

Architecture in Search of Sensory Balance

by

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Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

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Abstract

This thesis addresses the urgent need to awaken our numbed senses by means of haptic architecture. As today's technologies continue to hyper-stimulate and under-differentiate, it is architecture's obligation to resist the resultant de-sensitizing of daily experiences. A return of a multi-sensory and corporeal element to architecture can reveal new possibilities for restoring sensory balance, and for connecting our bodies to our surroundings. Through the authority of all the senses, we may re-discover our human identity within the larger context of the world.

The proposed design is a spa health club in downtown Toronto. Throughout history, public baths have been important spaces in cities. Bathers are able to be social or solitary as they choose, while cleansing body and senses. Today, such spaces are lost in the race where thousands upon thousands of advertisements compete for one's imagination. Combining the ancient bath culture with the contemporary fitness culture, the design of the spa health club aims to heighten awareness by engaging the body and all of its senses. Central to the design is an urban public park offering transitory moments of tranquility and sensual pleasure. The spa, with its public park, offers a space that resumes the dialogue between body and space, creating haptic memories and, above all, raising human consciousness.

Acknowledgements

My sincere thanks to my supervisor, Rick Andrighetti, and to my committee members, Dereck Revington and Lloyd Hunt. Your time, support and criticisms were much appreciated.

Dedication

To my family

Table of Contents

iii	Abstract
ix	List of Illustrations
I	Preface
3	Book and Stone
7	Instant Culture and the Blasé
11	Architecture of the Eye versus Architecture of Hapticity
17	Mass and Volume
25	Materiality and Time
33	Light and Shadow
43	Silence
53	Hapticity and Corporeality
65	Design
67	Project & Site Introduction
71	The Urban Park
79	The Spine
85	The Spa
93	Plans
113	Sections
125	Conclusion
129	Bibliography

List of Illustrations

- fig. 1.1** Blind Nations
Architecture and Ideas Vol. v no. 1 p.33
- fig. 1.2** Rome cobblestones
<http://www.amoretravelguides.com/italy-news/rome-cobblestones.jpg>
- fig. 1.3** Still image from movie Brazil
Brazil DVD Universal Home Video Inc. 1998
- fig. 1.4** Photograph of Hespeler Road in Cambridge
Photo by Clementine Chang
- fig. 1.5** Proposal of Urban Lifestyle Entertainment Centre at Toronto's Dundas Square
Canadian Architect V.50 n.09 Sept 2005 p.8
- fig. 1.6** City of Suzhou in China
Water and Architecture p.91
- fig. 1.7** Commercial Towers in New York City
Designing for the Built Realm: Fox & Fowle Architects p.187
- fig. 1.8** Thermal Bath in Vals
Peter Zumthor Works p.146
- fig. 1.9** Le Corbusier. La Tourette.
Le Couvent de la Tourette p.70
- fig. 1.10** Alvar Aalto. Villa Mairea,
Alvar Aalto: Between Humanism and Materialism p.207
- fig. 2.1** Tadao Ando. Sayamaike Museum in Osaka.
Domus October 2002 p.83
- fig. 2.2** Alberto Campo Baeza. Caja General Headquarters in Granada.
A+U #394 July 2003 p.29
- fig. 2.3** Moshe Safdie. Holocaust History Museum at Yad Vashem in Jerusalem.
Architectural Record July 2005 p.119
- fig. 2.4** Tadao Ando. Chikatsu-Asuka Historical Museum in Osaka.
Tadao Ando: Light and Water p.142
- fig. 2.5** Herzog & de Meuron. Schaulager, Viewing Warehouse, Basel, Switzerland.
New Museums p.72
- fig. 2.6** Zaha Hadid. Lois & Richard Rosenthal Center for Contemporary Art in Cincinnati.
Zaha Hadid Complete Works Volume 1 p.103
- fig. 2.7** Gable wall with door to hay loft in Videm.
Detail Magazine Jan/Feb 2004 p.11
- fig. 2.8** Mario Garzaniti. Housing, Brussels, Belgium.
Architectural Review Oct 2005 p.71
- fig. 2.9** Zade & Vila. Wood of Life.
V-iA arquitectura volume 14 p.37

- fig. 2.10** Zade & Vila. Wood of Life. Detail.
ViA arquitectura volume 14 p.37
- fig. 2.11** Paley Park in New York.
Photography by Ewa Rudzik.
- fig. 2.12** Peter Zumthor. Church in Sogn Benedetg.
Peter Zumthor Works p.57
- fig. 2.13** Qingyun Ma. Casa en el valle de Jade, in Lantian China
AV Monographs 108 2004 p.63
- fig. 2.14** Peter Zumthor. Gugalun House in Versam, Graubunden.
Peter Zumthor Works p.105
- fig. 2.15** Peter Zumthor. Thermal Bath in Vals.
Peter Zumthor Works p.159
- fig. 2.16** Tadao Ando. Komyo-ji-Temple in Saijo, Japan.
Tadao Ando: Light and Water p.251
- fig. 2.17** Moriyama & Teshima. Canadian War Museum in Ottawa.
Azure June 2005 p.84
- fig. 2.18** Patkau Architects. Vancouver House in British Columbia.
Architectural Record April 2002 p.99
- fig. 2.19** Le Corbusier. La Tourette.
Le Couvent de la Tourette p.91
- fig. 2.20** Toyo Ito. Bruges Pavilion.
El Croquis 123 p.171
- fig. 2.21** Moriyama & Teshima. Canadian War Museum in Ottawa.
<http://www.cbc.ca/ottawa/features/warmuseum/photogallery/index.html>
- fig. 2.22** Moriyama & Teshima. Canadian War Museum in Ottawa.
Azure June 2005 p.86
- fig. 2.23** Antoine Predock. Solstice Wall in Ventana Vista Elementary School, Tucson, Arizona.
Human Spaces p.139
- fig. 2.24** Tadao Ando. The Church of Light.
Tadao Ando: Light and Water p.68
- fig. 2.25** Peter Zumthor. Thermal Bath in Vals. Ceiling Detail.
Peter Zumthor Works p.168
- fig. 2.26** Le Corbusier. Notre Dame du Haut. Chapel at Ronchamp.
Poetics of Light p.190
- fig. 2.27** Tadao Ando. Fabrica. Benneton Communication Research Center. Treviso, Italy.
Tadao Ando: Light and Water p.193
- fig. 2.28** Peter Zumthor. Thermal Bath in Vals.
Peter Zumthor Works p.150

- fig. 2.29** Le Corbusier. La Tourette.
La Tourette: The Le Corbusier Monastery p.49 photos by Bernhard Moosbrugger
- fig. 2.30** Le Corbusier. La Tourette.
Le Couvent de la Tourette p.78
- fig. 2.31** Peter Zumthor. Art Museum Bregenz in Bregenz, Austria.
Peter Zumthor Works p.209
- fig. 2.32** Tadao Ando. Komyo-ji-Temple in Saijo, Japan.
Tadao Ando: Light and Water p.247
- fig. 2.33** Tadao Ando. Modern Art Museum of Fort Worth in Texas, USA.
New Museums p.62
- fig. 2.34** Peter Zumthor. Thermal Bath in Vals.
Peter Zumthor Works p.181
- fig. 2.35** Peter Zumthor. Thermal Bath in Vals.
Thermal Bath at Vals p.7
- fig. 2.36** Toyo Ito. Matsumoto Performing Arts Centre in Nagano, Japan.
El Croquis 123 p.138
- fig. 2.37** Moriyama & Teshima. Canadian War Museum in Ottawa.
A+U February 2006 p.95
- fig. 2.38** Steven Holl. Stretto House.
Questions of Perception p.111
- fig. 2.39** Tod Williams Billie Tsien & Associates. Museum of American Folk Art in New York, USA.
New Museums p.119
- fig. 2.40** Steven Holl. Stretto House.
Stretto House p.31
- fig. 2.41** Christian Moeller. Audio Grove. Sound Garden, Spiral/Wacoal Art Center, Tokyo.
Time and Place: Christian Moeller Media Architecture 1991-2003.
- fig. 2.42** An utaseyu shower at a Japanese hot spring.
Undesigning the Bath p.55
- fig. 2.43** Peter Zumthor. Thermal Bath in Vals.
Peter Zumthor Works p.177
- fig. 2.44** Barclay & Crousse. Casa Equis, Canete, Peru.
AV Monographs 108 2004 p.20
- fig. 2.45** Kazuyo Sejima & Associates. House in a Plum Grove, Tokyo, Japan.
AV Monographs 108 2004 p.92
- fig. 2.46** Kerry Hill Architects. The Serai Resort Hotel.
A+U February 1997 p.85
- fig. 2.47** Toyo Ito. Bruges Pavilion.
Toyo Ito builds the Bruges 2002 Pavilion p.86

- fig 3.1** Aerial map of proposed site and surrounding area
University of Waterloo Library
- fig 3.2** View of site on King Street West looking North from Metro Hall Plaza
University of Waterloo Library
- fig 3.3** View of site on Adelaide Street West
Photo by Clementine Chang
- fig 3.4** View of site looking north from Pearl Street towards Adelaide Street
Photo by Clementine Chang
- fig 3.5** View of site looking south from Pearl Street towards King Street
Photo by Clementine Chang
- fig 3.6** View of Pearl Street looking West
Photo by Clementine Chang
- fig 3.7** View of King Street looking West
Photo by Clementine Chang
- fig 3.8** Paley Park in New York
Photo by Ewa Rudzik
- fig 3.9** View of proposed building from Metro Hall Plaza on King Street West
Vignette by Clementine Chang
- fig 3.10** View of proposed ground level plaza from King Street West
Vignette by Clementine Chang
- fig 3.11** Queen Street West in downtown Toronto
Photo by Clementine Chang
- fig 3.12** Paley Park in New York
http://www.pps.org/great_public_spaces/one?public_place_id=69#
- fig 3.13** Queen Street West in downtown Toronto
Photo by Clementine Chang
- fig 3.14** Cobblestones of different shapes & colours
AV Monographs 108 2004 p.60
- fig 3.15** Cobblestones laid out in patterns at a park
<http://healthyaging.ori.org/cobblestone/photos/china9.jpg>
- fig 3.16** Cobblestone walking at a public park in Shanghai China
<http://healthyaging.ori.org/cobblestone/photos/china2.jpg>
- fig 3.17** View of reflecting pool from Pearl Street looking towards Adelaide Street
Vignette by Clementine Chang
- fig 3.18** View inside the spine looking up towards the outdoor bath
Vignette by Clementine Chang
- fig 3.19** Moshe Safdie. Holocaust History Museum at Yad Vashem in Jerusalem.
A+U February 2006 p.40
- fig 3.20** Translucent concrete
<http://www.gizmag.com/go/5093/gallery/>

- fig 3.21** Translucent concrete
<http://www.gizmag.com/go/5093/gallery/>
- fig 3.22** Behnisch, Behnisch & Partners. Terrence Donnelly Centre in Toronto.
Canadian Architect January 2006 v. 51 no.1 p.32
- fig 3.23** View of proposed outdoor running track
Vignette by Clementine Chang
- fig 3.24** Water texture
Unknown source
- fig 3.25** View of the Adelaide façade showing the glass steam tower
Vignette by Clementine Chang
- fig 3.26** Patkau Architects. Vancouver House in British Columbia.
Architectural Record April 2002 p.94
- fig 3.27** Patkau Architects. Vancouver House in British Columbia.
Architectural Record April 2002 p.98
- fig 3.28** Patkau Architects. Vancouver House in British Columbia.
Architectural Record April 2002 p.99
- fig 3.29** Carlsbad Cavern. Photo by Robert Swanson
<http://www.photodonation.org>
- fig 3.30** Mausoleum in Murcia
Detail Magazine April 2004 p.364
- fig 3.31** Detail, stacked glass corner feature, Ernst & Young Boardroom | Boston, MA
Photo by Paul Housberg. <http://www.glassproject.com/portfolio.htm#>



fig 1.1 "Blind Nation."

Preface

My thesis is borne of a critique of what I call “flattened” contemporary musical experience. Lamenting this loss of depth led to an examination of the ways in which technologies, particularly those dependent on electricity, resulted in concerts becoming events to be seen rather than heard and felt. Further exploration brought me to the proof of deaf and blind people’s ability to enjoy music and the means by which they do so. This, in turn, reinforced the notion that musical experience is multi-sensory, and that with flattened, primarily visual music, we are ignoring the powerful realm of felt sound. It occurred to me that, in a way, the healthy population has become more impaired than the deaf and the blind, the senses other than sight having atrophied. This irony sparked my exploration into multi-sensory, corporeal experiences through the tectonic and spatial language of architecture. I realized that the transformation of the manner in which we perceive music was only one example within an emerging thesis.



fig 1.2 The feeling of cobblestones under my feet is forever intertwined with my memories of living in Rome.

Book and Stone

Victor Hugo, the French author, once remarked that with the advent of printing the art of building vanished. The written sign released history from place. The interpretation was not bound to its surroundings. The book read by all no longer gave the ordained stone the same immediate importance. The dialogue between man and nature ceased. The book, it is true, transmitted the thought of stone, but freed from its mass. The concept of time is in disarray, the book is everlasting, reprinted, protected, moved, and stored. By forsaking its mass, its history is free from time. The next day, the stone again casts its shadow, but the book has already been interpreted.¹

Sverre Fehn. Does a doll have life?

While living in Rome, the building that made the deepest impression on me was the Pantheon. Before then, I had seen numerous photographs, studied its structure and its formal principles in textbooks. However, it was not until I *experienced* the Pantheon in its material form that it permanently imprinted itself into my memory. What the photographs and drawings could not communicate to me was the scale of its massive columns against my body, or the sound of water and the smell of moisture when rain falls through the oculus, or the slow movement of the sunbeam across the concrete dome. Embodied memories such as these are disappearing as our culture becomes more and more afflicted by ocularcentrism.



fig 1.3 Dining in the movie *Brazil* is reduced to an image representing the real food.

Despite its technological achievement, the printing press sowed the seeds of ocularcentrism. It marked a fundamental shift in our perception of the world. When the culture of the spoken word yielded to the culture of the printed word, consciousness and memory were radically transformed. Our way of thinking and perceiving shifted away from the situational and increasingly towards the abstract. Our sensory balance was upset when vision separated itself from, and dominated the other senses. On its own, the sense of sight tends to be distancing and detaching. Depending on vision as our primary means of perceiving is problematic, as ocularcentrism alters our understanding of the human body and severs its relationship to the surrounding space.

Since the invention of the printing press, technological inventions such as photography, film, radio, television and the internet have exacerbated the problem of ocularcentrism. These inventions allowed “the thought of stone”² to be “freed from its mass.”³ They brought portability to experiences which had once been concrete, detaching them from their once necessary place. Such portable experiences become commodified ideas which reinforce neither our sense of self nor our sense of reality. The camera, for example, enables virtual movements that are superhuman. In a matter of moments, its lens takes us from Paris to the moon and back, while our bodies remain stationary. This creates the illusion that the world is more accessible than it actually is. Similarly, radio technology compromises the authenticity of musical experience by allowing the living room to stand for the concert hall. Portable listening devices such as the *ipod* allow a virtual listening environment that is completely independent of any defined space. The internet creates an entire world of virtual reality where ideas, images, and commerce exist independent of physical space. Information is exchanged from one side of the globe to the other, a process by which the reality of physical distance is utterly annihilated.

As “the corporeal loses ground to the informational, the concrete to the representational, the real to the simulational,”⁴ our sense of space becomes almost non-existent, the dialogue between body and space ceases to be. Embodied memories are lost.



fig 1.4 Suburban roadways polluted with signs.

Instant Culture and The Blasé

Speed is the triumph of effect over cause, the triumph of instantaneity over time as depth, the triumph of the surface and pure objectality over the profundity of desire. Speed creates a space of initiation, which may be lethal; its only rule is to leave no trace behind.⁵

Jean Baudrillard, America.

The ocularcentric paradigm is the result not only of the nature of technological change, but also of its rate. Our contemporary culture is one of efficiency and commodity. Mass-production fosters our obsession with speed and feeds our hunger to consume. Mass-production standardizes, and speed finds no time for the varied and specialized nature of multi-sensory experiences that constitute reality. The cult of efficiency allows only for distant impact and instant imagery. Suburban roadways are flat and alienating because they are designed for the speed of the automobile rather than the walking pace of the pedestrian. They are lined with innumerable oversized signs that communicate exclusively to our sense of sight, the most efficient of the senses, the only one able to keep pace with the instantaneous and simultaneous aspect of modern perception. Speed indulges sight, collapses time and diminishes depth.



fig 1.5 Proposed entertainment centre including The Canadian Music Hall of Fame across from Toronto's Dundas Square draped in a sea of advertisement billboards.

Endless visual images are fed to us at an astounding rate. Televisions, newspapers, flyers and advertisement billboards confront our eyes and enter our imaginations without our consent. Our entire society is bombarded by visual noise, a phenomenon which contributed to Baudrillard's observation, "we live in a world where there is more and more information and less and less meaning."⁶ The overstimulation of our sight has reached a point at which we begin to tune out our environment in order to silence the visual noise. Neil Leach explains the blasé outlook in *The Anaesthetics of Architecture*:

The modern metropolitan individual has to develop a defense mechanism against the overstimulation of mental life in the city, and the blasé outlook is both a product of and a defense against this condition. ...To become blasé therefore constitutes an inability to react sufficiently to the mental impulses of the city. But the crucial point is that this condition is essentially a defensive one. By under-reacting to external stimuli, the metropolitan individual develops a form of defensive cocoon against overstimulation. The blasé outlook reveals how that individual has learned to survive within the conditions of the modern metropolis. The blasé attitude is therefore an adaptive phenomenon "in which the nerves reveal their final possibility for adjusting themselves to the content and the form of metropolitan life by renouncing the response to them."⁷

While our sight is exhausted, the other senses, particularly our tactile sense, remain suppressed and neglected. The simulated world of two-dimensional images does not engage our body in an intimate dialogue. With the simultaneous overstimulation and underdifferentiation of our senses, we struggle to integrate our experience of the world and of ourselves, losing intrinsic knowledge of our own bodies, and risking the loss of human identity. In short, we struggle to be human. Unable to participate in our surrounding environment, we become numbed spectators looking upon our own world as strangers. Architecture faces a battle to resist the influence of a culture that "defines reality in terms of media and simulation, that values appearance over existence, and what can be seen over what is."⁸

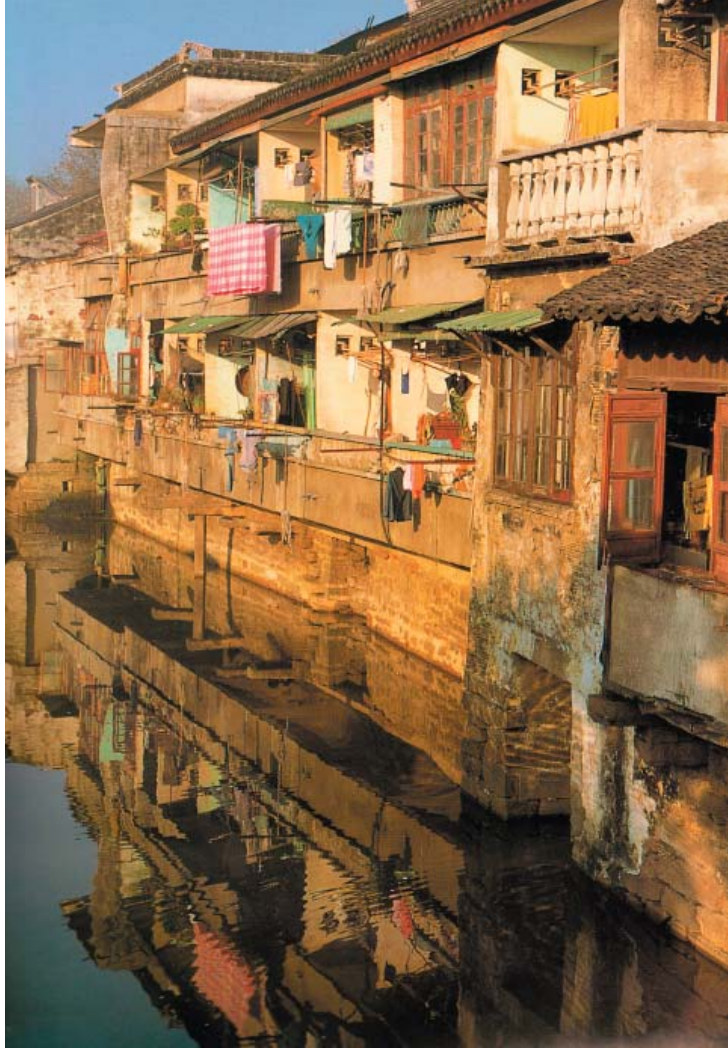


fig 1.6 Architecture of Hapticity - City of Suzhou in China.



fig 1.7 Architecture of the Eye - Commerical Buildings near Time's Square in New York City.

