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In Search Of Place

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IN SEARCH OF PLACE

By

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B.Arch Sci., Ryerson University, Toronto, 2008

A thesis

presented to Ryerson University

in partial fulfillment of the

requirements for the degree of

Master of Architecture

in the Program of

Master of Architecture

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Melody Taghi-Poor

Abstract

The following thesis will explore the contemporary meaning of 'Place' and the lost relationship between human sensitivity -both emotional and physical- and the setting, which together would form the very definition of a place, and will make an attempt to re-define this relationship. By returning to the basic definition of place, this paper emphasizes the fact that place without memory is simply space without meaning and that unlike places of our time that put little emphasis on the embodied memory, memory of place is experienced through not only mind but also the entire body.

The paper will take a bottom-up approach where 'Space' as a fundamental element of 'Place' and its transformation to place is discussed. There will be a comprehensive discussion on place itself and the role and ability of embodied memory in creation of place. Each section will make an effort to consider the current circumstances of 'Place' and how they might be transformed to establish a relationship between embodied memory of space and the physical location. Here, senses, movement and basic orientation of the body will be discussed as elements empowering the embodied memory and having the ability to transform spaces—or non-places- of our time into place.

Movement if not one of our five senses, inspires us to engage our whole body; we see, touch and smell what surrounds us, and also understand the setting in the sense that we engage or interact with it. The design project will explore the act of movement as the fundamental element of forming embodied memory of 'Space' and transforming it into 'Place'. Element of path, which links two significant nodes - one known as a place and another a non-place- will be incorporated to represent the act of movement and its impact on creation of a 'Place'.

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To my parents

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“...Space does not exist for the eye only; it is not a picture: one wants to live in it”

El Lissitzky

1.0 Introduction

'Place' has different meanings to different people but undoubtedly it creates a sense of continuity and attachment that also exists in relationships between one human being to another. Physical features alone do not form a place. It is through the interface between human emotional and physical sensitivity, and the location that a place achieves its distinctive meaning. A place is remembered; place without memory is simply space without meaning. Memory does not only exist in mind but is also experienced through the entire body. All our body think and remember as Juhani Pallasmaa put it.

21st Century brought with itself a new definition of place where its formal structure represented the spatial manifestations of a new society: society of an urbanized world with tendency towards exchange and information. As a result new types of spaces were developed that were essential for everyday practices of this culture. The concept of place has become the agent of representations skilfully communicated through images by the urban environment (Castello, p. 64). These new places with an emphasis on imageability and no sense of time and scale have set priority to on the visual sense rather than the entire body. Thus instead of experiencing the world with "the language and wisdom of body" (as Pallasmaa put it in *Architecture of Seven Senses*), we observe it from outside as spectators. As a result, there exists no connection between inside (self) and outside, memory and place.

Places in the society of today, are created with the aim of being desired as instruments of consumption. Consumer culture has a blatantly dualistic approach towards the senses. Present consumer capitalism has covertly developed wise strategies of "multi-sensory marketing" and a "new technocracy of sensuality" for the purposes of sensory seduction and product differentiation. We have already entered the era of manipulated sensations (Arup, p. 90).

Juhani Pallasmaa repeatedly discusses the contemporary society's overemphasis on the visual sense. He refers to the visual sense as focused vision and in comparison introduces the peripheral vision that to him has higher priority in our perceptual and mental system. He believes one of the reasons why architectural and urban settings of our time tend to make us feel like outsiders, in comparison with the powerful emotional engagement of natural and historical settings, is their poverty in the field of peripheral vision. As he puts it, "unconscious peripheral perception transforms retinal gestalt into spatial and bodily experiences". Peripheral vision integrates us with space, while focused vision pushes us outside the space, making us

mere spectators (Pallasmaa, p. 13). Pallasmaa argues that the inhumanity of contemporary architecture and cities can be understood as the outcome of the negligence of the body and the senses, an imbalance in our sensory system. The supremacy of the eye and the repression of other senses tend to push us into detachment, segregation and exteriority. At present the domination of vision is reinforced by a multitude of hi-tech inventions and the never-ending multiplication and production of images, "an unending rainfall of images" as Italo Calvino calls it. Furthermore, the experiences of space and time have fused into each other by speed and as a result we are witnessing a distinct reversal of the two dimensions: a temporalisation of space and a spatialisation of time. The only sense that is fast enough to keep pace with this astonishing increase of speed in the technological world is sight (Pallasmaa, p. 19- 21).

How might contemporary meaning of place be re-defined? What would be the role of embodied memory in this re-definition? Exploring the elements which are missing from the present day meaning of 'Place' is imperative to answering these questions.

2.0 Space and Place

2.1 Space

2.1.1 Definition

Ancient theories have defined space as a container of things. Space was therefore inevitably a void limited on the outside and filled up within. Empty space did not exist; everything had its position and setting. In fact for the architect the space or gap between ground, walls and ceilings is not oblivion; the very reason for his/her activity is to generate the void in order to contain and to suggest freedom of movement which humankind requires.

Painting, music and sculpture also have their spatiality but this defined from the exterior, presenting only the possibility of mental penetration. Architecture is the art of the hollow; we penetrate it with our body and not merely with our mind (Meiss, p. 101).

2.1.2 Elements

Architectural space is formed by the relationship between objects or boundaries and by planes which do not themselves have the characteristic of an object, but which define limits. These limits may be more or less unambiguous, constituting continuous surfaces and forming an uninterrupted boundary, or, on the other hand constituting only a few cues, for instance four columns, between which the observer establishes relationships, enabling him to interpret an unspoken limit (Meiss, p. 101).

Space has depth and is more or less dense. Spatial density is not only result of physical staging of depth, but also modulation of planes such as floor, walls, or ceiling so that the same unitary space appears relatively full or empty. One of the fundamental features that makes it possible to differentiate types of space is that it can either be closed, introverted, concentrated upon itself, or open, extrovert, centrifugal (Meiss, p. 106-107).

2.1.3 Types of Space

Within design education philosophies concepts of space and form are usually separated and regarded respectively as the negative and positive of the physical world, a world that solid objects reside and where the void –the mere absence of substance- is a surrounding atmospheric emptiness. However, since the beginning of the nineteenth century, there has been

an alternative concept of space as a continuum, as the continuously modified surface skin between the pressures of form and space. Architecture therefore can be considered as a creative expression of the coexistence of form and space on a human scale but its understanding, together with all other concepts, is rooted in the psychological space of our thoughts. For that matter, in his book *The Architect's Eye*, Tom Porter explains that space is divided into five categories: Perceptual, Multi-Sensory, Perceptual-Psychological, Conceptual and Pictorial (Porter, p. 26).

2.1.3.1 Perceptual Space

As we move through the space each body, head and eye movement sets the visual environment in motion. We can look up, down and sideways and collect information even at the periphery of our field of vision. The eye receives spatial information which is, both in frequency and velocity, far in excess of that received by any other sense organs. Despite the importance of vision we should never ignore the involvement of the other distance receptors: hearing in relation to the acoustic properties of space, and smell is aiding identification and orientation, the immediate receptors such as skin being more subtle in their sensitivity to the ambient temperature, humidity, texture and shape. The combination of these varied sensory inputs reinforces, elaborates and may even alter our visual perception of the environment to give us a complete image.

2.1.3.2 Multi-sensory Space

This type of space accentuates the kinaesthetic aspect of our tactile appreciation of space, space primarily perceived through the skin and muscles and in response to our position within or movement through it. Our bodily contact with the edges of space is central to our awareness of ourselves and our spatial location.

2.1.3.3 Perceptual-Psychological Space

E.T. Hall and R. Sommer has re-evaluated our relationship with our spatial setting and demonstrated that our conception of space is by no means confined to the volume occupied by our bodies. We exhibit similarities with animals in that we carry with us various territories or bubbles of personal space. Not only does this psychological space shrink and expand between personal and less exclusive parameters, but the concept of our own physical size can fluctuate in response to a psychological spatial relationship, our body seemingly growing in stature when

confined in small spaces such as elevators and, conversely, diminishing within vast spaces such as cathedrals and auditoria.

We place self-imposed limits on our location and movement through space by decisions made within socio-economic framework; decisions which dictate the location of our home, workplace and mode of travel, with additional factors such as length of residence influencing our perception of the urban environment. Such influences produce various forms of perceptual screening in different kinds of space. For instance in a cathedral people will tend to move more slowly and speak only in whispers. In an overcrowded elevator an individual's perception of that space will be altered just as a person experiencing a visually pleasant and thermally comfortable room 'sees' the space in a totally different fashion from someone occupying the same room with the heating increased to levels of discomfort.

2.1.3.4 Conceptual Space

As opposed to the psychological dimension of behavioural space and the tactility and measurability of physical space, conceptual space is that which we perceive and visualize. The design of space is, initially, a mental concept and any resultant response is primarily experienced through visual perception. It is essential that in tuning our mental attitude to the transfer of visual information a step is made across this conceptual threshold- from a form dominated perception to a renewed awareness of space as dynamic, tangible substance.

2.1.3.5 Pictorial Space

Our visual experience of space relies upon a hierarchy of optical functions which are triggered by a visual contact with the real world around us. The primary visual signals or cues which aid our perception of depth are binocular vision and motion parallax. Binocular vision consists of three related cues that are signalled independently to the brain where they are integrated with all other sensory phenomena to compound a total perception. These cues are accommodation, convergence, and disparity. First is the ability to focus the eyes on only one point at a time, second is the angle subtended by the two eyes in the object in focus, and third describes the fact that each eye receives a slightly different image from a perceived stimulus. Motion parallax on the other hand is produced by motion of the head and eyes. Movement at right-angles to a line of vision alter the relative positions of two unequally distant objects, for example, nearer trees and distant hills seen from a moving train will show different relative motion.

2.2 From Space to Place

2.2.1 Definition of Place

The meaning of space is often merges with that of place. What begins as undifferentiated space becomes place as we get to know it better and endow it with value (Tuan, p. 6). When meaning is attached to space, 'Place' is created. In its most fundamental sense, place is the setting for the events of human living. Physical features alone do not form place; "it is through the interaction of human sensibility with an appropriate physical location that place acquires its distinctive meaning" (Menin, p.43). The bond between people and places is the bond between our inner landscape and the outer landscape which we inhabit. Through continuity of this connection attachment is created (Myer, p. 11-14).

Sometimes confidence in 'Place' comes from the experience contrary to the positive encounters of that place. It is the experience of 'non-place' that holds within itself a sense of emotional, mental and physical nothingness (Menin, p. 2). A 'non-place' is what Marc Augé terms the interstitial location between here and there and between two significant points. Non-places as he explains are detached from any localisation or social networks and tends to be anonymous – void of particularity- and inert to geographic position –airports, shopping malls, motorways, supermarkets, hospitals. Non-places carry no history other than the last 48 hours of news. Place never disappears completely and similarly a non-place is never fully established. Non-places turn the subject into a passenger, a user, a customer, or listener, identified by name, address, date of birth, passport and PIN number. (Hoete, p. 16).

2.2.2 Characteristics of Place

A place has identity. A place's identity is complex, and when it has a distinct quality it heightens our awareness more than when it does not. The reverse is also true. A place of uncertain character disturbs us. As in the case of human identity, a place needs to be clear about what it is, what it is derived from and what it expects to become. In a place with no identity we feel confused or disoriented (Myer p. 36- 39).

A place is remembered. Through memory, uniqueness and meaning is attached to a particular location and place is distinguished from "undifferentiated sameness of space" (Borden et al., P. 55). Spaces become memorable not only through formal structures with special rationality or power but also through events that take place and are rooted in location, events that occur with

such strength and repetition that lend vividness to what surrounds them and invoke our memories of that place (Treib, p.64).

2.2.3 Self and Place: Relationship between Inside and Outside Worlds

Inside refers to a location that is in some way divorced, physically and metaphorically, from another location that is external to it. The locations of inside and outside create different spatial experiences and therefore suggest different mental orientations toward the world. Inside we are bounded; we reside in a space that has deepness and shadow. Outside on the other hand, we are confronted by solidness and surface. Inside we can smell, feel, hear as well as see the space for inhabitation, outside we can see the exterior facade of its shell.

We all began inside; intimately embraced and nurtured by warm flesh, we were contained and held. We could hear, touch, and feel, but we could only perceive light and shadow. From birth onwards, although we are constantly inside some spaces and outside others, the prime experience remains one of being inside. Even without the existence of a physical boundary, the places we inhabit with our bodies, for the most part those that we imbue with memories and dreams, become another kind of inside (Franck & Lepori, p. 18-19).

Although we can not see the inside of our body, we do build up memories of an inside world that include a panorama of experiences taken from the environment and carved into the feelings of our identity over a lifetime of personal encounters with the world. We populate our inside world with the people, places, and events that we felt at one time in the outside world (Bloomer & Moore, p. 49).

The modern society lives on the surface caring merely about appearances; the outside has become the public façade. The inside, what is unseen but felt, the realm of embodied experience, of fears and imagination, is subjective. Objectivity on the other hand is linked to the outside. The sensory mode that best serves the distancing this objectivity is vision: in order to see, one does not need direct physical contact with the condition to be identified and consequently one can be quiet removed from it. The senses of hearing, touching, taste, and smell all require closer contact or actual engagement (Franck & Lepori, p. 20). Our bodies are subjects and as a result porous and open to surroundings. Our bodies extend beyond the boundaries of our skin, into the world, incorporating what is different from us. As subjects we sense the world in all its prosperity: we touch, smell, hear and taste it (Franck & Lepori, p. 31).

