

# Toronto Pearson Noise Management Forums Public Meeting

September 23, 2021



# Welcome + Introductions

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# 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.

# Agenda

- Airport Updates
  - Healthy Airport Initiatives + Update on Travel Requirements
  - Overview of Airport Operations and overflow communities
  - Returning Traffic – Operations and Complaints
  - Briefing: 2021 Airside Maintenance
- NAV CANADA Updates
  - Required Navigation Performance (RNP) Consultation
- GTAA Noise Management Program Updates
  - Update: Noise Management Action Plan
- Questions

# Airport Updates

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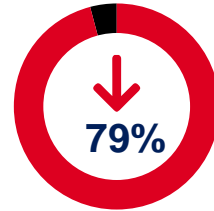


# Operating on **debt** financing



## Aircraft Movements

The first half of 2021 saw a reduction in aircraft movements of 60% year over year



## Passenger Traffic Trends

A reduction of 79% in passenger traffic year-over-year through Q2 2021



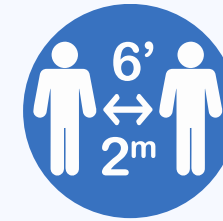
## \$746M Net Income Loss

In the last six quarters, the airport is operating almost exclusively on debt financing.





## HEALTHY AIRPORT COMMITMENT



- Health of passengers and employees comes first
- Guiding principles aligned with global best practices
- Low touch innovation: autonomous floor cleaners; UV light for disinfection; optimized air filtration and monitoring available to the public in real time
- Awarded “best hygiene” measures in North America
- “When you’re Ready” information campaign to coincide with changes in federal travel restrictions



# WHEN YOU'RE READY TO TRAVEL



**WHEN YOU'RE  
READY TO TRAVEL...**

WE'LL HELP YOU DO IT SAFELY.



**July 5, 2021:** The Government of Canada began to lift some travel restrictions, including allowing fully vaccinated Canadians to enter by air without mandatory quarantine.

**August 9, 2021:** Fully vaccinated American citizens and permanent residents allowed to enter Canada for discretionary travel

**September 7:** All other foreign nationals who qualify for the fully vaccinated traveller exemption

**Continuing operations:** Working in collaboration with airlines, CBSA, PHAC, and testing partners to manage number of passengers arriving and being processed throughout the terminal buildings

**Supporting passengers:** Pearson created new web portal + enhanced signage and communications efforts to explain what's changed and what to expect

# 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



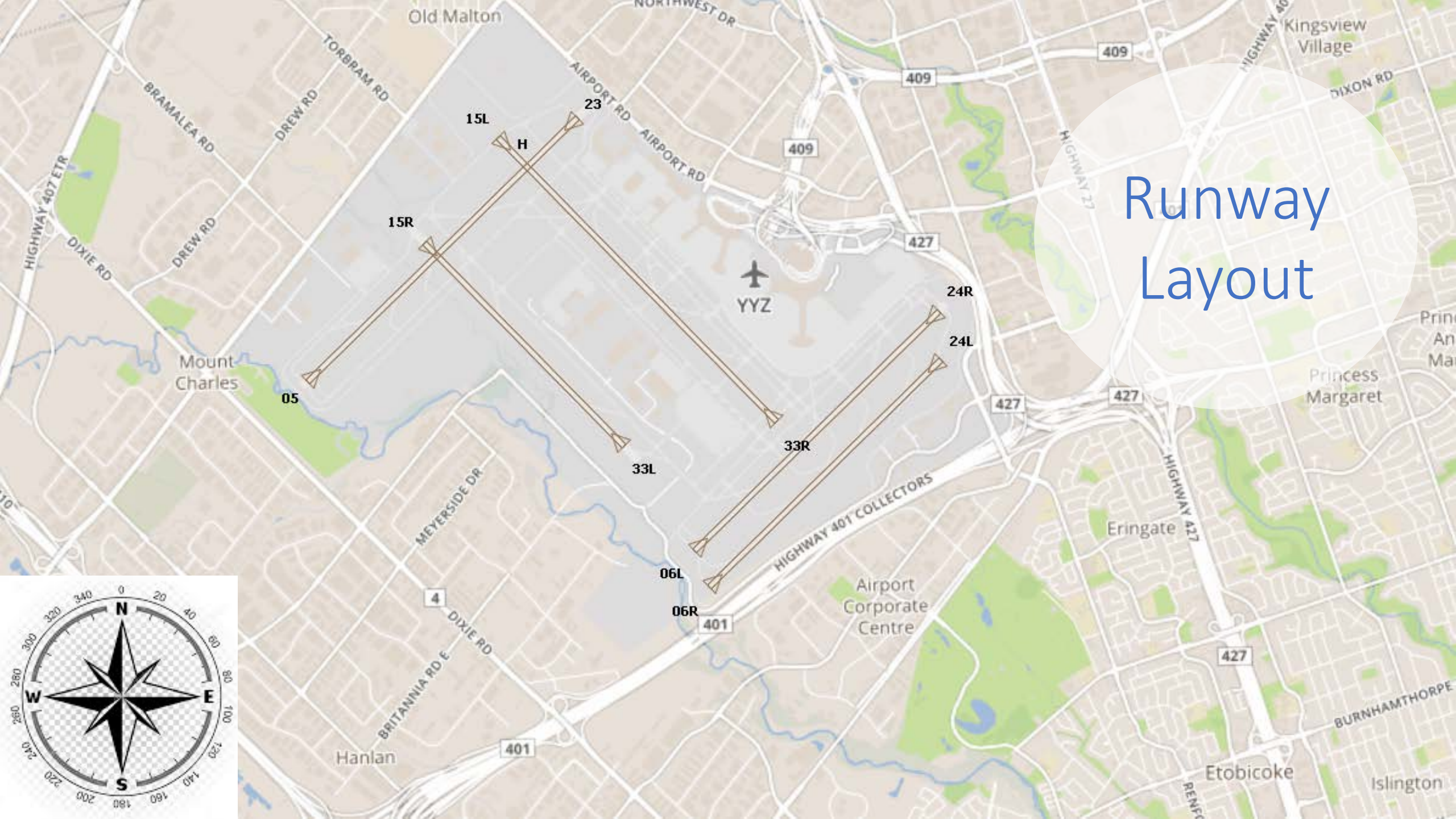
Restricted Hours (12:30 to 6:29 a.m.): governed by a Night Flight Restriction Program which limits number of movements. Runs from Nov 1 to Oct 31. Annual budget increases with passenger growth

# Our Runways

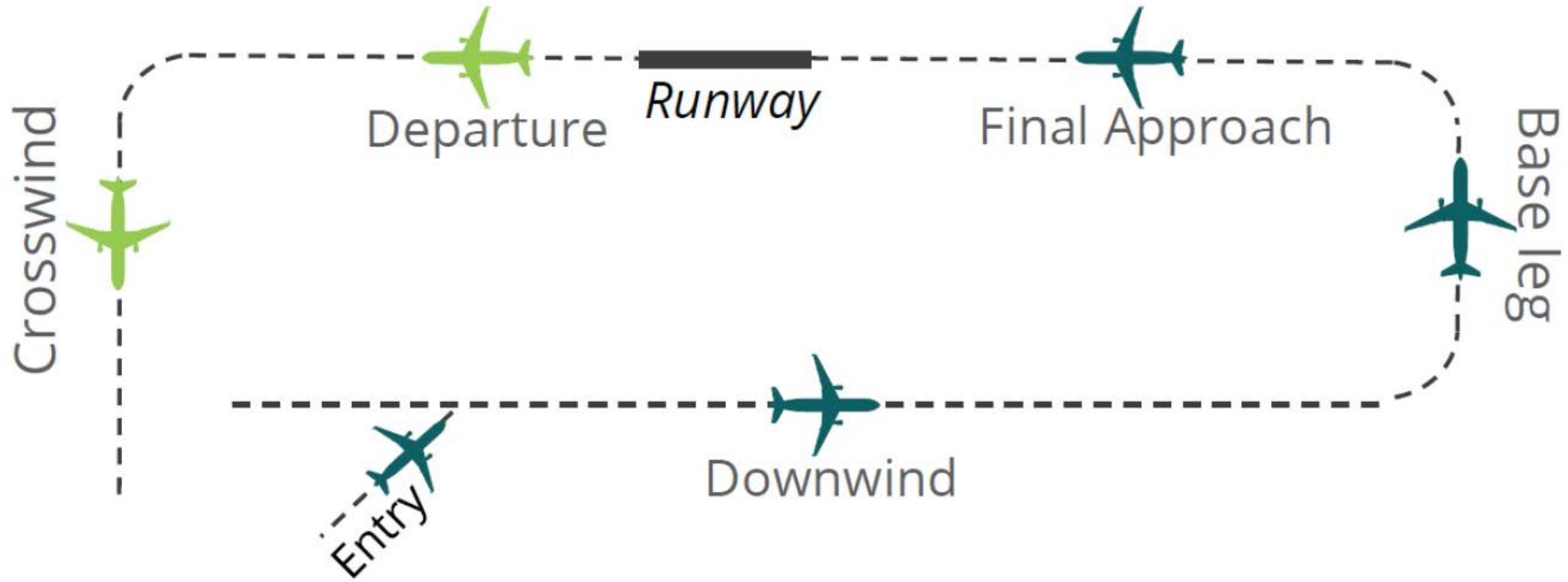
- Toronto Pearson has five runways
- Two runways go in the north-south direction:
  - Runway 15L/33R
  - Runway 15R/33L
- Three runways go in the east-west direction:
  - Runway 05/23
  - Runway 06L/24R
  - Runway 06R/24L
- Runways can be used from both ends, so while there are five runways, there are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



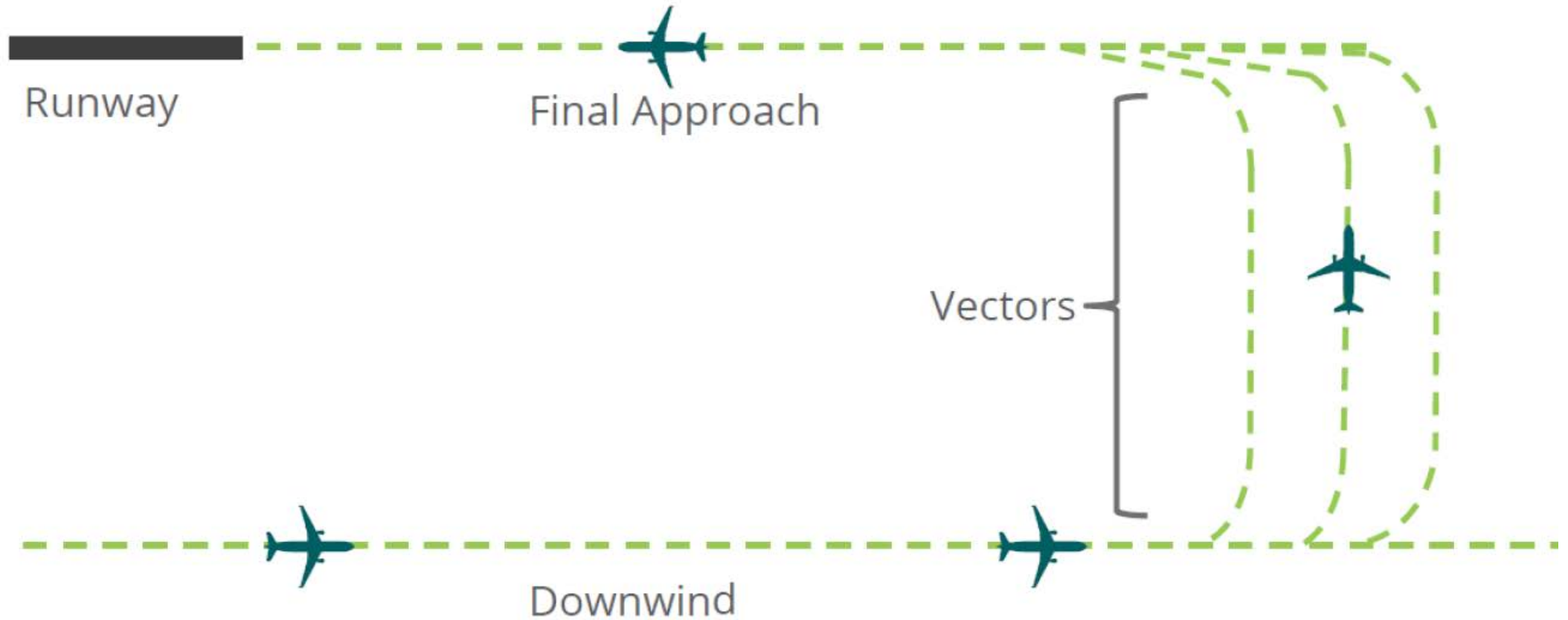
# Runway Layout



# Runway Circuit Pattern



# Runway Circuit Pattern



# Arrivals Runway 23

# Departures Runway 05

Communities impacted:

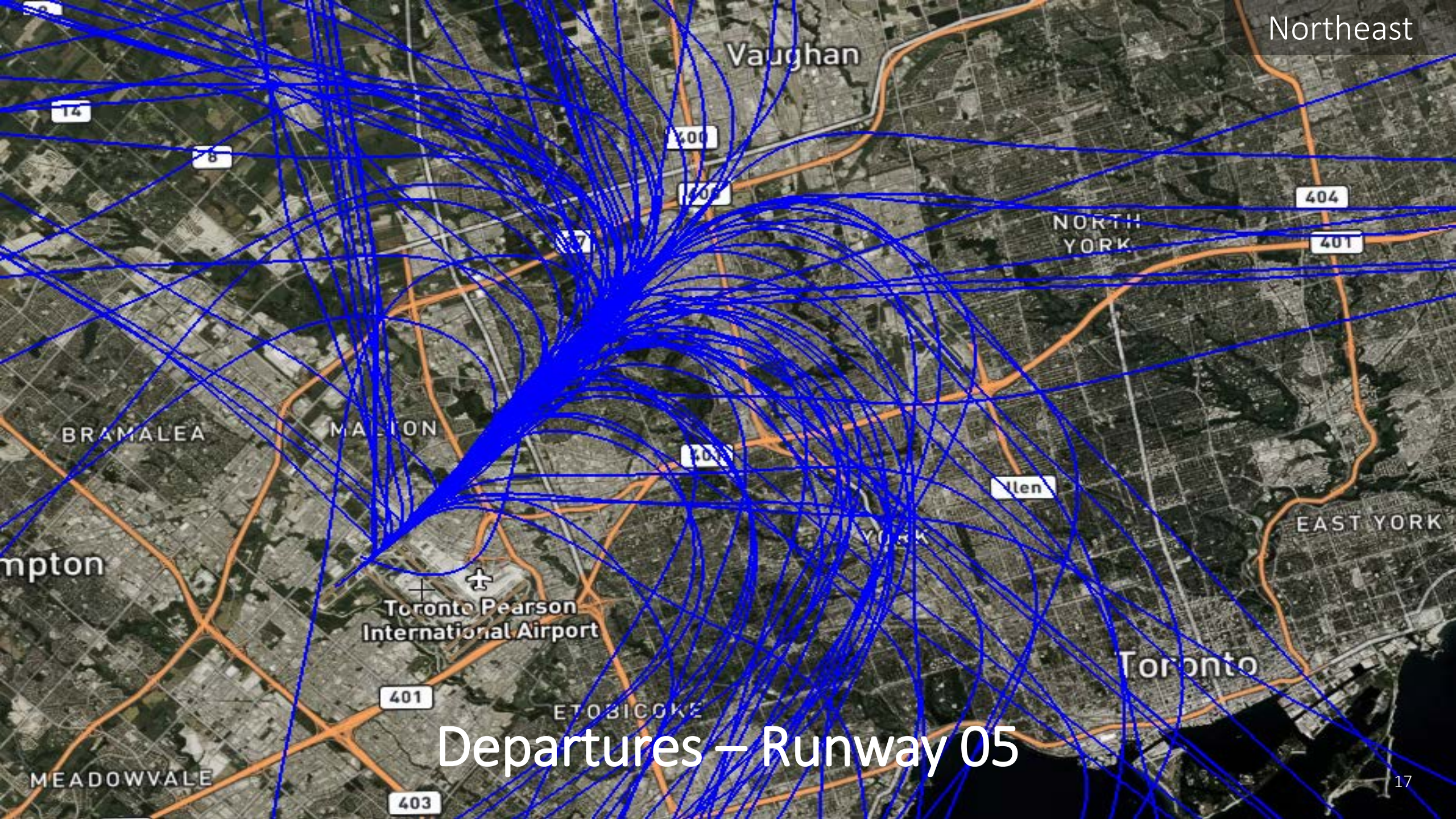
Maple/Vaughan, Richmond Hill, Thornhill, Rexdale





# Arrivals - Runway 23





Northeast

Vaughan

NORTH YORK

BRAMALEA

MARKHAM

WILLOWDALE

EAST YORK

MISSISSAUGA

Toronto Pearson International Airport

Toronto

ETOBICOKE

MEADOWVALE

Departures - Runway 05

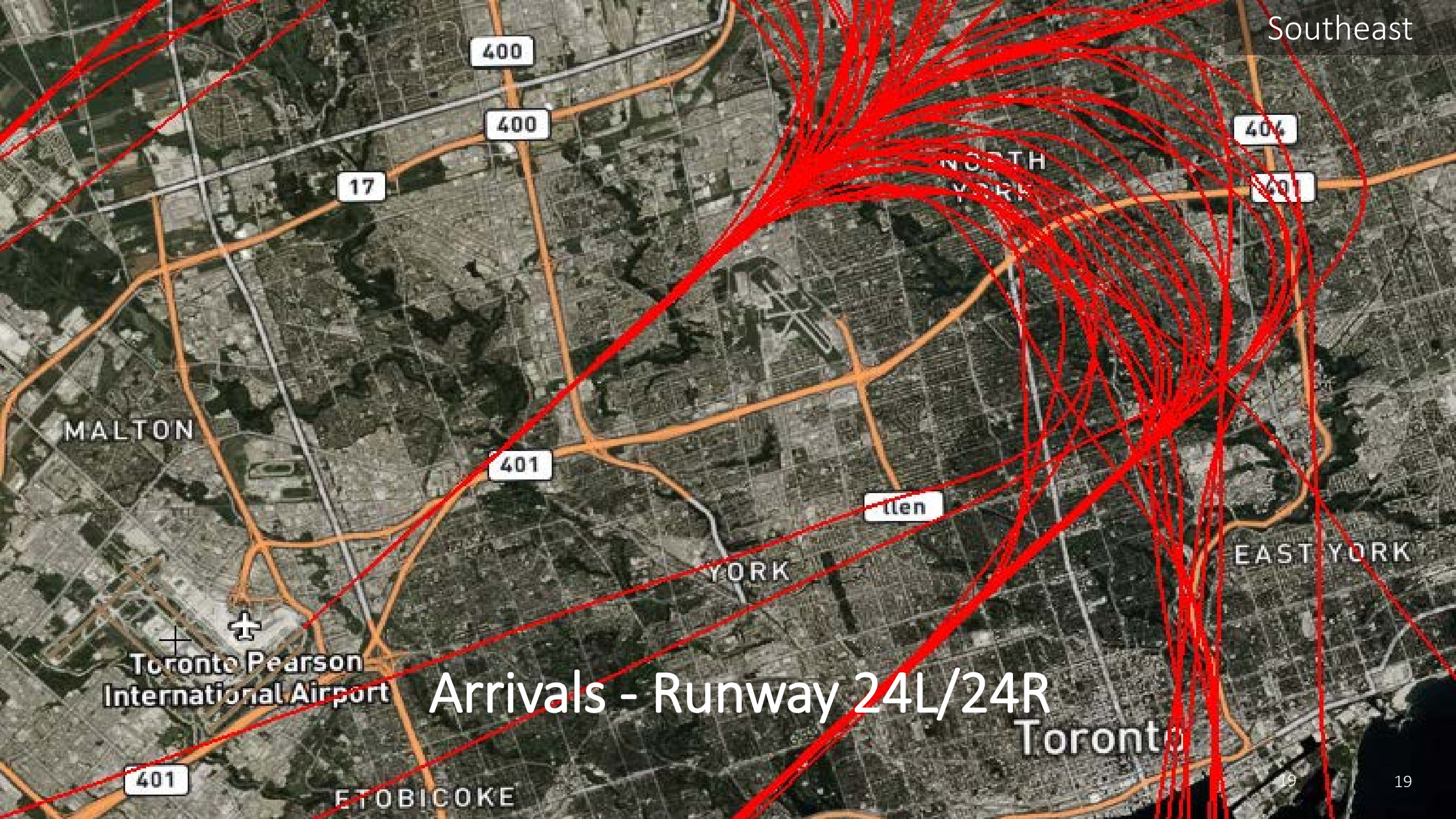


# Arrivals Runway 24L/R

# Departures Runway 06L/R

Communities impacted:

