



Boston College: Lean, Green & Local Construction

Project Name: Boston College

Project Location: Newton, MA

Project Size: 1000 sets

Building Types: 2000 and 2150 Comm Ave. Residence Halls

Project Team: BC & DCI

Product List: Bed, Dresser, Desk, Wardrobe, Coat Hooks

BACKSTORY

Boston College (BC) is a private Jesuit Research University founded in 1868 and located 6 miles outside Boston in Newton, MA. Ranked 30th among American Universities by US News & World Report BC has 9,100 full-time undergraduates and nearly 5,000 graduate students.

BC competes in NCAA Division I sports as members of the Atlantic Coast Conference and is considered one of the great Universities in the United States. According to [Wikipedia](#) it offers bachelor's degrees, master's degrees, and doctoral degrees through its nine schools and colleges:

- Morrissey College of Arts & Sciences
- Boston College Graduate School of Arts & Sciences
- Carroll School of Management
- Lynch School of Education
- Connell School of Nursing
- Boston College Graduate School of Social Work
- Boston College Law School
- Boston College School of Theology and Ministry
- Woods College of Advancing Studies
- The 175-acre hillside campus of Boston College, in the Chestnut Hill neighborhood of Newton, features gothic towers and architecture that shoots up through the trees and presides over the Chestnut Hill reservoir.



FORGING SUSTAINABILITY AT BC



DCI started working with the team at Boston College approximately 25 years ago. We have furnished many of their residence halls through a long and rich partnership.

This decades-long partnership was the backdrop for a new BC project that emerged in 2013. Boston College was tearing down an older dorm and building a beautiful new 245,000 square-foot residence hall on Commonwealth Ave.

At the same time, BC had just purchased a commercial apartment bloc at [2000 Commonwealth Ave](#) to retrofit and turn into student housing. This retrofitted facility required 500 sets of furniture with all the same specs as the cutting edge 2150 project.

Here's how [BC Heights](#) the BC student-run newspaper described the project at 2150 Comm Ave:

While the building—designed by EYP, an architectural firm located in downtown Boston—will serve primarily as a dorm, holding 60 six-person and 16 four-person apartments with full kitchens, it will also house an upgraded University Health Services clinic. The wing will have 12 exam rooms, five patient rooms, one isolation room for infectious diseases, and one treatment room, among other specialty rooms. There will also be space for nine offices and a larger reception and waiting area.

The new dorm will also have five floor lounges, 15 floor study rooms, a commons area that will include a small cafe, a seminar room, and three soundproof music rooms. The majority of the lounges are large rooms with mostly glass walls that will allow the building to be lit with natural light during the day.

In line with BC's growing commitment to creating a sustainable campus, the project was designed with a focus on environmental conservation and sustainability. This commitment to sustainability was reflected at every stage of the project. Here's how it played out.

To begin with, the original expanded [application](#) to the Boston Redevelopment Authority in 2013 contains several sustainability targets and commitments, including LEED Silver certification. Here are some of those goals and targets:

- **Waste Reduction and Recycling:** At least 50% of non-construction and demolition waste will be recycled and the University will implement a permanent recycling plan appropriate to the needs of the facility. At least 75% of construction and demolition materials will be recycled.
- **Procurement:** In the selection of building materials, consideration will be given to the use of recycled content, regional materials, and rapidly renewable materials. The University will incorporate the residence hall into its well-established recycling program.
- **LEED Certification:** The University will meet LEED Certified status and strive to achieve LEED Silver Certification for any new construction project.
- **Greenhouse Gases:** The University has had a 20% drop in Greenhouse Gas (GHG) emissions from stationary carbon sources since 2006. Boston College will continue to reduce GHG emissions.
- **Water Efficiency:** Boston College plans to reduce water consumption through water-conserving fixtures and water efficient landscaping; landscape materials will be selected that enhance sustainability and conservation of resources by virtue of suitability to site conditions. The interdisciplinary design team will endeavor to incorporate building systems to reduce water consumption by approximately 35%, using technologies such as dual-flush toilets and reduced-flow sinks and lavatories in the residential units.
- **Sustainable Sites:** Boston College has chosen to develop a sustainable site well-served by public transportation and other alternatives to single occupancy vehicle commuting. No increase in parking capacity is being provided. In fact, there will be a reduction of 66 parking spaces at the site. The University also plans to take steps to reduce light pollution from inside the building.

According to reporting on [Patch](#), in the initial stages of construction the builders and architects worked together to implement LEAN methodologies like pull planning and small batch execution to minimize waste and maximize efficiency.

Furthermore, “the use of rapidly renewable and recycled materials was encouraged, construction and demolition debris was recycled and reused, and provisions were made for the storage and recycling of waste materials.”

And according to BC Heights, which tracked the progress of the [project](#):

BC is taking a more renewable stance with the construction of this dorm, according to Hand Contractors. Independent inspectors have been meticulous with checking the insulation of pipes and quality of seals in the building to make sure the high-efficiency furnaces can function to their full potential. Hand said that 2150 will be the first BC dorm that will have a water filtration and recycling system to reduce the water consumption of the building.

Affordability, Sustainability, And Partnership

Leading up to this project, DCI had a long-standing relationship with BC's Residence Life and Facilities Teams. Given the high profile nature of this project and the huge amount of furniture involved--490 sets totalling more than 2000 individual pieces--BC wanted to make sure that DCI was still the best company to supply the furniture.



