



Ingenieuretag Baden-Württemberg
October 25 2022

Holzbau fürs Klima - eine kanadische Perspektive

Paul Fast
P.Eng., Struct.Eng.,
P.E., FIStructE., IngKH (Germany)

Fast + Epp

WHERE WE WORK



Edmonton

Calgary

Vancouver

Seattle

New York

Darmstadt

Stuttgart



VANCOUVER ART GALLERY

Vancouver, BC, Canada
Herzog de Meuron Architects











CHIP WILSON SCHOOL OF DESIGN

Richmond, BC, Canada
KPMB Architects and Public Design





SOUTH BURNABY ARENAS

Burnaby, BC, Canada
HCMA Architecture + Design





INTRO ONE

Cleveland OH, USA
Hartshorne Plunkard Architecture

Cross Laminated Timber Market



Revenue Split By Region



- Europe
- North America
- Japan
- South East Asia & Pacific
- China
- Latin America
- Middles East & Africa

Market Value

2022

US\$ 708.4 Mn

2026

US\$ 903.9 Mn

CAGR **6.3%** (2022-2026)



+ Politische Unterstützung



B.C.'s Mass Timber

Action Plan





+ Fördergelder





Natural Resources
Canada

Ressources naturelles
Canada

Canada



Clean Energy BC



Forestry Innovation
Investment[®]