Midtown Toronto, North York, Weston, Markham



Southeast

400

400

17

404

407

MALTON

401

Allen

YORK

EAST YORK

Toronto Pearson  
International Airport

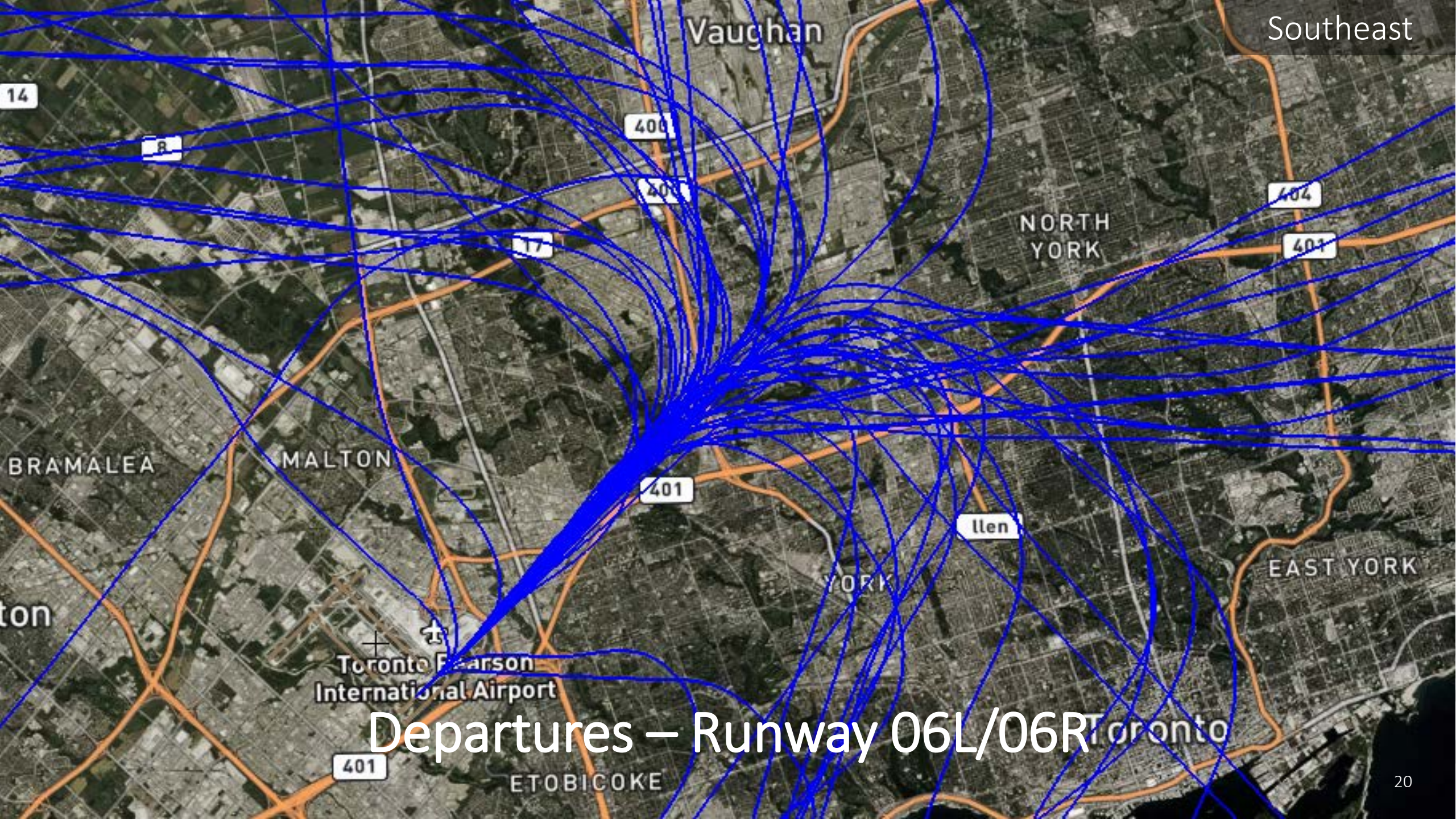
Arrivals - Runway 24L/24R

Toronto

401

ETOBICOKE





Southeast

Vaughan

14

400

403

404

401

NORTH YORK

BRAMALEA

MALTON

401

407

ton

YORK

EAST YORK

Toronto Pearson International Airport

Departures – Runway 06L/06R

401

ETOBICOKE

Toronto



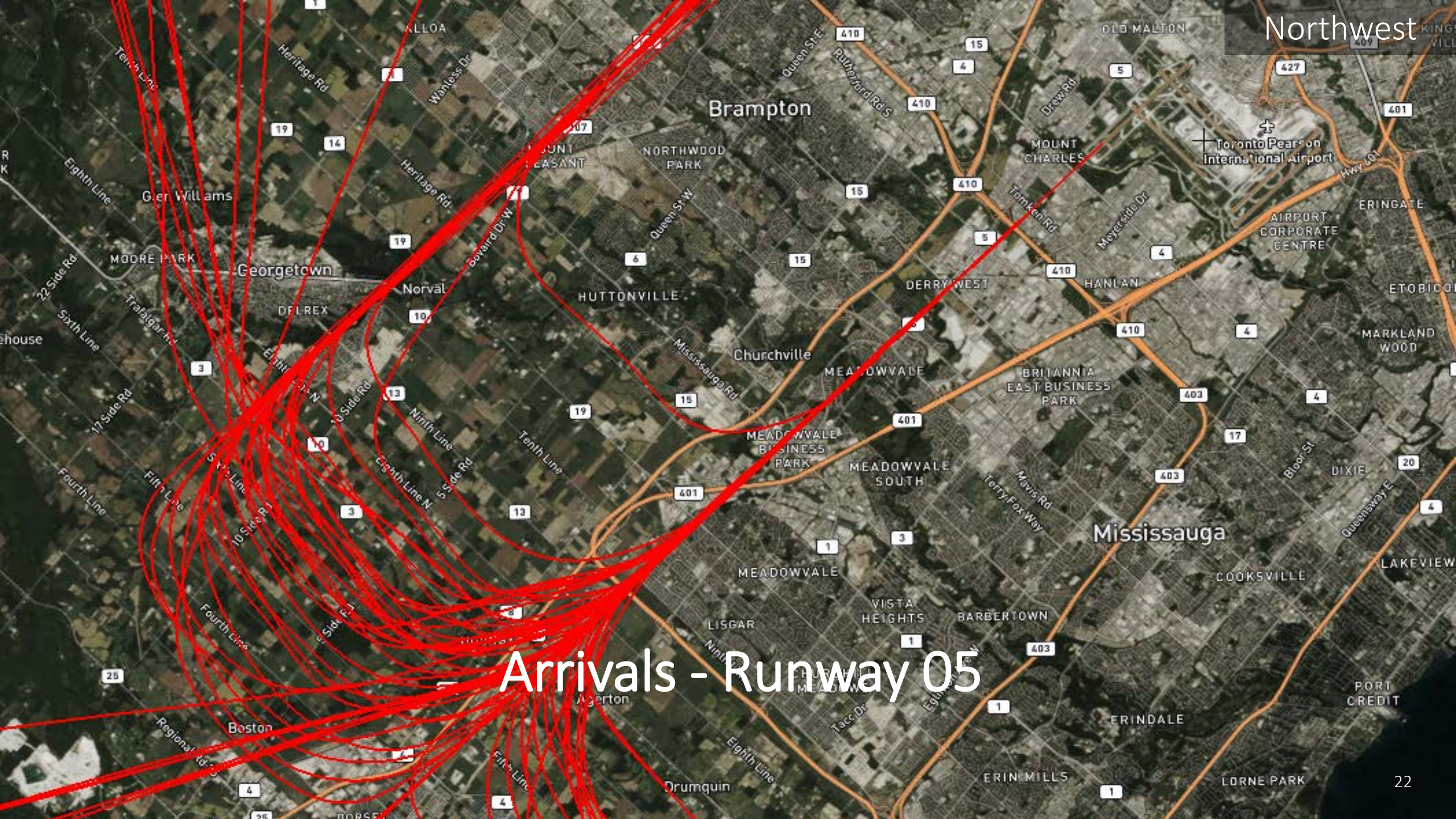
# Arrivals Runway 05

# Departures Runway 23

Communities impacted:

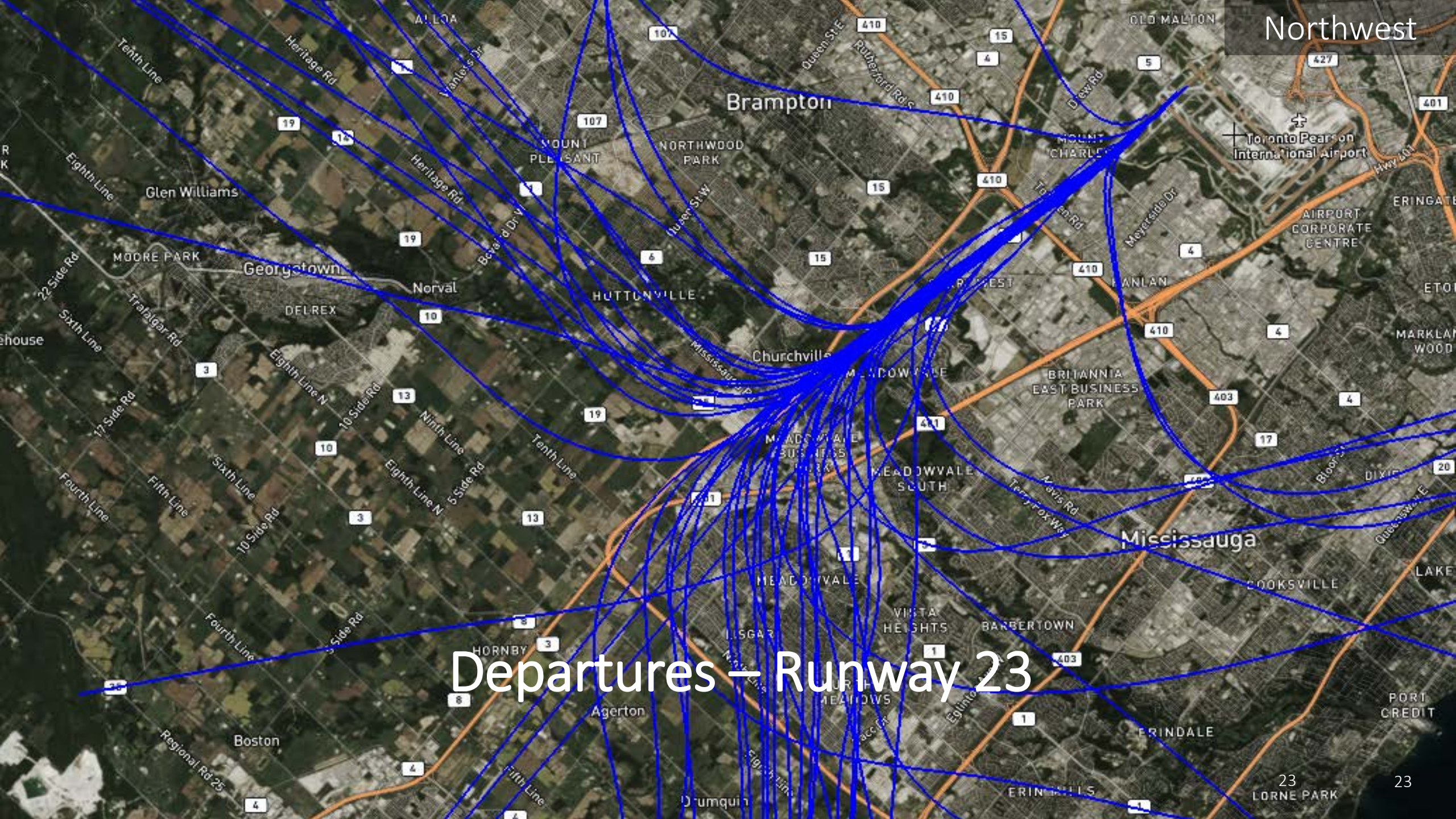
Brampton, Georgetown, Milton, Meadowvale, Streetsville





Arrivals - Runway 05





# Departures - Runway 23

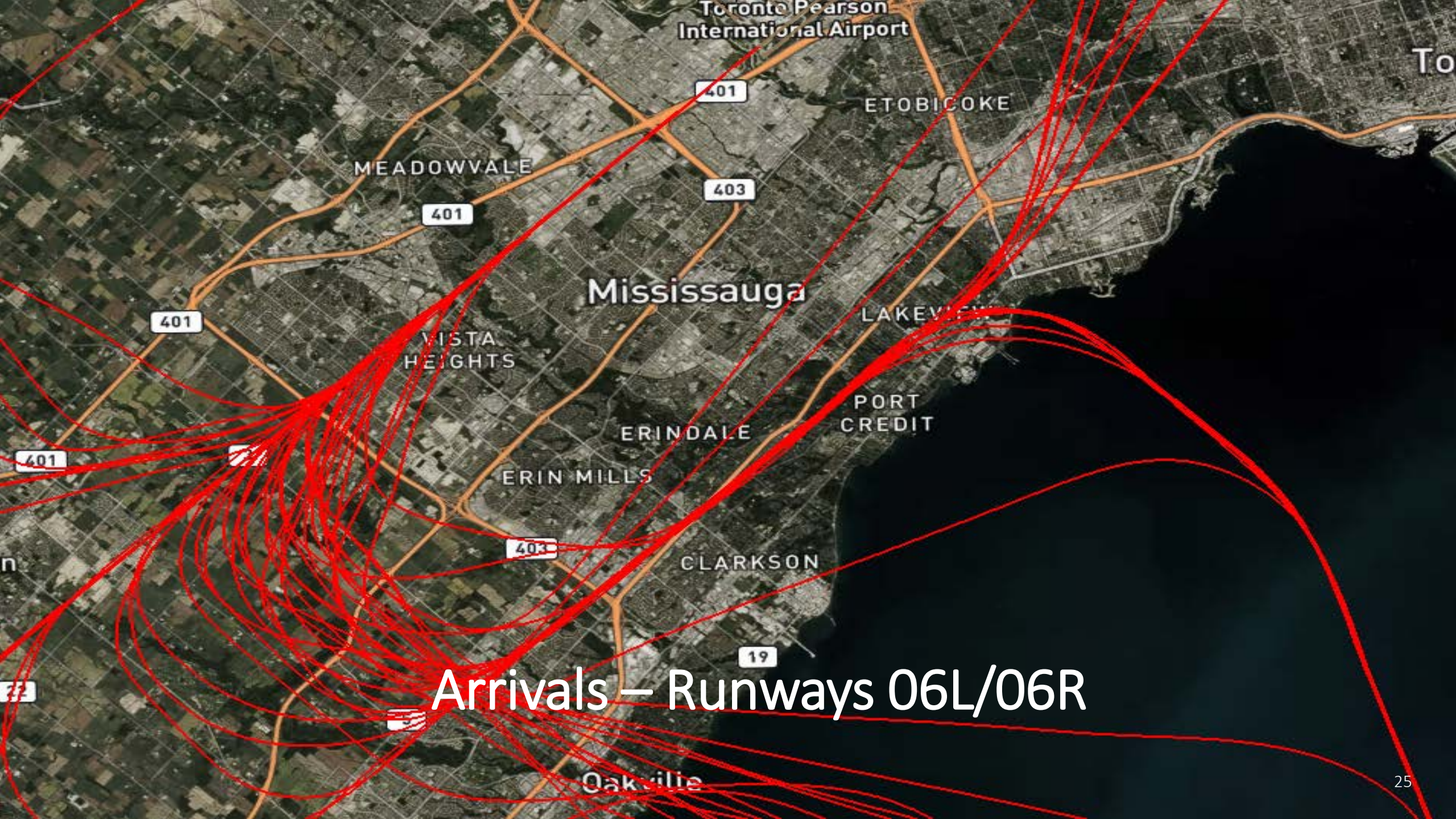


# Arrivals Runway 06L/R Departures Runway 24L/R

Communities impacted:

