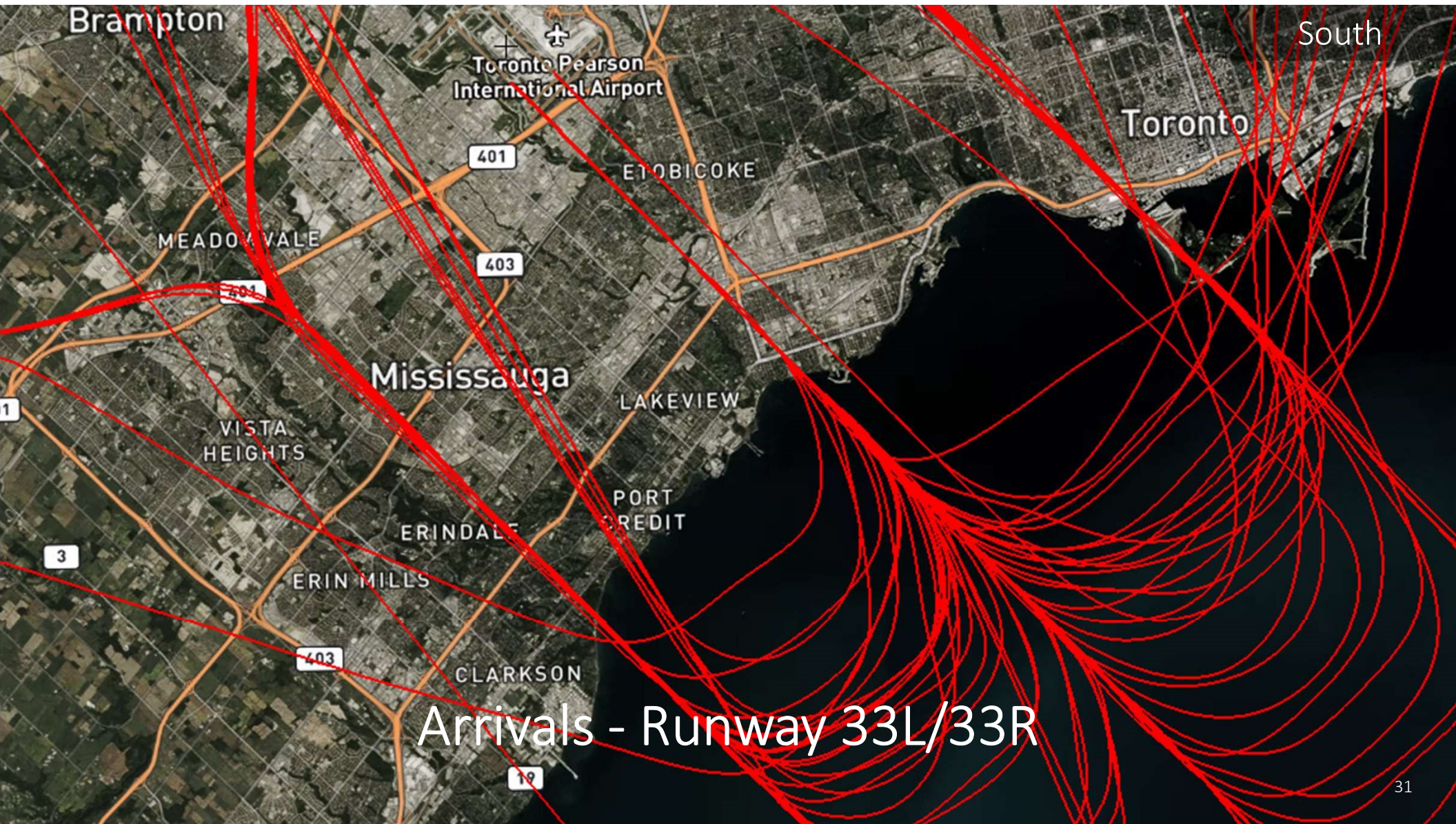
Arrivals Runway 33L/R

Departures Runway 15L/R

Communities impacted:

Etobicoke-Lakeshore, Alderwood, Long Branch, Markland Wood

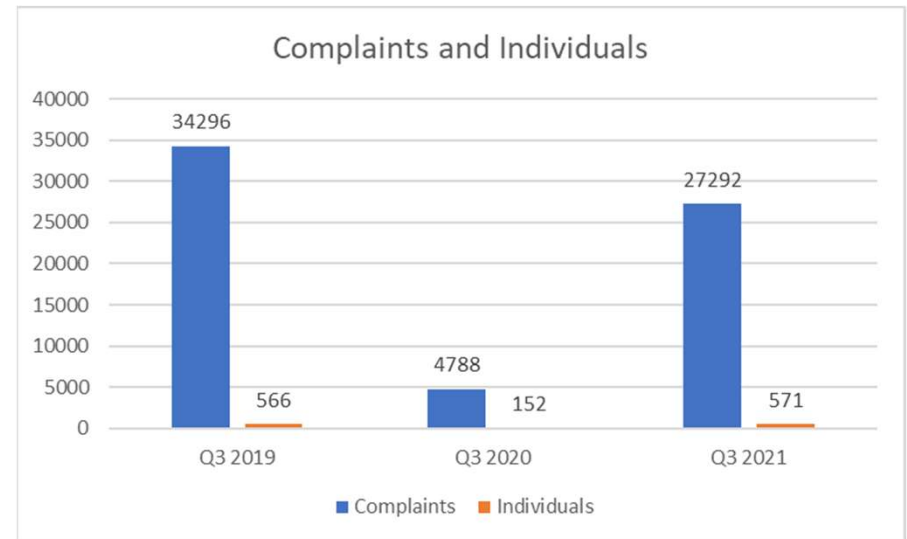
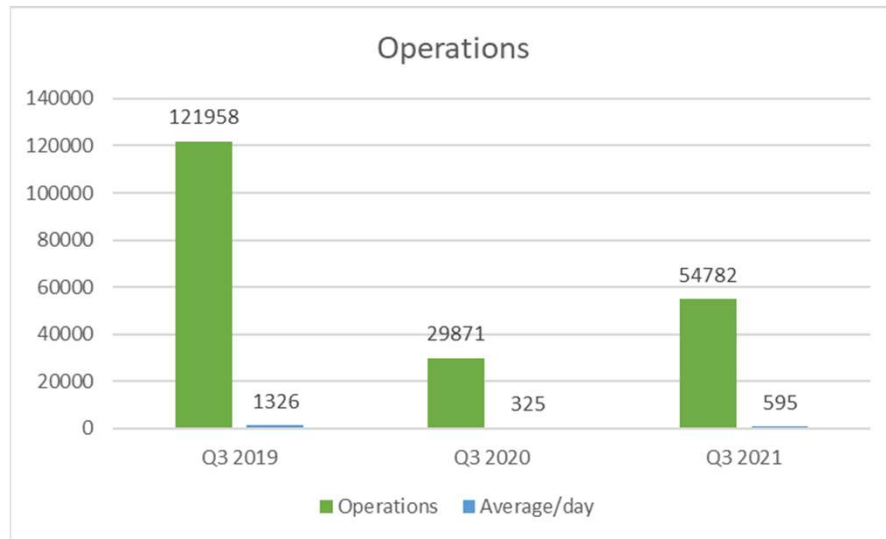






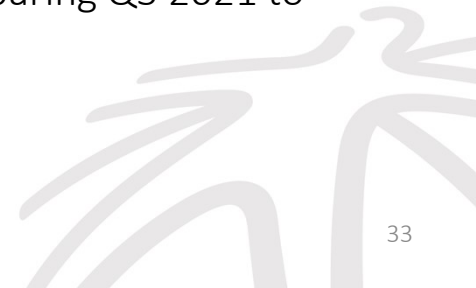
Departures – Runway 15L/15R

Operations & Complaints – Q3 comparison



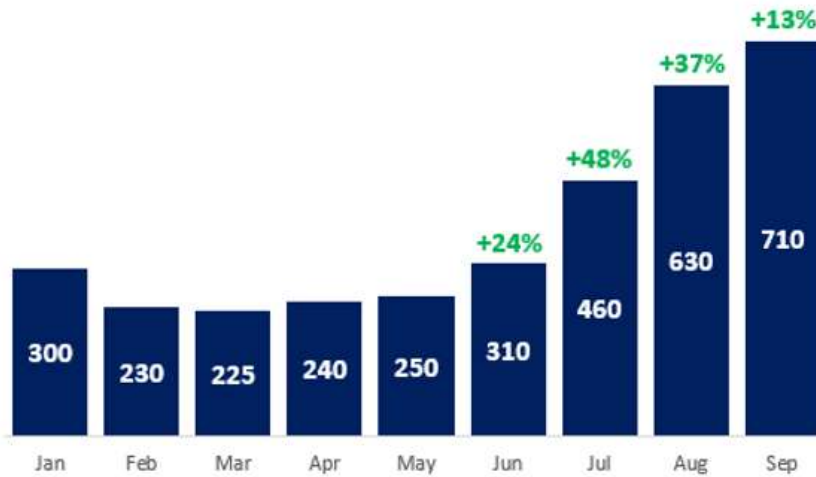
- Movements are **+83%** comparing Q3 2021 with Q3 2020
- However, movements are still **-55%** compared to Q3 '19

- 470% increase in complaints and 275.7% increase in individuals comparing Q3 2021 to 2020