Architecture of the Eye versus Architecture of Hapticity

In the intoxicating world of the image, it is argued, the aesthetics of architecture threatens to become the anaesthetics of architecture. The intoxication of the aesthetic leads to an aesthetics of intoxication, and a consequent lowering of critical awareness. What results is a culture of mindless consumption where there is no longer any possibility of meaningful discourse. In such a culture the only effective strategy is one of seduction. Architectural design is reduced to the superficial play of empty, seductive forms, and philosophy is appropriated as an intellectual veneer to justify these forms.⁹

Neil Leach. The Anaesthetics of Architecture.

The pathology of today's architecture is undeniably the result of our ocularcentric culture. Rather than providing a grounded spatial experience that engages the body and unites the senses, the architecture of the eye is flat and uniform. It simulates environments in which we observe mere impressions of reality. The detachedness makes us deaf and numb to our environment – even blind to it – destroying any sense of depth in our everyday experiences.

Epitomizing the architecture of the eye is the typology of the “big box” store. With its obvious lack of dialogue between body and space, the big box store is essentially a giant billboard whose sole purpose is to be seen from a distance while in a moving car. It is a standardized object with a form and appearance indifferent to the surrounding environment, each identical to each regardless of context. Typical condominiums and commercial towers are



fig 1.8 Peter Zumthor's use of Vals natural stones in the Thermal Bath celebrates traces of human life.

further examples of the lack of sensuality in contemporary architecture. Their overuse of glass and synthetic materials, immune to signs of wear, weaken the sense of scale and time, which contributes to a flat and inauthentic experience of reality. Juhani Pallasmaa comments on this problem, stating that “as buildings lose their plasticity and their connection with the language and wisdom of the body, they become isolated in the cool and distant realm of vision. With the loss of tactility and the scale and details crafted for the human body and hand, our structures become repulsively flat, sharp-edged, immaterial, and unreal. The detachment of construction from the realities of matter and craft turns architecture into stage sets for the eye, devoid of the authenticity of material and tectonic logic.”¹⁰

With the deterioration of contemporary architecture into instant impoverished images that pollute the eye, we must restore our senses by reviving our surroundings. We must resume the dialogue between body and space. The return of a haptic, multi-sensory dimension to architecture could reveal new possibilities of vision that aid in the search of sensory balance. Hapticity can steer us away from the focused vision of the ocularcentric culture which confronts us without permission and makes us uninvolved spectators. Instead, hapticity can steer us towards the realm of unfocused “peripheral vision that envelops us in the flesh of the world”¹¹ and allow us to participate intimately with our surroundings. Pallasmaa, making the case for the architecture of hapticity, speaks of the important role of the body and our tactile sense in *The Eyes of the Skin*:

*Touch is the sensory mode that integrates our experience of the world with that of ourselves. Even visual perceptions are fused and integrated into the haptic continuum of the self; my body remembers who I am and where I am located in the world. My body is truly the navel of my world, not in the sense of the viewing point of the central perspective, but as the very locus of reference, memory, imagination and integration.*¹²

It becomes clear that only by reconnecting our bodies to our surroundings through the authority of all our senses may we restore the human identity within the larger context of the world. Architecture has the potential to domesticate infinite space and endless time, giving these dimensions a human measure. With this, we are able to understand our own bodies, using them as the locus of perception, thought and consciousness. In turn,

we develop a strengthened sense of reality in our everyday experiences, and allow enriching embodied memories to be inscribed into our imaginations.

Decidedly, touch is the basis of haptic architecture. Touch is key to a multi-sensory spatial experience. In essence, all of our senses are extensions of touch, since ears, nose, mouth and eyes are specializations of the skin, the most sensitive of our organs. The biological fact prompts Pallasmaa's insight that "touch is the unconscious of vision, and this hidden tactile experience determines the sensuous quality of the perceived object, and mediates messages of invitation or rejection, courtesy, or hostility."¹³ Therefore, it is crucial to make use of the intrinsic qualities of the elemental components of architecture – namely, spatial sequence, mass and volume, light and shadow, materials and textures – to appeal to our tactile sense.

A good example of the new possibilities of vision that aid in the search of sensory balance is Le Corbusier's Villa Savoye at Poissy. In a sequence of cinematic spaces, the architect makes use of movement and change to give a strong sense of time. Although visual composition was one of its many preoccupations, Villa Savoye brings awareness to the body through its concern with spatial sequence. Other examples of haptic architecture include Le Corbusier's Monastery of La Tourette, in which the skillful use of light brings life to textured concrete surfaces that even the eyes can touch, and Alvar Aalto's Villa Mairea, which shows great attention both to details crafted for the human hands and to awareness of bodily encounters with the spaces. Peter Zumthor's Thermal Baths in Vals celebrates the traces of human life by using the site's natural stone as the primary material throughout the bathing complex.

These examples of haptic architecture beg the question, "[w]hy do we have so little confidence in the basic things architecture is made from: material, structure, construction, bearing and being borne, earth and sky, and confidence in spaces that are really allowed to be spaces – spaces whose enclosing walls and constituent materials, concavity, emptiness, light, air, odor, receptivity and resonance are handled with respect and care?"¹⁴ Ultimately, we cannot look to signs and symbols to give meaning to architecture. Only a corporeal architecture of hapticity can be intrinsically meaningful because it concretizes reality and affirms our very being in the world. It is an architecture that converses with the body and "enables us to perceive and understand the dialectics of permanence and change, to settle ourselves in the world, and to place ourselves in the continuum of culture and time."¹⁵

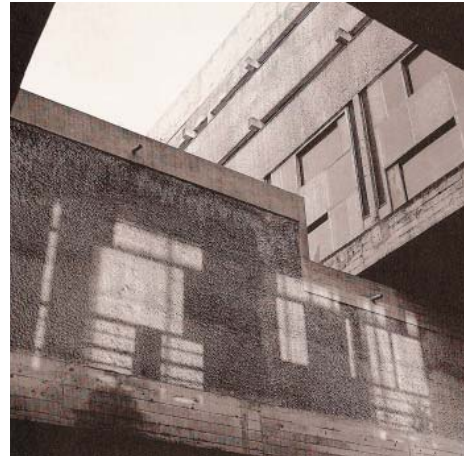


fig 1.9 Le Corbusier's Monastery of La Tourette.



fig 1.10 Alvar Aalto's Villa Mairea

The following chapter demonstrates an architecture of the senses. With the fundamental elements, mass and volume, light and shadow, materiality and time, architects can restore our sensory balance with an architecture of silence, of hapticity, and of corporeality.

Endnotes

¹ Sverre Fehn. *Light and Shadow in Architecture – Does a doll have life?* pp. 203 – 204

² Ibid. p. 204

³ Ibid. p. 204

⁴ Julio Bermudes & Robert Hermanson. *Tectonics After Virtuality: Returning to the Body*. p. 1

⁵ Jean Baudrillard. *America*. p. 6

⁶ Jean Baudrillard. *Simulacra and Simulation – The Implosion of Meaning in Media*. p. 79

⁷ Neil Leach. *The Anaesthetics of Architecture – Saturation of the Image*. pp. 34-35

⁸ Peter Eisenman. *Free Spirit in Architecture – Visions Unfolding. Architecture in the age of Electronic Media*. p. 88

⁹ Neil Leach. *The Anaesthetics of Architecture*. Preface. viii

¹⁰ Juhani Pallasmaa. *Questions of Perception – An Architecture of the Seven Senses*. p. 29

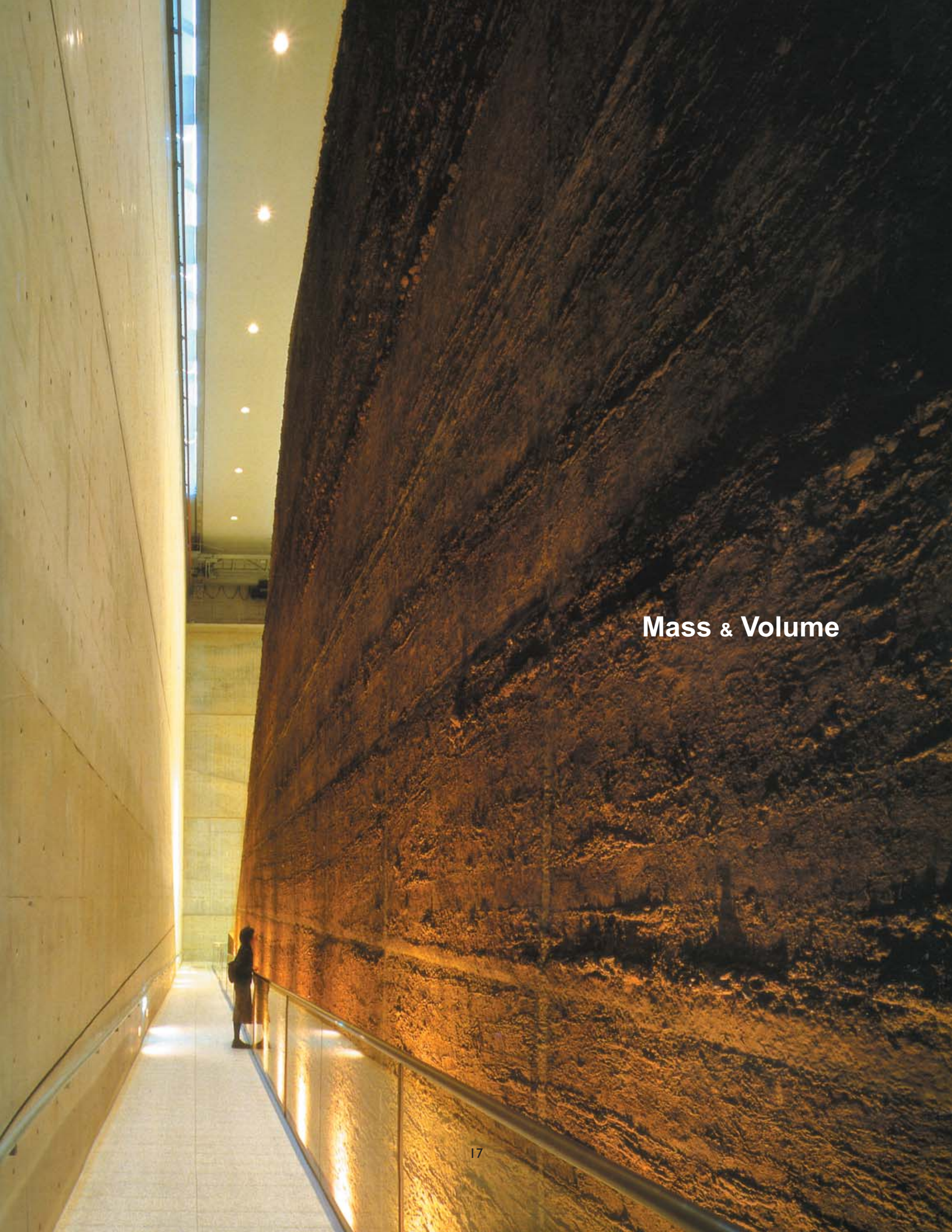
¹¹ Juhani Pallasmaa. *The Eyes of the Skin – Touching the World*. p. 10

¹² Ibid. p. 11

¹³ Juhani Pallasmaa. *Hapticity and Time* p. 79

¹⁴ Peter Zumthor. *Thinking Architecture – The Hard Core of Beauty*. p. 32

¹⁵ Juhani Pallasmaa. *The Eyes of the Skin – The Task of Architecture*. p. 71



Mass & Volume



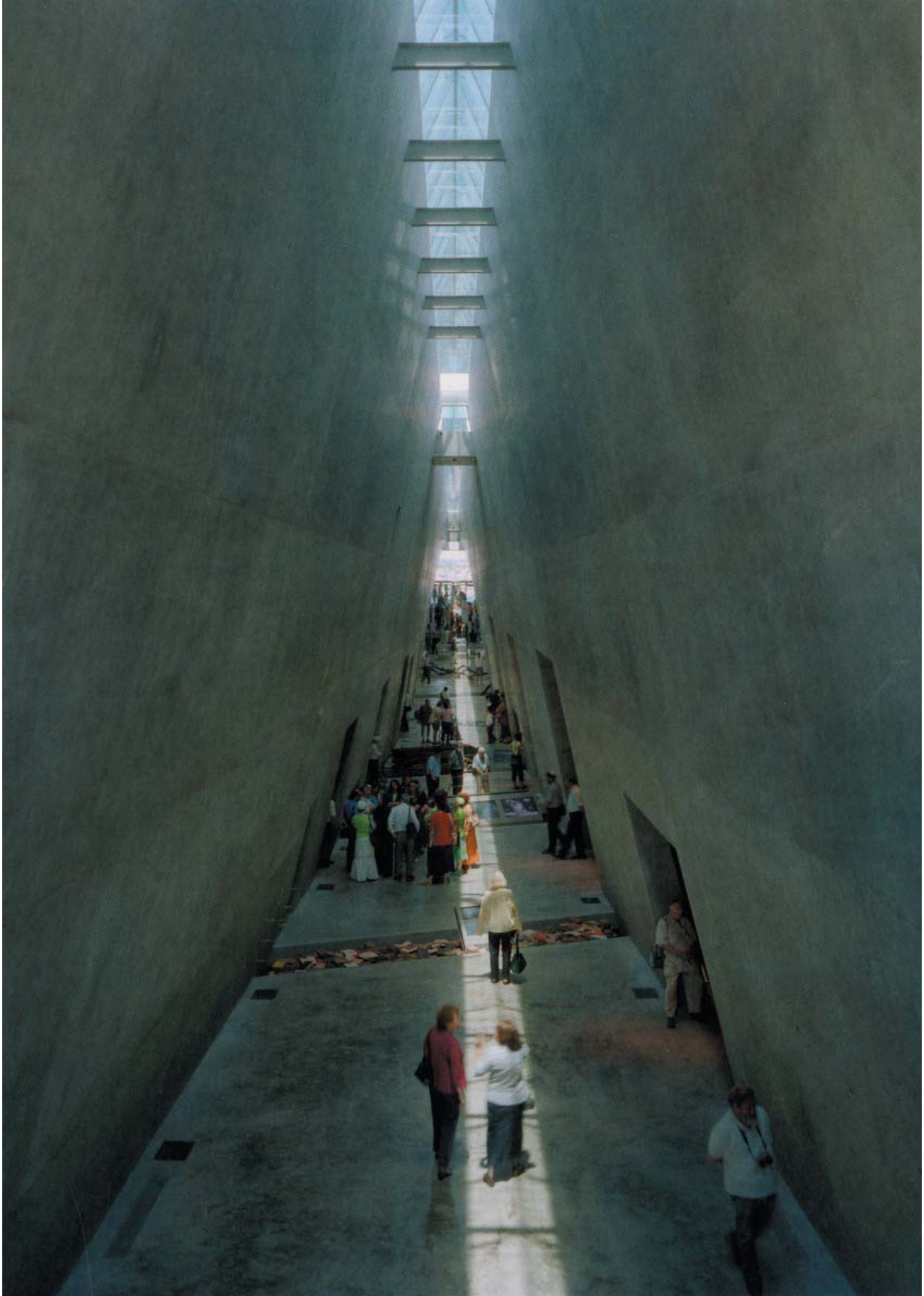
Previous Page Tadao Ando. Sayamaike Museum in Osaka.

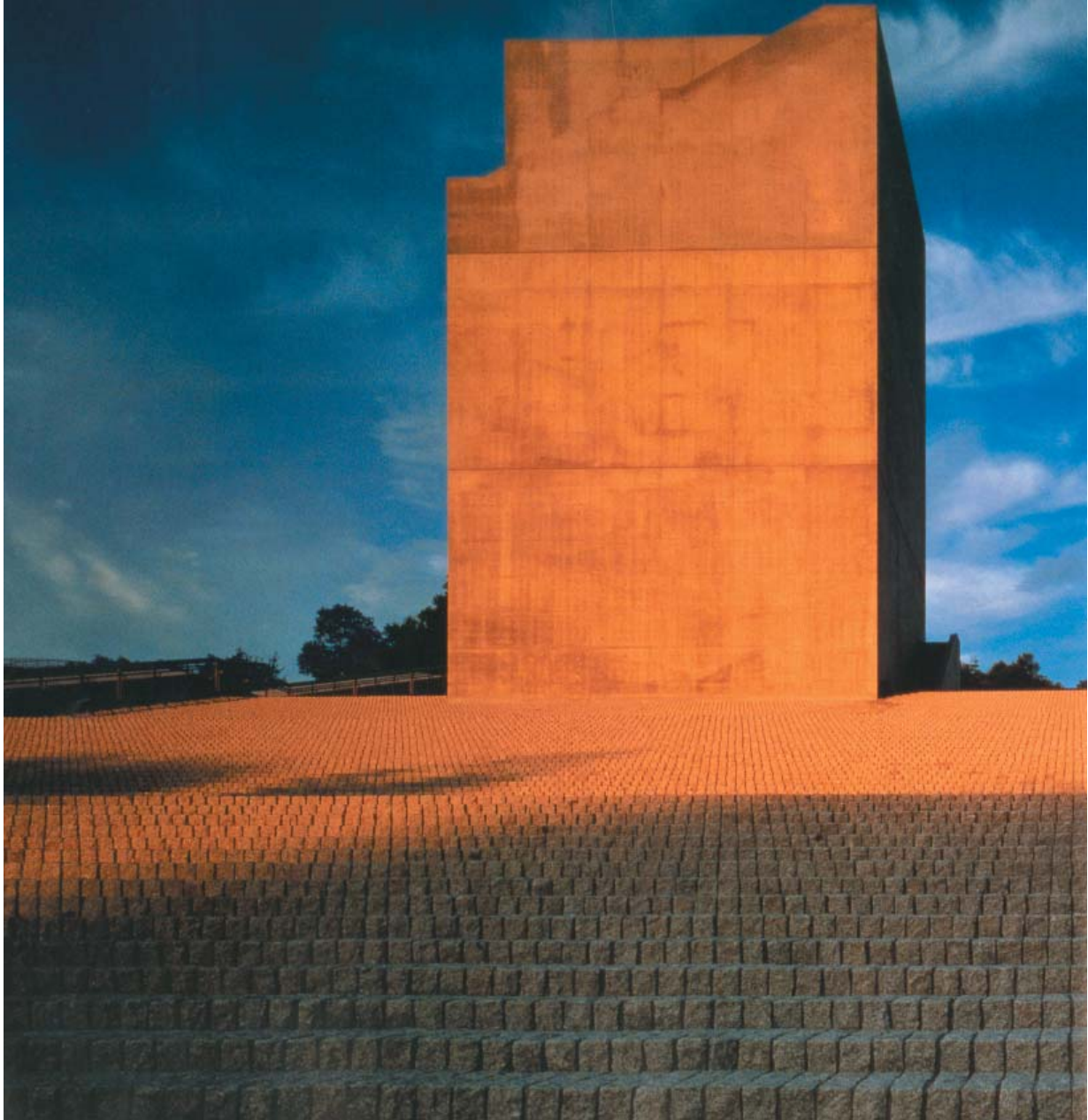
Left Alberto Campo Baeza. Caja Generral Headquarters in Granada.

Right Moshe Safdie. Holocaust History Museum at Yad Vashem in Jerusalem.

The sense of gravity is the essence of all architectonic structures and great architecture makes us conscious of gravity and earth. Architecture strengthens verticality of our experience of the world. At the same time that architecture makes us aware of the depth of the earth it makes us dream of levitation and flight.

Juhani Pallasmaa. An Architecture of the Seven Senses.





Above Tadao Ando. Chikatsu-Asuka Historical Museum in Osaka.

Right Herzog & de Meuron. Schaulager. Viewing Warehouse in Basel, Switzerland.

