

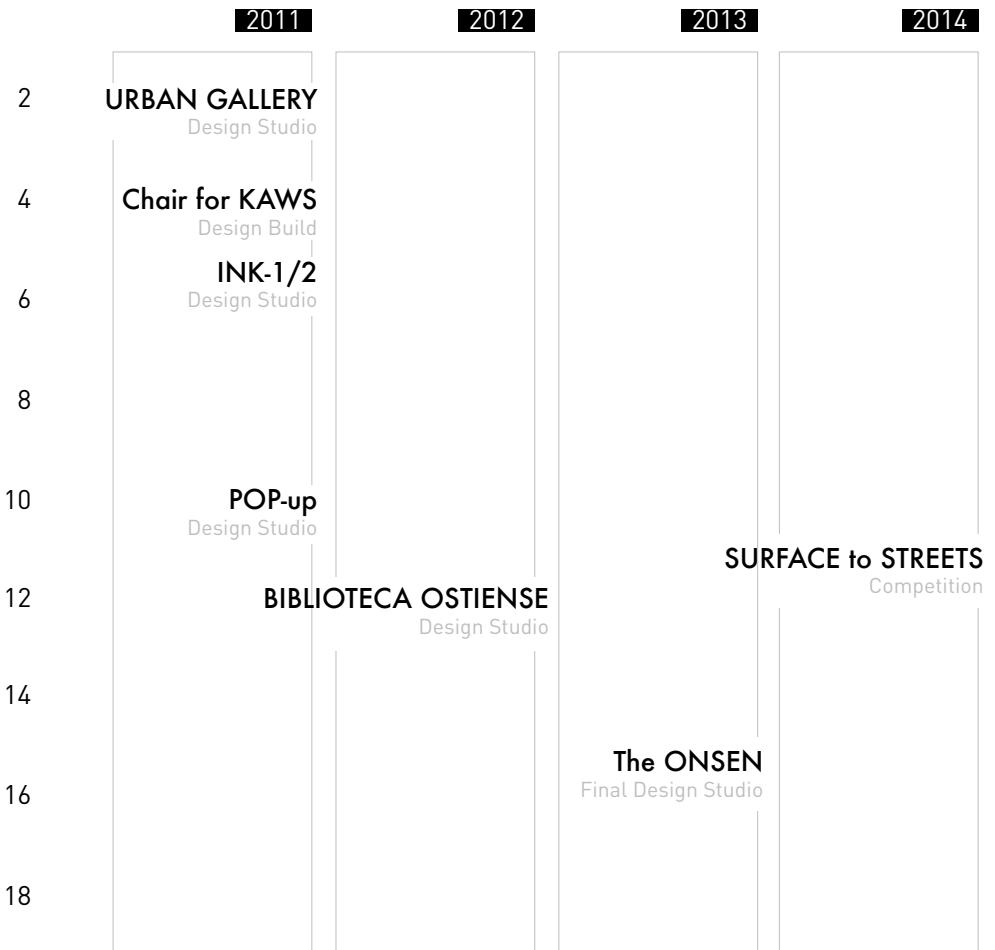


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Urban GALLERY

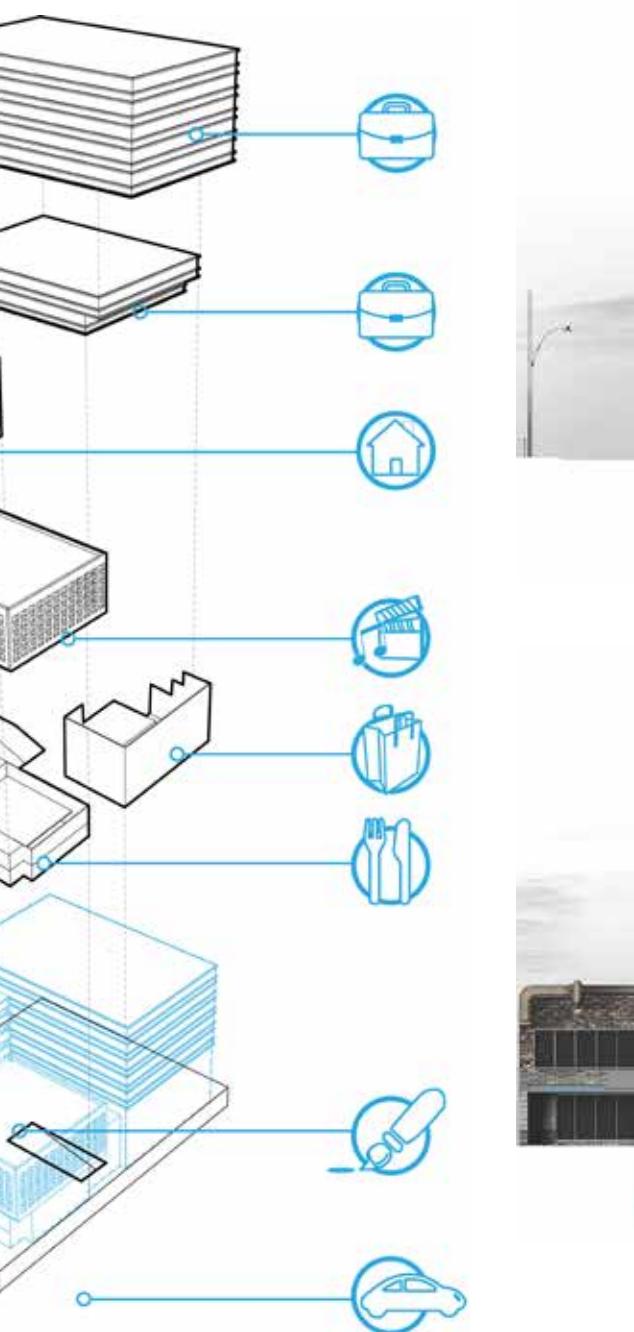
Design Studio | 2011 | Toronto, Canada

Located on the intersection of Spadina and College in downtown Toronto. The site has a number of medium density programs with an interesting alleyway that bisects the site used for circulation and back of house use. After careful study and investigation of the programs that are fed from this alleyway, It was clear that the assigned programs for the project could already be found somewhere along the site. The challenge of the project is a matter of density. The existing condition reaches a maximum FAR of 2 while the prescribed areas for the project would require an FAR of 5.



Using the study of the alley as a starting point, a discourse was taken to mimic the existing condition while providing a safe and publically activated ground level which would then be activated by the more private programs stacked above and tucked below the project.

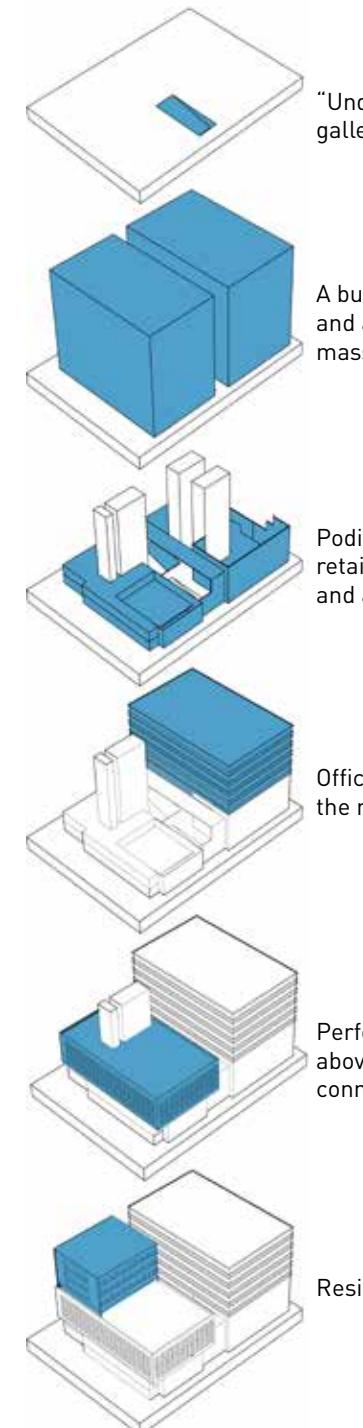
Further analysis of the program led to a division in program that shaped the massing of the project with the more private and light sensitive programs on one side, and a more transparent office mass on the other .



Unfolded North Elevation



Unfolded South Elevation



"Underground" gallery

A business mass and a recreation mass

Podium containing retail, restaurant and atrium

Office mass above the retail

Performance hall above restaurant connected to office

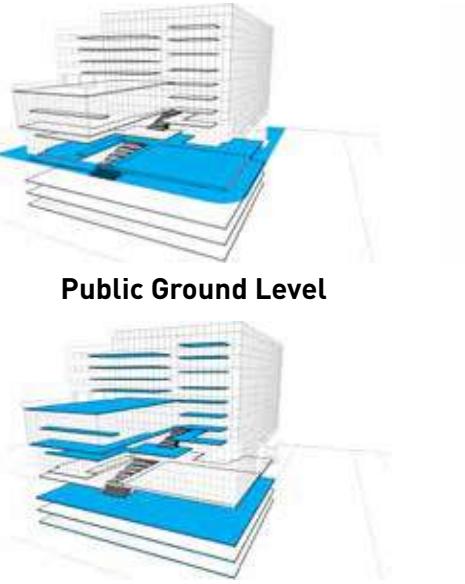
Residential mass



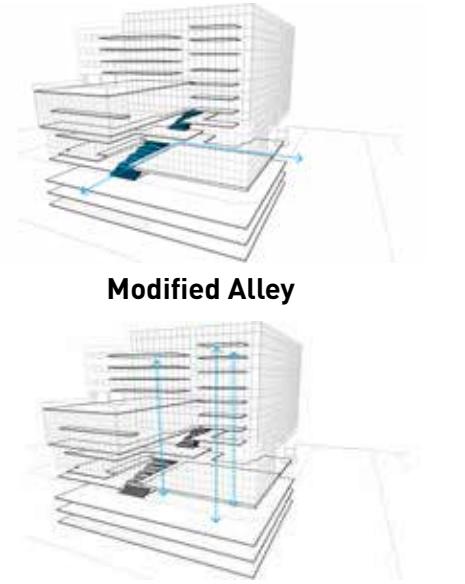
Solid Mass / Atrium Section

The focus of the projects was to have a very intense and urban alley that runs directly through the site. By recessing the art gallery and having a public seating area sloping towards it, it would draw a tremendous attention from the sidewalk. The two distinct masses (a clear and a solid one) allows circulation in the atrium to be highlighted with many of the aterial and con- nection circulations being single loaded with views mutu-ally to and from the atrium below.

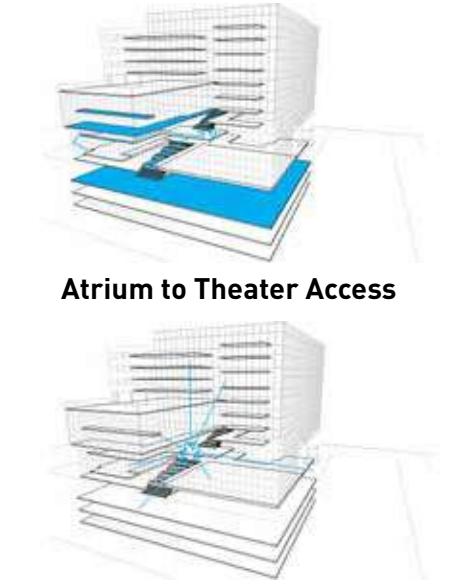
The only solid connection between the office mass and the recreation mass between the offices and the performance hall which could be a shared use space for lectures, conferences, and meetings. Above the performance mass sits the residential mass for artists with direct vertical circulation connecting the park- ing, restaurant, podium and the underground art gallery which curates the artists work in the studio directly above making the gallery highly relevance adding to the pace of the space.



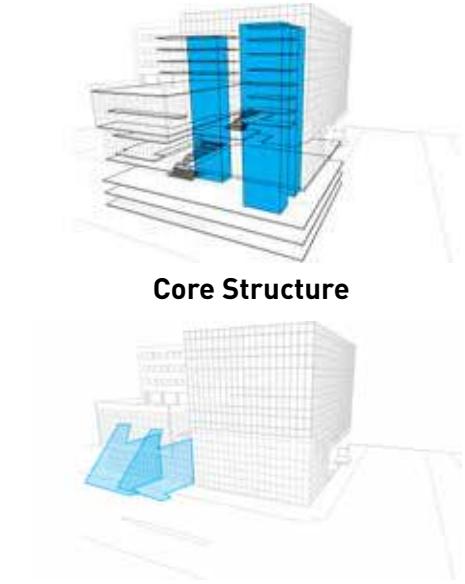
Public Ground Level



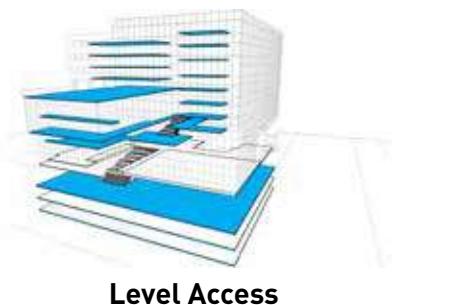
Modified Alley



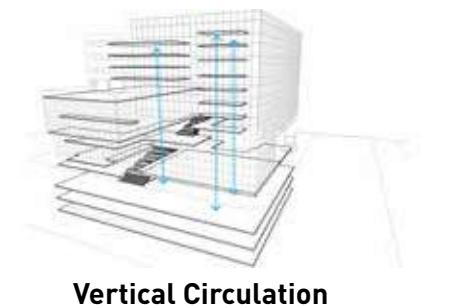
Atrium to Theater Access



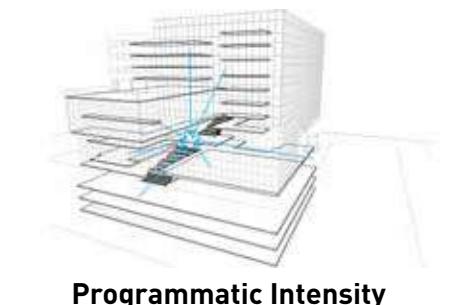
Core Structure



Level Access



Vertical Circulation



Programmatic Intensity



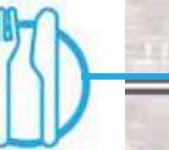
Transparent Mass / College Elevation

The podium is further activated by the introduction of a PopUP retail space. Situated in the idea location at the corner of the site, the pivoting curtain wall doors allows the corner to essentially dissolve and allow the corner to permeate into the building and retail space.