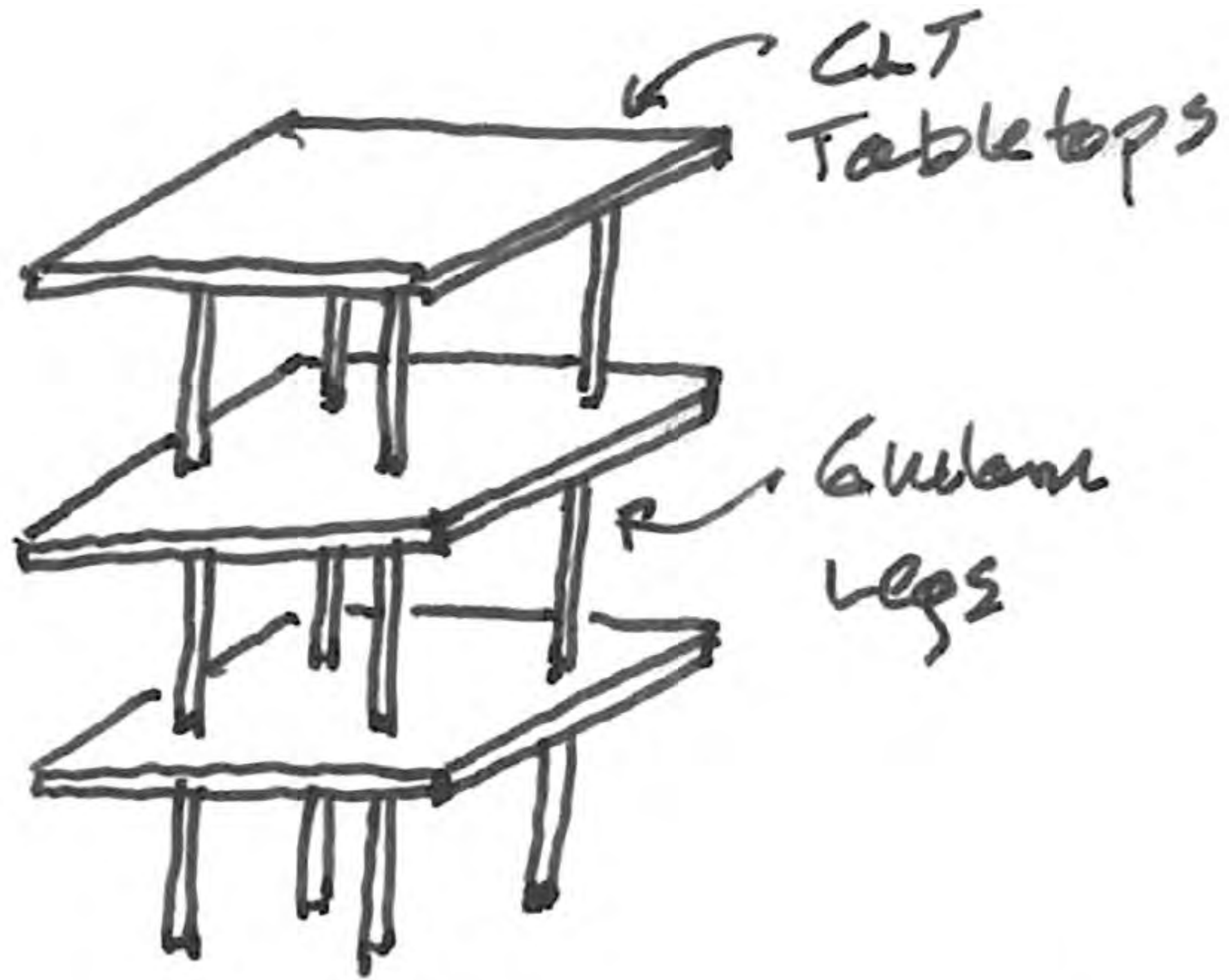


TALLWOOD HOUSE AT UBC

Vancouver, BC, Canada

Acton Ostry Architects





Stacked Table Concept





CREDIT: SEAGATE



POINT SUPPORTED CLT