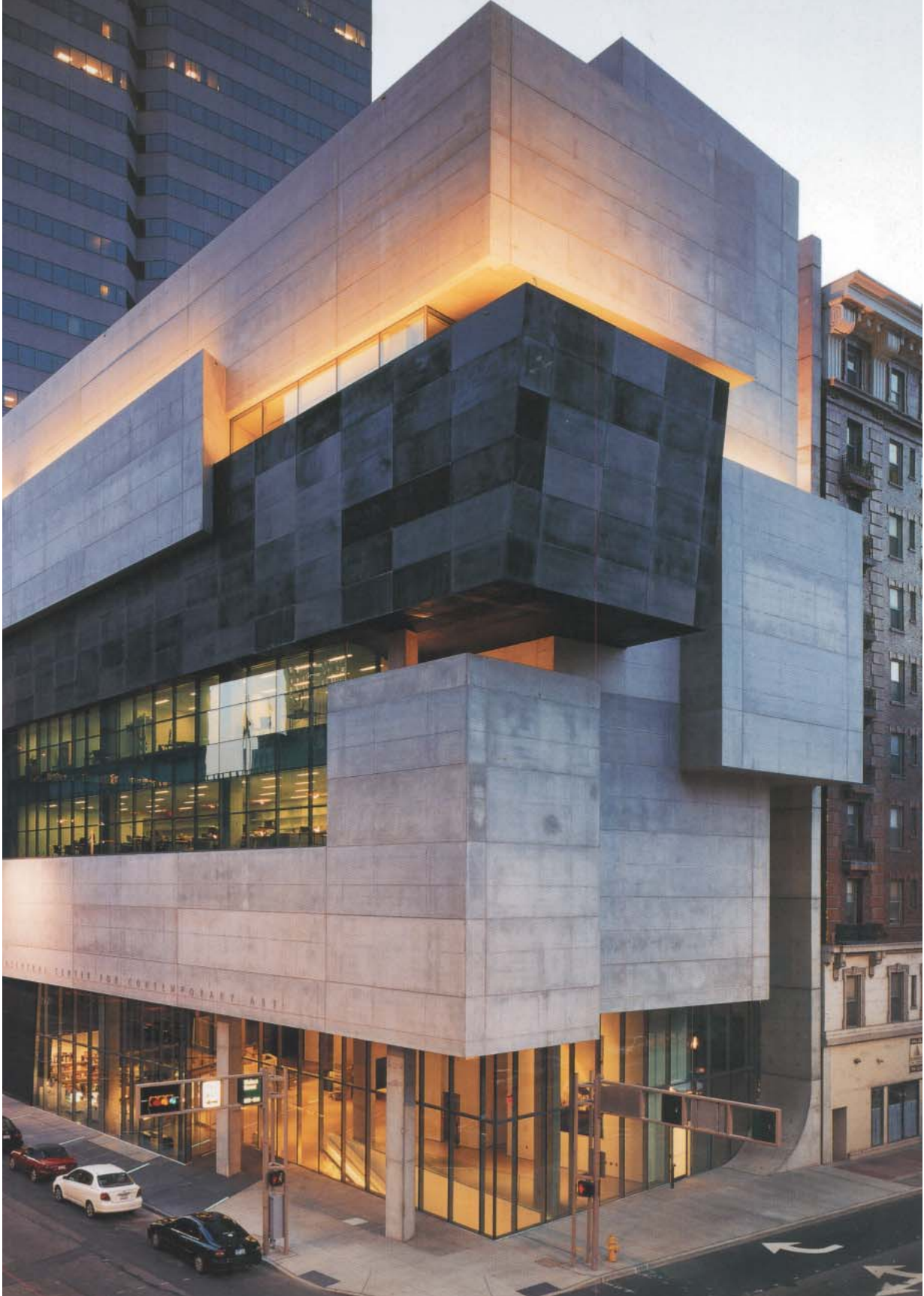
Man's first signs were to move the mass. The stone's precise placement on earth carried a message. Man could wander between arranged masses, as the dialogue belonged to the moment. The stone and its place were a point on earth that conveyed a mass inhabited by spirit.

Sverre Fehn. Does a doll have life?



Architecture always has to deal with the challenge of gravity; that's something that hasn't changed in the course of history. However, by changing the structure we have to create a quality of space that matches the present times. Before, I tried to hide the price of withstanding gravity. Now I feel I can expose these materials, have them out in the open, and still create modernity that responds to what is going today. That's a major change. We architects have to provide bodily experience through our creations. In the past I tried to construct something that's weightless. Like society itself becoming increasingly weightless. Nowadays, I feel that even in this information society we still have gravity, we still have to feel it, so we have to reopen and establish the awareness of gravity again.

Toyo Ito. Interview in ArchIdea #31, 2005.



Right Gable Wall with door to hay loft in Videm.



Materiality & Time





Left Mario Garzaniti. Housing in Brussels, Belgium.

Right Zade & Vila. Wood of life.

Below Zade & Vila. Wood of life - detail.



Architecture is exposed to life. If its body is sensitive enough, it can assume a quality that bears witness to the reality of past life.

Peter Zumthor. Thinking Architecture: A Way of Looking at Things.



Time and place must follow one another. Time in itself is a material.

Sverre Fehn. Does a doll have life?





Natural materials – stone, brick and wood – allow our vision to penetrate their surfaces and enable us to become convinced of the veracity of matter. Natural materials express their age and history, as well as the story of their origins and human use. All matter exists in the continuum of time; the patina of wear adds the enriching experience of time to the materials of construction.

Juhani Pallasmaa. The Eyes of the Skin.

Left from Top Paley Park in New York.
Zumthor. Church in Sogn Benedetg.
Qingyun Ma. House in Jade Valley. Lantian, China.
Zumthor. Gugalun House. Versam, Graubunden.

Right Peter Zumthor. Thermal Bath in Vals.



Left Tadao Ando. Komyo-ji-Temple. Saijo, Japan.

Right Top Moriyama & Teshima. Canadian War Museum. Ottawa.

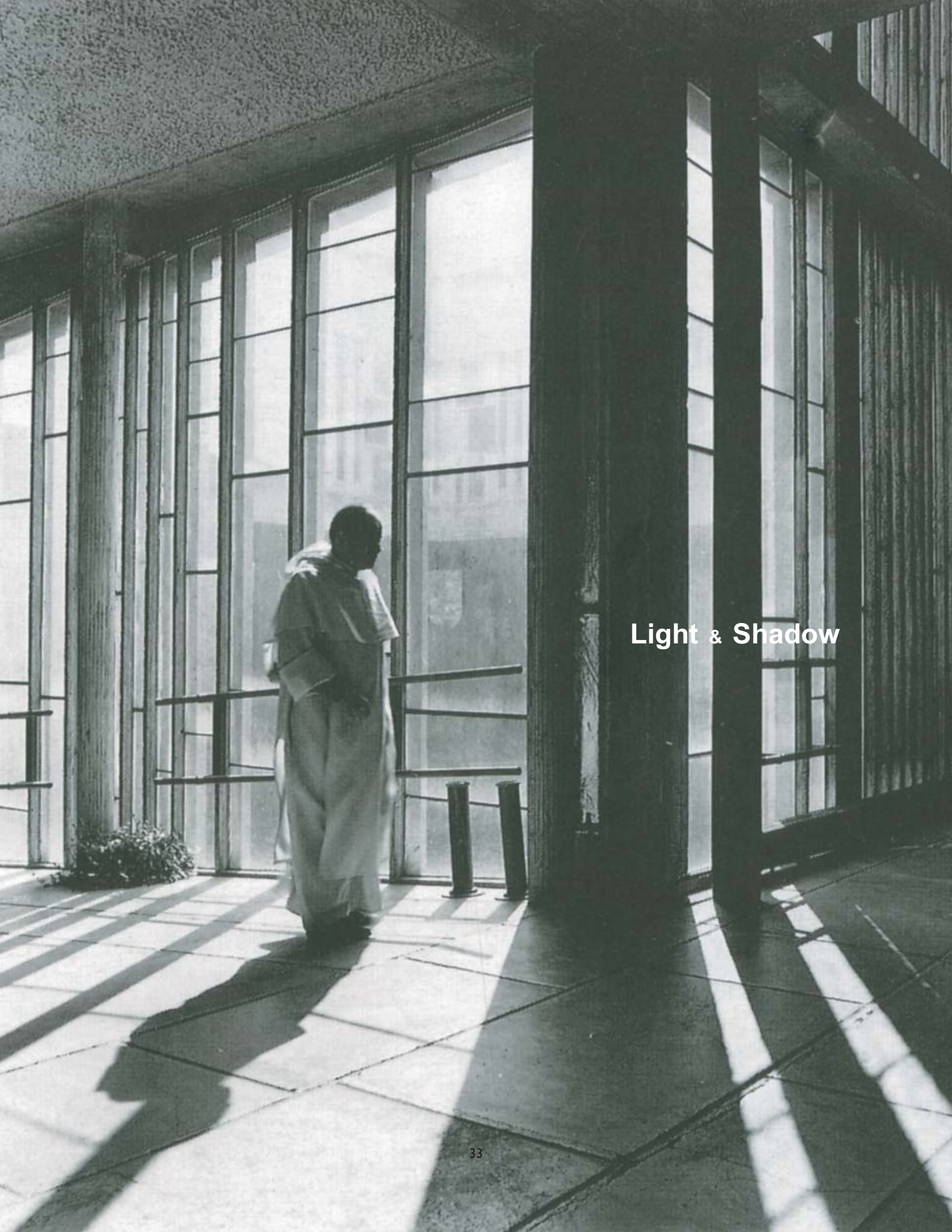
Right Bottom Patkau Architects. Vancouver House.



Each material has its own shadow. The shadow of stone is not the same as that of a brittle autumn leaf. The shadow penetrates the material and radiates its message. You converse with material through the pores of your skin, your ears, and your eyes. The dialogue does not stop at the surface, as its scent fills the air. Through touch, you exchange heat and the material responds immediately. Speak to a stone and it renders a mystery in resonance. Speak to a mountain ledge, and it holds up a mirror to sound. Listen to a snow-covered forest, and it proffers the language of silence. The great master in the use of wood as a material is a musical instrument maker. His ear gives each piece its dimension.

Sverre Fehn. Does a doll have life?





Light & Shadow



Previous Page Le Corbusier. La Tourette.

Above Toyo Ito. Bruges Pavillion.

Right Moriyama & Teshima. Canadian War Museum. Ottawa.

Shadow belongs to the earth. A world without it is a place without material.

Sverre Fehn. Does a doll have life?





Always the same and always different, light reveals what is.

Christian Norberg-Schulz. Poetics of Light.

Above Moriyama & Teshima. Canadian War Museum. Ottawa.

Right Antoine Predock. Solstice Wall in Ventana Vista Elementary School. Tucson, Arizona.





Left Tadao Ando. The Church of Light.

Right Zumthor. Thermal Bath in Vals. Ceiling Detail.



Deep shadows and darkness are essential because they dim the sharpness of vision, make depth and distance ambiguous and invite unconscious peripheral vision and tactile fantasy.

In great spaces of architecture, there is a constant, deep breathing of shadow and light; shadow inhales, and illumination exhales, light.

Juhani Pallasmaa. The Eyes of the Skin - The Significance of Shadow.



Light and shade are the loudspeakers of this architecture of truth, tranquility and strength.

Le Corbusier. Architecture of truth : the Cistercian Abbey of Le Thoronet

Above Le Corbusier. Notre Dame du Haut. Chapel at Ronchamp.

Right Tadao Ando. Fabrice. Bennetton Communication Research Center. Treviso, Italy.





Silence



Previous Page Zumthor. Thermal Bath in Vals.

Above Le Corbusier. La Tourette.

Right Le Corbusier. La Tourette.

The most essential auditory experience created by architecture is tranquility. Architecture presents the drama of construction silenced into matter and space; architecture is the art of petrified silence.

Juhani Pallasmaa. An Architecture of the Seven Senses.



What is meant by emptiness here is.... silence, clarity, and transparency. Emptiness may resound without sound, maybe be filled by its potential to be filled, and open what is complete.

For architecture, emptiness implies that a building should not be slave to its program, twisting and turning to accommodate our every movement and wish – squirming to please, as it were – but rather should be formed according to innate principles of order, structure, shelter, the evolution of architecture itself – and accident. It should be found useful and beautiful, like a tree.

Michael Benedikt. For an Architecture of Reality.



To me, buildings can have a beautiful silence that I can associate with attributes such as composure, self evidence, durability, presence and integrity, and with warmth and sensuousness as well; a building that is being itself, being a building, not representing anything, just being.

Peter Zumthor. Thinking Architecture: The Hard Core of Beauty.





Previous Page Peter Zumthor. Art Museum Bregenz. Bregenz, Austria.

Left Tadao Ando. Komyo-ji-Temple. Saijo, Japan.

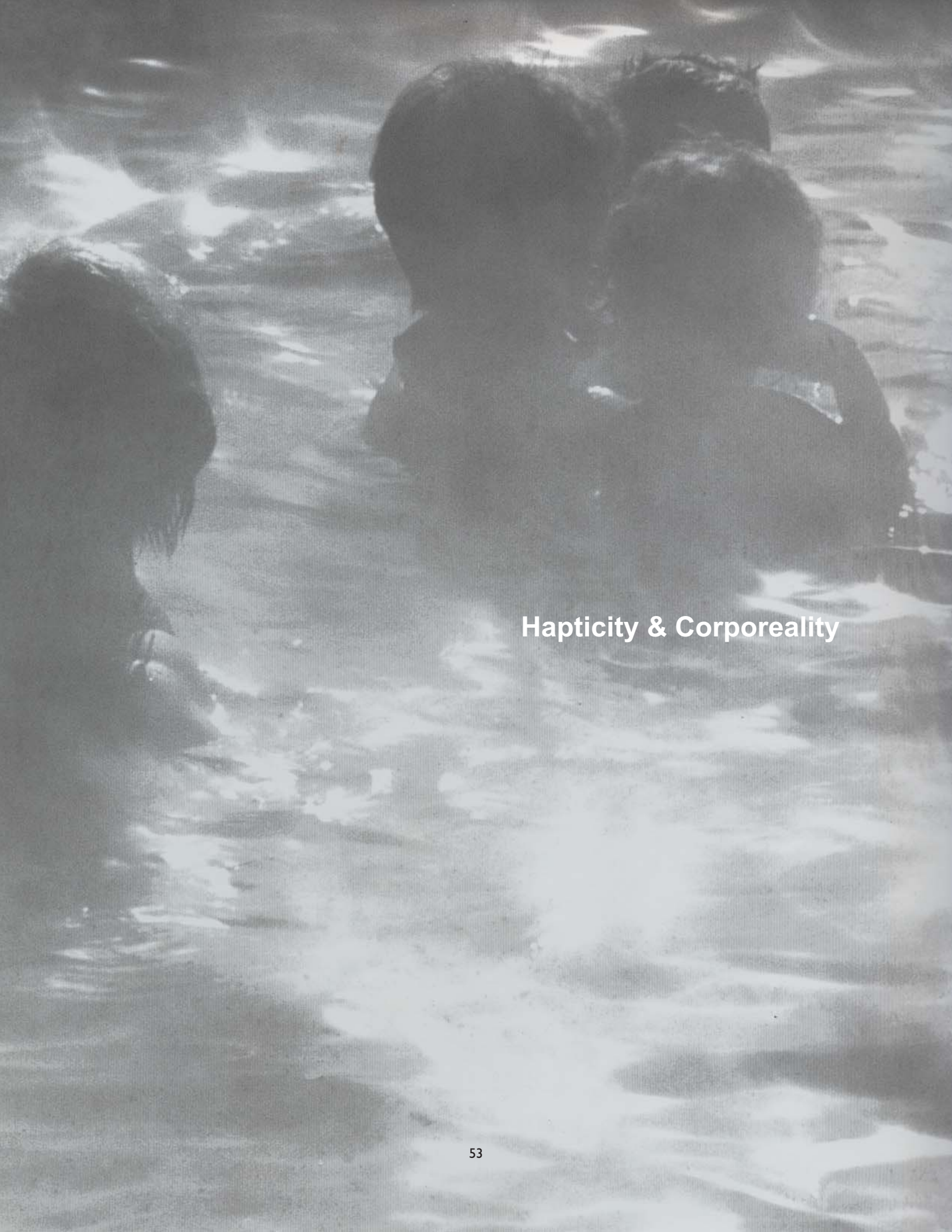
Above Tadao Ando. Modern Art Museum of Fort Worth. Texas, USA.

The silence of architecture is a responsive, remembering silence. A powerful architectural experience silences all external noise; it focuses our attention on our very existence, and as with all art, it makes us aware of our fundamental solitude.

Juhani Pallasmaa. The Eyes of the Skin.

Right Peter Zumthor. Thermal Bath in Vals.





Hapticity & Corporeality



When I took an escalator close to that wall, I sensed that something was happening in my mind and my body. I came to sense the entire architecture as tactile rather than visual. Although we tend to appreciate architecture visually, I began to understand that it emerges from the wider sensuous world. For ordinary people, the phrase 'enjoy architecture' means that they receive a sensuous stimulation from architecture. I think this should be our true experience of architecture. If architecture is experienced as such a sensuous world, we learn at the same time how to live in the world.

Taki Koji. A conversation with Toyo Ito.

When “I” perceive the concrete to be something cold and hard, “I” recognize the body as something warm and soft. In this way the body in its dynamic relationship with the world becomes the shintai.

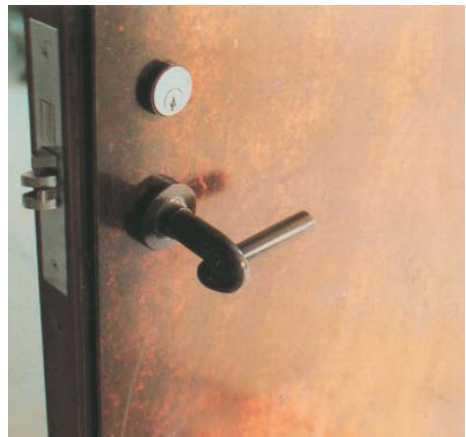
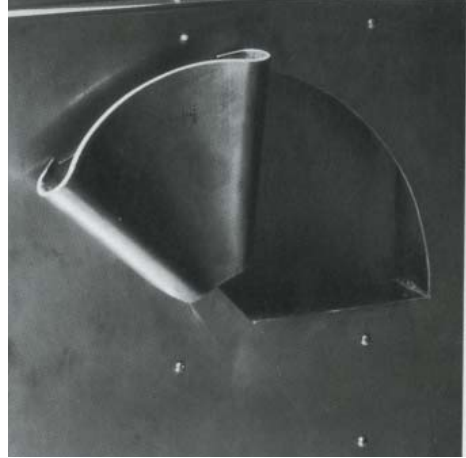
Tadao Ando. Shintai and Space.



Previous Page Peter Zumthor. Thermal Bath in Vals.

Left Toyo Ito. Matsumoto Performing Arts Centre. Nagano, Japan.

Right Moriyama & Teshima. Canadian War Museum. Ottawa.



Top Right Steven Holl. Stretto House.

