Haas Innovations Center

LOCATION
Yakima, Washington

OWNER
JOHN I HAAS, INC.

GROSS SF
23,705
BUILDING FOOTPRINT
17,751
COMPLETED
2013

Haas Innovations Center is the first LEED Gold Certified building in the City of Yakima and will therefore act as a resource, road map, and icon for other high efficiency developments in the area. It marks what many see as a growing trend toward the design of high performance buildings that not only leave light footprints on the environment, but also offer significant operational cost savings over the life of the building.

As the local face of John I. Haas, Inc., developing a sustainable energy efficient building was an important part of helping the community and their clients understand their commitment to sustainable farming practices and their core value of conserving our natural resources.

John I. Haas, Inc. is the leading provider of Hops in the United States and is part of the Barth-Haas Group that "leads the world in the supply of hops, hop products, and services". With this new facility, clients from all over the world will be able to visit Yakima, see their product, sample beer produced with their unique breeds of hops, and work with their chemists and brewmaster to research innovative uses for hops and to craft new beer recipes.

The Haas Innovations Center is composed of four primary parts: their local administrative offices, a state of the art research lab, fully automated research brewery, and an outdoor beer garden event center. It was important to the client that the building draws inspiration from the company's agricultural hop farming roots but in a more timeless contemporary northwest style. The resulting visually open design celebrates daylight and views and incorporates abstracted elements and ideas from a hop farm.

