

## Richmond-Airport-Vancouver, British Columbia, Canada

### MANDATE

In 2005, SNC-Lavalin was awarded a \$1.64-billion contract for the total engineering, procurement and construction (EPC) of an approximately 18-km light rail line with 16 stations that links downtown Vancouver with the international airport in Richmond and Richmond City Centre. InTransitBC, a limited partnership formed by SNC-Lavalin, British Columbia Investment Management Corporation (bcIMC) and the Caisse de dépôt et placement du Québec, subcontracted all EPC work to SNC-Lavalin and will own and operate the Canada Line for 35 years. The Federal and Provincial Governments, the Greater Vancouver Transportation Authority (TransLink) and the Vancouver International Airport Authority each invested in this project, which was also endorsed by the Cities of Vancouver and Richmond. SNC-Lavalin provided one-third of the \$120 million in equity being invested directly into the project and arranged \$600 million in loans.

### DESCRIPTION

The Canada Line, which entered revenue service in August 2009, improves existing transportation service by connecting with existing light rail lines, bus services, commuter rail, sea bus and the airport. The line is a fully automated, driverless system that uses rotary-driven, metro-type vehicles, and has eight underground, six elevated and two at-grade stations, as well as an operations and maintenance centre.

The alignment is fully segregated, with vertical grades up to 5.5% to accommodate the significant relief of the Vancouver area. The Vancouver segment is primarily underground (approximately 10 km), while the Richmond and airport segments are primarily elevated. The project's three water crossings include: the North Arm Fraser River Bridge, which has an extradosed design; the Middle Arm Fraser River Bridge, which uses balanced cantilever segmental construction; and a bored tunnel section under False Creek.

Station design is on an individual and "family" basis: Vancouver, Richmond and Airport stations each have a distinct character that integrates them into their respective communities and planned future development, yet easily recognizable as belonging to the line. Four stations serve as intermodal hubs:



- Waterfront Station, Vancouver: links the Canada Line, existing SkyTrain, bus, sea bus, helijet, commuter rail and cruise ship service
- Marine Drive Station, Vancouver: links the Canada Line and bus service
- Bridgeport Station, Richmond: links the Canada Line, bus service and a park-and-ride
- Richmond - Brighthouse Station, Richmond: links the Canada Line and bus service

### SERVICES PROVIDED

Design, construction, partial financing, operation and maintenance.

### AWARDS

The Canada Line Project has received numerous awards including, but not limited to:

- 2010: Lieutenant-Governor's Award for Engineering Excellence; Transportation Award of Excellence (CEBC)
- 2008: Award of Excellence, Transportation (American Council of Engineering Companies)
- 2008: Lieutenant-Governor's Award for Engineering Excellence, North Arm Bridge (CEBC)
- 2006: Infrastructure Deal of the Year, Americas (Project Finance International)
- 2006: North American Transport Deal of the Year (Euro Money)

**SECTOR OF ACTIVITY**  
Mass Transit Systems

**CLIENT**  
Canada Line Rapid Transit Inc. (CLCO)

**YEAR OF COMPLETION**  
2009