

T E R O N

S C H O L A R

**2 0 1 5**

C A N D I D A T E S

B O O K 1 O F 3

First Year + Second Year Students

SUBMITTED AND SELECTED WORKS FROM

# First Year Students

STUDIO 1 : ARCS 1105  
Bachelor of Architecture

Christophe Young ————— 04

Kathryn Vanbakel ————— 10

SUBMITTED AND SELECTED WORKS FROM

# Second Year Students

STUDIO 2 : ARCS 2105 + STUDIO 3 : ARCS 2106  
Bachelor of Architecture

Kareem Mitchell ————— 16

Thomas Brintnell ————— 22

David Anderson ————— 28

Jonathan Miura ————— 34

# WAVE PAVILION

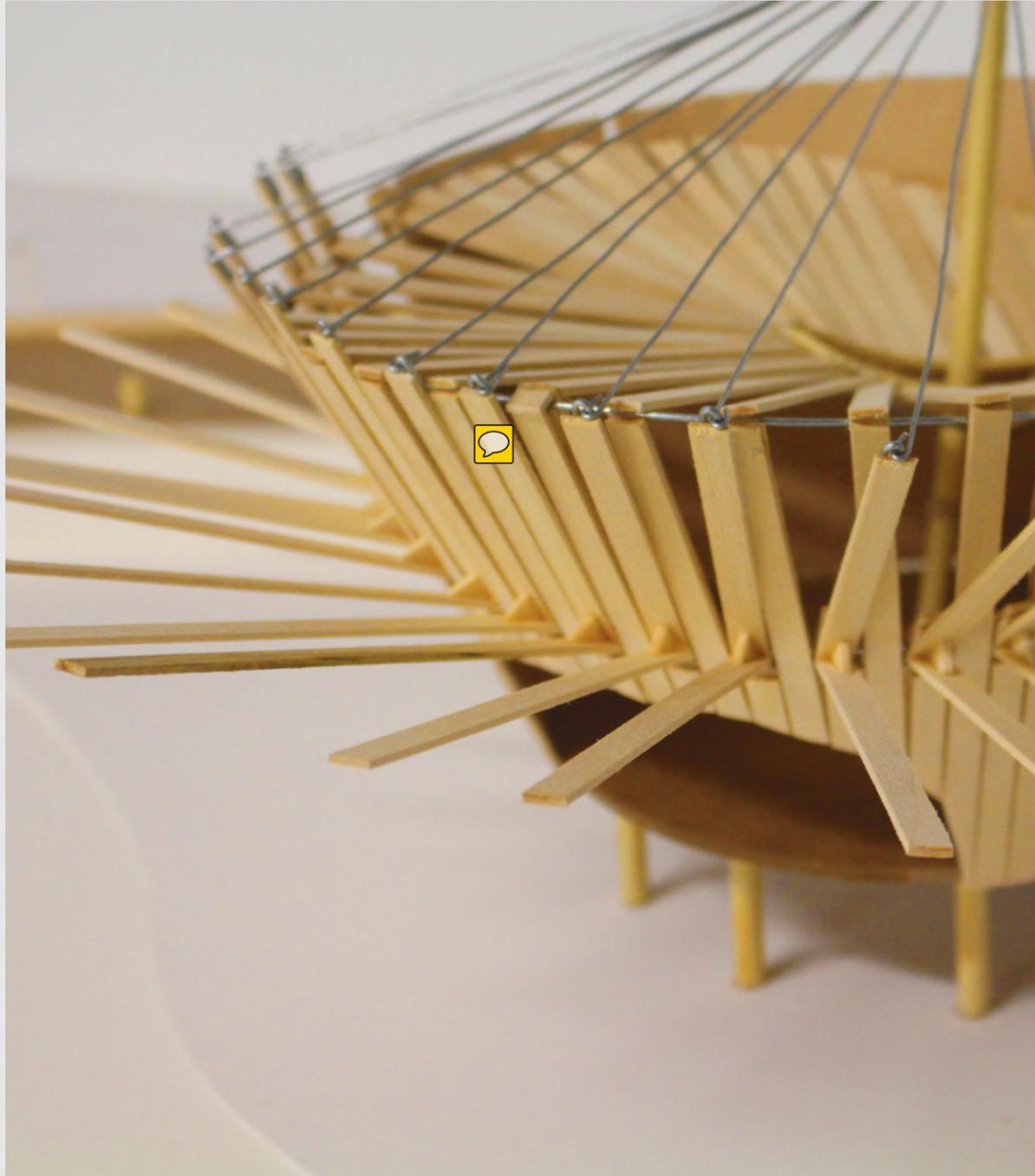
ARCS 1105 : First Year Student

Christophe  
Young

Hometown : Cornwall, Ontario

Age : 18

The nature of the project explored and created in Studio one delicately balanced the relationship between form and function, beauty and practicality. Beginning with the exploration of many talented and intuitive artists, architects and engineers such as Robert Van Embriqcs, Theo Jansen, Calatrava, and the many designers of the NY Highline, I quickly began to reverse engineer these projects, pick apart their intricacies, and expand on the fundamental elements these artists conveyed in their work. Most relevant to my work were the themes of wave movement, whether it be seismic, sound or light; the static wave and last of all the relationship of transforming or flexible design directly derived from Van Embriqcs many projects. Creating an interactive, harmonious and fluid pavilion that would reflect the needs of the people, the economy and the environment proved to be a challenging but in the end a very rewarding experience.



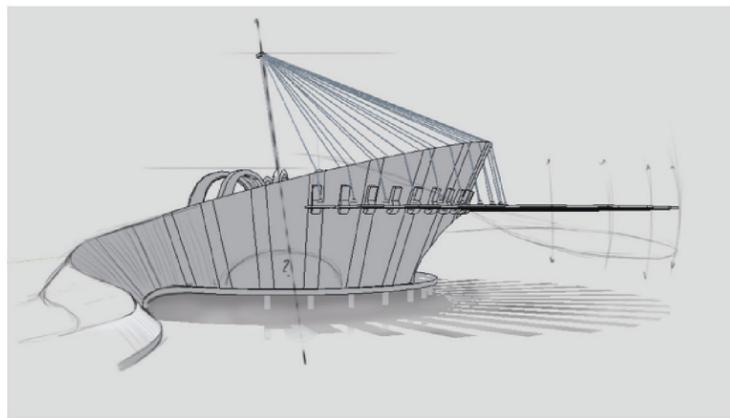
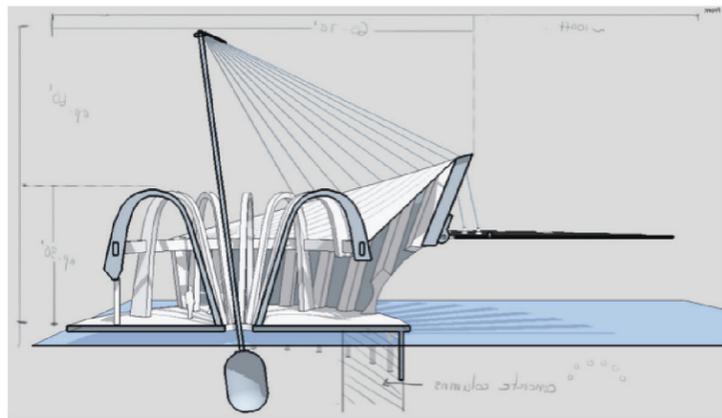
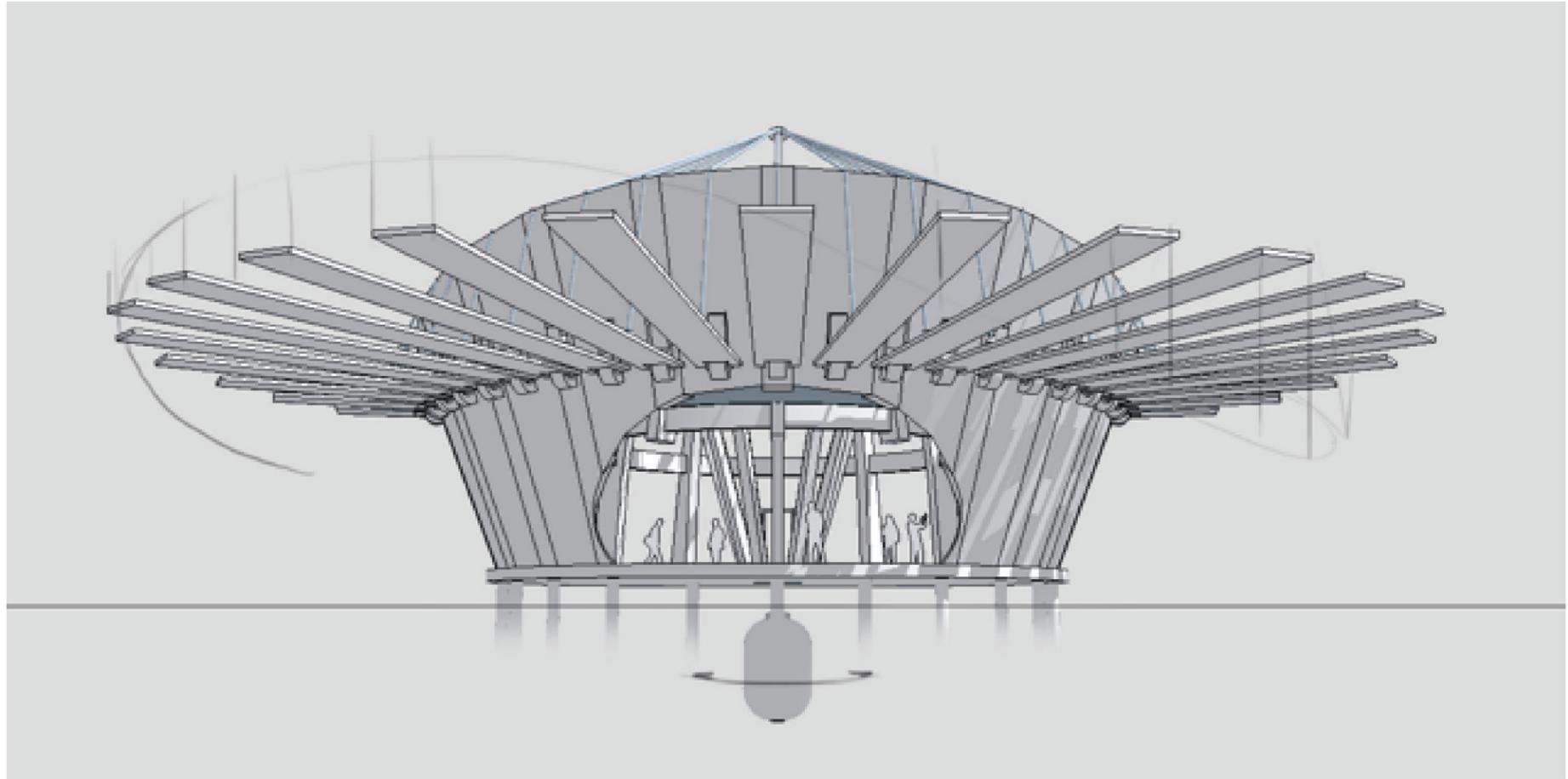
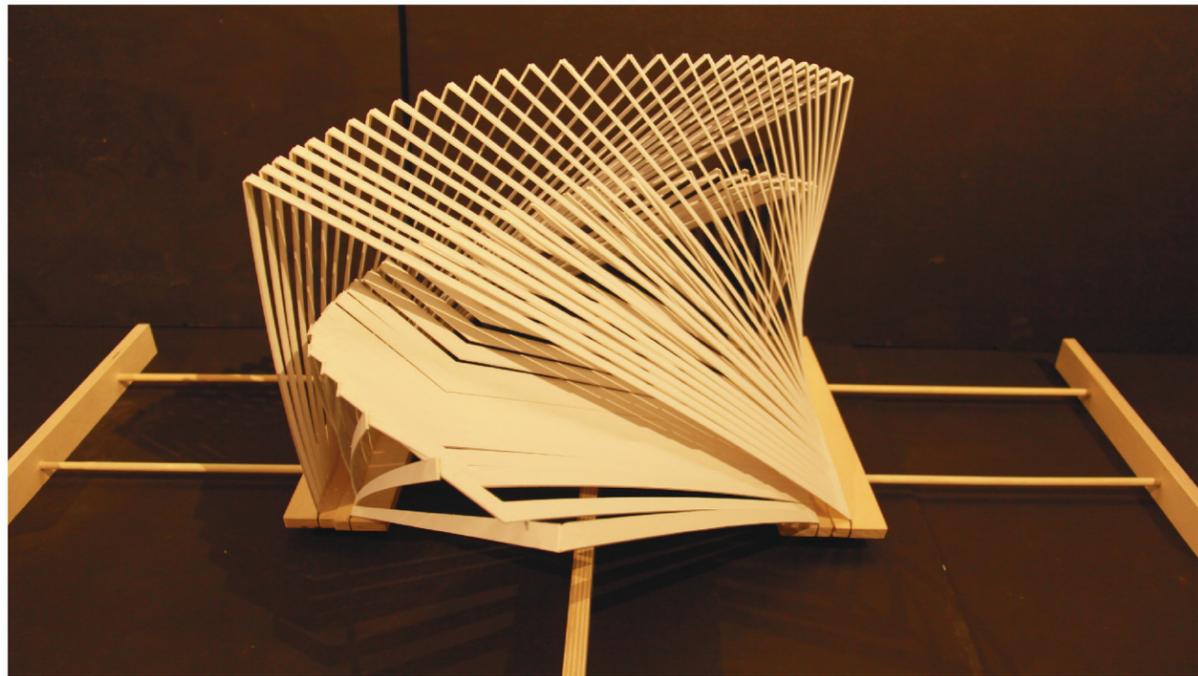
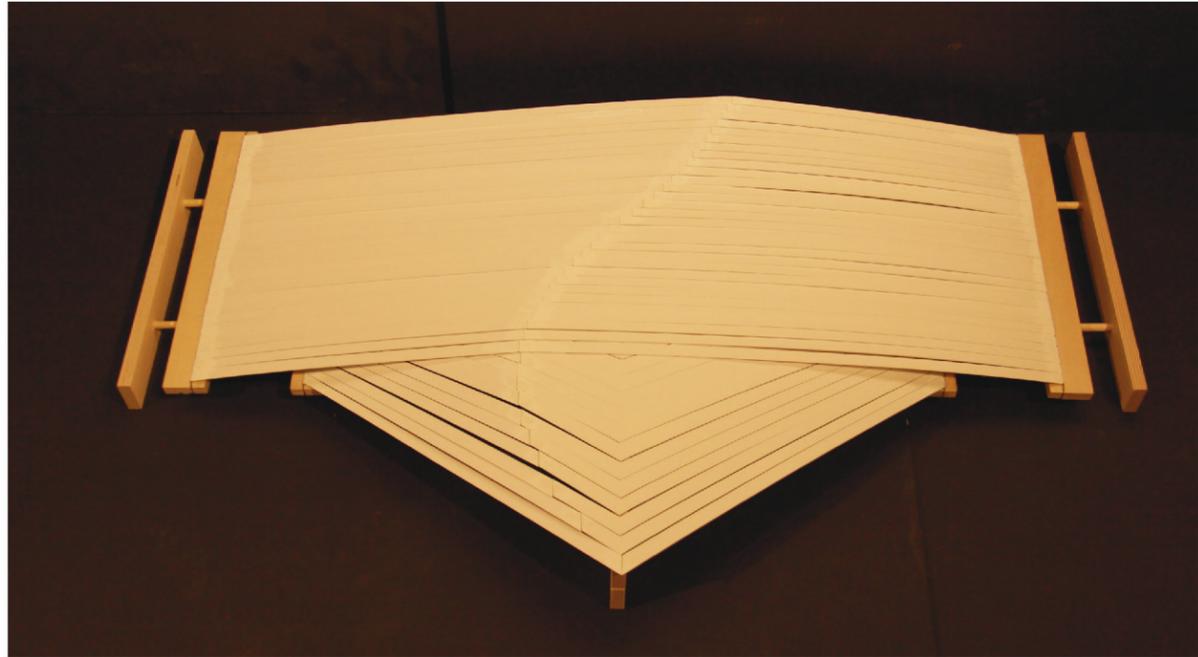
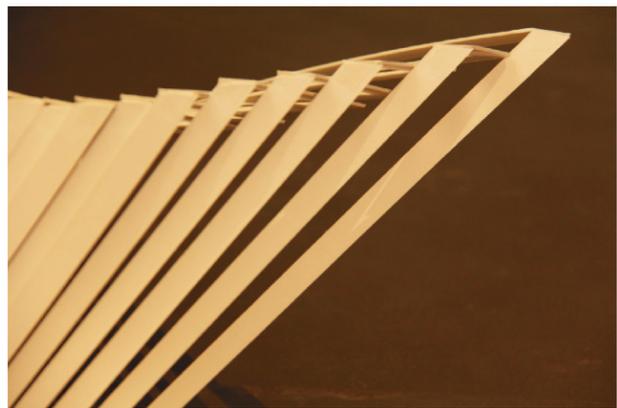
The pavilion project assigned at the end of Studio 1 was a major step into the architectural world. Designing for a practical purpose and not only for sculptural or esthetic value was not only more exhilarating but also a much greater challenge then expected. Luckily, over the course of the semester, I was immersed in the work of artists, architects and engineers who in there work perfectly combined form and function. Robert van Embricqs, a Dutch designer, demonstrated perfect harmony of these elements in his rising furniture designs. The large wooden sheets of wood, sliced and hinged along elegant curves transformed into esthetically pleasing pieces of furniture with the application of a compressive force while keeping its required function and level of comfort. To expand on his designs, I first recreated one piece of his rising furniture line and then explored the endless possibilities of shapes and applications. For he midterm project, I designed and built a scaled model of a two layered folding contraption following van Embricqs fundamental principles. In this project I explored the possibility of incorporating a hooking or chain reaction with both layers of the sculpture. Instead of simply transforming from a flat sheet sheet to a voluminous shape, this sculpture put in action multiple levels of transformation when compressing the top layer, like a domino affect. The sculpture achieved the static and elegant wave quality van Embricqs achieved in his flexible designs but pushed the larger scale sculptural use to a new level.