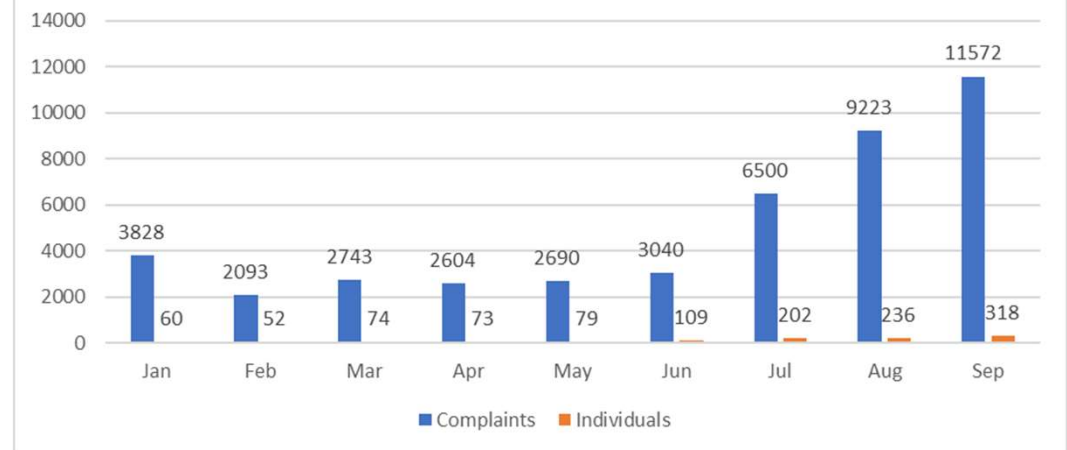


Operations & Complaints - YTD 2021

Avg. Daily Ops

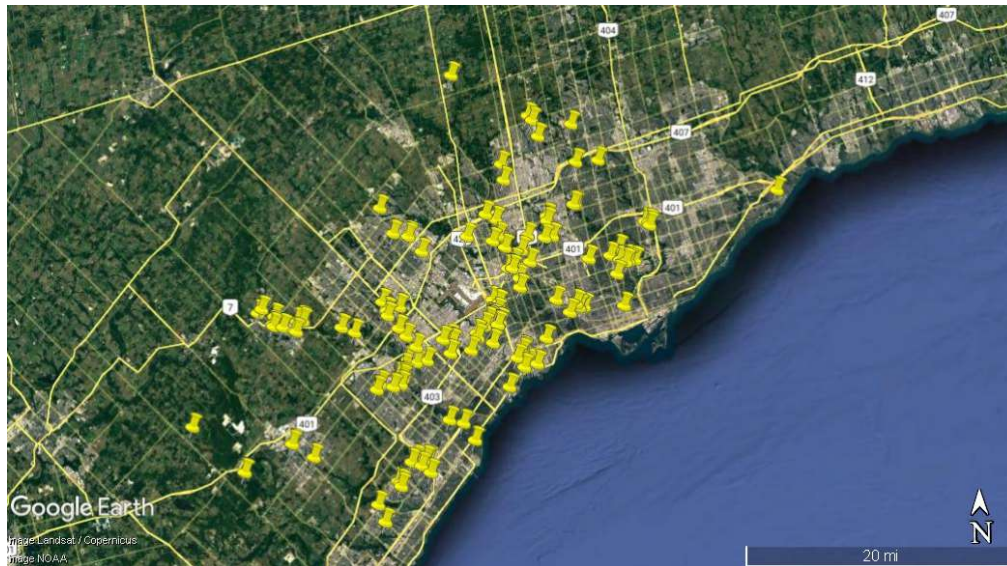


Monthly Complaints and Individuals

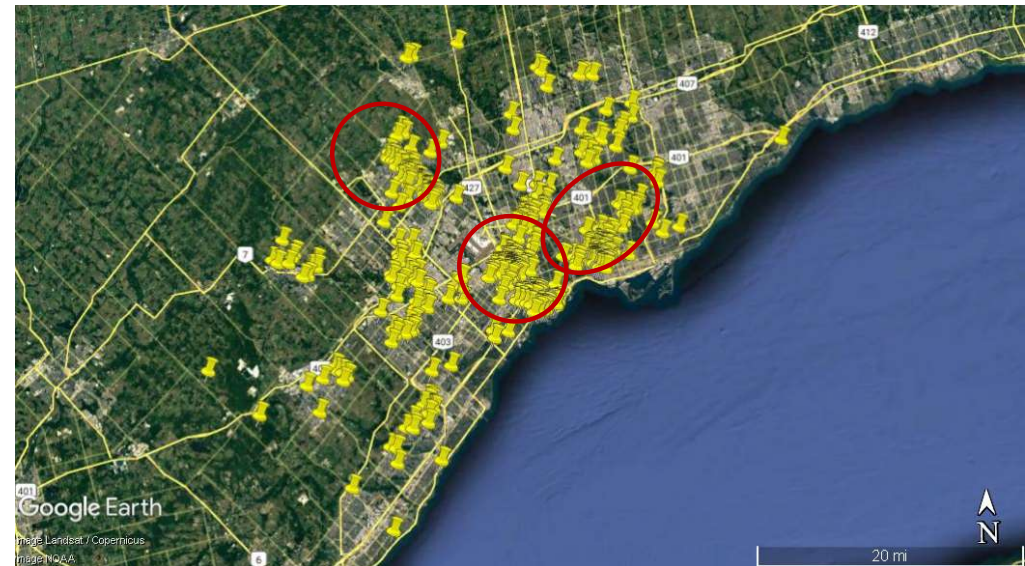


Complaint Distribution

Q3 2020: 4,788 complaints from 152 individuals



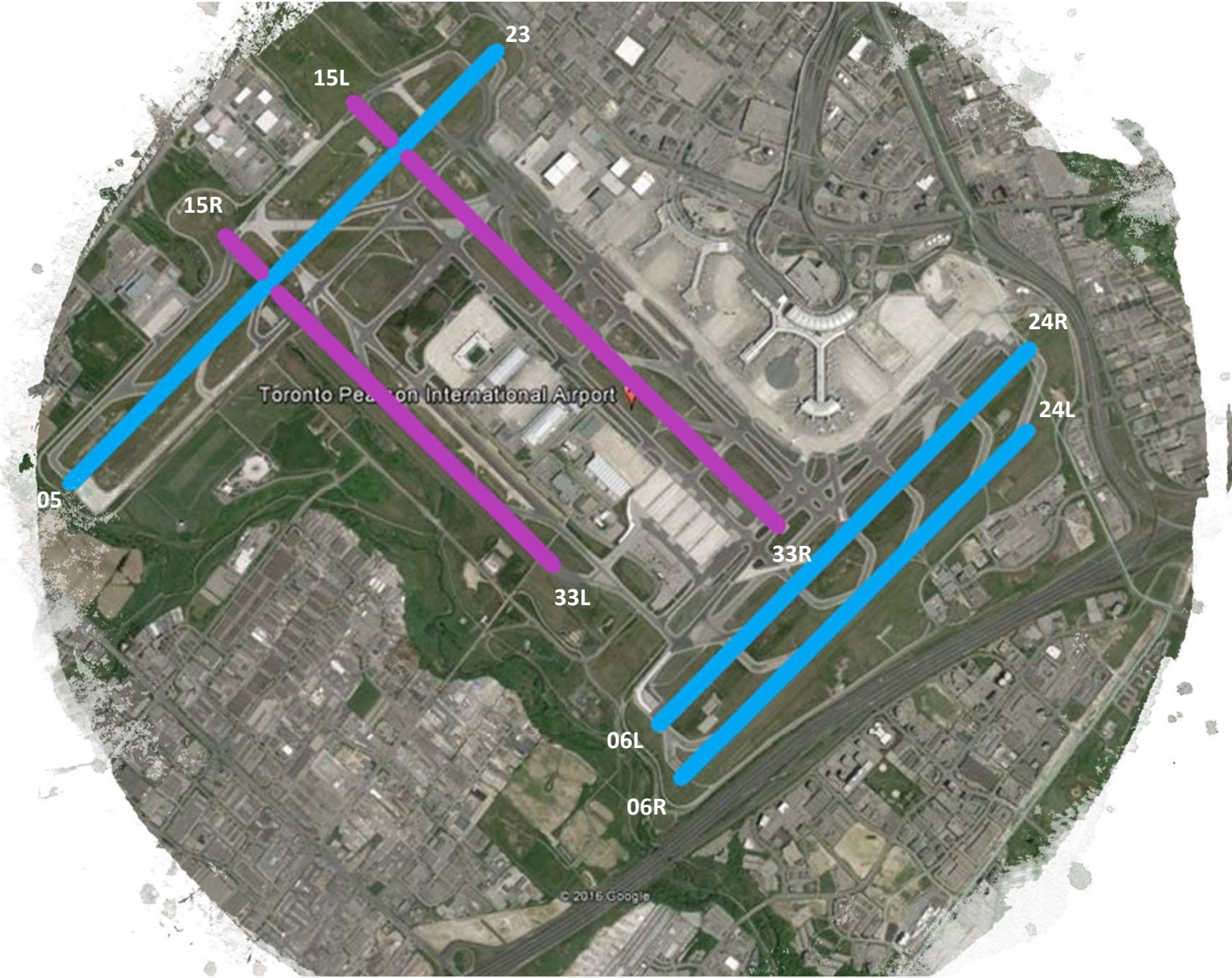
Q3 2021: 27,292 complaints from 571 individuals



More residents submitting complaints. Most evident in areas to the north and south of the airport and the east. This is likely related to the airfield construction program, the use of the north/south runways, departures off Runway 06R, and return of traffic leading to increased use of the downwind

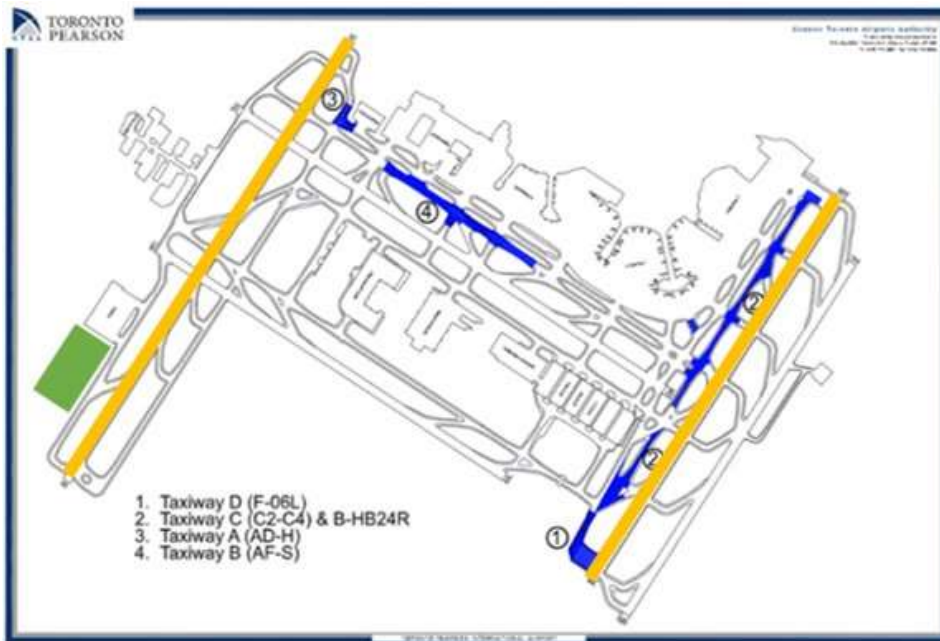
Airside Maintenance Updates





East-West
North-South

2021 Airside Maintenance Work



1. Work on the airfield:

- Threshold work on Runway 05/23
 - Phase 1 completed in October 2021
 - Phase 2 scheduled for early 2022
- Closure of Runway 06L/24R
 - Completed in October 2021

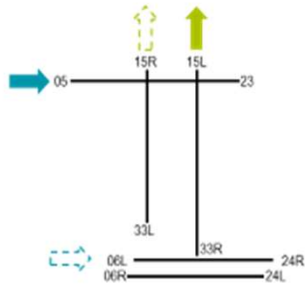
2. Bombardier constructing a new facility:

- Work continues affecting availability of Runway 05/23 at night
- December 2021 to March 2022

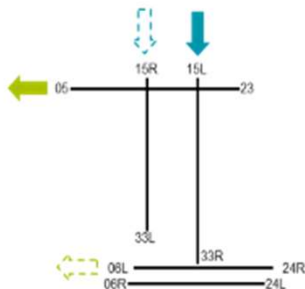
Nighttime Impact

Maintenance Preferential runways 06L/24R may be used during preferential hours (12:00am – 6:30am)

1st Choice - Whenever crosswind, tailwinds & winds-aloft allow

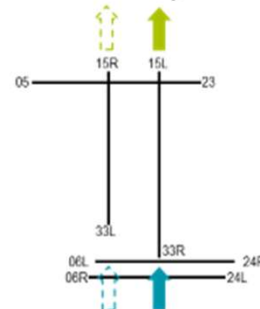


2nd Choice - Whenever crosswind, tailwinds & winds-aloft allow



Selection driven by weather conditions and infrastructure availability when 1st or 2nd choice are not operable. Ultimately any single or pair of runways can be used.

