



2014 AWARDS FOR ENGINEERING EXCELLENCE

Lieutenant Governor's Award for Engineering Excellence Port Mann / Highway 1 Improvement Project – Onshore Works



Consultants

H5M, a Joint Venture of
Hatch Mott MacDonald and MMM Group Ltd.

Owner

Transportation Investment Corporation

Design Builder/Client

Kiewit/Flatiron General Partnership

Category

Transportation & Bridges

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Between Vancouver and Langley, the TransCanada Highway 1 is Metro Vancouver's busiest transportation corridor. The highway, with its associated interchanges and connections to the region's growing communities, services daily commuters as well as commercial truck traffic and provincial travellers.

The \$2.5-billion, 37 kilometre Port Mann/Highway 1 Improvement Project is a major element of the Province of British Columbia's Gateway Program, established to address growing regional congestion, expanding populations, and multi-modal connectivity. The Project was procured as a design-build scheme—the largest transportation infrastructure project in British Columbia's history. Hatch Mott MacDonald (HMM) and MMM Group's H5M joint venture designed the Project's \$1.5-billion onshore works over an aggressive, five-year, fast-track design and construction period. As the principal design consultants for the onshore works, HMM and MMM Group led the overall design effort with the support of 13 consultants.

The Project's onshore works are a masterwork of engineering design and delivery within a complex, urban environment. H5M met and overcame a series of complex project challenges, from highly variable soils and strict environmental obligations, to preparing designs within a highly constrained and heavily travelled corridor. The team implemented a number of technical "firsts" for a project of this magnitude, such as developing the majority of the highway design using 3D modelling and Building Information Management methodologies.

By successfully completing this massive design effort, the H5M team enabled the Province and contractor to meet Toll Commencement by December 2012.