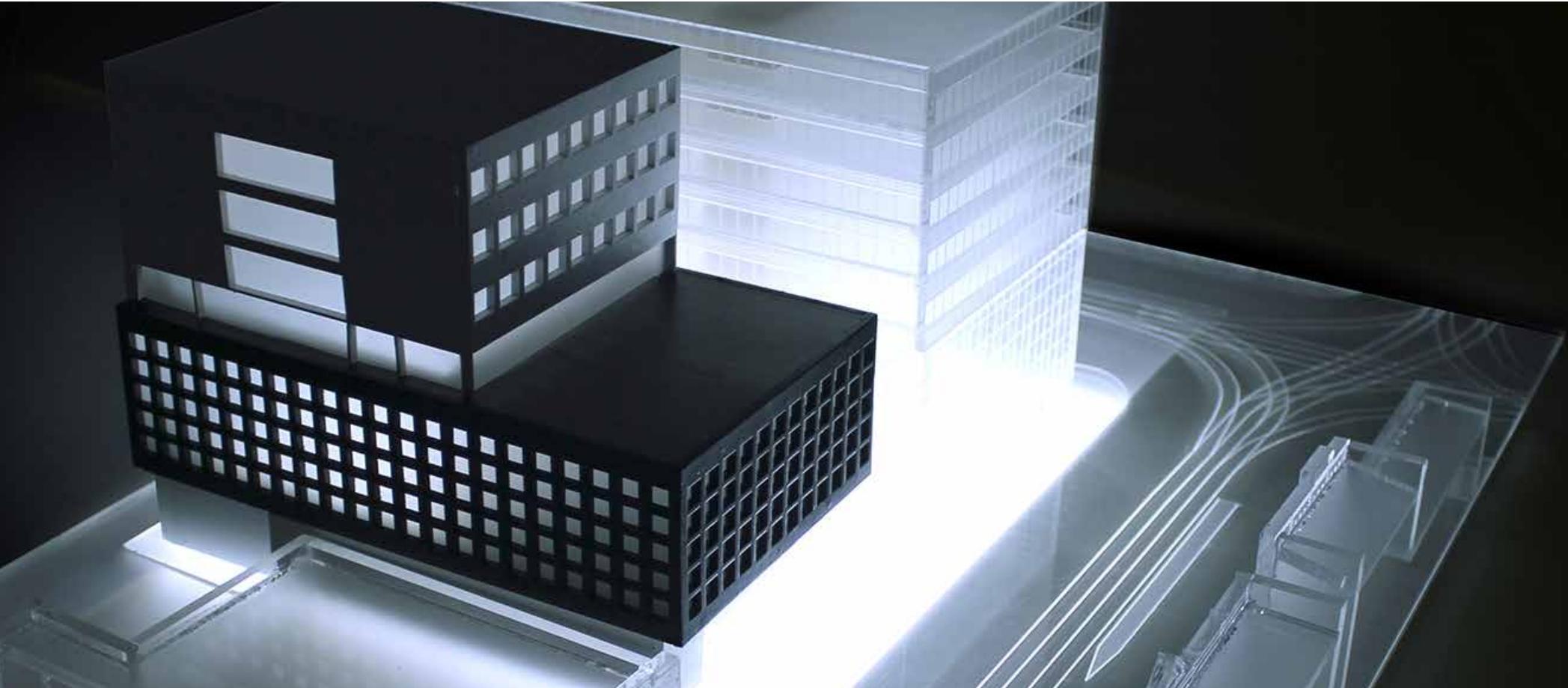
By having this permeable corner it effectively resolves the urban corridor issue by providing a well lit, secure, passage way with a good range of visibility of everything in the podium level.

The bi level restaurant doubles as a restaurant and an intermission space on the second level that is connected at the atrium, at intermission, the visitors spill out into the atrium drawing life back into the atrium having an elevated view of the street below.

The cafe at grade level possesss the most potential in drawing people into the building and into the underground gallery. People watching is not an uncommon phenomenon and with a sloped seating area this is further encouraged as the atrium is activated as a primary gathering and meeting space for the entire project.



Atrium Section



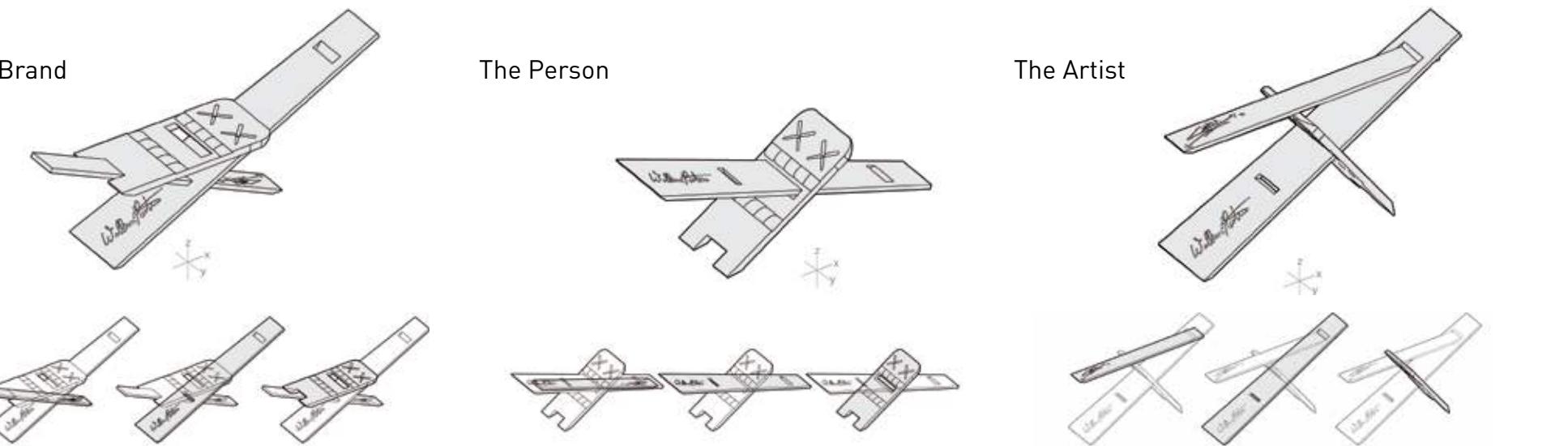
Spadina Elevation



CHAIR for KAWS

Structural Analysis | 2011 | Cambridge, Canada
a Pentesco x Tsui Collaboration

Brian Donnelly aka KAWS is a street artist originating from New York who specializes in creating artworks with known pop-culture icons such as the Simpsons or Disney to create a message that is instantly approachable to the general public. The design of this chair not only reflects Kaws as an artist but serves a purpose for his person, his brand, and his career. The 3 configurations of consists of 3 elements that can be arranged to form a lounge recliner, a bench forming his trademark X, as well as scaffolding to produce his art-works from. The focus of the chair epitomizes not only the high quality and craft of this work but plays with the perception of the form of the chair itself and its uses.



INK-PART1

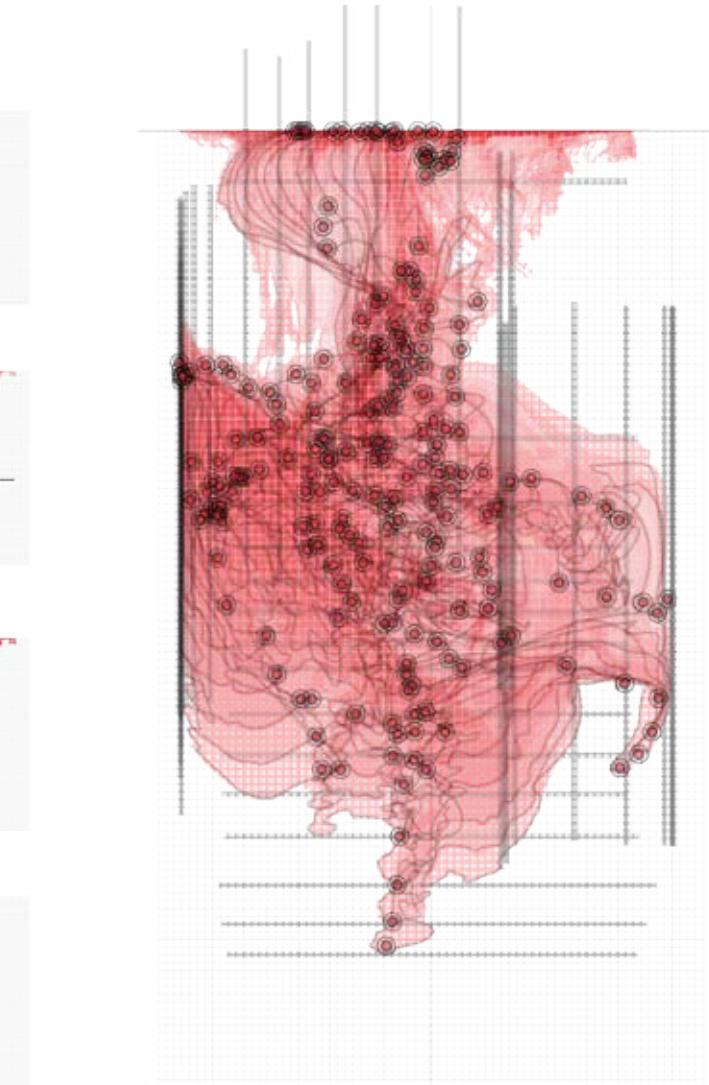
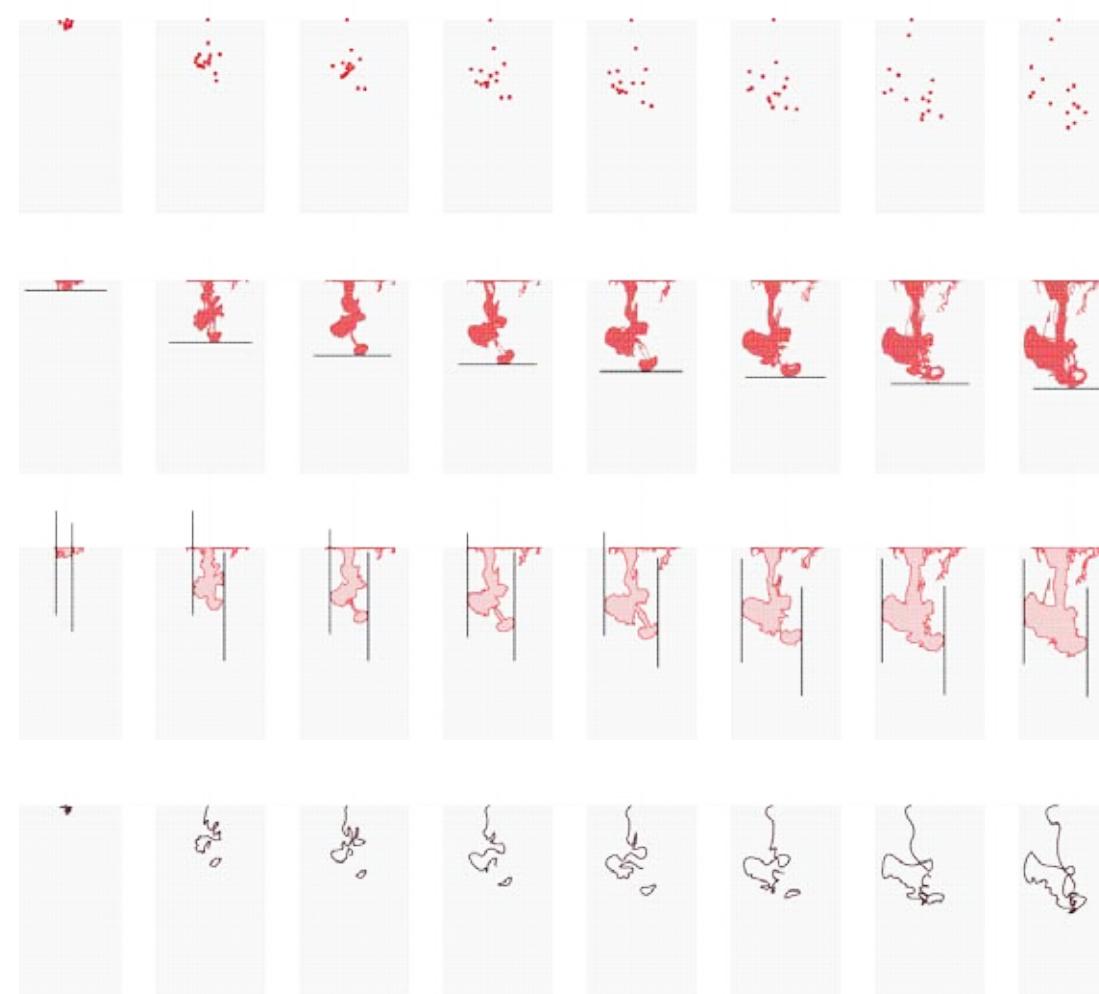
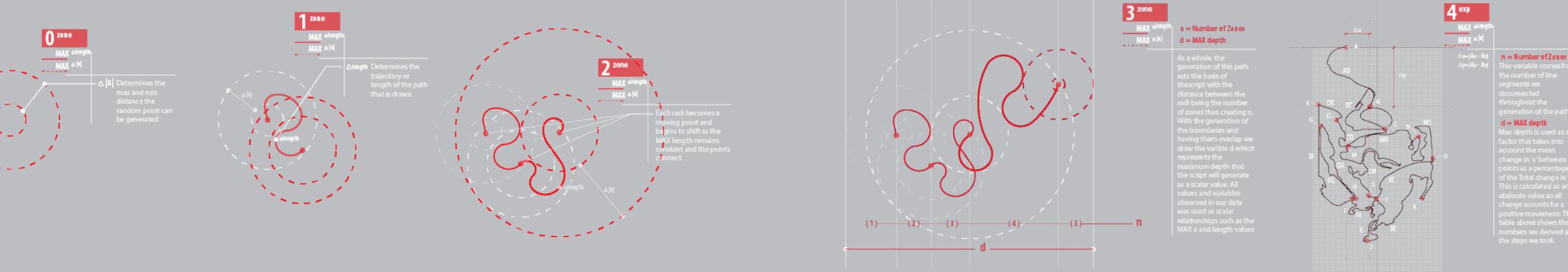
Parametric Design | 2011 | Toronto, Canada
a Pentesco x Tsui Collaboration



Project INK is an option studio where the basis was learning to use parametrics as a tool for design. The first exercise required us to take a physical phenomenon such as the movement of a swarm of birds and start to make sense of the movement and turn it into data. For this project we chose to observe and document the movement and growth of a drop of ink in a glass of water.

The growth of an ink droplet and as it slowly starts to diffuse into the glass of water not only provided an extremely

The main idea of what was observed from the phenomenon is that because of the amount of frames that we had between the first drop to the 15th frame of its expansion; we were able to analyze and anticipate the movement of our generated points and vectors. This allowed us to produce a number of scalar values that were intrinsically linked to each other so that at any given moment we could essentially emulate the scalar movement of the ink cloud.



Upon completion of this portion of the project one aspect that could have generated phenomenally different and interesting results is if the same observation was made on a different axis plane. This way we could achieve a 3D and almost radial/spherical look on the ink's growth. At the end of the project the most challenging aspect was to be able to communicate what we learned graphically so that it could be easily explained and discussed. The most difficult part of the project was learning to deal with extremely large sets of data. The second part of the project was to translate our data into a physical form.

INK-PART2

Parametric Design | 2011 | Toronto, Canada
a Pentesco x Tsui Collaboration

After collection the data from the ink droplet, the goal was trying to capture the random and swirling aspect of its movement and produce a freeze frame to ground it into the physical world. Using the scalar values we had, we were able to apply the growth rate of the ink droplet to a lofted curve based on a number of user input commands.

The user was asked to input the desired length of the expansion as well as the number of supports for the final form. The number of supports were used to generate the curves, the number of inflection points in the curves as well as the placement and number of the base supports. The length was used to determine the number of curves that would be generated on a scale from 1 to 15 which emulates capturing the droplet growth relative the the frame we gathered from the previous project.

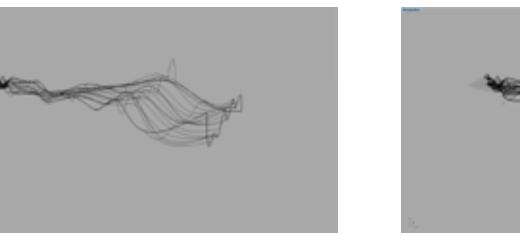
The final script we produced was able to generate an infinite number of random lofted canopies of varying sizes.



