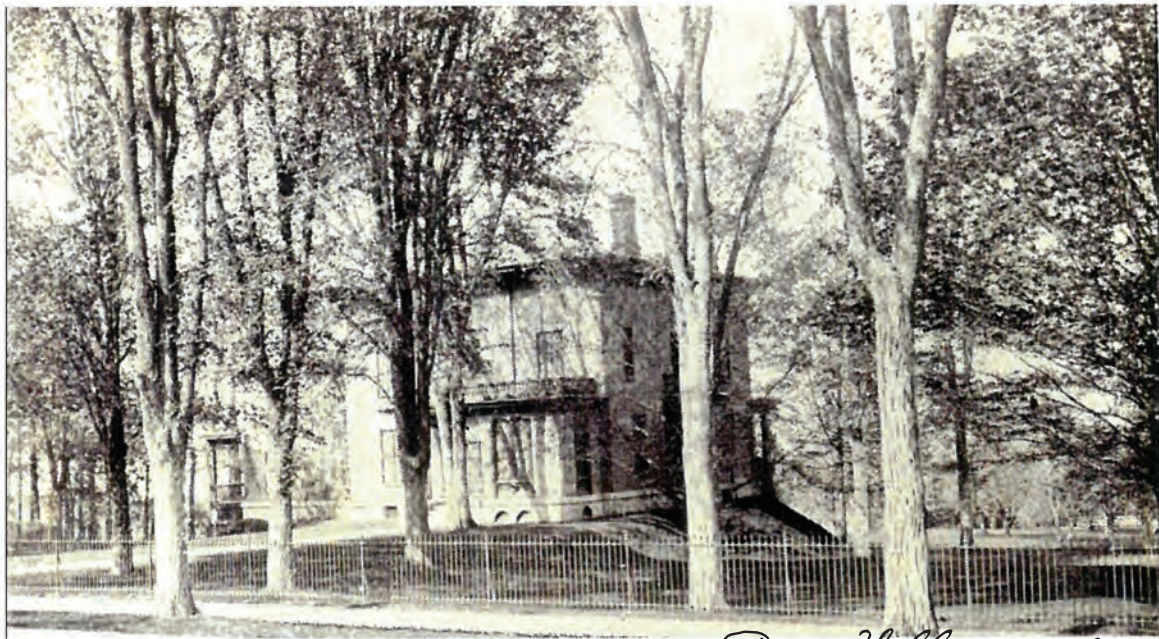


The Welcome and Admission Center at Roger H. Perry Hall

A LEED Certified Platinum Building





Perry Hall circa 1894

A Treasure from the Past

A living landmark for the future

Just past its 150th anniversary, the former residence now known as Perry Hall has had a dramatic rebirth at the center of Champlain College and Hill section neighborhood life. Perry Hall is the welcome center at the heart of the campus, with public green spaces for the local community to enjoy.

A partnership of architects and preservation experts carefully preserved and restored the structure's many unique period features, while adding new amenities and wings and incorporating a variety of sustainable design features. The result is a unique historical treasure fully revitalized for a new era of service in the 21st century.

You never have a second chance to make a first impression. We wanted to make our first impression memorable to our prospective students and families...to let people know that even as we embrace the future, we honor and cherish the past, the heritage of place and our people.

—Dr. David F. Finney, *President*



What Is LEED?

LEED (Leadership in Energy and Environmental Design) is an internationally recognized certification system, providing third-party verification that a building or community was designed and built using strategies aimed at improving performance across all the metrics that matter most: energy savings, water efficiency, CO₂ emissions reduction, high indoor environmental quality, and stewardship of resources and sensitivity to their impacts.

Developed by the U.S. Green Building Council (USGBC), LEED provides building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.

How Perry Hall Scored:

PLATINUM	88/110*
Sustainable Sites	25/26
Water Efficiency	7/10
Energy & Atmosphere	26/35
Materials & Resources	9/14
Indoor Environmental Quality	12/15
Innovation & Design	5/6
Regional Priority Credits	4/4

* Achieved score/Highest possible score (2009 edition)

Source: U.S. Green Building Council, www.usgbc.org

Champlain College is extremely proud and honored to have Perry Hall recognized as the third Vermont institutional building to achieve LEED Platinum status.

