



Fig 1. From the stacking of cantilevered homes on the West Vancouver mountainside, to the forest of towering Douglas-firs and high-rises across the inlet, Vancouver is a vertical city by nature.

ARCH 384: Competition Elective Essay

Precedent and Initiative in Architectural Design Statement:

“The works of the past always influence us, whether or not we care to admit it, or to structure an understanding of how that influence occurs. The past is not just that which we know, it is that which we use, in a variety of ways, in the making of new work.... The typology argument today asserts that despite the diversity of our culture there are still roots of this kind which allow us to speak of the idea of a library, a museum, a city hall or a house. The continuity of these ideas of type, such as they are, and the esteemed examples which have established their identity and assured their continued cultural resonance, constitute an established line of inquiry in which new work may be effectively grounded.”

The Harvard Architectural Review. Volume 5. Precedent and Invention. Between History and Tradition: Notes Toward a Theory of Precedent. John E. Hancock.

Canada's West Coast has cultural and architectural roots based on an enduring collective love of its natural surroundings. In Vancouver, urban planning has been a marriage of architecture and landscape; and unlike most other jurisdictions that strive to create cities with many green spaces, North America's only jurisdiction with an elected parks board continually works towards building a garden out of its city. Vancouver's challenge is to maintain its living standards, lush vegetation, and scenic vistas, while attempting to further push the limits of hyper-density, a vision that is explored in the Up! residential tower design for the 6th annual SSEF Design Competition. Vancouver's density is the result of the very geographical conditions that continue to make it the destination of people willing to pay high prices for slivers of real estate. Completely surrounded by ocean, coastal mountain ranges, crown forests and Agricultural Land Reserves, the city literally has nowhere to expand but up.

As the youngest major city on the continent, Vancouver has a downtown density surpassed only by Manhattan, with 105,000 residents living in 2 square miles.¹ An aerial photograph of Vancouver would show few signs of surface parking anywhere within the downtown peninsula, as the city approaches a build out, and all available sites for high-rises have been filled by residential and mixed-use towers over the last decade. As single-family house prices in the GVRD approach the \$900,000's² - becoming out of reach for even high-



Fig 2: Experiential section of the West Coast urban landscape

income households - the demand for condos is at a historical high. Yet much of the current condo boom is centered throughout the region's suburban town centres rather than in the downtown core due to the scarcity of sufficiently sized sites. The potential for further densification of downtown Vancouver now lies in the redevelopment of unconventionally small sites and the creation of livable spaces in close proximity to each other.³

Instead of producing striking forms solely for provocation or distinction, the ideal of architectural design, specifically for the West Coast, pursues visual harmony with climate and landscape that can be applied to an entire region and its way of life, resulting in a vernacular that is very particular to its natural setting. Local architects are regarded as among the best in North America, credited with buildings that evoke Frank Lloyd Wright and Japanese influences, creating various permutations of the West Coast style. For this reason, developers rarely seek the help of star architects and the international spice that they offer, as the concept of outside help is counterintuitive in a city that already shuns the notion of architecture for the sake of architecture.

While the strict design guidelines for development in Vancouver generally maintains a humane and aesthetically-pleasing kind of architecture, they frequently result in a bland sameness among the buildings, most noticeably in the endless rows of glass condos built within the last decade. The vast majority of them are roughly 300 ft tall, built to within inches of the downtown height restrictions imposed by view corridors, indicating that the city's exhaustion of buildable space is as much a planimetric issue as it is a volumetric one. Residential floor plans offered continue to disappoint, with unimaginative room configurations, and balconies occupying exactly the 8% floor space ratio exemption.⁴ The reality of an astronomically expensive market - made even more expensive by the city's insistence on super-slender

towers and all required setbacks - results in developers often having to sacrifice architecture, but instead play with building bylaw loopholes in order to maximize interior floor space and whatever necessary to make housing affordable to a market accustomed to buying square footage.

It is during this rapid evolution of the skyline, when planners should ensure that by the end of the decade that Vancouver's downtown will become more than just cliffs of silvery ice made from slices of thin glass towers that might have been more striking in lesser quantities. Rather than applying creative architectural expressionism to individual buildings, the beauty of the city's setting should be reflected at the scale of entire neighbourhoods.



Fig 3: "A sterile row of glassy towers marching down the street"
-Joyce Drohan⁵

With rain being the only weather factor, Vancouver's vertical landscape and mild temperatures allows for an environment where stepped gardens, long cantilevers and the fusion of indoor and outdoor space is both ideal and appropriate. The district of West Vancouver, with its combination of steep topography, terraced homes, cantilevered glass boxes, and lush vegetation is to many the ultimate in West Coast living. For all its beauty, the lush mountainous suburb is however unsustainable, as the richest postal code in the country also happens to be one of most sparsely populated. Besides the issue of density, the reality is that families that continue hoping for the desired suburban life end up affording little more than treeless cookie cutter heat island conditions, hours outside of city limits.



