



## International Canada

### Client

British Columbia Ministry of  
Transportation & Partnerships  
British Columbia

### Location

Vancouver, British Columbia,  
Canada

*Industry-leading context sensitive design solutions were used to develop an upgrade more consistent with the adjacent sections.*

*Designed to improve safety, enhance reliability, and increase capacity, the project will support future growth and increased travel in the region, well beyond the Olympic Games.*

## Sea-to-Sky Highway Improvements – Planning, Design, and Program Development

### Project Description

Continuing our successful track record of supporting Olympic venues in North America since 1996, CH2M HILL is working with the British Columbia Ministry of Transportation and Partnerships British Columbia to improve access to the 2010 Winter Olympic Games in Vancouver and Whistler. Within 24 hours of the International Olympic Committee's host-city selection announcement, we were selected for three significant assignments, including directing the overall development of the design-build-finance-operate (DBFO) program for the Sea-to-Sky Highway, the only route connecting the two venues.

The Games will create significant traffic on the highway, which is a narrow, winding, two-lane, undivided road over much of its length. It runs through several small communities, traverses mountainous terrain, and has significant safety deficiencies, which cause a high incidence of severe crashes. The improvements include highway widening and straightening, improved sightlines, and additional passing lanes.



Our projects include applying industry-leading context sensitive design to a 2.1-mile segment, serving as procurement manager/contract manager for a concession operator, and managing the Horseshoe Bay to Lions Bay design-build project. Overall, the Sea-to-Sky Highway project is designed to improve safety and reliability and to increase capacity, not only for the Olympic Games, but to support future growth and increased travel in the region.

**Kelvin Grove to "M" Creek Highway Design** – This project included planning and preliminary design of 2.1 miles of mountain highway upgrading through the Village of Lions Bay. The main objective was to widen the highway through Lions Bay and to develop new access points at the north and south limits of the community.

Extensive design development was required to address community concerns with numerous laning and access combinations investigated. Industry-leading context sensitive design solutions were used to develop an upgrade more consistent with the adjacent sections.

**Procurement Manager/Contract Manager** – In a senior-level role, CH2M HILL guided the planning, preparation, and implementation of a procurement process for a concession operator for improvements to the Sea-to-Sky Highway. Because the program presents complex engineering, construction, and management challenges, including the highway's difficult mountainous terrain and the lack of precedence with concession operations in British Columbia, CH2M HILL applied sound business judgment to the unique issues in this corridor. The CH2M HILL team will continue serving as contract manager for the concession contract.

**Project Manager for the Horseshoe Bay to Lions Bay Design-Build Project** – This project involves widening a 7.5-mile stretch of two-lane road



that winds along nearly vertical rock faces to four lanes on a straighter alignment. CH2M HILL developed contract documents, managed procurement, and is currently directing this project through construction. In order to meet the schedule, this segment will be “pre-built” through a design-build contract and will ultimately be turned over to the concession operator.

A key benefit of a DBFO project is the ability to encourage innovation by contractors to achieve the project objectives. To do that, the technical requirements must be performance based rather than prescriptive. This was a key focus area for CH2M HILL. We also had a significant role in reviewing project risks to identify those which were to be retained by the government, transferred to the contractor, or shared through an incentive payment scheme. The process developed during this assignment will ultimately be used by Partnerships British Columbia on other significant transportation infrastructure projects in the province.