—David J. Provost, Sr. Vice President

Welcome and Admission Center

at Roger H. Perry Hall: LEED Certified Platinum

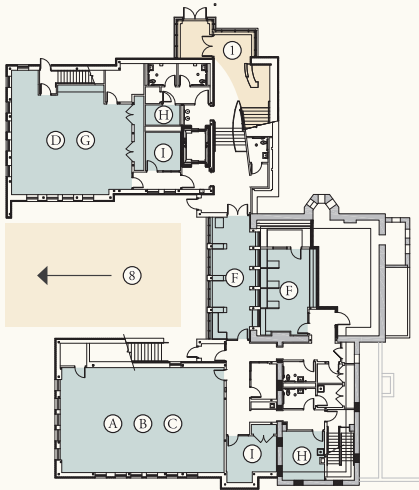
Perry Hall is LEED certified Platinum; the highest U.S. Green Building Council (USGBC) certification a building can receive. Perry Hall is designed as a cohesive unit, with integrated systems that function together to create a sustainable whole. Technology has helped this building reach these high environmental standards, but other approaches to sustainable development are paramount to its success. The renewal of the historic building and additions designed to complement the older structure prove that green renovation is possible.

Further, Perry Hall demonstrates the feasibility of advanced sustainable technologies and sets a precedent for institutional green building.

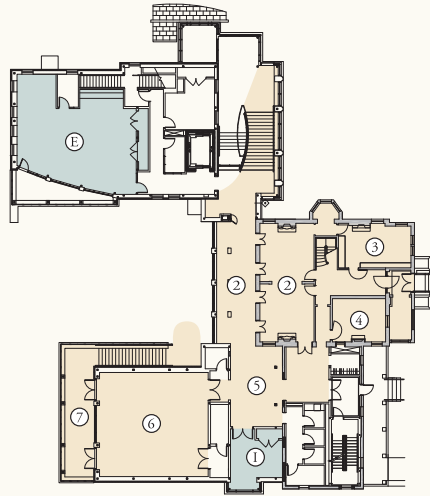
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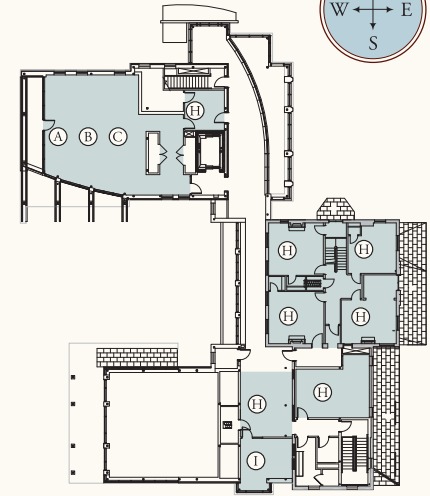
Floor Plans



First Floor



Second Floor



Third Floor

- | | | | | | |
|--------------------------------|---------------------|--|---------------------------|---|------------------------------------|
| ① Main Entrance (Maple Street) | ④ Conference Room | ⑦ Back Deck & Staircase | Ⓐ Financial Aid | Ⓓ Admission Operations | Ⓖ Office of International Programs |
| ② Reception Rooms | ⑤ Hitching Post | ⑧ West Lawn: Sundial, Wetland Garden, Geothermal Well, Digital Studio Barn | Ⓑ Student Accounts | Ⓔ Admission | Ⓗ Offices |
| ③ Library/Llewellyn Collection | ⑥ Presentation Room | | Ⓒ Advising & Registration | Ⓕ Student Services & Customer Relations | Ⓘ Conference Rooms |