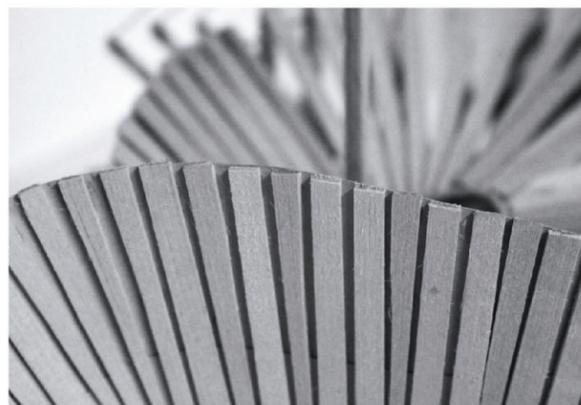
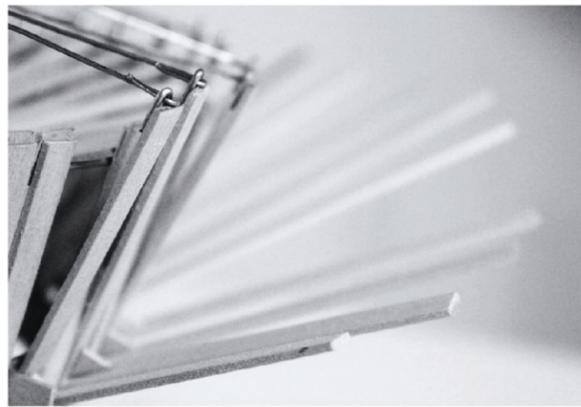
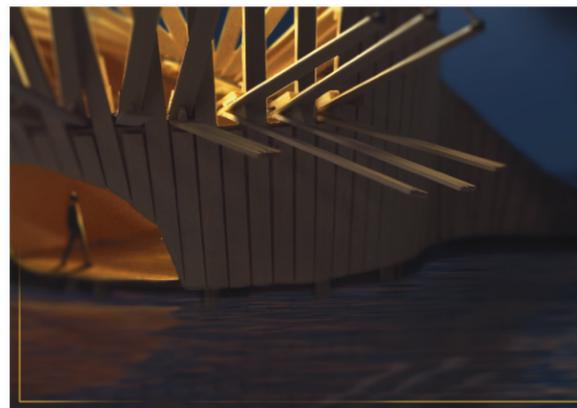
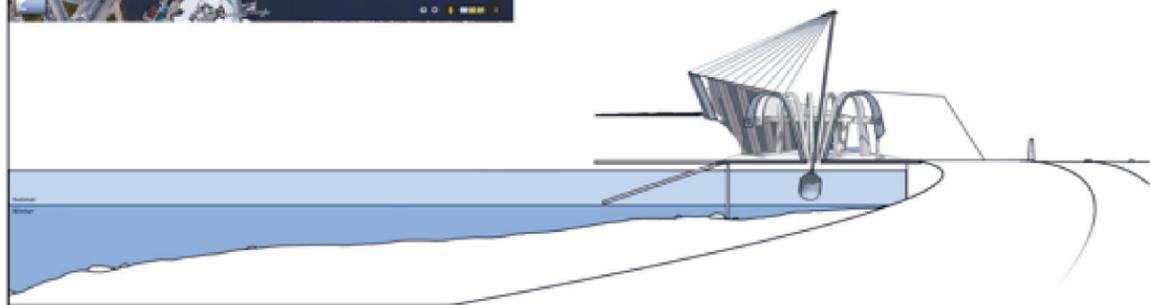
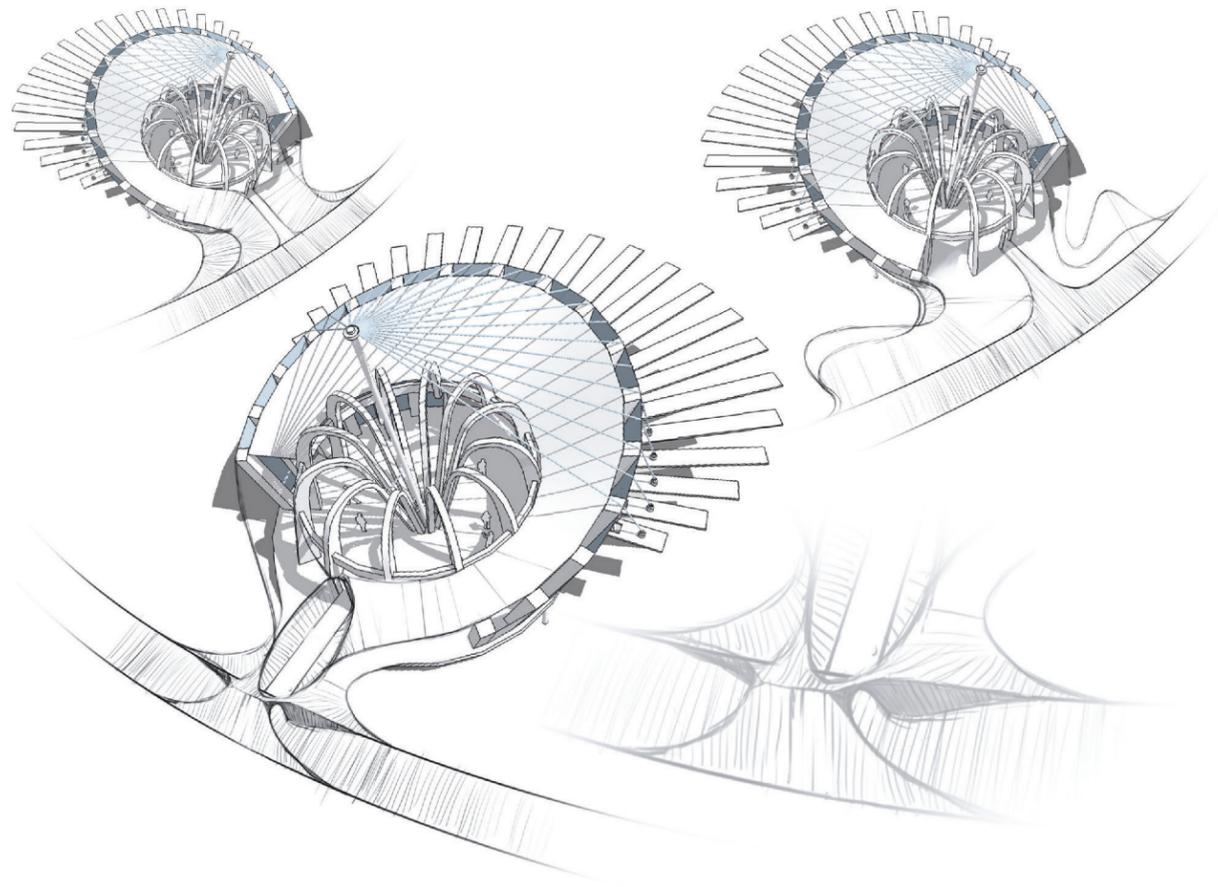
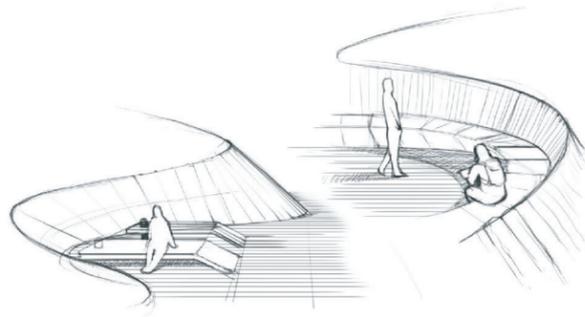
Despite achieving what was initially envisioned, a change in mindset catapulted the project in a new direction. Despite being very interactive and dynamic during its transforming phase, Embricqs and my projects sat in two, safe, structurally sound and static positions: the initial, untransformed flat polygonal state and its later transformed, three dimensional, wave-like state. With the urge to make the project more dynamic in its nature, I changed routes and began to study the works of more significant artists and architects in this domain such as Calatrava and Theo Jansen. The Calatrava wave, which uses a sinusoidally undulating ruled surface over a reflective pool of water to create a mesmerizing wave affect, was one of many projects that helped inspire later more dynamic projects. Because a large rotating motor put this wave in action, I was again challenged by the will to make a freely moving wave, without the energy of motors or man power. It is only when I rediscovered the power of pendulum waves that I instantly found a solution. The pendulum wave uses a row of pendulums, each increasing in length at a constant rate. Because the frequency of a pendulum is determined by its length alone, when put in motion, all pendulums start swinging at a very similar frequency but slowly start to stager until the harmonic length become synchronized and create a variety of wave periods and frequencies without any external force (besides gravity). This beautiful horizontal plane wave created by pendulums alone could then be transferred to vertical plane waves like Calatrava's by using T-shaped pendulums which pivoted at the T's point of intersection. The horizontal member of the T would then tilt like a lever at the exact rate of the pendulum swinging below.