2.2.4 People and Places: Place through the Lens of Urbanism

When the relationship between inside and outside worlds is established, we feel the need to become part of a larger world -the society- where individuals step out of their boundaries to interact with one another and with their environment. Therefore, place becomes a shared experience.

One kind of interaction between people and their environment features the most established idea of place, associating it with what is known as *genius loci* which starts predominantly as a place with prominence of natural aura and progressively proceeds towards a place of cultural aura with a prominence of the marks left by human interventions. In another condition the relationship between people and their setting involves more subjective phenomena, which defines places that evoke people's collective memory. These could refer to places that are associated with the built heritage or localities with memorable and explicit features to which the occupants attach themselves, their thoughts and feelings. And there is a condition that comes from the interaction between people themselves in the environment, where the social dimension is significant. These are plural places, centres of diversity, places where because they are essentially collective, things are offered and exchanged, there is a construction of plurality (Castello, p. 10-14). Modernism used plurality as a tool for "making" places. These so-to-speak places were localized and planned urban spaces that were intended for performing social functions; spaces where people would go to meet and socialize (Castello, p. 83). These three phenomena are not mutually exclusive; on the contrary they gather and pervade each other.

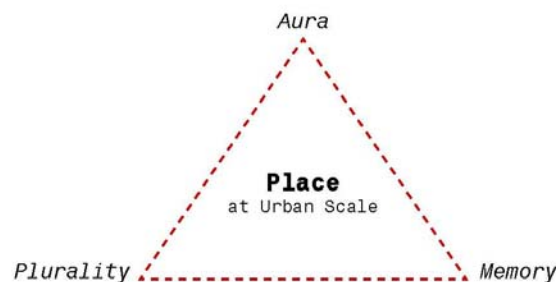


Figure 2-1: Types of Place through the Lens of Urbanism

John Hannigan is one of the first sociologists to investigate the topic of places in the cities of today, which he believes are formed with the aim of being mainly desired as instruments of consumption. By interpreting the present-day place through the logic of existing social conditions of a consumer society, he deals with the concept of place as means of representation

that is expertly provided by the images communicated by urban places. When describing what he calls the fantasy city of today, he is in fact referring to places presented by today's cities that are intended for leisure and entertainment, continuously offering an attractive and captivating mix of events and social interaction. Hannigan defines several distinctive characteristics of the fantasy city: it is thematic as a whole or in parts, it ostensibly seeks to create brand surrounded by powerful aura, it is modular and combines distinguished components such as themed restaurants, museums, book and music megastores, it is materialization of an environment that is centred on itself, and last but not least it is built on technologies of stimulation, virtual reality and the emotions of the spectacle, reducing the distance between authenticity and illusion. He believes the fantasy city knows very well how to meet pleasure-seeking behaviour of today's consumer society, be it through the technological seduction it can produce, or the social interaction it represents (Castello, p. 64-66).

2.3 Place and Memory

Our recollections are situational and spatialized memories; they are memories attached to places and events. We tend to remember the depicted object, person, or event in its full spatial reality (Treib, p.22).

2.3.1 Individual vs. Collective Memory

It is this ability of being held in mind that allows places to attain significances that are both intimate and public. They settle in minds of individuals, yet through incorporating elements of common experience, they facilitate the development of shared conceptions that tie our thoughts together.

2.3.2 Embodied Memory

Remembering is not only a mental task; it is also an act of embodiment and projection. Every place can be remembered, partly because it is unique, but partly because it has affected our bodies and generated enough association to be held in our personal worlds. As Philosopher Edward S. Casey has mentioned in his book *Memorizing: A Phenomenological Study* mentions "There is no memory without body memory" (Bloomer & Moore, p. 107).

2.3.2.1 Experiencing Space through Senses

Our senses are in continuous trade with our settings; we concurrently internalize these settings and project our entire body upon them. Memories are not only hidden in the secret actions of the mind; they are also stored in our skeletons, muscles and skins. All our senses and organs think and remember (Treib, p. 27- 30). A theme park environment is filled with exaggerated levels of sound, smell, taste, and touch together. By contrast, to enter a medieval cathedral is to leave behind the sights, sounds and smell of the hubbub outside and to replace them with a new range of sensations monitored by our body. The skin registers a reduction in temperature, the eyes accommodate both the lower levels of light and the intense coloured light from stained-glass windows, the nose detects musty and sometimes mysterious, exotic odours and the ears pick up the echoes of isolated, reverberating sounds against the concentrated stillness of a vast, cavernous space (Porter, p. 27).

2.3.2.2 Basic Orientation

It is from the body that we orient ourselves in the world. “Here” is where our bodies are located in space and “there” is some distance from them. Left and right, up and down, front and back, large and small, above and below are all defined in relation to our bodies (Franck & Lepori, p. 46).

Basic orientation refers to our postural sense of up and down, front and back, and right and left as well as here-in-the-centre. Up and down, our most basic orientation, is the most unstable and yet the most splendid because of its dependence on gravity, and establishing awareness of the ground plane. Robert Thomson, in a study of traditional African architecture, draws a comparison between the expression of the vertical dimension in the gestures and posture of African dancers and European ballerinas: the former are down-beat dancers, pouncing on the earth, while the ballerinas, true to their transcendental culture, rise from the ground and attempt to escape the earth. Front is the orientation toward mobility and suggests potency and virtue, while back has concealed and unsophisticated (spatially lower) implications. Most of the sensory apparatus is forward, while the regions of the back have fewer defences and possess more private and lower functions. Right and left-sidedness also attain meanings derived from experiences of body strength and control. The effect of these body meanings can be illustrated by exploring some probable emotional responses to conditions in the environment. For instance consider being limited to an entirely horizontal set of paths in which only front and back, and

right and left orientations are feasible. Without the opportunity to ascend and descend, our passage may be a discouraged one (Bloomer & Moore, p. 34-41).

2.3.2.3 Movement of the body

The movement of the body if it is not itself one of our five senses provides us with a scale to perceive space. Passing through, visiting, dancing, gestures all allow us to value the magnificence and discovery of that which is hidden: to move closer, move away, go round, go up, go down, go into, escape, are all actions that invite us to arrange for ourselves what we want to see, hear, feel, smell, and touch in a certain environment (Meiss, p. 15). It is through movement that we recognize and understand the world. Not only do we make bodily movements to see, touch and smell what surrounds us, we also understand surroundings and objects in the sense of how we might engage or interact with them (Franck & Lepori, p. 55). Our perceived experience of interior and exterior architectural space is primarily a sensual event involving movement- for to pass through an environment is to cause a kaleidoscope of transitions between one spatial impression and another (Porter, p. 26).

With the positions and movements of our bodies we organize space. A person walking in a straight line makes a path. Two people facing each other in conversation make the space around and between them personal. A group of people sitting together facing each other form a circle. People standing one behind the other and waiting make a line. A group of people facing a single person shape an audience (Franck & Lepori, p. 56).

Looking at the body in space, we realize that geometric abstractions and descriptions quickly assume layers of associative meaning. Rudolph Laban, an influential pioneer in graphic notation for dance, has described movement in terms of the “frontal”, “vertical” and “horizontal” planes (Bloomer & Moore, p. 58). A look at the vertical and horizontal dimensions is especially relevant to movement in architectural space. All human movement traces complex spatial configurations. Its forms can be seen as a compounding of movements through the spatial axes- a process continually changing in time. Curvilinear and diagonal motions are developed in relation to the two axes, while spiral and helical motions are developed in relation to three axes. It is interesting to note that movement in two axes or one plane, such as walking, running, and most forms of human mobility, is the most prevalent mode in typical day’s activities. Although we are capable of an infinite range of movements, most of us move within a fairly narrow variety of our

possible range. One of the critical causes of this range is the built environment, the spaces and places we make and inhabit (Bloomer & Moore, p. 59).

When it comes to perception and psychology of space, Kenneth Bayes has described two kinds of movement through space: one exploratory through an unknown environment; the other habitual through a known environment. In the first the architecture is new, prominent and strange; one is exploring, open and receptive, moving and experiencing new things, investigating. In the second the architecture is in the background, hardly noticed; one moves through it without the awareness of the surroundings, thinking only of a goal (Porter, p. 44).

Slowness and speed are also associated with movement. There is a bond between slowness and memory, between speed and forgetting. The extent of slowness is directly relevant to the intensity of forgetting. Today, with the dizzying speeding up of the pace of time and the constant acceleration of our experiential reality, we are seriously threatened by a widespread cultural forgetfulness (Treib, p. 32). Movement or mobility as known by the contemporary context, is a complex concept, ideologically elusive and difficult to pin down. It incorporates information technologies and telecommunications triggering a spatial schizophrenia; today one can be in two places at once. For that matter, mobility is also multi-scalar: as a concept it simultaneously envelops, for example, the global map of airspace, the specific scales of architectural space and the virtual world of communications (Hoete, p. 11-12). Today's mobility is concerned with how one occupies the duration between places. In the void of travel, the passenger kills time. Waiting, sleeping, reading, texting and calling are all non-events that typify the journey between home and office. Spatial movement thus resolves not only the logistics and objectives of getting people, goods, services and information from A to B, but accepts that the space you are at is the ideal space to be part of: a transitory experience (Hoete, p. 17).

2.3.2.4 Transformation of Body-Centred Sense of Place throughout History

At its beginning architecture derived from a body-centred sense of space and place. Columns were without doubt celebration of the particular human upright posture even before they were pressed into service to hold up roofs over human bodies. Walls had been invented to describe human territoriality even before they were joined into whole systems to make rooms and buildings. And roofs overhead, however vital their necessity was to keep out the rain, served to cap a building, like human head. Qualities invested by mankind into those columns, walls and roofs gave meaning to his built world. At a later time a row of columns could form a front porch

of a remarkable power; in early Greek cities it was reserved for the headman and used by him when he was dispensing justice. The triangular end of a gable roof above columns had also been from earliest times a sign for authority. By Roman times the columns had often fused into a wall, but it was still used to imply potency in, for instance, a triumphal arch through which a victorious general might parade (Bloomer & Moore, p. 5-9).

A specialized architecture which ignored and excluded the more general function of extending the human self endorsed as early as the 17th Century, when Western Europe began to industrialize. At that time the human and divine themes perpetuated by the aristocracy and church were challenged by the engineers, militarists, and industrialists whose control was rapidly growing. The evolution from the presence of the body as a divine organizing principle in architecture to a more perfunctory organization gained momentum from Galileo's arguments in favour of mathematical measurement and experiment as the criteria for physical truth. Before that, it was natural to imagine an architecture which celebrated the properties of human body. But instead the human body was thought to obey mechanical laws, so was the architecture which served it. A search for new laws with which to oversee all physical forms was institutionalized by the founding of national academies of science and learning throughout Europe (Bloomer & Moore, p. 15).

Inevitably debates arose as to whether a building was beautiful because of its adornment and proportions or because of other functional criteria. Engineers argued that proportions should indicate the perfunctory properties of the building, and thus the thickness of a visible beam should demonstrate the weight it carried; doctors proposed that their hospitals be formed as ventilators for the removal of germs from air within; and prison officials asked that their buildings be designed for the efficient surveillance of prisoners. Military engineers demanded the right to plan urban fortifications, while in earlier times artists such as Leonardo and Michelangelo had undertaken the construction of such civic ramparts (Bloomer & Moore, p. 17).

After 17th Century the aesthetic debates and theories about the way we sense beauty had begun to persuade and in fact make prejudice our understanding of how we experience architecture. Descartes was so cynical about the reliability of senses that he trusted only the act of thinking itself. Cartesian "rationalism" demanded the assignment of objective meanings to things, and these meanings were to be derived by reasoning rather than being sensed. By regarding architectural issues and challenges as the territory of deduction rather than feeling, the bodily senses, which were not considered to be prime instruments of thought, would obtain

a lower significance. However there were voices during the period which argued that feelings, independent of reason, were able to reveal a measure of truth.

In mid-18th Century philosopher Edmund Burke suggested that in visual beauty the feelings generated by smoothness result from relaxing muscles, while bodies which are rough and angular provoke and vellicate the feeling. The bodily senses and the sense of beauty are closely linked in this statement. In the early 19th Century Hegel emphasized the mental aspect of art, implying that art is also art for the senses. He, nevertheless, restricted those senses to sight and hearing which were organs of aesthetic satisfaction and disqualified touch, taste and smell. To him sight and hearing did not modify or consume their objects. By the end of the 19th Century almost all aesthetic problems which dealt with three-dimensional forms were treated automatically as visual problems. The body was less likely to be considered in any rational debate about architecture, where no argument had successfully competed with the post-Galilean outlook of the physical body as a machine. The word body had generally come to signify the physical, nonrational, and mindless body. The focus on conceptual and mental processes and their disparity with the physical operations of the body had reinforced the belief in the separation of mind and body (Bloomer & Moore, p. 23-29).

During the beginning of the 20th Century, a new theoretical model emerged from the findings of the Gestalt or Form psychology. This group of theorists was able to demonstrate and prove by experiment that in fact irrational forces in the act of perceiving reacted on the object being perceived. Events in the visual field of perception for instance were simplified by a phenomenon called closure, a tendency to decrease an intricate pattern to a more familiar and simpler pattern. Notable in these observations was a revelation that individuals also tend to simplify patterns toward symmetry rather than asymmetry, and toward basic geometric groups rather than arbitrary and less defined ones. For example, a square was shown to be the most memorable and neutral form because of its orientation and uniformity. The manifestation of the Gestalt experiments in visual perception was to have a vast effect on the development of 20th Century modern architecture. These inspirational trials seemed to be exactly what was needed in the context of the pluralist and contradictory viewpoints that constituted architectural education. Theories could now be developed directly from experimental findings in ways parallel to, and as hopeful as, the experiments of systematic engineering (Bloomer & Moore, p. 32).

