ACCC MEETING

AIRPORT COMMUNITY CONSULTATIVE COMMITTEE

JANUARY 8, 2020

YYC CALGARY AIRPORT AUTHORITY

Agenda

- Welcome & Introductions
- Noise Program Updates
- Construction and Runway Use
  - Runway Use Trends
  - Construction Update
- Update: NAV CANADA Alternate Departure Headings Trial
- New Aircraft Noise Reduction Technology: Airbus A220
- Additional Questions?

NOISE PROGRAM UPDATES

YYC CALGARY AIRPORT AUTHORITY

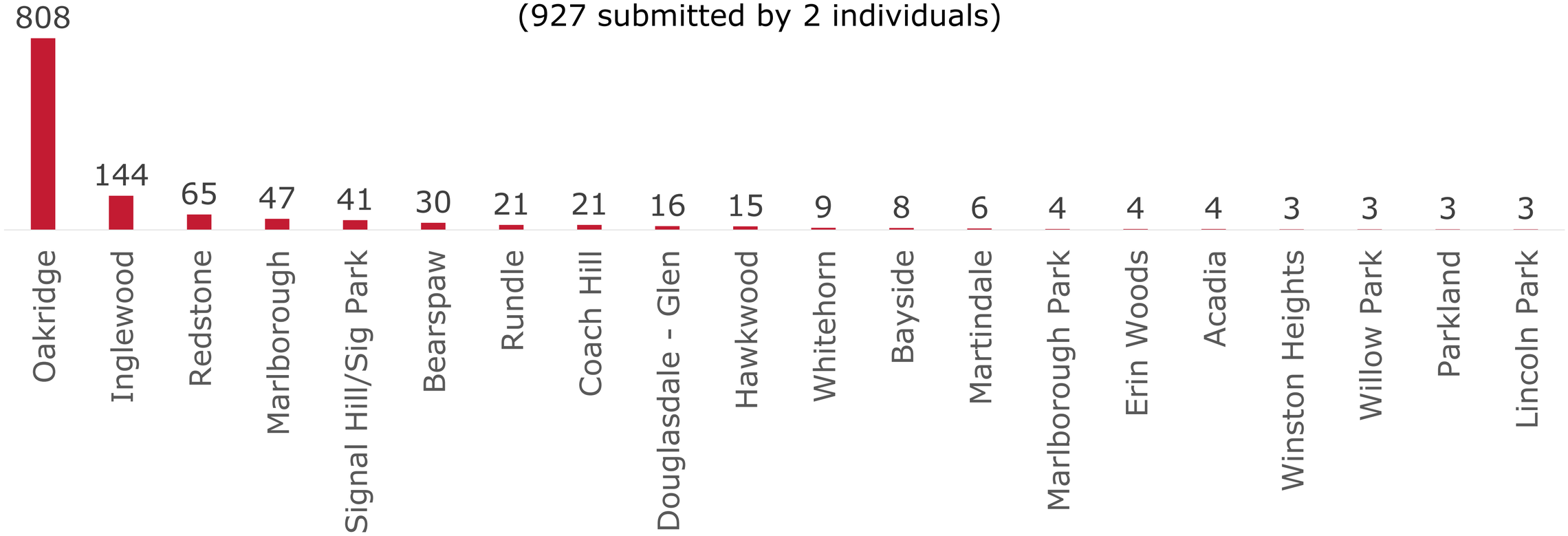
Mobile Noise Monitoring Program

- Program on hiatus over the winter and **will resume in Spring 2020**
- Aircraft noise is measured in each community for 4 weeks at a time
- Communities that participated in 2019:
  - Signal Hill
  - Strathcona Park
  - Chestermere
  - Airdrie – King's Heights
- Summary report will be shared with participating communities

