ORCHARD COMMONS

ARCHITECT | Perkins and Will Architects
STRUCTURAL ENGINEER | Stantec
CONSTRUCTION MANAGER | Stuart Olsen Dominion Construction
ADDRESS | 6363 Agronomy Road, Vancouver BC
The UBC Orchards Commons development combines two 18-storey student housing residences, with a shared student commons area that houses amenities and food services. The structure of the commons area features exposed mass timber elements including glue laminated timber (GLT) columns and beams, along with nail laminated timber (NLT) roof and stairs. The NLT roof panels that cover over 1,800 m$^2$ over the commons area were fabricated with local wood fibres that provide an aesthetic timber soffit.
UBC BASEBALL INDOOR TRAINING CENTRE

ARCHITECT | Michael Green Architecture
STRUCTURAL ENGINEER | Equilibrium Consulting
CONSTRUCTION MANAGER | Kindred Construction
ADDRESS | 3085 Wesbrook Mall, Vancouver BC

Photo: Rich Lam | Courtesy: UBC Athletics & Recreation
The state-of-the-art UBC Baseball Indoor Training Centre provides space for a comfortable training environment all year round. The building has a concrete foundation and a hybrid structure: the training area features exposed glue laminated timber (GLT) columns and beams and laminated strand lumber (LSL) tilt-up walls; the observation deck, offices, and visitor areas are conventional light wood frame structure. The structure is the first glulam LSL composite tilt up wall panel system of its kind.

**GROSS FLOOR AREA**
1,200 m²

**HEIGHT**
9.4 m | 2 storeys

**PROGRAM**
Athletics

**FUNCTIONS**
Baseball training, offices, community room

**MEP CONSULTANT**
Mechanical: AME Group
Electrical: Jarvis Engineering Consultants

**CONSTRUCTION**
2015

**PROJECT COST**
CDN$3,5M (2015)
UBC BOOKSTORE
Expansion and Renovation

ARCHITECT | office of mcfarlane biggar architects + designers (omb)
STRUCTURAL ENGINEER | Fast + Epp
CONSTRUCTION MANAGER | Syncra Construction
ADDRESS | 6200 University Blvd, Vancouver BC
Operating since 1917, the UBC Vancouver Bookstore building was renovated in 2013 to improve the space and expand its footprint. The building’s new roof consists of prefabricated hybrid wood-steel panels made from nail-laminated timber (NLT) that integrate the mechanical and electrical systems as well as the roof membrane. These panels were manufactured off-site and installed in just three days. The new bookstore has an improved and brightened presence and provides a vibrant social space at the campus heart.

| **NLT** | Ceiling |
| **STEEL** | Columns |
| **CONCRETE** | Foundation and structure |

**GROSS FLOOR AREA**
818 m²

**HEIGHT**
7 m | 2 storeys

**PROGRAM**
Academic

**FUNCTIONS**
Retail and social/reading spaces

**MEP CONSULTANT**
Mechanical: Cobalt Engineering
Electrical: MMM Group

**CONSTRUCTION**
2013-2014

**PROJECT COST**
CDN$6.6M (2014)

More info: [https://bookstore.ubc.ca](https://bookstore.ubc.ca)
UBC FOOTBALL ACADEMIC CENTRE

ARCHITECT | Musson Cattell Mackey Partnership
ENGINEER | ByCar Engineering
CONSTRUCTION MANAGER | Kindred Construction

Photo courtesy of: UBC Athletics & Recreation
The UBC Football Academic Centre, situated adjacent to the football field at the UBC Thunderbird Stadium, provides space for the Varsity Football team to focus on their academic development. The building structure is composed of glue laminated timber (GLT) columns and beams, and nail laminated timber (NLT) ceiling and wall panels. The building features a retractable wall that opens fully to allow access and visibility to the stadium field.

**CONSTRUCTION**
2015

**PROJECT COST**
CDN$1,1M (2015)

**GLT**
Columns and beams

**GROSS FLOOR AREA**
161 m²

**HEAVY TIMBER**
Columns and beams

**HEIGHT**
1 storey

**CONCRETE**
Foundation

**PROGRAM**
Athletics

**FUNCTIONS**
Study space, meeting rooms
UNIVERSITY BOULEVARD TRANSIT SHELTERS

ARCHITECT | PUBLIC Architecture + Communication
STRUCTURAL ENGINEER | Fast + Epp
ADDRESS | University Boulevard, Vancouver BC

Photo courtesy: Fast + Epp
In 2013, two transit shelters were erected at the University Boulevard bus loop, and have since become an integral part to this boulevard’s identity and redevelopment. Conceptually, the shelters act as an extension of the nearby Katsura tree line. Each shelter features an oversized cellular wood structure, clad in glass and supported by steel columns. The canopy form is achieved by repeating a single, easily prefabricated, glue laminated timber (GLT) module. Each module is an asymmetrical pentagon, rotated and flipped along its edges, and when assembled together create a lively hive-like structure.