After building and testing this concept, we were assigned the brilliant Pavilion project. I was now challenged to make use of all the research, explorations, discoveries, and innovations I had gathered throughout the semester. Moreover, to apply this knowledge and place a final design in an insightful location brought upon other interesting challenges. To make use of my methodical personality and work out a logical solution to the many problems I faced, I set out to find a site within the parameters assigned. Familiar with the Ottawa area, I set out to find a site along the canal which would complement the fundamental elements of earlier explorations and the

several ideas I had in mind for a pavilion. The Dows Lake board walk which started at the Dows Lake Marina and ended under park trees was the perfect site. Just short of 4m wide and a couple hundred meters long, the board walk offered many elements that would help convey an insightful and well conceived design. Of course, the boards cladding the dock were materials I could take advantage of and create interesting ruled or translated surfaces with, and the vast expanse of water could possibly be used as a mirror or power source. Overall, the textured materials, location and orientation of the site would help enhance the character, purpose and meaning of the pavilion. Also, the site, being a victim of Canadian weather, changed radically during the winter. The dropping water levels, the freezing lake, and the abundance of snow and ice indicated the possibility of changing the pavilion's program during the winter season to adapt and stay practical during these long winter days. The summer was known to be very hot and humid, high water levels, high boating circulation on the water and sometimes very windy. All of these things could be taken advantage of if incorporated into a design correctly.

After inspecting all the different facets of the project, I made the decision to design a boathouse and rental pavilion for the summer and a warming shelter, skate rental or bevertail cuisine for the cold winter. To incorporate the static, ruled wave van Embricqs used in his rising furniture designs, I designed a shell for my pavilion, which starting from the board walk, uses the existing materials in an innovative way. The boards slowly lift from the board walk and transform into the exterior walls of the pavilion. Due to the nature of the shape given to the shell, it can be built flat aside and then wrapped around frame work overhanging the water. An opening from the boardwalk side receives visitors from land and a lager opening cut into the facade receives canoeists and kayakers from the water. Boaters have the option to dock around the pavilion and on an extruding dock. During the winter, this dock drops into a stair case because of dropping water levels and allows skaters to access the pavilion from the ice. Still, after designing the main structure or shell of the pavilion, I challenged myself to incorporate the dynamic wave component. This would later prove itself to be an intricate and complex task. The fundamental shape of the pavilion is not at all rectilinear but rather centrally focused. This made using a row of freely swinging giant pendulums to create the wanted affect impossible and/or very dangerous and uncontrollable. To solve this problem, I researched the mathematical relations found in circles and plane waves and found an interesting solution. The inside of the pavilion is almost shaped like a torus. This allows a large vertical mast to penetrate through the pavilion. This mast, weighted by a heavy buoy, tilts slowly left, right, back and forth on a gimbal due to the currents and waves affecting the underwater buoy. Two dozen adjustable cables run down from the top of the mast and attach themselves to L-shaped wooden elements forming an overhanging awning over the water. Due to the relation the center point of a circle (the top of the mast) has to its circumference (the hinged awning on the shell of the pavilion), the movement in the mast is transferred to the awning, creating a fluttering wave above the water. The vertical elements in the awning also momentarily uncover holes in the pavilion's facade, creating a wave of light at night due to the light sources from inside the pavilion escaping. All the effects created by the awning are enhanced by there reflection on the water – night and day. Studio 1 proved to be very challenging and in the end very rewarding. The exploration and research done throughout the semester was fruitful and let to a practical, beautiful, and realistically accomplishable pavilion. Overall, it expresses the passion and work of not only the architect but also the user. Built like a boat shell, the experience of looking through the openings in the ceiling and seeing the canting mast with cables running overhead can only remind one of the intimate experience of boating on the Ottawa waters.





# ELEVATED EXTENSION

ARCS 1105 : First Year Student

Kathryn  
Van Bakel

Hometown : Clinton, Ontario

Age : 19

Looking to elaborate on my studies of work done by Mitra Fabian, I focused on natural patterns and effects of gravity when designing this pavilion. I decided to expand on an already established lookout point in the Dominion Arboretum as the site of my project. The design allows individuals to walk out across an expansive bridge, or ascend the spiral staircase from the base of the hill to reach the larger platform that overlooks the arboretum and canal. The pavilion is composed primarily of a steamed wood facade and features a frosted glass floor allowing for a dynamic interaction of light and shadow as it's natural exposure to sunlight changes throughout the day. The multiple landings found in the spiral staircase enable alternative resting points for individuals as well as areas where the arboretum and the integration of foliage into the pavilion structure can be observed. The continual growth cycles of the plant material integrated into the facade emulates ideas of morphing biology explored earlier in the semester.



When first envisioning a pavilion, I knew I wanted to create something that would reside in a natural setting. After some brief explorations of the Dominion Arboretum I realized that this was the perfect place for me to start to design my project. While wanting to emphasise the natural beauty of the surrounding landscape rather than overpower it, I also wanted to create a space that would allow others to observe it in all seasons. This led the program of my design to become a lookout tower. After finding a previously established lookout point atop a centrally located large hill in the Arboretum, I decided that this was the best possible site for my pavilion. Inspiration from my explorations throughout the semester led me to focus the design of the pavilion in several main areas. I wished to create a structure that was capable of growing and evolving with the seasons as the surrounding landscape did, while incorporating natural patterns and the effects of gravity. The pavilion's natural exposure to changes in sunlight throughout the day means that a dynamic interaction with light and shadow is possible, emulating the effects of my previous studies.

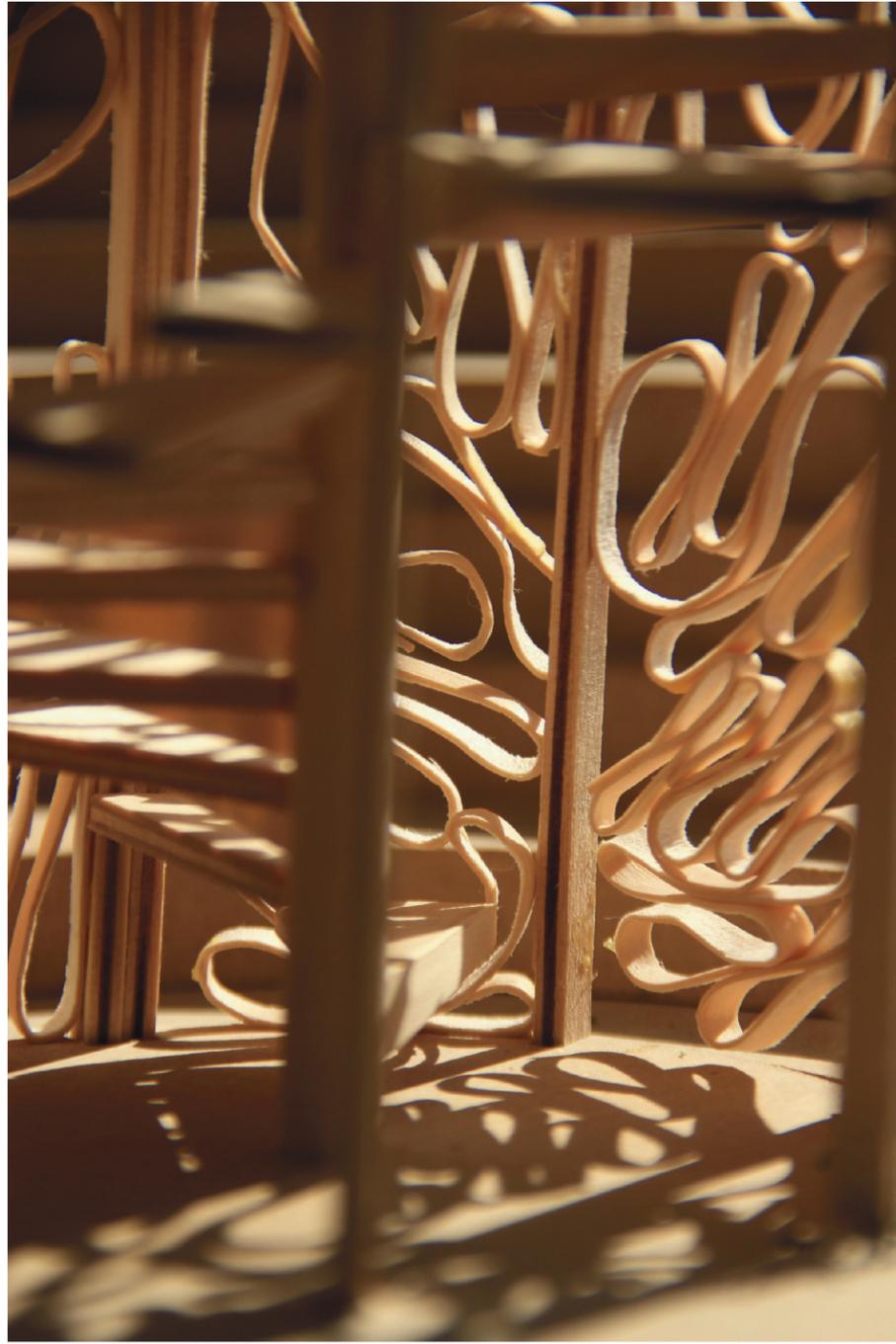
The tree trunk like structure first originated when experimenting with catenary arches found in my second study of Mitra Fabian's work. Here I had suspended ribbons of mylar over pegs and saw how they interacted with gravity and created these great inverted arcing forms. I decided that incorporating this into my design would not only create a structurally stable form, but also one that melds naturally into the landscape as it emulates the other trees in its vicinity. The design of the facade is inspired by the folding and undulating patterns created by actively modulating forms in previous studies. Rather than being formed out of mylar like in my previous studies, the pavilion's facade would be made with laminated and steamed wood. Still being affected by the compressive forces of gravity in a similar manner, the wood facade is more compact at the base of the structure and becomes more relaxed as one reaches the top. The two additional landings found within the spiral staircase of the lookout tower allow for both spaces of rest and secondary lookout points from which the Arboretum can be observed. At these places specifically the undulating folds of the facade have begun to grow in size, allowing greater windows through the structure. Due to the additional space, the vining type of plants are given space to grow amidst the facade while still leaving areas open for viewing beyond. The pavilion orientation along with the asymmetrical plan of the upper deck towards the center of the arboretum in both instances allows the lookout points to have the best possible view of the arboretum. This is so that individuals are extended and immersed even further into the environment. The frosted and translucent floor not only allows for a dramatic interaction with light observable at multiple locations within the structure, but also provides the underlying branch like structure supporting the floor the opportunity to be visible. This effect again emulates the natural structure of a tree, while the incorporation of plant material into the facade of the structure allows the structure itself to mold into the environment and participate in the changing seasonal cycles of growth. The integration of foliage into the structure also aids in the obstruction of unwanted wind and weather, allowing individuals to climb or descend the structure while being properly and comfortably sheltered from the elements.