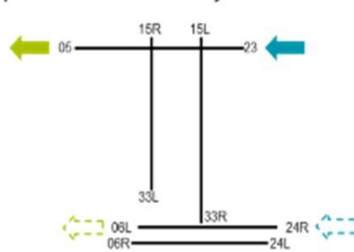
Operation for northerly wind



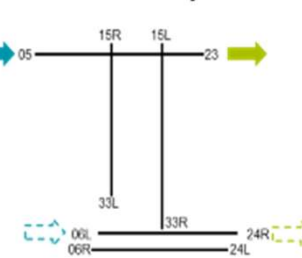
Operation for southerly wind



Operation for westerly wind



Operation for easterly wind



Key:

- Primary departures
- Primary arrivals
- Maintenance adjusted departures
- Maintenance adjusted arrivals

2022 Airside Maintenance Project

Reconstruction of Runway 06L/24R

Condition of Runway 06L/24R

- Despite regular maintenance on runways, surfaces eventually degrade due to wear, weather (freezing and thawing) and time.
- Runway 06L/24R is approximately sixty years old. Its surface has degraded to the stage that it requires a full reconstruction to enable continued safe operations.
- This reconstruction is slated for 2022, significant community impacts expected.

Next Steps

- Details such as duration and timelines will be confirmed once contract is awarded in early 2022
- Communications will begin in Q1 2022 including briefings on the work, timelines and community impacts



NAV CANADA Update



December 2021

NAV CANADA UPDATE

Serving a world in motion
navcanada.ca



OVERVIEW



Currently focused on public consultation



Majority of briefings to elected officials are complete



Collecting feedback through online survey form



Consultation concludes December 17



Industry Noise Management Board Updates

WHY IS THIS CHANGE BEING INITIATED?

- › The industry is committed to continuous improvement and working toward minimizing and mitigating environmental impacts – noise and emissions – where possible.
- › The pandemic had a devastating impact on the entire travel and tourism ecosystem, directly impacting the millions of people who rely on the aviation sector for safe travel, tourism, trade, and employment.
- › The aviation sector's successful recovery depends on continuing to find innovative ways to operate in an efficient and environmentally sustainable way, and support a competitive sector with affordable air travel.
- › These procedures support environmental sustainability efforts by significantly reducing greenhouse gas emissions and delivering noise mitigation to many communities, while reducing flight times and improving operations to meet future demand for air travel

WHAT IT MEANS FOR COMMUNITIES

RNP AR supports environmental sustainability efforts by delivering noise mitigation to many communities and reducing greenhouse gas emissions.

- › Delivers noise benefits when compared to an existing approach procedure
 - Up to 142,000 fewer residents will be overflowed at noise levels above 60 dB(A)
- › Allows more efficient manoeuvring of aircraft over certain areas
 - RNP AR on the northern runway (05/23) has a beneficial effect on the south runways
 - This allows them to stay higher and quieter resulting in an additional 46,000 fewer residents overflowed at noise levels above 60 dB(A)
- › Prevents release of 178,000,000 kg (178,000 Tons) of CO₂ over 10 years
 - That's about the same as removing 43,475 vehicles from the road ¹

¹ This assumes the average vehicle on the road has a fuel economy of 9L/100km, drives 20,000km per year, and that every litre of gasoline burned creates about 2.34kg of CO₂.

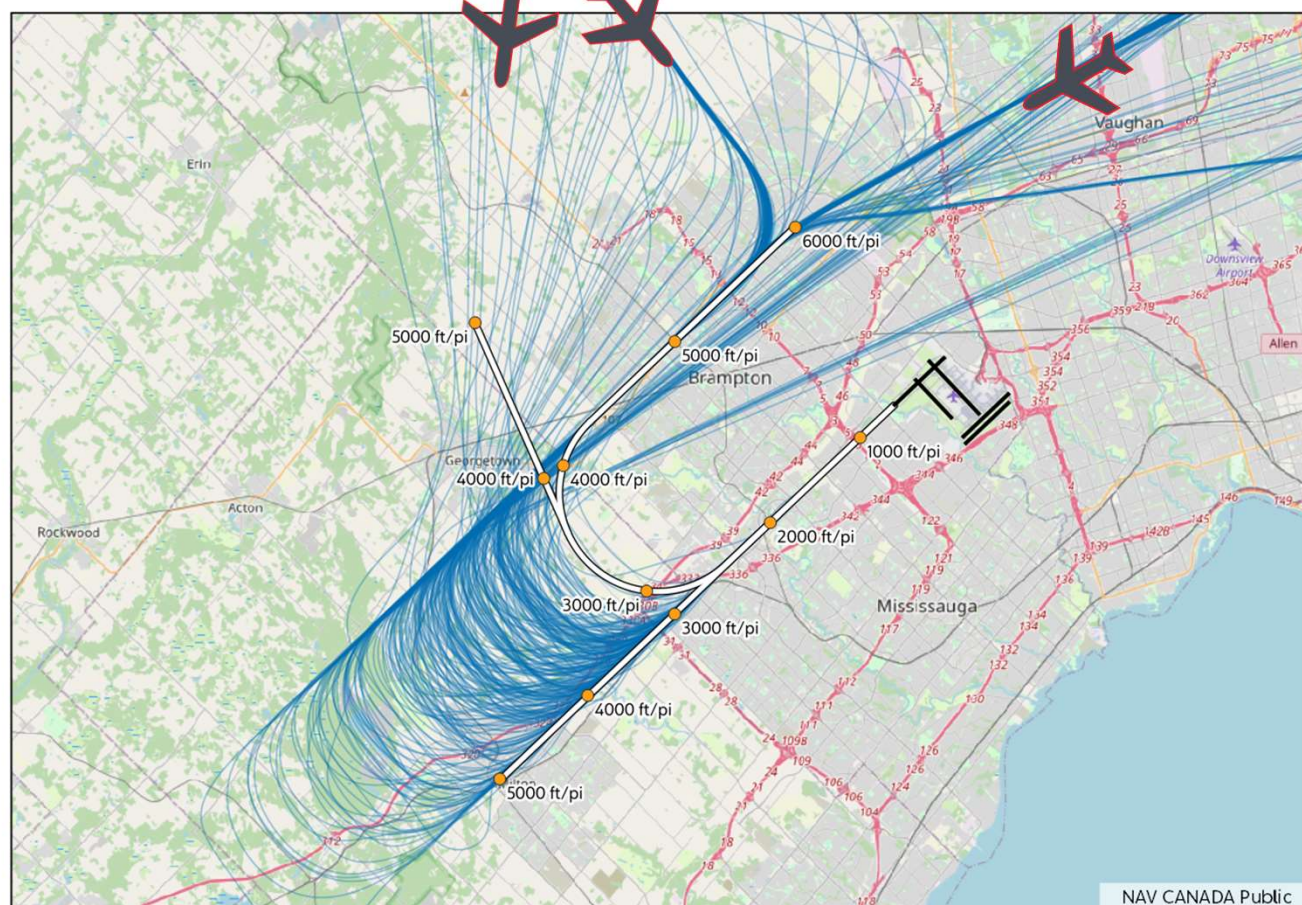
APPROACH TO RUNWAY 05 (TODAY & FUTURE)