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





Toronto Pearson International Airport

ETOBICOKE

MEADOWVALE

Mississauga

LAKEVIEW

VISTA HEIGHTS

PORT CREDIT

ERINDALE

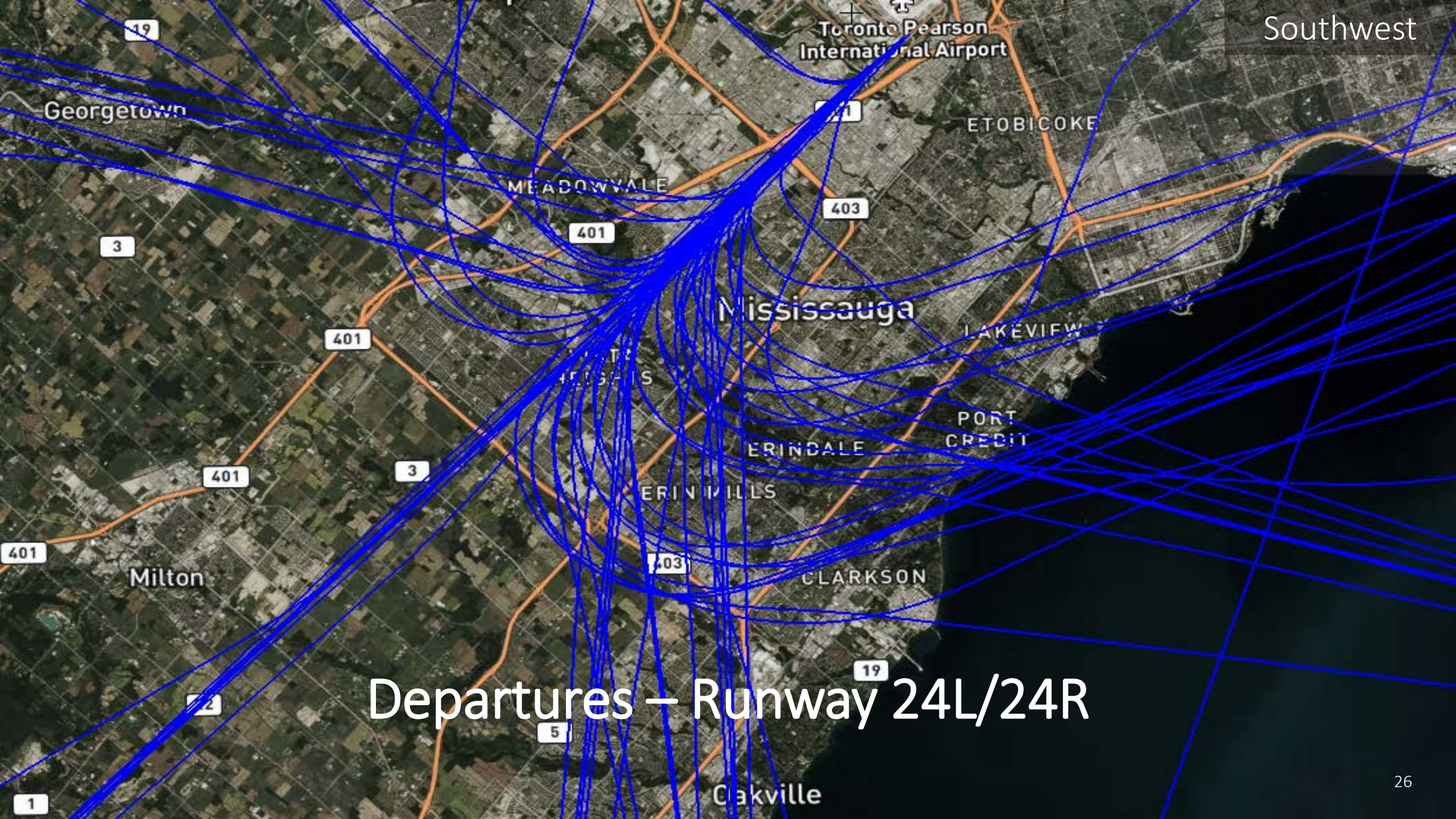
ERIN MILLS

CLARKSON

Oakville

Arrivals – Runways 06L/06R





# Departures – Runway 24L/24R



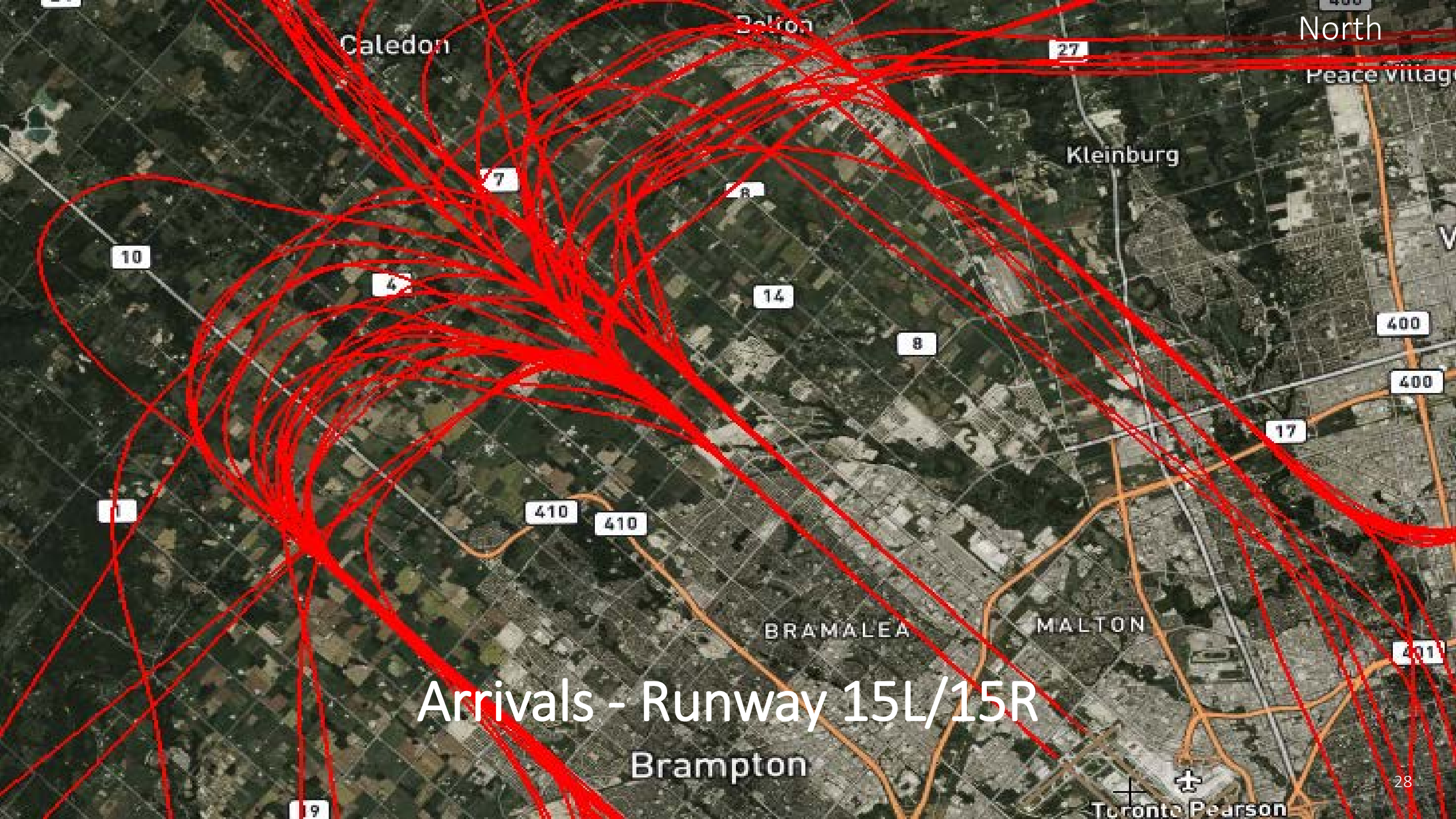
# Arrivals Runway 15L/R

# Departures Runway 33L/R

Communities impacted:

Brampton, Malton





# Arrivals - Runway 15L/15R

Brampton

Toronto Pearson



North

Vaughan

4

4

8

400

400

17

410

404

BRAMALEA

MALTON

401

Brampton

Toronto Pearson  
International Airport

19

Georgetown

Departures – Runway 33L/33R

401

ETOBICOKE

MEADOWVALE



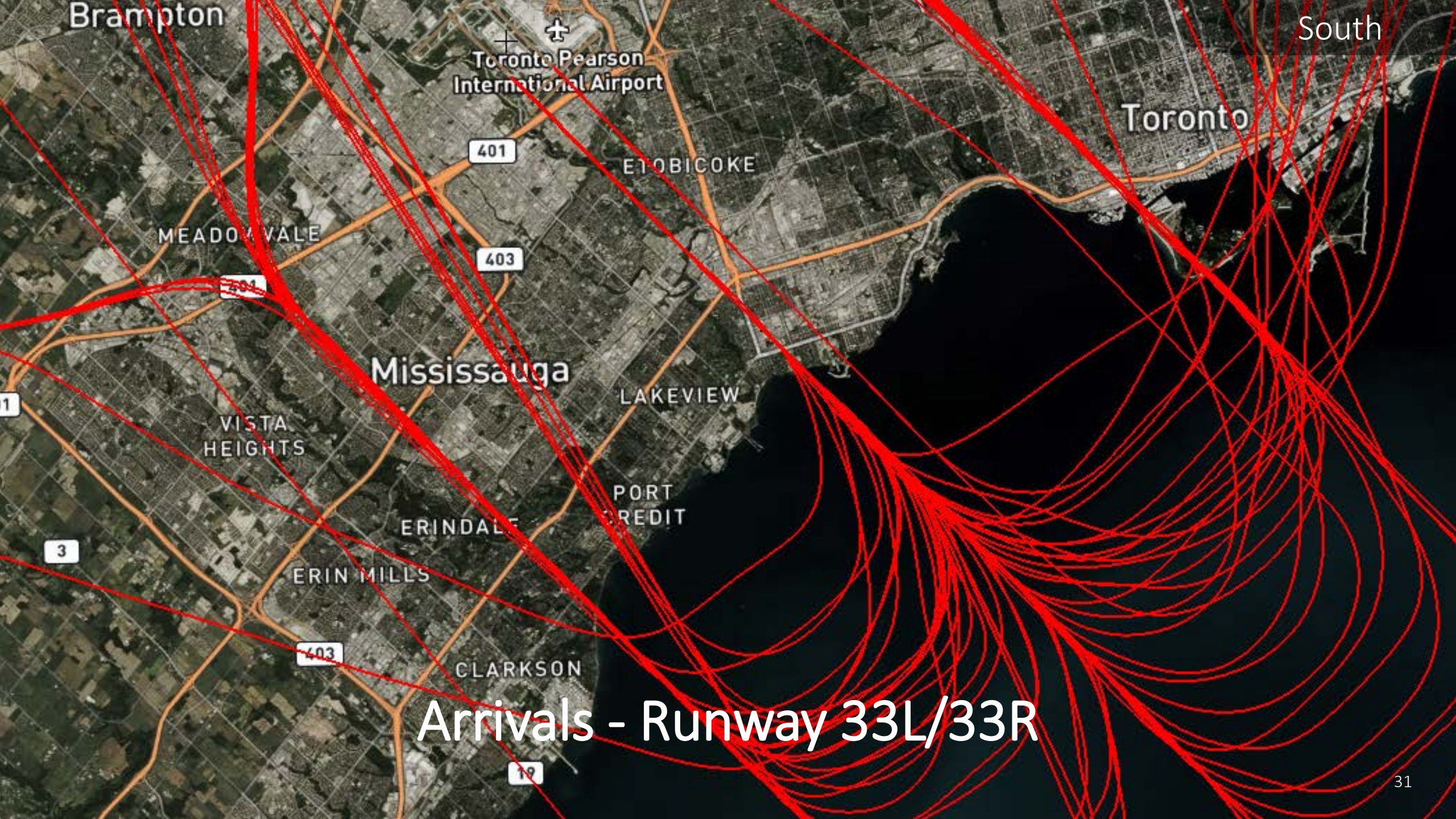
# Arrivals Runway 33L/R

# Departures Runway 15L/R

Communities impacted:

Etobicoke-Lakeshore, Alderwood, Long Branch, Markland Wood





Brampton

South

Toronto Pearson  
International Airport

Toronto

401

ETOBICOKE

MEADOWVALE

403

Mississauga

LAKEVIEW

VISTA  
HEIGHTS

PORT  
CREDIT

ERINDALE

3

ERIN MILLS

403

CLARKSON

Arrivals - Runway 33L/33R

10





BRAMALEA

MALTON

South

401

404

YORK

Brampton

Toronto Pearson International Airport

Toronto

401

ERINBORO

MEADOWVALE

403

Mississauga

LAKEVIEW

VISTA HEIGHTS

Departures - Runway 15L/15R

PORT CREDIT

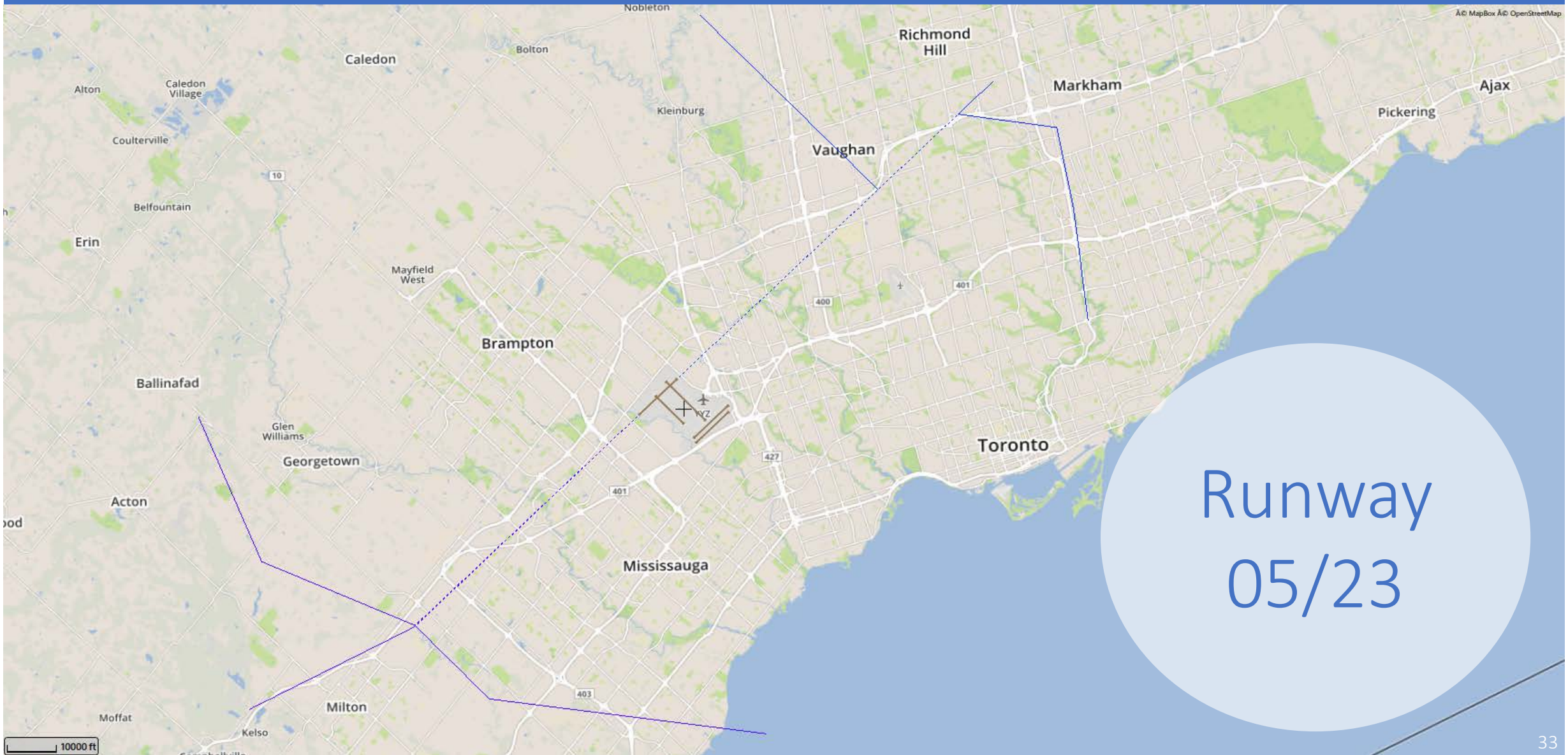
ERINDALE

ERIN MILLS

3



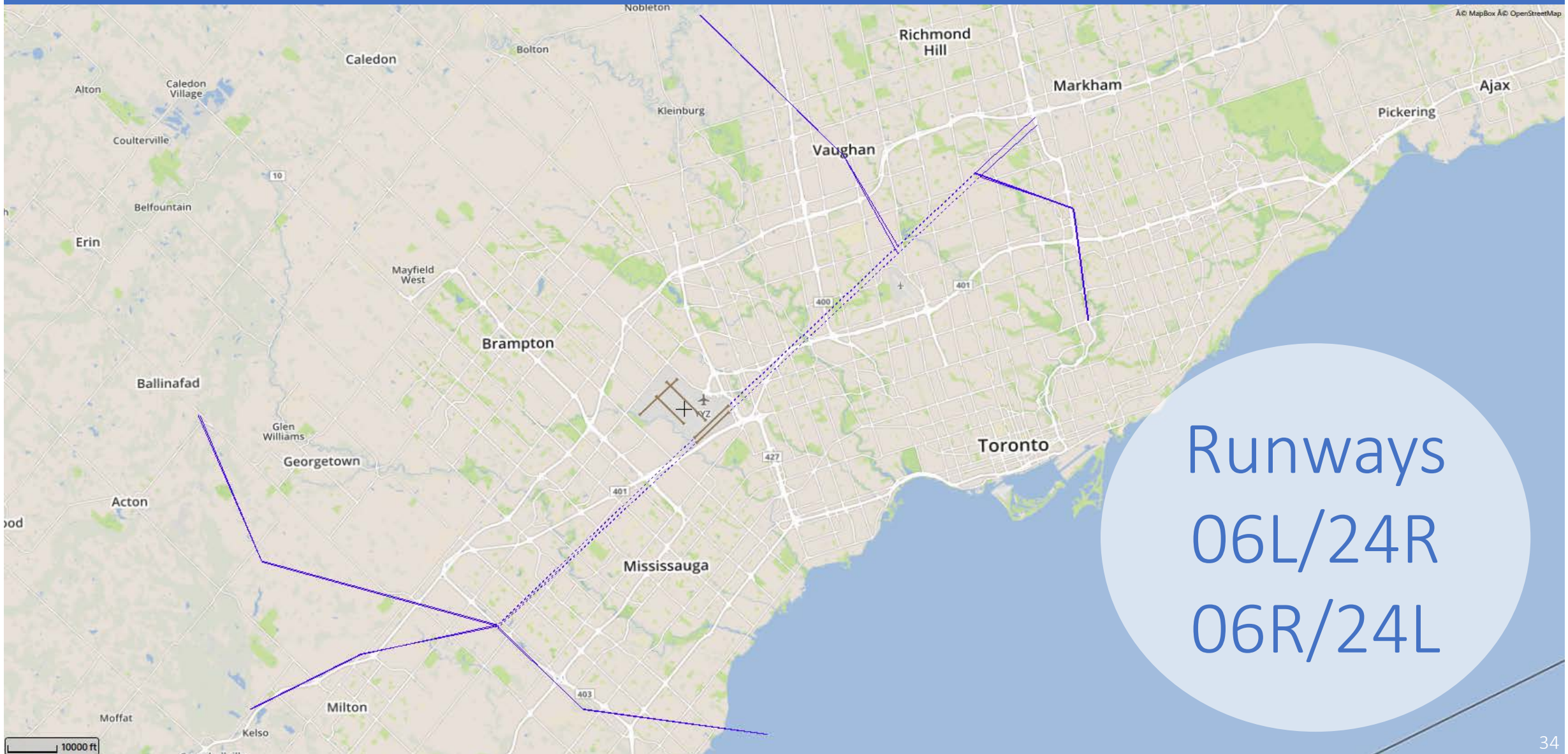
# Nighttime Arrival Procedures – RNAV X



Runway  
05/23



# Nighttime Arrival Procedures – RNAV X



# Returning Traffic – Operations and Complaints

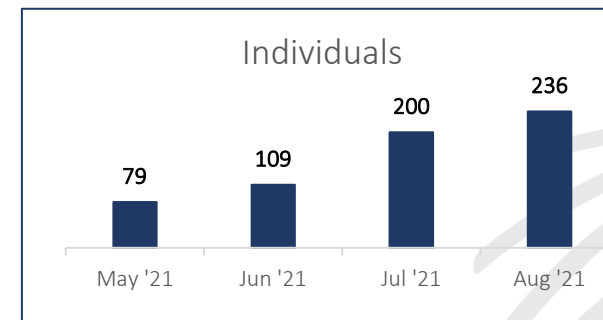
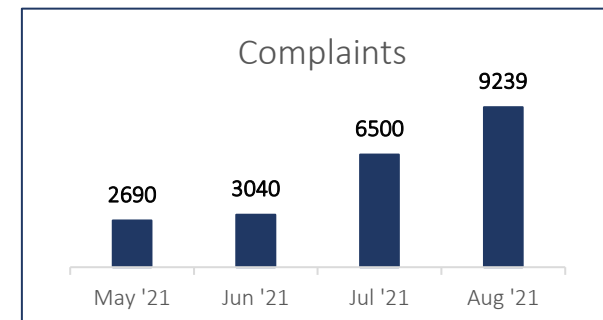
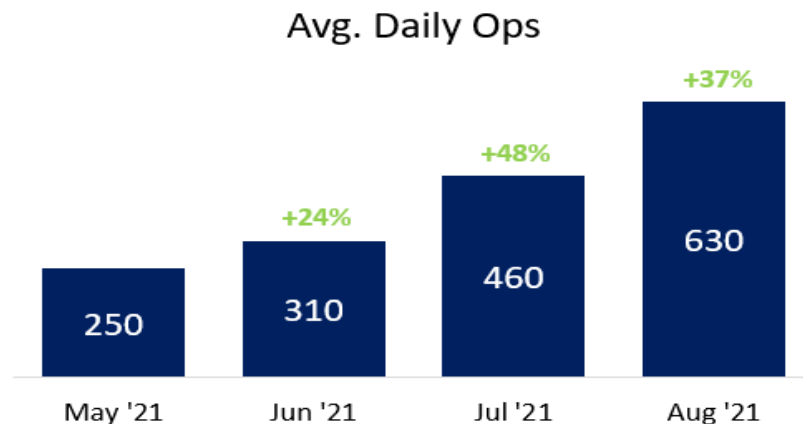
Air traffic in Canada has been at levels not seen since 1970 due to the pandemic. Changes made to government restrictions on air travel in early August resulted in a significant increase in traffic.