**CONSTRUCTION**
- **Year:** 2013
- **Cost:** CDN$475K (2013)

**GROSS FLOOR AREA**
- 2 shelters | 120 m² each

**HEIGHT**
- 4 m

**PROGRAM**
- Academic

**FUNCTIONS**
- Bus shelters
UNIVERSITY HILL SECONDARY SCHOOL

ARCHITECT | Thinkspace Architecture Planning Interior Design
STRUCTURAL ENGINEER | Fast + Epp
CONSTRUCTION MANAGER | Bird Construction
ADDRESS | 3228 Ross Drive, Vancouver BC
The University Hill Secondary School, located in the former UBC National Research Council building, was renovated, expanded and transformed into a new 800 student capacity school. The structure is mainly composed of concrete and steel and includes mass timber elements in strategic areas, in line with the Ministry of Education Wood First Initiative. Glue laminated timber (GLT) and heavy timber beams are used in the gym and studio roof to provide longer spans. GLT elements can also be seen at the entrance canopy.

GLT
Columns and beams for gym, studio, and entrance canopy

HEAVY TIMBER
Beams

CONCRETE
Foundation and original structure

GROSS FLOOR AREA
11,835 m²

HEIGHT
11.7 m | 2 storeys

PROGRAM
Academic (Grades 9 - 12)

FUNCTIONS
Classroom, gymnasium, library, activity and meeting spaces

CERTIFICATION
LEED Gold (2016)

MEP ENGINEER
Mechanical: JM Bean & Company
Electrical: Jarvis Engineering Consultants

SUSTAINABILITY CONSULTANT
Graham Hoffart Mathisen Architects

CONSTRUCTION
2012 - 2015

PROJECT COST
CDN$38M (2015)
WAYNE AND WILLIAM WHITE ENGINEERING DESIGN CENTRE

ARCHITECT | McFarland Marceau Architects
STRUCTURAL ENGINEER | Fast + Epp
CONSTRUCTION MANAGER | VanMar Constructors Inc.
ADDRESS | 2345 East Mall, Vancouver BC

Photo: Don Erhardt | Courtesy: McFarland Marceau Architects
The Wayne and William White Engineering Design Centre provides students from the different UBC engineering departments with a design studio, workshops and project rooms for classes and meetings. While the building structure primarily consists of concrete and steel, the atrium features an extensive use of wood and is supported by a series of glue-laminated timber (GLT) columns and beams. The atrium also uses nail-laminated timber (NLT) panels for its roof and cedar sidings on the exterior walls as sunshades. Although not certified, the building is designed to LEED Gold standard.

**GLT**
Atrium beams and columns

**NLT**
Atrium roof

**WOOD SIDING**
Sunshades

**CONCRETE**
Foundation and structure

**GROSS FLOOR AREA**
1,922 m²

**HEIGHT**
14.2 m | 3 storeys

**PROGRAM**
Academic

**FUNCTIONS**
Classrooms, study spaces, workshops, and mixed-use space

**MEP ENGINEER**
Mechanical: Stantec
Electrical: Acumen Engineering

**CONSTRUCTION**
2010 - 2011

**PROJECT COST**
CDN$8,5M (2011)

More info: [https://design.engineering.ubc.ca/engineering-design-centre/](https://design.engineering.ubc.ca/engineering-design-centre/)
WESBROOK COMMUNITY CENTRE

ARCHITECT | Francl Architecture and PUBLIC
STRUCTURAL ENGINEER | Equilibrium Consulting
CONSTRUCTION MANAGER | Scott Construction
ADDRESS | 3335 Webber Lane, Vancouver BC

Photo: Camille Esquivel | Courtesy: Francl Architecture
The Wesbrook Community Centre serves UBC neighbourhoods, in particular the residences of Wesbrook Place, by providing gathering space and amenities such as a fitness center, a gymnasium, and activity rooms. The building’s columns and beams, including the series of arched, long spanning beams of the gymnasium, are made of glue laminated timber (GLT). The floors, walls, and roof consist mainly of cross-laminated timber (CLT) panels, while cedar panels were used for the façade. Wesbrook Community Centre is a high-performance building, designed to meet energy targets equivalent to a LEED Gold standard.