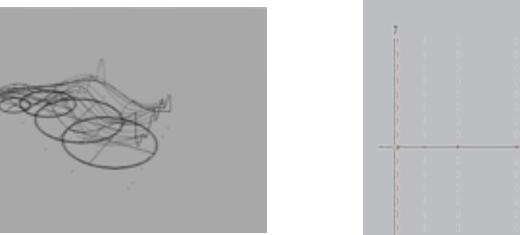
Input



Line Generation



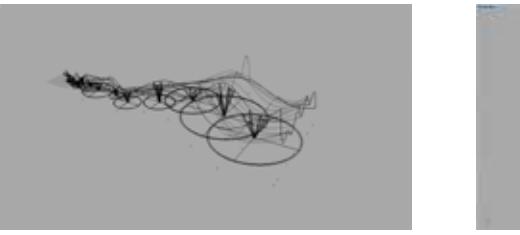
Scale and Loft Crv



Base Generation



Support Generation



Trim

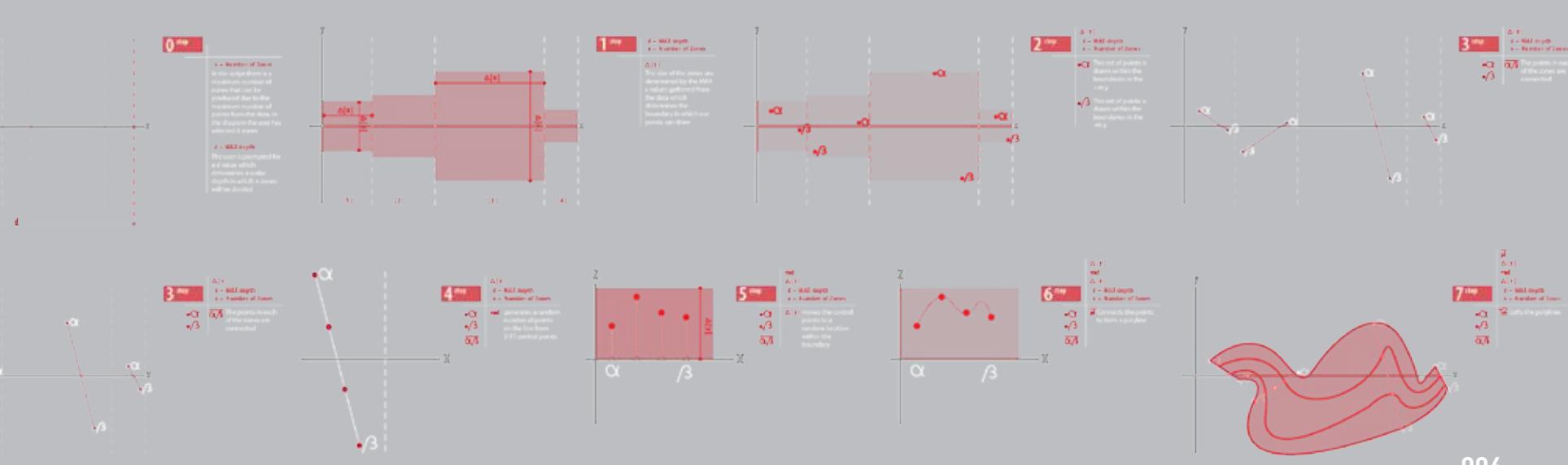


Delete Points



Final

The undulating canopy was able to mimmic the growth of the ink droplet simply with the use of the variables related to the 15 frames we used to document its growth. The rest of the project was simply using the data to either manipulate or show the fluid yet unpredictable nature of the movement.



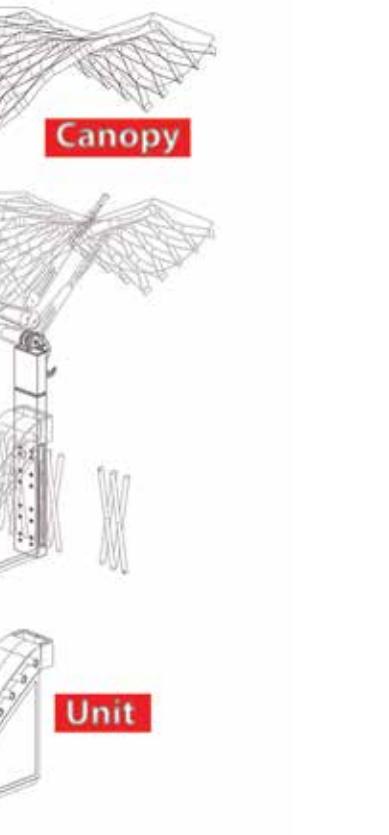
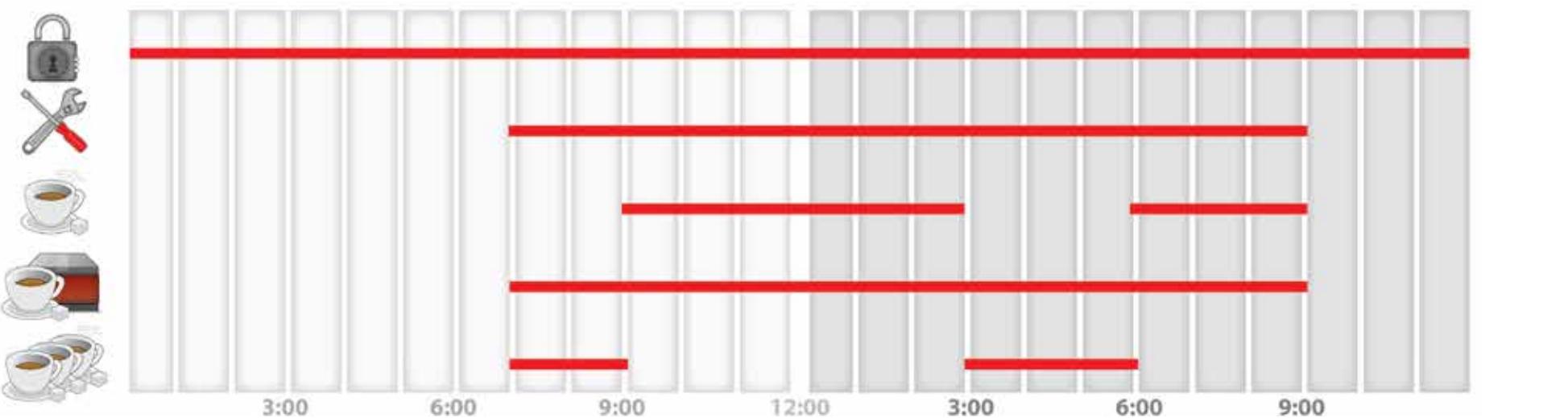
POP-up

Parametric Design | 2011 | Toronto, Canada
a Pentesco x Tsui Collaboration

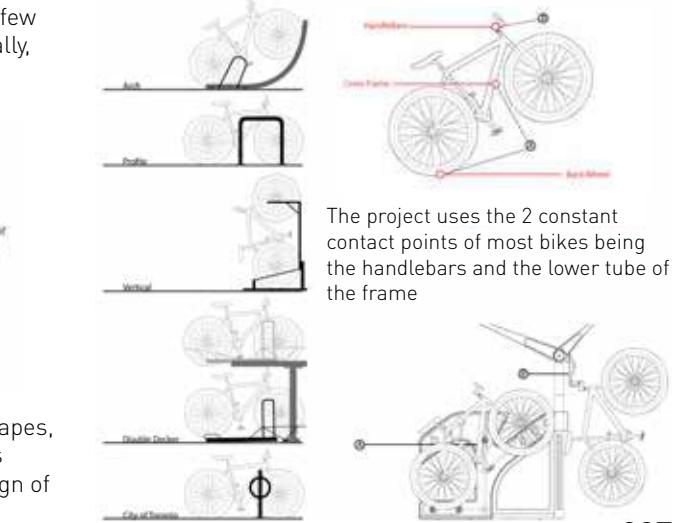
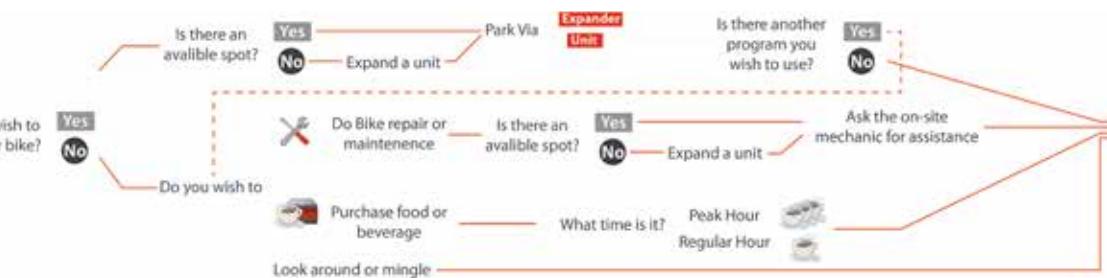
The idea of PopUP presents a number of challenges especially for a project that thrives for creativity but still remain grounded within feasible limits. After completing a preliminary project where we were assigned the task of mapping the movement of an ink droplet into water, a fascination grew out of a system that would be able to start off small but expand into an extremely complex form. With that the idea of creating an expandable, highly customizable and interactive system was born.



Driven by the bike culture of Toronto, the movement of urban cycling ranging from alley cat racing, group rides, bike clinics that happen out of necessity but also starts to form a highly communal force that creates an identity for its users. This lends perfectly to the program of pop up which requires a lightweight, modular, transportable and easily deployable design that should be able to be infinitely scaled due to demand. The challenge is then to draw enough program and support to create a culture around the project. From these parameters the following programs were decided:

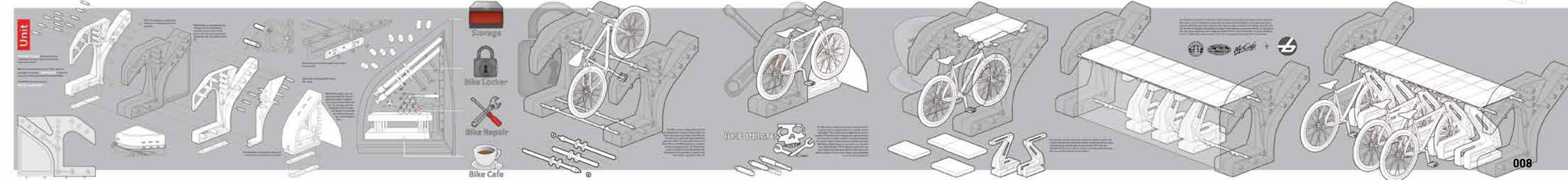
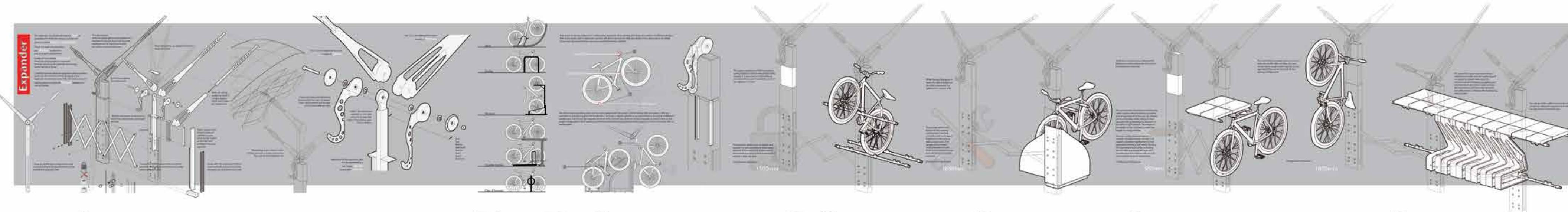
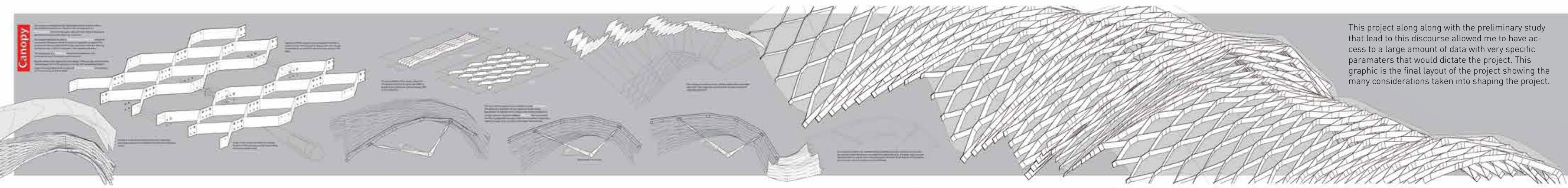


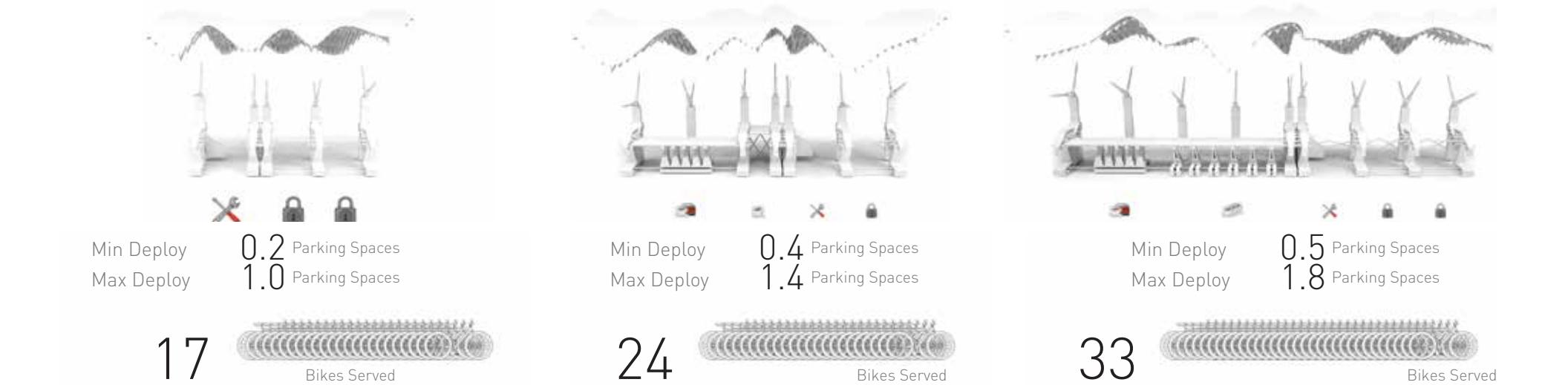
Aside from these programs the bike hub needed to be modular in design, easily deployable and transported with very few people, and must fit within the boundaries of a typical parking space not to effect the existing street infrastructure. Finally, The Bike Hub must be designed to fit as many different bikes as possible regardless of size, shape and type