## Operations

- **Aug '20:** 10,344 movements (330 per day)
- **Aug '21:** 19,238 movements (620 per day)
  - Movements are **+86%** compared to this time last year
- **However,** traffic levels are still **-54%** compared to Aug '19 and remain years away from full recovery

## Complaints

- **Aug '20:** 1,516 complaints from 88 individuals
- **Aug '21:** 9,239 complaints from 236 individuals – month over month increases since May.

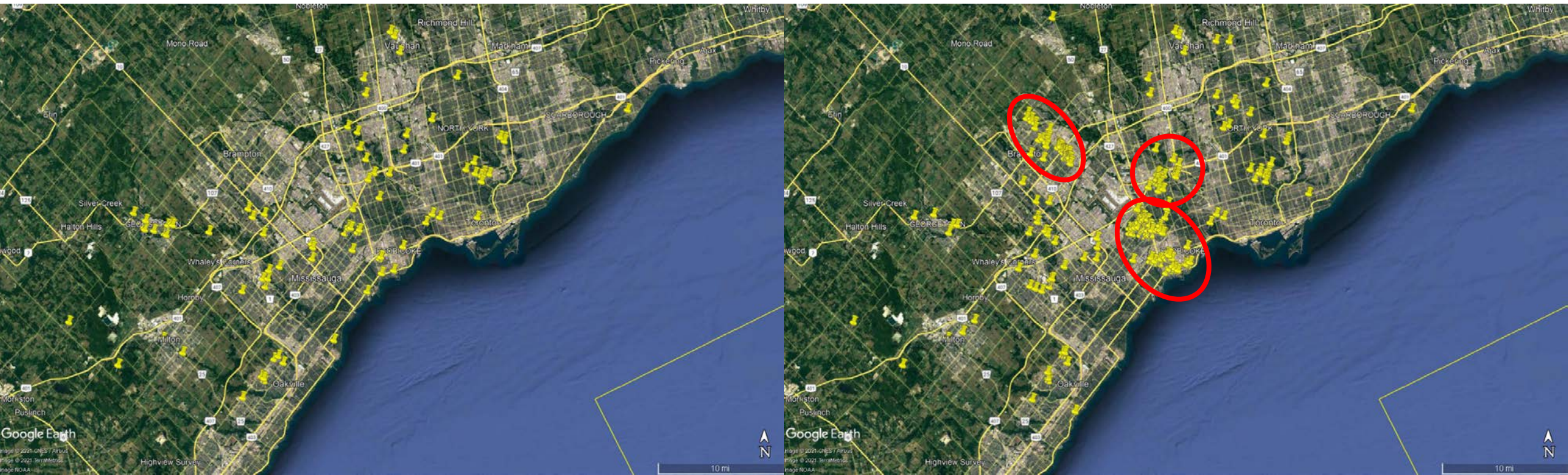




# Complaint Distribution

August 2020: 1,516 complaints from 88 individuals

August 2021: 9,239 complaints from 236 individuals



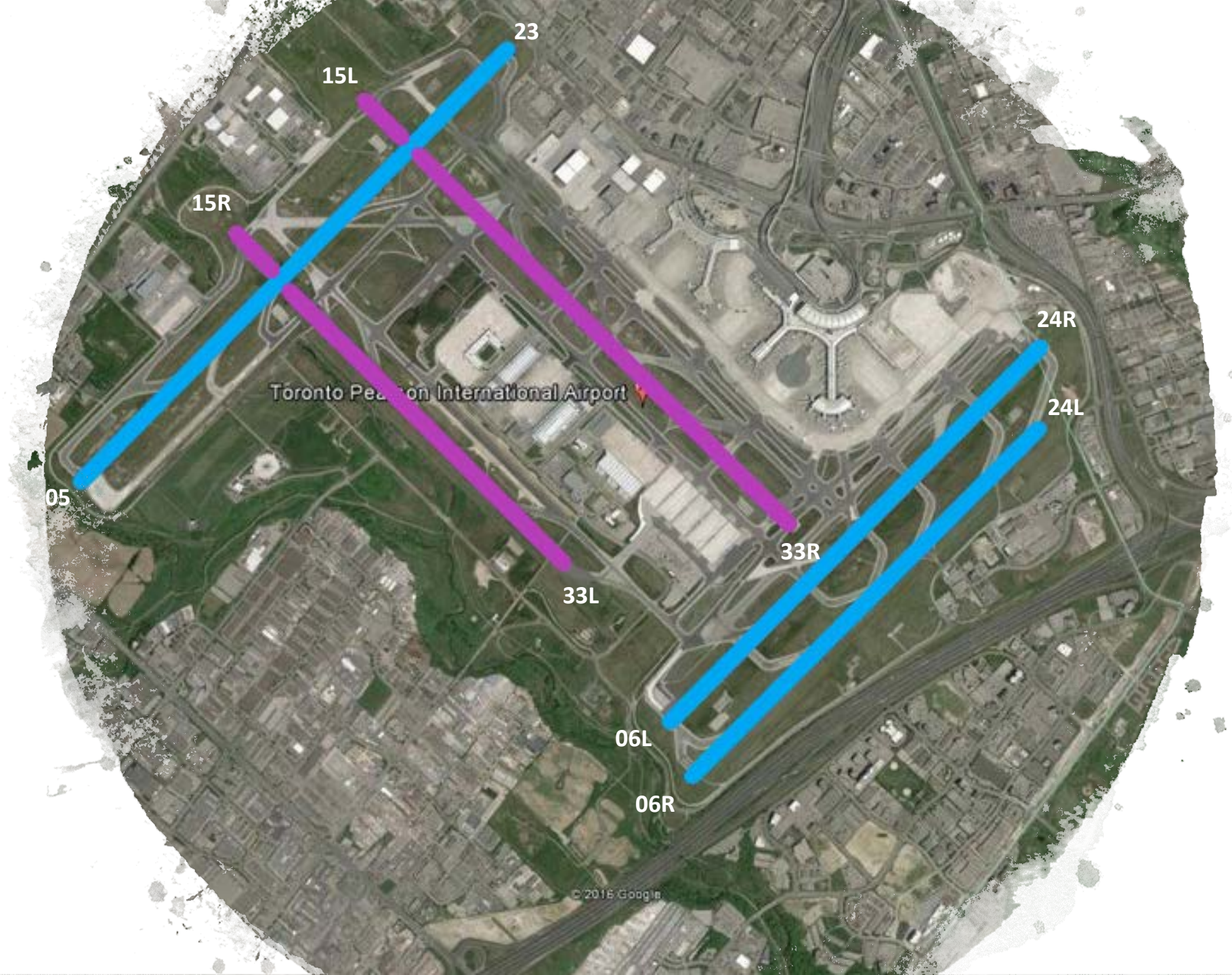
More residents submitting complaints. Most evident in areas to the north and south of the airport and the east. This is likely related to the airfield construction program and the use of the north/south runways and departures off Runway 06R.



# Airside Maintenance Updates

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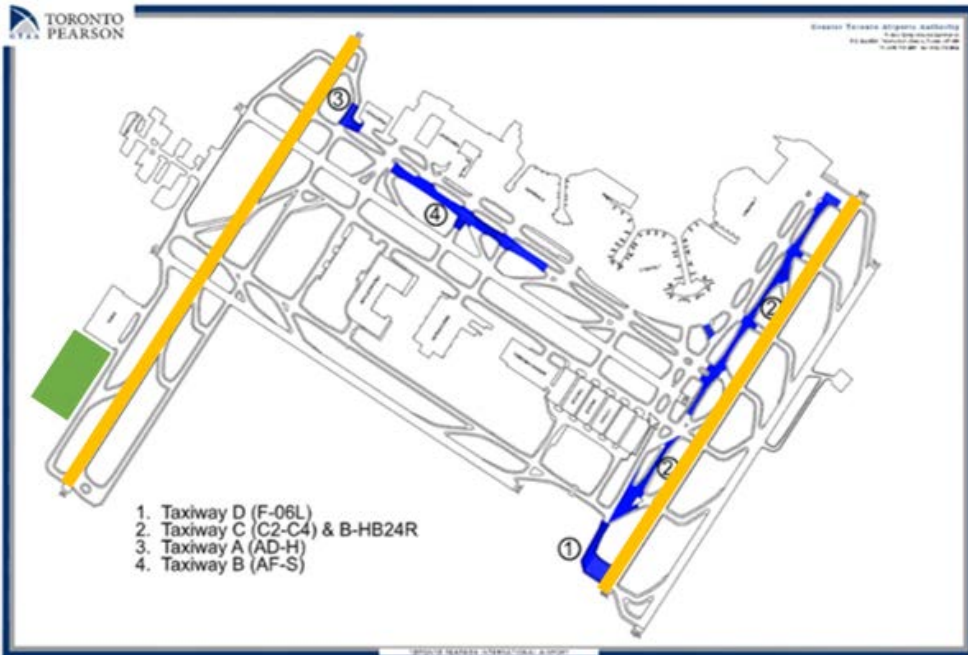




East-West  
North-South



# 2021 Ongoing Airside Maintenance Work



## 1. Work on the airfield, restricting usage of some runways:

- Closure of Runway 06L/24R (work on Taxiway C) – 6:30AM to 6PM Mon-Fri
  - Late April to October 15
- Threshold work on Runway 05/23
  - September 7 to 30 (piggybacking on Bombardier nighttime closure)
  - October 3 to 7, full 24hour closure to repaint

## 2. Bombardier is constructing a new facility (green box on the map)

Nighttime closures of Runway 05/23 – 9PM to 7AM Mon-Fri

- August until December
- Moved to nighttime in August to accommodate traffic demand

## 3. Routine maintenance and offsite crane operations

- Routine maintenance affecting runway availability can lead to configurations using available runways