Elevations



East




North



West



South



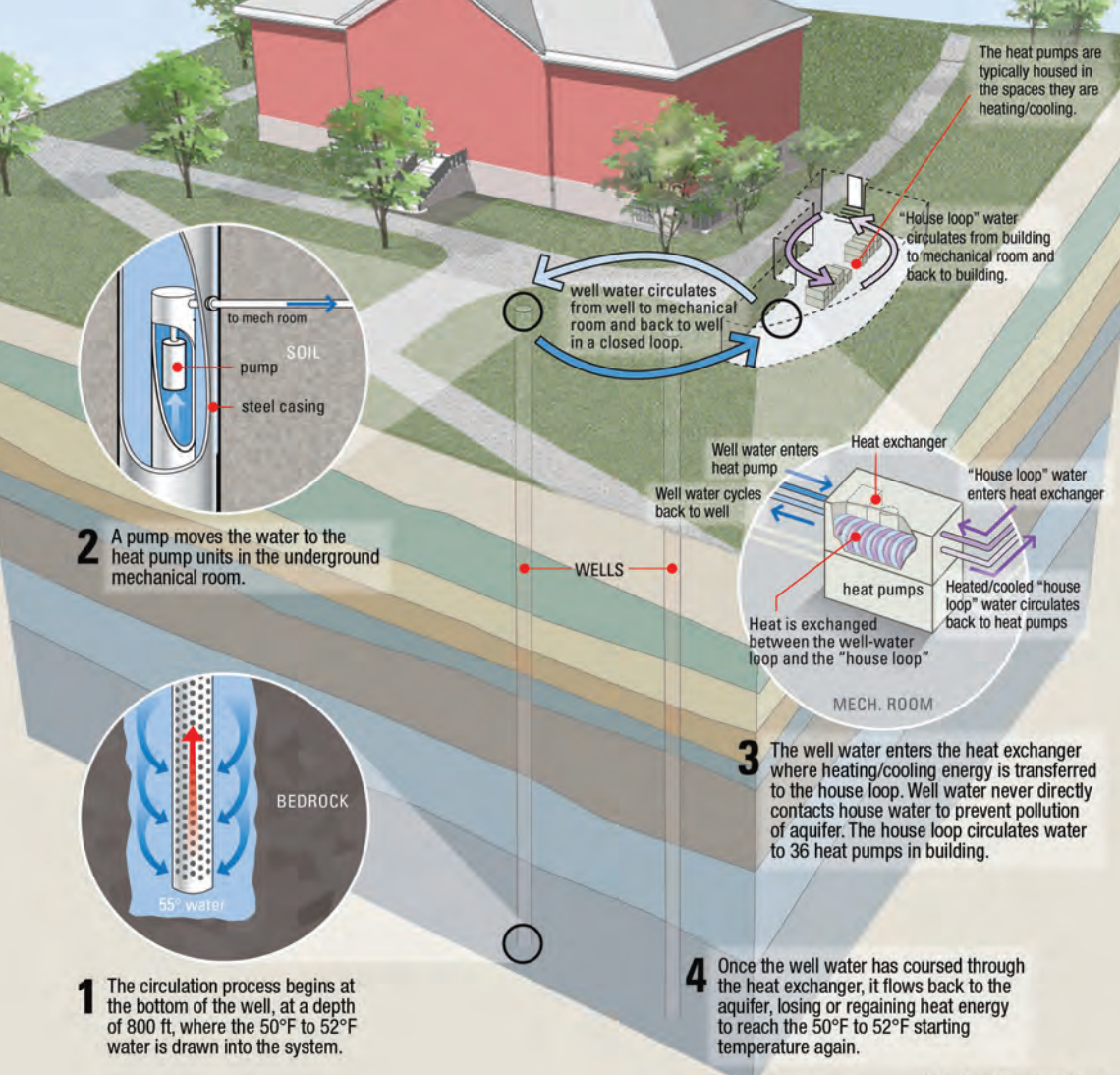
The vision of Champlain College shaped a project that celebrates the past, honors the present and leads us into a sustainable future.

— Jean Carroon, *Goody Clancy*

Adaptive Reuse

Roger H. Perry Hall is a renovation and expansion of a National Register-listed historic residence located in the heart of Champlain College's campus and the center of the South Willard Street Historic District neighborhood. The project has transformed the 1860-era Italianate style home and gardens into a state-of-the-art welcome and admission center for prospective and returning students.

The careful combination of airy hallways, office space and a presentation room with the renovation of a historic building connects the site to both the existing campus and future expansion. The project preserves and enhances many of the existing building's unique period features, architectural details and views of Lake Champlain.



Original graphic by Goody Clancy

This was a great project as Champlain was open to the idea of a geothermal system for a historic building, and we struck a large mass of liquid energy that we were able to tap into that allowed for a low-cost, reliable system.

—Wayne Nelson, L.N. Consulting, Inc.

Geothermal System

A heating and cooling system directly from the earth

The geothermal heat pump system uses the earth as the energy source for Perry Hall. The earth's steady temperature provides extremely efficient heating in winter and cooling in summer. This mitigates electric costs compared to alternative electrically-based systems and is a sustainable alternative to fossil fuels. The geothermal system operates using interconnected systems. The first is a groundwater system, consisting of a source well (*top photo*) and injection well. The wells are connected to a natural underground aquifer that provides the thermal mass that creates the water base temperature of 50°F to 53°F for the system.