During the mid-20th Century, some extreme application of Cartesian space presented a dangerous threat to our identity as individuals. The futuristic group Superstudio presented some

of the most haunting images of bodily alienation. One of their visions promised the total freedom of living on a never-ending gridded platform into which we may plug for energy, information, or nutritive needs. In this Utopia, we were assured that we would no longer require clothing or shelter and that we could be transported instantaneously to any part of the earth. This scenario embodied a clear denial of the need for the interaction of body and the environment.



Figure 2-2: Superstudio's Infinite Gridded Platform for Complete Freedom from Place (Source: foldeditions.blogspot.com)

The other extreme to alienation of the body was overmanipulation of the body. It is not surprising that hypermanipulation was in the sphere of the same futurists who considered humankind to be a neutralized nomad, unhinged from his/her special places. Members of the Archigram group proposed such future pleasures as “Mansak” and stated: “All the sensory equipment you need for environmental information retrieval, and for performing tasks. Direct your business operations, do the shopping, hunt or fish, or just enjoy electronic instamatic voyeurism, from the comfort of your own home” (Bloomer & Moore, p. 74-75).



Figure 2-3: Archigram's Freedom from Place (Source: busk.com)

3.0 From One Place to Another

3.1 Introduction

Place does not always live in isolation; it may live in relationship with another place. A city becomes a place not only through places it holds within itself but also through experience of moving from one place to another.

By moving from one place to another, a person requires a sense of direction. Purposeful movement, movement that is directed toward places, provides us with a memorable world of events. Therefore space created through movement can be experienced as the relative location of places and as the distances and expanses that disconnect or connect places (Tuan, P. 12).

Movement is physically and conceptually defined by path. Path can go from one point to another or it can return to the point from which it began. Sometimes these points happen to exist in one space and movement is formed within, or they exist in more than one space and movement in between becomes a distinct entity with its own spatial characteristics. Movement may also be combination of these two. Here, moments of transition are crucial to mediate between the two. Success or failure of a path system with various types of movements depends on how well points of transition are integrated. Successful points of transition have characteristics of both conditions and for that they hold an extensive spatial value.

This chapter, which cultivates ideas for the design project, will discuss the three elements of path, place as a node, and threshold.

3.2 Path

Movement creates path, and on the other hand a created path holds movement; the unique character of a path is being a void ready to receive human movement. The path enables us not only to move from one place to another, to go next to or to cross places, but also helps us to remember things seen and experienced, and to position us in a wider community. The experience of the path is a dynamic one and the terms associated with it are verbs of action: to walk to, to seek and find, to pass through, to discover, to enter and leave, to stop at or continue in a place. Sometimes this path gradually or on the contrary unexpectedly crosses boundaries (Meiss, p.156).

In a city, one type of path is created by an extended square or a public space, whose opposite sides are more closely related than its adjacent ones. Here, the path itself may be sensed through the time it takes to move along it, although the whole space is still evidently a place. A more ubiquitous kind of architectural path is of course the street, edged perhaps on one or both sides by continuous buildings or flanked by structures with spaces in between. On some memorable streets, a marker can interrupt without stopping movement along the path. Or the vertical dimension can be the prominent one, and motion along the path can be via ramp or stairs. A vivid instance of a significant path is the pilgrimage route, where following the path itself constitutes a central part of the ritual. Since a path implies movement, the form of motion is important. Pedestrian movement, for instance, which by tradition has been the creator of path, is flexible and allows for most people turns of any dimension or degree with a wide variety of speeds. A bicycle or skates extend the range of possible speed to the extent of directional flexibility. And other means of transportation offer us higher speeds and more kinetic experience but at the expense of reducing our contact with the surrounding world (Bloomer & Moore, p. 92-94).

3.3 Place as a Node

Places are distinguishable from the world around them. Kevin Lynch in *Image of The City* has defined node as “strategic point in a city into which an observer can enter and which are the intensive foci to and from which he is travelling, or simply concentrations, which gain their importance from being the condensation of some use or physical character.” (Lynch, P. 72). Although in his definition, Lynch concerns himself with objective characteristics of node and refers to city dwellers as observers, he identifies it as a point to which some kind of a purpose for travelling is attached. Therefore, it would be appropriate to think of place as a node since it gains its significance through meaning that is associated with it. Every node is not a place but every place undoubtedly is a node.

Lynch also mentions the concept of node is interrelated with the concept of paths, since junctions are typically the meeting points of paths, “events on the journey” (Contandriopoulos & Mallgrave, p. 338). Here, it is relevant to link together notions of path and place; every place is experienced, and is linked to another place through a path or series of paths. The more conscious and participatory is this experience of passage within or to and from a place, the stronger bond is made with the place.

3.4 Threshold

Each relationship between places proceeds from two aspects of dependence. It provides both separation and connection, or, in other words, demarcation and transition, break and continuity, boundary and crossing. Threshold and spaces of transition become places themselves (Meiss, p.148). They are places of exchange between opposing and sometimes even conflicting phenomena. This division confers upon them a duality between their independent existence and the principle spaces which they articulate and to which they are subordinate.

The threshold presenting possibility of crossing a limit is associated with movement. These passages are directional in the sense that they originate in one space and lead to a different space (Meiss, p.152-153).

4.0 Precedents

4.1 Vietnam Veterans Memorial



Figure 4-1: Vietnam Veterans Memorial; Aerial View (Source: Google Maps)

Designer: Maya Lin

Location: Washington D.C.

Construction: 1982

Vietnam Veteran Memorial was funded in 1979 by three Vietnam War veterans in an attempt to heal the emptiness the war had created. A national design competition was announced and Maya Ying Lin, a Yale University student in architecture was announced as winner. Her proposal suggested a place where everyone would be welcome to not only remember the past and grieve, but also to reflect upon the difficult place the war continued to occupy within their society.

Lin's competition entry proposed a 500-foot wedge-shaped black granite wall, polished to form a mirror-like surface. She explained that walking through the site, the memorial appears as a rift in the earth, a long, polished black stone wall, emerging from and receding into the earth. Her cut into the land productively connected the land to her own body in order to wrench the memorial

away from “nascent illustration and narration”. Instead of moving clearly from the position of the present back into the past attempting to represent that past in its entirety, the memorial presents the invisible pre-personal affect of the war sustaining that affect through a block of violent sensation as opposed to narrative meaning (Parr, P. 61).

Approaching the memorial, the ground slopes gently downward, and the low walls emerging on either side, growing out of the earth, extend and meet at a point below and ahead. The names seemingly infinite in number convey the sense of overwhelming numbers, while unifying those individuals into a whole (Parr, P. 56).



Figure 4-2: Vietnam Veterans Memorial; Bird's Eye View of the Path (Source: theaccounts.tumblr.com)



Figure 4-3: Vietnam Veterans Memorial; View from the Path (Source: visitingdc.com)

As one descends the path along the wall he/she feels they are entering a secluded space, set off from the busy surroundings. Streets and skylines disappear to leave him/her alone with the wall and its content. Then, as he/she passes the angle and begins to climb, they feel themselves emerging again into the world of noise and light after a contemplative experience.

Lin created a landscape of percepts that make invisible forces visible, such as when we see ourselves before the invisible in the polished surface of the granite wall. In so doing the memorial establishes a relationship between the visitor and the site. Using the architectural element of a wall that commonly produces a sense of inside and outside, Lin combines this with a variety of other architectural elements including path. The memorial is a wall-becoming-path, inviting us to embark on a journey, not just forcing us to standstill; we move ten-feet below the earth's surface and slowly rise again; we follow our own reflection as it connects with the reflection of the park and the names of the deceased and missing. Engaging the temporality of the journey the memorial decodes the functional definition of a wall-corner terminating a surface and creating a space.



4-4: Vietnam Veterans Memorial; Establishment of bond between Inside (Visitor) and Outside (Site) (Source: time.com)

Working with architectural elements in an unconventional ways infuses an affective intensity into the memorial, one that turns the self-justifying aesthetic of minimalism on its head, releasing a self-referential aesthetic in its place (Parr, P. 62-65).

4.2 Landscape Formation (LF) One / Landesgartenschau

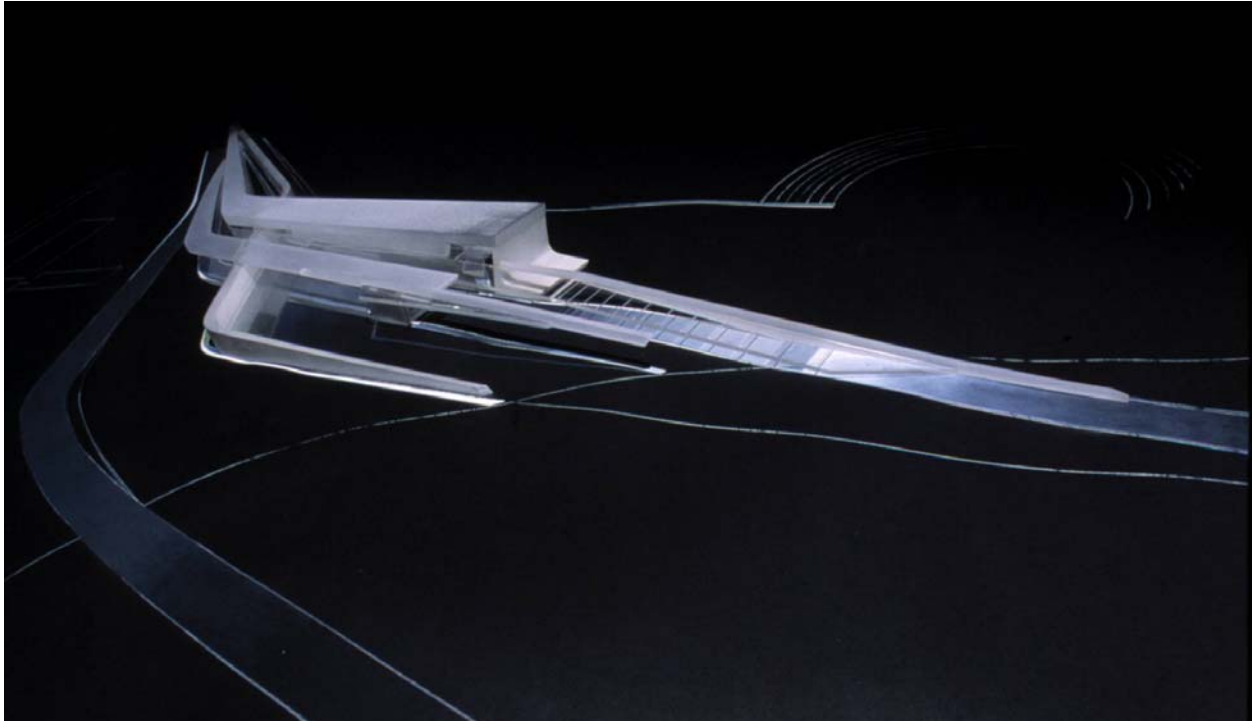


Figure 4-5: LF One; Conceptual Drawing (Source: Zaha Hadid Architects)

Architect: Zaha Hadid Architects

Location: Weil Am Rhein, Germany

Construction: 1997-1999

The LF One building is located at a strategic point between the old town and Vitra headquarters, a complex which has brought new cultural and architectural energy to the area. It houses a temporary exhibition, café and environmental centre. The building emerges gradually from a network of paths, leaving it to the visitor to define and realize its beginning and its end (Noever, p. 130).

LF One acts as a bridge linking these two parts of town, and in effect it is a building conceived in order to encourage the movement of people. In response to the necessity of channelling this pedestrian flow, the architect created a building which is ordered around a bundle of pathways. These pathways sweep around the curving site in a pattern of movement suggested by its existing topology: each path becomes a route which flows beside, over and even through the building.



Figure 4-6 & 4-7: LF One; Path system forming the project (Source: Zaha Hadid Architects)

The building's walls do not interrupt the flow; rather, they act as a channelling mechanism into which the actual function of LF One seems to be poured. This sense of continuing flux within a static building gives the impression that the building is moving imperceptibly, from the direction of the Vitra complex and heading gradually towards town (Barley, p. 89).

LF one is an example of a design project in which space is formed through purposeful movement. Here, series of paths work together to create both a sense of connection and momentary transitions.



Figure 4-8: LF One; Elevation (Source: Zaha Hadid Architects)

4.3 Toronto Waterfront's Wavedecks



Figure 4-9: Spadina Wavedeck (Source: West 8)

Designers: West 8 + DTAH (Joint Venture)

Location: Waterfront Toronto

Construction: 2007-2009

Spadina Wavedeck (2007-2008), Simcoe Wavedeck (2008) and Rees Wavedeck (2009) are part of the Toronto Central Waterfront revitalization plan, along one of the most heavily used parts of the shoreline which are characterized by movement and flow. The design of the Waterdecks includes a continuous promenade along the water's edge and boardwalk.



Figure 4-10: Rees Wavedeck; Situation Before (Source: West 8)



Figure 4-11: Rees Wavedeck; Transformed (Source: West 8)

One of the unique characteristics of the Wavedecks is acting both as pathways to direct pedestrians flow and create connections along the waterfront, and to establish flexible gathering spaces where a bond between people and setting is formed. The pathways are partially transformed along the way to create amphitheatre-like steps which allow people to interpret the space in various ways. Variations in elevation encourage diverse activities -such as walking, sitting and playing- that involve dialogues between body and space.