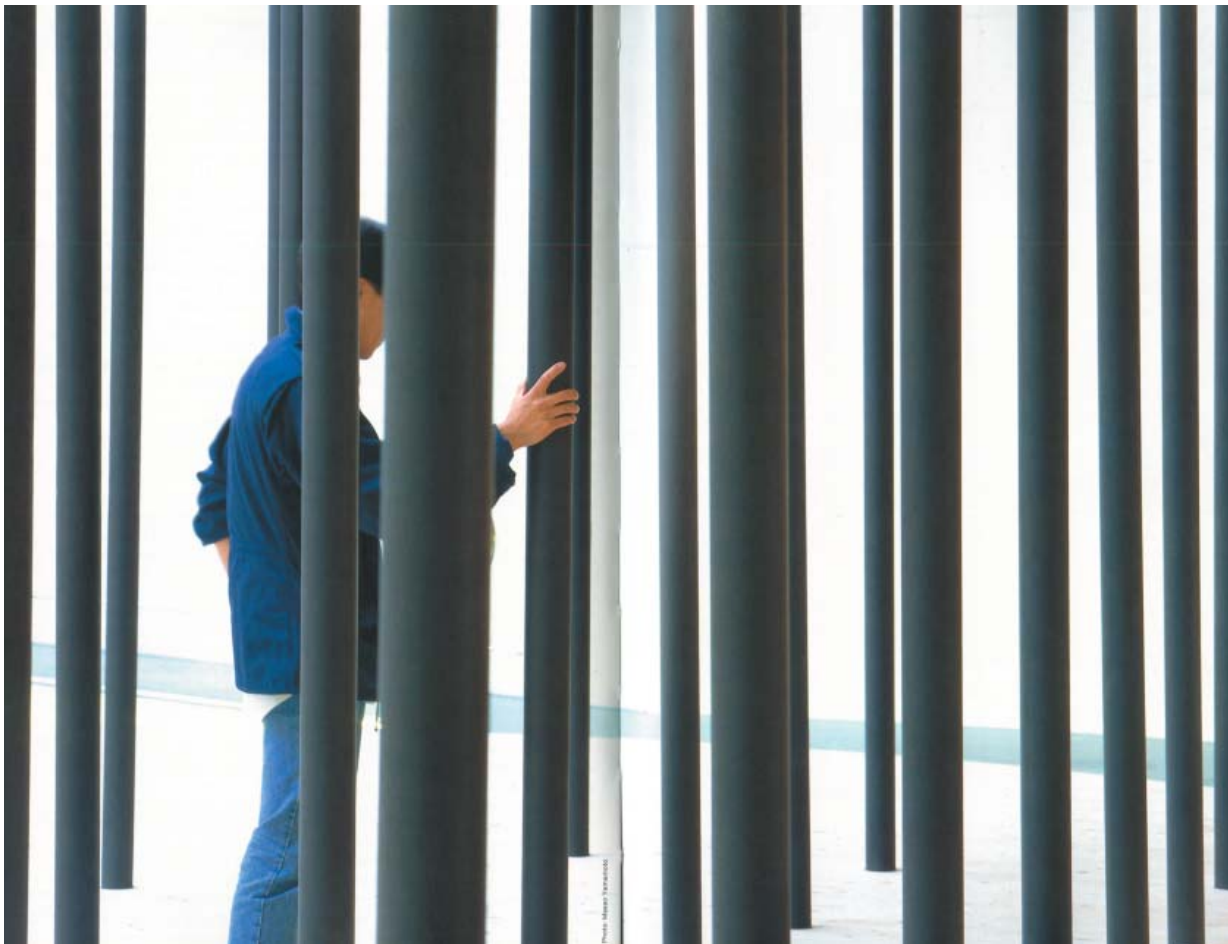
Middle Right Tod Williams Billie Tsien.
Museum of American Folk Art. New York, USA.

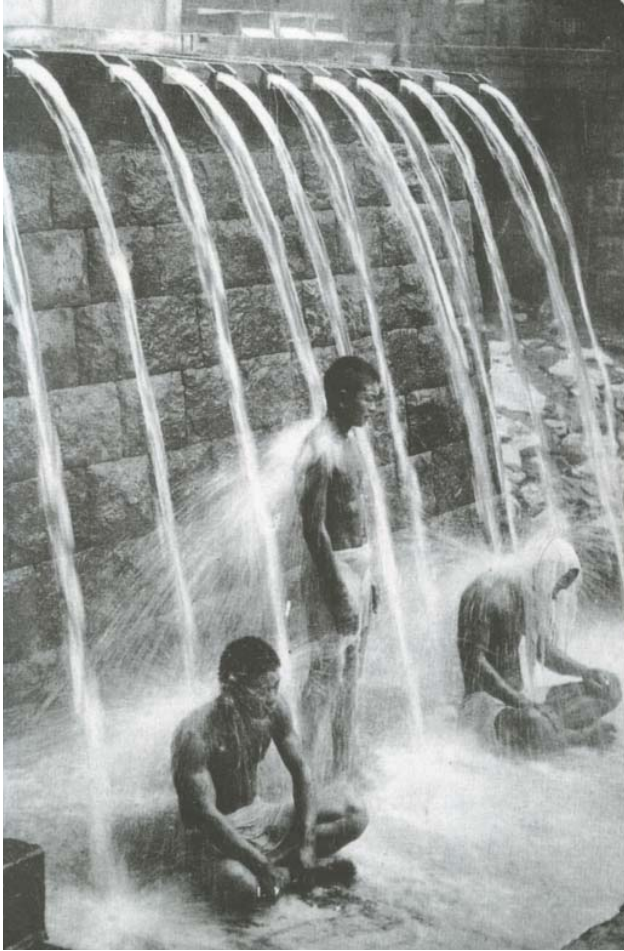
Bottom Right Steven Holl. Stretto House.

Next Page Christian Moeller. Audio Grove.
Sound Garden in Wacoal Art Center. Tokyo, Japan.

Touch is the unconsciousness of vision, and this hidden tactile experience determines the sensuous quality of the perceived object, and mediates messages of invitation or rejection, courtesy or hostility.

Juhani Pallasmaa. Hapticity and Time.



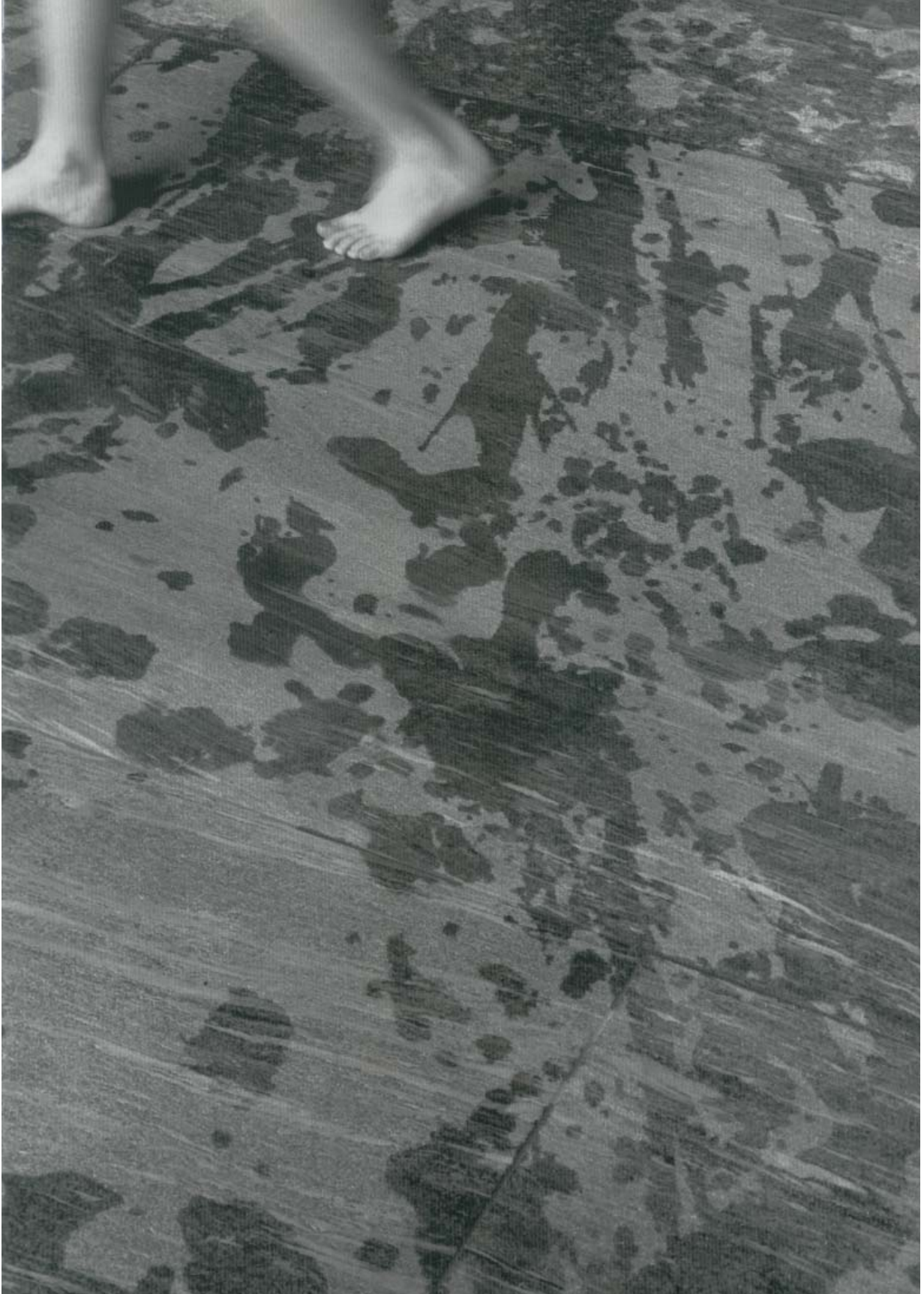


Left Utaseyu Shower at Japanese Hot Spring.

Right Peter Zumthor. Thermal Bath in Vals.

I am convinced that a good building must be capable of absorbing the traces of human life and thus of taking on a specific richness.

Peter Zumthor. Thinking Architecture: A Way of Looking at Things.





Every touching experience of architecture is multi-sensory; qualities of matter, space and scale are measured equally by the eye, ear, nose, skin, tongue, skeleton and muscle. Architecture strengthens the existential experience, one's sense of being in the world, essentially giving rise to a strengthened experience of self.

Juhani Pallasmaa. The Eyes of the Skin.

Left Barclay & Crousse. Casa Equis. Canete, Peru.

Below Kazuyo Sejima & Associates. House in a Plum Grove. Tokyo, Japan.





Top Kerry Hill Architects. The Serai Resort Hotel.

Right Toyo Ito. Bruges Pavilion.

Only the architecture itself offers the tactile sensation of textured stone surfaces and polished wooden pews, the experience of light changing with movement, the smell and resonant sounds of space, the bodily relations of scale and proportion. All these sensations combine within one complex experience, which becomes articulate and specific though wordless. The building speaks through the silence of perceptual phenomena.

Steven Holl. Question of Perception. Phenomenology of Architecture.



Design



fig 3.1 Aerial map of proposed site and surrounding area

Project & Site Introduction

The proposed design is a spa health club located in the entertainment district of downtown Toronto. Throughout history, public baths have been important spaces in cities. Bathers are able to be social or solitary as they choose, while cleansing body and senses. Today, such spaces are lost in the race where thousands upon thousands of advertisements compete for one's imagination. Combining the ancient bath culture with the contemporary fitness culture, the design of the spa health club aims to heighten awareness by engaging the body and all of its senses. The proposed building does not rely on distracting signs and symbols to justify its existence; rather, it is a place that celebrates the ritual and reality of everyday life through multi-sensory corporeal experiences. Central to the design is an urban public park offering transitory moments of tranquility and sensual pleasure. The spa, with its public park, offers a space that resumes the dialogue between body and space, creating haptic memories and, above all, raising human consciousness.

The chosen site consists of two narrow vacant parking lots in a highly charged area of downtown Toronto. The first lot fronts on King Street West, just east of The Royal Alexandra Theatre. The second lot connects from the first across Pearl Street through to Adelaide Street West. The surrounding area is occupied by many restaurants and theatres. In addition to The Royal Alexandra Theatre, significant neighboring buildings include Roy Thomson Hall, Princess of Wales Theatre and the future home of the Toronto International Film Festival building.



fig 3.2 View of site on King Street West looking North from Metro Hall Plaza



fig 3.3 View of site on Adelaide Street West



fig 3.4 View of site looking north from Pearl Street towards Adelaide Street



fig 3.5 View of site looking south from Pearl Street towards King Street



fig 3.6 View of Pearl Street looking West



fig 3.7 View of King Street looking West



fig 3.8 Paley Park in New York



fig 3.9 View of proposed building from Metro Hall Plaza on King Street West.

The Urban Park

Public spaces allow for shared experiences that can give rise to the mutual respect – however grudging – that is the basis of a thriving metropolitan culture.¹

Raymond Gastil. Open New Designs for Public Space.

There is much pedestrian traffic encompassing the proposed site, especially during warmer weather. Metro Hall Park is a public plaza which sits directly across the proposed site. Despite its harsh condition, it remains heavily used by tourists, concert goers, office workers and local residents in the area. It is evident that this area of downtown Toronto can benefit greatly from an intimate and sensual public space - a place where theatre goers can meet before a show, a place where office workers can spend their lunch hours, a place for a peaceful stroll after dinner.

The proposed King-Adelaide urban park provides for an indispensable public place of tranquility and contemplation within a city. It is an opportune place to stimulate our senses and to de-clothe the visual and acoustic noises in the city. The park is designed to encourage pedestrian traffic through the site and through the building. It acts as a spatial, acoustic and luminous filter, a cleansing threshold to prepare visitors for a sensual experience of exercise, bathing and eating.

¹ Raymond Gastil. *Open New Designs for Public Space*. Introduction.

Approaching the spa health club, one comes to an urban oasis. The cobblestone park, long and narrow, is at once open and intimate. So quiet, restful, a perfect momentary escape from the noisy streets. Wonderful, dappled light falls through a line of honey locust trees, illuminating the massive concrete walls and the river of cobblestones.



fig 3.10 View of proposed ground level plaza from King Street West.

I was happy to see that my favourite table in the cobblestone park was empty. It's become a daily ritual for me, spending my noon hour people-watching from the shade of the trees. Even on rainy days I still come here. I stroll along the health club's interior promenade and go to the upper floor balcony where the smell of moisture in the air is refreshing, the rhythm of the rain on the cobblestones soothing.



fig 3.11 An intimate laneway café on Queen Street West in downtown Toronto.



fig 3.12 New Yorkers enjoying Paley Park.



fig 3.13 Another Toronto café makes use of a narrow space.

Ground Level Plaza

The ground level plaza at the King-Adelaide urban park draws its inspiration from New York's Paley Park, a successful and heavily used urban park in midtown Manhattan. The King-Adelaide plaza is a long narrow public space that is at once open and intimate. A line of deciduous trees serves as both an acoustic and luminous filter for the park. The plaza acts as a north-south connection between King Street and Adelaide Street. Its easy accessibility encourages pedestrians to walk through the urban park en route to other destinations. During warm weather, the café at the ground level of the proposed building spills out onto the plaza with movable chairs and tables.



fig 3.14 Cobblestones of different shapes & colours.

Cobblestone Walking

Stepping into the King-Adelaide park, one will immediately sense the tactile cobblestone beneath one's feet. Cobblestone walking is a popular activity in residential and public parks in Asia. Essentially, it is a tradition of walking on numerous smooth cobblestones that are laid out in patterns on the ground. The simple act of walking becomes a form of foot massage during which different pressure points are stimulated, promoting relaxation and healing in the rest of the body. Cobblestone walking, also known as foot reflexology, is "a science based on the belief that each part of the body is interconnected through the nervous system to the hands and feet. Stimulating specific reflex points in the feet can bring needed nutrients to poorly functioning areas of the body. This can help restore balance throughout the body."²



fig 3.15 Cobblestones laid out in patterns at a park.

² http://www.blatmanpainclinic.com/blat_glossary.htm



fig 3.16 Local residents enjoy a morning of cobblestone walking at a public park in Shanghai, China.

Reflecting Pool

In addition to the cobblestone ground, another important element of the King-Adelaide park is a shallow glass-bottomed reflecting pool. The pool sits directly over the warm bath in the underground spa complex. Not only does it provide a sense of tranquility to the park, but the reflecting pool also offers visual hints of the bathing activity below ground through the glass skin. Amplifying the sensual dialogue between the bathers and the park visitors is a series of tensile rods inside the structural columns connecting the two pools, through which the movement of the bathers below is translated into ripples in the reflecting pool above.



fig 3.17 View of reflecting pool from Pearl Street looking towards Adelaide Street.

Every morning while walking to work, I can't help stopping at the glistening pool where the same group of elderly men and women mingle as they walk barefoot on the beautifully patterned cobblestones. There's a dense curtain of evergreens there. The smell is almost better than the first sip of coffee in the morning.



The Spine

fig 3.18 View inside the spine looking up towards the outdoor bath.



fig 3.19 Inspiration for the spine - Moshe Safdie's Yad Vashem History Museum.



fig 3.20 Translucent concrete allows the transmission of daylight into interior spaces.



fig 3.21 At night, translucent concrete shows silhouettes of people inside a glowing interior.

The Spine

Defining the space of the King-Adelaide park is the long narrow concrete spine of the building. The spine stretches the whole length of the site from King to Adelaide, bridging over Pearl street on three different levels of the building. Unlike most standard and mundane circulation spaces, the spine is a tall resonant space whose mass and volume bring awareness to the body and its human scale. A bridge and stairs circulation system connects the various fitness facilities of the exercise health club without compromising the strong sense of verticality within the spine.

The massive walls of the spine are made of textured and translucent concrete that appeal to our tactile sense. Textured concrete tells of the wooden form work used in the casting process of the concrete, giving it added depth and dimension. Translucent concrete, with its embedded glass fibers, allows the transmission of light into the spine during the day while the spine glows in reverse at night.

At night, the long spine glows a like a lantern, warming the snow-covered grounds. The soft shadows of athletes glide through the building at every level. The reflecting pool glimmers dimly, projecting silhouettes of naked bodies in the mysterious subterranean spa.

Rooftop Restaurant

The restaurant with an outdoor terrace sits at the top level of the spine. At an upper mezzanine level above the restaurant is a bar on a meandering bridge.

Bamboo Garden

An indoor bamboo garden anchors the southern King Street façade of the spine. The bamboo garden provides green space throughout all the seasons and is accessible by the general public. The bridges at all levels of the building lead to tranquil resting spots enveloped by the foliage of the bamboo garden.

fig 3.22 Inspiration for the Bamboo Garden - University of Toronto's Terrence Donnelly Centre.



Changerooms, Exercise & Yoga Studios

The changerooms, exercise and yoga studios are protruding glass-skinned volumes supported by the spine and slender concrete columns. Wooden louvers inside the glass skin function as a luminous filter.

fig 3.23 View of proposed outdoor running track.



Running Track

The suspended outdoor running track loops through the spine at the fourth level, giving an elevated and open view to the runners. An indoor stretching space at the same level is available for warm-up. Trees from the outdoor terrace below provide shade and intimacy along the track.

The Spa

The spiraling descent down into the underground spa is sensuous. Uncanny. Bathers appear and disappear into the glass steam tower. The silhouettes of naked bodies float in the thick clouds of steam. I follow the trail of wet footprints on the warm stone floors. Before long, I find myself at the bottom of the glowing glass tower, inside an underground world of bathers.



fig 3.25 View of the Adelaide façade showing the glass steam tower.

The Spa

The spa bathing complex occupies the entire underground levels of the site. It is a sensuous subterranean experience that counters the numbing underground PATH network running through downtown Toronto. In addition, a steam tower connects from the underground spa to an outdoor pool at the 8th level.

Steam Tower

A sensual beacon for the spa, the steam tower anchors the northern Adelaide façade of the spine. It is a double-layered glass tower filled with rising and circulating steam, with shadowy figures of the bathers within. Bathers may enter the steam tower at various entry points on different levels, where the intensity of steam increases as one moves up the tower. The bathers travel up and down the stairs of the tower in a spiraling motion, connecting them to all levels of the spine, including the roof-top outdoor pool. At the underground spa level, bathers may exit the steam tower where it extends into a diving platform for an intense dive into the ice plunge pool.

Outdoor Bath 36 °C

The outdoor bath is long narrow pool located on the roof top of the spine. The glass windows at the pool's bottom provide aquarium views of the bathers and cast rippling effects of light and shadow through the water lens.