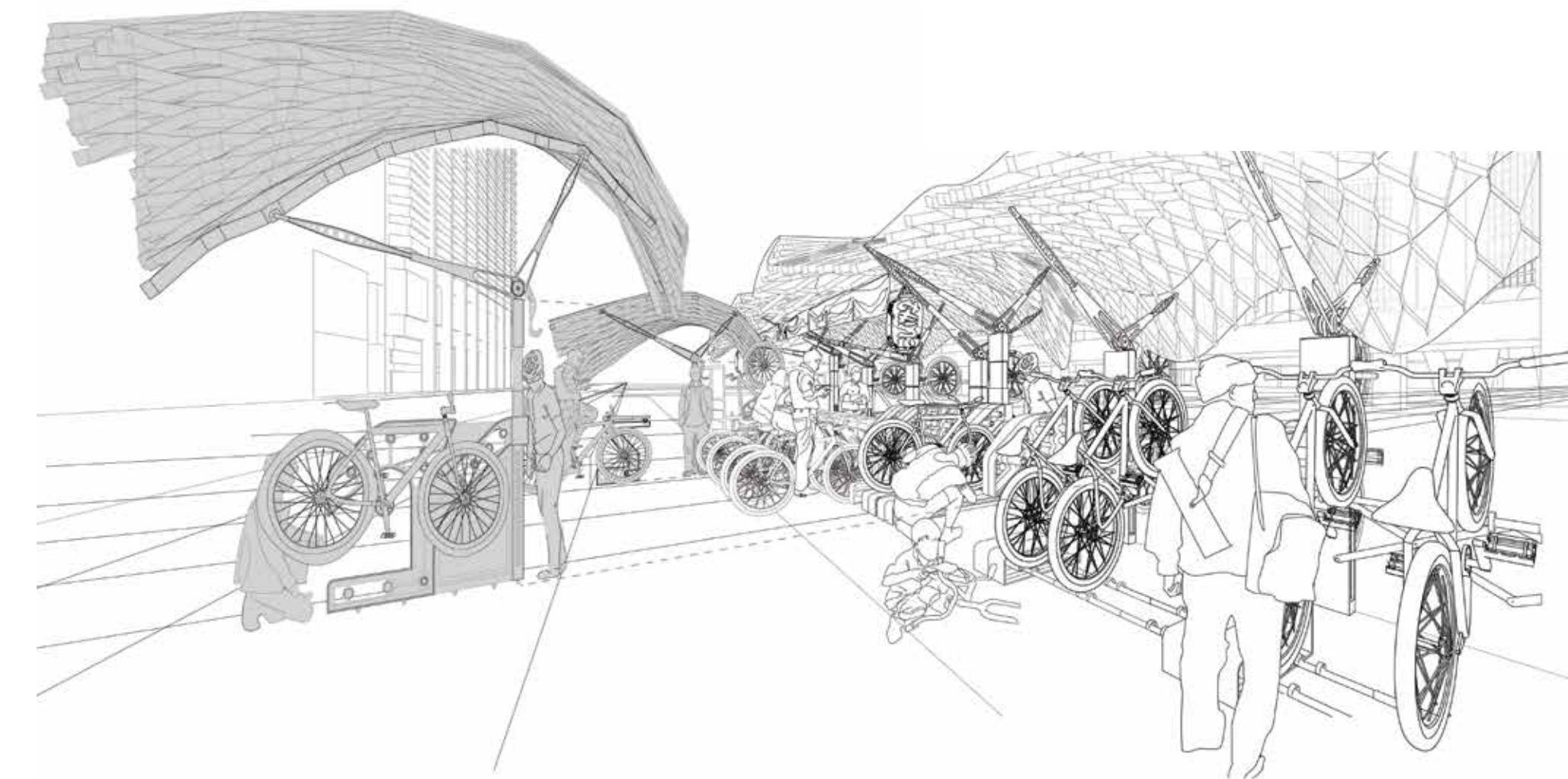
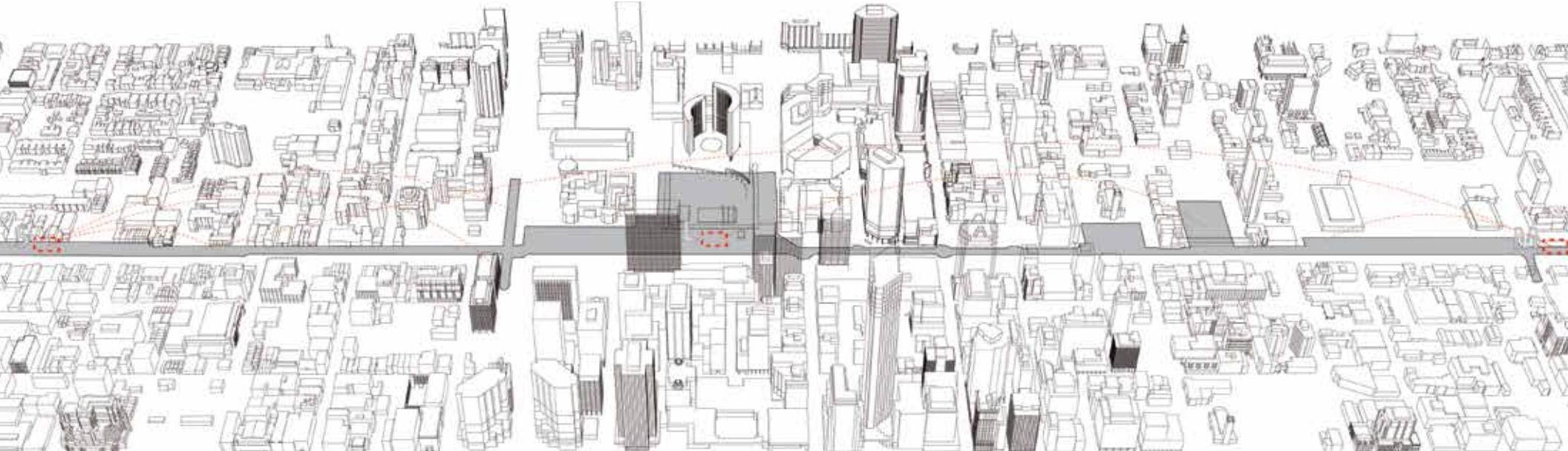
The initial intention was to derive the shape of the project through parametrics using the dimensions of various bike shapes, parking and storage types. However upon doing various studies of bike dimensions and elements a nominal design was found which became the basis of the design for a major part of the project. The use of parametrics was used in the design of the canopy which would be able to expand and contract relative to the size of the bike hub at any given time.

This project along along with the preliminary study that lead to this discourse allowed me to have access to a large amount of data with very specific paramters that would dictate the project. This graphic is the final layout of the project showing the many considerations taken into shaping the project.





Based on these 3 elements a array of variations driven by size and the space available can be deployed to service the community. The entire hub could be shipped and moved relative to city events, traffic conditions, and even as venues for street events. With an infinitely expandable system street fares and night markets could use the bike hub as a possible platform to host and support events throughout the city.



This is a rendering showing the L deployment in Nathan Philips Square in Toronto. As you can see, all of our proposed program is utilized including the expanded cafe. From this image it is easy to imagine the adaptive nature of this design and its ability to connect and repeat, forming new and close knit spaces and booths which can be used for a number of different functions including food vendors, information and event booths, and even gathering spaces for night markets and large events.

SURFACE to STREETS

DAWNTOWN Competition | 2014 | Miami, USA
a LUXIGON LA Collaboration

Dawntown was an ideas competition put forth by the city of Miami to effectively draw cycling culture back to its downtown core. The program brief had a number of highly redundant requirements when its goal was merely to promote and encourage a viable biking strategy to Miami. The descision was to pick out key programs from the program list and scatter them into satelite points into the city. Our solution was a surface or a check point at key areas of the city where cyclists can gather, educate, and travel as a united cell within the streets of Miami. The belif is that along with more numbers and travelling in cells, cycle commuting can begin to form identity, unity, and ultimately promote health amongst its users. Our point of analysis looks at Americas two most populous cities and how our system can start to shape the new Miami.

Commuter Culture

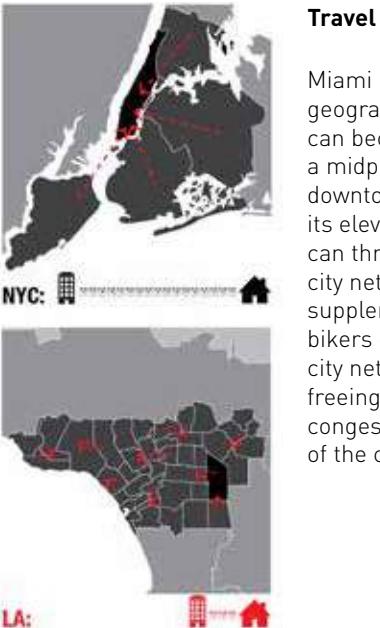
New york's commuting culture relies heavily on its extremely extensive and efficient subway network within manhattan. Conversely, Los Angeles relies on personal cars and the city's sprawling network of highways and streets.

Commuter Travel

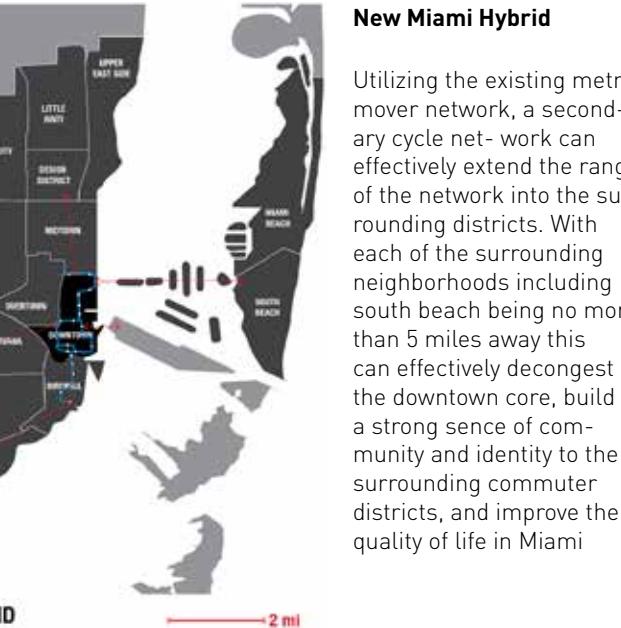
Despite new york's density, majority of New Yorkers avoid the high rent costs of living in the city in exchange for long commute times of living in its surrounding burrows. According to the NYT twice as many people commute into Manhattan than the number who lives there. Angelenos have a different system where many choose to live very close to their places of work. Thus creating a distinct collection of neighborhoods with autonomous identity and characteristics outside of the downtown core



Commuter Culture
Miami, because of the location of its downtown and the fact its not located on an island makes it a hybrid of the two cities. By utilizing its existing downtown network teamed with the new cycling culture, its commuter culture draws inspiration from both cities. Of living in surrounding suburbs and biking to connecting bike hubs



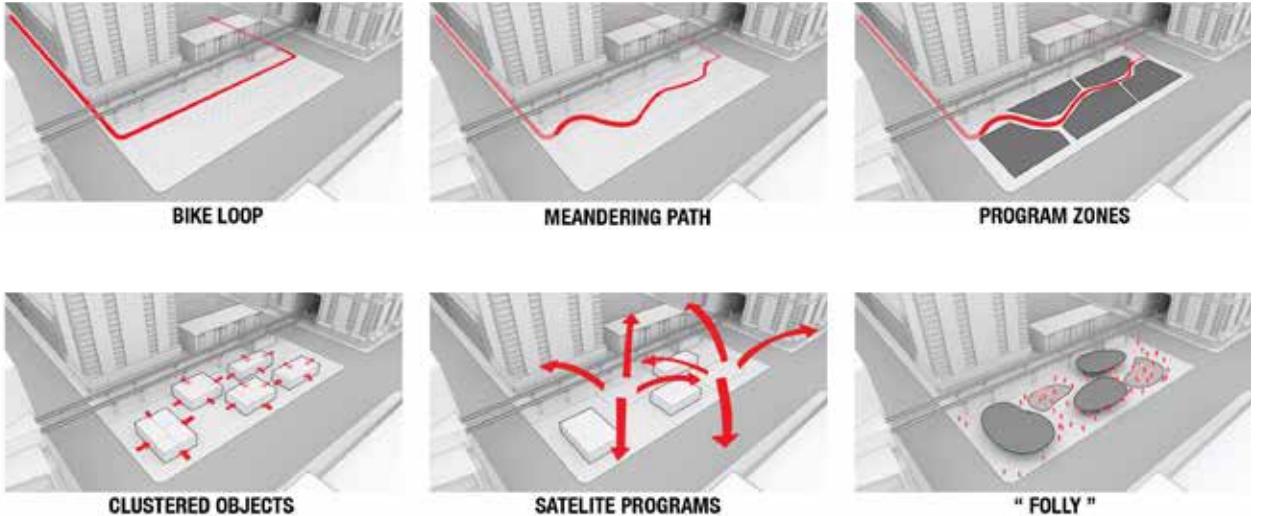
Travel Culture
Miami because of its geography and scale can become a midpoint where downtown Miami with its elevated network can thrive as a inner city network that supplements the bikers of the inner city network thereby freeing up downtown congestion in and out of the citycenter



New Miami Hybrid

Utilizing the existing metro mover network, a secondary cycle net- work can effectively extend the range of the network into the surrounding districts. With each of the surrounding neighborhoods including south beach being no more than 5 miles away this

can effectively decongest the downtown core, build a strong sence of community and identity to the surrounding commuter districts, and improve the quality of life in Miami



Site Intervention/Satellites
The scheme was a clear challenge of the program brief. With such a cost concious brief that called specifically not the create expensive above ground networks, our proposal simply becomes an extension of the city network. Taking the lessons learned from POPup the push was to take all the assigned program and mesh it into the existing street fabric. This allows for a very cost effective solution where all the investment is left into fueling a culture rather than a building.

Biblioteca OSTIENSE

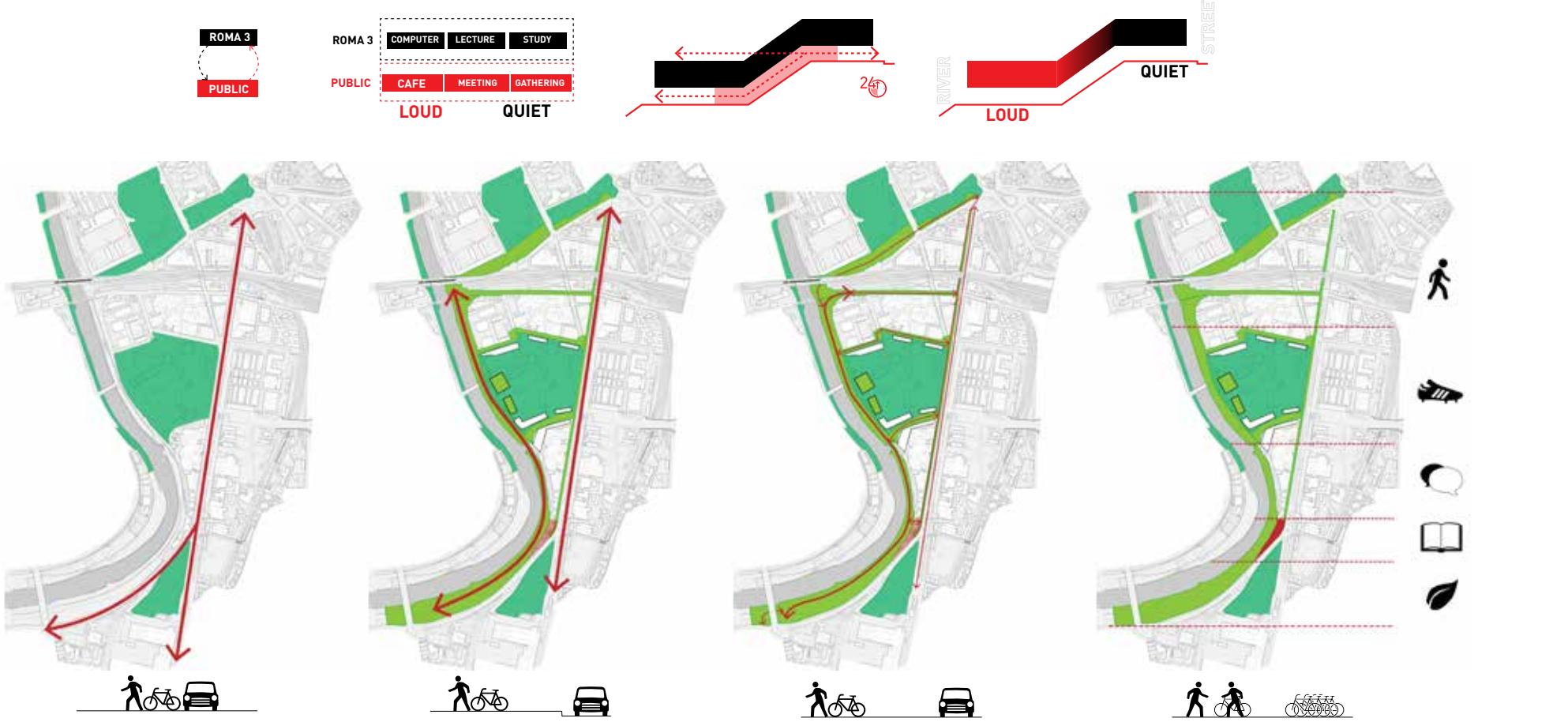
Design Studio | 2013 | Rome, Italy
a Gwendolyn Lovsted Collaboration

Library Ostiense is the product of 4 months in Rome and studying the local culture, customs and ultimately the architecture of the eternal city. The objective of the project was a masterplan that takes place along a major artery near the outskirts of Rome that converges with the Tiber river with the site of the project precisely where the two meet. Situated on what used to be a single storey restaurant, a garage and a gas station, we transformed the site into a communal hub and gathering space complete with a library, lecture hall,

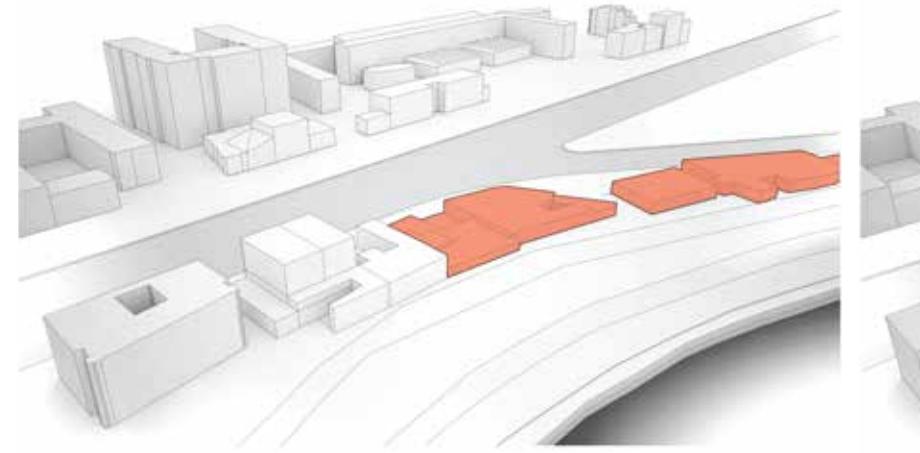
cafe, and a connection point to reflect on Rome's industrial past.

