



## Sea-to-Sky Highway Improvement Project, Vancouver BC

CH2M HILL served as the program manager for the development and implementation of the procurement process that successfully delivered the first public-private partnership (PPP) of a design-build-operate-finance (DBFO) transportation project for the Province of British Columbia. CH2M HILL acted as the contracts manager responsible for developing and implementing long-term contract relationships on behalf of the Province.

### Transportation

#### Client

British Columbia Ministry of Transportation and Infrastructure

#### Location

Vancouver, British Columbia

The project involved managing the effort to rebuild and operate the \$600-million Sea to-Sky Highway, the only route linking the City of Vancouver with the Whistler Mountain and Blackcomb ski resort areas, approximately 62 miles to the north. Prior to starting work, the existing highway was a narrow, winding, two-lane undivided highway over much of its length, running through several small communities and mountainous terrain, with significant safety deficiencies.

Anticipating the award of the 2010 Olympic Games to Vancouver, the British Columbia Ministry of Transportation spent 2 years planning highway improvements to enhance safety, reliability, and capacity through widening (typically to three lanes), straightening curves, adding more passing lanes, and other design enhancements. Within 24 hours of the International Olympic Committee announcement of Vancouver's selection to host the 2010 Winter Olympic Games, CH2M HILL was selected by the Ministry to act as the procurement manager for Partnerships BC (the government entity established to manage all PPPs in the Province), to develop the procurement strategy for the Sea-to-Sky Highway project.

The Ministry initially engaged CH2M HILL to manage and provide advice for a business case analysis to identify the optimum project delivery method to effectively complete the improvements by the required fall 2009 date. During this process, CH2M HILL played an integral role in determining the financial feasibility of accelerating the completion of these highway improvements through a DBFO process.

The business case also identified project risks to determine appropriate risk sharing: those retained by government, transferred to the concessionaire, or shared through an incentive-based payment mechanism. The business case analysis and risk profiling assessed the full cost of constructing, operating, maintaining, and financing the improved roadway over the next 30 years—5 years of construction and a 25-year operations concession—and confirmed that the DBFO delivery model was superior to conventional delivery. The Ministry approved the business case findings, and Partnerships BC assumed responsibility to procure the Sea-to-Sky Highway DBFO Project.

To more easily define the scope of work for the project, the highway was divided into 13 sections; the scope included designing and constructing improvements for 10 highway sections, the long-term operation, maintenance, and rehabilitation of all 13 highway sections, and the operation and maintenance of adjacent side roads. Due to the timing of the DBFO process development, some sections were under construction by conventional and design-build delivery models. For example, one section of the highway was delivered as a \$40-million design-build project with CH2M HILL as the section manager overseeing construction.

As procurement manager, CH2M HILL guided the planning, preparation, and implementation of an innovative procurement process that engaged proponents in its development, achieved value, and remained fair, open, and transparent. The process was based on linking the key project objectives (improved safety, reliability, and mobility, enhanced operations and maintenance, and meeting schedule, budget and construction traffic management requirements) to the proposal evaluation process and the performance payment mechanism that would compensate the concessionaire throughout the project term.

Partnerships BC and CH2M HILL actively promoted this project and its innovative selection method through an interactive consultative process to ensure that the Province's objectives and procurement processes were clear and understandable. One-on-one meetings with the three short-listed proponents engaged them in discussion regarding risk allocation, performance payment mechanisms, and proposal evaluation criteria. The input of the three short-listed proponents helped shape the proposal and contract documents, ultimately resulting in a concession agreement acceptable to both the financial institutions and the proponents. The positive relationships established during the interactive procurement process set the stage for stronger and more collaborative, long-term relationships between the Ministry and the successful bidder throughout the project term.

The procurement process developed for the Sea-to-Sky DBFO also delivered an affordable contract and achieved significant added-value to the Province. The same process will be used by Partnerships BC on upcoming transportation PPP projects.

Following contract award, CH2M HILL served as the Ministry's contract manager. The continuity provided by this involvement strengthened the working relationships developed with the selected proponent through the procurement process. Because this was the first contract of its type to be executed by the Province, unique approaches and procedures were developed to facilitate its management. One of the key considerations was to manage the contract as a performance-based partnership that maintained agreed risk allocations.

The Sea-To-Sky Highway Project won the Canadian Council for Public-Private Partnerships Gold Award for Innovation and Excellence in November of 2005 and the Global Public Private-Finance Awards in London in May of 2006.

## About CH2M HILL

Headquartered near Denver, Colorado, USA, employee-owned CH2M HILL is a global leader in consulting, design, design-build, operations, and program management for government, civil, industrial and energy clients. The firm's work is concentrated in the areas of water, transportation, environmental, energy, facilities and resources. With US\$6.3 billion in revenue and 23,000 employees, CH2M HILL is an industry-leading program management, construction management and design firm, as ranked by Engineering News-Record and named a leader in sustainable engineering by Verdantix. The firm has been named a FORTUNE 100 Best Companies to Work for five times. Visit us at [www.ch2mhill.com](http://www.ch2mhill.com), [twitter.com/ch2mhill](https://twitter.com/ch2mhill) and [facebook.com/ch2mhill](https://facebook.com/ch2mhill).