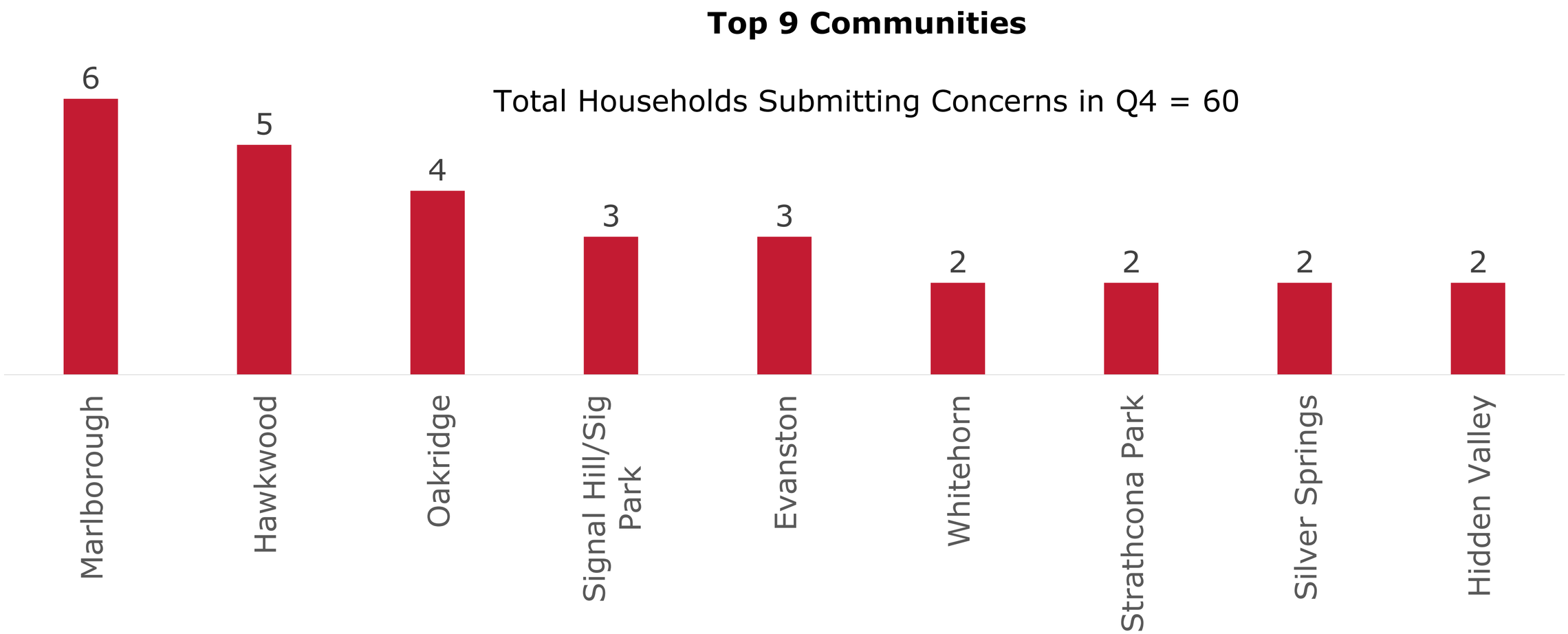
Noise Concerns: Individual Submissions – Oct to Dec 2019

Top 20 Communities

Total Noise Concerns in Q4 2019 = 1,285
(927 submitted by 2 individuals)



Noise Concerns: Number of Households – Oct to Dec 2019



2020 Noise Management Program Plan – Preliminary Overview

Q1	• **January 8 – ACCC Meeting** (report on previous quarter) • Finalize noise management program plan • ACCC survey – feedback on 2020 priorities • Deliver 2019 report for mobile noise monitoring
Q2	• **April 22 – ACCC Meeting** (report on previous quarter) • Release 2019 annual report • 6-month update on NAV CANADA Alternate Departure Headings Trial • Review noise concern submission process and confirm policy • Resume mobile noise monitoring program
Q3	• **July 15 - ACCC Meeting** (report on previous quarter)
Q4	• **October 28 – ACCC Meeting** (report on previous quarter)