Early in the project it was evident the building would need to address two major user groups, the students of Roma Tre and the members of the public that will be using the building. The focus of the library then shifted to create a public building not only for the students but for the community. Because of the site's very unique location it inherently possessed a number of dualities that

became essential elements that shaped the programmatic organization and massing of the library. The contrasts between loud and quiet spaces, river and street atmosphere became key elements that shaped not only the building but more importantly the public space on the ground plane, establishing a key connection between the street and the river. To highlight the axial relationship between river and street the building aims to create a frame that physically creates a bridge to connect the two entities.

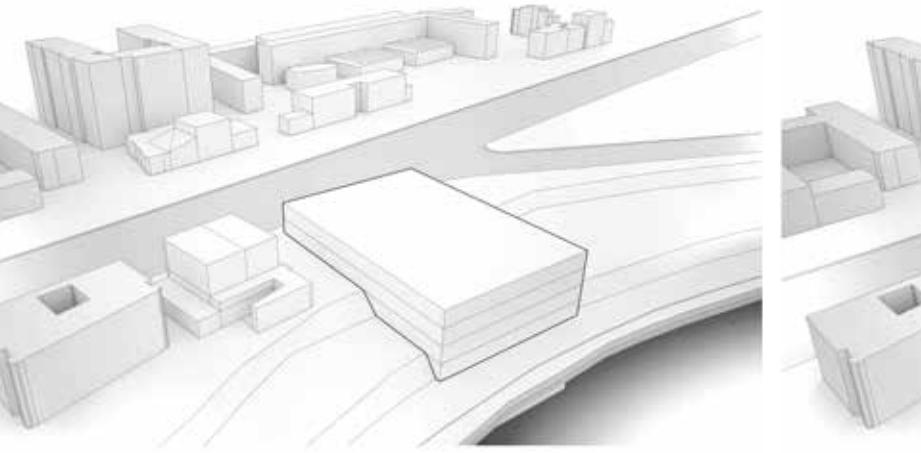


The existing street condition of Viale Ostiense puts all pedestrian traffic and car traffic along the same axis. We propose to remove several lanes of parking from Viale Ostiense to make space for a green path along the west side of the street. A new linear park beside the river will serve pedestrians and cyclists. Transverse paths are placed at key points to connect Viale Ostiense to the river path, creating a series of green loops for pedestrians while maintaining an efficient traffic system for cars. Restaurants, cafes and shops activate these connecting armatures, while the river path is divided into five sections with distinct characters and uses.



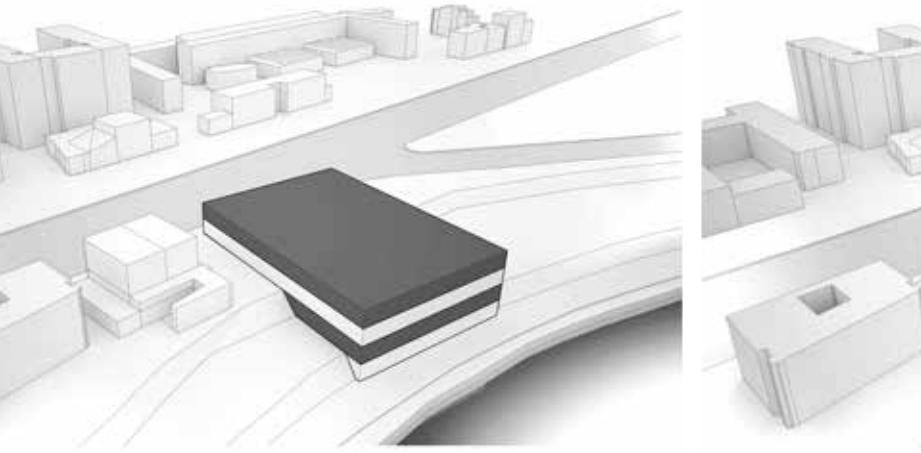
Demolish Existing Buildings

Within the given site, we propose to remove any low density retail (currently a gas station, a garage and a restaurant) to make space for the new library where the river and the road converge.



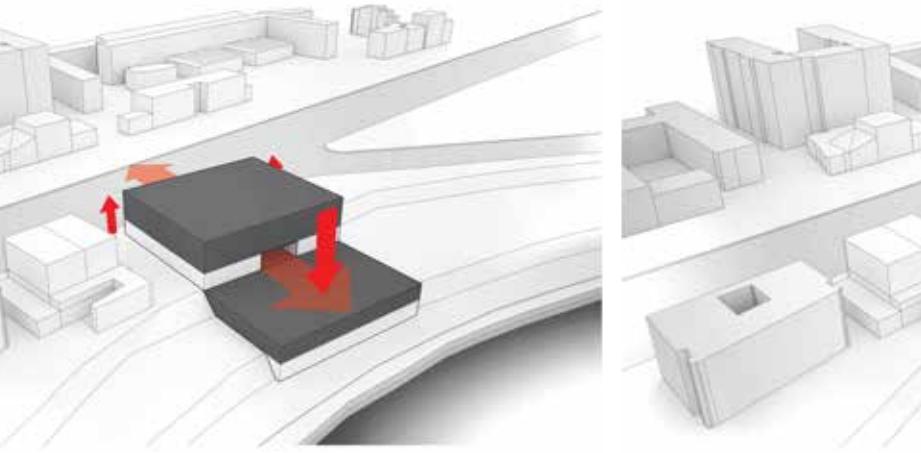
4 Storey Building

The library sits in between the street and the river, connecting the two major axes, with a distinct relationship to each.



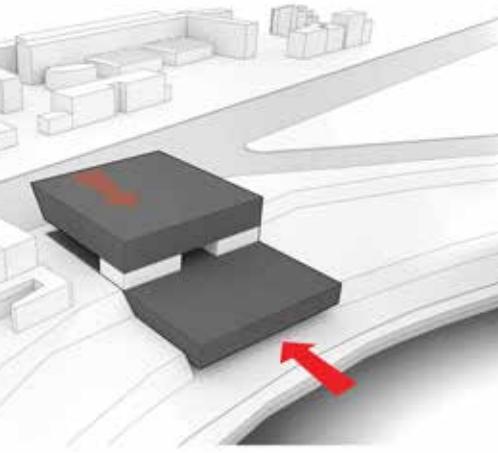
Division of Public and Private Programme

The dark grey blocks will contain private library programme, while the white levels will be kept open to the public, on the ground and river levels.



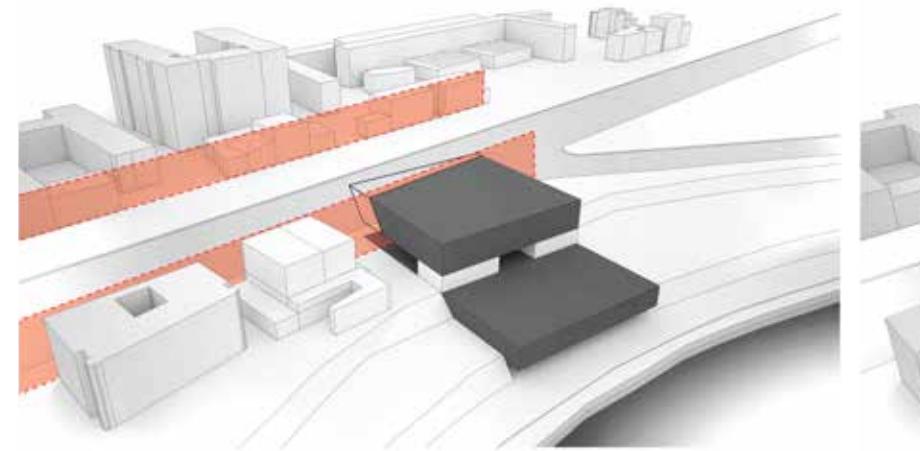
A Framed View

An opening is cut in the elevation to frame the view from the road to the river and strengthen their relationship. The building's levels are manipulated to relate to the scales of the immediate context.



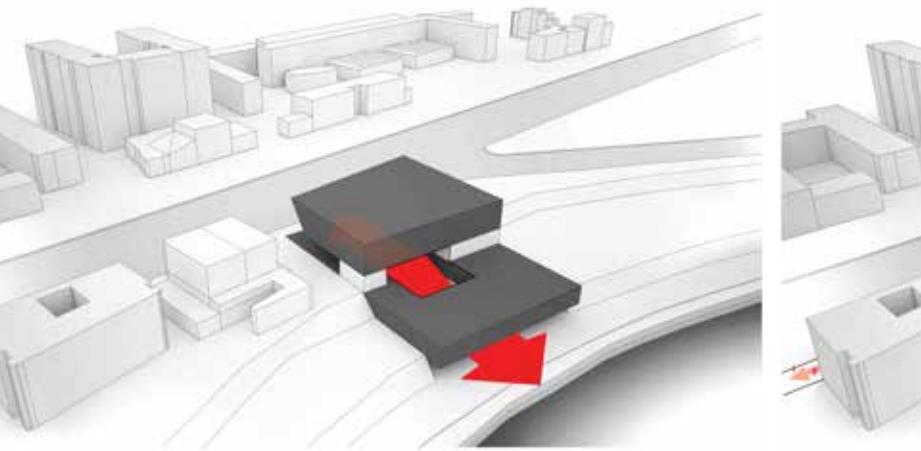
Inset Public Program

To allow more public interaction as well as circulation through the building, the public levels are pushed in, drawing pedestrians into the building.



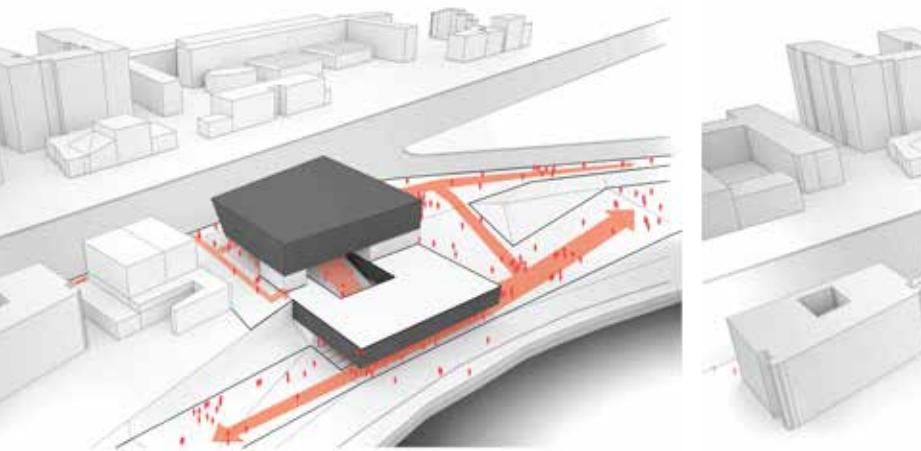
Line up Street Facade

The street facade is angled to match the surrounding fabric and axis of Viale Ostiense.



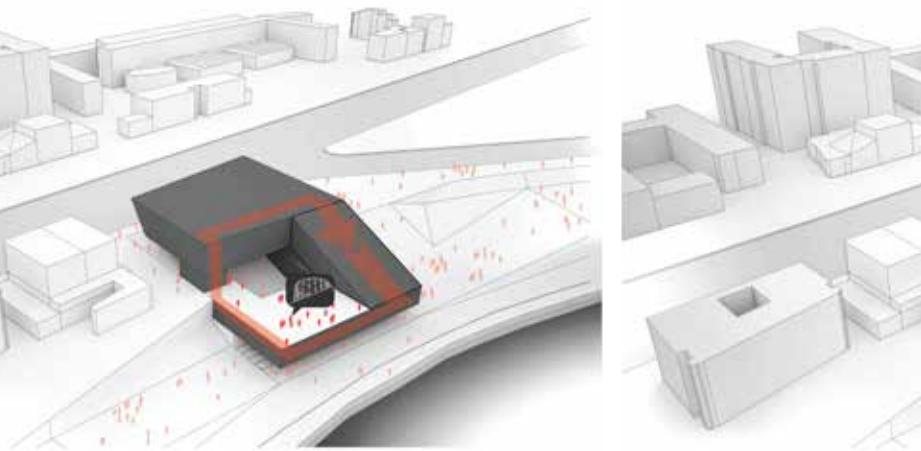
Main Staircase

An outdoor staircase cuts through the center of the building, reinforcing the connection between the street and river by providing a physical access between them.



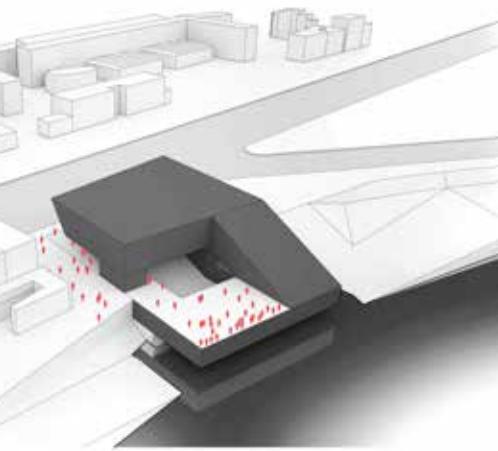
Landscape Changes

The landscape around the building is manipulated to integrate it into loops of pedestrian paths. The library is a critical point where the river path, street path, and transverse routes all converge.