KEY ANALYSIS/DESIGN ISSUES





KEY ANALYSIS/DESIGN ISSUES

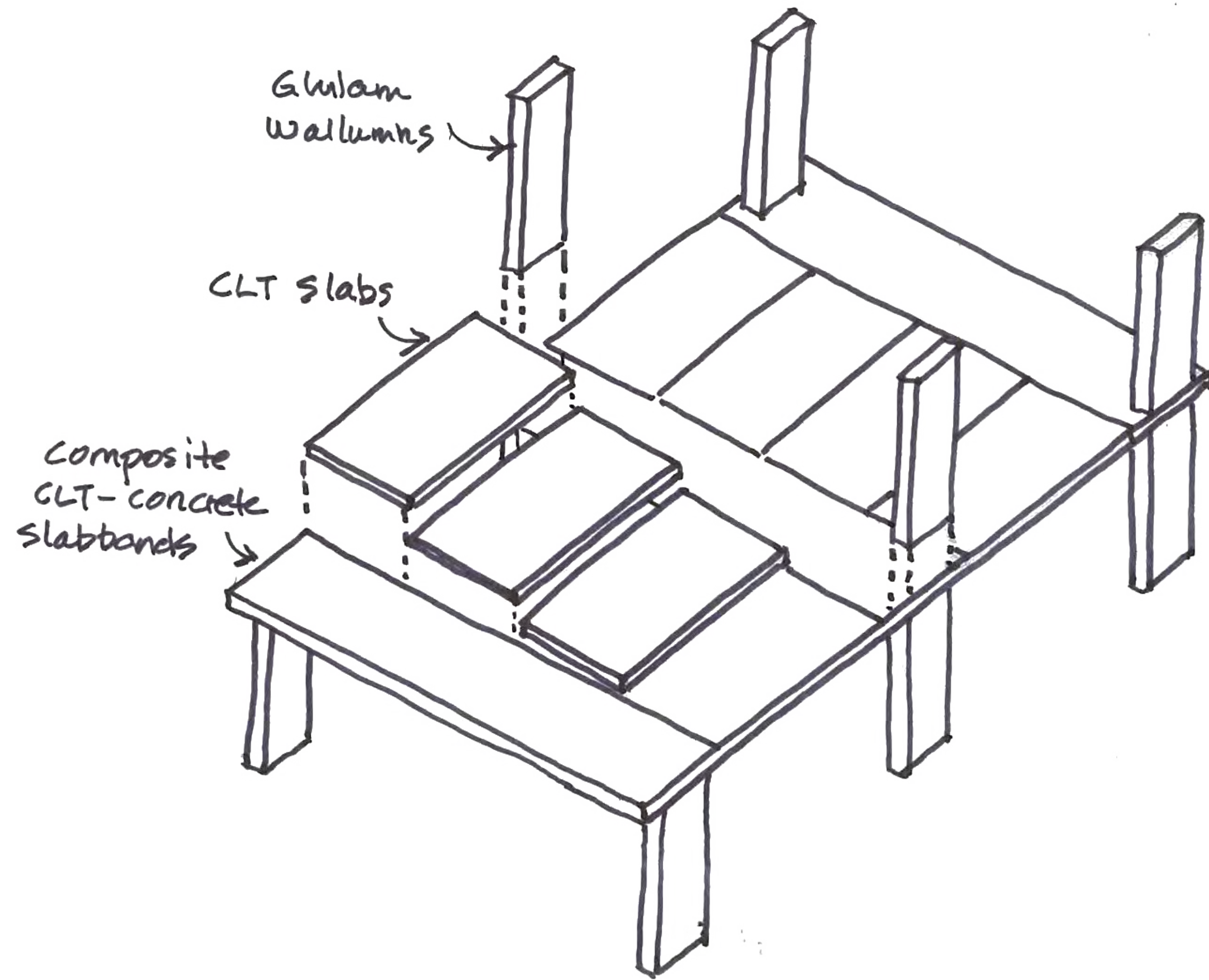






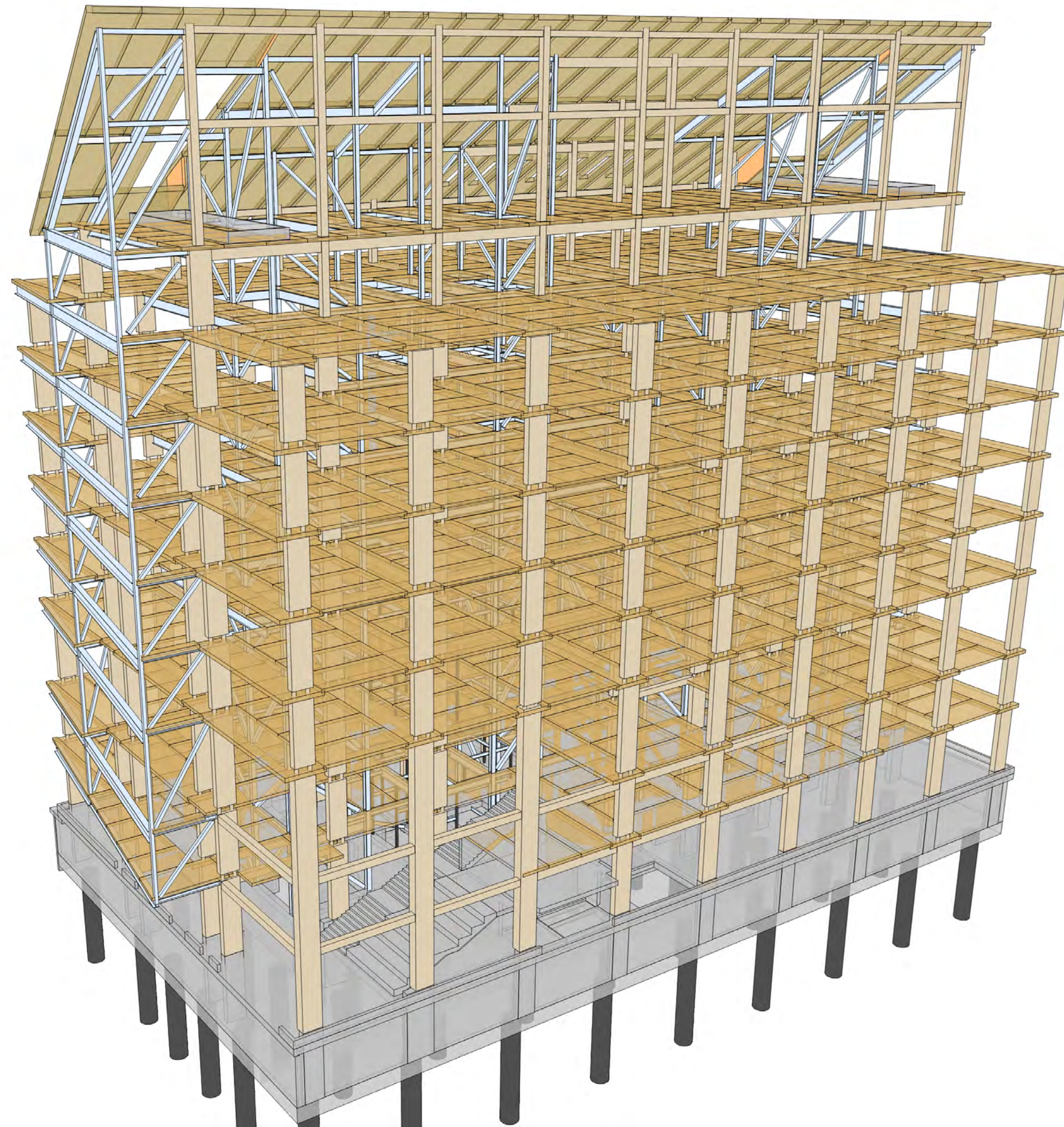
LIMBERLOST

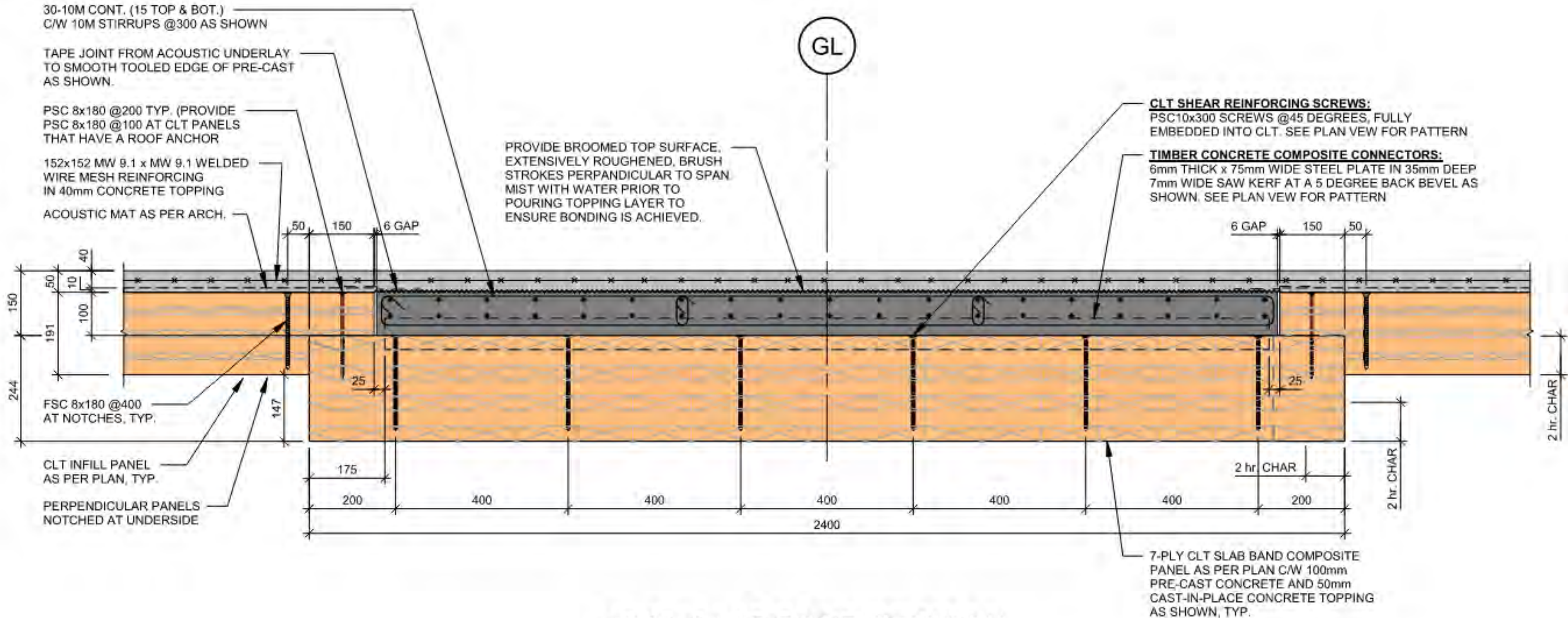