# Possible Community Impact

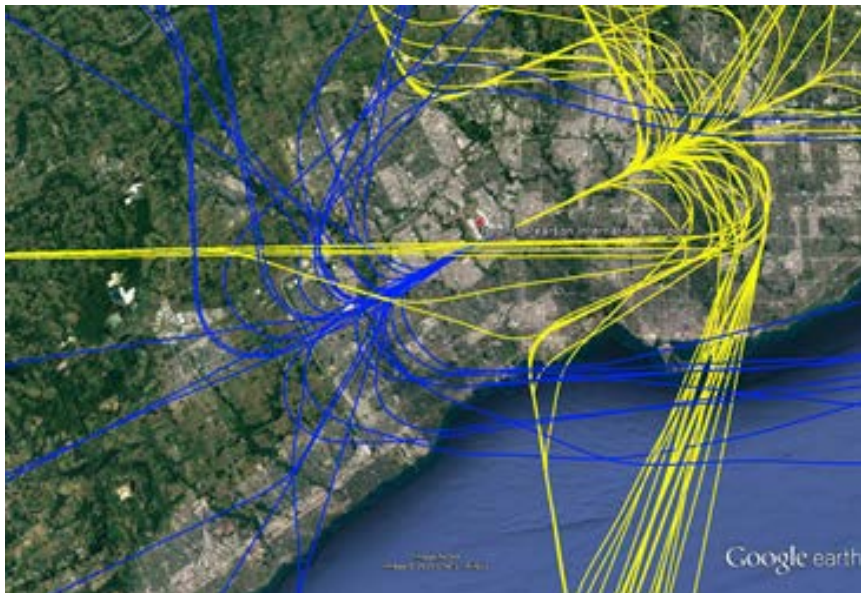


## **Increased use of the parallel east/west Runways 06L/24R and 06R/24L**

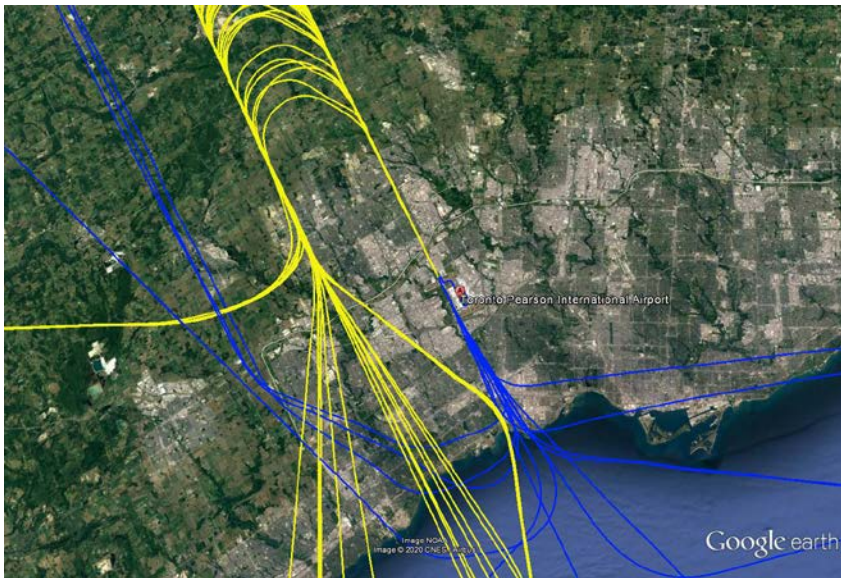
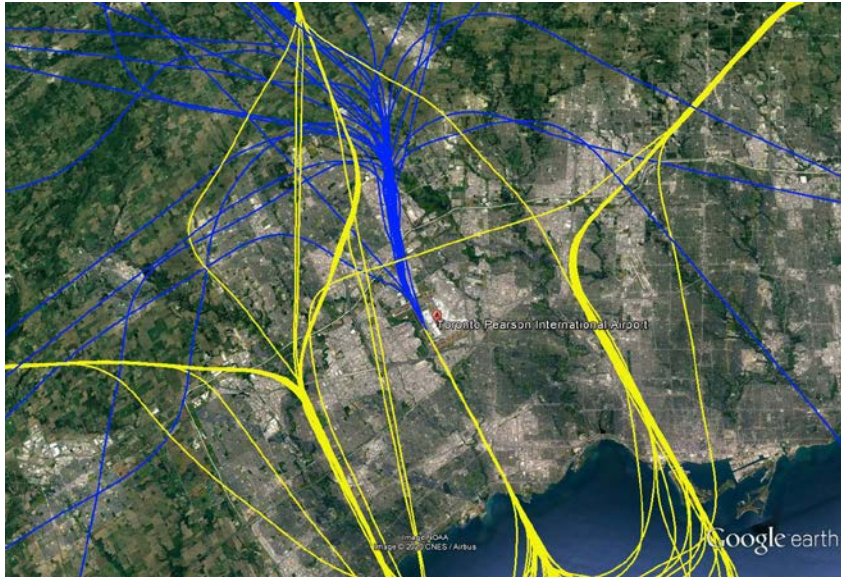
- When Runway 05/23 is closed for Bombardier work 9:00pm – 7:00am through to December (evening and early morning)

## **Increased use of Runway 06R/24L which is slightly further south than 06L/24R and is closer to communities**

- When Runway 06L/24R is closed- through to mid-October (daytime)



# Possible Community Impact

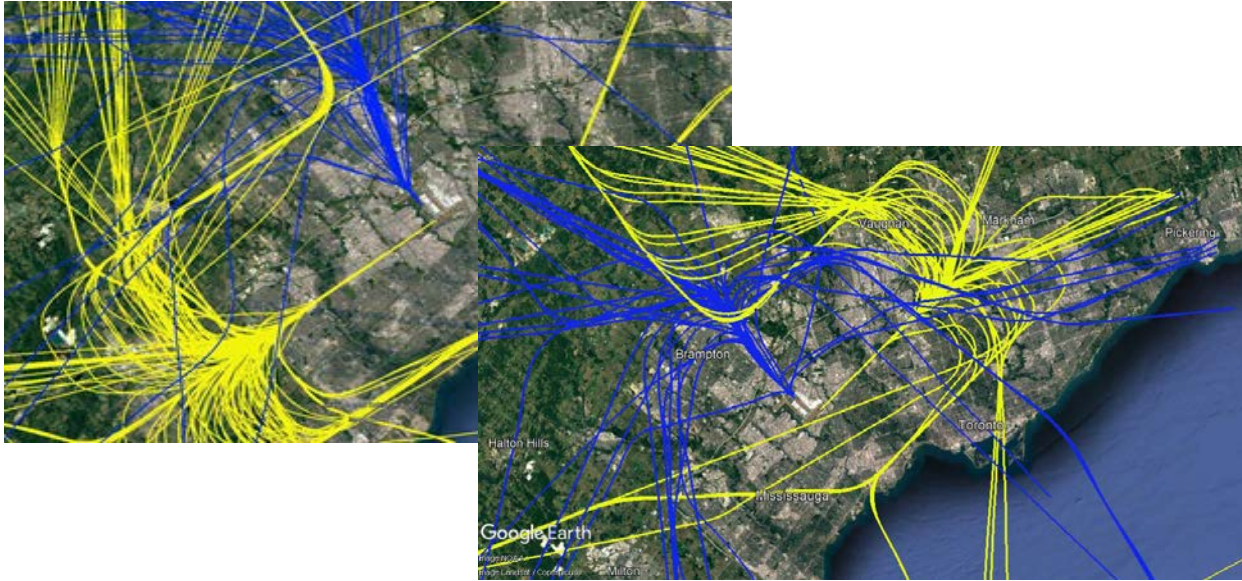


## **Increased north/south operations - arrive Runway 33L/R and depart Runway 33R or arrive Runways 15L/R and depart Runway 15L/R**

- When Runway 05/23 is closed for Bombardier work 9:00pm – 7:00am through to December and demand cannot be handled on available east/west runway (evening and early morning)
- When Runway 05/23 is closed for 5-days for threshold work October 3-7 (daytime)

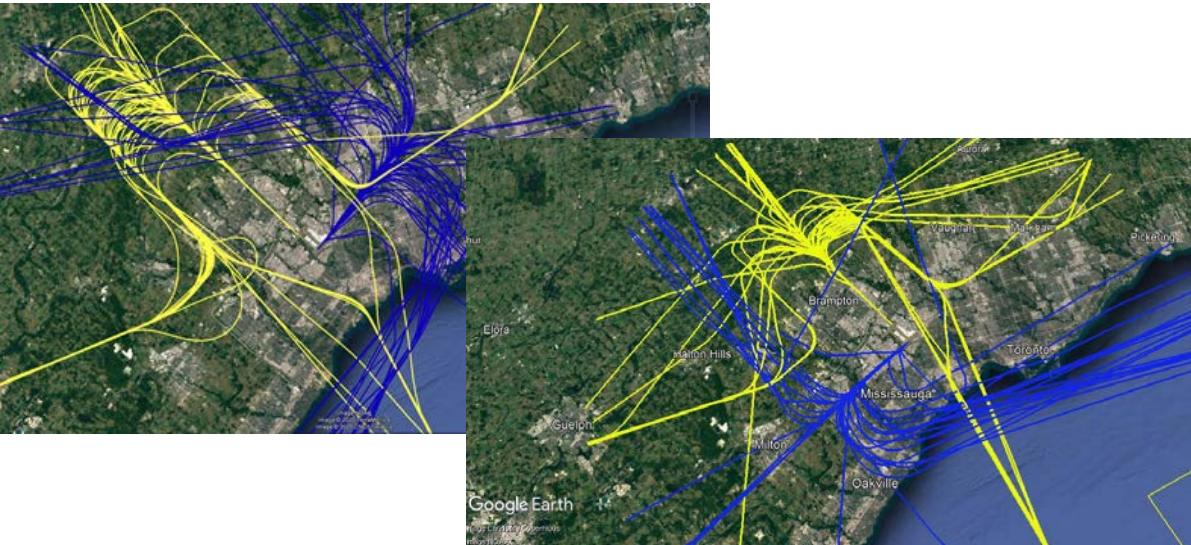


# Possible Community Impact



**Two directional configurations - Depart Runway 33R/L and arrive Runway 06L/R or 24L/R or Arrive Runways 15L/R and depart Runway 24L/R or 06L/R**

- When Runway 05/23 is closed for Bombardier work 9:00pm – 7:00am through to December (evening and early morning)
- When Runway 05/23 is closed for 5-days for threshold work October 3-7 (daytime)

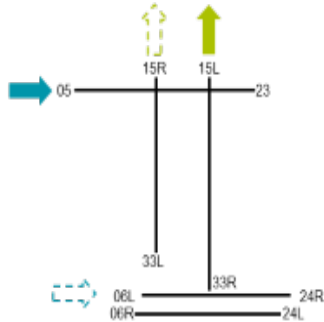


# Possible Nighttime Impact

Maintenance adjusted preferential runways will be used during preferential hours (12:00am – 6:30am) when work is affecting the availability of primary preferential runways.

- When Runway 05/23 is closed for Bombardier work through to December

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

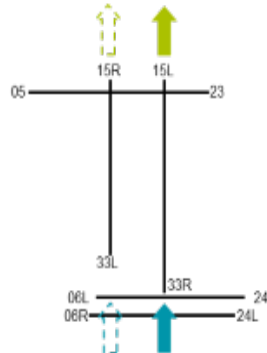


**2nd Choice - Whenever crosswind, tailwinds & winds-aloft allow**

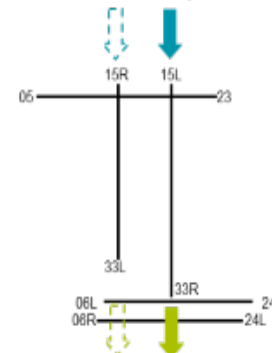


**Selection driven by weather conditions and infrastructure availability when 1<sup>st</sup> or 2<sup>nd</sup> choice are not operable. Ultimately any single or pair of runways can be used.**

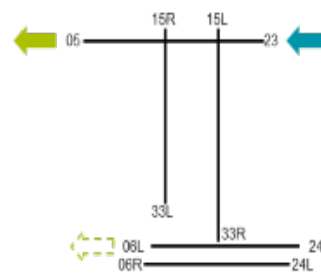
Operation for northerly wind



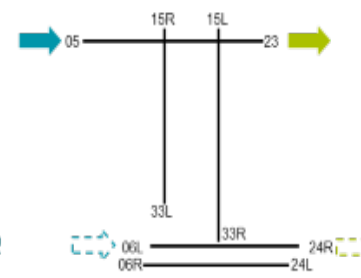
Operation for southerly wind



Operation for westerly wind



Operation for easterly wind



**Key:**

- ← Primary departures
- ← Primary arrivals
- ↕ Maintenance adjusted departures
- ↕ Maintenance adjusted arrivals





## How we're Communicating

- Noise Management Forums
  - Elected Officials briefing
  - Neighbourhood Table meeting
  - Public meeting
- Emails to Elected Officials
- Checking In – community monthly e-newsletter
- Social media
- Residents can find the most up-to-date information on the [Noise Advisory webpage](#)

# NAV CANADA Update

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September 2021

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# NAV CANADA UPDATE

Serving a world in motion  
[navcanada.ca](https://navcanada.ca)



## OVERVIEW



Currently focused on preparations for public consultation of RNP-AR approaches



Working with the GTAA on technical analysis



Consultation plan being developed subject to prevalent public health conditions



Combined with new ICAO standard to deliver noise benefits



Designed only on the north side





# SOME BACKGROUND ON RNP

# WHAT IS RNP?

- › Required Navigation Performance (RNP) is a form of Area Navigation (RNAV)
- › Uses the aircraft's flight management system and satellite positioning to fly a precise three-dimensional path in the sky.
- › RNP makes it easier to design safe efficient, predictable routes.
- › It is being used to update approach paths to airports for appropriately equipped aircraft and certified crews.
- › Currently implemented at 29 Canadian airports.





