The Canada Line

• An automated light rail rapid transit system linking downtown Vancouver with both Richmond and Vancouver International Airport

• Construction commenced in August of 2005

• Opened on August 17, 2009, 3 months ahead of schedule
$1.9 billion P3 project (2003 $)

Public Funding $1.247 billion (Federal, Provincial, TransLink & YVR)

Debt Providers $657 million

Concession/InTransit BC
33.3% SNC-Lavalin
33.3% bcIMC
33.3% CDP

Concession Agreement

EPC Contractor
SNC – Lavalin -T

Operating Company
SNC-Lavalin-O&M

Operating Contract (fixed price with performance incentives and penalties)

Design / Build Contract (lump sum turnkey contract)
Delivery of a Complete Turnkey Mass Transit System

- Planning
- Conceptual design
- Preliminary design
- Detailed design

- Procurement
- Project management
- Construction management
- Systems integration
- Systems acceptance
Project Alignment

- 18.5 km fully automated system
  - 7.6 km elevated
  - 1.8 km at-grade
  - 9.1 km underground
- 16 stations (6 elevated, 2 at-grade, 8 underground)
- 3 water crossings (2 bridges, 1 tunnel)

**Bored tunnel**

**Cut & cover tunnel, stacked configuration**

**Cut & cover tunnel, side by side conf.**

**At-grade section on airport lands**

**Elevated in Richmond, on airport lands and in Vancouver to 63rd Ave.**
SNC-Lavalin

- Concession Co - 1/3 ownership and financing of Project
- 4-year EPC contract through SNC-Lavalin Transport
- 4-year mobilization and 31-year O&M contract through PROTRANS BC (subsidiary of SNC-Lavalin O & M)
- One Company project delivery = efficiency
- On budget, ahead of schedule delivery
Construction Highlights

Construction Methods

- Bored Tunnels
- Cut & Cover Tunnels
- Elevated & At-grade guideways
Testing & Commissioning

- System Testing & Commissioning was initiated 18 months prior to Service Commencement

- Testing & Commissioning consisted of testing the function, operation, and integration of all systems

- Twelve continuous days of Trial-Running and Service Commencement Performance Demonstration

- A collaborative effort between Concessionaire, EPC, and Operations
Service commenced on August 12, 2009

On August 17, 2009, the Canada Line opened its doors to the public, 3 months ahead of schedule.

During the fare-free period between 1PM and 9PM on Opening Day, the Canada Line carried in excess of 82,000 passengers.
Services Provided

- Operations
- Customer Service
- Maintenance
- Employing 220 FTE
Olympic Winter Games in Vancouver, BC - February 12 – 28, 2010

**Prediction:**
- 2.25 million passengers expected to pass through YVR during this period
- An additional 230,000 passengers on the Canada Line during the Games

**Actual results:**
- An additional 2.2 million passengers carried on the Canada Line during the Games
- 100% of the fleet was in operation 10-12 hours a day
- Average daily ridership during this period > 228,000
- Total ridership for Games period – 3,881,986
- 24 hour service, Feb. 28 – Mar. 1, 2010 – Busiest out-flowing day at YVR
### The First Year in Review

**August 17, 2009 to August 16, 2010**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle Availability (Peak)</td>
<td>99.99%</td>
</tr>
<tr>
<td>Vehicle Availability (Off-Peak)</td>
<td>100.00%</td>
</tr>
<tr>
<td>Vehicle Availability (Overall)</td>
<td>99.99%</td>
</tr>
<tr>
<td>Station Availability</td>
<td>99.99%</td>
</tr>
<tr>
<td>System Availability</td>
<td>99.99%</td>
</tr>
<tr>
<td>Vehicle Quality</td>
<td>99.99%</td>
</tr>
<tr>
<td>Station Quality</td>
<td>99.68%</td>
</tr>
<tr>
<td>Total Ridership</td>
<td>36,196,056</td>
</tr>
</tbody>
</table>
Economic Benefits

Value for Money

P3 contracts can yield cost savings over conventional contracts

- Lower capital & operating cost
  - Reduced ability to meddle during final design and construction
  - Integration efficiency
  - Single point of contact
- Reduced initial public investment in a public project
  - SNC-Lavalin’s private investment and financing
- Risk Avoidance to the Public
  - Cost/Budget certainty
  - On-schedule delivery
  - Performance guarantees
- Guaranteed continued investment in CAPEX during life of project
Economic Benefits

• Early delivery
  – Revenue and Efficiencies realized earlier than planned

• Employment
  – 1,700 direct jobs created during construction
  – Over 200 long term FTE jobs created through O&M contract

• Transportation efficiency
  – 20% of region’s residents live along corridor
  – 1/3 of region’s jobs located along corridor
  – Making the region more attractive for nat’l and int’l investment

• Reliable and high quality transit service
  – Exceeds expectations
Environmental Benefits

- Adds 16 stations to Greater Vancouver’s rapid transit network
- Transportation capacity equivalent to 10 arterial lanes of roadway
  - Reduction of 14,000 tons of CO$_2$ emission within first 5 years
- Facilitates Transit-Oriented Development
  - Dense mixed-use planning
  - Compact urban form
  - Concentrates commercial activities
The Canada Line is a model for P3 project delivery

- Demonstrates added value for money vs traditional contract
- Proof through actual project delivery

One Team - Designed, built, operated and maintained by SNC-Lavalin

The first Air Rail Link in Canada

Environmentally sound form of commute for the region

Expect a continued increase in ridership

Enhances Vancouver’s reputation as a world-class Canadian city
Canada (Line) Wins GOLD!!