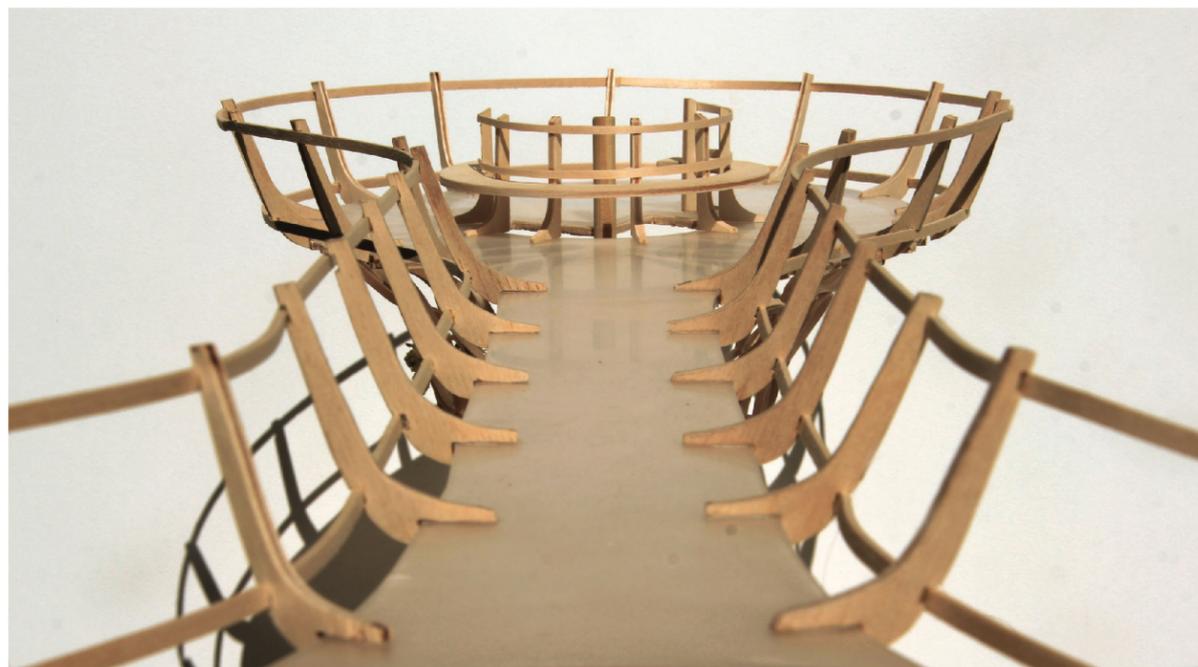
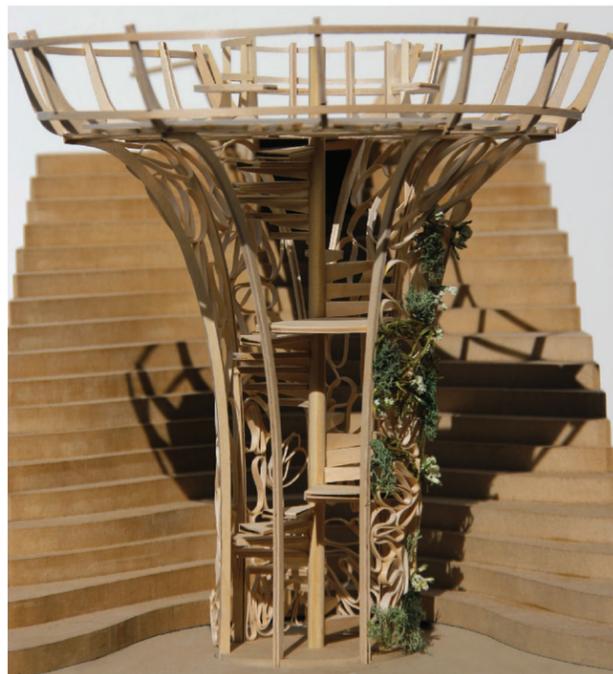
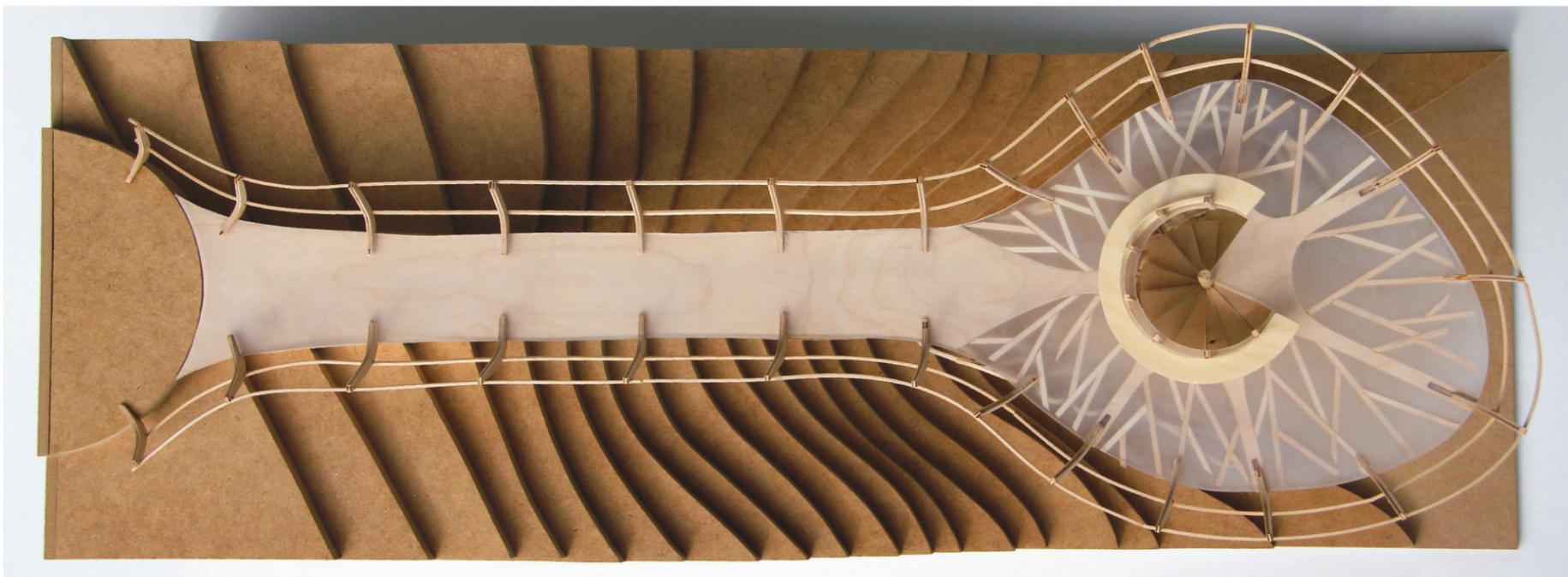
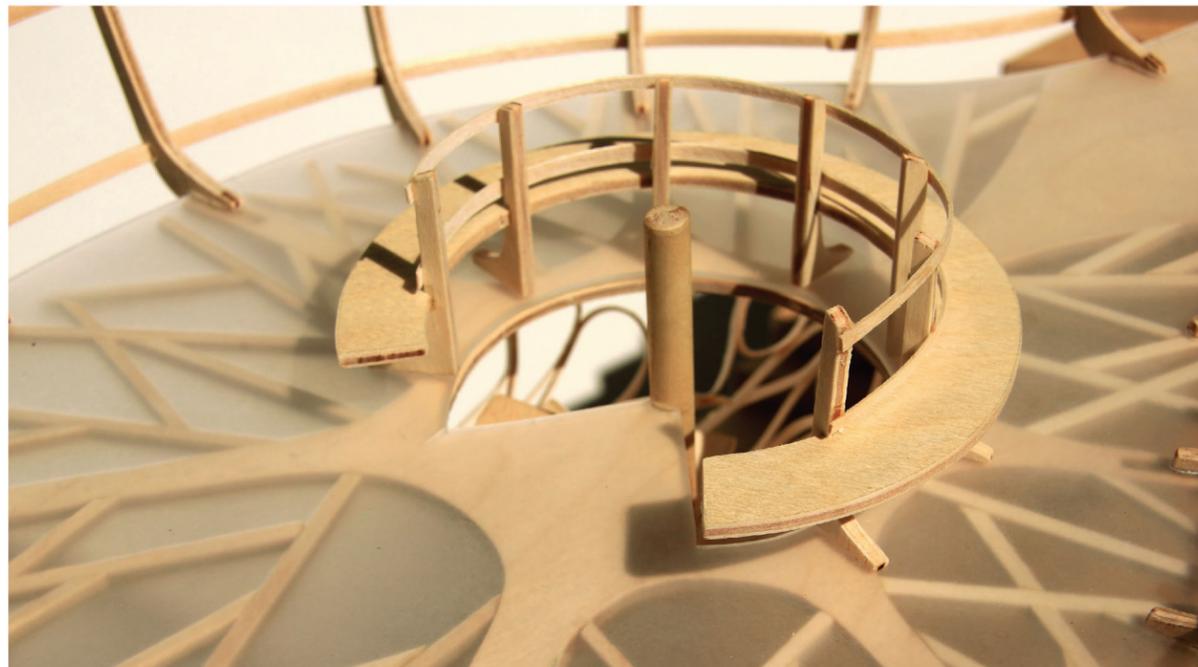
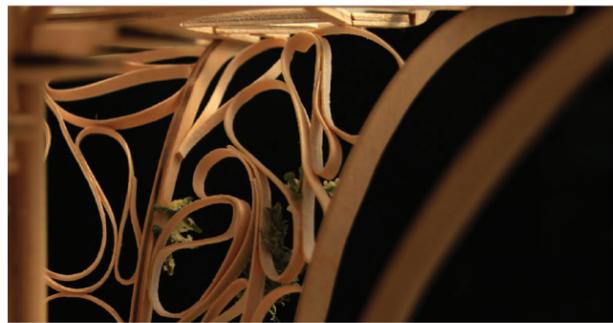
Thanks to the extension of the bridge, the tower is easily accessible in all seasons and to those with a physical handicap. I wanted to ensure that even if one was not able

to climb the staircase to reach the top deck of the lookout tower, due to a physical or natural limitation, that they would still be able to enjoy the pavilion as much as possible. The nature of the pavilion's design also creates an effect of floating for observers when positioned at the edge of the upper deck. The translucency of the flooring allows an engaging interaction with light, and the lack of visible support directly below creates a dramatic overlook emphasizing the surrounding natural environment. This immersion in the landscape again allows for the awareness of the architecture to fall away and the focus to instead be on appreciating the environment, as the plan was to not overpower the Arboretum and its natural characteristics, but to instead blend in with the landscape.

I felt that it was important to incorporate an aspect of living structure to the project as this would not only further integrate it into the site but also benefit the carbon footprint of the project. It would also create a space where the native species of the Ottawa region could further thrive. Due to the planned design and span of the bridge, recontouring the topography of the site chosen was necessary. If the original slope of the hill had been taken into account, the bridge would have required a much more extensive and structurally implausible length. Therefore the modification not only creates a more practical design but also imbeds the structure further into the site as the hill hugs around the tower.

The economic benefit of the pavilion can be seen in several instances. Not only is the building of the structure a source of construction jobs, but the continual maintenance of greenery and structure throughout all seasons will also require the employment of a team of individuals. The lookout may also serve as a type of experiment in structural and aesthetic integration of plant material into architectural projects, which may encourage other future projects to do the same.





# RAILWAY STUDIO

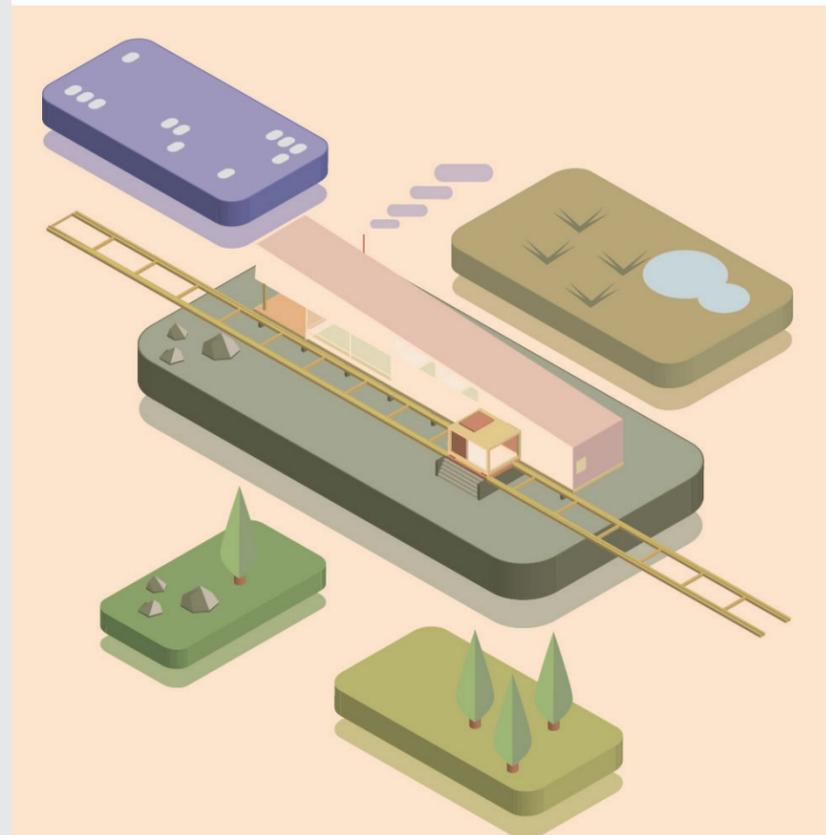
ARCS 2105 : Second Year Student

Kareem  
Mitchel

Hometown : Brooklin, Ontario

Age : 22

In Blue Rock Nova Scotia, the Sunset Rock Vacation House is intended to highlight the aesthetic qualities of the landscapes. The building's complexity is nonetheless rooted in its architectural characteristics. Designed by the Mackay-Lyons Sweetapple Architects, the Sunset Rock House was built to be a scenic refuge for a professional couple who became captivated with the distinguishing view of the ocean. The program of Sunset Rock is inherently superficial. The building is situated meters from the edge of the rocky Atlantic coastline. An open wooden terrace punctuates the nook of the house as a scope aimed towards the ocean. The house's lengthy corridor passively frames the sunset through glass walls at the end of the western wing. As an architectural aperture, the building creates a regulating filter for the owner's fascination with the sunset experience. To broaden the narrow focus of house, The Railway Studio Addition enhances the viewer's perspective through the extension of a multi-linear viewpoint. Designed for a conceptual landscape artist, the Railway Studio's program will inspire a versatile relationship between architecture and site. The mobile artist will be able to document his experiences and explore his environment in sheltered comfort.



