

POWER 'UNDENIABLE'

While the "tall building is a controversial type of structure, its prevalence and power remains undeniable," says Prof. Brian Sinclair of the faculty of environmental design at the University of Calgary.

"Across the globe, more and taller towers are being designed and developed. The Burj Khalifa in Dubai, for example, reaches higher than any building on the planet. "In this studio, the students were challenged to con-

sider this architecture's fit within Calgary — and to push hard to respond sensitively and sensibly to important qualities of the building that might make it more successful on environmental, esthetic, functional, social, cultural and sustainable levels.

"To these clever, curious and talented architecture students, the sky was the limit."

— Richard White



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The Burj Khalifa tower in Dubai is 2,717 feet tall — the biggest in the world.

Sky's the limit for students

Iconic buildings imagined for city

In the '70s, the Calgary Tower stood head and shoulders above all other buildings downtown. It was truly an icon — a beacon that could be seen from all four quadrants of the city. Now it is hidden in a maze of office, condo and hotel towers, with only glimpses of its red flying saucer-like observation deck poking out here and there.



RICHARD WHITE

The students were given the following guidelines:

- To create a mixed-use, highly innovative, quality design building that had the power of branding for a major offshore real estate investment trust.
- It had to be a minimum of two full city blocks downtown — an area including Beltline and East Village. While the site was at the discretion of the students, they had to provide a site analysis and an explanation of why they chose it.
- It had to have a minimum gross area of development of 3.7 million square feet — about twice the size of the Bow Tower.
- The project also required a minimum height of 1,640 feet high — 2.5 times taller than the Calgary Tower — with a minimum of 100 floors.
- The students had to provide at least one main tower, with consideration of additional buildings as part of the overall land development.
- The project must contain residential (hotel and condominium), commercial office, retail, a minimum of 30,000 square feet of cultural space, and parking.

Does Calgary need a new icon — a building that truly stands out from all the rest?

With all due respect to the new Bow, 8th Avenue Place and Centennial towers, none of these are visible from all four quadrants as you enter the heart of the city.

Have you ever wondered what Calgary's downtown skyline might look

like if someone were to construct a really tall building of, say, more than 100 floors?

Where would you place it? What should it look like?

That is the challenge that Prof. Brian Sinclair of the University of Calgary put to his students in the senior architectural studio program this year.



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Brian Sinclair, professor of architecture and environmental design at the University of Calgary.

- The development had to be buildable in the real world and would be subject to review by a professional engineer.
 - The building should "belong in Calgary."
- Sinclair's six students divided themselves into three teams of two and eagerly took on the challenge. And what a challenge it was. Architectural design is an amazingly complex process, integrating esthetics, econom-

ics, engineering, transportation, safety and sustainability, as well as social and cultural factors.

Innovation, resourcefulness and exploration are the pillars of architectural thinking and practice. The students were encouraged to tackle emergent and experimental building systems, as shown by the following examples:

SEE WHITE, PAGE J6



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BY THE NUM8ERS

264,600

The number of Albertans 65 years or older as of 2001. As more people move into the senior market, many will have disabilities, so housing will need to be more accessible.

117,700 44.5%

The number of seniors with disabilities in the province as of 2001.

The disability rate in per cent within Alberta during that year.

Source: Canada Mortgage and Housing Corp.

FROM PAGE J4

WHITE: Inspiration

Team 1: The Skystone

Cameron Ashe and Jill Jaber Akl chose a location along the Bow River at the Eau Claire Market site.

Their inspiration was the 1914 Mawson Plan for Calgary — a proposal by British architect Thomas Mawson that was never implemented — that called for this site to be home to a signature building on the river bank.

Another influence was the City Beautiful, a reform movement in North American architecture and urban planning that flourished in the 1890s and 1900s.

The intent was to use beautification and monumental structures in cities for the common good, as well as to create civic virtue and pride among urban populations.

Advocates of the movement believed that such beautification could promote a harmonious social order that would improve the quality of urban life. For Ashe and Jaber Akl, their vision was to create a development that had year-round vitality, hybridizing the man-made and natural environments into a refreshing new 21st century design statement.

The first step was to adopt a sandstone-coloured facade in recognition of Calgary's history as the Sandstone City (vestiges of which can still be found in the sandstone buildings along Stephen Avenue.)

The sculpted form of the

region's sandstone hoodoos were the inspiration for the overall organic shape of the buildings.

The students' use of fluid dynamic computer modeling allowed them to create a sensual and feminine overall building shape, making it stand out from Calgary's existing block-like buildings — which give a more masculine impression.

Several other features link the building back to nature.

These include a 60-foot waterfall or vertical river (using the building's grey water), sky gardens on the 8th, 10th and 20th floors, as well as two "parks" — one on the 80th floor, with the other on the roof of the parkade entrance.