LEED SITE CREDITS ACHIEVED 23/27*

Construction Activity Pollution Prevention Required

Site Selection - 2*

Development Density - 5

Public Transportation Access - 6

Bicycle Storage & Changing Rms - 1

Low Emit/Fuel Efficient Vehicles - 3

Parking Capacity - 2

Maximize Open Space -1

Stormwater Quantity Control -1

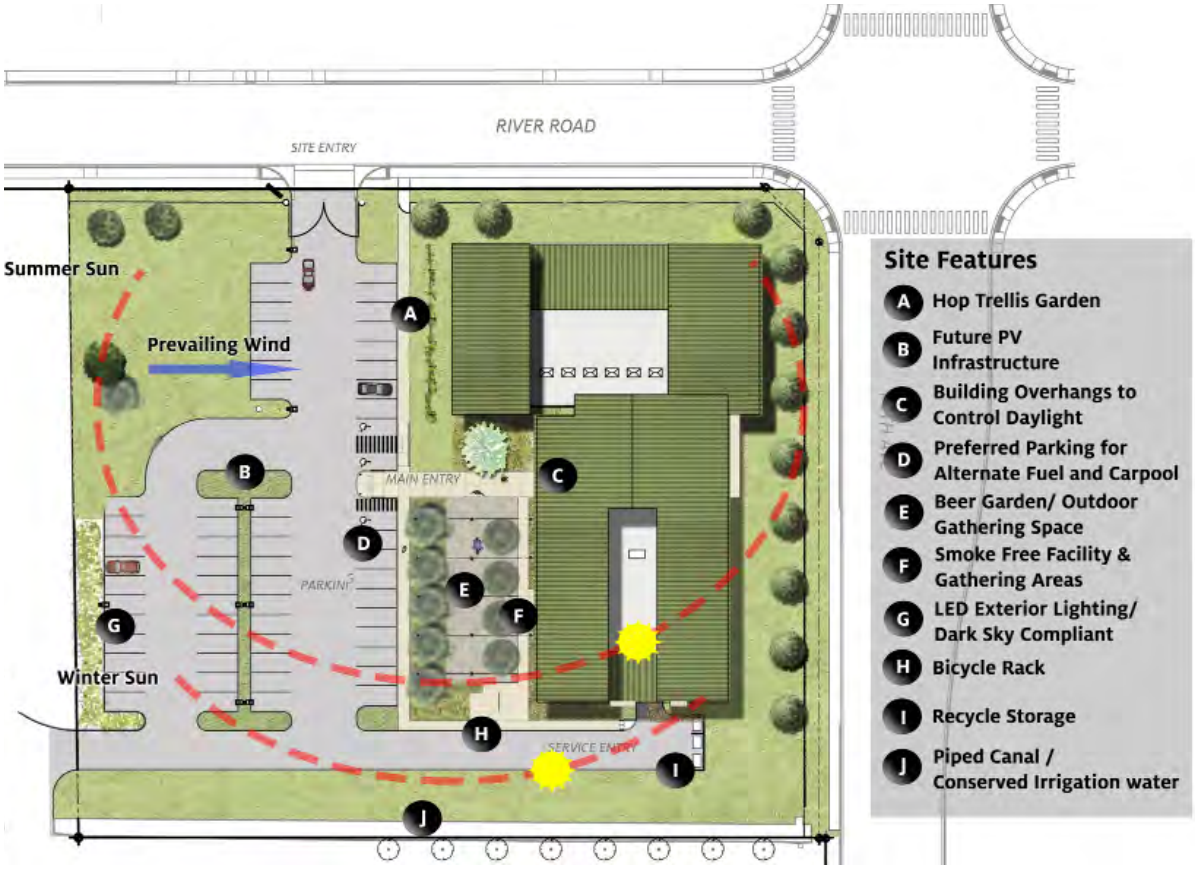
Stormwater Quality Control - 1

Heat Island Effect Roof -1

*includes regional priority credit

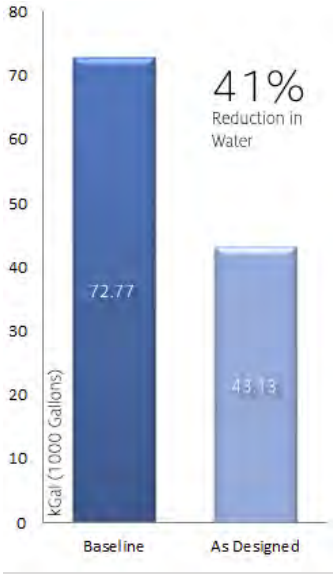
Design & Sustainable Site

Sited on a prominent corner, the facility is oriented along a north south axis that allows the building to hug the busy adjacent street improving its visibility, improving the streetscape, and allowing the entrance and beer garden to be tucked around on the other side so that they are visually and acoustically buffered from traffic. The main entrance also faces the rest of their adjacent facility, establishing a visual connection between their new research facility and the hop extract plant that represents the production side of their business. Onsite parking was kept to the minimum allowable and 5 prominent spaces have been reserved for carpool and high efficiency vehicles. The inclusion of a bicycle rack, showers, and lockers encourage employees to take



advantage of biking as an alternative form of transportation while the nearby Greenway provides options for going out on a mid-day run, bike ride, or walk. John I. Haas, Inc. expressed an interest in being able to add photovoltaic panels to the site in the future. To support this, a set of large conduit were run from the parking lot into the building to allow PV covered parking canopies to be installed when the price becomes more feasible.

WATER USE REDUCTION



Water Efficiency

Breweries and Labs consume a lot of water. However, through the use of low flow fixtures, automatic faucets, and dual flush valves, the estimated water use for this facility is 40% below standard use.

LEED WATER CREDITS ACHIEVED 5/12*

Water Use Reduction 20% - Required

Water Use Reduction 40% - 5*

*includes regional priority credit

Although not applicable for LEED certification, another water saving feature was included as part of this project. During the summer, Yakima is a hot dry environment that relies heavily on irrigation. However, there is no significant source of funding for maintaining and repairing the existing irrigation lines. One of the resulting unrepaired irrigation canals ran along the south edge of the site. The canal was old, severely damaged, and leaking heavily. However, the irrigation district could not afford to repair it. A preliminary inspection estimated as much as 2% of the water was leaking into the ground. As part of the project, the damaged canal was removed and piping installed. As a result, the irrigation water was saved and the safety issues surrounding having a large open fast moving body of water was eliminated.

Energy & Atmosphere

A whole building energy model was used to calculate the expected energy use for the building. The energy model shows an estimated savings of 30% over a baseline building. A large portion of this savings is due to the use of energy efficient HVAC equipment and an energy recovery ventilator. The building envelope was also improved by increasing the insulation by 150% of the code requirements, the use of double thermally broken storefront and curtainwall systems, and triple pane glazing.

Partnering with Pacific Power through their Blue Sky program, John I Haas Inc. arranged for over 70% of their electricity to be generated by renewable energy facilities.