Figure 4-12: Simcoe Wavedeck (Source: West 8)

4.4 Transient Field

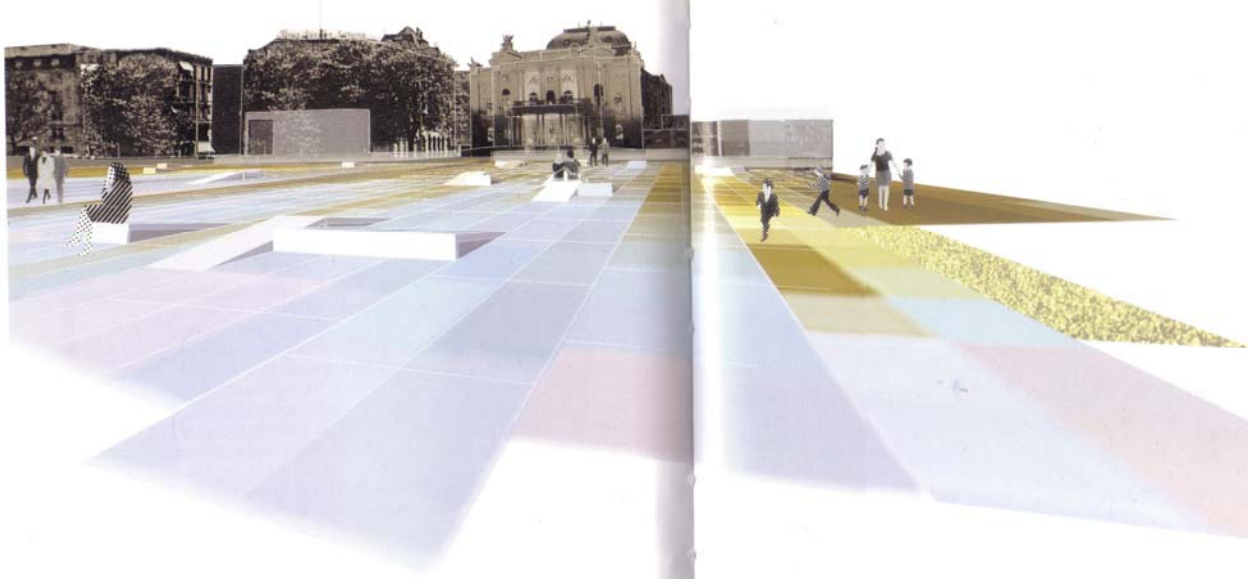


Figure 4-13: Transient Field; Transformed Public Space through Involvement of Users (Hoete, P. 52)

Proposed by: City of Zurich, Part of Tessera Project

Location: Zurich, Switzerland

Tessera Project attempts to question the conventional notion of space through design proposals that presupposes narrative, transition and movement as the fundamental nature of spatiality. The project believes that everyday experience of the built environment frequently leads us into a feeling of undesirable consistency and that the intrusion of unexpectedness as a design scheme awakens our spatial awareness and stimulates our imagination.

During World War II the exposed earth of the Bellevue-Stadelhofen Square held within itself cultivation of potato and rape, an image profoundly carved in the collective memory of the City of Zurich. Today it facilitates traditional events such as the burning of the snowman, installation of circus and rotation of seasonal market.

Keeping the rural character of the square, Transient Field has proposed that the ground of Bellevue-Stadelhofen would become a zone of reinterpretation. This new floor is composed of sliding panels arranged in long parallel strips, which adapt to the impulses of passer-by, who during the day can reorganize the panels to form seating, alcoves of intimacy and playground apparatus. The design creates a range of configurations between two extreme conditions: the absolutely blank –revealing the field- and the fully covered. At night the square's ground

transforms into luminous screen, rendering images of past memories, and becomes a space for social encounters in which illuminated pedestrians engage with each other and the space. The proposal makes an attempt to generate a sense of place by pursuing and creating memorable events that mobilize the passer-bys to a higher level of engagement with their environment (Hoete, P. 26 & 51).

4.5 Blur Building



Figure 4-14: Blur Building (Source: Diller Scofidio + Renfro)

Architect: Diller Scofidio + Renfro

Location: Swiss Expo, Yverdon-Les-Bains

Construction: 2002

Blur project was a temporary installation for the Swiss Expo 2002. It was an attempt to re-define conventional use of space and to put into test our reliance on the visual sense. The project made use of a high-definition technology to form a low-definition space. Contrary to immersive environments that crave for one's sense of vision in high-definition with ever greater technical ability, Blur is low-definition. In this pavilion there is nothing to see but our dependence on vision itself.

Water is the site as well as the primary material, which is pumped from Lake Neuchatel, filtered and shot upwards creating a fine mist through high-pressure nozzles. Upon entering Blur, visual and acoustic references are vanished; there is only absolute “white-out” and “white-noise” of pulsing nozzles. The public can approach Blur via a ramped bridge. The 400 foot long ramp deposits visitors at the center of the fog mass onto a large open-air platform where movement is unregulated. One can ascend to the Angel Deck, which is the roof of the installation, via stairs

that that emerges through the fog into the blue sky. At this moment the visitors return from being participants of this space to their status as spectators of today's world.



Figure 4-15: Blur Building's Interior; spectators become participants (Source: blogs.wabash.edu)



Figure 4-16: Blur Building's Angel Deck; participants become spectators (Source: Diller Scofidio + Renfro)

4.6 Simple Network of Underground Wells and Tunnels



Figure 4-17: Simple Network of Underground Wells and Tunnels; Installation Site (Source: aaycock.com/)

Designer: Alice Aycock

Location: Far Hills, NJ

Construction: 1975

Alice Aycock is an artist whose early works focused on memory, collective historical memory and individual experiential memory. A Simple Network of Tunnels and Wells, which was later destroyed, referred to underground spaces and the emotions evoked by crawling around underground in dark. It was an underground structure in which you would crawl in the dark, trying to remember once you got down there what you had seen above ground and the kind of setting you had encountered before the descent.

The configuration appears at first to be uncomplicated and lucid, geometric and rectilinear, but the actual experience is not. As you moved from light to dark, you entered a much more inexplicable place in which you must physically and psychologically engage the sculpture.



Figure 4-18: Simple Network of Underground Wells and Tunnels; Tunnel (Source: aaycock.com/)



Figure 4-19: Simple Network of Underground Wells and Tunnels; Access through the Well (Source: aaycock.com/)

Finally you could emerge from below, joining thoughts and feelings about what is above with what is below (Treib, p. 88).

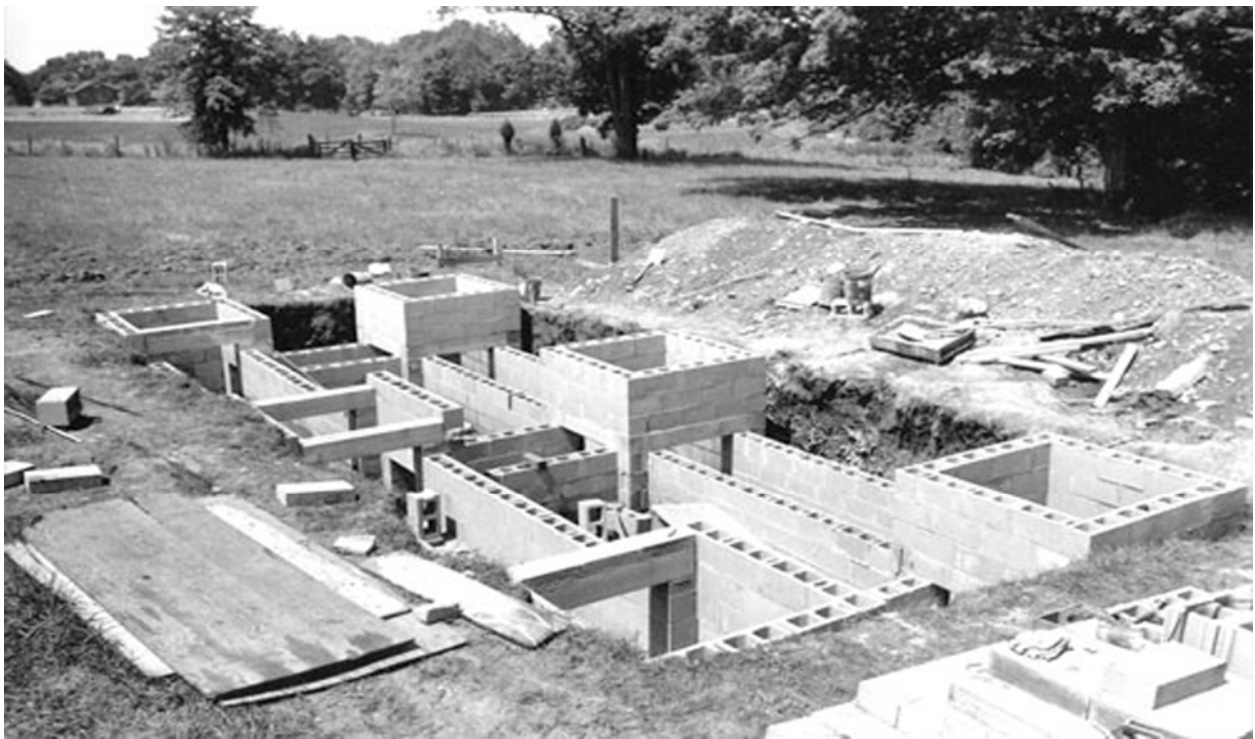


Figure 4-20: Simple Network of Underground Wells and Tunnels; Construction
Concrete block, wood, earth, approx. 28' wide x 50' long x 9' deep (Source: aaycock.com/)

4.7 The Memory Theatre of Giulio Camillo



Designer: Diller Scofidio + Renfro

Location: New York, NY

Construction: 1986

Giulio Camillo was a 16th Century architect and philosopher whose study of human memory led him to build a “memory theatre” that possessed mysterious powers: those who entered it would emerge with a memory of all knowledge of the world. A commedia dell’arte troupe, directed by Matthew Maguire, guided an audience through the labyrinth in the Brooklyn Bridge Anchorage vaults, the paths of Camillo’s mind.

Figure 4-21: The Memory Theatre’s Interior; Installation (Source: Diller Scofidio + Renfro)

The installation theatrically spears three successive chambers of the Anchorage with two disconnected structural units that cantilever toward one another but never meet. The structure is tensioned into place against the thick masonry walls and apertures of one bay of the Anchorage. Exploring the emotion of danger, the installation produces a gap, which is no longer here but not yet there- a synapse that can only be bridged hesitantly by the stride.

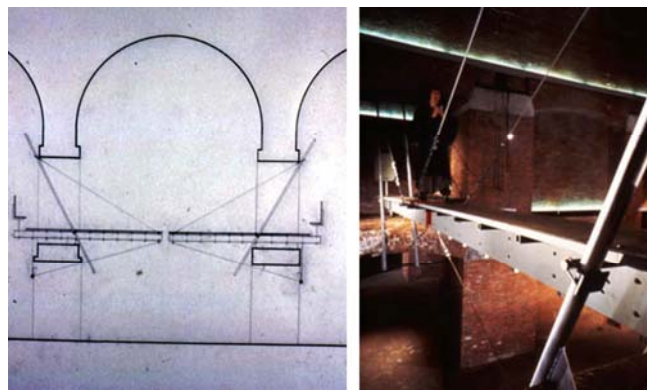


Figure 4-22: The Memory Theatre’s Interior; Section through the Installation (Source: Diller Scofidio + Renfro)

5.0 Design Project

5.1 Introduction: Project Description

Through movement we employ our entire body; we see, touch and smell what surrounds us, and we become aware of the setting in a way that we engage or interact with it. The design project will explore the act of movement as the fundamental element of forming embodied memory and transforming a 'space' into 'place'. There will be an attempt to prove that by changing the way one moves through a 'space', embodied memory is formed and 'place' is created.

Site for this project is characterized by movement and flow. Element of path that connects two nodes -one known as a place and the other a non-place- is employed to portray the act of movement and its influence on formation of a 'place'. Thresholds will act as seamless transitions between the existing nodes and proposed path.

Initial Design Exploration that initiated the design proposal was an attempt to define a 'place' within a 'non-place' on a site that is recognized by movement and is known to be a destination for significant travelling paths within the city. Through this study, both emotional and physical responses of the commuters to the environment were explored.

5.2 Initial Design Exploration

This project explored the meaning of 'place' and attempted to prove that physical features alone do not form a 'place' but it is through the overlap between human physical and emotional responsiveness and the setting that place achieves its distinctive meaning. Centred on the act of movement this installation made an effort to slow down the commuters and make them conscious of their environment.

Union Station was selected as the context and Go transit concourse level as the site. Union Station was once known as a gateway to the City and a 'place' that was engraved in the collective memory of its people. Today due to the fact that most connections to trains and other modes of transportation are made through the underground level -Go Concourse level- overall, station is not perceived as a place. Go concourse is representation of a non-place, a space that is dominated by speed and necessity. Fast food industry, walls and columns covered with advertisements, digital screens showing on-going changes in arrival and departure time, and commuters rushing through the space contribute to the lack of meaningful interaction with the setting.