# RNP AR – THE PROJECT

- › Leveraging RNP AR to introduce new procedures to Toronto Pearson
- › Originates from recommendations made in the Helios Report
- › Opportunity to reduce the need for the High-Low split
- › Delivers continuous descent operations and shorter track mileage
- › No changes to departures or existing RNAV procedures

HELIOS

an advisory company of Egis

INDEPENDENT TORONTO  
AIRSPACE NOISE REVIEW  
Report and Recommendations

In partnership with:

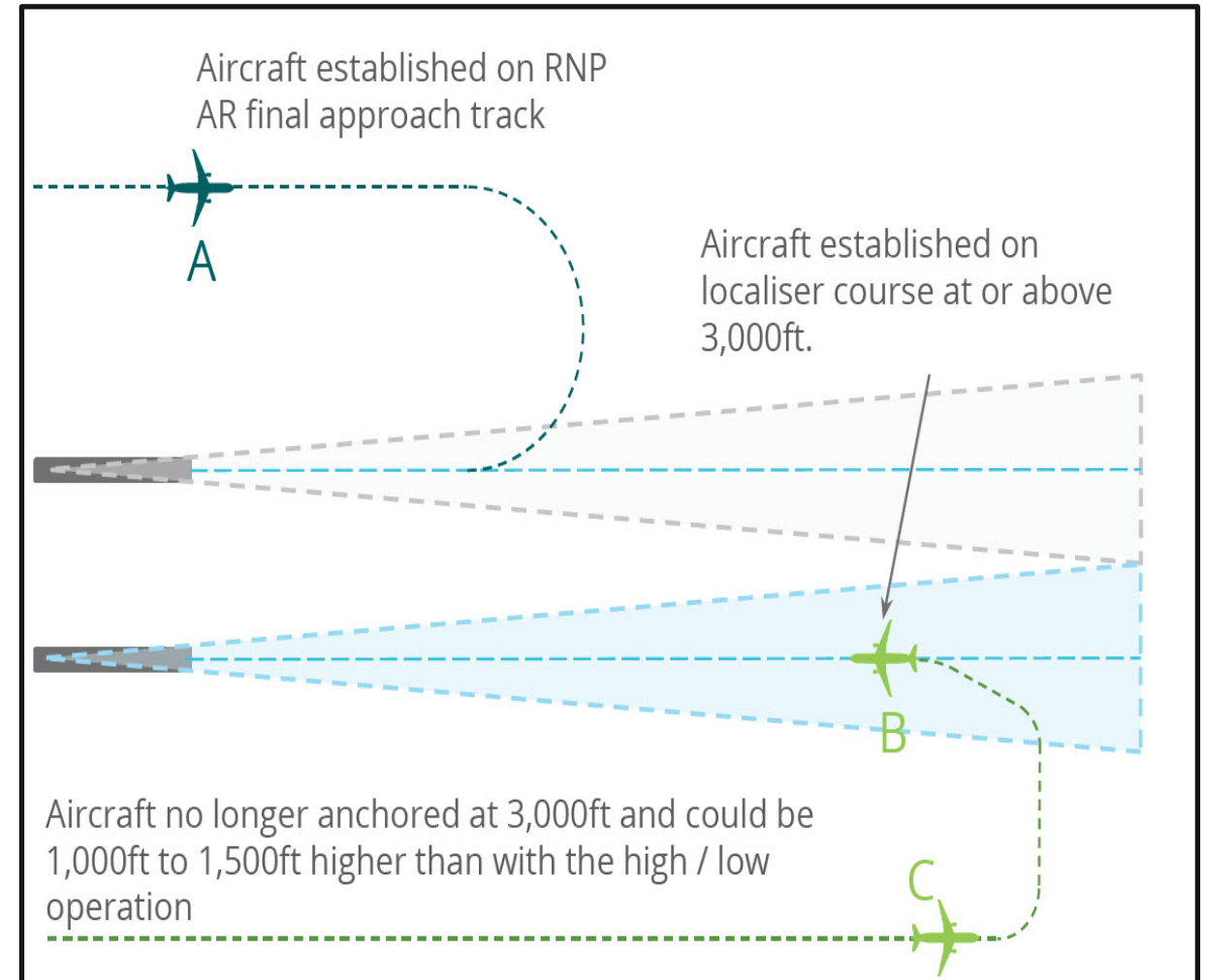
**Recommendation 3A:** NAV CANADA should design Required Navigation Performance Authorization Required procedures that can reduce the need for a high / low operation, taking due consideration of the location of the tracks, and proceed to consultation to facilitate implementation as soon as is practicable.

**Recommendation 3B:** NAV CANADA should maximise the use of the Required Navigation Performance Authorization Required (RNP AR) procedure to incentivise those airlines not already capable of RNP AR to invest, as the RNP AR approach route will offer airlines a more fuel efficient arrival route.

company

# PARALLEL OPERATIONS WITH RNP AR

- › RNP AR arrivals on the north side are considered “established” when they commence the procedure
- › Allows traffic to be managed differently, leading to noise benefits
- › Significant reduction in mileage, fuel burn and GHG emissions







# WHY ARE WE DOING THIS?

# THE BENEFITS

- › Environmental benefits
  - › Reduces the requirement for low altitude level segments on downwind
  - › Overall community noise benefit
  - › Significant reduction in GHG
  - › Improved operations
  - › Reduction in track miles
  - › Reduced time in system and fuel savings
- › RNP AR approach track containment
  - › No risk to safety
  - › Reduces use of parallel visual approaches

## **RNP-AR Usage at Calgary International Airport (CYYC)**

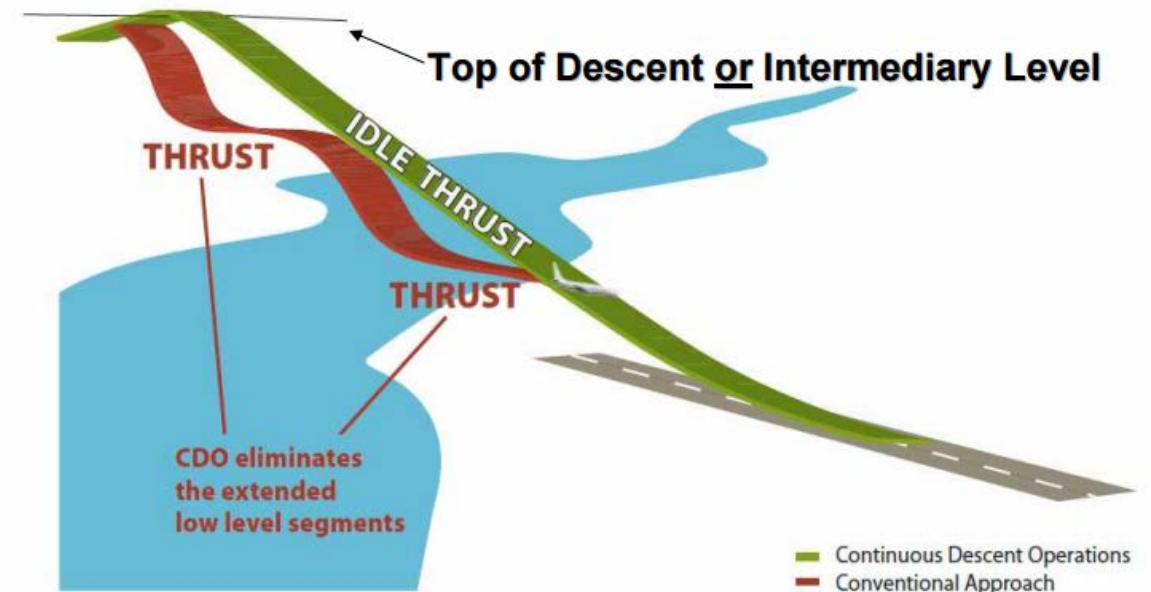
- › Since EoR – over 3000 approaches per month
- › Approx. 35,000 track miles saved per month
  - › Roughly equates to a reduction of 140 hours of low altitude, power on flight in populated areas per month



# WHAT DOES IT MEAN FOR COMMUNITIES?

Outcomes can include:

- › Less variability of flight path location for those aircraft that are equipped to use RNP.
- › Better avoidance of populated areas in some instances (though it is often not possible to entirely avoid populated areas).
- › A “cleaner” aircraft profile (less increases or decreases in throttle, reduced flap use) compared to other approaches.

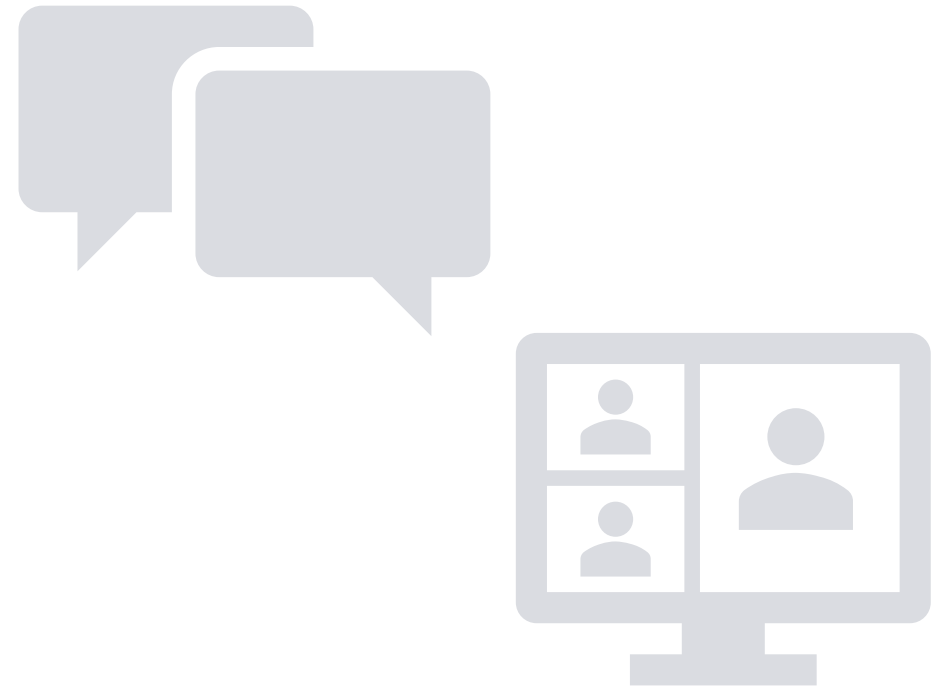


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## WHY NOW?

- › Continuing to advance Helios work and noise mitigation
- › Supports airline recovery through reduced fuel burn
- › Aligns with environmental goals
- › Benefits to ANS, operators, the airport, and the community





# PUBLIC CONSULTATION

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# CONSULTATION GOALS

- › To accurately communicate and seek feedback on expected impacts and benefits to affected areas, as per the Airspace Change Communications and Consultation Protocol.
- › To share overall environmental benefits of EoR, both in terms of GHGs and Continuous Descent Operations, while proactively communicating potential changes to the soundscape.



# CONSULTATION PLANNING

## Considerations

- › Focused on virtual channels due to COVID-19
- › Provide multiple avenues to providing input
- › NAV CANADA is the proponent with GTAA supporting
- › Content to be developed in collaboration with GTAA
- › Draws on work by GTAA Community Relations

## Steps

- › Pre-Briefing of Noise Accountability Board and Noise Management Forums
- › Outreach to elected officials prior to consultation
- › Consultation – minimum 45 days
- › Post-Consultation Report
- › Implementation – Subject to Consultation
- › Post-Implementation Reporting

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THANK YOU





# Noise Management Action Plan Updates

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# 2021 NMAP Workplan at a Glance

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.*
- Completion of the School HVAC Pilot Program – *project nearing completion*
- Launch Community-Proposal Review Process – *launched, received first submissions*
- Work with major operators to complete status update of the A320 family aircraft operating at Toronto Pearson and continue to monitor operations of retrofitted vs non retrofitted aircraft. *Updated database, reports now indicate that 94% of A320 series aircraft are performed by retrofitted aircraft.* Reports available under [A320 Retrofit program usage reports](#)
- Identify aircraft operating at Toronto Pearson by Noise certification ‘chapter’ and determine Phase 2 of Quieter Fleet Incentive Program. - *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

Since the start of the pandemic, air traffic in Canada has been at low levels not seen since 1970.

As government restrictions on air travel are eased in a measured and health-focused way, Canadians are beginning to think about air travel again.

As volumes slowly begin to increase, residents may begin to again notice some of the aircraft noise they heard in the past, though traffic won't reach pre-pandemic levels for some time.

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

- [Noise Management webpages](#)
- [Noise Advisories](#)
- [InsightFull](#) – interactive noise web portal
- [WebTrak](#)
- [Noise Management Forums](#) (materials from public meetings and details on upcoming meetings)
- [Checking In newsletter](#)

# Question Period

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# Thank You

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Next Meeting: December 2, 2021