30.9%
Annual energy Savings

$15,243
Annual Energy Cost Savings

LEED ENERGY CREDITS ACHIEVED 15/35

Fundamental commissioning - Required

Minimum Energy Performance - Required

Fundamental Refrigerant Management - Required

Optimize Energy Performance - 10

Enhanced Commissioning - 2

Measurement & Verification - 1

Green Power - 2

LEED MATERIALS CREDITS ACHIEVED 4/10

Storage & Collection of Recyclables - Required

Construction Waste Management 75% - 2

Recycled Content 20% - 2

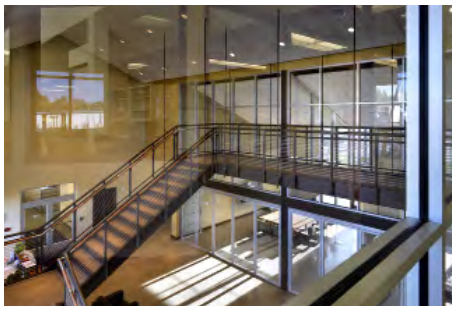
81%
of Construction Debris
was Recycled

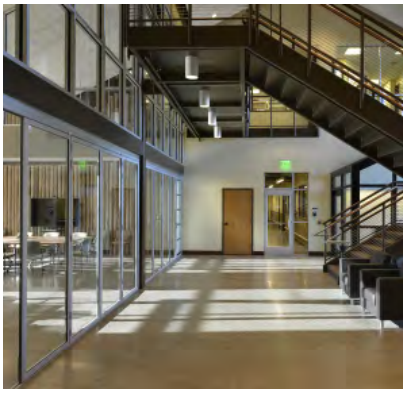
It has been said that almost everything we throw away can be recycled. At the Haas Innovations Center, the concept of recycling was approached in several ways: use of recycled products during construction, recycling of construction debris, and promoting recycling by the end users.

Materials that are made from recycled products were selected during design and documented during construction. As a result, over 33% of the total materials used on this facility were manufactured from post-consumer and pre-consumer recycled products.

Recycling construction debris turned out to be the most surprising and satisfying approach. According to the contractor, the waste was easier to recycle than expected. However, some items did require extra trucking to reach an appropriate facility. Of the total construction waste for this project, 81% was recycled. By weight, over 67 tons of waste were diverted from landfills.

The third approach was to encourage employees and visitors to recycle. To make recyling easy, collections points were distributed around work areas, and placed at locations that see a lot of waste. As a result, the employees will collect post-consumer recycled content that could be used to manufacture new building products.





Through measures such as improved air quality, daylight, and outdoor views, research has shown a reduction in employee rate of absenteeism, improved states of well-being, and a boost in performance.

The design of the Haas Innovations Center emphasized an open visibility between spaces and to the outside. The borrowing of views through adjacent rooms allows employees to maintain a connection to the outdoors and to each other.

Daylighting was also emphasized. Over 75% of the regularly occupied spaces in the building are lit by daylight. Light is brought deep into the building by light wells with clerestory windows, translucent skylights, and a few tubular skylights in areas that were difficult to reach using conventional methods.

LEED IEQ CREDITS ACHIEVED 12/15

Minimum IAQ Performance - Required

Environmental Tobacco Smoke Control - Required

Outdoor Air Delivery Monitoring - 1

Increased Ventilation - 1

Construction IAQ Management Plan During Construction - 1

Low Emitting Adhesives & Sealants - 1

Low Emitting Paints & Coatings - 1

Low Emitting Composite Wood - 1

Indoor Chemical & Pollutant Source Control - 1

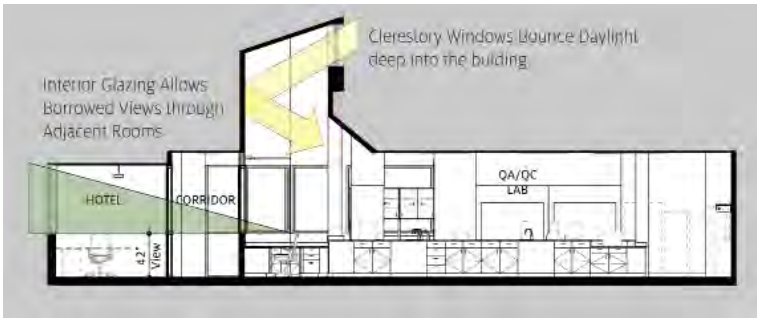
Controllability of Lighting - 1

Controllability of Thermal Comfort - 1

Thermal Comfort, Design - 1

Thermal Comfort, Verification - 1

Daylight for 75% of Spaces - 1



LEED 2009 NC CREDITS ACHIEVED

SITE
23/26
WATER
5/10
ENERGY
15/35
MATERIALS
4/14
INDOOR QUALITY
12/15
INNOVATION
6/6
TOTAL
65 Points
Minimum for LEED Gold = 60

Design Team

KDF Architecture

Kramer Gehlen and Associates – Structural

Notkin Engineering – Mechanical

Sparling Engineers – Electrical

Huibregtse Louman Associates – Civil

The Berger Partnership – Landscape

KEMA - LEED Consultant

General Contractor

VK Powell Construction Company, LLC