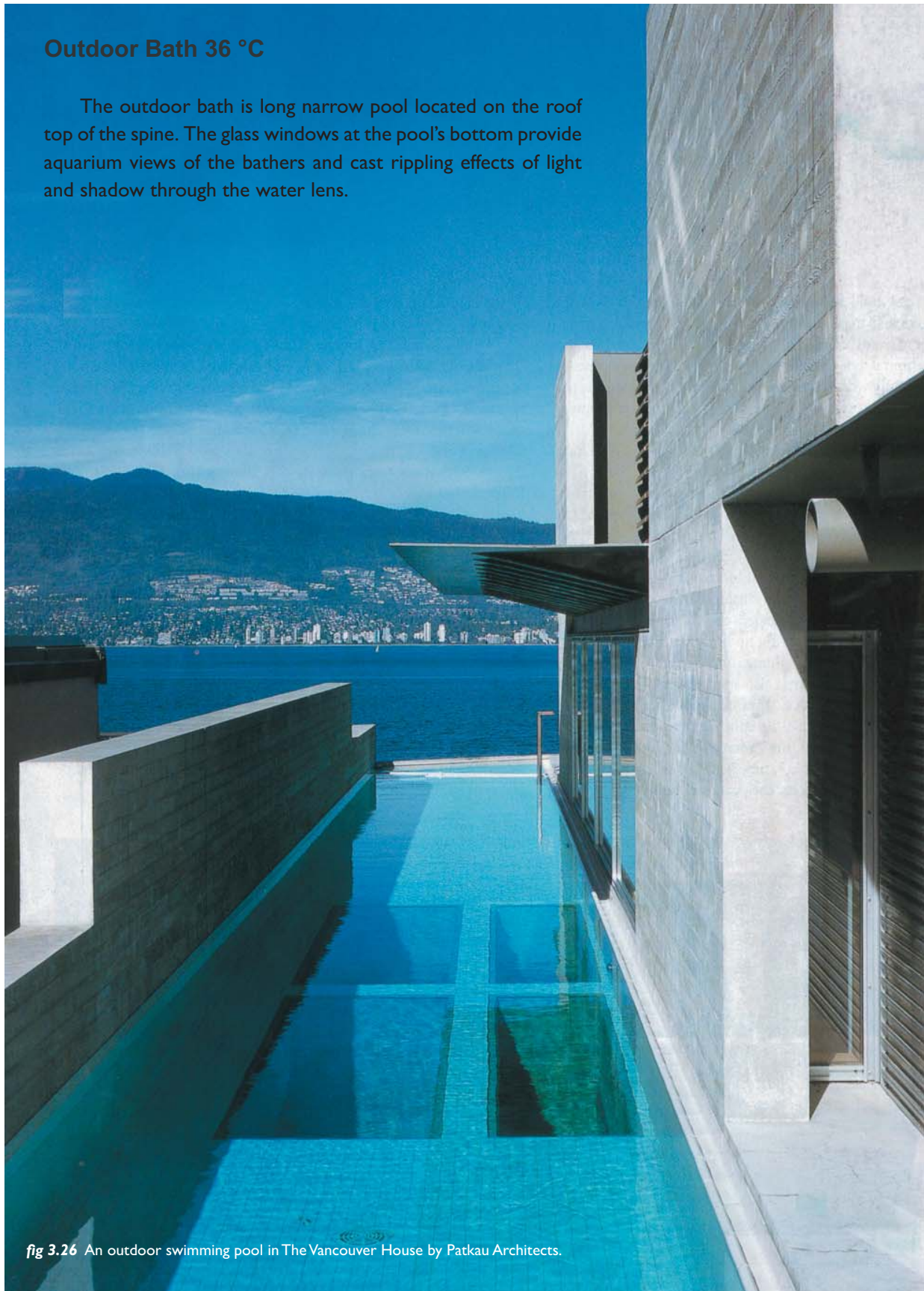


fig 3.26 An outdoor swimming pool in The Vancouver House by Patkau Architects.



fig 3.27 Aquarium view of the outdoor pool through glass openings.

Ice Bath 12 °C

The ice bath includes two small pools along the spine of the building. The first is a deep diving pool for quick plunges while the second is a shallower sitting pool for cooling off. Both pools sit in line with openings directly above which function as light wells. The bathers can at once experience the warmth of sunlight with the cooling effect of icy water.

Bathers emerge from the glowing tower of steam and one splash after another plunge into the deep icy pool. The cold water is piercing, a shocking pleasure.

Warm Bath 30 °C

The warm bath is the largest pool in the spa and made suitable for swimming. Although it is an underground space, the glass-bottomed reflecting pool above acts as a luminous filter illuminating the whole pool with natural light.

I slipped into the huge pool of warm water that glistened under the sunlight. A subtle aroma of eucalyptus lingers in the air, coming from a private bath at the other end. As I swam I could see the rippling water of the reflecting pool above altering the sun's rays, casting ever-changing shadows onto the textured walls all around.

fig 3.28 Rippling shadows cast through the water lens.



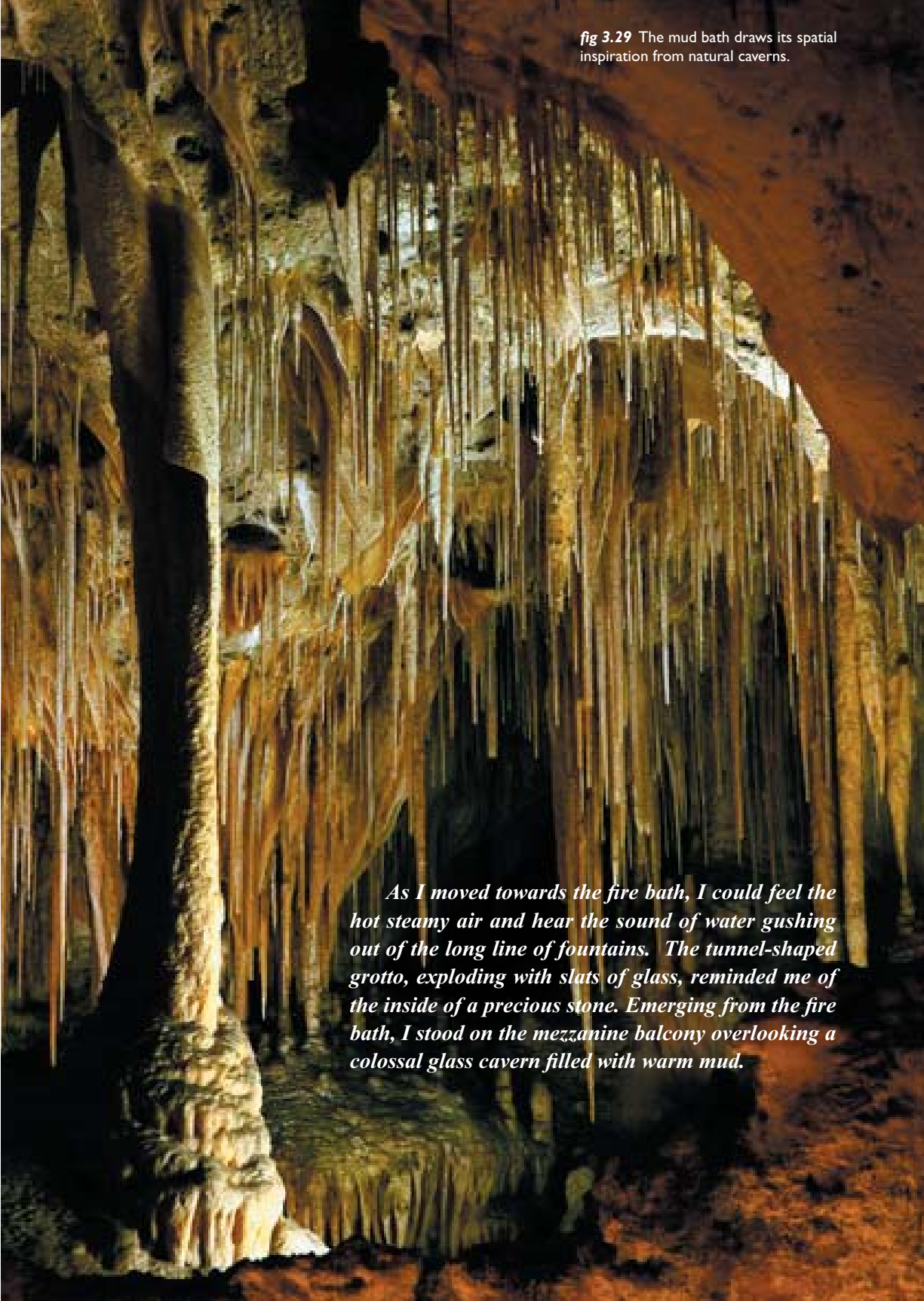


fig 3.29 The mud bath draws its spatial inspiration from natural caverns.

As I moved towards the fire bath, I could feel the hot steamy air and hear the sound of water gushing out of the long line of fountains. The tunnel-shaped grotto, exploding with slats of glass, reminded me of the inside of a precious stone. Emerging from the fire bath, I stood on the mezzanine balcony overlooking a colossal glass cavern filled with warm mud.



fig 3.30 An example of the use of stacked glass in the Mausoleum in Murcia.

Fire Bath 42 °C

The fire bath is a long narrow pool within a grotto-like tunnel. It is a mezzanine overlooking the stacked-glass mud cavern below. One side of the fire bath is lined with fountains where bathers can enjoy a hydro-massage in the steamy hot pool.

Mud Bath 30 °C

Submerged deep into the earth, the architecture of the mud bath is inspired by the intimate and unique shapes of caverns. Instead of using natural stones, the cavernous space is formed with numerous slats of glass stacked, giving it a modern expression rather than attempting to simulate an actual cavern. A large staircase leads bathers down to a this four-storey resonant space filled with circulating warm mud.

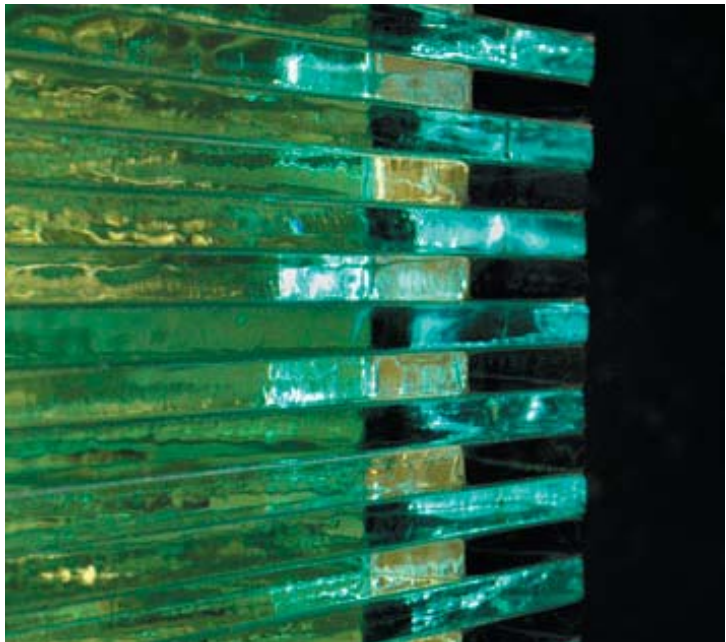
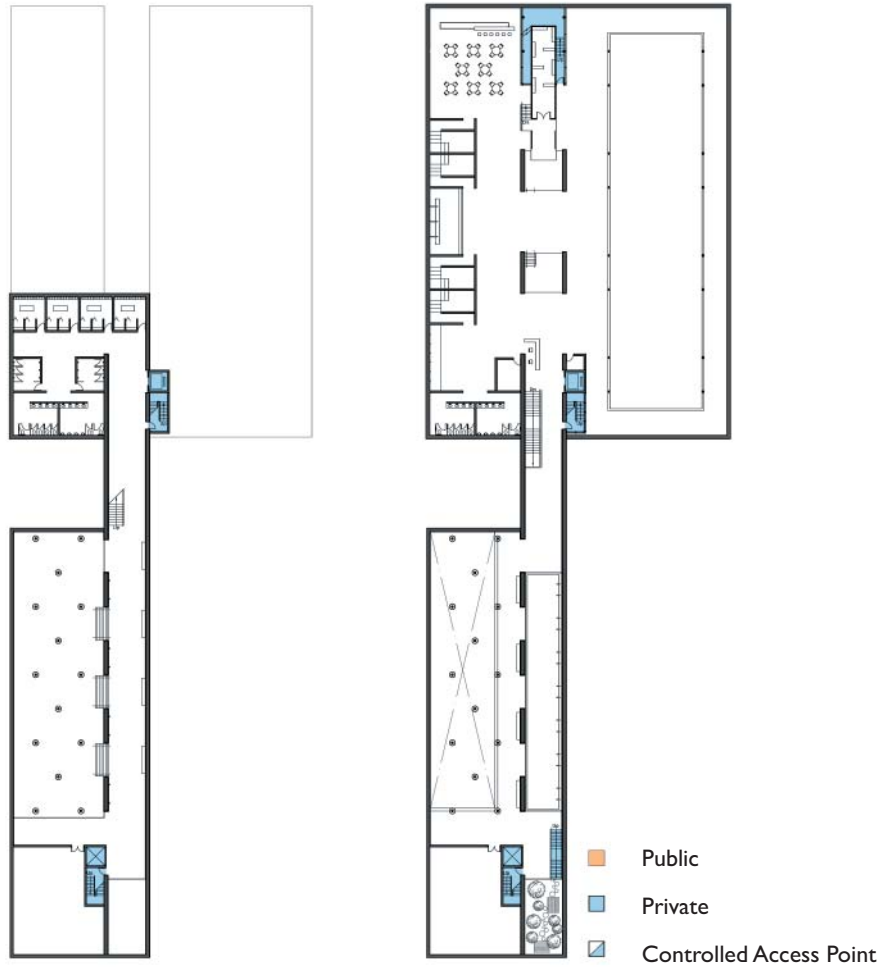


fig 3.31 A corner detail done with stacked glass.

Plans

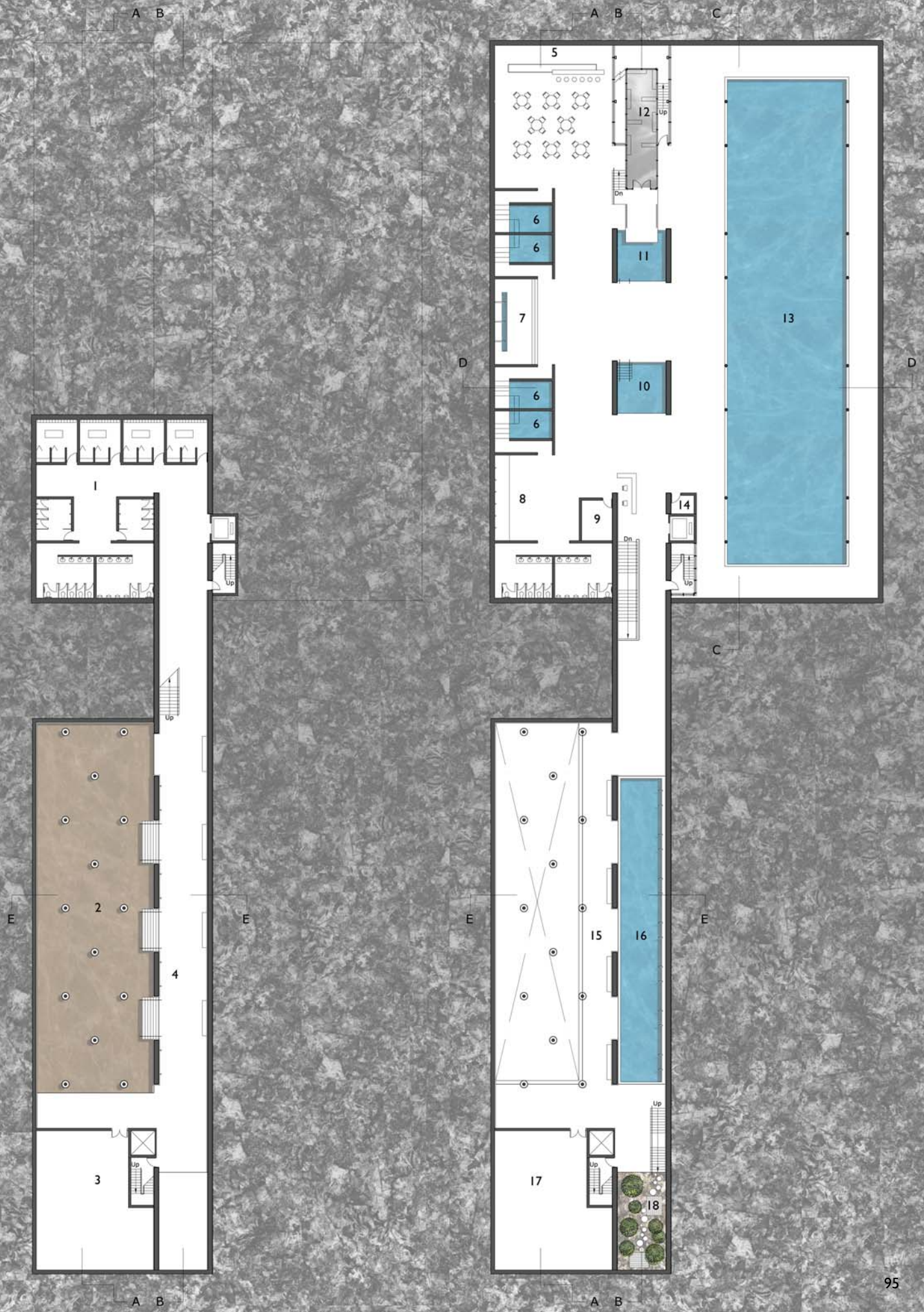
Legend

- | | | | |
|---|-------------------------------|----|---------------------------------------|
| 1 | Changerooms & Showers | 10 | Ice Bath 12°C |
| 2 | Mud Bath in Glass Cavern 30°C | 11 | Ice Dive 12°C |
| 3 | Mechanical Room | 12 | Steam Tower |
| 4 | Shower Stone | 13 | Warm Bath 32°C |
| 5 | Juice & Water Bar | 14 | Janitor's Closet |
| 6 | Private Bath | 15 | Mezzainine |
| 7 | Drinking Stone | 16 | Fire Bath w/ Fountain Massage
42°C |
| 8 | Shower Stone | 17 | Bath Attendants & Storage |
| 9 | Administrative Office | 18 | Indoor Bamboo Garden |



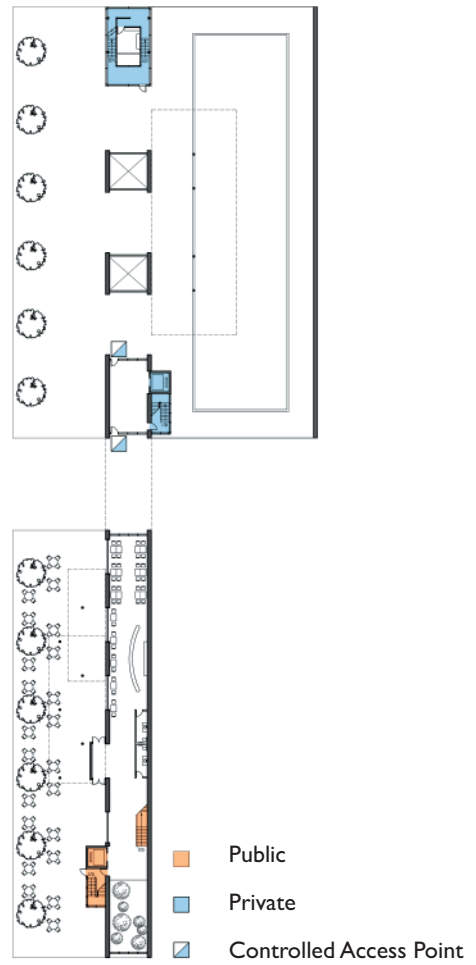
Lower Level Plans
@ - 14.0m & - 7.0m
Scale 1:500





Legend

- 1 Steam Tower
- 2 Public Urban Park
- 3 Open to Spa Below
- 4 Reflecting Pool w/ Glass Bottom
- 5 Members' Entrance
- 6 Main Entrance
- 7 Café
- 8 Indoor Bamboo Garden
- 9 Royal Alexandra Theatre

