Jean Canfield Building

Charlottetown, PEI

Jean Canfield Government of Canada Building

The Jean Canfield building is one of the most environmentally friendly buildings ever constructed by Public Works and Government Services Canada. To successfully integrate old and new, this four-story building will combine new environmental design features and technologies, but still reflect the character and historic architecture that is evident throughout downtown Charlottetown. The building is a showcase for environmental technologies and includes the use of natural light to moderate indoor temperatures, recycled rainwater to reduce water consumption and a reflective roof to reduce the amount of heat the building absorbs from the atmosphere.

Three Government of Canada initiatives guided the design and site preparation for the Jean Canfield building. They are: *sustainable development*, which minimizes the negative impact on the environment during the design, construction and operation and the maintenance of the building; *connectivity*, to increase government efficiency and make services to Canadians more accessible; and *supportive work environments*, to ensure employees have the space, tools and technology they need to be comfortable, effective and efficient.

Description:

- *4 Story Building, Site Area: 5002 m2, Gross Floor Area:* 17,500 m2.
- Anticipated capacity: 500 employees.
- *Tenants* will include: Veterans Affairs Canada, Atlantic Canada Opportunities Agency Business Service Center, Citizenship and Immigration, Service Canada, Environment Canada, International Trade Canada, Industry Canada, Public Works and Government Service Canada, Canadian Heritage, Health Canada, Public Health Agency of Canada, PEI Federal Council, Treasury Board Secretariat and Canadian School of Public Service.
- $53.8 million project.

Highlights:

- The building is registered with the Canadian Green Building Council with LEED® Gold as the target.
- Located on a “Brownfield Site” in downtown Charlottetown, the building’s environmental ‘footprint’ is reduced.
- Local recycled and renewable material was used in the building’s construction resulting in less construction and operating waste.
- Annual consumption of water is reduced through capture, storage and treatment of rainwater for building operations and water efficient fixtures.
- The building uses radiant chilled/heated slabs, rather than cooling or heating the ventilation air only.
- The building’s design incorporates a raised access floor, providing for highly flexible and serviceable building services and eliminating the need for ventilation ductwork.

- The building's layout is flexible to accommodate future relocations without the need of costly mechanical renovations.
- Operable windows and the use of atrium exhaust allow the building to be naturally ventilated.
- Energy loss through exhausted air is recovered and reused to assist in cooling/heating new incoming air.
- The use of Charlottetown's District Heating System eliminates the need for fuel-fired boilers.
- Natural and reflective lighting levels, with individual user controls reduce energy consumption while providing a more productive work environment.
- Daylight harvesting allows for more use of natural light, and occupancy sensors activate lighting only when it is needed.
- Office bays offer daylight/views on both sides and cross-ventilation for maximum productivity and energy savings.
- The building is equipped with a Photovoltaic Array, which will generate 130,000 watts of electrical power from solar energy. This has the equivalent energy reduction of 80 cars per year.
- Power is purchased for the building from Provincial wind turbines yielding virtually zero emission.

Jean Canfield Building's Photovoltaic Array

- Shared boardrooms, business centres, computer centres, training rooms, mailroom and a learning centre reduce the building's environmental 'footprint' and operational cost per tenant.
- Estimates of energy use indicate the project will be approximately 60% more energy efficient than national energy efficient buildings.
- Community Liaison Committee of local interest groups involved in the project
- Community engagement allowed for active involvement of Holland College, UPEI and local schools.