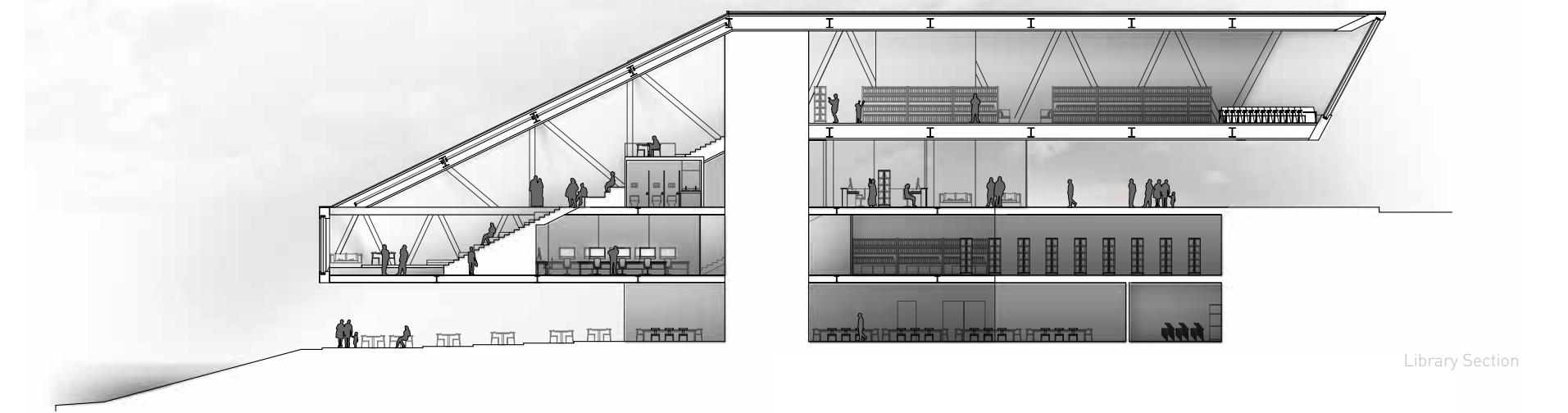
Continuous Interior Circulation

An enclosed feature stair completes the interior circulation loop, creating an informal meeting space for the library, with views out to the river. The exterior public platform is accessible from Viale Ostiense, and has excellent views of the iconic Italgas site.

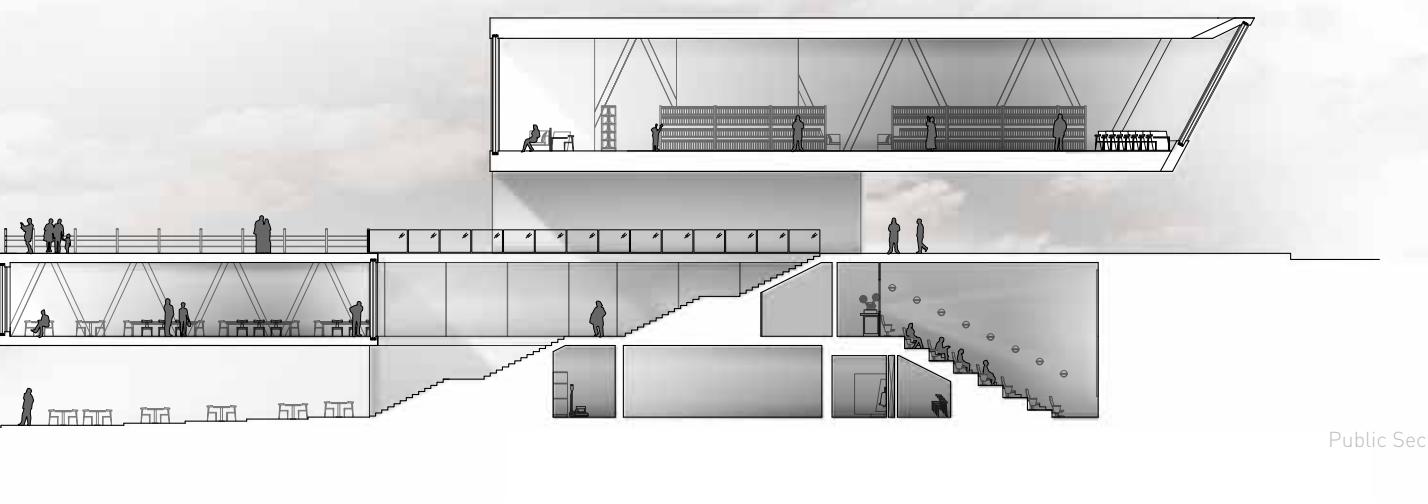


Flooding Public Spaces

The lowest level of the building is designed to be flooded during high river levels, creating a direct and dynamic relationship between the library and the river.



Library Section



Public Section

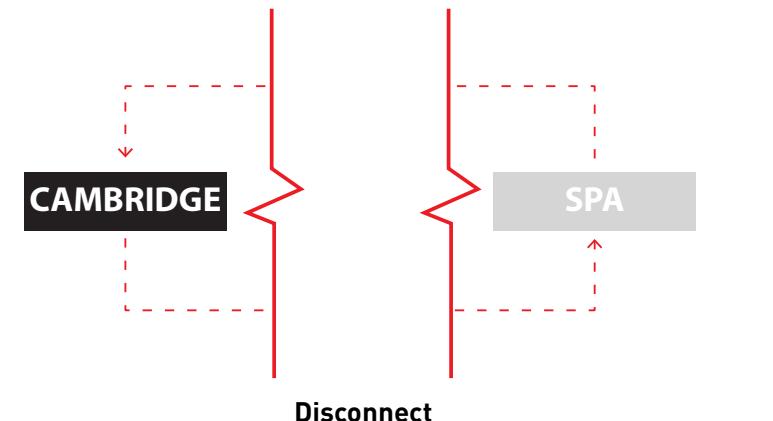
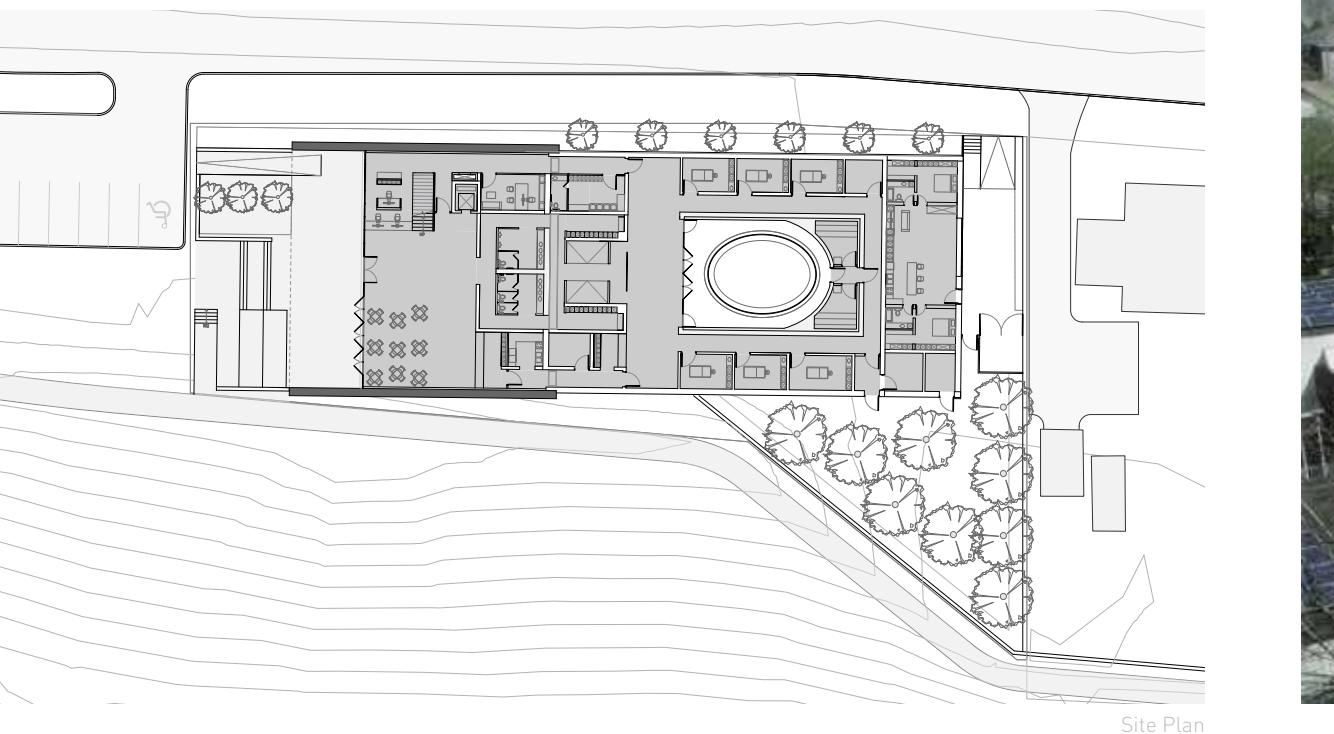
The ONSEN

Design Studio | 2013 | Cambridge, Canada

Challenging the conventional western idea of a "spa", The O thrives to create an experience that brings back the value community and gathering within the context of Cambridge.

The Project utilizes the spa as a vehicle to explore the juxtaposition of spa and community similar programmatically to the Japanese Bath House. Situated near an edge condition within the urban fabric of downtown Galt, the O aspires to integrate itself with daily life within Cambridge to return its visitors to the pace and rhythm of the city itself.

The O presents a number of contrasts and tensions and explores their implications and how it effects the users programmatically, spatially, and in terms of sensual experience.

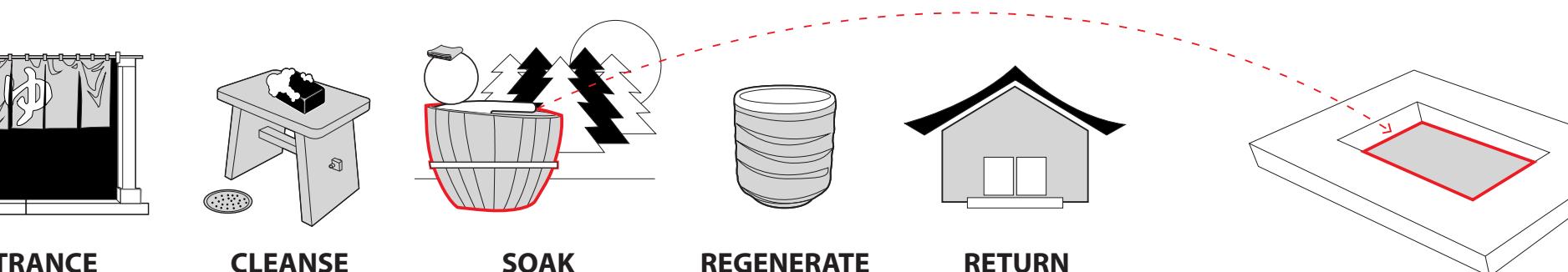


The challenge of creating a Spa within what seems to be an edge condition within Cambridge presents a number of different issues including questions of accessibility, need, and site which challenges the conventional idea of the spa experience.



More than a Spa

It soon became clear that a building with such an exclusive reputation cannot thrive in this community and therefore must provide additional program to activate the building.

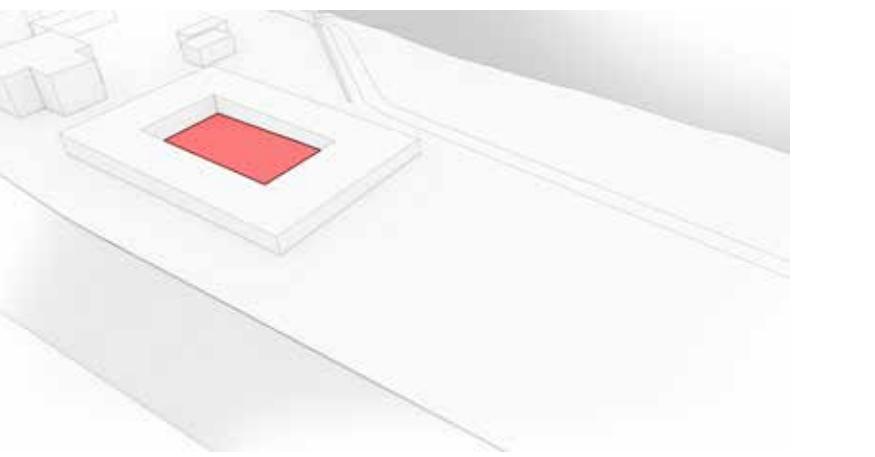


Japanese Bath House

A hybrid program which connects the spa and the community can be found within the Japanese Bath House. A tradition where the western world calls a "Spa" experience and integrates the ritual into everyday life. The spa will mimic the sequence of the bath house while celebrating the most critical part of the ritual the point where the visitor soaks in a water filled world in contemplation while observing nature and returning one's pace to its local and natural rhythm.

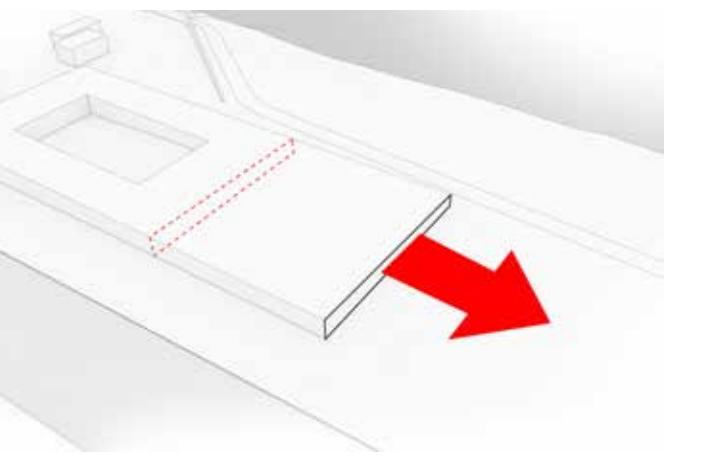
Courtyard Focus

The Courtyard typology with the soaking space in the center would take full advantage of the building envelope to control the views while shielding the space from the rest of Cambridge. The space will remain open air and grounded within the site while exposing the users of the sights, smells, sounds and weather of the city.