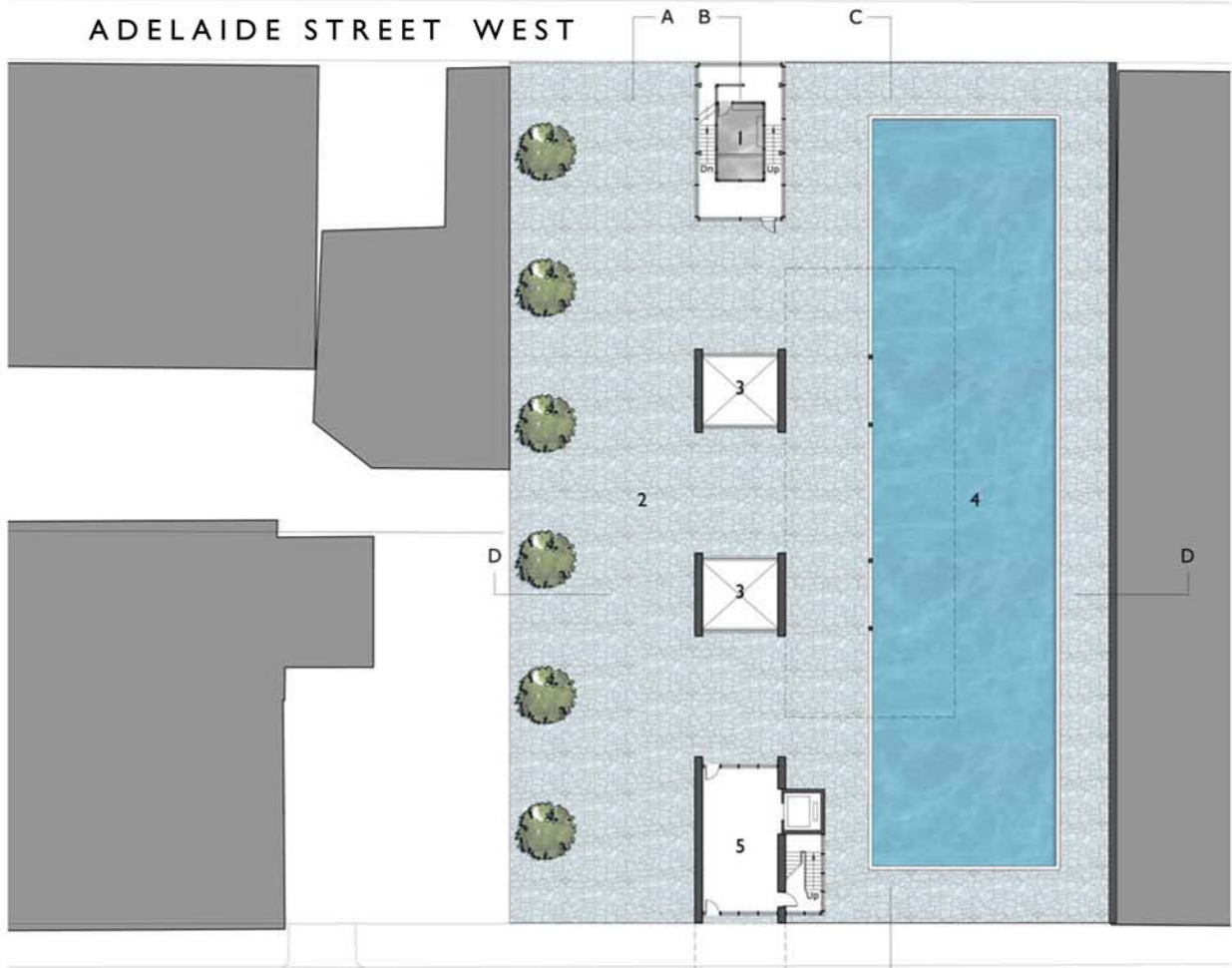


Ground Plan @ 0.0m

Scale 1:500



ADELAIDE STREET WEST



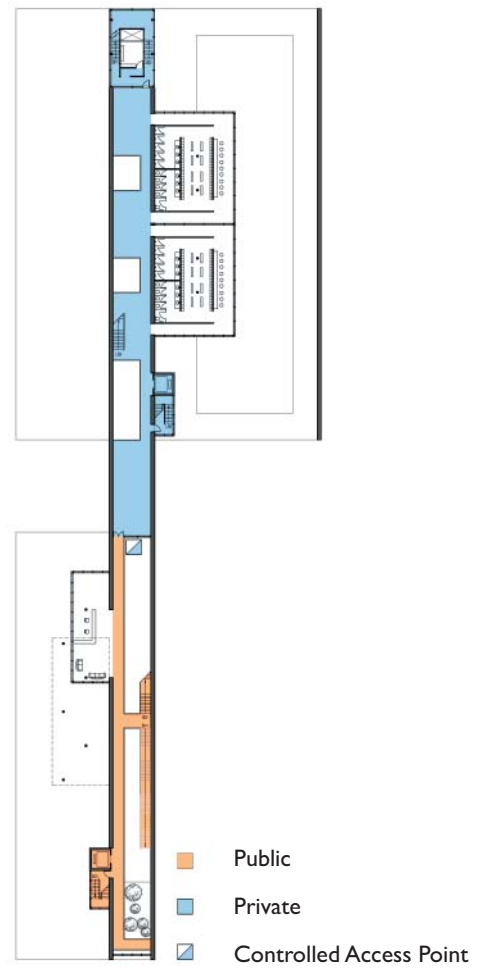
PEARL STREET



KING STREET WEST

Legend

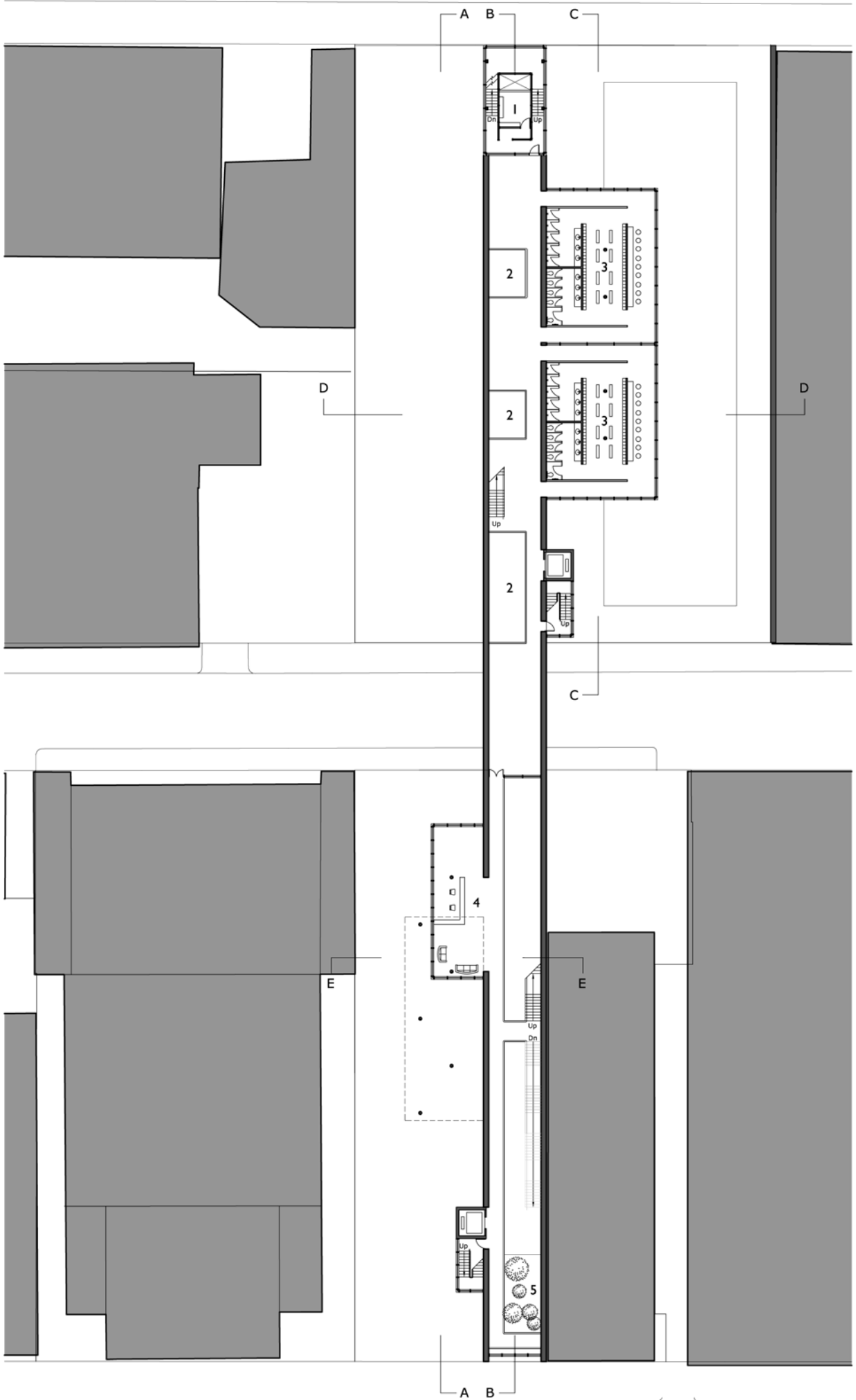
- 1 Steam Tower
- 2 Open to Spa Below
- 3 Changerooms
- 4 Reception
- 5 Bamboo Garden Below



Second Plan @ + 7.0m

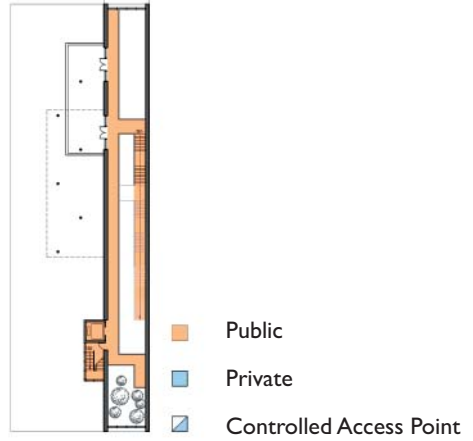
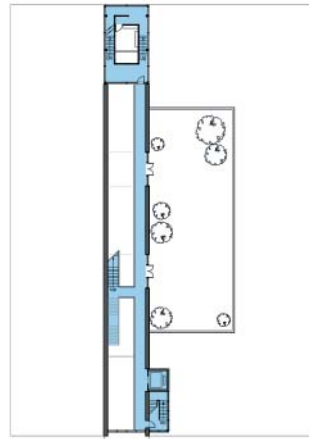
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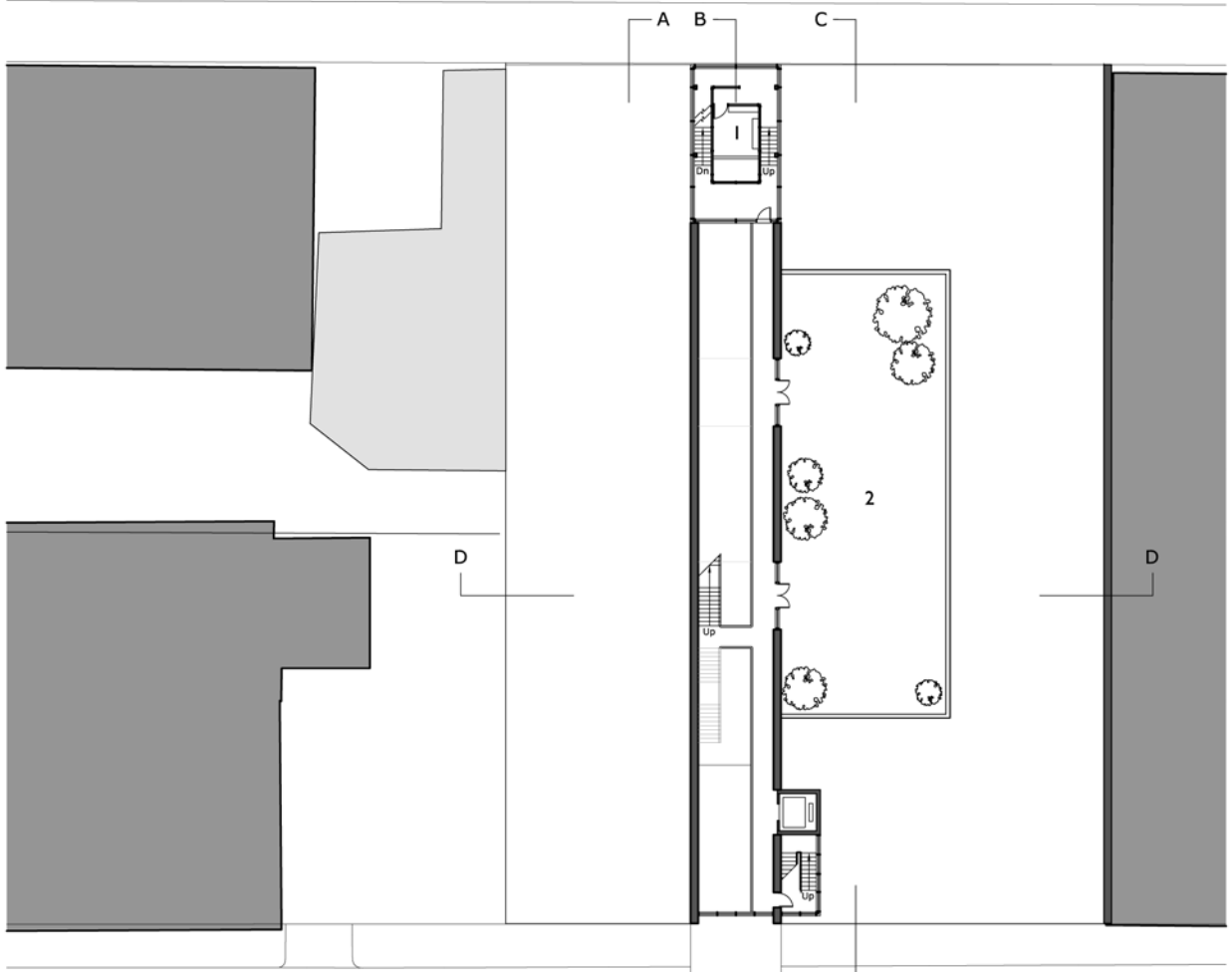
- 1 Steam Tower
- 2 Outdoor Terrace Garden
- 3 Public Outdoor Balcony
- 4 Bamboo Garden Below



Third Plan @ + 10.5m

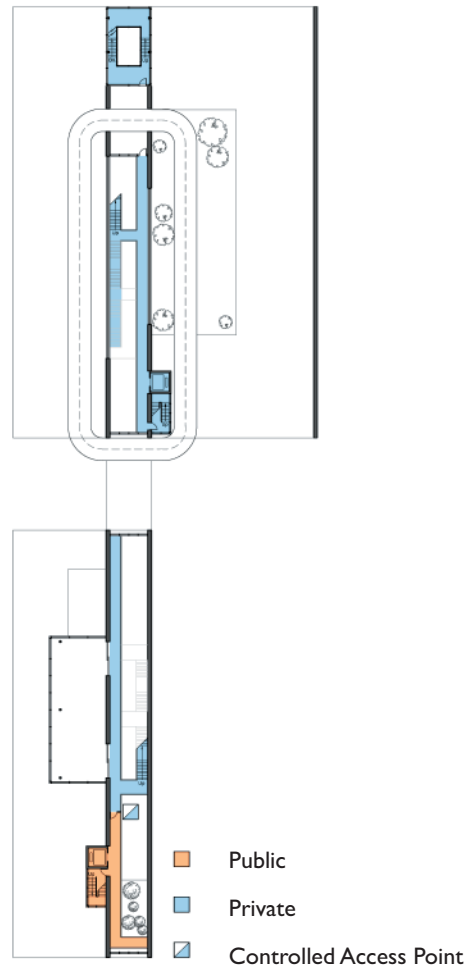
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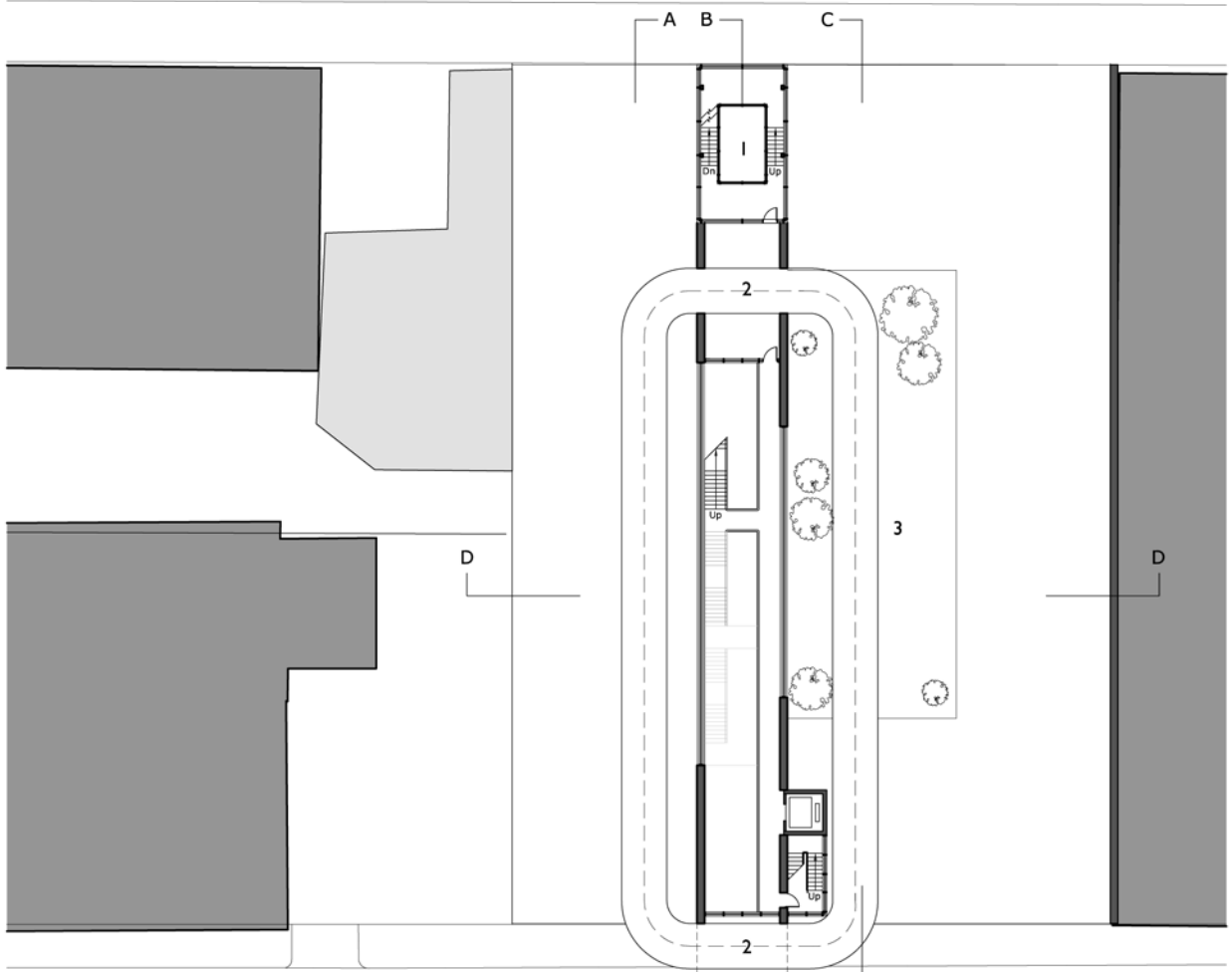
- 1 Steam Tower
- 2 Outdoor Running Track
- 3 Outdoor Terrace Below
- 4 Exercise Studio
- 5 Bamboo Garden Below