George Brown College Toronto, ON, Canada
Morijama Teshima/Acton Ostry Architects



Structural Concept







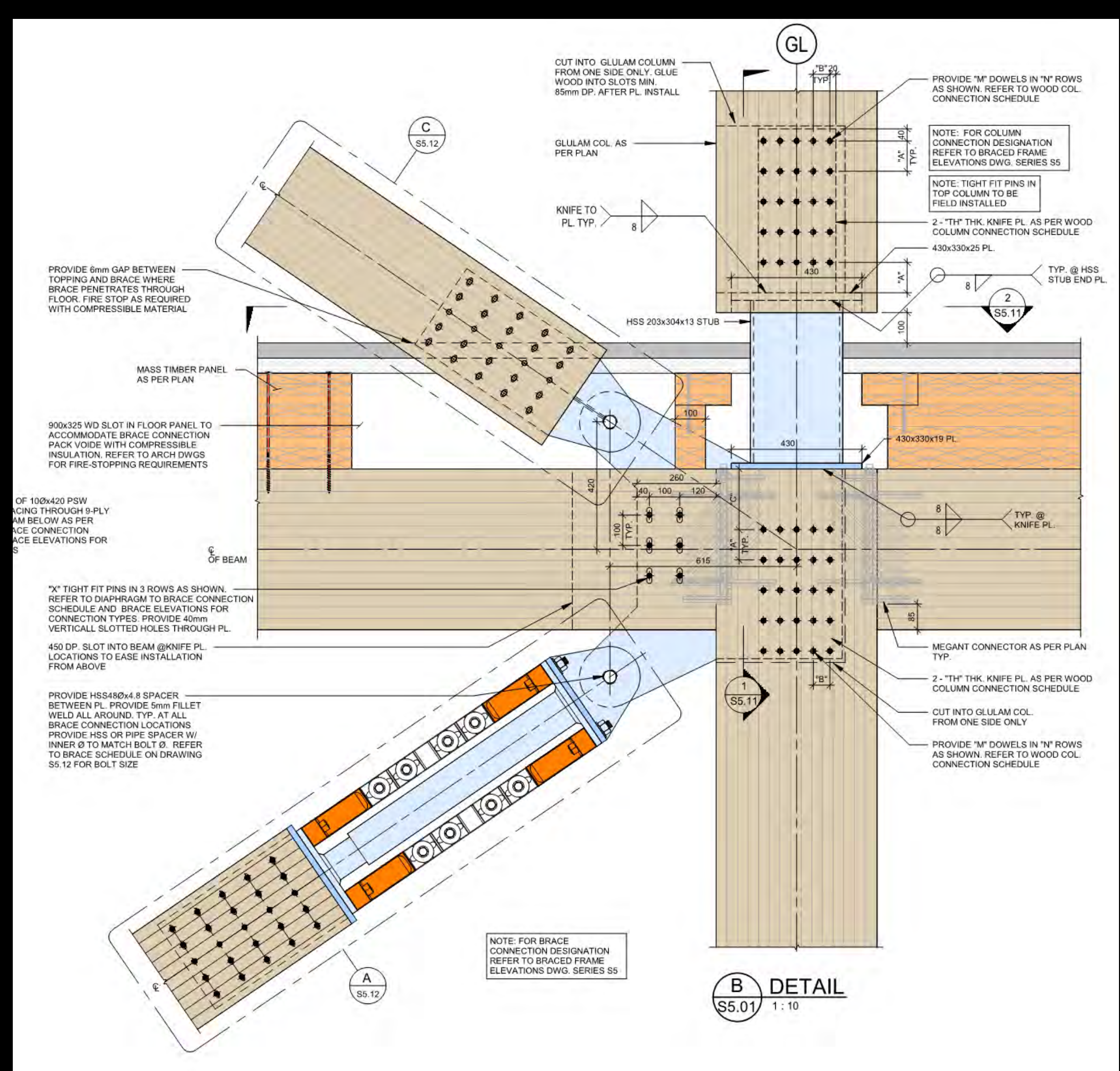
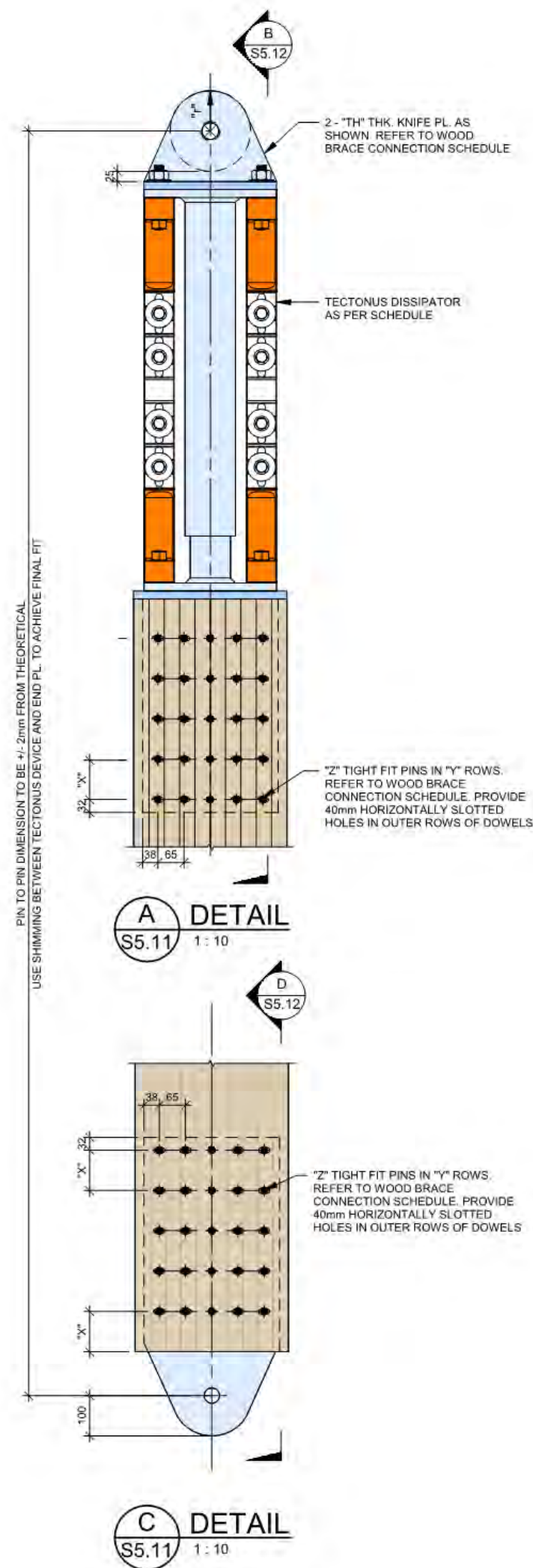
TYP. SLAB BAND SECTION