**RNP Approach and Historical Tracks -
Approche RNP avec des routes
historiques
Runway 05 - Piste 05
Overview - Aperçu**

Map / Carte

Region of Interest / Région d'intérêt	
Runways / Pistes	
RNP planned altitude above sea level Altitude planifié au-dessus du niveau de la mer	
RNP Approach path centre line Axe de la trajectoire d'approche RNP	
Historical Tracks / Routes historiques	



For additional information, visit
www.navcanada.ca/YZRNP
pour information supplémentaire






Updated November 2021
Mis à jour en novembre 2021

APPROACH TO RUNWAY 23 (TODAY & FUTURE)

NAV CANADA

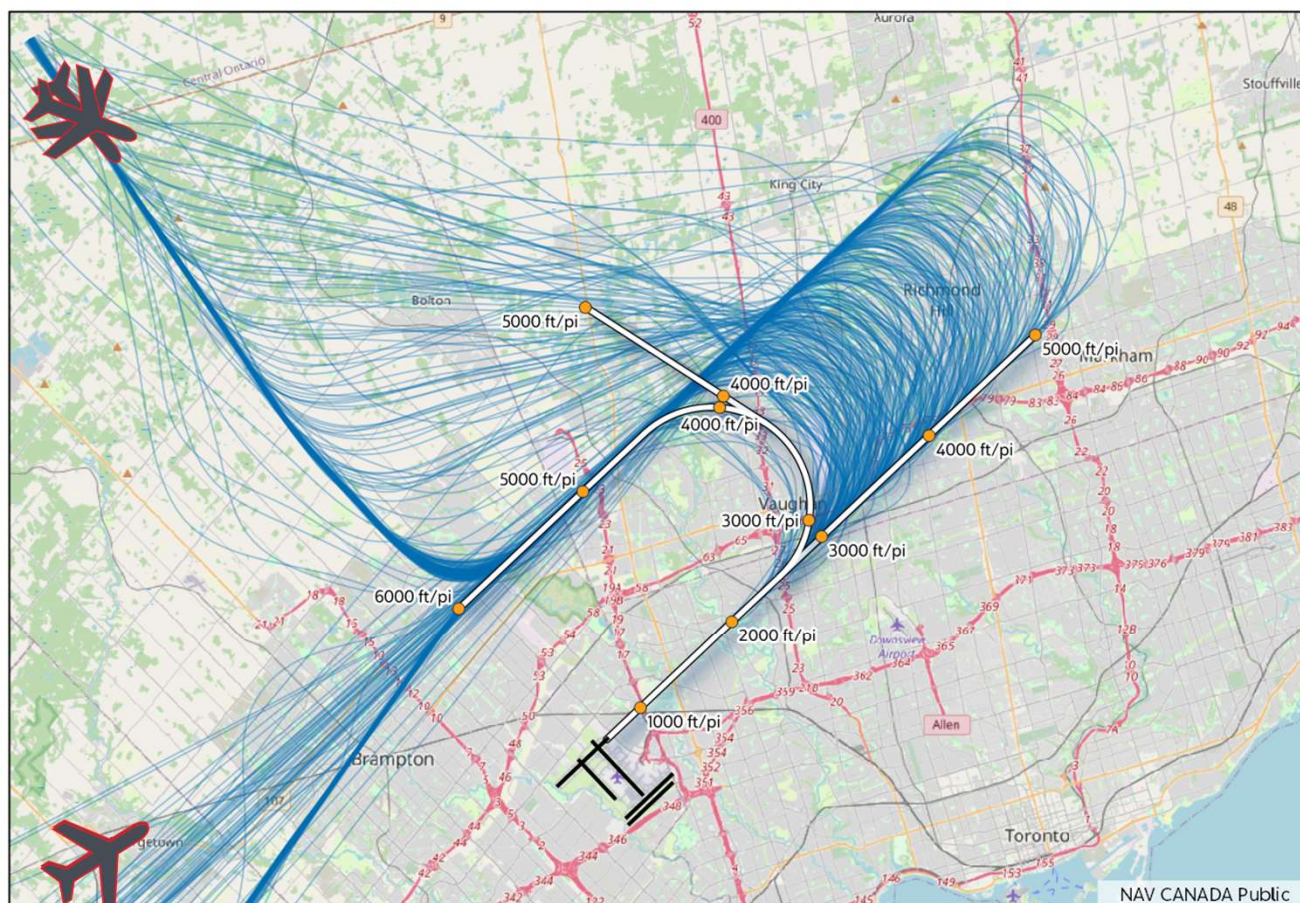
**RNP Approach and Historical Tracks -
Approche RNP avec des routes
historiques
Runway 23 - Piste 23
Overview - Aperçu**