Fourth Plan @ + 14.0m

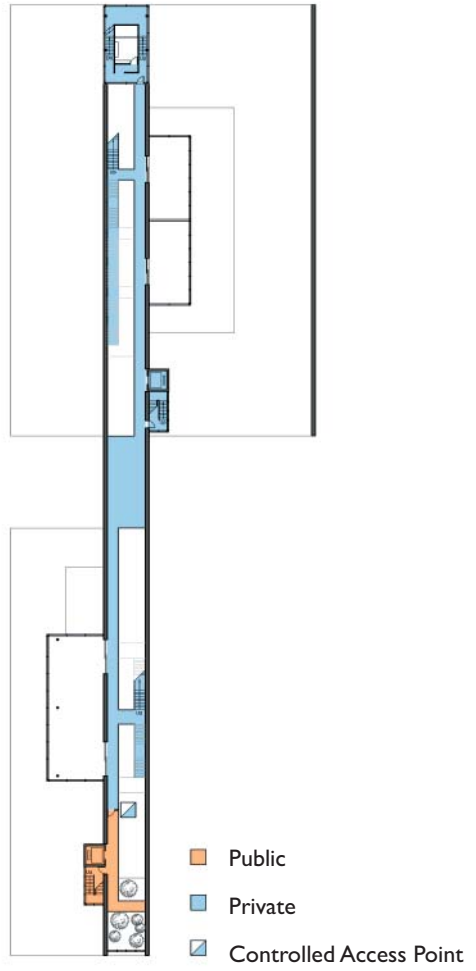
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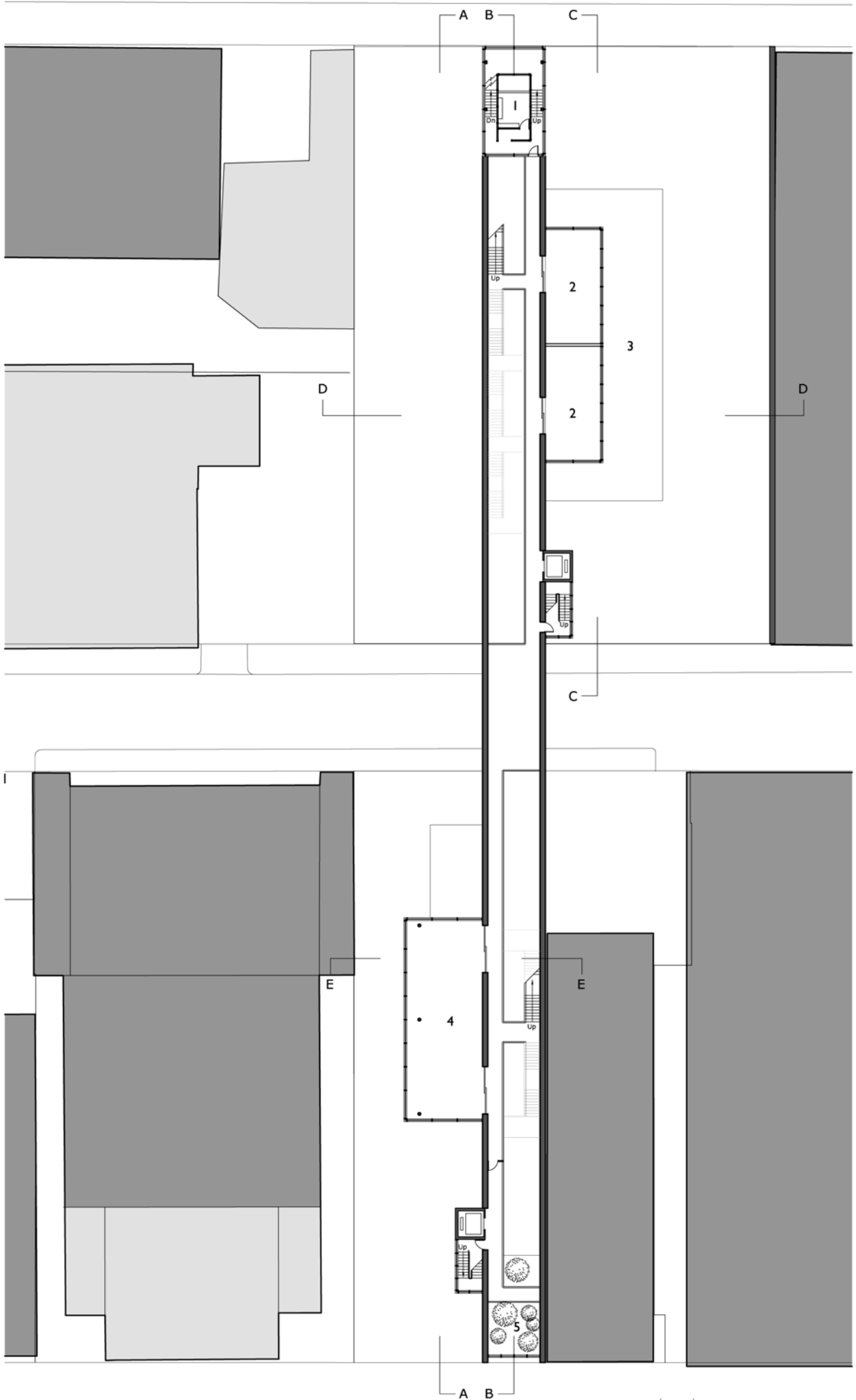
- 1 Steam Tower
- 2 Yoga & Dance Studio
- 3 Outdoor Terrace Below
- 4 Exercise Studio
- 5 Bamboo Garden Below



Fifth Plan @ + 17.5m

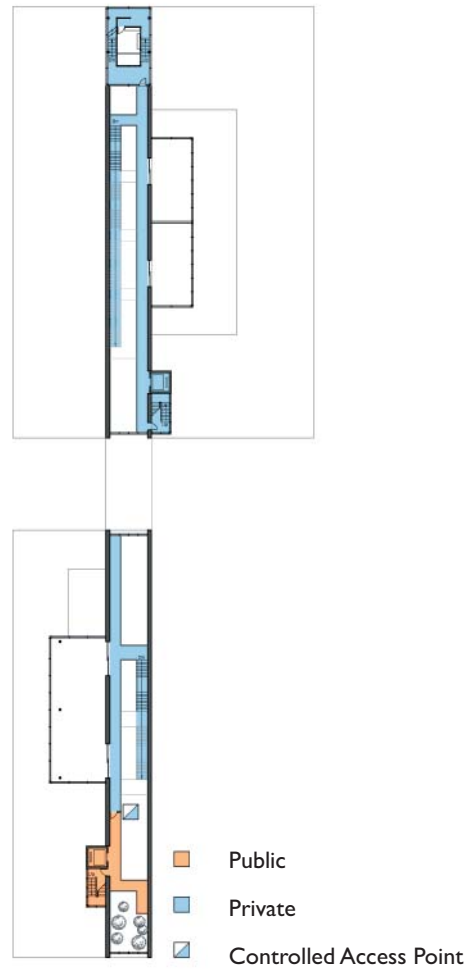
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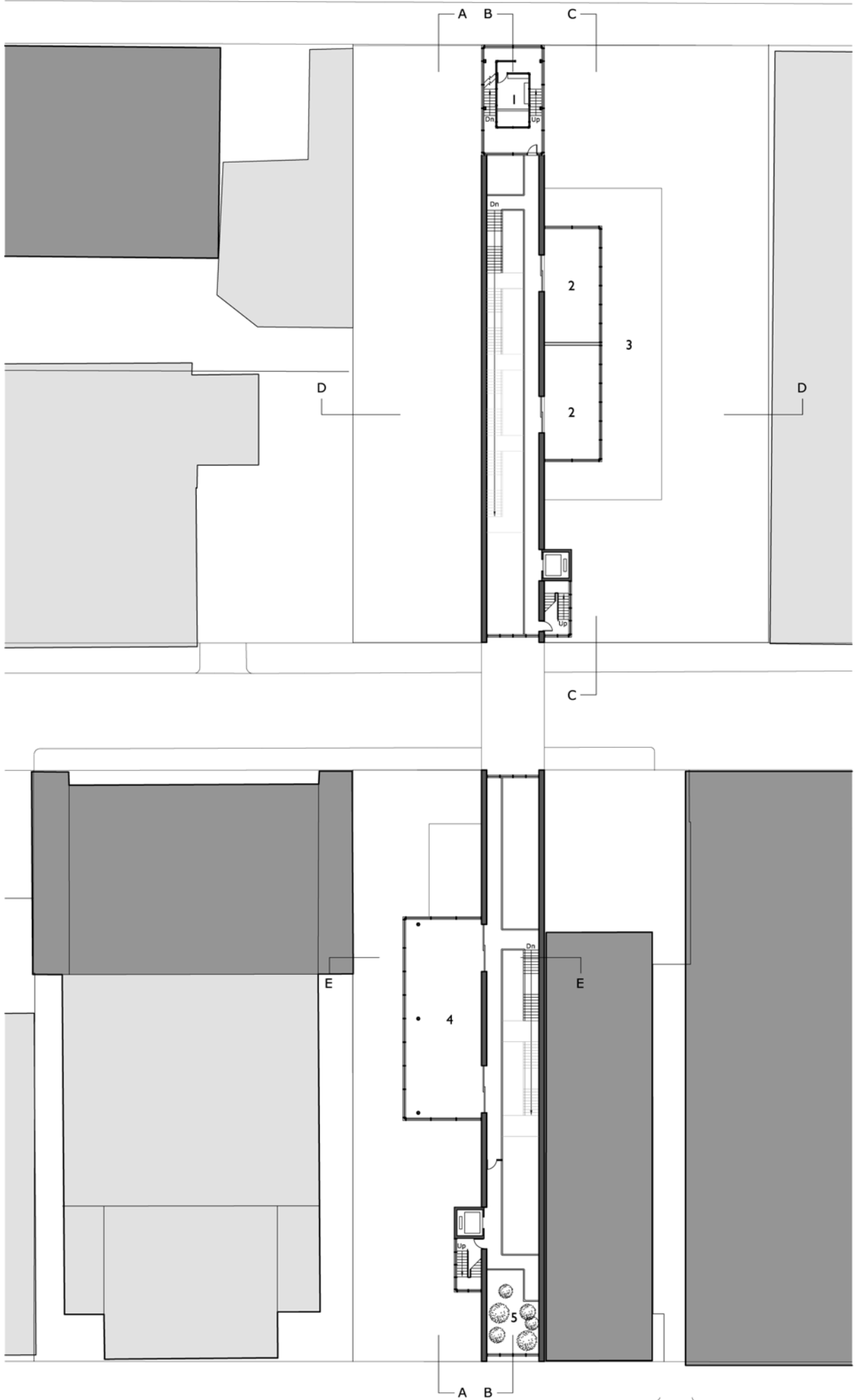
- 1 Steam Tower
- 2 Yoga & Dance Studio
- 3 Outdoor Terrace Below
- 4 Exercise Studio
- 5 Bamboo Garden Below



Sixth Plan @ + 21.0 m

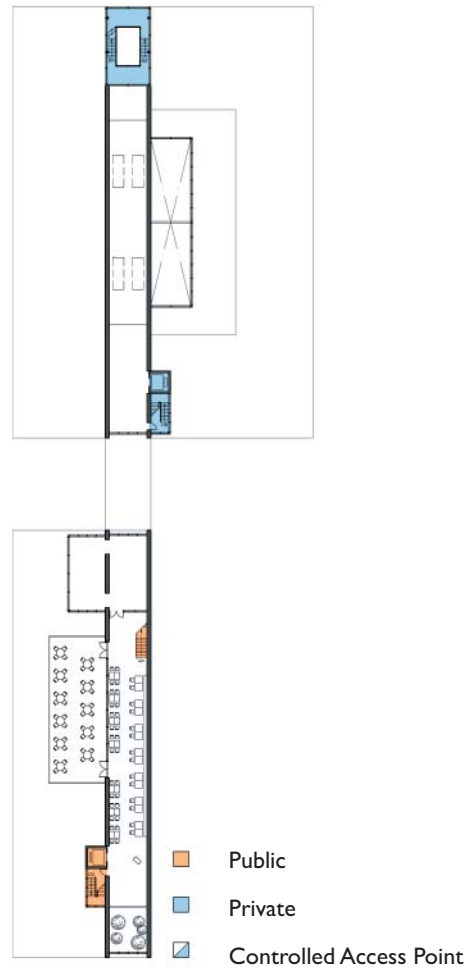
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Legend

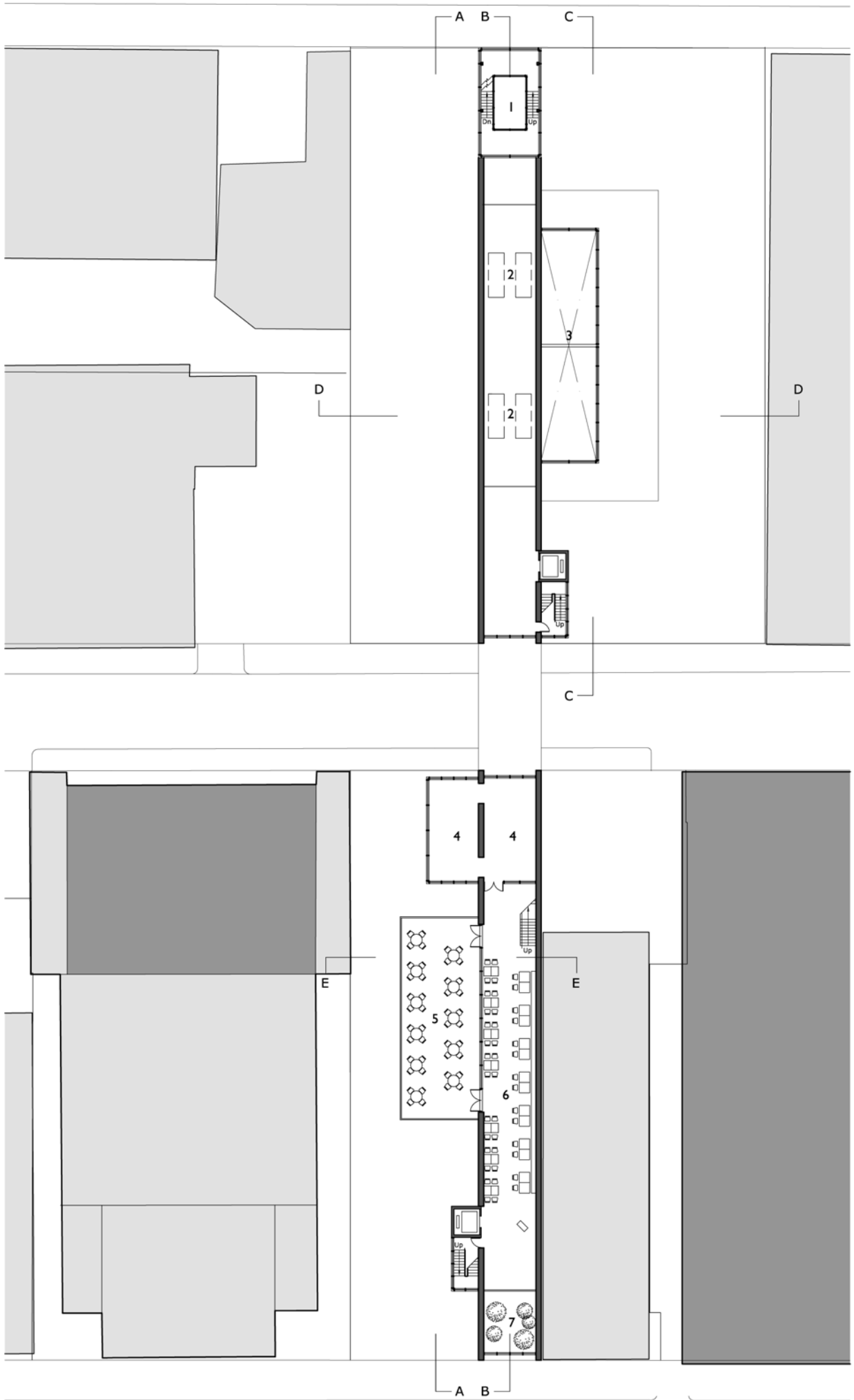
- 1 Steam Tower
- 2 Glass Windows at Pool's Bottom
- 3 Yoga & Dance Below
- 4 Restaurant Kitchen
- 5 Outdoor Dining Terrace
- 6 Restaurant
- 7 Bamboo Garden Below



Seventh Plan @ + 24.5 m

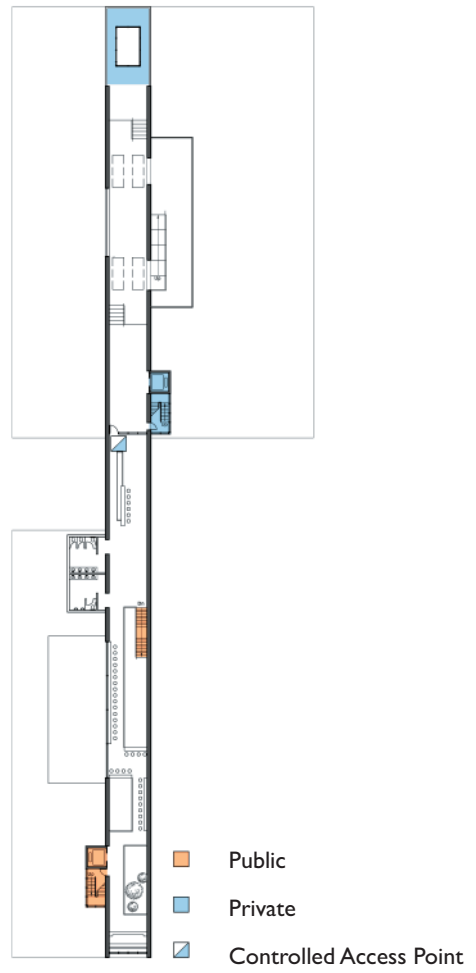
Scale 1:500





Legend

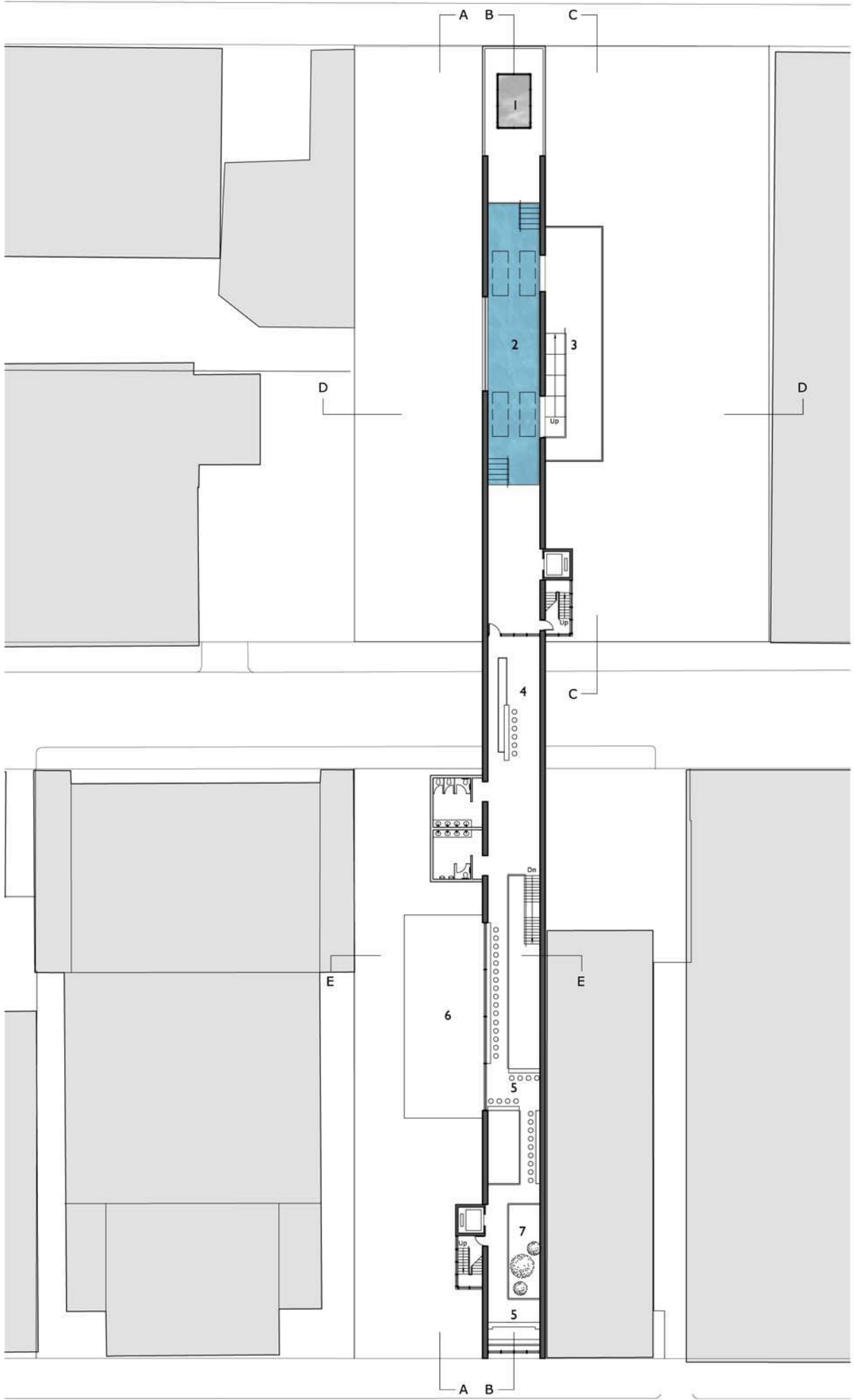
- 1 Steam Tower
- 2 Outdoor Bath 36°C
- 3 Rest Island
- 4 Juice & Water Bar
- 5 Catwalk Bar
- 6 Restaurant Terrace Below
- 7 Bamboo Garden Below