The complex also has an enormous atrium that connects the two buildings, allowing natural light to shine into all interior spaces.

At ground level, retail and cultural spaces combine to create a more pedestrian-friendly streetscape.

In a bold move, Ashe and Jaber Akl also created a five-floor retail mall from the 65th to 70th floor — talk about elevating the Calgary shopping experience to new heights.

I am not aware of this feature in any other building in North America; maybe the world.

Team 2: The Apasstaan

Nooshin Esmaili and Branica Jovanovic chose to locate



Courtesy, Brian Sinclair

An artist's rendering of what the Skystone would look like if it was constructed.

their development in East Village, also near the Bow River at the LRT tracks.

Apasstaan is Blackfoot for "bridge." Nooshin and Branica's development is meant to act like a bridge, linking East Village to the downtown core extending all the way to Fort Calgary.

The inspiration for the crystal-like building is Alberta's long-standing resource-based mining history — from coal mining to oilsands.

This history led Esmaili and Jovanovic to conduct

some crystal-making experiments to generate ideas for an innovative structure for their building. Using the Milner-Indices Crystal Plane, they were able to study twists and turns associated with the upward forces that created the mountain rock formations thrusting out of the flat prairie.

To further this metaphor, the base of the building is a Frank Ghery-like, multi-plane glass crystal structure that reads like the foothills rising out of the flat, prairie-like streetscape of East Village.

The culture centre and retail are all placed at ground level, while offices occupy the bottom third of the tower.

An hotel is in the middle third, with condos filling the top third. Sky gardens are placed on every 10 floors, allowing tenants to have their own public space.

From an innovation perspective, mini-wind plates and solar panels are integrated into the building's facade.

SEE PLATES, PAGE J8

Courtesy,
Brian Sinclair
Prof. Brian Sinclair of the University of Calgary with students.



TALL ORDER

The work of the EVDS Senior Research Studio on Tall Buildings will be published in 2011 through the Chicago-based Council on Tall Buildings and Urban Habitat. This organization, of which Professor Brian Sinclair of the University of Calgary is a member, explores,

researches and advocates for tall buildings.

The projects will also be submitted to various architectural competitions, including the international eVolo magazine's 2011 Skyscraper Competition for students.
— Richard White

FROM PAGE J6

PLATES: Higher learning

This means there will literally be more than 100,000 of these plates moving with the wind and sun during the day, giving the tower an ever-changing kinetic shape.

Team 3: Pas de Deux

Somayeh Mousazadeh and Ghazaleh Safarzadeh chose a site in West Village (the area west of the Mewata Armouries and the Science Centre, between the railway tracks and river) right next to the Bow River.

The inspiration for their design was the prairie grasslands and it consists of two buildings that are designed to interact with each other like two pieces of grass. To accomplish this, each building rotates 30 degrees every 20 floors and is tapered at the top to create a sense of movement to the eye.

The very futuristic, Jetson-looking base of the building has bridges connecting the development to the river's north and south river banks, as well as to the LRT station to the south.

This two-tower project would consist of a 120-floor office tower and a 100-floor residential tower, with the cultural space suspended between the two.

The top of the buildings are intended to move with the breezes like a wind sock, generating electricity for the

complex.

To minimize the space needed for a parking garage, a crane system would lift and move cars into their spots, rather than driving up ramps to your parking spot.

Summary

It was interesting that all three teams independently chose sites near the Bow River (rather than along the railway tracks or Beltline blocks), where their massive projects would cast significant shadows on the adjacent river pathway, as well as across the river to the north side pathway.

Another common denominator of the three proposals was how the buildings were inspired by nature and place, rather than existing Calgary architecture.

Perhaps the next generation of Calgary architects will help our city evolve from its pragmatic, prairie and pioneer esthetic to a more individualistic, iconic and imaginative one that reflects a new and unique sense of place.

From Sinclair's perspective, "the most important aspects of the studio is the diverse, remarkable and rich learning that happened as clever students tackled the well-considered, sensitive and imaginative design of their tall buildings."

"The students were charged to seek that magical place of balance between the pragmatic and the poetic, that line between what is buildable and what is incomprehensible. All teams succeeded with skill and grace."

RICHARD WHITE HAS WRITTEN ON ART, ARCHITECTURE AND URBAN CULTURE FOR MORE THAN 20 YEARS. HE IS DIRECTOR OF STRATEGIC INITIATIVES AT RIDDELL KURCZABA ARCHITECTURE. E-MAIL HIM AT RICHARDW@RIDDELL.CA



Photos courtesy, Brian Sinclair

Prairie grasslands inspired the design of Pas De Deux concept.



More than 100,000 movable plates are part of the Apasstaan design.



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BRIAN SINCLAIR, UNIVERSITY OF CALGARY