The water that cycles into the pumps is on a separate closed-loop system that transfers heat directly through a highly efficient plate and frame heat exchanger. The two circulated fluids never come in contact, thus preventing aquifer contamination. Perry Hall contains 37 heat pumps (*bottom photo*) to transfer energy throughout the building. One side of the building can be cooled while the other side is heated, which is relevant on a sunny winter day when one side is heated by the sun and the ambient temperature cools the other side. This ability to transfer energy throughout the building allows for an extremely efficient operation.



The landscape design is a marriage of the property's heritage and stewardship: an enclave of native plants in the context of contemporary uses of Champlain College, and sustainable landscape design for the 21st century.

—Robert White, *ORW Landscape Architects & Planners*


Landscaping

Blending historical significance and ecological protection

The landscaping around Perry Hall is a blend of historic reminiscence, environmental protection and community orientation. The plants chosen for the grounds are native species that are low maintenance and drought tolerant, and also honor former resident Nellie Flynn (1861-1922) who was known for her botanical collection. The permeable concrete promenade and constructed wetland area (featuring native plantings) help stormwater runoff. An easement arrangement with the City of Burlington provides public access to the surrounding grounds, and the great lawn available for community gatherings.

Various porches and indoor views highlight the grounds and Lake Champlain beyond. The south glass of the office wing will be shaded by vegetation as vines climb the greenscreen mounted between the projecting roof beams. The curving roof of the presentation wing is a planted green roof that contributes to stormwater retention and reduces heat island effect.





At Perry Hall, rainwater is treated as a resource rather than a nuisance...it grows the green roof, recharges the groundwater through the pervious pavers, and adds to the contemplative beauty of the Perry Lawn as it is filtered in the gravel wetland plantings.

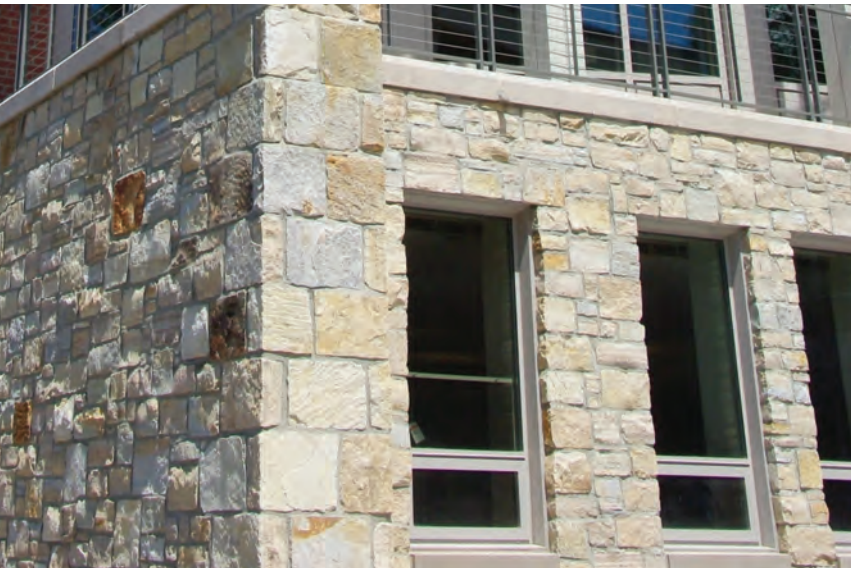
—Kevin Worden, *Engineering Ventures, Inc.*

Stormwater Runoff Prevention

Helping Lake Champlain and beautifying our site

City landscapes, complete with asphalt, concrete and rooftops that prevent rain and melting snow from seeping into the ground, can create problems from water accumulating on ground surfaces and picking up oil and other debris before it runs into larger bodies of water, such as Lake Champlain. Without proper management, stormwater can cause flooding, pooling, erosion and water pollution. Perry Hall's location on the hill called for special attention to stormwater prevention, in order to improve the water quality of Lake Champlain. Three features of the Perry Hall project help reduce stormwater runoff: a green roof on the south end (*top photo*),

installation of pervious pavers on the site to reduce runoff and encourage groundwater infiltration (*lower right*) and the installation of constructed gravel wetland to collect all site runoff and detain and clean it (*lower left*). Features such as the green roof and wetland not only help water quality issues but also add to the overall beauty of the building and site.



Throughout design and construction of Perry Hall, Champlain College consistently made decisions that put the environment and the community first.

—Karen Walkerman, *Second Law*

Material Use and Reuse

Local sourcing and durability

A major contributor to Perry Hall's sustainable design is the use of local and durable (long-service-life) materials.