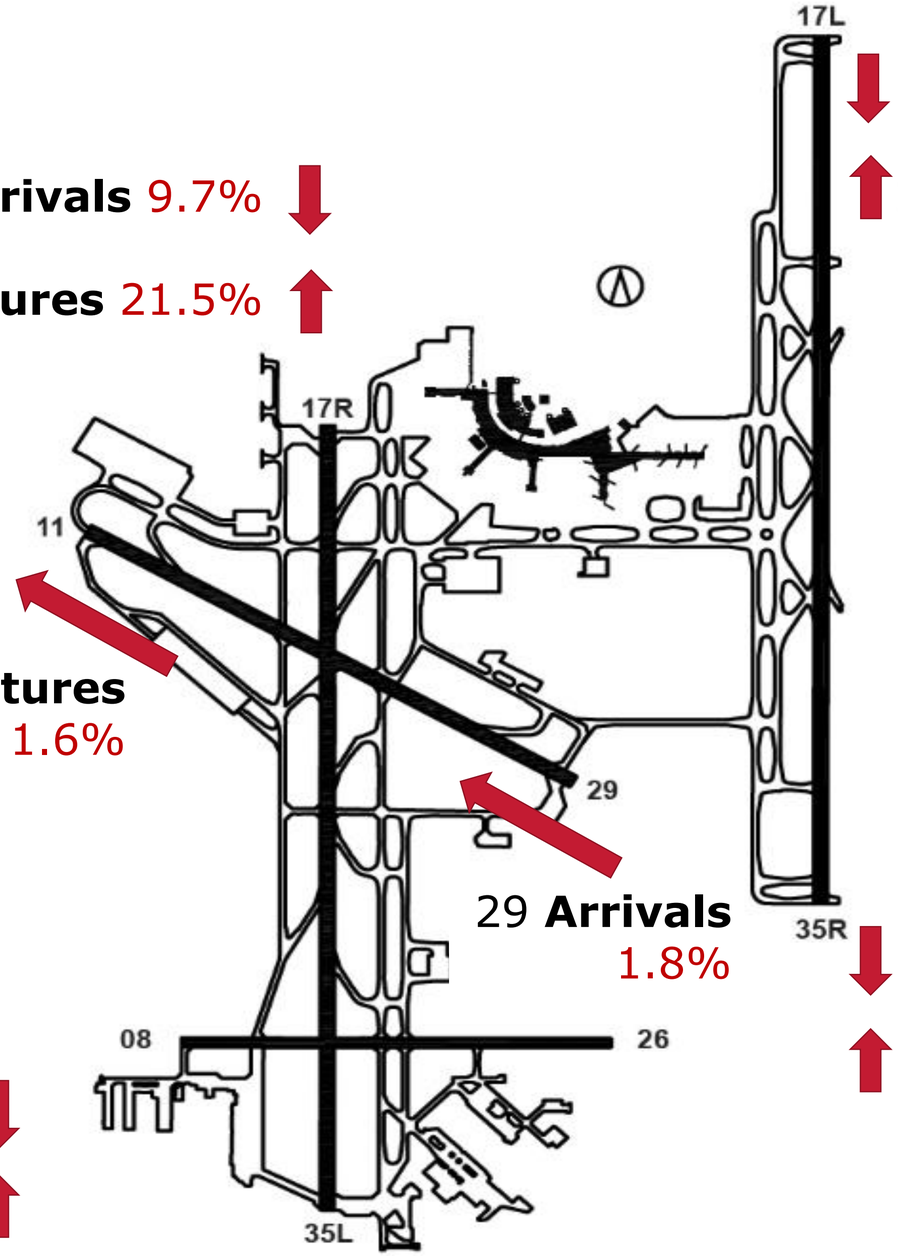
CONSTRUCTION IMPACTS AND RUNWAY USE

YYC CALGARY AIRPORT AUTHORITY

Runway use: Oct - Dec 2019

	Arrivals	Departures
17L	4,625	2,500
17R	5,409	7,054
35L	9,128	11,962
35R	7,524	5,392
29	1,004	862
26	102	33

Total aircraft movements = 55,595



17L **Arrivals** 8.3%

35R **Departures** 9.7%

17R **Arrivals** 9.7%

35L **Departures** 21.5%

29 **Departures** 1.6%

29 **Arrivals** 1.8%

17L **Departures** 4.5%

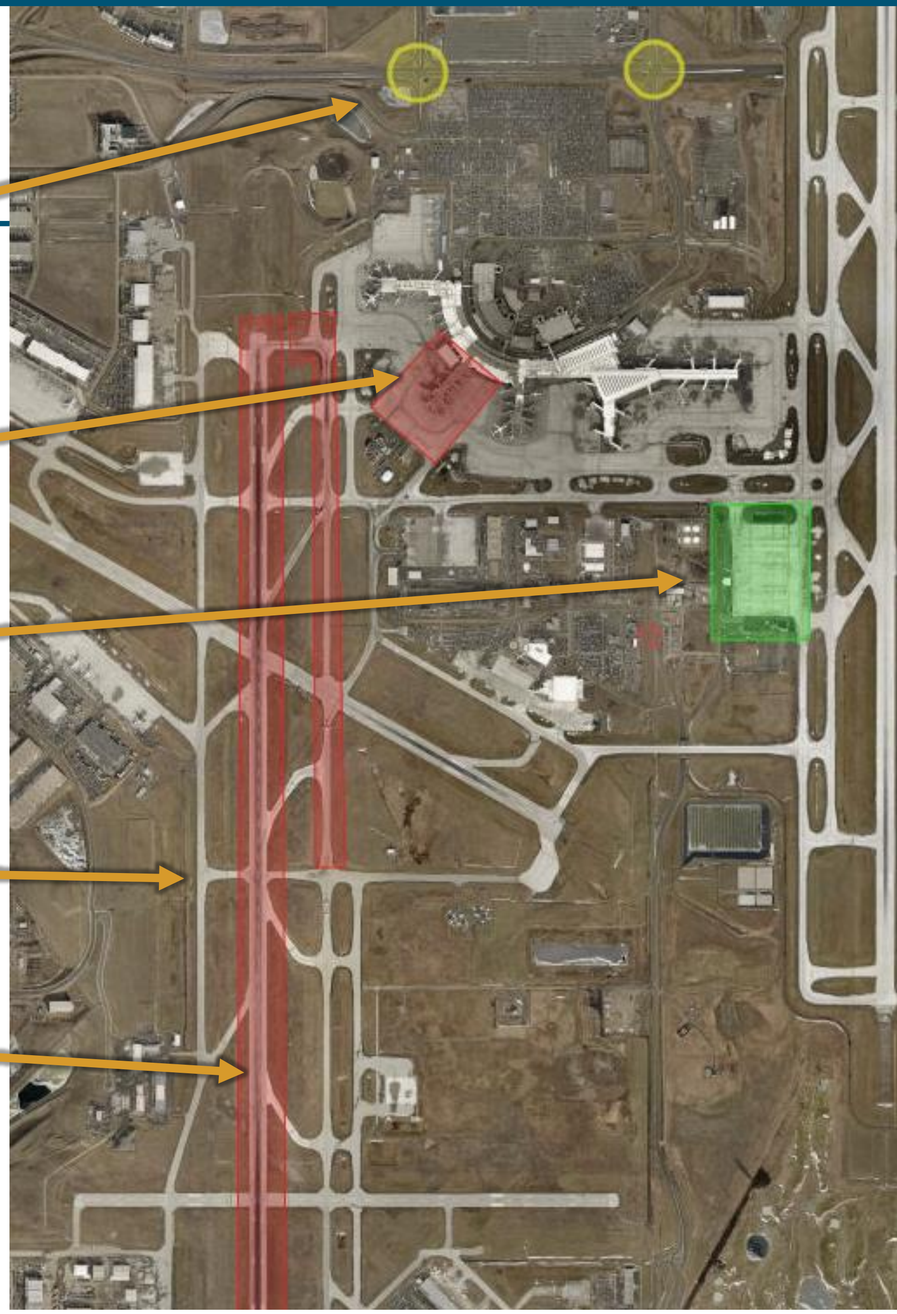
35R **Arrivals** 13.5%

17R **Departures** 12.7%

35L **Arrivals** 16.4%

2020 Construction Update

- Airport Trail Interchanges
- Airfield Pavement Restoration
- East Deice Apron
- Airfield Electrical Sign Restoration
- West Runway Rehabilitation Planning