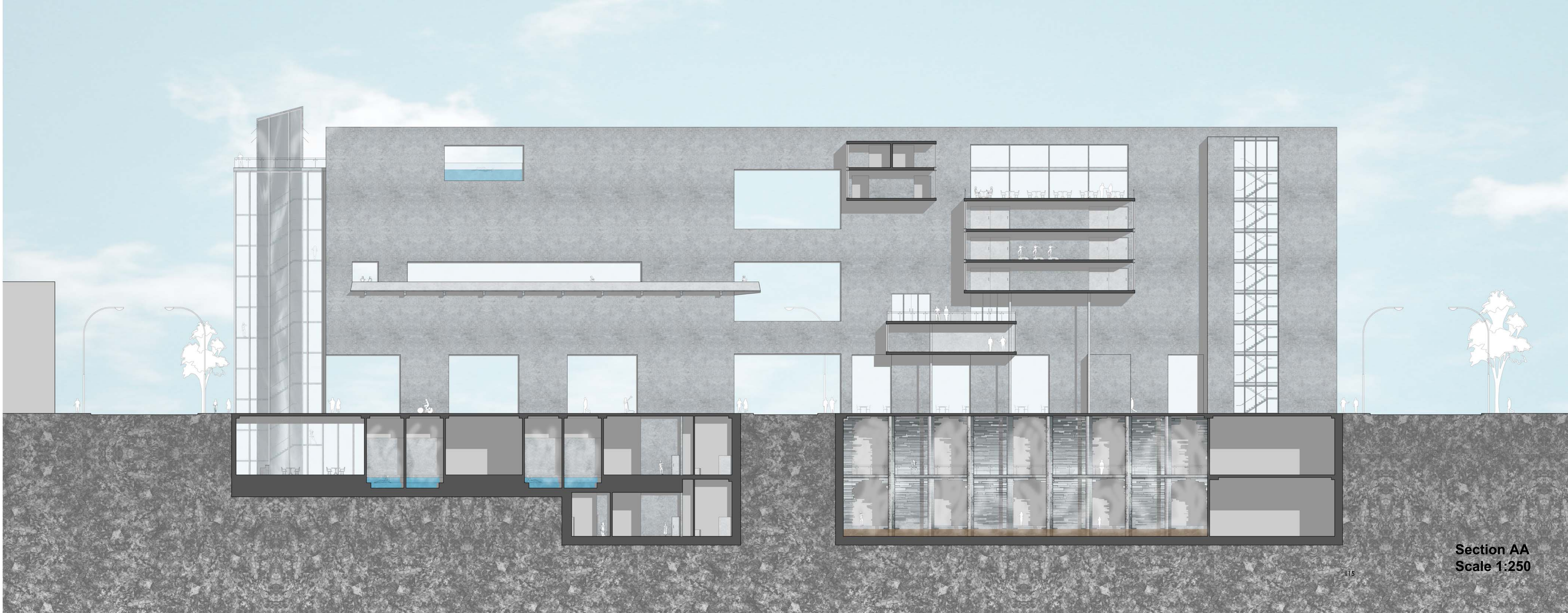
Eighth Plan @ + 28.0 m

Scale 1:500

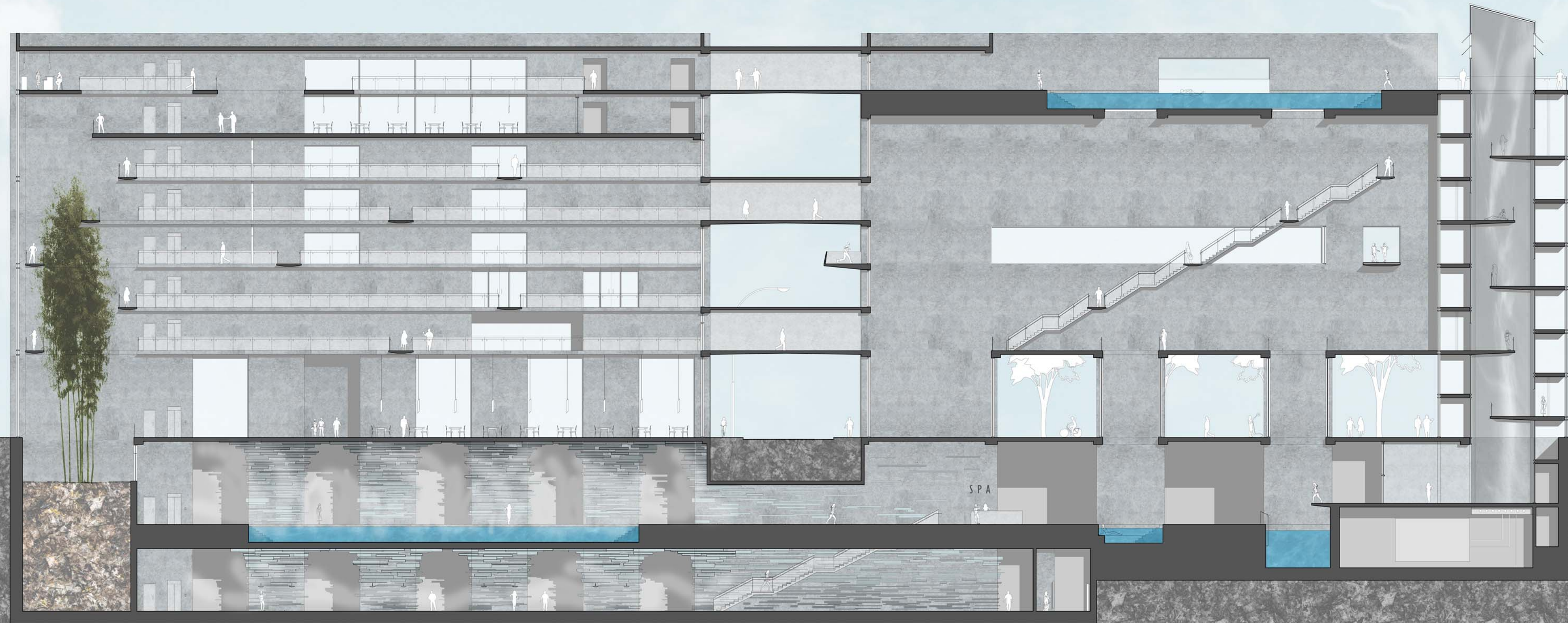




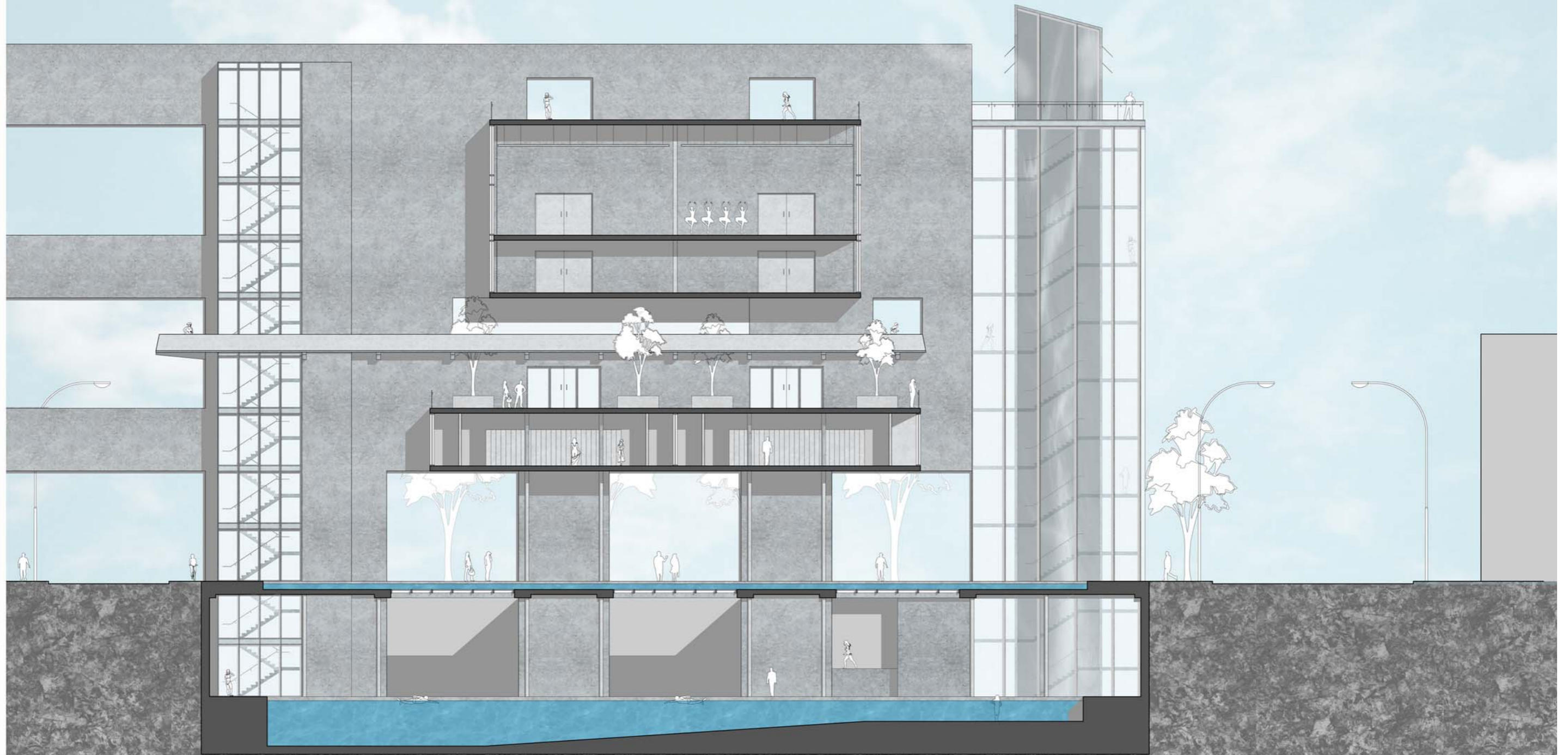
Sections



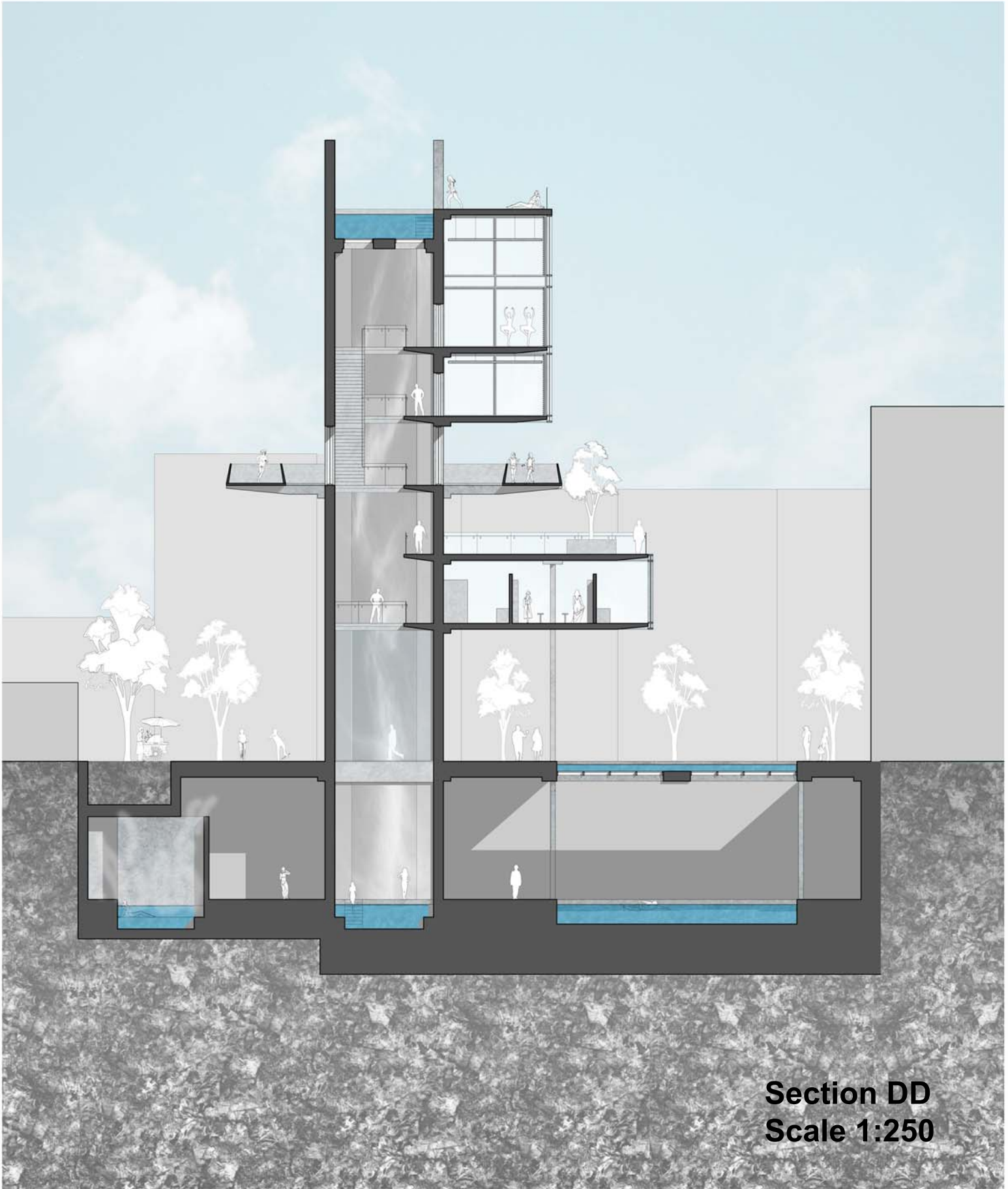
Section AA
Scale 1:250



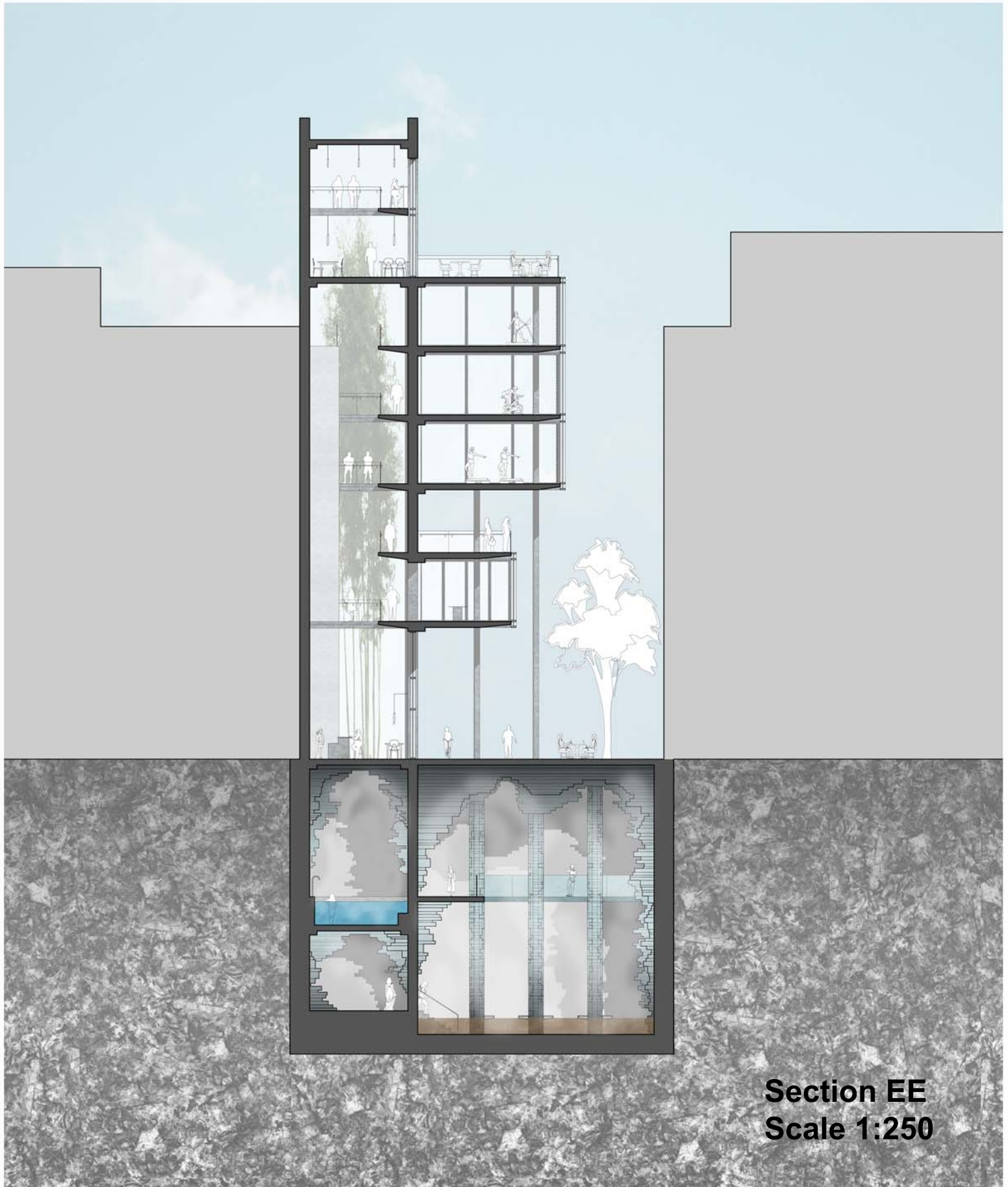
Section BB
Scale 1:250



Section CC
Scale 1:250



Section DD
Scale 1:250



Section EE
Scale 1:250

Conclusion

Architecture In Search of Sensory Balance

In memorable experiences of architecture, space, matter, and time fuse into one single dimension, into the basic substance of being, that penetrates the consciousness. We identify ourselves with this space, this place, this moment and these dimensions as they become ingredients of our very existence. Architecture is the art of reconciliation between ourselves and the world, and this mediation takes place through the senses.¹

Juhani Pallasmaa. The Eyes of the Skin.

We all have memories of important spaces from our childhood. Indeed, “we all experience architecture before we have even heard of the word.”² We remember our bedrooms, our houses, gardens, streets and cities, each filled with different scents, colours, textures, noises, even flavours. These memories are powerful and deep because they are embodied, the spaces having been *experienced*. That we naturally seek to experience space intimately is evidenced by every child’s having “built a fort” or “played house”, games in which the created space is imbued with great and rare significance. When spaces are fully experienced they penetrate consciousness through intimate dialogues with eyes, ears, nose, mouth, skin, skeleton and muscles. They enter the body through the senses and settle there, often forever.

In our media-saturated culture, however, where intimate dialogues as such are lost, experiences are based on mere images of reality and not on reality itself. The result is that the body disconnects from the process of remembering. The tendency is to remember images of places rather than the places themselves. These are artificial memories. Floors make no sound, walls have no texture, air has no odour. Such artificial memories confuse our sense of being in the world because our bodies do not fully sense them. In contrast, embodied memories remind us

of our humanity because they involve all of our senses. Sadly, as tactile experiences of the world are replaced by their visual representations, “the depth of our being stands on thin ice.”³

Architecture must respond by countering the numbing effects of our ocularcentric culture. It must present the flesh of reality uncluttered by signs and symbols. Only by creating multi-sensory corporeal experiences through an architecture of hapticity and reality may we restore sensory balance and form embodied memories that archive the depth of human existence.

The proposed spa health club is an architecture in search of this balance. Throughout the conception of the design I fixed on how the spaces would confront the body, using experiential situations to develop an architectural form. With mass, volume, materiality and light, I have attempted to convey a haptic and corporeal architecture that makes us aware of the fragile human measure. Of great importance is that the building does not try to be anything other than itself. No mere representation, it simply *is*. For me, as the author of this thesis, the success and satisfaction of the design lies not only in the finished proposal, but also in the *process* of design which values the full potential of human existence.

Endnotes

¹ Juhani Pallasmaa. *The Eyes of the Skin*. p.50

² Peter Zumthor. *Thinking Architecture*. p.57

³ Steven Holl. *Thin Ice. The Eyes of the Skin*. Preface.

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