Map / Carte

Region of Interest / Région d'intérêt	
Runways / Pistes	
RNP planned altitude above sea level Altitude planifié au-dessus du niveau de la mer	
RNP Approach path centre line Axe de la trajectoire d'approche RNP	
Historical Tracks / Routes historiques	

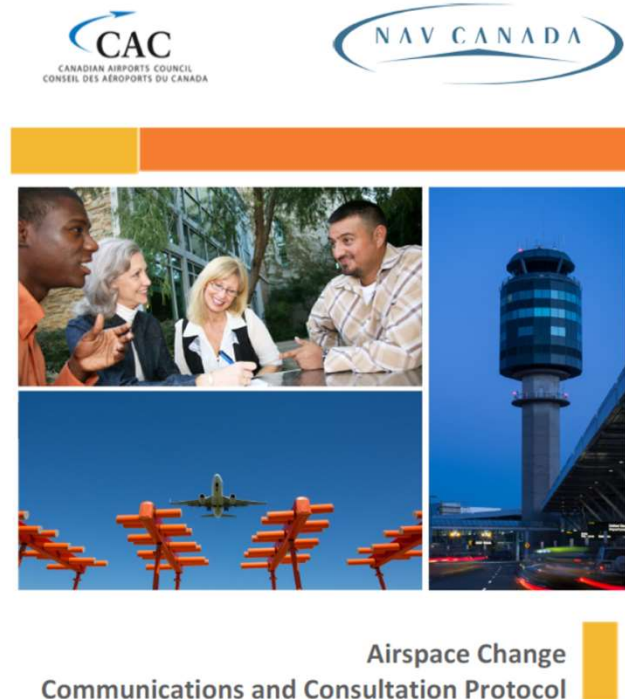
For additional information, visit
www.navcanada.ca/YZRNP
pour information supplémentaire