The use of local materials is important for maintaining a building with low embodied energy. Whenever possible, materials were sourced from within 500 miles of the site and preferably from Vermont. All of the furniture in the building came from within 500 miles and is 100% recyclable. All of the site stone was cut from quarries in Vermont. An added bonus to using local materials is that they promote the local economy.

Additional examples of sustainable material features are the stained concrete floors, the refinished wood floors, the

cork flooring and the low-embodied-energy carpeting used on the project. Stained concrete is low maintenance and known for longevity; cork flooring is made from a common renewable resource; up to 45 pounds a year can be harvested from a living tree for up to 100 years. All of the carpeting is composed of recycled material and is manufactured using the most sustainable practices. Further, Perry Hall preserved most of the historic structure during this renovation, a strategy that reused existing structure and materials, thus reducing the building's embodied carbon. All of the historic brick was retained and restored, as were windows, floors, walls, doors and other architectural elements.



The Perry Hall lighting design is a success story because it achieved an overall lighting power density of 0.57 watts/square foot, which is [about] 43% less than that allowed by the Energy Conservation Code.

—Paul Lekstutis, L.N. Consulting, Inc.

Building Lighting

Efficiency and natural daylight

To ensure the efficient use of electricity, Perry Hall is designed to utilize natural daylight whenever possible. Its orientation and window placement create optimal natural light penetration, reducing the need for electrically powered light sources. When artificial light is needed, light level and occupancy sensors take over. These sensors detect ambient light changes and occupant movement, turning modulating lights on only when needed and only to the specific level required to illuminate the area. Most of the lighting is connected to dimming daylight controls, so energy can be reduced on sunny days. The lighting in Perry Hall is designed to be supplemented with task lighting. Lights turn on when people enter a room, and

respond to factors such as time of day and ambient light levels. The monitoring system can also be overridden, however, if a person requires additional light. Exterior lights around Perry Hall use “Dark Sky” technology. These lights are designed to illuminate spaces below them, but radiate no ambient light upward. Their goal is to reduce light pollution in urban areas and reduce electricity usage. Additionally, the lights have multiple stages; they dim down during times of low traffic, and motion detectors return the lights to full power when people are in the area, to ensure safety. Exterior lighting is all LED, which uses less energy and lasts longer.



Perry Hall represents the artful integration of historic architecture and leading-edge technology. Cx Associates was pleased to contribute to the project team's success at realizing Champlain College's vision of a high-performance facility with ties to the past.

—Matthew Napolitan, Cx Associates

Commissioning

Ensuring optimal building performance

An important step of completing a building project, but one that is not always taken is ensuring that all building systems are functioning effectively. Perry Hall went through a complete commissioning process, verifying and documenting that systems such as the geothermal heat pumps, heating and cooling components, and other building controls operate properly. Continued maintenance and monitoring of the building's controls will help ensure operational costs stay in check.

Champlain Internships at Work

Business major Danielle Thorburn '12 (*pictured center, at left*) was able to learn about each of the trades involved with the Perry Hall project, working alongside the Engleberth Construction team. Danielle came to Champlain eager to learn more about historic restoration to launch her own company in the future. She was able to get hands-on learning with the Perry project and network with several different local contacts in the restoration field.



Perry Hall is a beautiful example of our commitment to campus sustainability in our built environment.

—Christina Erickson, Sustainability Director

Additional Features

Enhancing the efficiency and aesthetic quality

A variety of other features add to the efficiency and aesthetic quality of Perry Hall, including:

- Use of ultra-low-flow fixtures (*top photo*) and dual-flush fixtures (*lower right*) to promote water conservation
- Improved air quality via use of non-toxic and low-VOC materials used in construction, ventilation design and green cleaning practices

- Triple-glazed windows and passive solar design to lower energy usage

Altogether, the Perry Hall retrofit will save 45 tons of carbon per year compared with a traditional building its size.



I feel proud knowing I come to work every day in a space that is natural, sustainable, and good for myself and the environment. Not many people can say they work in a mansion with state-of-the-art energy efficiency.

—Alison L. Mueller, Senior Assistant Director of Admission

Building Users

A place to welcome and call home

Perry Hall houses the College's Admission, Financial Aid, Student Accounts, and Advising & Registration Departments, and since its opening in September 2010, the building has been used for a variety of purposes, including receptions, conferences, lectures and performances. Visitors find the building to be a beautiful and comfortable beginning to their time on campus, and our surrounding community is pleased to have this historic home restored.





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COLLEGE

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