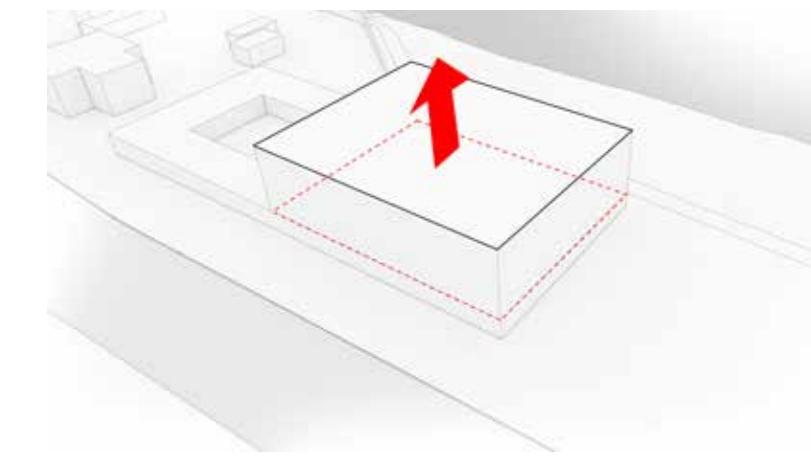
Courtyard Typology

The Courtyard allows for the building to have a focused and a central public space and allows for a controlled view experience due to lack of a view on the site



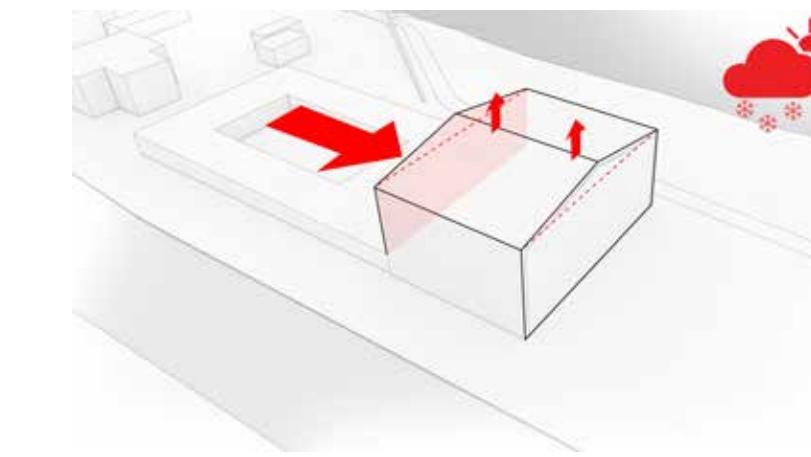
Linear Experience

Following the format of a traditional Japanese Bathhouse, a similar sequence of experience is mimiced programmatically within the spa



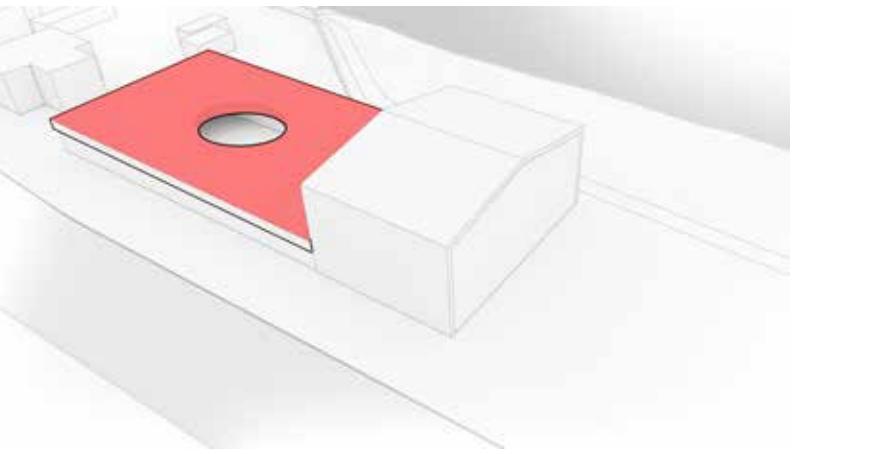
Programmatic Adjustment

A second floor towards the south of the site is added allowing spaces such as the reception, Cafe and Movement Studios to take full advantage of daylighting and views



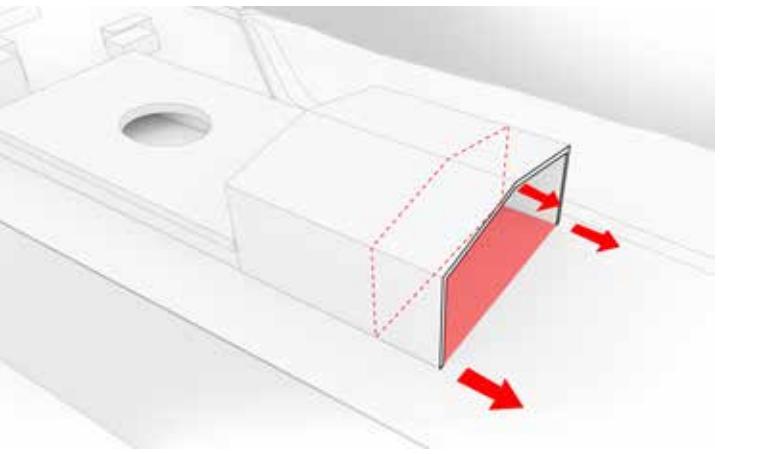
Setback and Pitch Roof

A setback along the courtyard ensures that the added mass does not shade the Spa courtard. A pitch in the roof is added to shed snow in the winter which produces a similar aesthetic of building compared to the rest of Cambridge



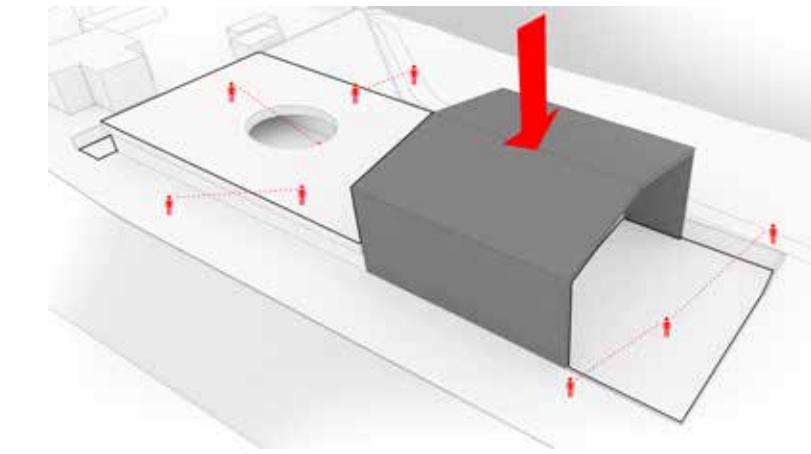
Green Roof Garden

A roof garden that highlights the oculus is added to the roof with the added productive aspect to the building. A circular open air cutout remains which highlights, connects, and roots with spa within Cambridge and the elements



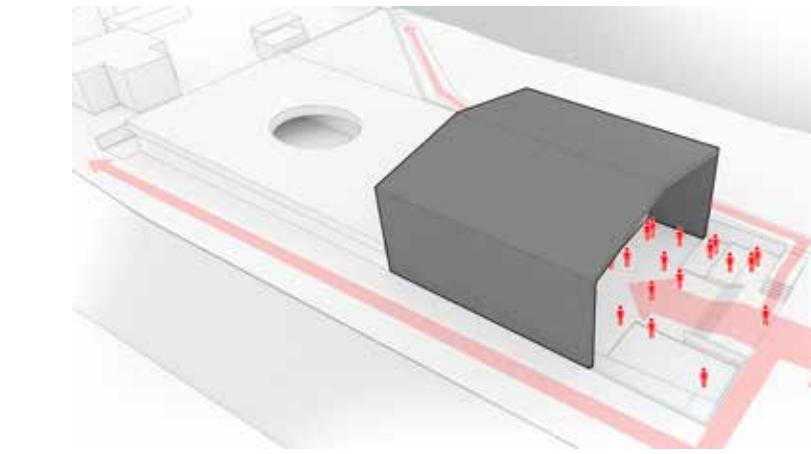
Shaded Porch

The roof contour is extended to create a large shaded porch which protects the building from heat gain in the summer and allows for sun penetration during the winter



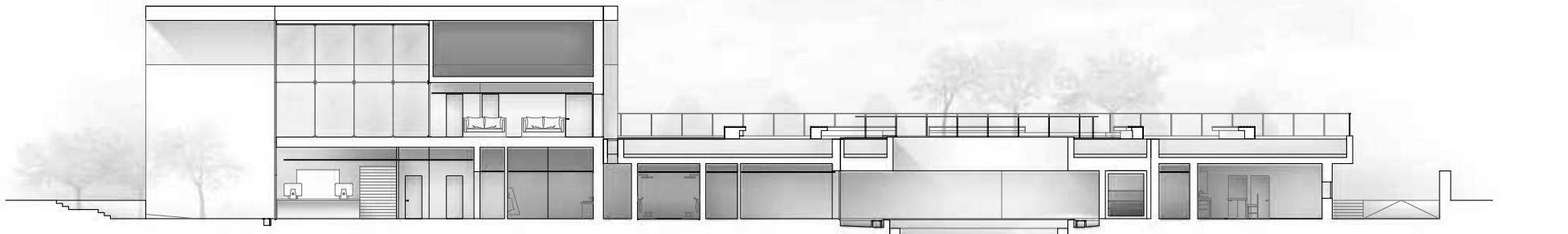
Sunken Building

The whole building is set into the ground, creating a distinct public piazza on the south facing side of the building. The added section variance creates a number of tensions between the different levels and programs in the Spa

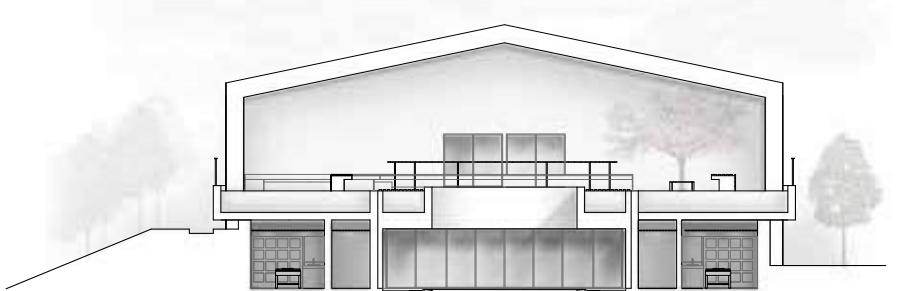


Continuous Circulation Loop

To allow more public interaction as well as circulation through the building, the public levels are pushed in, drawing pedestrians into the building.



Sequence Section



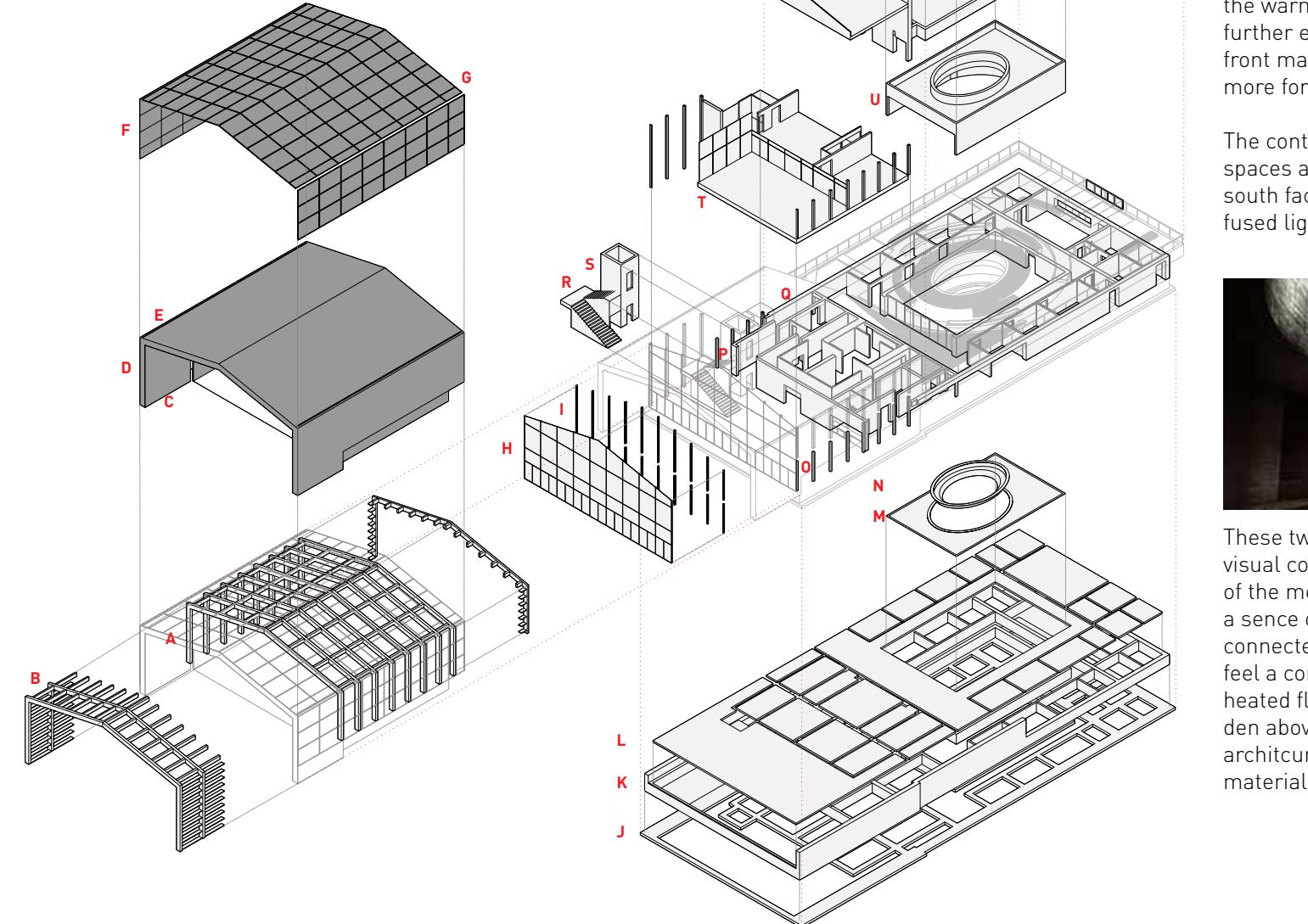
Spa Section



Atrium Section

A Glulam Member 418mmx215mm
 B Timber Porch Overhang
 C Tongue and Groove Wood Finish
 D Zinc Panel Cladding
 E Hidden Eavestrough
 F PV Panel
 G Solarthermal Panel
 H Curtain Wall
 I HSS
 J Concrete Footing
 K Concrete Foundation Walls @200mm
 L Concrete Slab on Grade @100mm
 M Crushed Stone Courtyard (Open-Air)
 N Cast in Place Concrete Pool

O Timber Post (Supporting Second Floor)
 P Concrete Shear Wall @200mm typ.
 Q Precast Concrete Panel Cladding
 R Wood Feature Stair
 S Hydraulic Elevator Shaft
 T Bubble Deck Floor Ø500mm 2nd Floor
 U Cast in Place Courtyard (Self Supported)
 V Attic/Mechanical Space
 W Concrete Shear Wall
 X Concrete Roof @300mm
 Y Intensive Green Roof