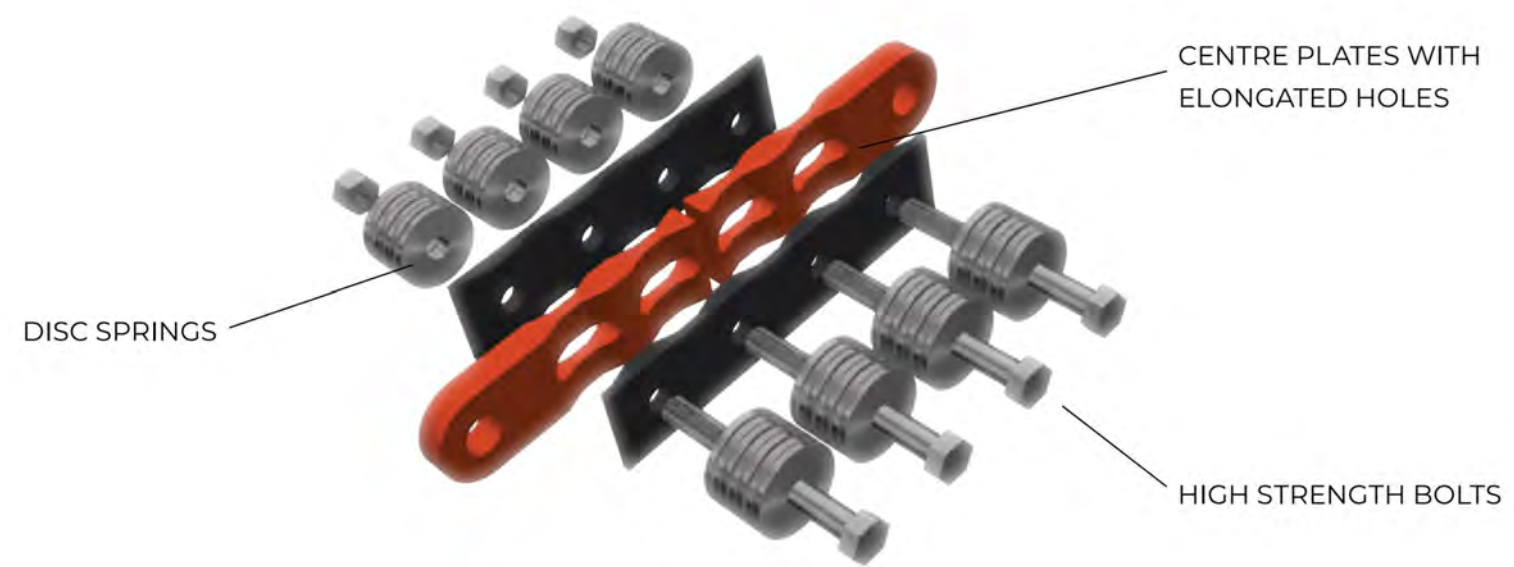


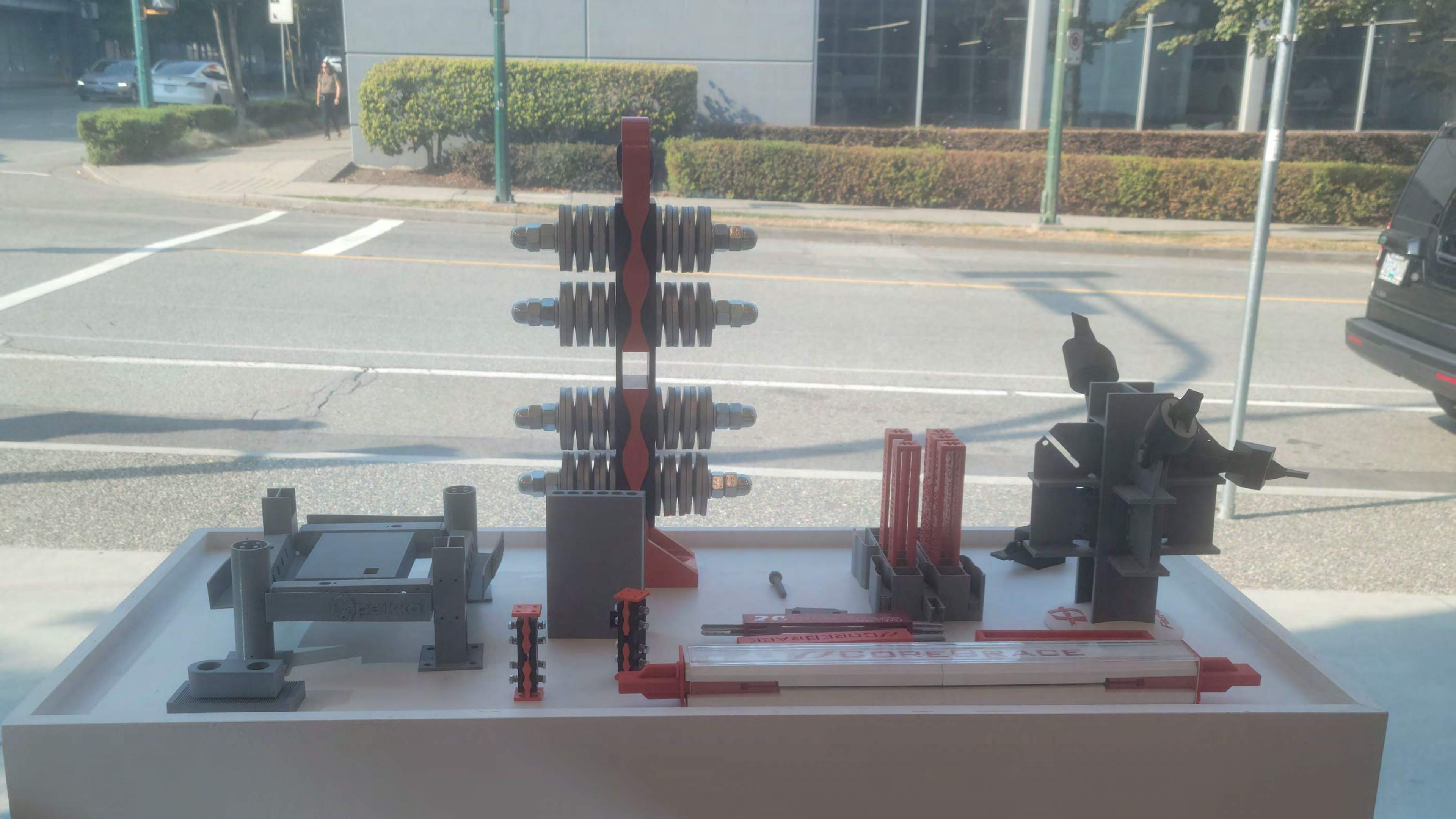




KEITH DRIVE
Vancouver, BC, Canada
Dialog Architecture









FAST + EPP HOME OFFICE

Vancouver, BC, Canada
f2a Architects

Concept



by Fast+Epp



Companion
Construction

FAST + EPP HOME OFFICE
Vancouver, BC, Canada
f2a Architects

Fast + Epp
STRUCTURAL ENGINEERS

NO
TRESPASSING

WARNING
POLO
604.321.40

FOR LEASE
West 7th Avenue







SIR MATTHEW BEGBIE SCHOOL

Vancouver, BC, Canada
HCMA Architecture + Design



+ Fortschrittliche Normen



Type IV-A Height and Area Limits



18 STORIES
BUILDING HEIGHT 270'
ALLOWABLE BUILDING AREA 972,000 SF
AVERAGE AREA PER STORY 54,000SF

TYPE IV-A

Credit: Susan Jones, atelierjones

Occupancy	# of Stories	Height	Area per Story	Building Area
A-2	18	270 ft	135,000 SF	405,000 SF
B	18	270 ft	324,000 SF	972,000 SF
M	12	270 ft	184,500 SF	553,500 SF
R-2	18	270 ft	184,500 SF	553,500 SF

Areas exclude potential frontage increase

In most cases, Type IV-A height & story allowances = 1.5 * Type I-B height & story allowances