2020 Construction Update

West Runway Rehabilitation Planning & Design

- A feasibility study has been completed that provides the Airport Authority with an analysis of current state, design options and construction phasing options
- Key stakeholder consultations to be conducted throughout 2020 to 2022
- Anticipated start date – Spring 2022

YYC CALGARY AIRPORT AUTHORITY

Deicing Operations Impact

- New East Deice Apron (EDA)
  - Will be the primary location for aircraft deicing while supporting more efficient glycol recovery and recycling.
  - Days during deicing events will see more aircraft departing from the East parallel so as to accommodate immediate departures after the aircraft have been deiced.
  - West Deicing Apron (WDA) will be used to support deicing events as required.

QUESTIONS?

NOISE MITIGATION INITIATIVES

YYC CALGARY AIRPORT AUTHORITY

2020-01-08

JET DEPARTURE HEADING TRIAL UPDATE

Early performance results

Greg Konrad
Manager, Calgary Tower

Serving a world in motion
navcanada.ca

NAV CANADA

OVERVIEW

Calgary Tower in collaboration with the Calgary Airport Authority is currently trialing new departure procedures that are intended to:

- Deliver noise mitigation to communities south of the airport
- Respond to airport infrastructure changes
- Improve air traffic management during high demand periods

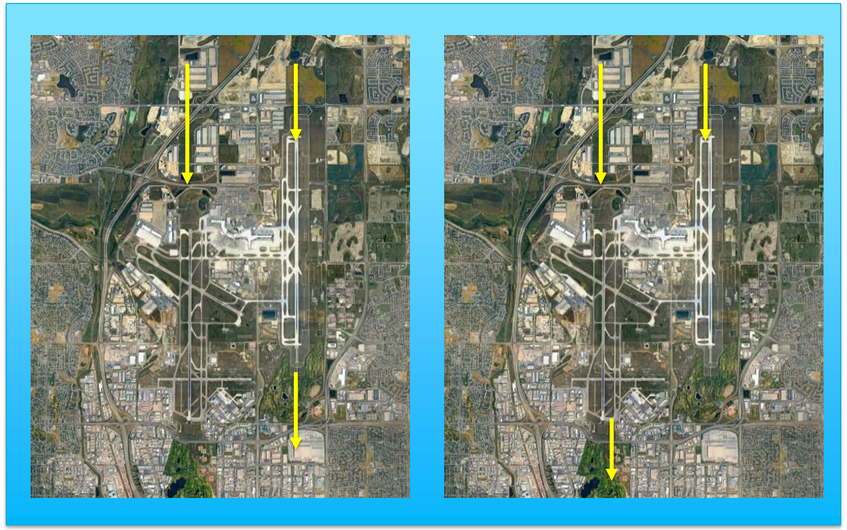
CURRENT OPERATION

Calgary Airport operates in one of two modes for arrivals and departures in a north/south configuration:

1. Arrive one or two runway(s) and depart one runway
2. Arrive two runways and depart two runways (SPID – simultaneous parallel instrument departure)

Modes in a 17 R/L configuration:

1.



2.

TRIAL CONCEPT

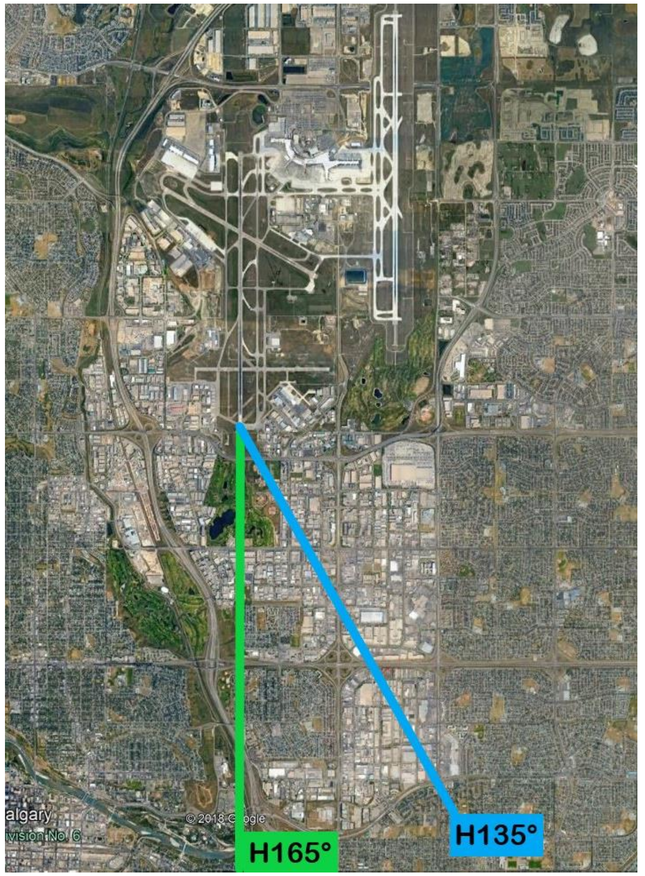
- Trial jet turns in a south flow on runways 17R/L
- Change in initial departure heading for some toward the other runway
- Similar to what is done in a north flow (runways 35R/L).
- Proposed trial period: 12 months

