Montréal-Trudeau Airport Light Rail Shuttle

Workshop on Enhancing Intermodal Passenger Travel in Canada

May 31st 2012
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Aéroports de Montréal

A not-for-profit corporation
Management, operation, and development under the terms of a 60-year lease signed with Transport Canada in 1992:

- Montréal–Pierre Elliott Trudeau International Airport (passenger)
- Montréal–Mirabel International Airport (cargo and industrial)

Mission

- **TO PROVIDE QUALITY AIRPORT SERVICES** that are safe, secure, efficient and consistent with the needs of the community;
- **TO CONTRIBUTE TO THE ECONOMIC GROWTH** of the Greater Montréal area, especially through the development of the facilities under our responsibility;
- **TO COEXIST IN HARMONY WITH THE SURROUNDING COMMUNITY**, particularly in matters of safety and environmental quality.

Financially autonomous

- No government subsidies
- Pays rent to Government of Canada and municipal taxes
- Bond platform – DBRS (A) Moody’s (A1) rating
Montréal-Pierre Elliott Trudeau International Airport Overview

• More than 13 million passengers/year
  » 12 % in transit
  » Annual long-term growth: 3 %

• 36 airlines
• 130 destinations
• World-class corporations (Air Canada, Air Transat, Bombardier, CAE)
• 28,000 direct jobs on site
  » 9,000 within terminal zone
• 3 % of Greater Montreal GDP
• More than $1.6 billion invested in airport infrastructures since 2000
Montréal-Pierre Elliott Trudeau International Airport (continued)
Profile of clientele

- Montréal-Trudeau passengers’ profile
  - Business travelers: 42 %
  - Visitors: 38 % → European: 13 %
  - 20 % traveling from Trudeau airport at least 5 times/year
  - Traveling alone: 70 % // Traveling with more than one: 8 %
Montréal-Pierre Elliott Trudeau International Airport (continued)

Air passengers land origin

- Montréal-Trudeau, one of the most important journey generator on Montreal Island

- Approx. 40,000 land journeys / day
- Peak up to 46,000 (including Trudeau terminal staff)
Montréal-Pierre Elliott Trudeau International Airport (continued)
Accessibility Issue

• Airport = air / ground intermodal mode
• Airport access time = competitiveness factor
• Good connection with transit network

   Ease of airport staffing

• Montréal–Trudeau (located in West Island)

   Accessible only by road = Congestion

• Air-rail link = Efficient, rapid and reliable service any time

   A must in Montréal, especially in winter
Following the study of several options with Governmental partners in order to improve transit for airport users and West Islanders, the Government of Quebec granted 200 M$ for the implementation of Aérotrain, a rail link between Montreal-Trudeau Airport and Gare Centrale, using CN right-of-ways.

Negotiations with CN that followed resulted in a more complex, more expensive and riskier Project.

- Construction of infrastructure, its maintenance and train control would be under the exclusive responsibility of CN without any risk-taking.
- CN does not agree with a dedicated railway principle, compromising the service reliability on the long run.
- Operating and maintenance costs charged by CN are non-negotiable
- Electrification is complex and expensive

CN option facing many other major issues:

- Federal funding below 200 M$ (PPP Canada program requirements),
- PPP model:
  - Mixed interest from private sector
  - Risks too high to be supported by ADM without compromising its business model
- Acceptability issues (exclusive service and social concerns along the railway)
• ADM always worked in partnership
• ADM always worked to build infrastructures benefiting to airport users and West Island users.
• It is clear that using conventional railways cannot respond to this objective
• It is now imperative to develop a different approach
  » Elevated light rail system with bidirectional tracks, using electrified rolling stock
    • Ex. Canada Line in Vancouver, a success story
    • An efficient and structuring transportation mean
  » Transit and Aérotrain services in accordance with original ADM vision
    • Extension to the West Island
Elevated Light Rail System
One infrastructure – two needs/clienteles – two services

One infrastructure
• Common infrastructure between Dorval city and Downtown (19.5 km)
• Different extension options West of Dorval station

Two needs/clienteles – Two services
• Airport service
  » Unique pricing of $15 if the following parameters are met:
    • Express service
    • Rolling stock and schedules adapted to the needs of airport travelers carrying luggages
  » Ridership: +/- 10,000/day

• West Island Commuter
  » Pricing integrated to STM transit network
    • Intermediate stations
  » Bus feeding and park-and-ride available in some stations (Fairview, Dorval and Lachine)
  » Ridership: +/- 40,000/day

Complementary service to the current Vaudreuil-Hudson AMT commuter train line
Elevated Light Rail System (continued)
Efficient technologies

- Wide range of light rail autoguided rolling stock technologies on the market
  » North American examples

AirTrain JFK, NEW YORK 2004

Canada Line, VANCOUVER 2010

Millenium Line, VANCOUVER 2002
Elevated Light Rail System (continued)
Route Example
Elevated Light Rail System (continued)
Route’s main features

- Bus feeding in the West Island (Fairview terminal, Dorval and Lachine)
- Park-and-ride available at these 3 stations
- Intermodal station at Dorval (AMT-STM-Aérotrain-VIA)
- Station serving CUSM
- Metro station connections at Georges-Vanier (South-West) and downtown
- Flexibility with urban configuration which minimizes the impact
- Fairview terminal in the heart of West Island
- Montréal-Trudeau station located in the heart of the Airport (already built)
- Several possible terminal stations in downtown
  - Place Bonaventure is in the heart of downtown
    - Close to Gare Centrale
    - Offers the opportunity to link the Airport and the West Island with Montreal South shore (Light Rail Train on Champlain Bridge)
Elevated light rail system (continued)
Main advantages compared to freight railroad right of ways

- **Reliability**
  - Autonomy during construction and operation vs Railway operators

- **Performance and benefits**

  - High level of service for West Island commuters
    - Off-peak frequency: 8-10 min.
    - Peak frequency: 3-4 min.
    - Pricing integrated to STM transit network

  - High quality and dedicated service for airport users
    - Frequency: 10 minutes
    - Express service
    - Pricing: $15

  - Available capacity for future service improvement

  - Complementary to the current Vaudreuil-Hudson commuter train line

  - Operating surplus of airport service will contribute to finance commuter transit system
Elevated light rail system (continued)
Main advantages compared to using freight railroad right of ways

• **Funding model**
  » Low operating costs (auto-guided rolling stock)
  » Well adapted to a PPP – private partner contribution to infrastructure costs
  » Federal contribution (PPP Canada), Hydro-Québec and ADM in addition of Provincial Government

• **Environment**
  » Electrified: Positive environmental balance
  » Light trains, low noise emissions,
  » Flexibility with urban configuration which minimizes the impact

• **Innovative technology**, give a positive image of Montreal City
## Project Schedule (preliminary)

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<td>» Environmental process (provincial and federal) / BAPE</td>
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<td>» Construction works</td>
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<td>» Tests and Service launch off</td>
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**THIS SCHEDULE NEEDS TO BE OPTIMIZED**