Figure 5-1: Initial Design Exploration; Union Station's Go Concourse Level as the Site

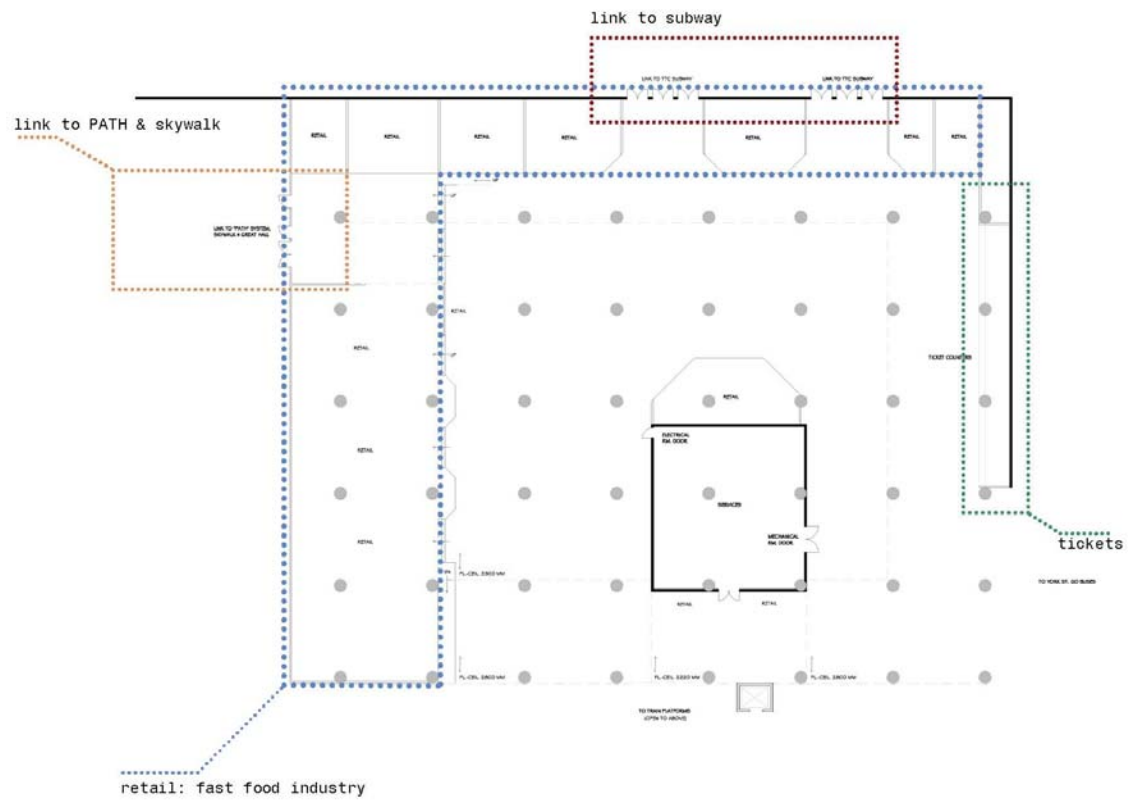


Figure 5-2: Union Station's Concourse Level; Program Distribution

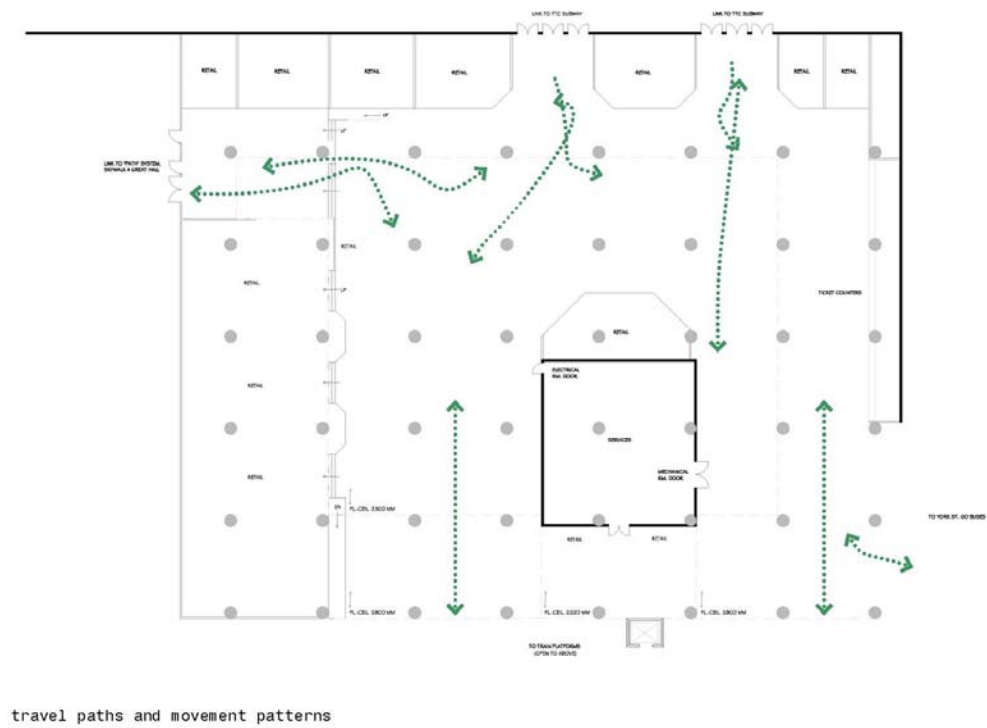


Figure 5-3: Travel Paths and Movement Patterns

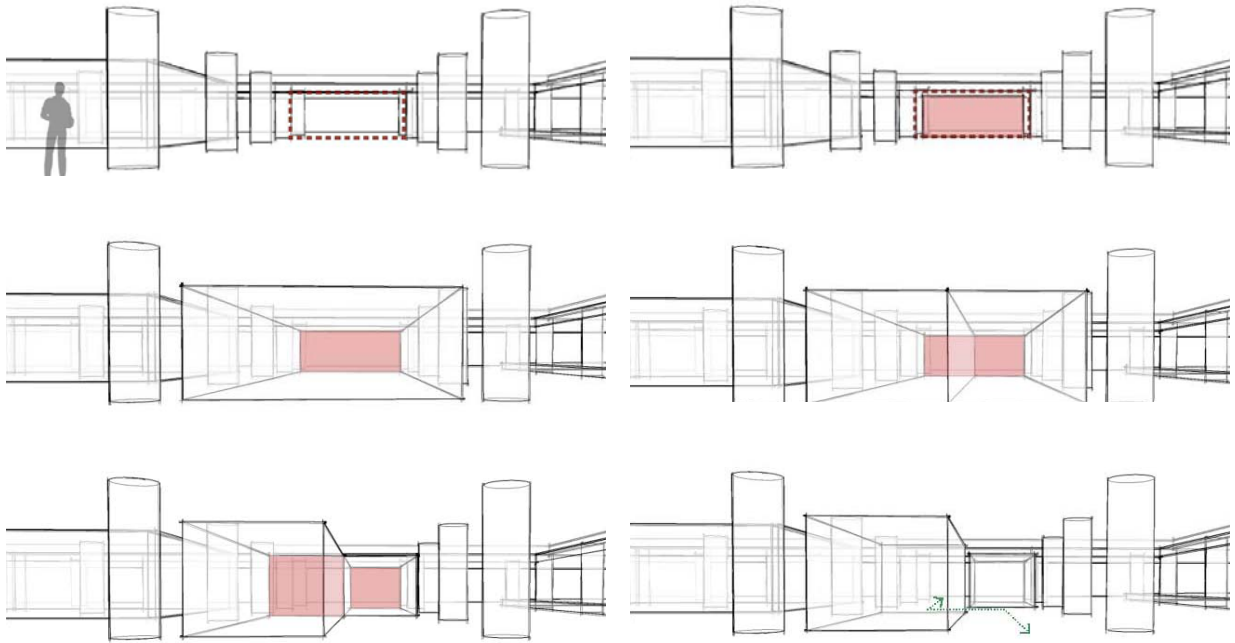


Figure 5-4: To Trainshed; conceptual drawings representing physical interpretation of movement patterns within the space

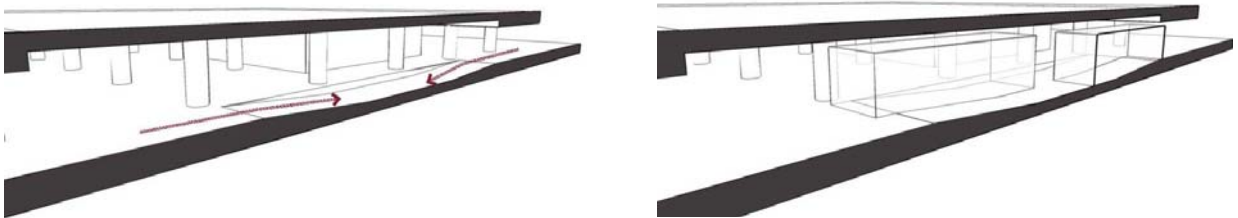


Figure 5-5: Transition between physical and mental formation of place; proposed ramps make commuters conscious of their path

