



29 November 2017

RE: Bayview Place DA-3 DP Application • Sustainability & Green Features

The design team has looked at both passive and non-passive strategies in the design of this latest phase at Bayview Place. The primary focus has been in development of a robust and highly efficient building envelope which exceed the requirements of the BC Building Code. The primary component of energy consumption in the building is heating, and an air-tight and highly efficient envelope is the single most effective strategy to reduce energy use.

An energy model was prepared for this project which illustrates that the design achieves a 10.3% savings in annual energy usage compared to ASHRAE 90.1-2007 Appendix G and hence meets and exceeds the BC Building Code energy performance requirement through performance path and City of Victoria requirement. The following energy conservation measures are incorporated into the design to achieve the level of performance:

- High performance windows with thermally broken aluminum frames and gap filled with argon gas in between double glazing.
- Reduce lighting power density in the common areas such as corridors, storage, lobbies, etc., and the parkade by $\pm 30\%$ below code (30% below ASHRAE 90.1-2010).
- High efficiency heating plant using $\pm 88\%$ efficient hot-water condensing boiler system and outdoor air reset controls for lower temperature limits
- High efficiency domestic hot water system ($\pm 95\%$ efficiency).

The building will be designed and specified exclusively with energy efficient LED luminaires that meet or exceed the lighting power density prescribed by the energy code. LED luminaires that are used will be mercury free and also free from other known hazardous materials. LED luminaires have a proven track record of longevity which reduce service and maintenance costs accordingly. The lighting in the building will be designed with control zones that allow maximum flexibility of the lighting levels within a given space. Research shows that when a user is given the ability to control their lighting in a space, they often use less lighting than what is available. Lighting controls are also a requirement

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of the energy code in British Columbia, therefore additional controls will be designed and specified including daylight harvesting, automatic dimming and shutoff, and astronomic controls.

The exterior lighting for the facility will be designed with various features that complement and respect the development and neighboring properties. As with interior lighting, all exterior luminaires will be LED with certain baseline features across the project. All exterior lighting will be full cut-off (no up-light) and will be prescribed with glare shields and optics to reduce the light spill onto neighboring properties. All exterior lighting will be specified as 3000K colour temperature which aligns with the International Dark Sky Alliances' recommendations. Exterior lighting will also be designed with automatic controls including dawn to dusk astronomic timers, and motion-response dimming for large area lights.

The building design also includes numerous electric vehicle charging stalls to meet a growing demand. This strategy will provide an opportunity for users to use and charge their electric vehicles and reduce the amount of greenhouse gas emissions in our area.

We believe most residents will be able to walk or bike to work or amenities due to the proximity to downtown. The building site is close to several bus routes as well as a multi-purpose path; it has been designed to encourage the use of bicycles. To promote cycling we have made it simple and direct for bikers with the provision of a bike ramp directly off the street into the secure underground bike room, which will accommodate 20% more bike parking stalls than the City of Victoria requirements. A bike repair workshop is included within the bike room.

These sustainability strategies and initiatives go above and beyond the current policies and codes within the City and Province, setting this newest building at Bayview Place as a benchmark within the neighbourhood and community.

Respectfully,

HDR|CEI Architecture Associates Ltd

A handwritten signature in black ink, appearing to read 'Jim Aalders', is written over the printed name.

Jim Aalders Architect AIBC, MRAIC, LEED AP