Type IV-A area = 3 * Type IV-HT area



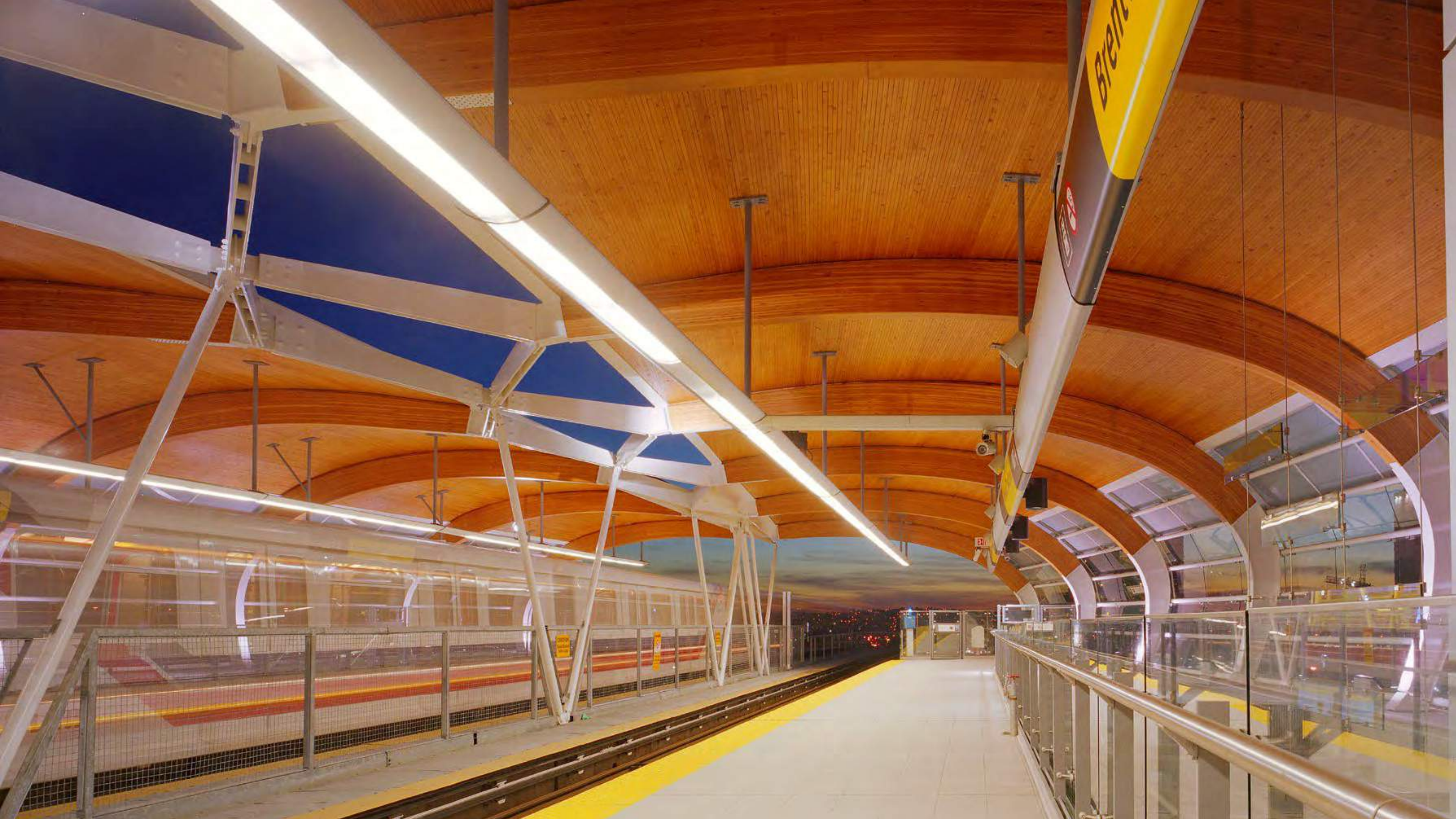
+ Hybride Bauweise

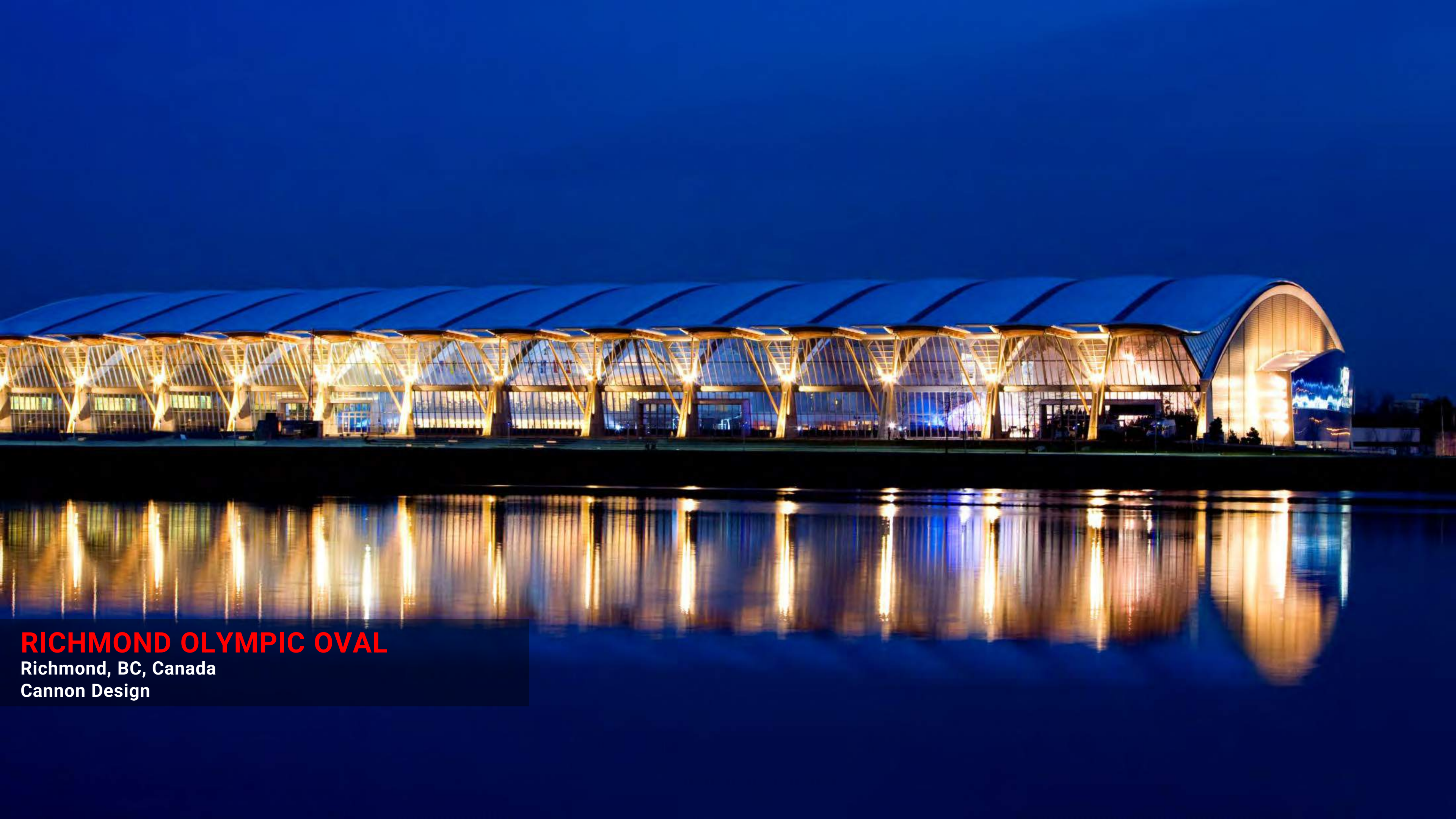




BRENTWOOD TOWN CENTRE

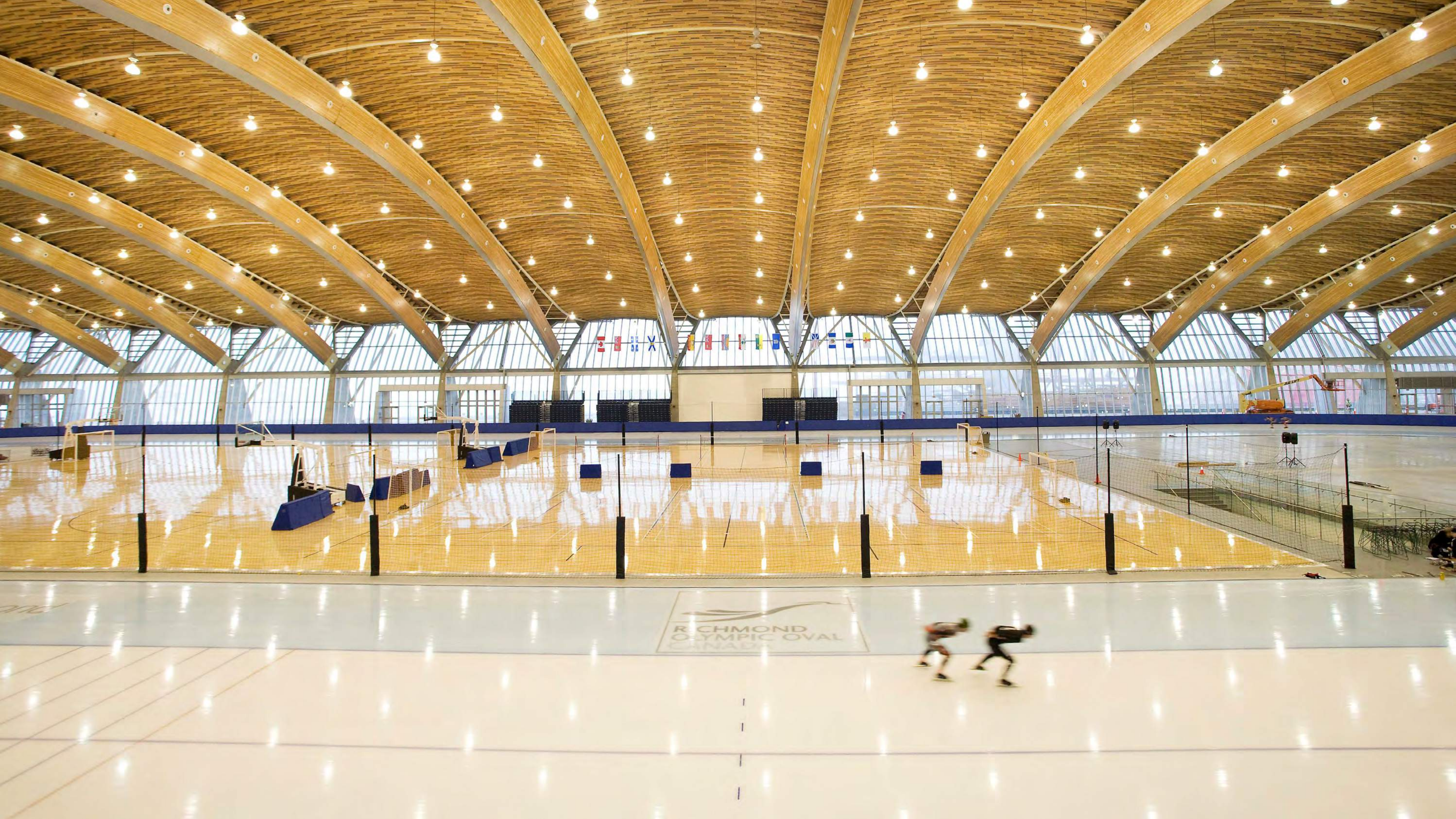
Burnaby, BC, Canada
Perkins + Will Architects