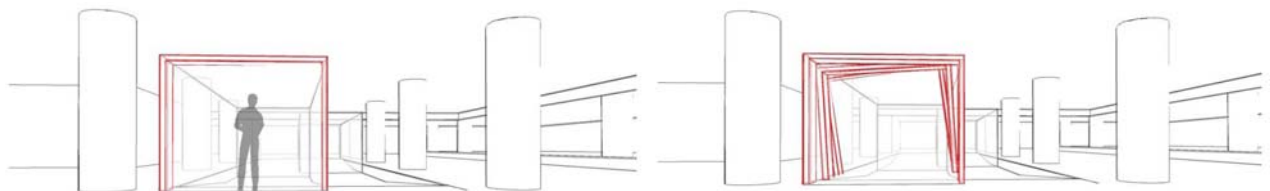


Figure 5-6: Conceptual drawings representing mental formation of place

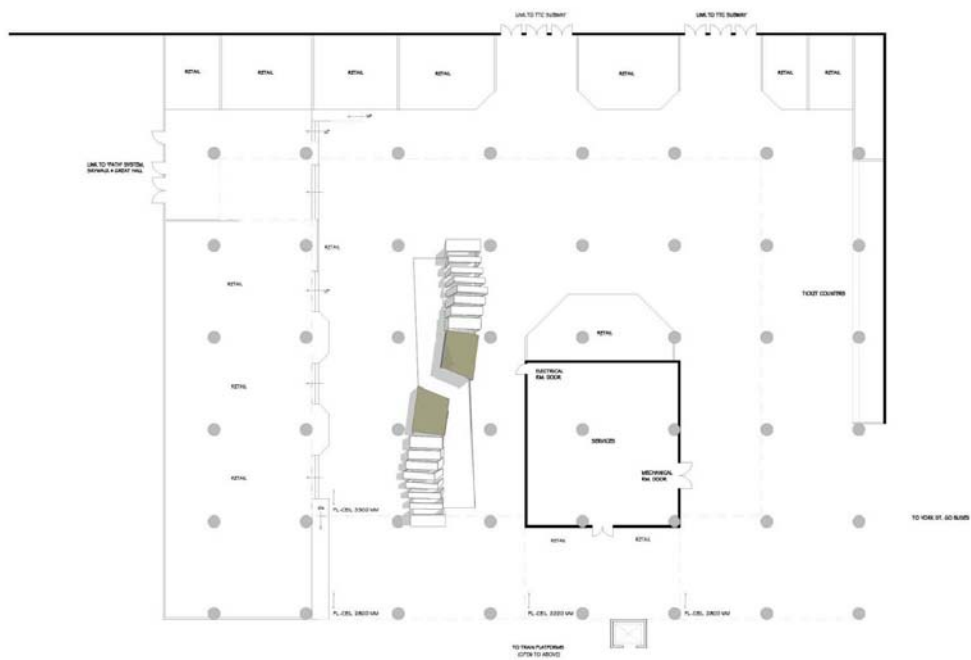


Figure 5-7: Proposal

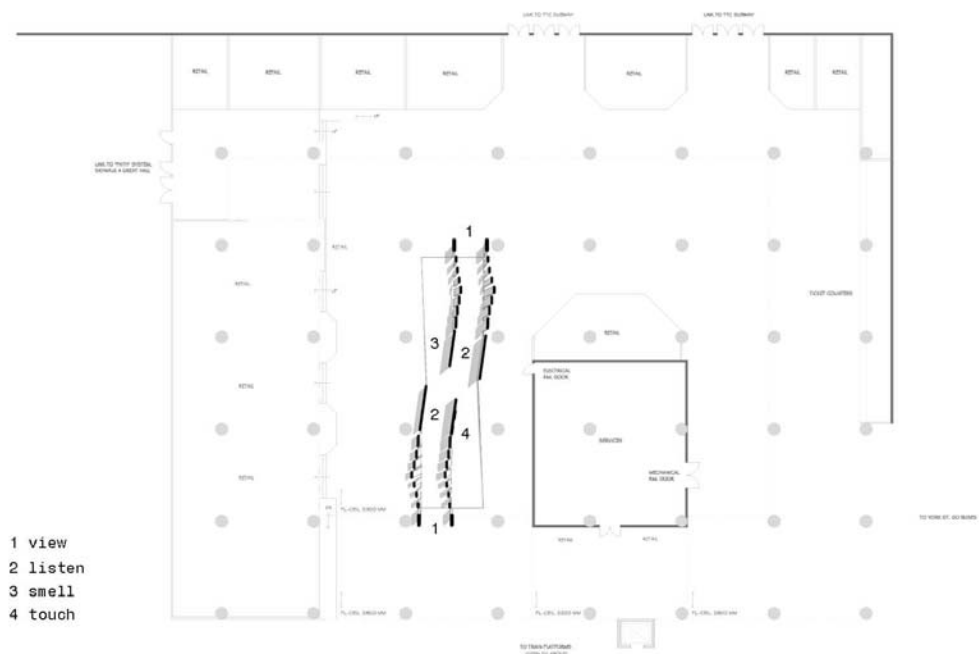


Figure 5-8: Plan



Figure 5-9: Vignettes

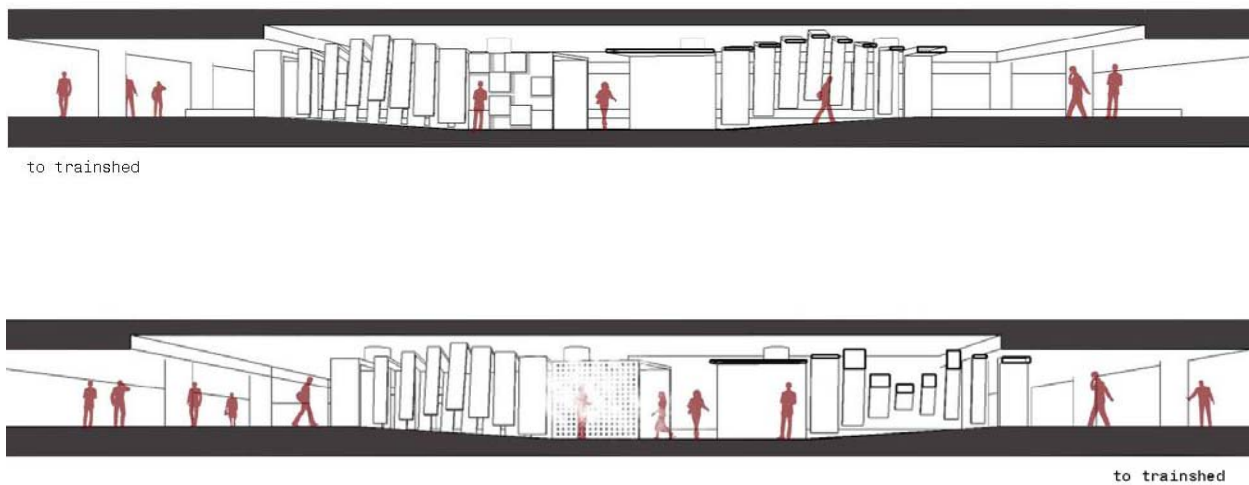


Figure 5-10 : Sections through the installation

5.3 Design Principles

'Path' is the representation of movement. Throughout the course of this project there will be an attempt to find a bond between embodied memory of space and formation of 'place'. Therefore, here 'path' refers to a type of movement that engages the entire body, movement by foot.

Without the opportunity to ascend or descend, change direction or the way one experiences the 'path', their travel would be a discouraged one. Today the paths we take rarely evoke our sense of consciousness; we take them blindly and simply as means of reaching the destination rather than becoming participants along the way. Consequently, there exists no bond between inside and outside, self and the setting.

Proposed 'path' will be looked at from two perspectives. In the first scenario 'path' is tangible and becomes a tool for consciousness. It creates an opportunity for ascend or descend. It may change direction so that traveller is placed in distinct conditions, or change in width to increase or decrease speed. Last but not least, texture or materiality of the path may transform or the 'path' may become extension of the space and contains within itself events along the way.

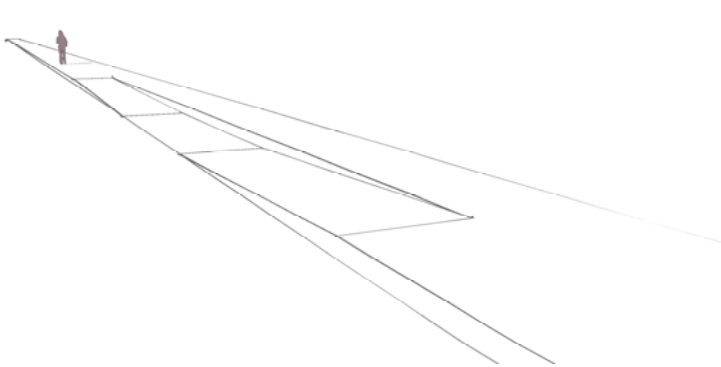


Figure 5-11 : Ascend and descend

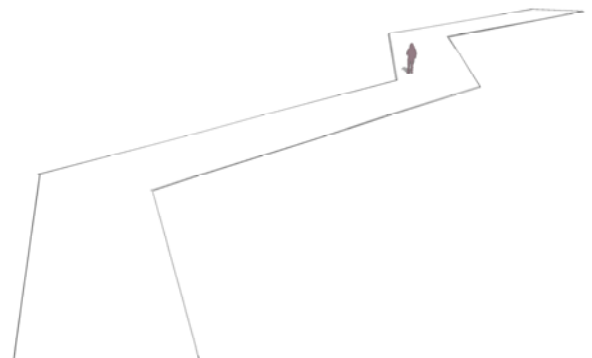


Figure 5-12 : Change in direction

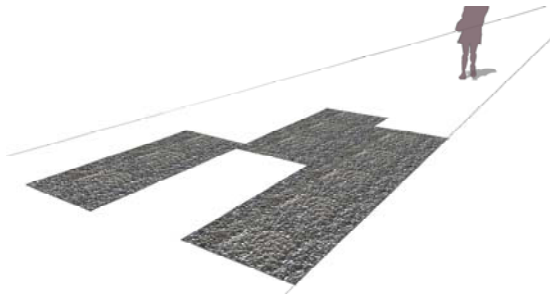


Figure 5-13 : Transformation of texture or materiality

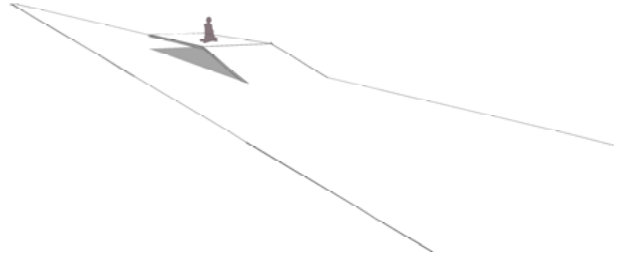


Figure 5-14 : Extension of events along the way

In the second scenario, 'path' is a void and a field for consciousness. It may involve our feelings and emotions for instance it may carry a sense of compression or release. It may acoustically isolate us from the surrounding or make us interact with the setting in a sensual way. Finally, the 'path' may help us experience the light differently as we move through it.

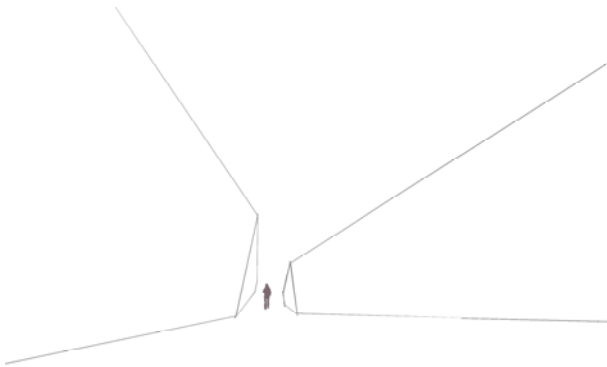


Figure 5-15 : Involvement of feel or emotions



Figure 5-16 : Editing Sound

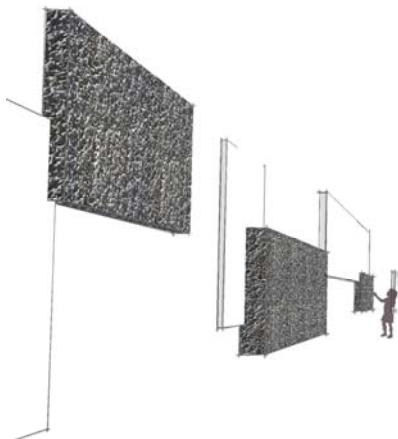


Figure 5-17 : Interaction with the setting



Figure 5-18: Experiencing light

5.4 Context and Site

The site for the project is located at the end of the City of Toronto, where the City is connected to the Billy Bishop Airport through the Western Channel. Although its existence has brought up some environmental concerns, Billy Bishop Airport continues and is anticipated to continue its operation due to its proximity to the Financial District of Toronto and its connection to major cities in Canada and US. According to the Toronto Port Authority every year approximately 1.3 million passengers take the ferry across the channel to get and return from the airport and this number is expected to rise due to the anticipated number of flights.

The choice of this site is not without a reason; it connects the city which has long been known as a 'place' and the airport –a 'non-place'- that carries within itself a sense of physical, emotional and mental nothingness.

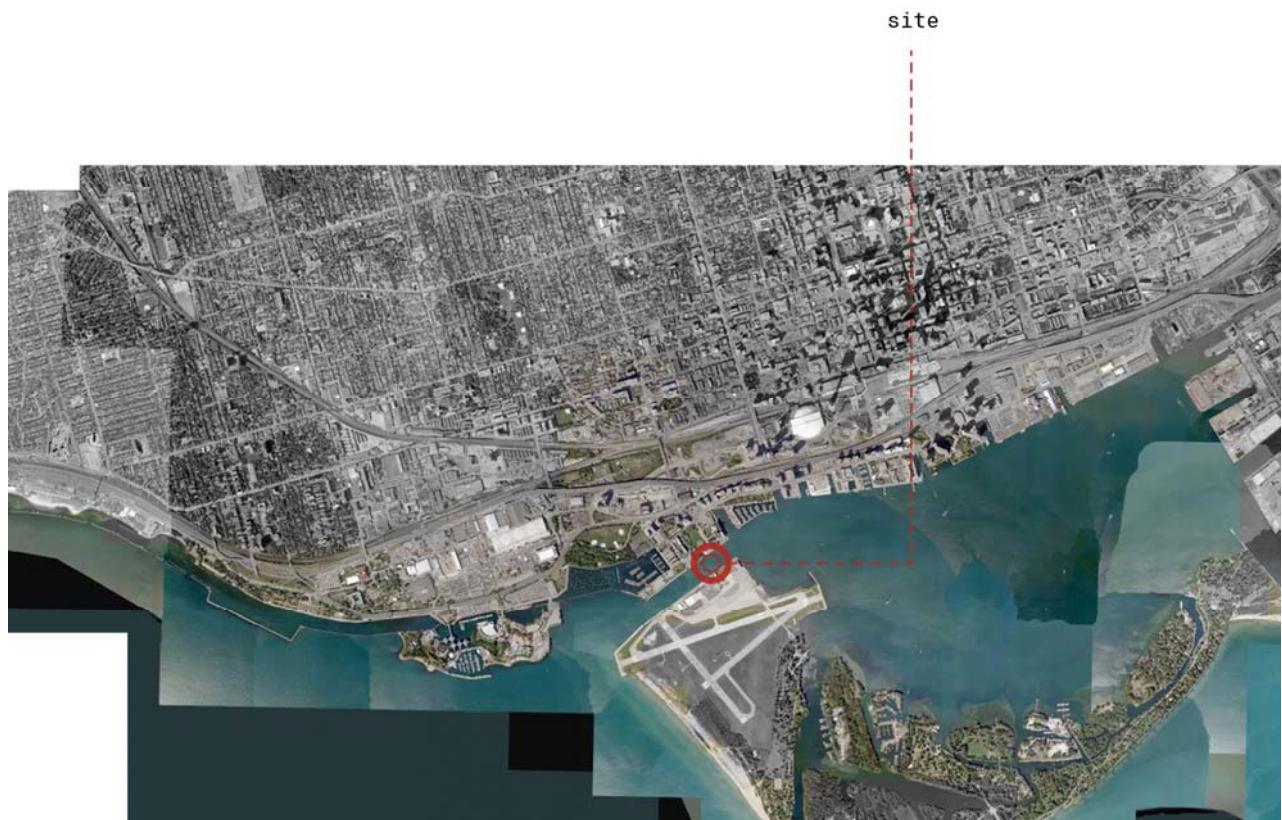


Figure 5-19 : Context Map (Source: Google Images)

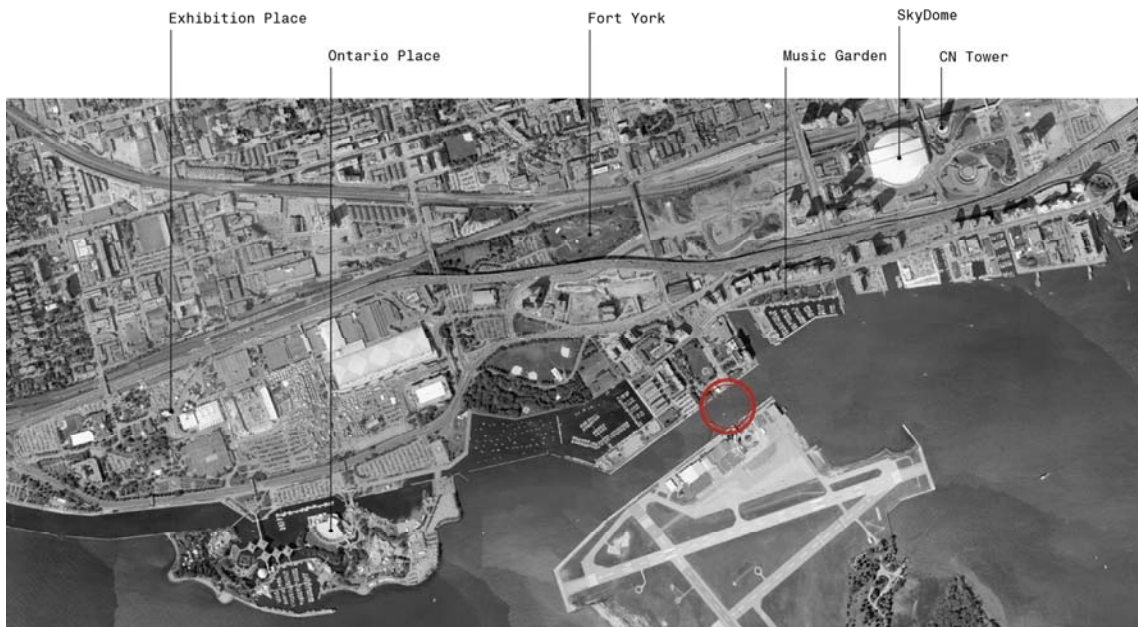


Figure 5-20 : The City, the Western Channel and the Billy Bishop Airport (Source: Google Images)

5.5 Program

The project will be an underground pedestrian tunnel connecting the City to the Airport. The tunnel is intended to be used by both airport commuters and the City dwellers.