Runway	Current 17R	Proposed 17R Westbound	Proposed 17R Eastbound (A)	Current 17L	Proposed 17L Westbound (B)	Proposed 17L Eastbound
Heading	165	165	135	155	185	155

OPPORTUNITY – 17 R

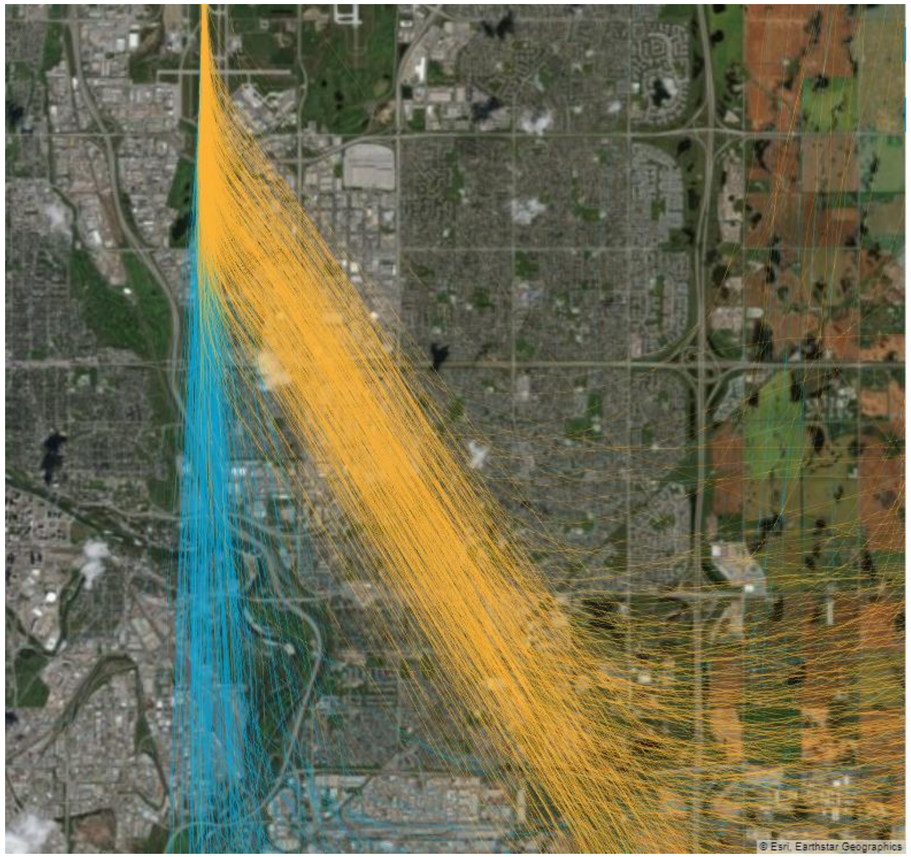
A. 17R – This procedure would be used in either of the modes described above.

[expect approximately 30-50% of the traffic on heading 135]



17R JET DEPARTURES

Summary Statistics – October to December



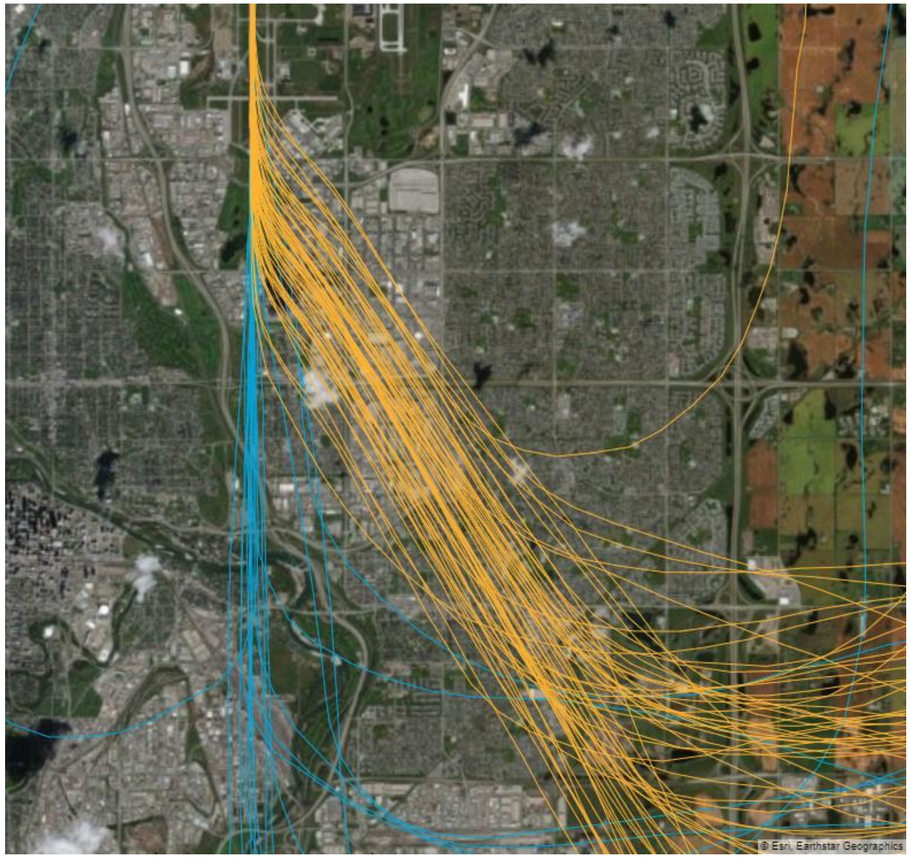
Tracks for turn-eligible flights, .