The goal of virtual reality is immersion. A convincing world is a product of artificial stimulation and suspension of truth. Although the realization of an environment corresponds to its graphic similarity to reality, the experience is validated through the perception of the observer. One's consciousness increases through the contiguity of multiple senses. The Finish architect Pallasmaa critiques the superficiality or architecture devoid of immersion in his book titled the "Eyes of the Skin". He emphasizes that space cannot be summarized in frames by sight. "Instead of experiencing our being in the world, we behold it from outside as spectators of images projected on the surface of the retina." It is evident our sensitivity to existence is limited the less receptive we are to the encompassing features of our surroundings. In Blue Rock Nova Scotia, the Sunset Rock Vacation House is intended to highlight the aesthetic qualities of the landscapes. The building's complexity is nonetheless rooted in its architectural characteristics. Designed by the Mackay-Lyons Sweetapple Architects, the Sunset Rock House was built to be a scenic refuge for a professional couple who became captivated with the distinguishing view of the ocean.

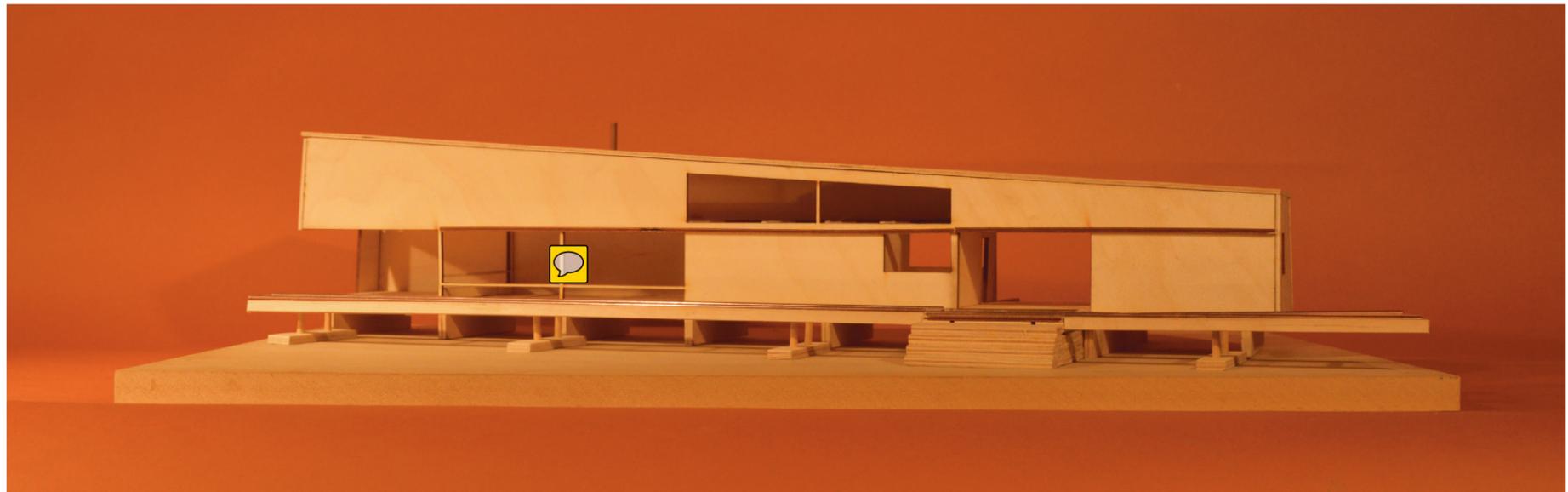
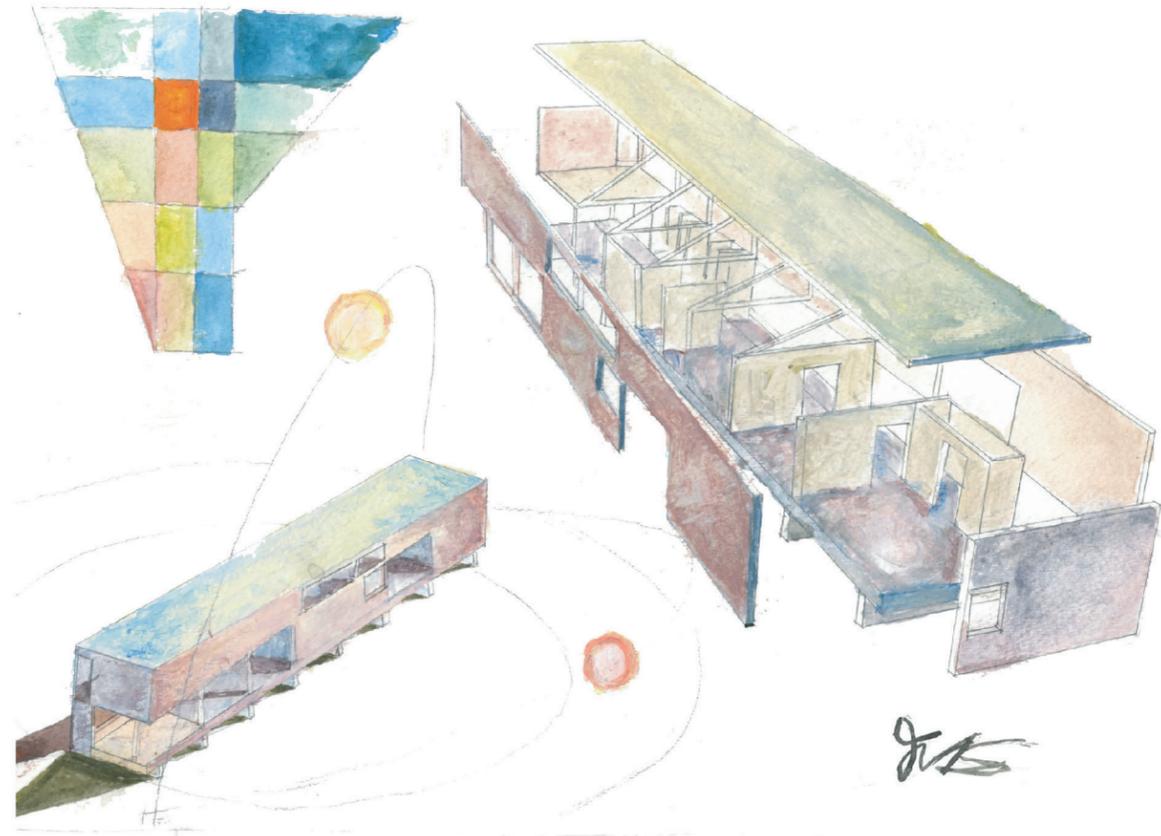
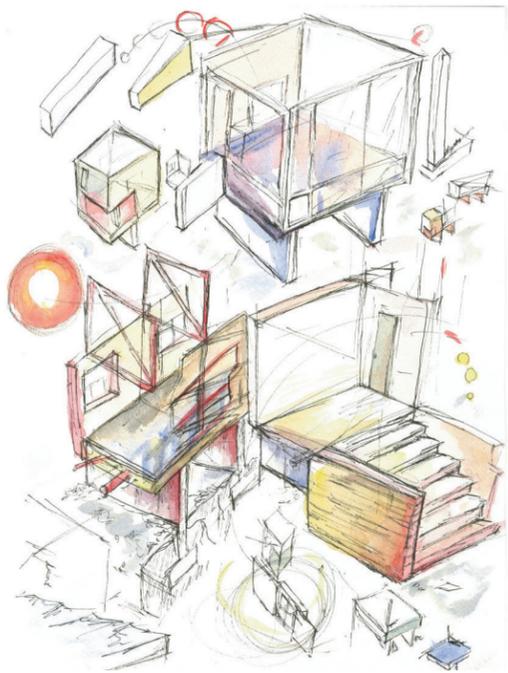
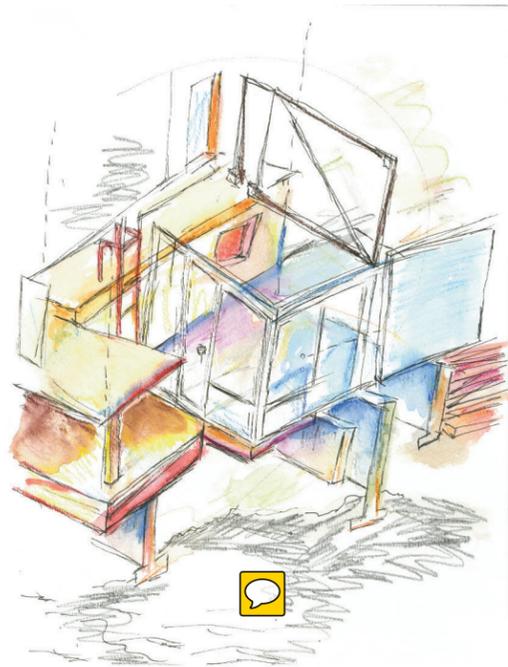
The program of Sunset Rock is inherently superficial. Sunset Rock is situated meters from the edge of the rocky Atlantic coastline. An open wooden terrace punctuates the nook of the house as a scope aimed towards the ocean. The house's lengthy corridor passively frames the sunset through glass walls at the end of the western wing. Interior fixtures are intentionally minimal to focus the attention on the view. The precedent outdoor deck allows the owners to participate in the subduing atmosphere of the environment. As an architectural aperture, the building creates a regulating filter for the owner's fascination with the sunset experience. To broaden the narrow focus of house, The Railway Studio addition enhances the viewer's perspective through the extension of a multi-linear viewpoint.

