

Vancouver Community Library

Green Building & Sustainable Site Features

Building Materials:

Sustainable Wood:

- 75% of the wood products used in the building were certified by the FSC (Forest Stewardship Council) as having been harvested from sustainably managed forests.
 - Deck is Tiger wood
 - Benches and planters are Ipe (ee-pay)
 - Vancouver Room floor is reclaimed walnut

Concrete:

- The concrete poured for the foundation, floors/ ceilings, and the walls contains recycled fly ash, which is a waste product from mining operations.

Steel:

- The structural steel contains 76% recycled content.

Locally Sourced Materials:

- Over 20% of the materials used in the building come from our region and were shipped less than 500 miles minimizing the carbon emissions associated with this construction project.

Recycled Content:

- Over 20% of the materials used in the building contained recycled content.

Waste Management:

- An effective waste management plan diverted over 75% of all construction waste keeping it out of the landfill making it available for either reuse or recycling.

Construction Features:

Rain screen/Curtainwall:

- The building envelope is a rain screen and curtainwall design which provides superior water management, added insulating value and increases the overall longevity of the building.

Daylighting:

- The significant amount of glass in the structure allows 90% of the building's spaces an outside view.
- Sunlight and outside views in a building increase occupant's comfort and employee productivity and decrease absenteeism.
- Ample sunlight reduces the need for electric lighting, and lights throughout are on both daylight and occupancy sensors to turn off when not needed.
- Sunlight warming the concrete pavers in the atrium creates passive solar heat gain which reduces the heating needs in the building thereby reducing energy costs.
- The frit pattern in the glass is designed to reduce heat gain and glare in the summer.
- The cantilevered 5th floor terrace is designed to create shade on the glass when the sun is high in the summer.
- The metal mesh on the west side of the building reduces heat-gain and glare from the bright afternoon sun

Lighting:

- The lighting design utilizes high efficiency fixtures and is occupancy controlled throughout most of the building, including the shelving lighting.

In-Floor Radiant Heat:

- The floor in both the Columbia room and the Atrium are heated using a system of hot-water filled tubes. Rather than use energy to heat all of the air in these large spaces, the warm floor heats the occupant in a much more efficient (and comfortable) way. The two high efficiency gas fired boilers that supply the hot water make this an economical heating system.

Radiant Fin-Tube Heat:

- Hot water fed into tubes located under the floor grates that wrap around the perimeter of all the raised floors. The heat generated in the tubes rises up in front of the glass walls heating the colder air radiating off of the glass.

Access Floor:

- A raised access floor system has been used throughout most of the building. Half of floor 1 and floors 3 through 5 have this system. The plenum space created by the raised floor houses much of the wiring, plumbing and network cabling. The grid containing the removable tiles on top of the floor allows easy access to the systems below which cuts down on maintenance costs and provides for future flexibility when changes are needed adding to the overall longevity of the building.

Sustainable Site:

Public Transportation:

- The Library's downtown location is easily reached using public transportation and several bus stops are only a short distance away.

Biking Encouraged:

- The Library has public bike racks and has installed bike storage for staff use and has provided showers and changing rooms to encourage the staff to bike to work.

Green Roof:

- The green roof on the south side of the 5th floor terrace captures and absorbs storm water reducing the amount of runoff created by the building.
- The vegetation and organic materials located on the 5th floor terrace reduce the building's heat island effect.

Landscaping:

- The landscape consists of native plants requiring minimal irrigation
- The irrigation system tracks rainfall amounts and humidity levels in order to deliver just the right amount of water needed by the plants. The system has been designed to use 50% less water than other irrigation systems.

Interior Finishes & Fixtures:

Paints, Sealants & Adhesives:

- In order to preserve the building's healthy air quality only low-VOC (volatile organic compounds) paints, sealants and adhesives were used in the building eliminating any chemical out gassing.

Restroom Fixtures:

- The faucets and toilets are hands free and low flow water saving fixtures. They are powered by sensors that harvest the room's existing light eliminating the need for electrical power.
- The lighting is an energy efficient occupancy controlled system.

Appliances:

- All of the appliances are energy star rated

Flooring:

- The linoleum floor in the staff room is made with 100% natural non-toxic ingredients.