- **3,096 jets** departed off of 17R in total
- Of these, **40%** or **1,239 departures**, were eligible to turn to a heading of 135°
- **28%** of total departures **(875 departures)** turned to a heading of 135°

2020-01-07
Source: EXCDS, RDPSR
Prepared By: Corporate Performance (KS, CP)

17R JET DEPARTURES

Summary Statistics – October to December



Tracks for turn-eligible flights, first week of December 2019.

- **3,096 jets** departed off of 17R in total
- Of these, **40%** or **1,239 departures**, were eligible to turn to a heading of 135°
- **28%** of total departures **(875 departures)** turned to a heading of 135°

2020-01-07
Source: EXCDS, RDPSR
Prepared By: Corporate Performance (KS, CP)

17R JET DEPARTURES

Summary Table – October to December

Month	Turned	Not Turned	Not Eligible	Total
Oct.	155	114	354	623
Nov.	279	78	668	1025
Dec.	441	172	835	1448
Total	875	364	1857	3096

2020-01-07
Source: EXCDS
Prepared By: Corporate Performance (KS, CP)

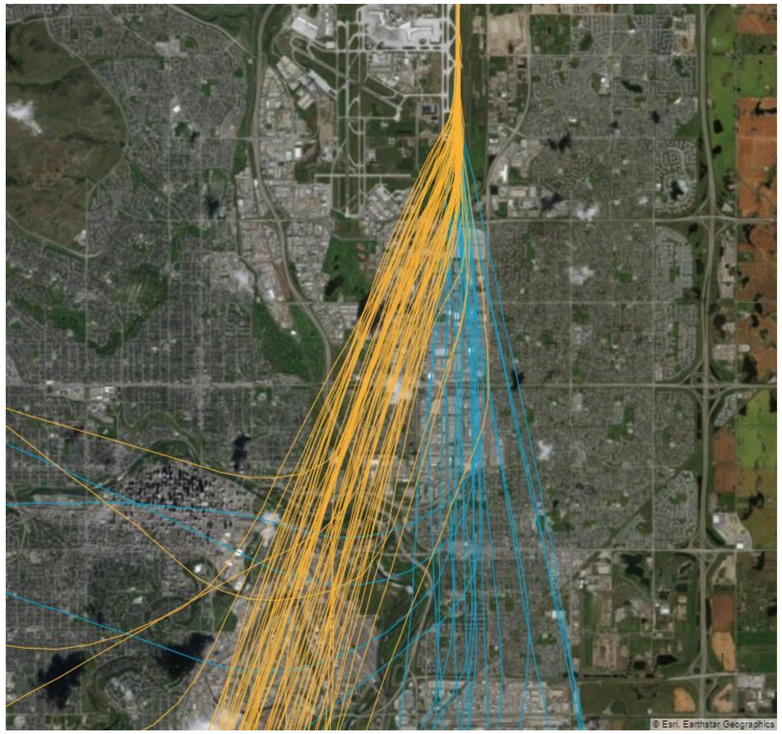
OPPORTUNITY – 17 L

B. 17L – This procedure would only be utilized when two departure runways are in use (SPID).

[expect less than 15% on heading 185]

17L JET DEPARTURES

Summary Statistics – October to December



- **1,450 jets** departed off of 17L in total
- Of these, **8%** or **112 departures**, were eligible to turn to a heading of 185°:
- **5%** of total departures **(79 departures)** turned to a heading of 185°

Tracks for turn-eligible flights.

2020-01-07
Source: EXCDS, RDPSR
Prepared By: Corporate Performance (KS, CP)

17L JET DEPARTURES

Summary Table – October to December

Month	Turned	Not Turned	Not Eligible	Total
Oct.	14	13	245	272
Nov.	32	6	544	582
Dec.	33	14	549	596
Total	79	33	1338	1450

2020-01-07
Source: EXCDS
Prepared By: Corporate Performance (KS, CP)

BENEFITS

Environmental	Operational
Increased noise distribution for departures, and ability to distribute regardless of runway in use.	Reduced complexity in moving aircraft on the ground and reduced active runway crossings
Departures from 17 R more likely to overfly non-residential use land at lowest altitudes	Consistency for the controller in allowing the same techniques to be applied in either flow (north/south).
Departures from 17L more likely at a greater altitude when they reach residentially populated areas	Improved utilization of changes to ground infrastructure
Reduced greenhouse gas emissions as a result of reduced taxiing and more direct routing	Increased ability to move traffic in a timely manner during peak periods

TRIAL – KEY CONSIDERATIONS

- Trial format provides an opportunity to assess the benefits to the communities – intended 1 year trial
- Initial briefing to the airport's community consultative committee (ACCC) provided on September 18th
- A public notice was published on the airport's website and shared with YYC's email distribution list
- Committed to updating the ACCC on performance of the trial at scheduled meetings (4x/year)
- Your feedback is welcomed
- Towards the end of the trial, further public engagement/consultation will be considered in coordination with the Calgary Airport Authority

QUESTIONS ?