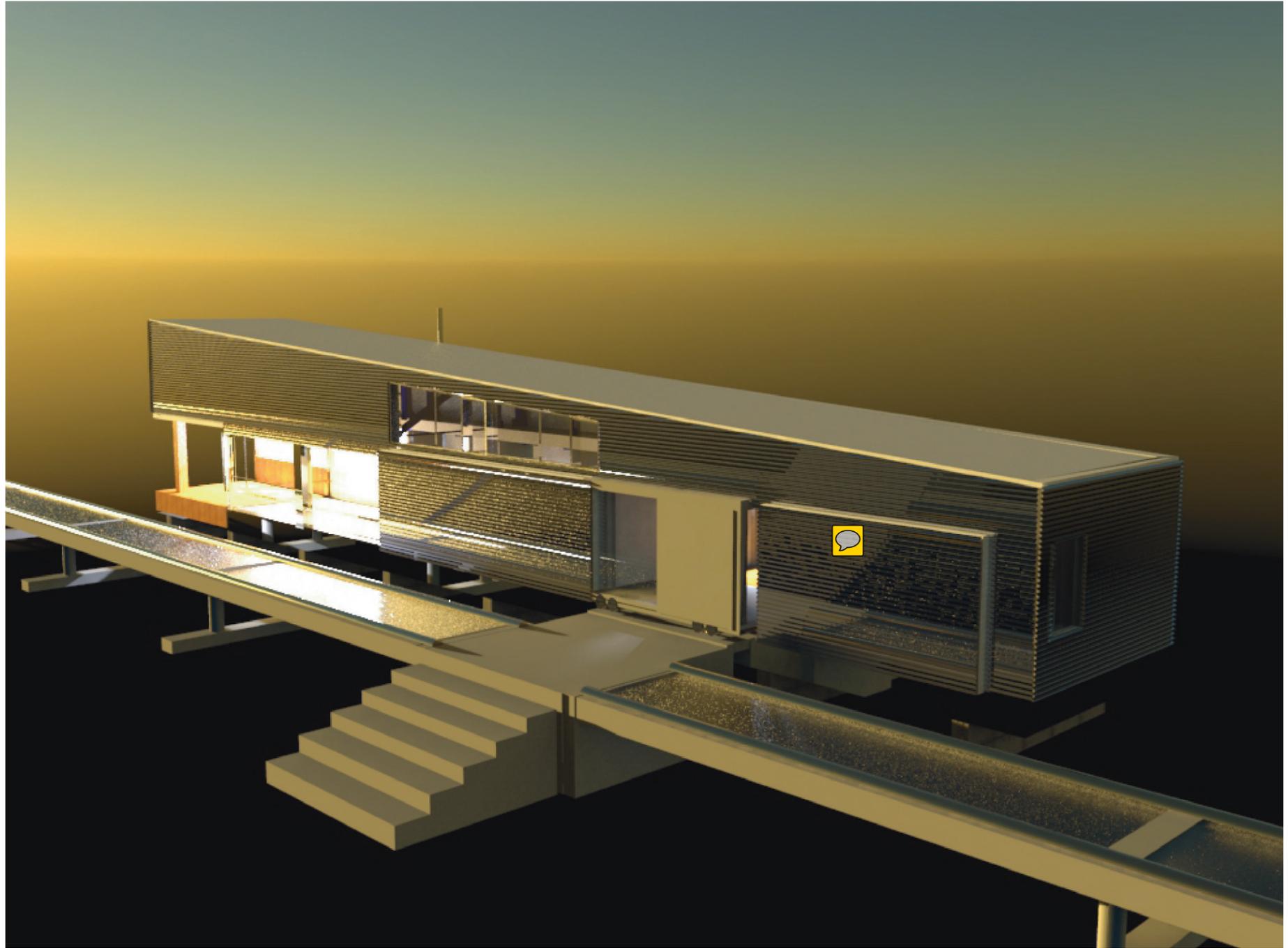
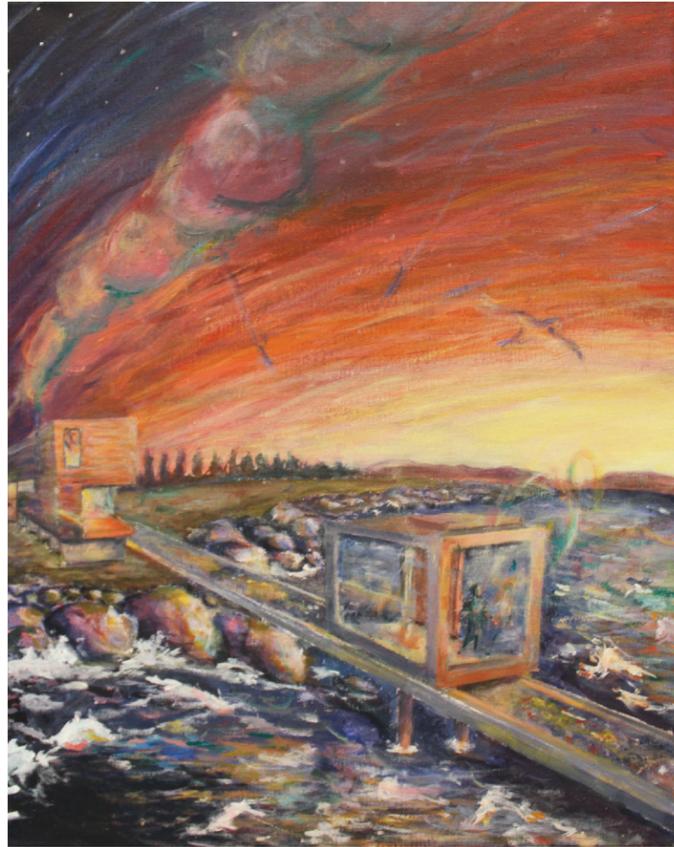
Designed for a conceptual landscape artist, the Railway Studio's program will inspire a versatile relationship between architecture and site. Like a journal, art is beyond a forced frame of reference and broadens relative to the curiosity of the artist within his or her perception of space and time. Sketching, drawing and painting are efficient tools that permit an intimate deconstruction of an environment validated through its inherent voyeuristic and temporal process. The mobile artist will be able to document his- experiences and explore his environment in sheltered comfort.

Although the Railway Studio is designed simply as a minimalist outlook, its role is juxtaposed by the functionality of its geocentric features. The sun provides dynamic character because of its variability. The interaction of daylight and site offers a potential for beautiful compositions of colours and rendering. Glass walls encase the architectural addition to broaden the view of the landscape. The walls checkpoint the journey of the sun before it descends into the Atlantic while stimulating sequential regularity throughout the studio. A pivoting wall located at the center of the southern facade allows the occupant to edit the entry of light and divide space accordingly. The wall also provides a convenient location for the artist to display his work.

Powered by the passenger using a traditional pump system, the studio travels along a track suspended over the landscape. The studio docks inside an opening within the Sunset Rock House via retractable platform. Entry and exit from the site, building or addition is permissible thorough sliding glass doors located on the northern and southern facades of the studio.

Sunset Rock is successful because it enriches an existing experience. The building regulates the substantial amount of sensory stimulation provided by the natural environment. The Railway Studio achieves a tailored personal immersion attributed to the relationship of architecture, site and observer. Pallasmaa denounces that the "timeless task of architecture is to create embodied and lived existential metaphors that concretise and structure our being in the world." The value of the architecture is measured through its capacity to reveal the wonder of its contextual setting. It is imperative that the goal of design be to produce experiences rather than seduce the eye. The more prominent the immersion, the greater it models the visceral feeling of being in reality.





# LITTLE ITALY BRANCH LIBRARY

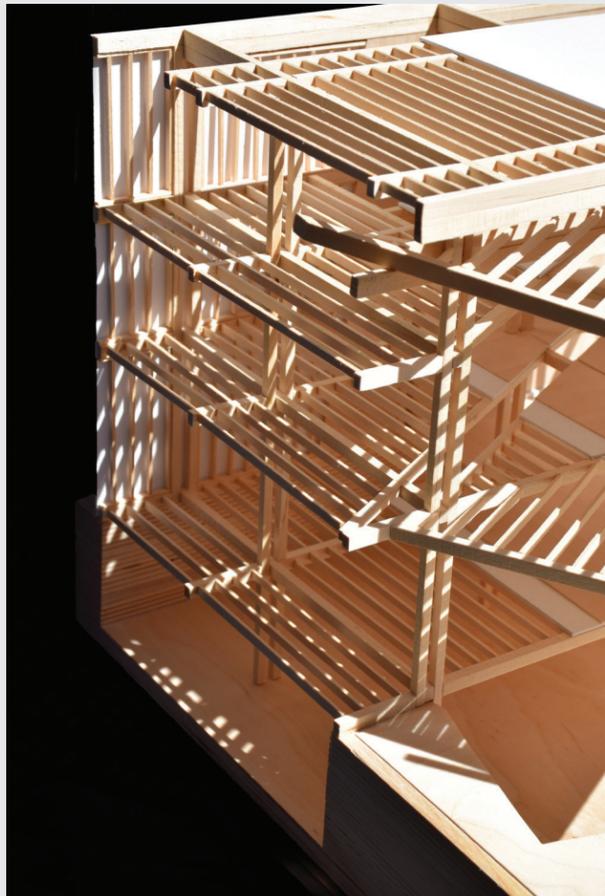
ARCS 2106 : Second Year Student

**Thomas  
Brintnell**

Hometown : Oakville, Ontario

Age : 20

Located on the corner of Preston and Larch Street is a barren parking lot awaiting future development. The site is perfectly located amongst shops, cafes, and restaurants with a banquet hall across the street. Included in this proposal is an outdoor garden and plaza accompanying a small branch library. The plaza offers recreational space with a skating rink in the winter and a pond with waterfall in the summer. The library will be open to use the community and houses materials for all ages and subjects. The sunken courtyard provides the public with the opportunity of taking books outside to read without the necessity of signing them out. With a modern exterior appearance, the library will act as a gathering place for community members and visitors to the area.



The site for the Little Italy Branch Library is situated on the corner of Larch and Preston Street in the heart of Ottawa's Little Italy community. In its current condition, the site is a very unattractive parking lot in a lively area surrounded by gelaterias and cafes, the Salas San Marco Banquet Hall and a vast selection of restaurants. With my proposal, the site will be split into two main functions, an outdoor plaza with gardens and a small branch library. Since this library will be able to connect into the large network of Ottawa Public Libraries, it does not need to be an overly large building. In starting the design process we were encouraged to design in a reverse-like order, starting with the design of the plaza and garden before starting the building. My concept for this plaza was to bring a recreational aspect into the program, with a focus on winter activities. Unfortunately, the site had previously been known as a spot to deposit snow when clearing the streets and sidewalks thereby rendering it useless for recreation. In the new plans, a generous portion of the outdoor space was designated for a pond in the summer and a skating rink in the winter. Circling two sides of the rink are benches enabling skaters to tie up their skates and providing spectators with a place to sit. To combat Ottawa's harsh cold temperatures a pergola with heating built into its roof structure is situated between the rink and the sidewalk thereby giving pedestrians a place to sit and relax while keeping warm. The front portion of the plaza lies relatively flat with trees and lighting to welcome people from all directions to the site.

## Physical Form and Materiality

The library functions on a simple rectangular plan with the main floor housing two entrances, one through the library's café facing Preston street and the other into the libraries foyer, directly from the plaza. The foyer leads one in any of three directions: the first towards the café on the right, the second leading to a celebrated staircase enabling you to access the other floors and the third to a warm space with a large fireplace overlooking the skating rink. The second floor houses the teen's section with designated group study spaces. It is also the floor where you can find the libraries large multipurpose space. This space leans out from the building enabling the people within this celebrated two-story space to connect with the garden. This room was designed to allow the library to host guest speakers, activities for the community and has the ability to be rented out by the general public. The third floor contains the adult stacks with fiction, non-fiction and special heritage and foreign languages section. The children's section can be found on the lower level with an access to the plaza through sunken courtyard. The sunken courtyard allows light to fill the lower level whilst providing an additional space for the children's section to move outside. It will provide enough security to watch over children while conducting activities outside. The courtyard completes the fourth side of the pond, which in the summer will flow over the wall of the courtyard, creating a beautiful waterfall feature.

## Imagineering

The exterior of the library is clad in glass however different treatments have been used to allow more or less light to penetrate the space. The differentiation is based on the desire for more or less privacy and also gives consideration to where books are stored since too much UV light can be damaging to the books. Additionally, an exterior screening system

consisting of a series of perforated panels will control the amount of light entering the building. Such screen system is located on the Preston Street façade and wraps halfway across the plaza façade.

