



2016 AWARDS FOR ENGINEERING EXCELLENCE

Award of Merit

Barnston / Maple Ridge Pump Station



Consultant

Associated Engineering

Owner/Client

Metro Vancouver

Category

Municipal

For more information, please contact:

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Metro Vancouver is responsible for providing clean, safe drinking water to over 2.4 million residents throughout the Lower Mainland. The new Barnston / Maple Ridge Pump Station ensures reliable delivery to residents in the fastest-growing areas of the region; Maple Ridge, Surrey and Langley. Delivering an eventual peak hour flow of over 400 million litres per day, this pump station is one of the Province's largest. Associated Engineering provided engineering services for preliminary design, detailed design, equipment procurement, tendering, construction, and post-construction for this large, complex and technically challenging project.

The \$46.5 million project engaged the community and minimized impacts on the environment and the surrounding neighbourhood. Key features include:

- Continuous communication with residents and the adjacent community to address concerns
- Minimal impacts on the surrounding area through design and implementation
- Ability to provide future on-site energy recovery
- On-site pond to detain storm water from the site
- Green roof to mitigate and control surface runoff and insulate the building from heat and cold, in addition to providing a pleasing natural screen for adjacent residents
- A unique mass concrete foundation that minimized impacts during construction
- Locally supplied glulam beams
- Electrical, HVAC and controls located above the flood level in case of a dyke breach at the Fraser River
- Water-cooled pumps to reduce cooling requirements
- Use of natural and LED lights as much as possible

The client, Metro Vancouver, and the Associated Engineering design team, provided leadership to the greater community by implementing essential infrastructure in an environmentally sensitive manner.