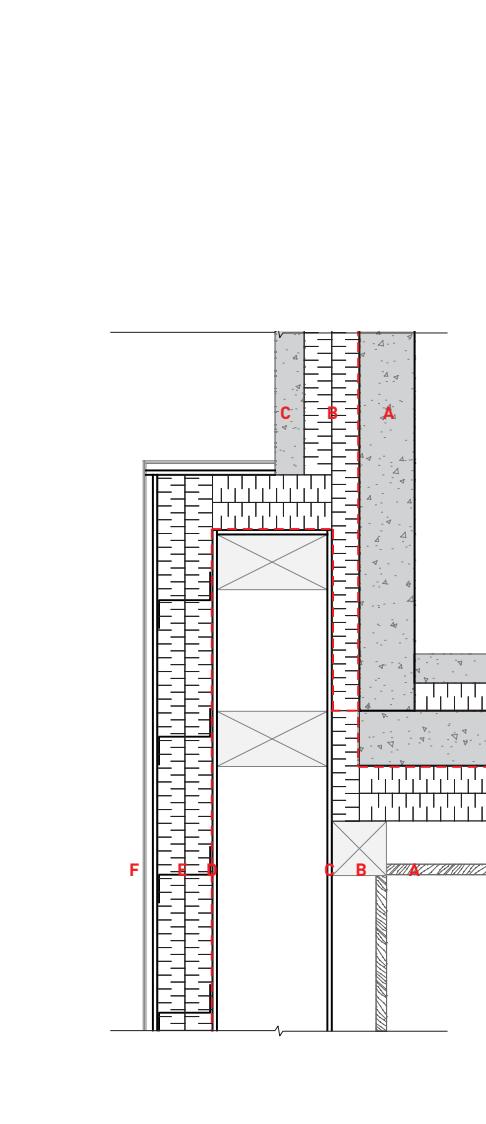
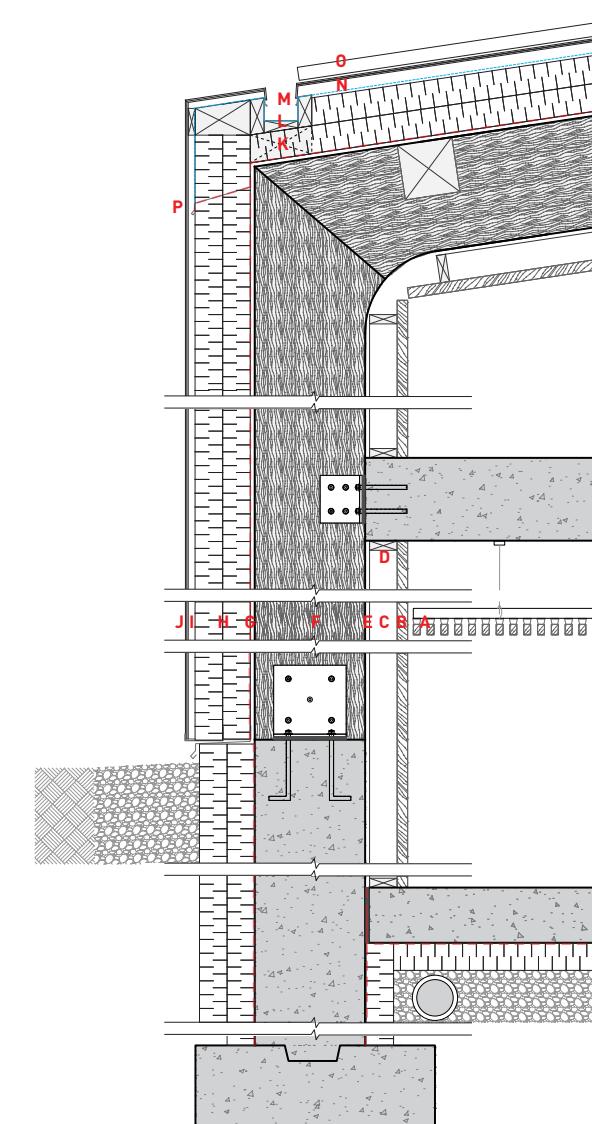
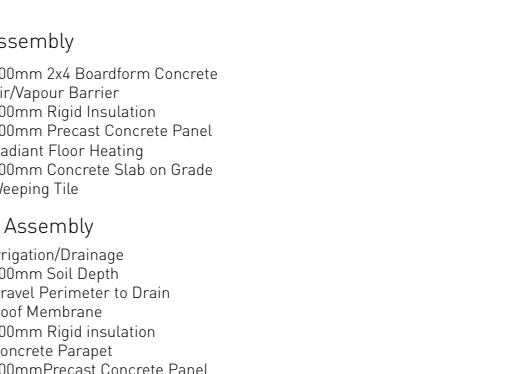
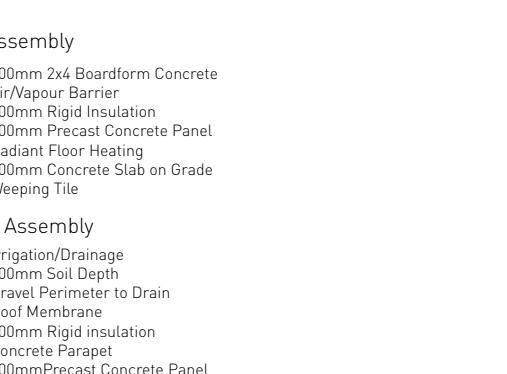
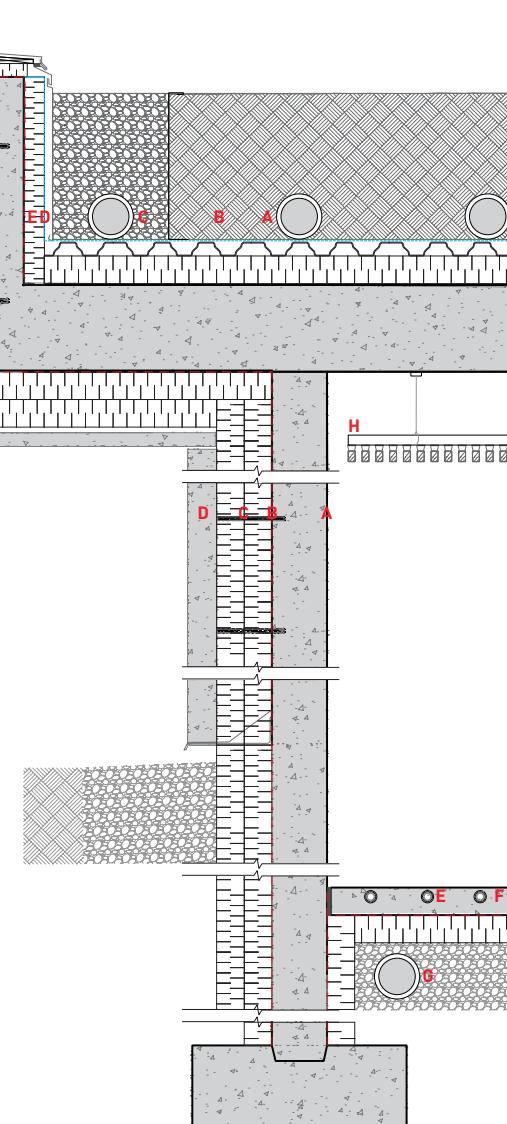


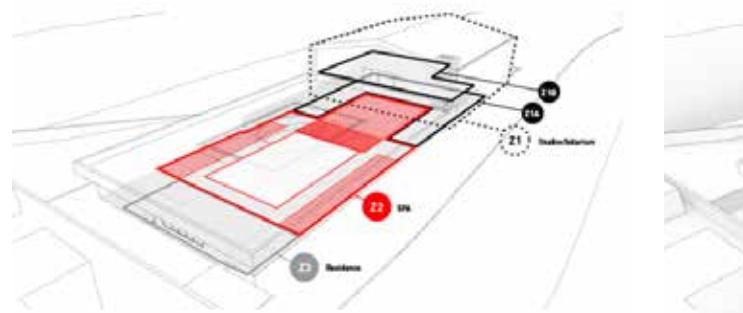
The dualities between the warm barn shaped wood and the submerged concrete spa is echoed throughout the project including its details and thermal strategy. With its public face reflected through the warm and overtone of the wood the visitors are further encouraged to gather and congregate in the front mass while the submerged concrete mass is more for personal and silent meditation.

The contrast is also excentuated through how the spaces are lit. One with extremely large shaded but south faced glazing while the other receives soft diffused light from the North.



These two spaces are programmed very similarly with visual connections between the piazza and the visitors of the movement studio and the restaurant it creates a sence of community even if the programs are disconnected. Similarly the bathers in under the oculus feel a connection between the people resting on the heated floorslab as well as visitors of the roof garden above. The only dinsction between them is in the architcultural language through the articulation of the materials as well as the human scale of the spaces.

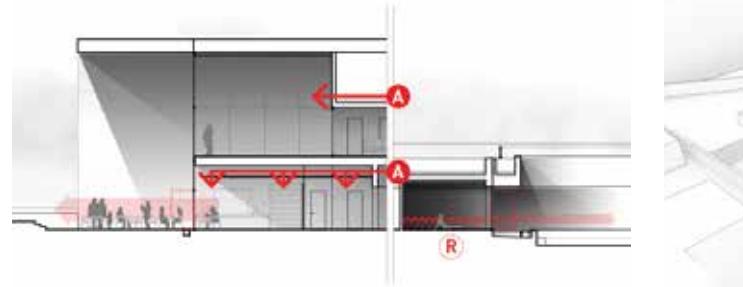




Thermal Strategy

Composed of 3 distinct Zones with varying comfort characteristics based on program and number of occupants, the strategy for the spaces are very different from one another

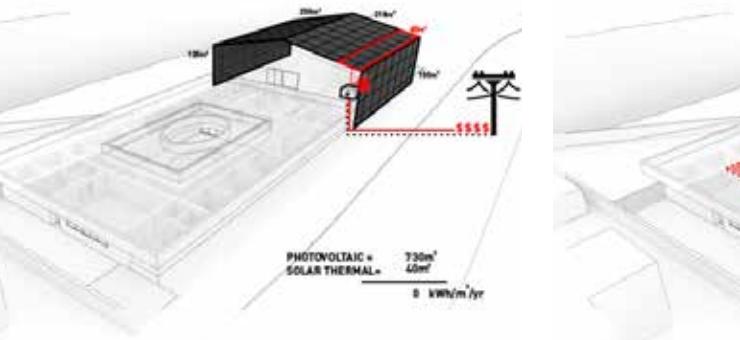
- z1 With a large glaz- Z2 ing on the south facing atrium, an air system provides quick climate control in an area with large temperature swings
- z2 A heated and Z3 cooled slab controls user experience in the spa area and allows occupants to be barefoot in the spa area
- z3 An air system allows the residence to regulate the temperature quickly especially when it is not occupied during the day



Lighting Strategy

The spatial implications and tensions between the airy overhang and the low level spa area makes with the building teamed with the energy strategy offers the users a wide range of public interactions within the building

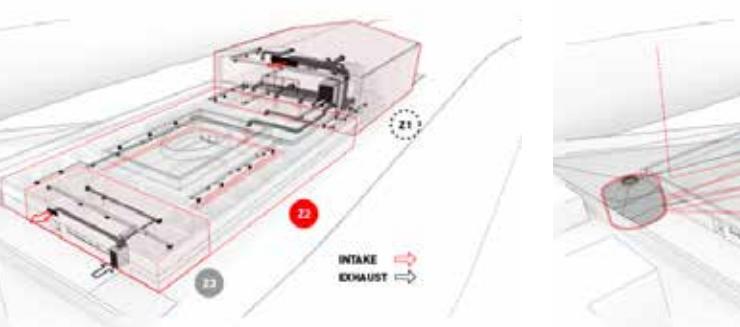
- z1 Naturally lit and shaded during all seasons, the double height overhang allows an airy location for occupants to gather
- z2 The Spa area is a very intimate and human scale with dim lighting that draws occupants to the Oculus.



Power Generation

PV panels store some of the energy in batteries in the mechanical room and the rest is sold back to the city grid. Solarthermal panels harvest enough energy for hot water use, radiant heating, and use for the outdoor pool

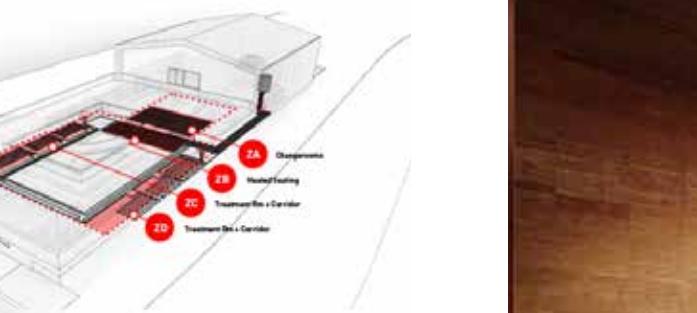
- Without any power generating systems in place the building stands at 150 kWh/m²/yr
- With PV and Solarthermal panels implemented the building generates enough energy to be self sufficient



Air Management

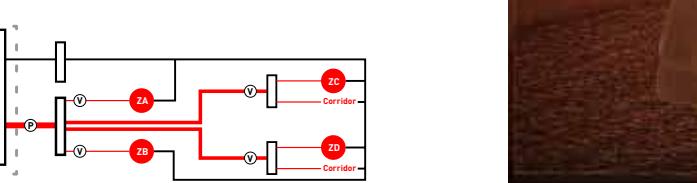
The Airhandling unit is coupled with an HRV within the mechanical room as well as fan coils within the ducts of specific spaces to further customize the amount and temperature of the air entering the spaces

- z1 An air system is most effective in this space due to the thermal swings caused by the glazing but also the varying demands on the movement studio
- z2 Although this area Z3 is mainly serviced by radiant heating this area also has the largest amount of exhausts because of the number of wet programs.
- z3 With similar demands to Z1, the practitioners residences remains untreated during the day and is used only when it is occupied



Radiant Grid

The Main manifold is located within the office area which is easily accessed and monitored. Each of the zones have a thermostat which regulates the flow of the water to fine tune the temperature in which it is heating



Man in sauna



Couple in pool



Woman walking



Child playing



Person in pool at night



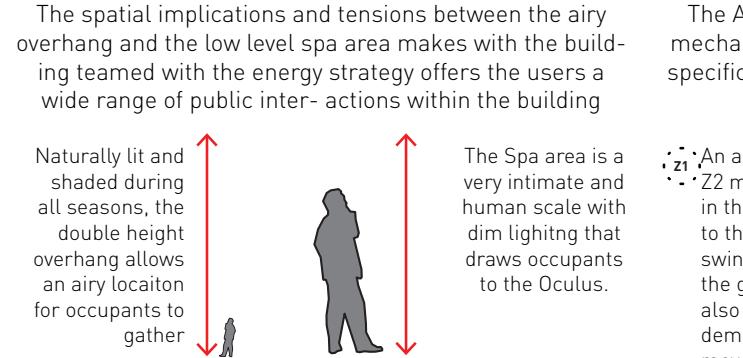
Person in pool at night



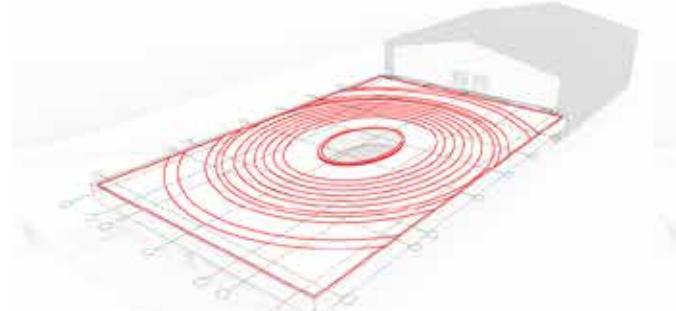
Person in pool at night



Person in pool at night



018



Dual Grid

Intersecting a path grid with a radial grid that draws focus to the oculus



Oculus Grid



Program Path

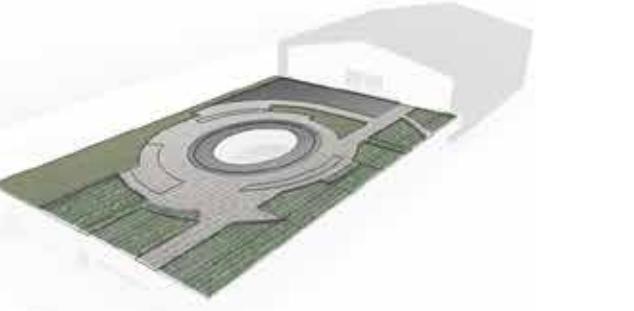
A direct and functional path to access the gardens while a separate meandering path for the visitors



Gardener



Visitor



Ground Textures

Different Ground textures provides a range of different experiences for the visitors



Crushed Stone



Intensive Planting

Seasonal Grasses



Shading Elements

Mid and high level planting to provide shading and spaces of repose along the crushed stone path



Blossom Tree



Gathering Points

Long benches which face the oculus provides a place for visitors to relax and enjoy the landscape while allowing for small pockets of interaction



Oculus Focus

The Landscape roof not only provides a space for repose, gardening, irrigation, and shading but creates an interesting programmatic overlap between the bathers and the visitors of the roof



2013-2014

LUXIGON Los Angeles, USA

2013

LUXIGON Paris, FR

Partnered with a number of local and international architects in visualization for their projects and designs

2012

CS+P Architects Toronto, CAN

Worked closely with a team that was planning a 10-year renovation and addition project for Tyndale University which included design and promotion material for funding for a Gym, Library and Auditorium

2011

Dn_A Design and Architecture Beijing, CN

Developed on an exhibition project for the Beijing Design Triennial at China Nation Museum. Was involved in the design, narrative, and visualization of the project

2010

Arquitectonica Miami, USA

2010

Arquitectonica Hong Kong, CN

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