Serving a world in motion
navcanada.ca

NAV CANADA

Airbus A220 Noise Emissions

Captain Andrew Kovats
Technical Pilot, Navigation & Operational Efficiency

January 8, 2020
YYC ACCC

20%

lower fuel burn & CO_2 emissions*

50%

Reduction in noise footprint*

NOx emissions

50%

below CAEP/6

What makes it so quiet?

PW1500G Geared Turbofan

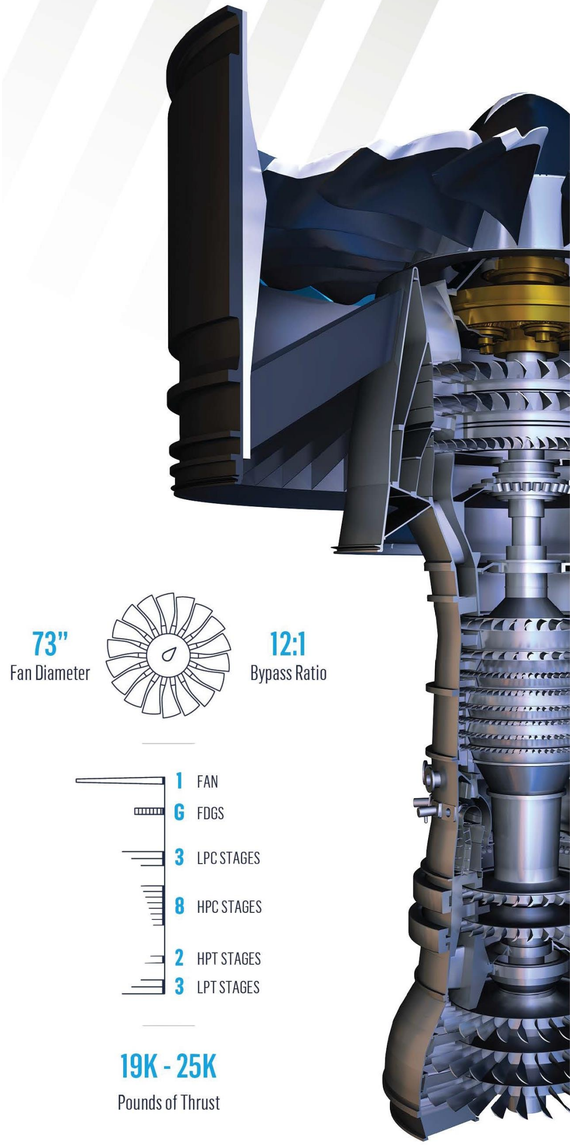
The decoupling between the fan and the core allows both components to be operated at their respective optimal speed, thus reducing the engine noise.

Advanced Material

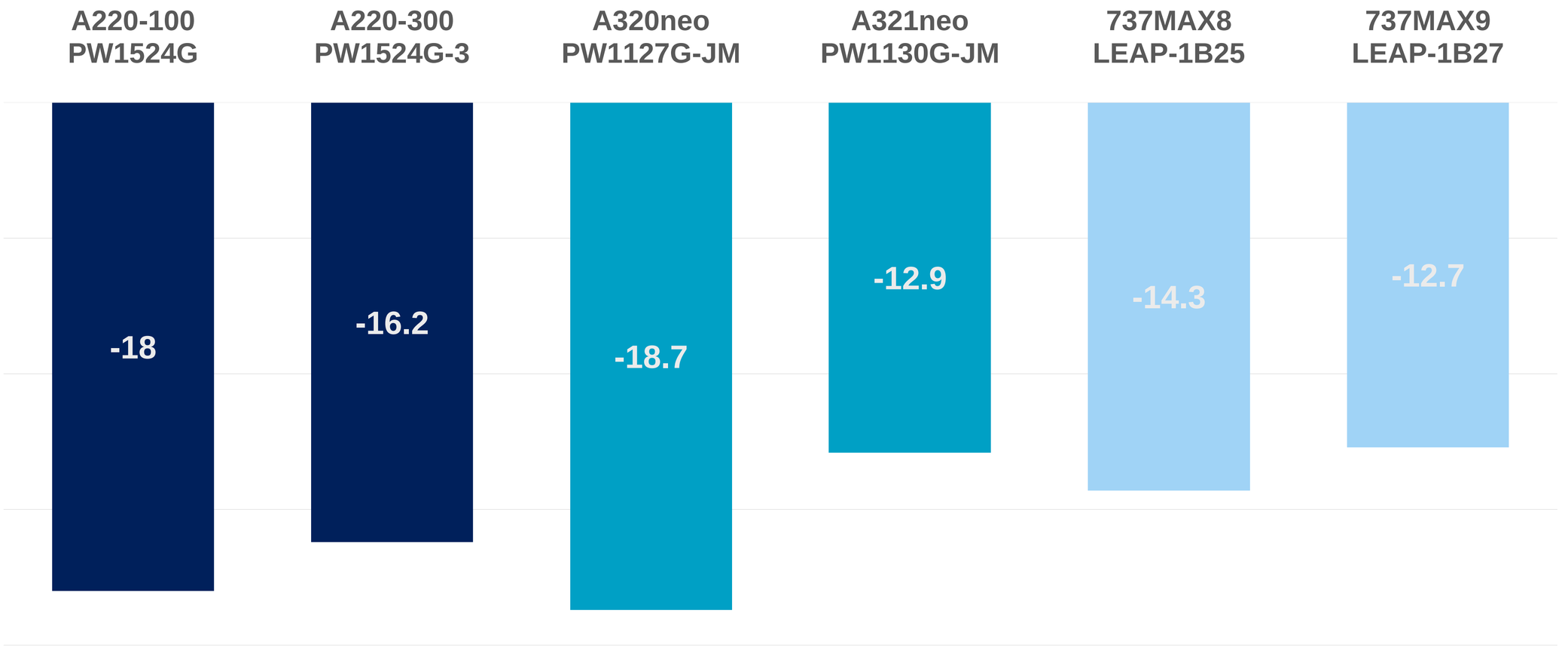
50% Advanced Materials (like aluminum-lithium and carbon fiber) lowers the aircraft weight. This lower weight requires less thrust for takeoff, thus reducing takeoff noise.