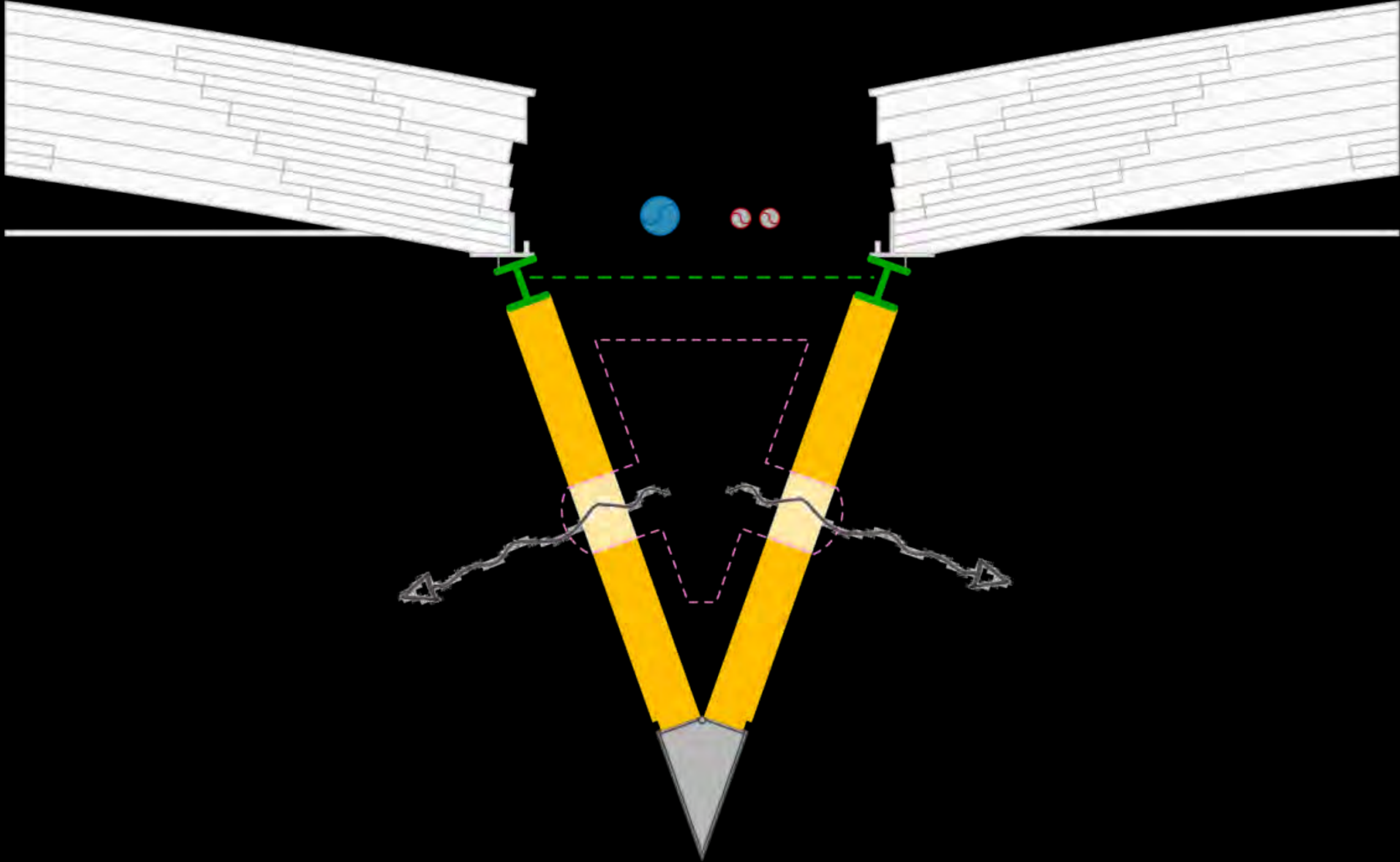


RICHMOND OLYMPIC OVAL

Richmond, BC, Canada
Cannon Design



RICHMOND
OLYMPIC OVAL
CANADA



+

***Even before an athlete steps on the ice...
a world record has been set.***



**Together, two BC companies have created
the longest hybrid arch ever built.**

The Richmond Speed Skating Oval showcases a truly unique integration that combines the warmth of BC wood with the strength of BC steel. Fifteen monumental 100-metre arched trusses were created from 120 of Structurlam's Douglas Fir curved glulam beams (8 glulam beams per arch). George Third and Son affixed steel plates and wide flange beams to form 'V' shaped composite girders for the arches that once connected, span almost 100 metres apiece, the longest hybrid arch in the world. All completed on time and on budget. So even before the athletes arrive, the facility already holds a world record.



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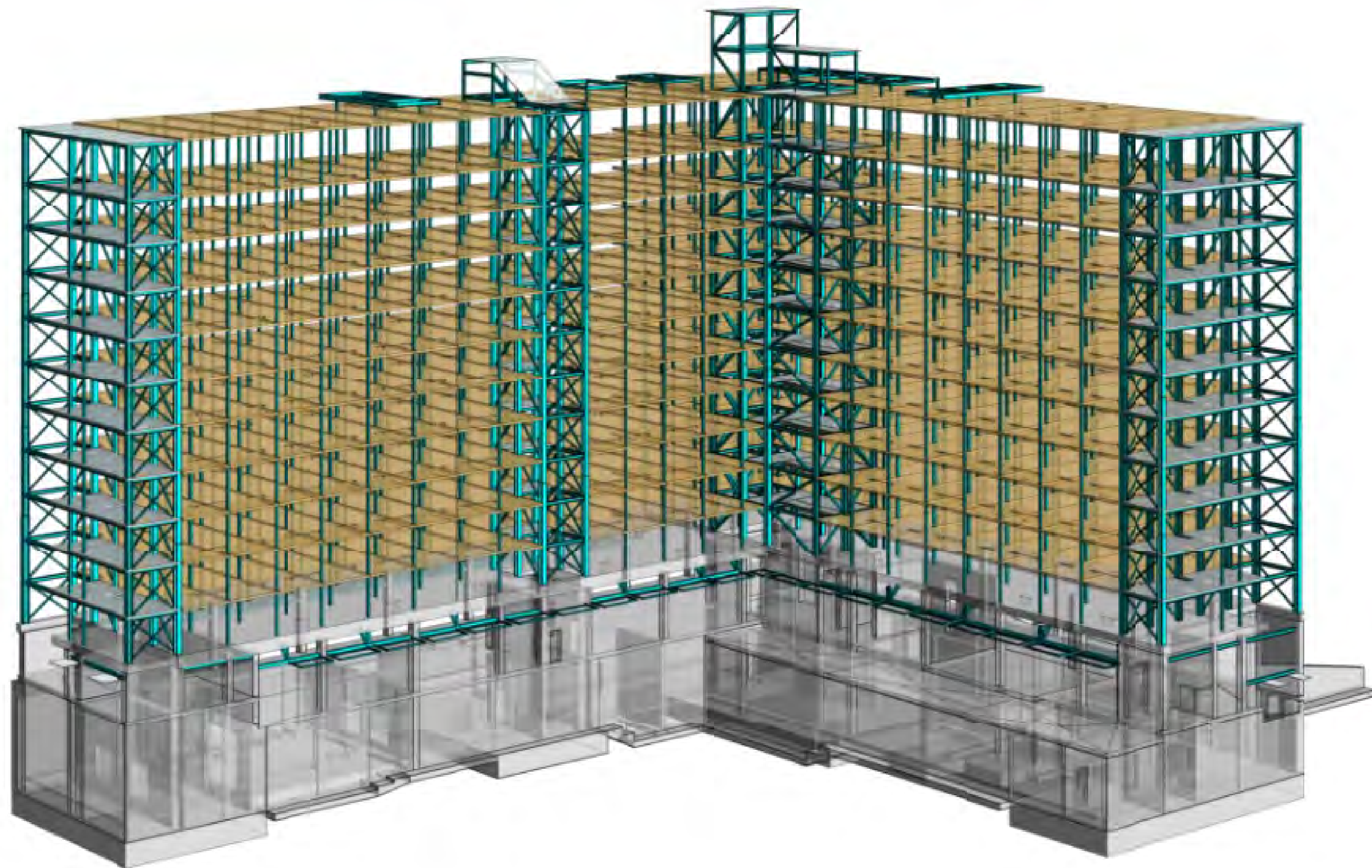