## Social Impact

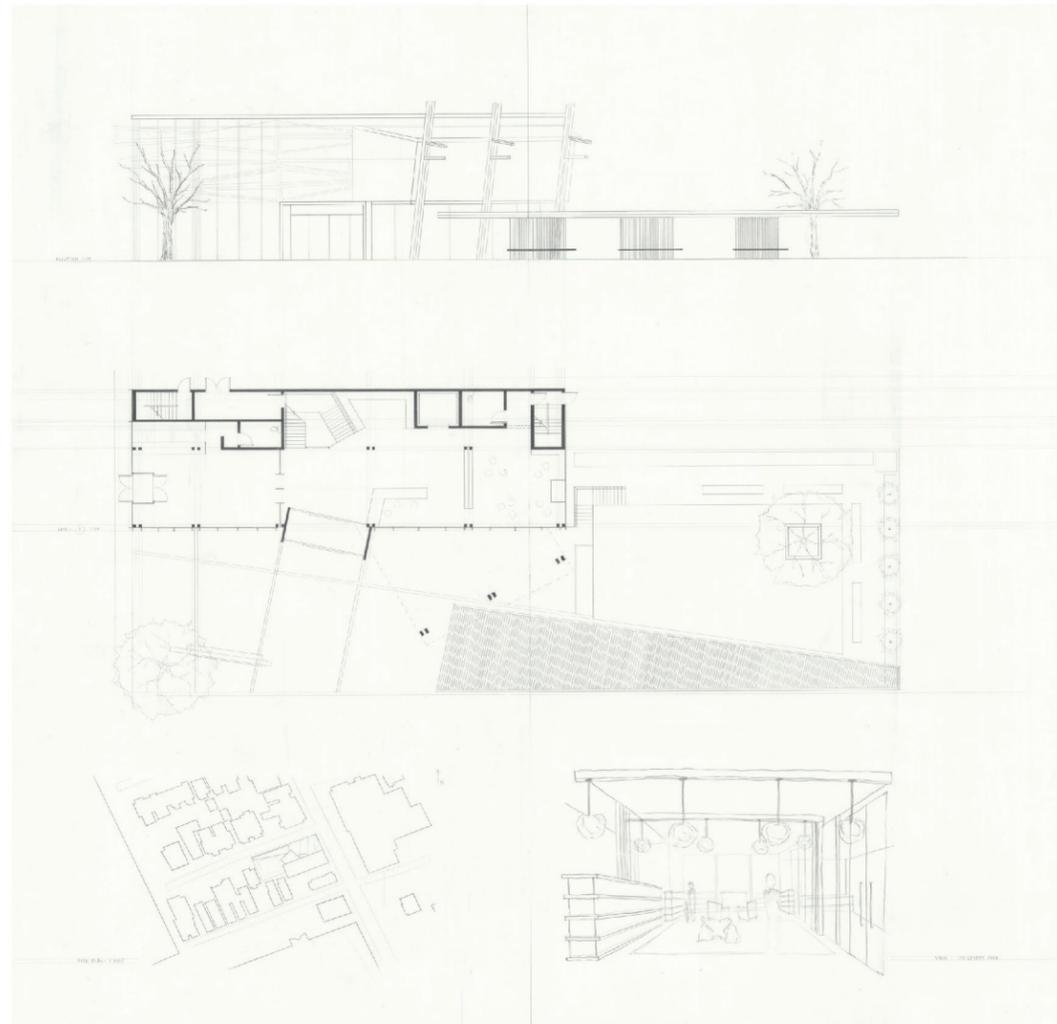
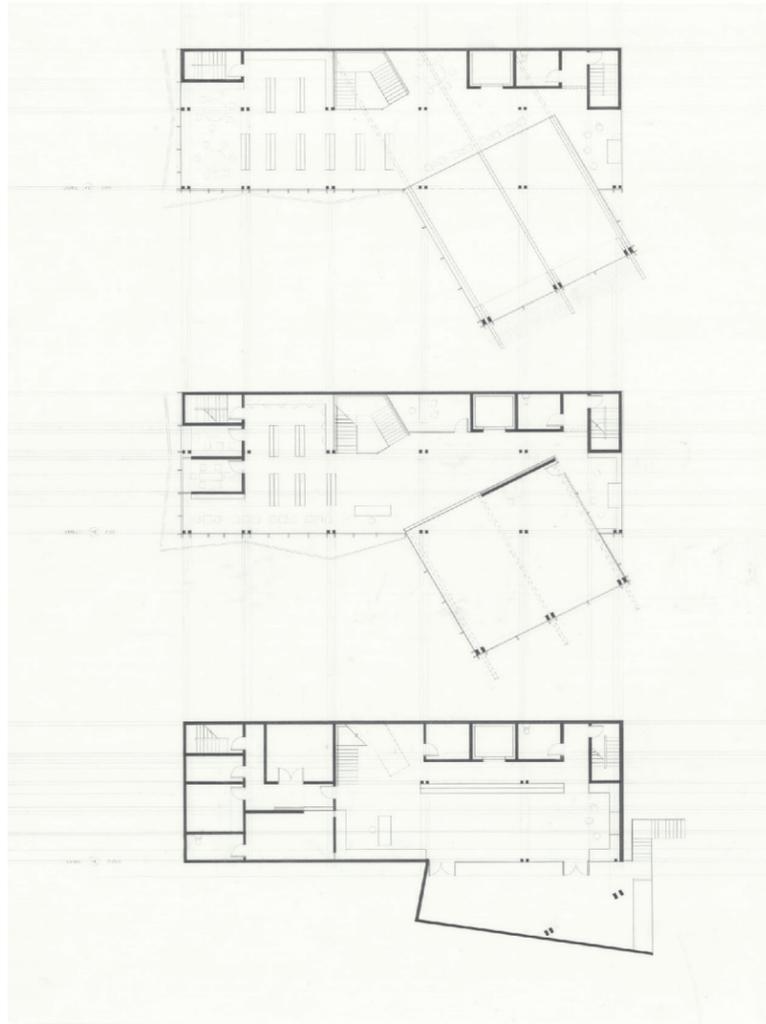
Upon completion of this project, the library will serve people of all ages. It will act as a central gathering spot for students to work on homework or assignments and offer the potential for children's activities and events to be scheduled. The plaza will encourage people off the street to come and read you book, sit and drink their coffee or eat their gelato. It will also act as a beautiful backdrop for the Banquet hall across the street as they host weddings, business conferences or private functions.

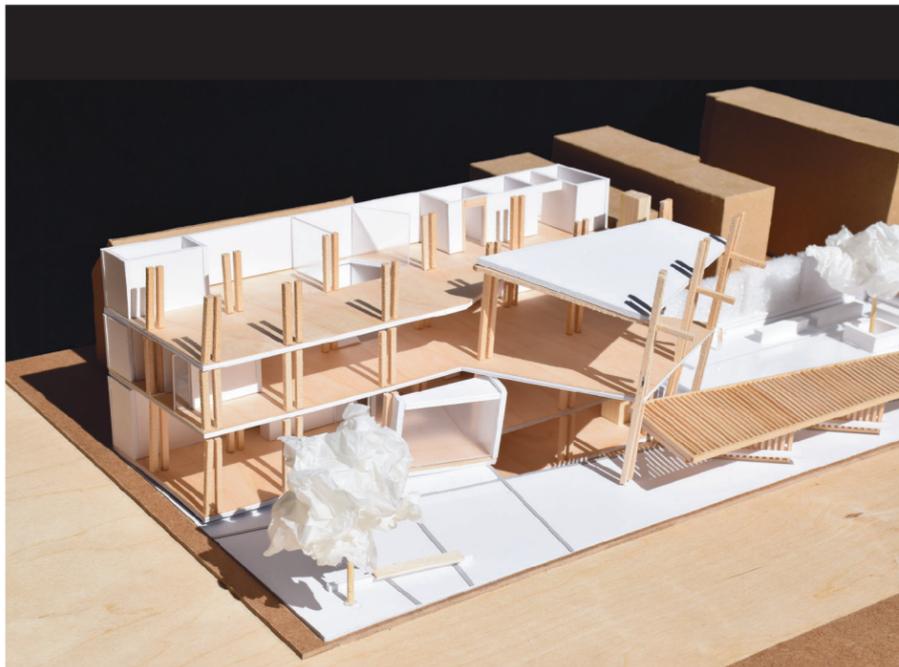
## Economic Impact

The Little Italy Branch Library will open up the job market requiring the hire of librarians, janitorial staff, special events coordinators and deliverymen to transport books between libraries. In the wintertime there will also be a crew needed to maintain the ice rink. The library and plaza will also offer a positive economic impact to the surrounding businesses, as most of the cafes and small eateries do not have any outdoor entertaining space. The plaza will allow people to purchase their food goods and take them here to enjoy.

## Environmental Concerns

The project acts in a positive manner towards the environment as it reclaims what was a dead concrete area and revives it with the planting of trees, bushes and gardens. The upkeep required to maintain the library should not have a negative impact either since the choice of using treated glass would just require washing unlike a painted material which continually requires maintenance. Overall the project will serve to unite the community of Little Italy, supplying them with a reference center, a place of gathering and learning. It will also act as a year round recreational space to be enjoyed by families and visitors of the area.





# LITTLE ITALY BRANCH LIBRARY

ARCS 2106 : Second Year Student

David  
Anderson

Hometown : Sherbrooke, Quebec

Age : 22

This local library in the heart of Little Italy, intended to serve as a branch for Ottawa's main public library, was carefully designed with the principles of conceptual strength, pragmatic use of space, and aesthetics guiding each step of the process. The library's ambition is to create a communal environment for residents of all ages to learn and share through books and digital means, and via several social groups and lectures that the facility is designed to host, without needing to go far from the neighbourhood. Composed of a stepped courtyard open to the street leading to a more intimate gathering/garden space, and notably the first section to be designed, the plaza helped dictate the library's shape and function. Instead of opening up towards Preston, which is the main tourist street of Little Italy, the library takes you in from the plaza and opens up towards the garden space at the back. The glazed areas, enlarged towards the back, become areas of communal activity while the solid exterior walls contain personal reading spaces and stacks. The building and the plaza therefore work together by opening up to the neighbourhood social fabric, thus catering to locals and fulfilling their needs for a branch library.



Located on the corner of streets Preston and Larch, Ottawa's West Centertown Branch Library and the Renaissance Plaza emerge in the center of Little Italy. In a holistic approach, the library design was part of an inclusive process embracing an embodied experience of its own through a conceptually strong, pragmatic design and a visually pleasing scheme that fed off of the plaza's original design.

The Renaissance Plaza, designed and modelled weeks before knowing that a library would later complement it, consists of an open front section that acts as a stepped courtyard with podiums: these will accommodate ice sculptures in the wintertime, bringing both the winter festivities of Ottawa to the center of Little Italy along with a subtle reference to traditional caryatides of Roman gardens. This consequently gives sense to its name (Renaissance) along with the fact that it is meant to revitalise the center of Little Italy. This first section is very public and can be easily seen from the street. In the summertime, the podiums become seating areas and the stepped courtyard allows a clear view of the street. The rear section speaks more to the intimacy of Italian culture by being a simple, more secluded gathering area where locals, predominantly, would come and partake in whatever activities they wish. It is a more playful area, complete with ground lighting and a play with landscape that allows for various activities for all ages.

As the library is meant to fulfill the needs of the local community, it only made sense for it to follow the design of the Renaissance Plaza and open up towards the back, which already catered to the neighbourhood. Indeed, the outdoor aesthetics of the library consist of glazing, which increases towards the back part of the plaza, and a corten steel paneling mass. The interior areas behind the glazed surface comprise the more public spaces like a communal reading/study lounge on the ground floor and the computer area on the second level. Behind the corten steel façade lie the quiet areas, which include individual study stations, group study rooms, book stacks, and reading areas. The corten façade peels out on the front allowing north light in, and the roof has two light shelves for an even, holistic, lighting effect. Through examining these different areas, which were used as guiding principles for the design, one can realise the strong link between the plaza and the building and the hierarchy of private vs public spaces. Inside, the wood frame structure is revealed, leading to joist hanger details and precise ceiling joint detailing. The structure follows the floor and includes openings and subfloors on several levels, creating boundaries between areas along with a hierarchy of spaces that are experienced vertically and horizontally throughout the building, thus reinforcing its unity.

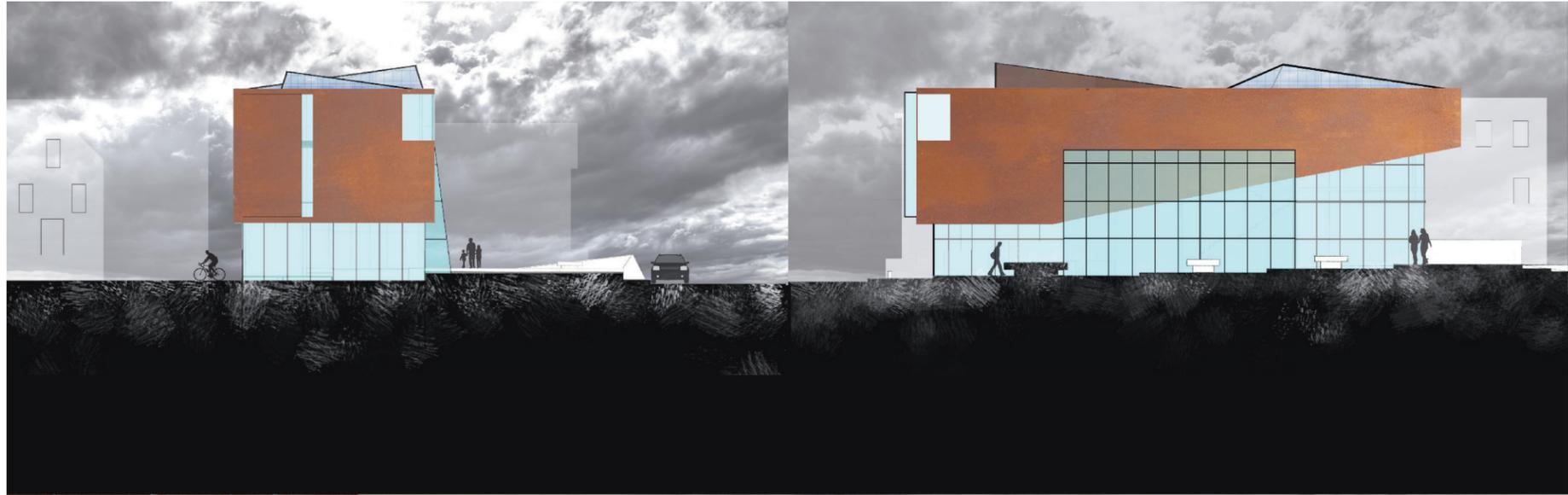
This library, through its design and location, will have a direct impact on the population of Little Italy. Although the neighbourhood was once populated mostly by Italian immigrants who lived and worked in the area, Little Italy's demographics have changed over the years and it now embraces a double identity. The main street (Preston) is still full of "Italian" shops and restaurants that cater to families and tourists with its unique location and great atmosphere that keeps Little Italy's culture alive. However, recent demographic studies show that what was once a very traditional Italian community now consists mostly of low-income households, young professionals, and students. A disconnect between the busy commercial