Aerodynamic Optimization

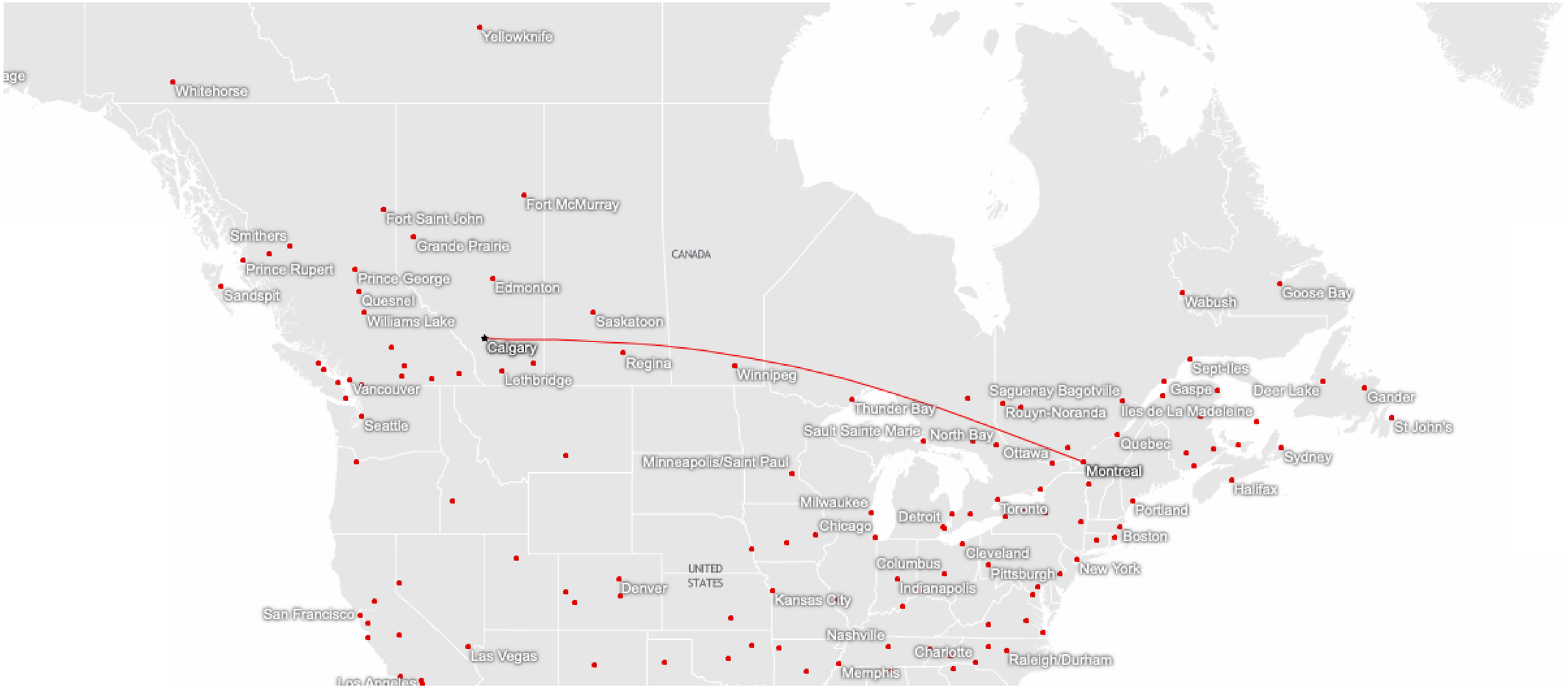
Optimal airframe, wings, winglet & engines integration allows aerodynamic detailing to reduce drag. Reduced drag leads to reduced noise.



Cumulative noise margin vs. ICAO Chapter 4 noise standard (EPNdB)



- Montreal to Calgary to start
- Other YYC routes may be coming in the fall
- Forecasting potentially ninety A220 YYC movements per month by December, 2020



Thank you
Merci

Tel: +1 (604) 505-1050
Email: Andrew.Kovats@aircanada.ca

aircanada.com

YYC CALGARY AIRPORT AUTHORITY