BCIT STUDENT HOUSING

Vancouver, BC, Canada
Perkins + Will Architects







CLARKS VILLAGE

Austin, TX, USA

Herzog de Meuron/Page Architects





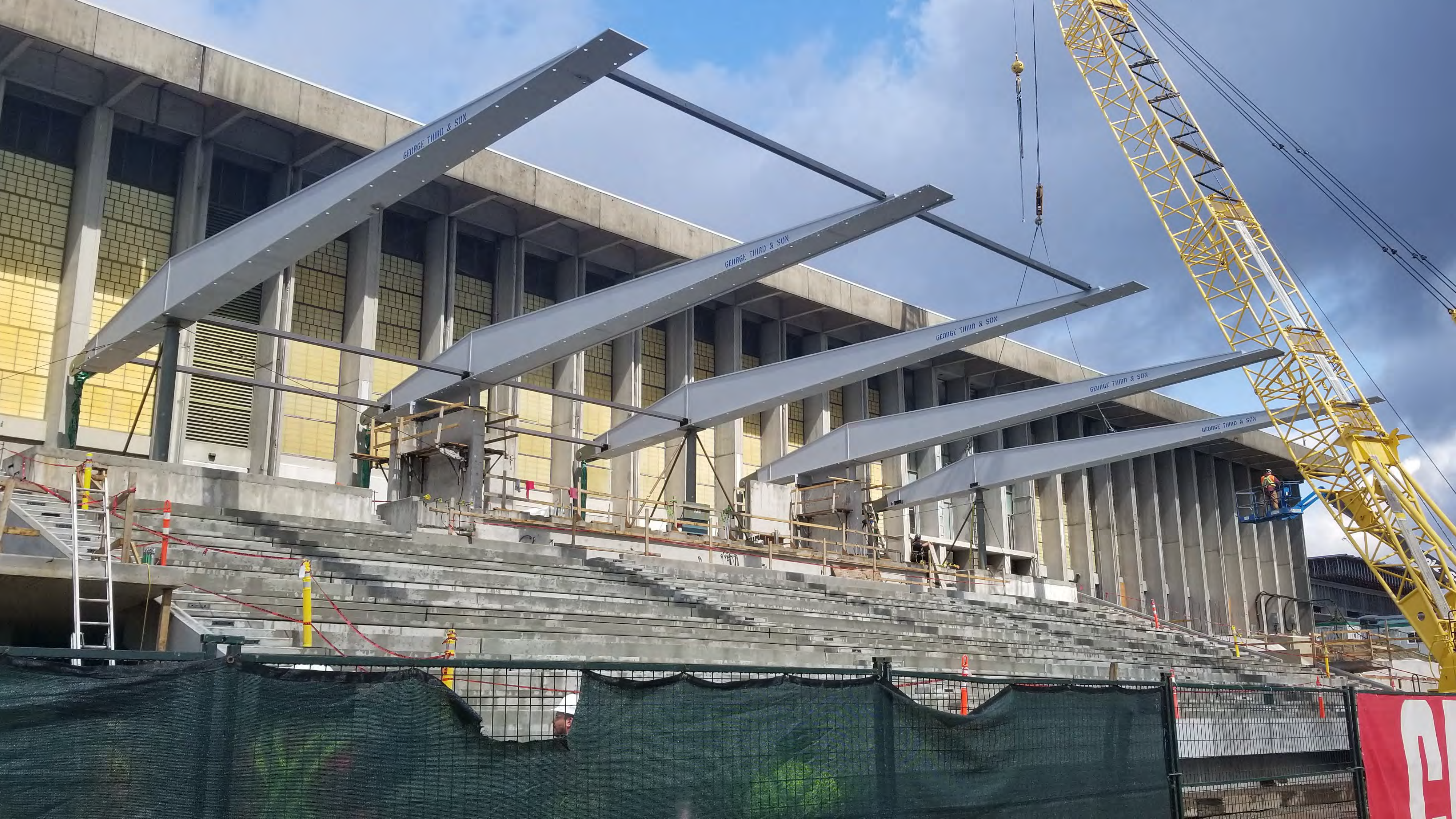


WESTHILLS STADIUM
Langford, BC, Canada



NCAA Team  **CANADA'S NCAA TEAM**  *Canada's NCAA*

SFU GRANDSTAND
Vancouver, BC, Canada
Perkins + Will Architects



GEORGE THIRD & SON

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GEORGE THIRD & SON

GEORGE THIRD & SON

GEORGE THIRD & SON









BEAR CREEK PARK

Surrey, BC, Canada
Stantec Architecture



+ Ambiente = Höhere Mieteinkünfte





FAST + EPP HOME OFFICE

Vancouver, BC, Canada

f2a Architects









PORT ROYAL

New Westminster, BC, Canada
Ramsay Worden Architects







+ Risiko Bereitschaft





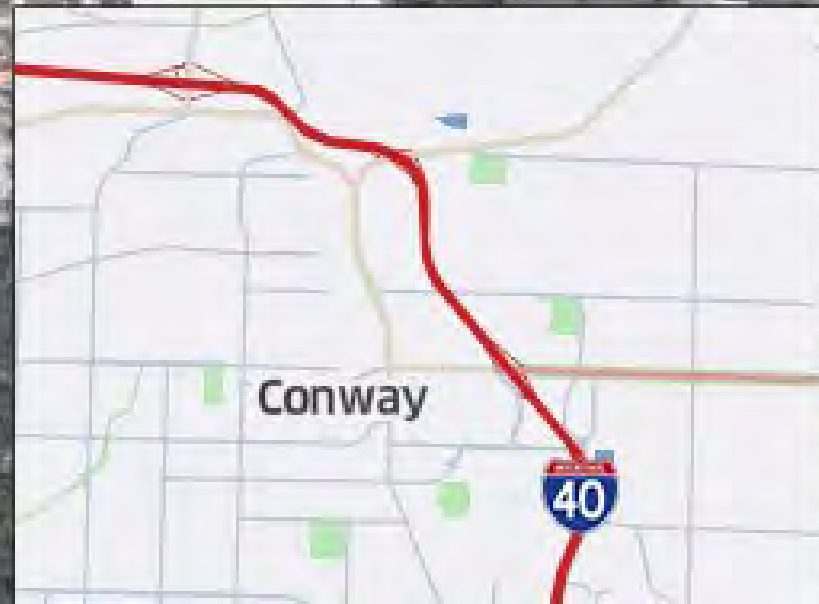
WALMART HOME OFFICE CAMPUS

Bentonville, AK, USA

Gensler

Structurlam Mass Timber Corp.

1800 Sturgis Road, Conway







Thank you!