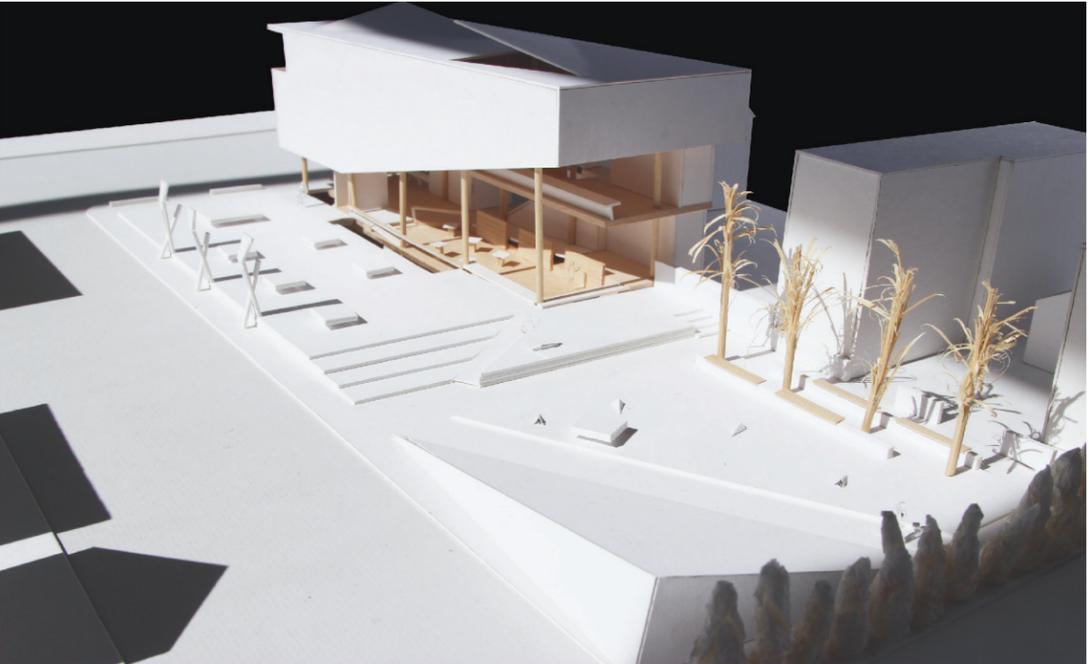
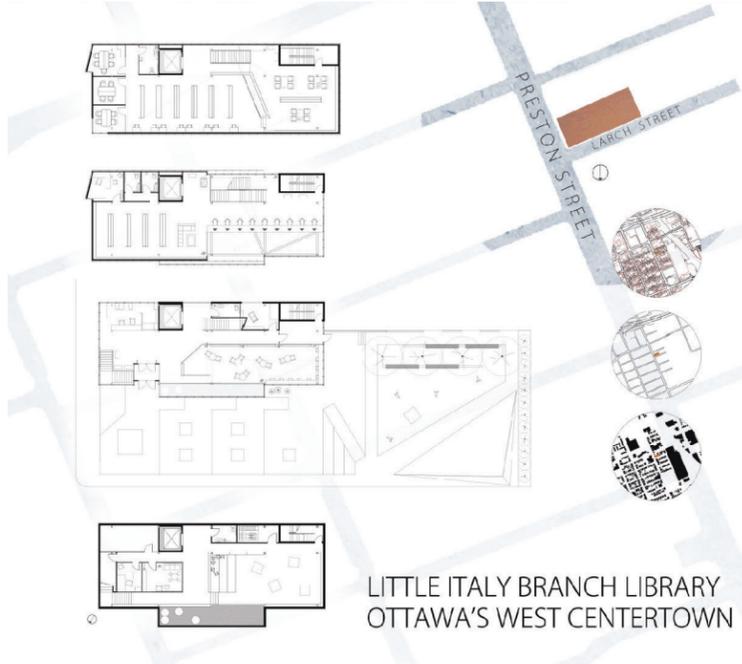
street and the inner social fabric of the neighbourhood is evident, yet has not been addressed. The new Branch Library is a statement towards this issue, as it is designed for the area's local residents rather than for tourists. Along with the Plaza, it projects into the inner fabric of the community rather than vice versa.

The environmental concerns regarding this facility were related mostly to the lighting and heating of a public building. During the day, light permeates through the library without being too bright and without generating too much heat. This was achieved by leaving the lower levels exposed to light and the upper ones as a solid mass with only strategic openings facing north to get even, natural light that won't generate as much heat as direct southern exposure. The regulation of light and heat are therefore interrelated and dependent. The two light shelves on the roofs open up to face north light which means that their reverse side is oriented south, so can therefore be the primary location of solar technology to reduce the already low heating and lighting cost. The openings through each level also allow better heat distribution and therefore vertical cross ventilation will help lower heating and air distribution costs.

Being a building that isn't designed to generate revenue doesn't mean the economic impact will be negative! Short-term construction costs will be heavy, but the purpose and advantages that the library offers to locals will allow long-term efficiency for the Ottawa public library service and the targeted population. This will largely affect the distribution of books and other library material to the population of west Centertown. Investing in public services can be scary and easily disapproved by many, but the long-term advantages on the population are immeasurable; through the facility we can offer the environment and material to help educate and share knowledge through all levels of society. Also, slight revenue will be generated through the increase in rentals and memberships, and perhaps also from the different meeting groups like book clubs, writing groups, or storytelling venues.

What one experiences upon being exposed to this library, in its totality, is the result of carefully understanding and managing all aspects of the project: pragmatic, aesthetic and conceptual. It is a simple, elegant, revealed-wood structure, with intricate, delicate joints; along with its hardwood floors and a beautifully-designed book stack, the whole experience allows the user to understand the true nature of Ottawa's West Centertown Branch Library in the heart of Little Italy.





# 1ORIGIN2HARMONY8FORTUNE LIBRARY

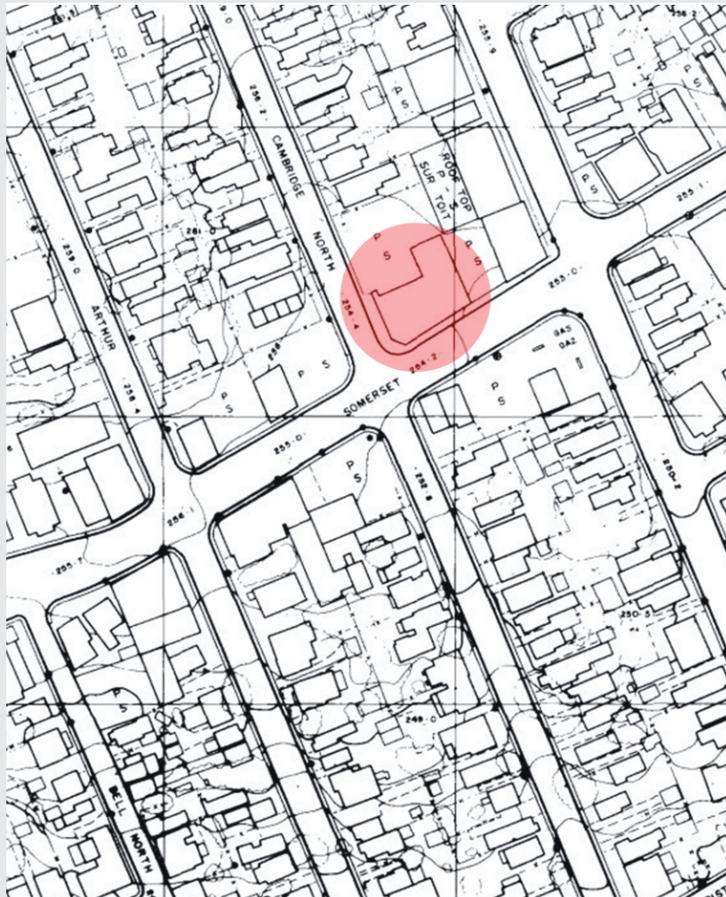
ARCS 2106 : Second Year Student

Jonathan  
Miura

Hometown : Enniskillen, Ontario

Age : 21

Given a site located in a culturally rich area of Ottawa (Chinatown), the assignment was to first analyze the site. Following this development of knowledge we were to design a winter “wonderland” plaza. The only significant restriction was to respect the boundary of the future building which would occupy a portion of the east side of the lot. Once the plaza was complete, the assignment was to create an abstract façade study without knowledge of the buildings form or program. The idea was to think freely without restriction. Following this exploration we had to design a small branch library with strict size and locational parameters. A study of a branch library over reading week was completed for inspiration of circulation and proportions. A list of requirements for our library were received. The building could be three storeys tall, with a focus on the main “reading room” space. Being our first major architectural design project, public circulation, programmatic arrangement, and a clear summative idea/concept was to be developed. Through an architectural language drawings, images and ideas were to be legible without verbal clarification.



Beginning with site analysis, my research was mainly focused on the traditions and Chinese culture that could be experienced at this site. After many trips to Chinatown it became quite evident that it was lacking in these areas. Chinese architecture and art is extremely vibrant and beautiful but through the majority of the year there was no evocative spaces which justified this powerful aesthetic. Chinatown seems to almost exclusively bring locals and people from all cultures together for the experience of culinary flavour. My goal was to introduce more tradition in a modern, effective way. The outcome would be a unified community where the people of Ottawa could experience what else the Chinese culture has to offer.

The plaza celebrates Yuan-Xiao Festival (Chinese lanterns). At the beginning of the Chinese New Year celebration, 128 lanterns get suspended from a minimal timber post and beam frame. Teared polished stone slabs become spaces for elder Chinese people to practice Tai-Chi. A bamboo pathway guides the pedestrian through the garden of light to the buildings entrance. The paths irregular journey mimics the movement of the Chinese Lion dance. The organization of all rows, columns, platforms, posts, beams and lanterns, distances and dimensions are derived from lucky Chinese numbers (like 1 origin, 2 harmony, 8 fortune). On the last day of the New Year, all the lanterns are removed, vendors line the streets where flying lanterns can be purchased. Together families purchase a lantern, write their wishes for the New Year and as a community, release them into the sky. The canopy of lanterns becomes an urban park where the community and visitors could take part in a unifying, cultural celebration. During the summer months platforms become one of three categories, coy ponds, gardens, or platforms for Tai-Chi. To replace the missing lanterns, the posts house large vertical lights, illuminating the space once again.

Not knowing the program of the building and its interior layout, the task of designing a façade was difficult. The idea for my façade was to create a collage of material properties that evoke Chinese culture, complement one another aesthetically but also range in function. This way it would be easier to later arrange the materials to better suit the programmatic arrangement behind the curtain wall. The two main statements are the sunscreen and the concrete slab. The screen would produce mute the natural light but still illuminate the interior spaces. The concrete slab on the other hand is a strong statement which addresses a change in program or function.

During my study of a small branch library, I spent a lot of time focusing on circulation and the arrangement of spaces. I found that due to the advancements in technology the library was not as much a place to get books but rather a popular place for students to study. I wanted to divide the spaces by noise level, age group, and communal vs private spaces. Secondly, I wanted to have the staff and public areas function as two separate entities with minimal overlap. This way staff can work without interrupting the public. A large concrete slab defines this boundary, where all necessary staff, mechanical, and storage rooms remain on the north end of the library. Lastly I found that a large majority of library goers chose to sit along a double height space or window. For this reason I chose to make two generous double height spaces which would create beautiful interior

views and arrangements. Also by removing a large portion of the main floor, the lower level would not only receive more light but remove the negative connotation of being a “basement” and become another “level”. The double height space on the lower level is the celebrated reading room with bookshelves lining the perimeter, overhead natural light and large hanging light fixtures which continue the lanterns grid from exterior to interior as an abstracted interpretation. The lower level is the public reading space and children’s area. In relation to the urban fabric of Somerset St (Main strip), the majority of ground levels consist of public spaces, restaurants in particular. Second and third levels are private spaces (often apartments). Following the fabric, a café (popular spot through my research) sits on the south, Somerset façade. All public and communal spaces are located on this level. The second level is the group study area and adult stacks with less noise. Continuing upwards the program becomes more private and more quite. Lastly the third floor is the single study area, teen stacks, and quiet floor. These study areas also sit along the second, double height space. The core of circulation is centralized and fire stairs on both North and south ends of the library. The sunscreen creates muted light, perfect for reading on both upper and more private floors. Heavy timber construction not only is spatially efficient but also allows for lots of natural light. In addition it is a renewable resource which was a large part of Ottawa’s history (Timber industry). The sloped roof is appropriate for the North American climate and opens up towards the plaza. The library and plaza embraces the urban fabric, respects the climactic condition and introduces more Chinese tradition to this culturally rich location in Ottawa.