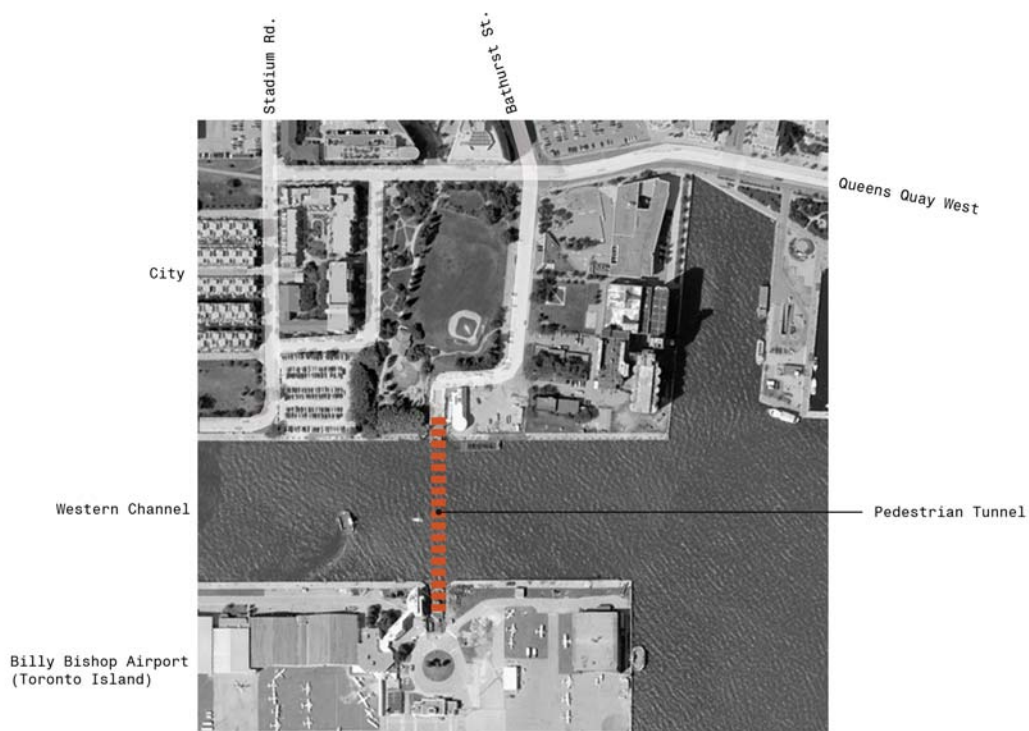


Figure 5-21 : Site and Program (Source: Google Images)



Figure 5-22 : Memories of the City (Source: Google Images)

For those who leave the City and carry with themselves memories of the City, the tunnel will act as a closing chapter. On the other hand, for those who see the City for the first time, it will act as a gateway to the City.



Figure 5-23 : The Idea of the Tunnel as a Gateway to the City (Source: Google Images)



Figure 5-24 : View of the Billy Bishop Airport from the City



Figure 5-25 : Panoramic view of the City from Little Norway Park



Figure 5-26 : Existing Elements Surrounding the Site



Figure 5-27 : View of the City from the Billy Bishop Airport

5.6 Existing Proposal by Toronto Port Authority (TPA)

Proposed tunnel to Billy Bishop Airport by the Toronto Port Authority is estimated to be approximately 123 meters (404' feet) and to be located 30 meters below surface of the water through the bedrock. The tunnel is to be 8 meters wide - with moving walkways on both sides- and 4 meters high.

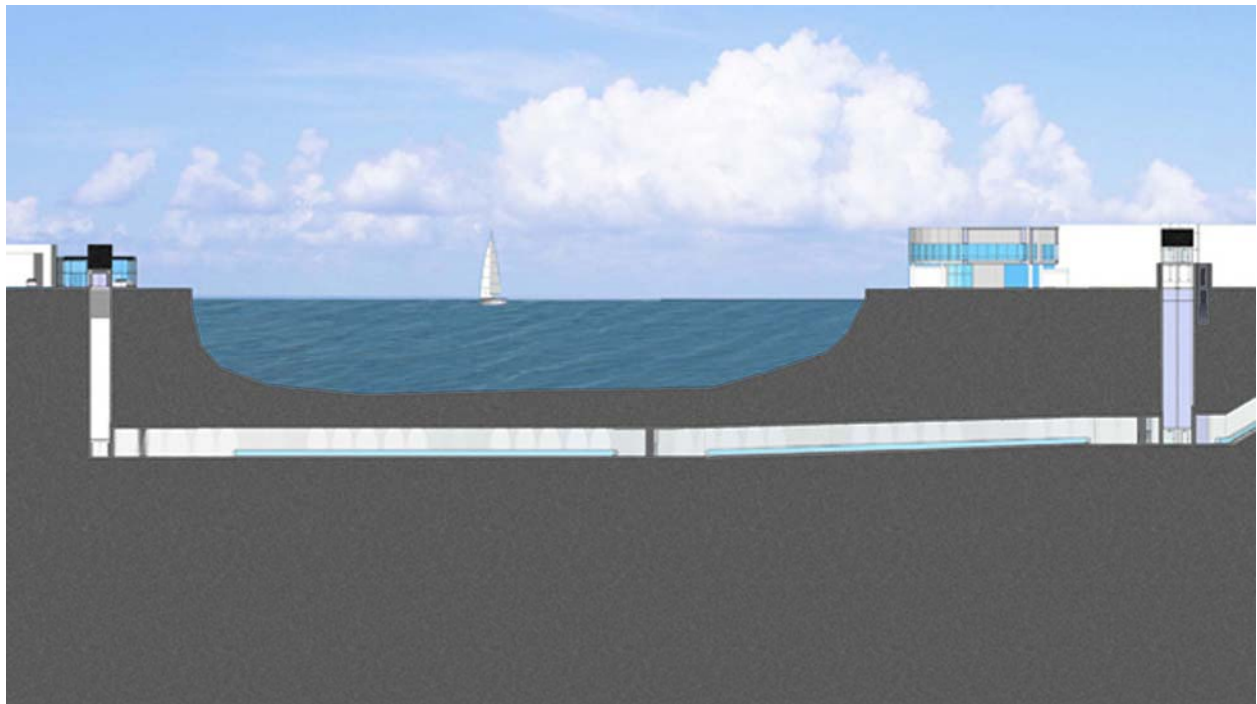


Figure 5-28: Proposed section by TPA (Source: Toronto Port Authority's Website)

As TPA has proposed, elevators, escalators and stairwells will be employed to connect both land and airport sides to the tunnel. Connecting structures are to be designed to connect elevators, escalators and stairwells to existing facilities on two sides. Minor reconfiguration of existing access, circulation and parking areas on the land and airport sides is also foreseen by the TPA.

It is anticipated that ferries will be operating after the completion of the tunnel to transport vehicles and passengers- if they desire- to the Island.

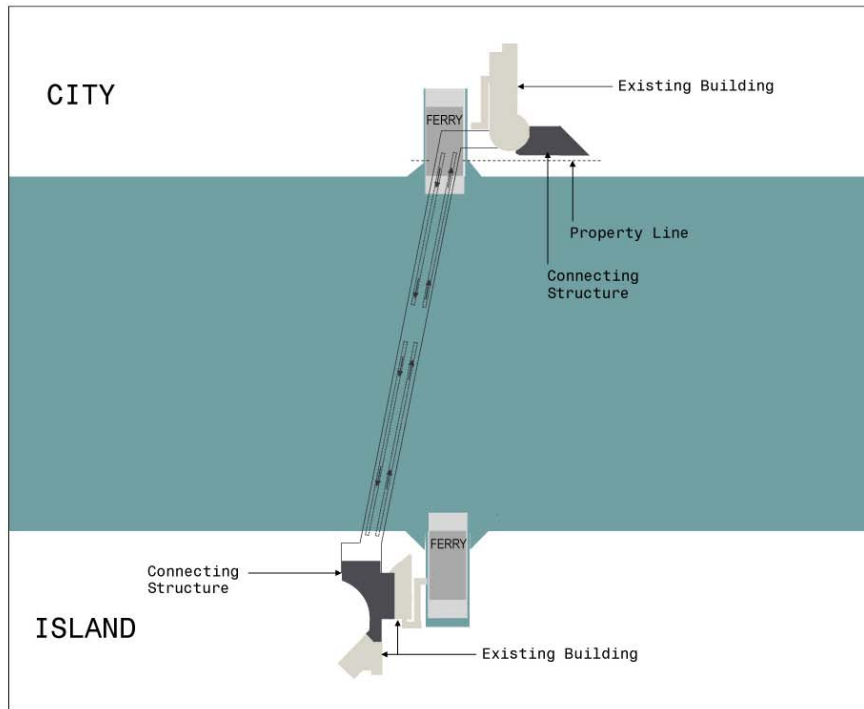


Figure 5-29: Proposed site plan by TPA (Source: Toronto Post Authority's Website)

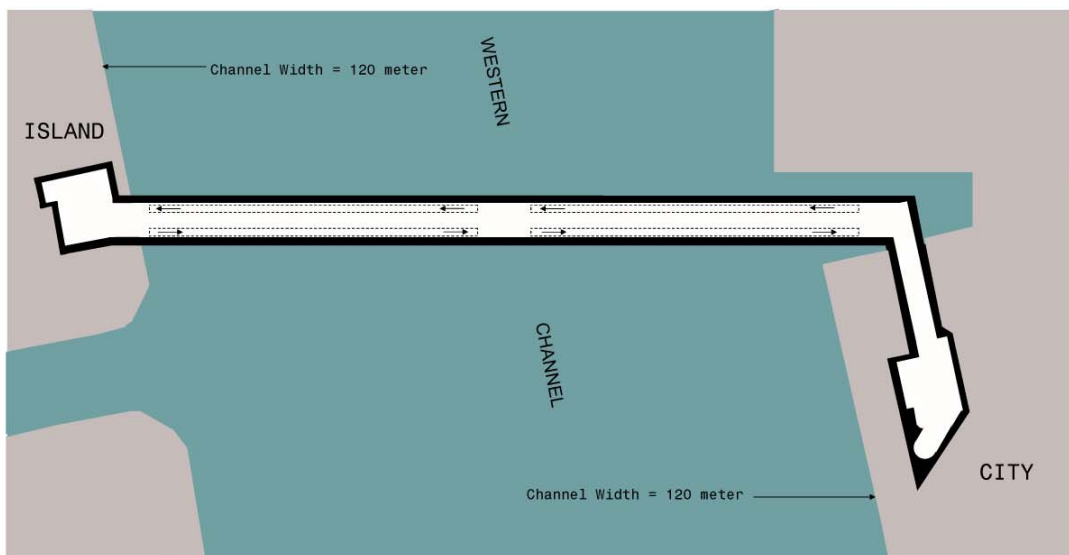


Figure 5-30: Proposed plan by TPA (Source: Toronto Post Authority's Website)

5.7 Case Studies

5.7.1 Therme Vals

Architect: Peter Zumthor

Location: Graubünden Canton, Switzerland

Construction: 1993-1996

Built over the only thermal springs in the Graubunden Canton in Switzerland, The Therme Vals is a hotel and spa in one which combines a complete sensory experience. The idea was to create a form of cave or quarry like structure. Working with the natural surroundings the bath rooms lay below a grass roof structure half buried into the hillside.