Fig 4: A recent residential redevelopment in Richmond advertised among its selling points the preservation of a single mature oak tree on site amidst the townhouses.



Fig 5: Same development on satellite imagery

In suburban Vancouver, along with increased pollution and traffic, the subdividing of lots and abundance of infill developments in previously single-family neighbourhoods have been increasing the density of suburbia at the cost of the green space that drew people there in the first place. As the general disillusionment with suburban life continues on, only two solutions are evident: kill the suburb or offer an alternative. The only way to realistically provide twentieth century lifestyle ideals within a 21st century context is to embrace hyper-density and rethink the concept of proximity.

The Up! residential tower design takes the gardens, hedges, trees and privacy that suburbia used to offer, and explores the possibility of orienting them vertically. While most downtown residential towers

are characterized by diligent landscaping around their trademark townhouse podiums to provide for a humane environment at street level, the same is not done for the tower portion, as if under the assumption that parks and terraces can only exist on the ground. Efficient application of building regulations tend to leave most residential towers with tiny balconies protruding from sheer walls of glass, providing spectacular views, but allowing little integration of interior and exterior spaces and effectively stranding occupants in boxes in the sky.

However, all of downtown Vancouver is zoned as "discretionary", ⁶ making it is a privilege and not a right to build. As in much of the city, project approvals are granted based not on the meeting of building codes but on good design; therefore a relaxation of code requirements is possible for every project, granted that the city receives benefits in the form of amenity, pedestrian experience and good architecture. The policy framework is there to encourage denser, more beautiful buildings, but few developers are willing to make the investment.



Fig 6-9: Street level treatment of downtown residential areas. The integration of building and street are achieved with dense planting, water features, townhouse podiums or small ground level floor plates to allow for generous landscaping.



Fig 10: Evergreen Building

Arthur Erickson responds to the Vancouver landscape by creating part of it out of an office building. The Evergreen Building was completed in 1980 as a 10-storey trapezoidal structure, with receding zigzag and linear floor plates to create terraces that open up the work environment, providing every floor with the “executive pleasures”⁷ found in few other office buildings. The building is the inspiration for the Up! residential tower design, as an example of urban landscaping and “a model of a new, more intimate and transparent working community - a clustered form that allows both for privacy and sociability...equally relevant to how we might re-think city housing.”⁸ Over the course of 27 years, the building has become an inspiring lesson in urbanism to architects and planners, and providing much needed horizontal lines in what has become an entirely vertical street scape. However, because it did not meet the 20-year requirement for the 1990 Recent Landmarks inventory, it has yet to be designated as part of the Vancouver Heritage Register. The owner, who commissioned Erickson for the project in 1980, decided in 2003 that the building’s small floor plates are no longer ideal in an office market, but rather suited for residential

conversion given the abundance of patio space on every floor and the high residential demand in the area. As the building’s floor area is well below the permitted FSR for the site, a 4-storey addition is proposed to make the conversion economically feasible. City planners disapproved, citing lack of parking, a certain detraction from the original architecture, and the unfriendly impact of the extra height to residential towers that have sprouted around it since the mid 1990’s. The owner wishes to retain the building, but if a profitable conversion to residential is not possible, it would be much easier and cheaper to replace the Evergreen with a 300 foot tower.

Nicolas Olsberg, former director for the Canadian Centre for Architecture, stresses the value of saving this icon of Vancouver architecture:

“Evergreen translates to a modest, economical everyday workplace the great ideas of Robson Square - using the building itself to shift the levels of the cityscape and the scale of its forms to relieve the relentless up and down procession of tombstones on a grid of roadways, walls and alleys...Evergreen does not just talk to the topography of Vancouver, but it helps to make it, building a little mountain at the water’s edge that reflects the great slopes of terraced homes, rock and greenery on the other side of the Strait. With its white marine trim, dark glass and twisting shelves of balcony, it reconciles the lively disorder of the harbor front to the rigid scale and corporate geometry in the forest of towers behind it...Above all, by sending green space gently skywards, it serves, like an ancient hanging garden, to draw nature into the backdrop of the street scape...Letting this piece of the city’s landscape go now would mean not just pulling down a landmark in the history of architecture, but tantamount to tearing up something that is becoming a parkland.”⁹



Fig 11: View of Evergreen building with 4-storey addition and Up! Residential tower