In essence, everyone wanted to make sure that our furniture was still competitively priced. Furthermore, because this new residence hall had special environmental credentials, they wanted to re-evaluate our long-running partnership to ensure we were the greenest furniture manufacturer.

So we invited BC's Associate Vice President of Student Affairs, Director of Residential Life, Director of Procurement, and Assistant Director, Facilities to our manufacturing plant in Lisbon, NH and our rough mill in South Royalton, VT to see DCI's unique chain of custody manufacturing process in action.

This was important because, unlike any other company supplying furniture in our market, we own every stage of the process, from the selection, cutting, and rough milling of local hardwood trees, to the manufacturing, finishing, delivery and installation of FSC C-O-C certified furniture.

Chain of custody allows us to manage quality and sustainability at every stage and to keep every aspect of the project local. This convinced the team at BC that DCI has the most sustainable furniture production process.

There was one last hurdle. Pricing.

Finally, we reviewed our entire customer history with them in order to match our historical pricing. Then we provided BC with further discounts through a special pre-payment pricing plan. As a result, we were able to give them highly competitive prices. And in the end, this engaged partnership and in-depth planning allowed us to produce and deliver their furniture ahead of schedule.

Sustainability In Action: Local Sourcing, Maximum Yield, Creating Wildlife Habitat

As outlined above, the residence hall was built based on the principles of sustainability. A number of things made this project a paradigm of sustainability.



1. Local Sourcing

One key tenet of sustainability includes sourcing labor and materials locally. That benefits the municipal economy and reduces the energy, labor cost, and carbon footprint.

BC has always maintained a strong commitment to the Boston community so it was important to them to make sure that

everything was locally sourced. They wanted this multi-million dollar project to benefit the local business community and economy.

The architects were local, the contractors were local, and the construction team was local.



From DCI's side, everything in the project, except for hardware--which came from North Carolina--was locally sourced.

All the wood for the furniture was harvested in nearby New Hampshire by local foresters--men and women with family-run businesses. The DCI team who built and installed the furniture was also local.

Conversely, our competitors source their wood panels from Canada. From a sustainability perspective, that's bad on a few fronts.

First, it hurts the local economy, since the money leaves the country. And second, it means a lot more shipping which consumes carbon-based fuel and increases the overall carbon footprint of the project while contributing to global warming.

2. Maximizing Wood Yield

What else made this project a paradigm of sustainability?

In addition to the fact that our factory produces no waste and uses all production by-products to fuel our operation, we use more of the wood we harvest than anyone else.

In terms of the Ash and Oak trees we used to make the Boston College furniture, we used 80% of all the wood from the trees we harvested. That's super efficient and a higher percentage than any of our competitors.

How do we manage that? We've developed a unique finger joining wood assembly process that allows us to use reclaimed wood to make our furniture stronger. In simple terms, we repurpose scrap components into longer boards and internal components that extend the life of our furniture. Nothing goes to waste.

3. Creating Wildlife Habitat

In addition to maximizing wood yield, we always work with State Foresters to ensure that our tree cutting has a maximum benefit to wildlife.

For the Boston College project, here are some of the positive impacts associated with this timber harvest. This is excerpted from a planning document from the New Hampshire State Forester:

This treatment will primarily benefit wildlife at this entry via the young forest growth established through group selection. Regenerating hardwood seedlings will result in woody browse benefiting wildlife species such as white-tailed deer and moose. In addition, once young mixed hardwood and softwood growth is established it may create feeding and nesting opportunities for several wildlife species including wild turkey, Canada warbler, wood thrush, veery, black-throated blue warbler, eastern wood peewee, and ruffed grouse. Existing and potential cavity trees, snags, and large down coarse woody material will be left in tact to provide denning, foraging, and hibernating opportunities for several wildlife species including yellow-bellied sapsucker, blue-spotted salamander, Jefferson salamander, ribbon snake, and several bat species.

Managing Complexity & Bridging The Design Gap

In terms of size, scope, quality, and sustainability credentials, this is one of the most impressive buildings we've had the privilege to work on.

There were also a lot of stakeholders working at different levels. For example, we worked with teams in the following departments: Capital, Procurement, Residence Life, Facilities, and Project Management.

We needed buy-in from all of them and at the same time, looked to us to take the lead on the project. Needless to say, it was a complex project which required a high degree of customization and flexibility.

We worked in a collaborative process with these stakeholders and our product evolved a lot as a result. For example, we went back to them after they made furniture selections and made counter suggestions. We even built samples so they could see why it didn't work.





In addition to getting buy-in from everyone involved, we needed our furniture to match what their designer had picked from other sources. There was a design gap, and we had to bridge it.

So our challenge was to complement other features and furniture and to do so affordably. How did we do that?

First, we went through over a dozen stains and custom laminate selections in order to find the perfect match. It had to be affordable and either compliment or match everything in place.

Because they had already chosen their doors, wooden railings, lounge furniture feet, it came down to the stains. We were able to shoot it right down the middle and create a design that integrated and blended everything through our stains and finish.

To set up an order today or to talk with one of our representatives, you can write to us here or call: (800) 552-8286.

You can also learn more about our industry-leading FSC CoC [certification](#), our [MAS certification](#), and our green materials [sourcing](#), sustainable [manufacturing](#), and our unique zero waste Vertical Integration [Process](#) (VIP).

Download the DCI Sustainability overview [here](#).

<http://dcifurn.com>

sales@dcifurn.com

(800) 552-8286

265 South Main Street

Lisbon, NH 03585