Updated November 2021
Mis à jour en novembre 2021



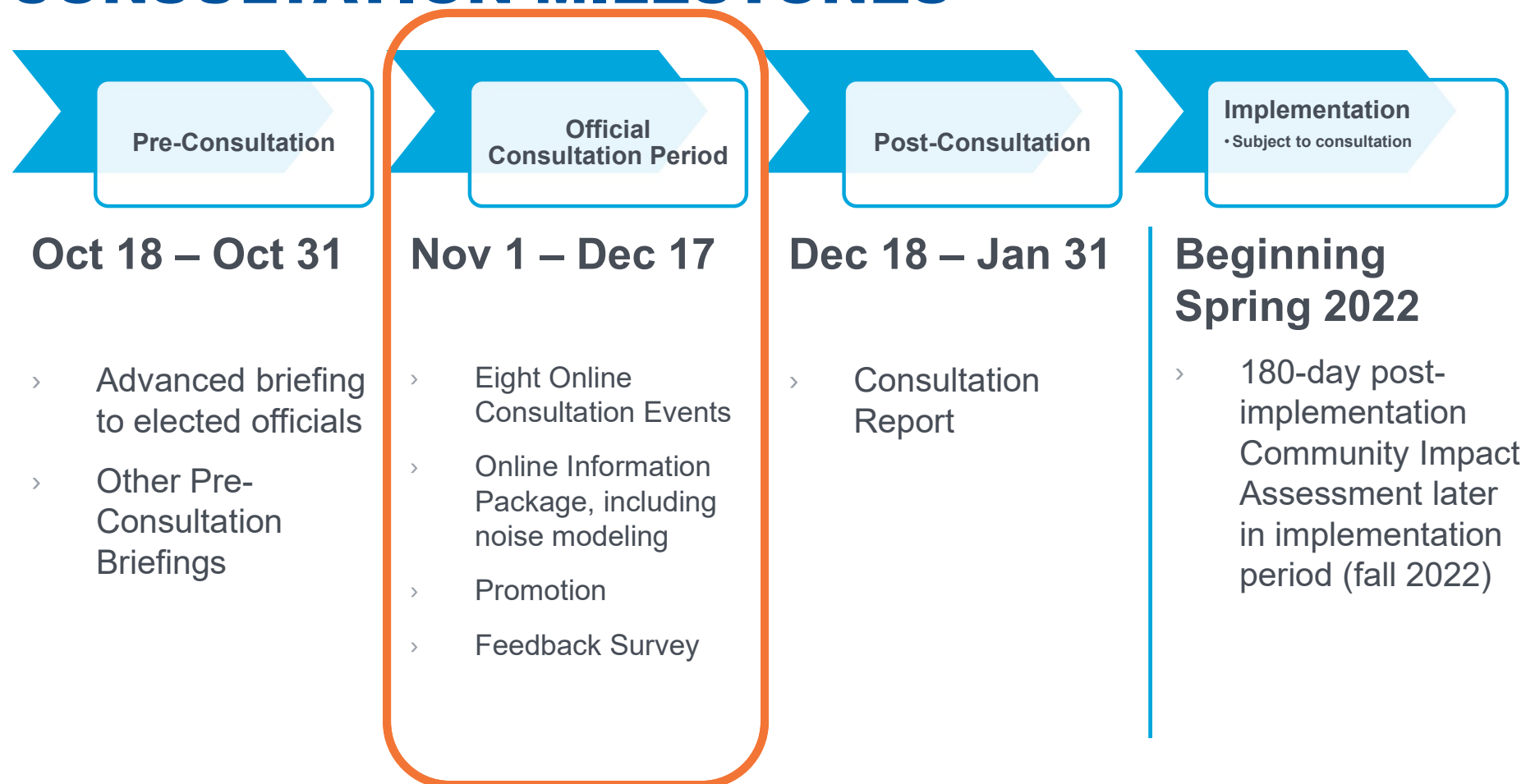
CONSULTATION GOALS

- › Accurately communicate information about expected changes and benefits to communities, as per the Airspace Change Communications and Consultation Protocol.
- › Ensure that residents and businesses have the opportunity to learn about the proposed changes and provide their input.



A voluntary protocol of the aviation industry
June 2015

CONSULTATION MILESTONES



Pre-Consultation

Oct 18 – Oct 31

- > Advanced briefing to elected officials
- > Other Pre-Consultation Briefings

Official Consultation Period

Nov 1 – Dec 17

- > Eight Online Consultation Events
- > Online Information Package, including noise modeling
- > Promotion
- > Feedback Survey

Post-Consultation

Dec 18 – Jan 31

- > Consultation Report

Implementation

• Subject to consultation

Beginning Spring 2022

- > 180-day post-implementation Community Impact Assessment later in implementation period (fall 2022)

CONSULTATION EVENT SCHEDULE

Event	Date	Registration Link
✓ General Information Session #1	November 22, 5:00 p.m.	https://www.eventbrite.ca/e/197843072957/
✓ Community-Specific (Halton Hills)	November 23, 5:00 p.m.	https://www.eventbrite.ca/e/197886573067/
✓ Community-Specific (Brampton)	November 24, 5:00 p.m.	https://www.eventbrite.ca/e/197890123687/
✓ Community-Specific (Caledon & King)	November 25, 5:00 p.m.	https://www.eventbrite.ca/e/197891006327/
✓ Community-Specific (Vaughan)	November 29, 5:00 p.m.	https://www.eventbrite.ca/e/197894015327/
✓ Community-Specific (Oakville)	November 30, 5:00 p.m.	https://www.eventbrite.ca/e/197895519827/
Community-Specific (High Park, Parkdale, Mid-Town Toronto, Leaside, Don Mills)	December 6, 5:00 p.m.	https://www.eventbrite.ca/e/197897746487/
General Information Session #2	December 7, 5:00 p.m.	https://www.eventbrite.ca/e/197898819697/

ONLINE FEEDBACK SURVEY

- › Feedback received through the online survey form will be reviewed and considered as part of consultation report
- › To ensure comments are included for consideration as part of the consultation, they must be submitted via the online feedback survey



Link to online feedback survey

<https://www.research.net/r/VBRBSQ7>

INDUSTRY NOISE MANAGEMENT BOARD

- › INMB meeting held on Monday, October 25
- › Meeting highlights include:
 - Discussion on improving use and adoption of continuous descent operations both from air traffic control and airline operations standpoint
 - Updated the board on upcoming Toronto RNP public consultations
 - Briefing from GTAA on submissions received through the Community Proposal Review Process
 - › Submission was reviewed by the board who agreed the idea shows merit and potential for noise mitigation. It will therefore be incorporated into the INMB's workplan for further study.

THANK YOU



Noise Management Action Plan Updates



2021 NMAP Workplan

2021 NMAP mid-year update available under Action Plan updates on the [NMAP webpage](#)

- Six Ideas - Trial extension continues for Idea 6: Review of the Preferential Runway System with quarterly reports. *Propose that process for concluding the Trial begins given the easing of travel restrictions.*
- School HVAC Pilot Program – *project complete Fall 2021. HVAC installed and functioning at Marvin Heights Public school in Malton.*
- Launch Community-Proposal Review Process – *launched, received first submissions, one accepted by Industry Noise Management (INMB) for further study.*
- Quieter Fleet Incentive Program
 - Phase 1 A320 series retrofit program. *Reports now indicate that 94% of A320 series aircraft are performed by retrofitted aircraft.* Reports available under [A320 Retrofit program usage reports](#).
 - Phase 2 –Explore further options for program. Identify aircraft operating at Toronto Pearson by Noise certification ‘chapter’ to inform Phase 2. - *By fleet type complete, by chapter underway*
- Develop metrics and engage with industry and community stakeholders for the Fly Quieter and Greener Reporting Program. - *underway*
- Continue to publish noise data and enhance content on InsightFull. [InsightFull](#) reporting and enhancements continue.



Stay In Touch



The following are ways that you can stay informed about airport activities:

- [Noise Management webpages](#)
- [Noise Advisories](#) – information on airside maintenance work with potential for community impact
- [InsightFull](#) – interactive noise web portal customized by area, includes several reports
- [WebTrak](#) – flight tracking tool with option to submit noise complaints
- [Noise Management Forums](#) (materials from public meetings and details on upcoming meetings)
- [Checking In newsletter](#) – monthly community focused e-newsletter on airport updates, activities and meeting notices



Question Period



Thank You

Next Meeting: to be determined