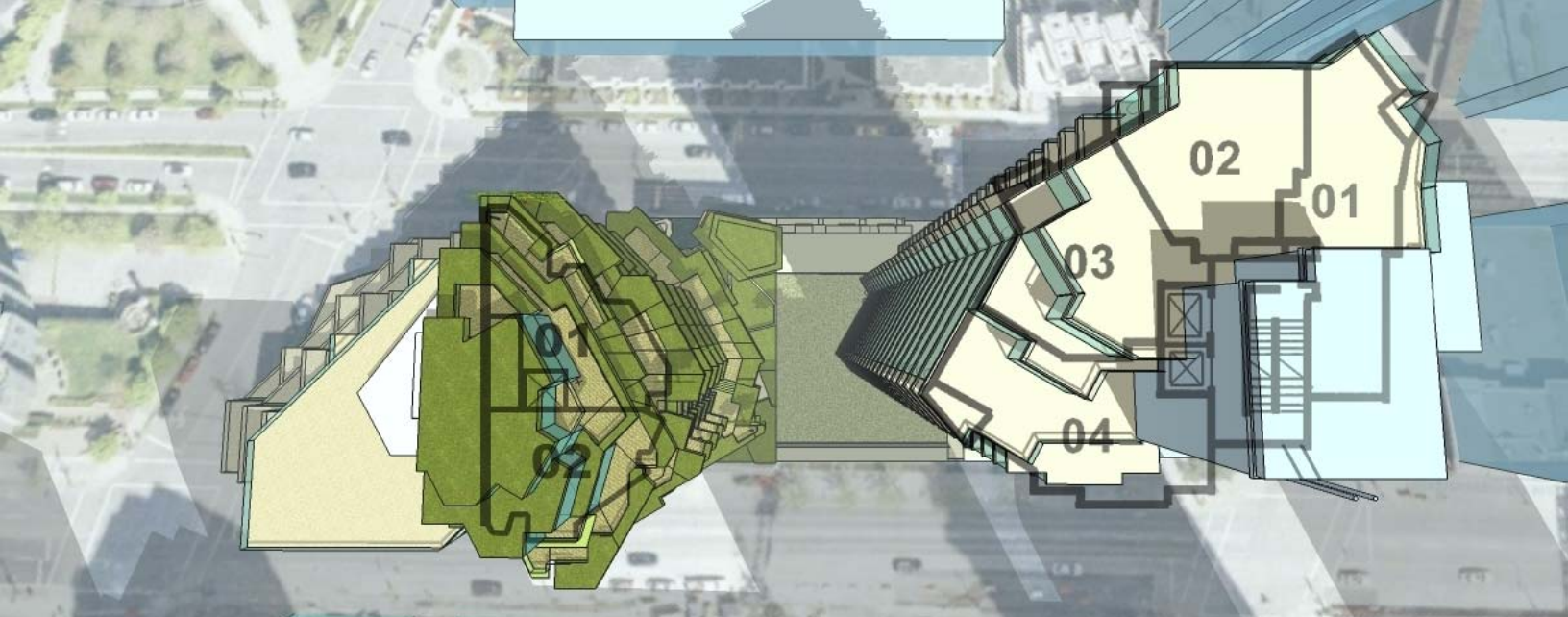


Figure 12: Proximity of Up! Residential tower (left) floor plates with those of neighbouring 1228 W. Hastings St. The terrace for Unit 02 is separated from the balcony of Unit 04 of W. Hastings by a distance of no more than 36 feet.

In 2006, the Evergreen was granted heritage protection while the owner sold the property and received a heritage density transfer. The building will continue to provide office space, a scarce commodity in a 90% residential downtown.

Erickson designed the Evergreen as a stairway into the anticipated urban jungle growing around it, expecting it to be abutted by even taller buildings. As such, the elevator core is located to the east, facing the city with a mostly blank concrete wall deemed unfriendly by those living around it, especially residents of a tower 100 feet east of the Evergreen building at 1228 W Hastings St. The Up! Residential tower is located on the site immediately east of the Evergreen and west of 1228 W Hastings, thus will complete the blank facade of the former while oriented towards the latter. The design, based on an exploration of hyper density, therefore assumes a somewhat friendlier version of the unrealized 4-storey addition to the Evergreen Building and thus attempts to reconcile it spatially and architecturally with the neighbourhood around it.

The tower is characterized by extensive terraces and landscaping on every floor, which offers far less to the developer by way of financial return than if the floor area is glazed in as interior space. However the accessibility of green spaces in all levels of a multi-layered city is vital in ensuring that a healthy quality of life can accompany increased density. When interior living spaces are integrated with the peace and tranquil of small-scale private gardens, it is possible to bring the comfort of suburbia back into the 21st century city. Being a place where it is a privilege and not a right to build, Vancouver carries a discretionary approach to urban planning, so that when the importance of landscaping is realized, provisions can be made to exempt vegetated spaces from building FSR's. High-density residential developments in Vancouver typically feature towers spaced 80 feet

apart, a waste of an excessive volume of empty air. Conversely, if the tower is well proportioned in relation to its neighbours, sufficient views and even better privacy can be achieved with landscaping to a depth of up to 15 feet on either end of that distance, on top of a reduction of the overall separation by 20 feet, thus improving the quality of open space while reducing its quantity.

The tower's shape resolves two issues inherent with its siting: the intrusion of its massing into street and harbour views from 1228 W Hastings; and the loss of privacy resulting from the close proximity of the two residential towers. From a design perspective, the floor plates take the shape of ginkgo leaves, while the elevation is reminiscent of a tree. The elevation's staggered shape is conceived after a study of Taipei 101, from which the 8 articulated sections of the superstructure is viewed by many to be resemblant of a bamboo shoot. Its 22 stories consist of 7 floors



Fig 13: Taipei 101



Fig 14: Tower in context of neighbourhood

receding down to a 2-storey lobby and amenity space; 10-floors of two-storey units making up the main section of the tower, which rises to meet the top of the Evergreen building; and a 5-storey “bulb” projecting above it to house the penthouse and sub-penthouse. The tower is anchored by an elevator core which abuts the concrete face of the Evergreen building. Floors 8-17 consist of two-storey apartments such that only one layer of terraces is required for every two floors, allowing for larger trees to be planted as part of the landscaping.

The floor plates taper towards the Evergreen building at both ends, such that the massing does not introduce any new obstructions of the view from 1228 W Hastings. The tapering also means minimizes shadow effects over Jarvis park, as the tower's shadow will be almost entirely within the shadow caused by Evergreen. The additional 5-stories extending above the height of the Evergreen is staggered towards the west and away from the harbour so that from 1228 W Hastings the volume will be largely within the part of the skyline already obstructing the view of the mountains. The ground floors have the smallest floor plates, allowing for extensive landscaping and views across Hastings St towards the marina and Stanley Park from Pender street, that are obstructed by the current low-rise building on site.

Opposite, from top to bottom:

Fig 15: Emphasis on stacking of horizontals

Fig 16: Model of neighbourhood with tower

Fig 17: 18th floor terrace



Despite the close proximity between the two buildings, the units within them are not directly oriented towards each other, but rather towards coal harbour, Jervis park, and W Pender Street respectively. In addition a fair amount of privacy is maintained due to the vegetated terraces, which limits daytime visibility into the units by providing heavy shading over the floor-to-ceiling windows; and by bringing nature close to each unit, decreases the scale of the what is considered an appropriate visual buffer. This pattern continues up the 20 levels of residences, sending shelves of vegetation soaring towards the canopy of Vancouver's urban jungle.

This application of Arthur Erickson's terrace building typology is thus stretched skywards by the stacking of green spaces, elevating the experience from the slope of a mountain to the slope of a tree on the mountain. The tower, relatively small in comparison to the forest of skyscrapers around it, sets a precedent for the "layered" look of the urban landscape that continues to densify around it, even as the neighbourhood appears already saturated. It responds to the vision of the Evergreen Building profoundly and completely, fully integrating it with the Vancouver skyline with a tree extending out from "the moss-and-fern-grown ledges of rock that rise up a bank on the shores of a real forest." ¹⁰



Endnotes:

1. <http://www12.statcan.ca/english/census06/data/popdwell/Tables.cfm>
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Images:

1. *Photograph of downtown from West Vancouver*
2. *Experiential section of west coast urban landscape*
3. *Photograph in Coal Harbour*
4. *<http://cassisliving.ca/about.html>*
5. *Google Earth imagery*
- 6-9. *Photographs in Coal Harbor*
10. *<http://www.lestwarog.com/evergreen/index.html>*
11. *View of downtown with rendered Evergreen building addition and Up! Residential tower*
12. *Site plan of Up! Residential tower and 1228 W. Hasting St*
13. *http://images.businessweek.com/ss/07/03/0315_skyscrapers/image/1-taipei-101.jpg*
14. *Photograph from Coal Harbour rooftop with tower rendering*
15. *Rendering of tower in neighbourhood*
16. *Photograph of tower in neighbourhood model*
17. *Rendering of rooftop terrace*
18. *Photograph of West Coast suburban landscape*