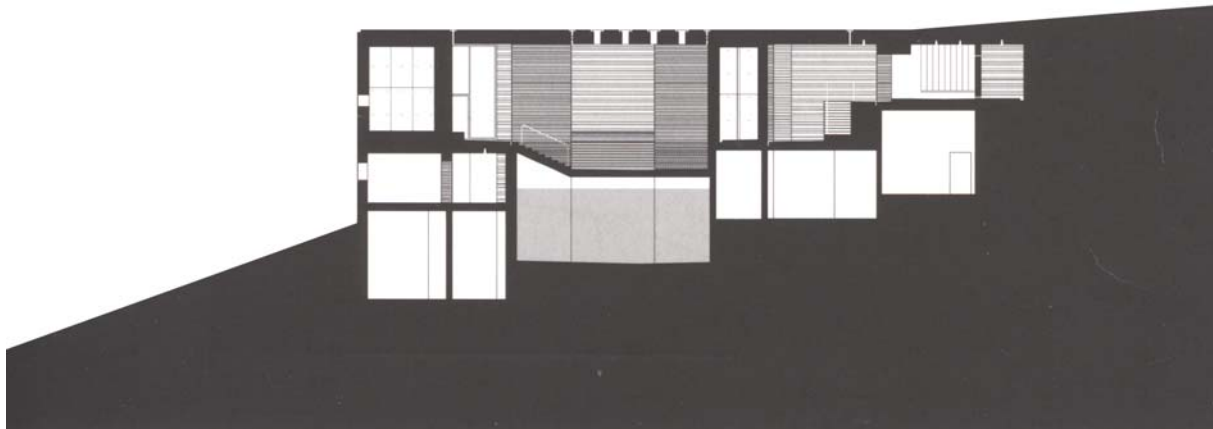


Figure 5-31: Section through the Therme Vals (Source: Zumthor, p. 105)

The entire structure extends to a width of approximately 58 meter and cuts as far as 34 meters into the slope in front of the main building of a hotel complex, which was erected in the 1970s. Fifteen rectangular stone blocks that are composed based on strict grid of perpendicular lines and range from three to five meters in width and six to eight meters in length, each support part of the roof. In the areas in between, movement happens, in the corridors, on the steps and in the pools. During his journeys o Turkish baths in Budapest, Istanbul and Bursa, Zumthor returned with a mental image of long broad steps leading into the baths instead of straight—edged pools; steps that allow the body to find its own height and position.



Figure 5-32: Conceptual sketch of the Therme Vals
(Source: Zumthor, p. 82)



Figure 5-33: Interior of the Therme Vals (Source: ArchDaily)

Throughout the course of the design, which became a really, solid and void played important roles. Solid was used to define blocks acting as enclosures and voids within them presented the bathers with various spatial experiences. Here, water played an important role; it was experienced at different temperatures and in different spatial situations with variations in the lighting, the colours, the climate, the materials, and the sound created through contact between stone and water. Water was used for relaxation, as a ritual, purification, peace, serenity: no noisy attractions, no intrusive stimulation, only the sensation of one's own body undergoing subtle change. Colour plays an important role in manipulating the sensations. In Fire Bath that the water temperature is 42°C, the red coloured concrete wall heightens one's perception of temperature. In the ice bath that is a one-person immersion pool, the 14°C water and blue-green colour of the concrete instantaneously take away the physical and mental sensation of heat (Zumthor, p.89-96).

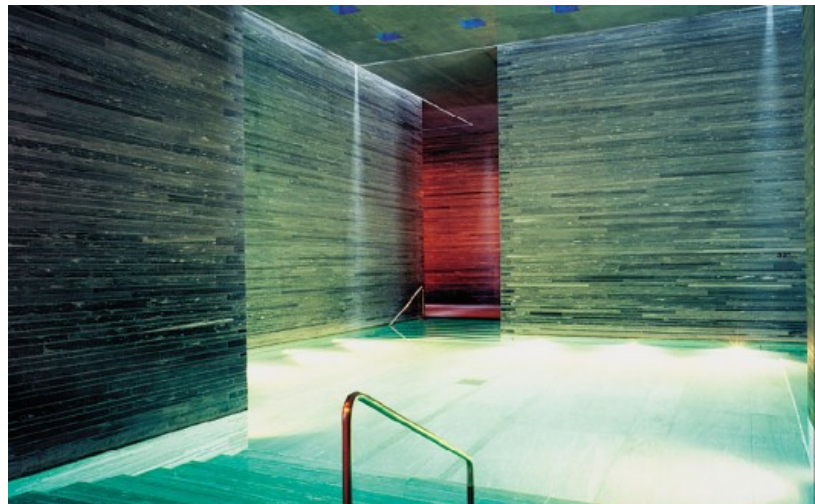


Figure 5-34 & 5-35: Interior of the Therme Vals (Source: ArchDaily)

5.7.2 Theatre in the Rock

Architect: Tadao Ando

Location: Utsunomiya, Tochigi, Japan

Construction: 1996

This project is located in the town of Oya in Utsunomiya, where the stone with the same name is extracted and is seven miles north-west of the city centre. The design was inspired by the first experience of Ando in an Oya stone mine where he saw a ray of light that penetrated into the pitch-black chamber.

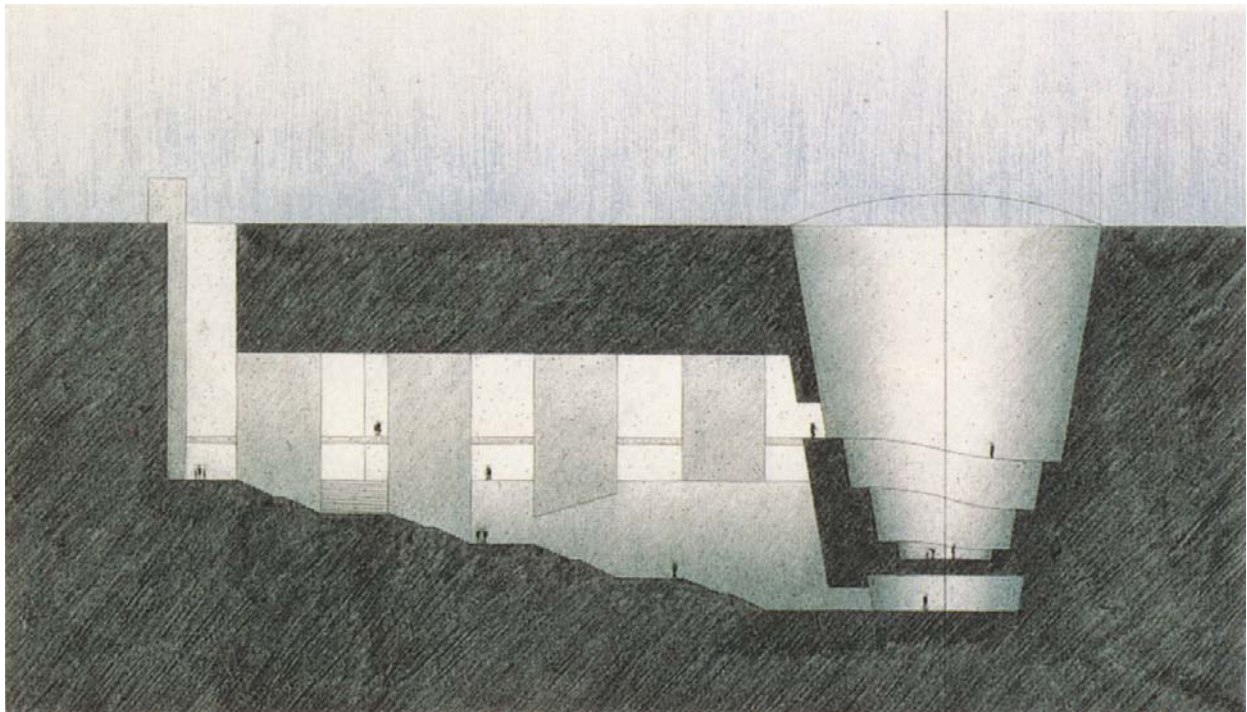


Figure 5-36: Cross-section (Source: Dal Co, p. 227)

The project proposes to model the terrain in predetermined ways so that resulting environment can be used later as museums and theatres. Under a 15-meter stone slab roof lies a 30-meter-high void. A staircase descends into the depth of the soil between the pillars placed at intervals of ten meters. As Ando mentions the project could be called “architecture of the earth”, not only in reference to the underground location but also to the reversed traditional architectural relationship between space and architecture: the structure is perceived as the space and the space is instead expressed as the structure. He believes to place oneself into the bowels of the

earth is like looking into variety of moods that are not experienced in normal life. He explains that in some ways, it feels almost like a return to the womb (Dal Co, p. 224).

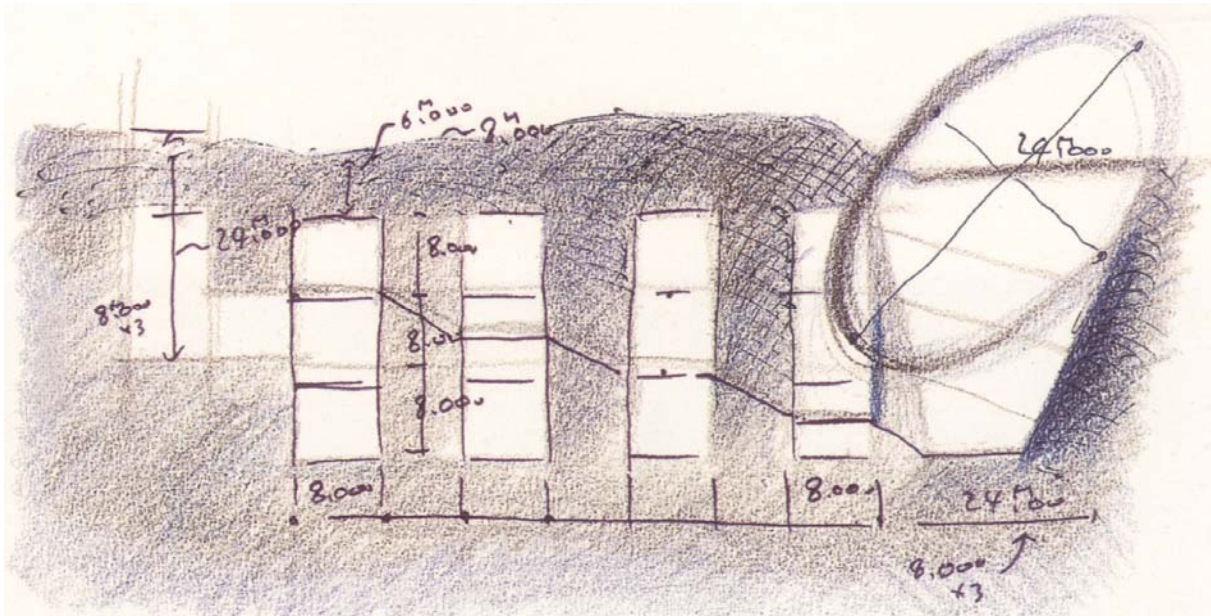


Figure 5-37: Studio sketch (Source: Dal Co, p. 225)

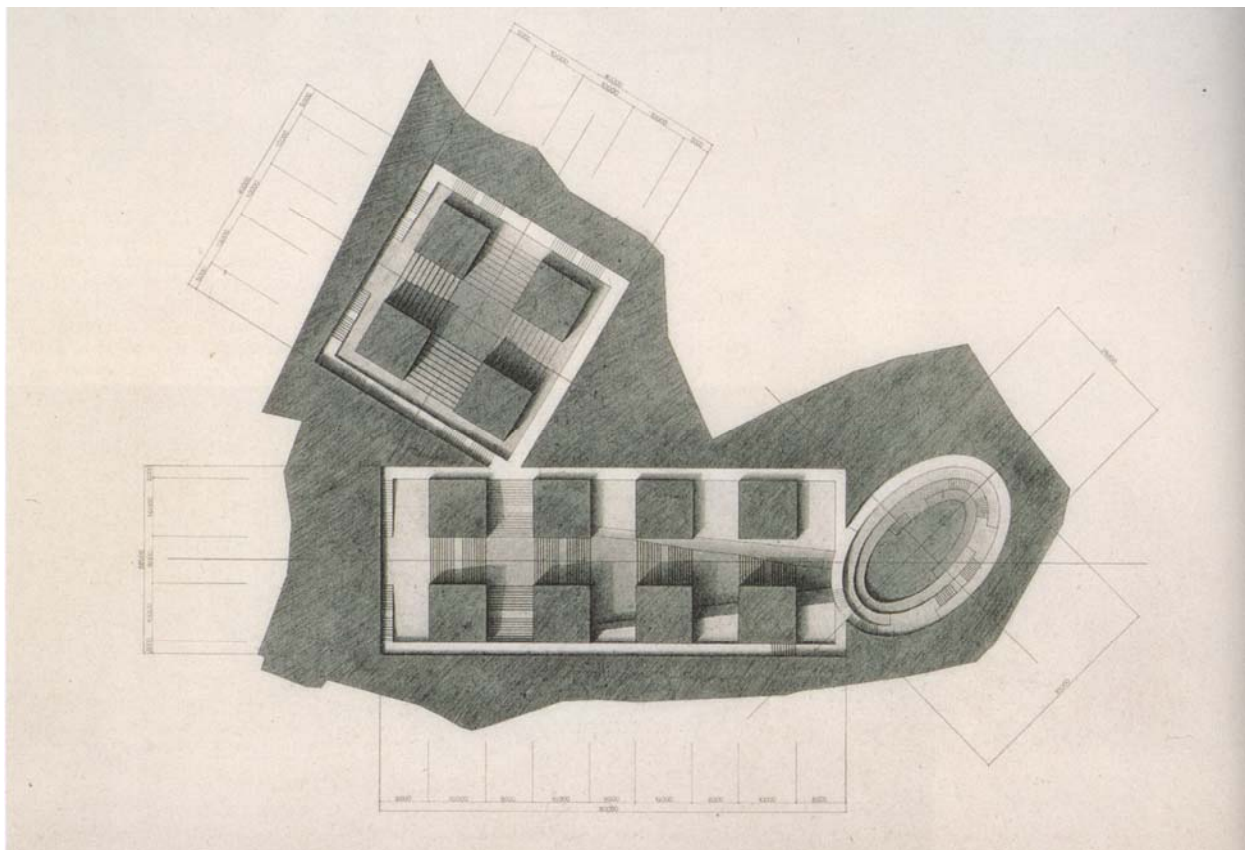


Figure 5-38: Plan (Source: Dal Co, p. 226)

5.7.3 Chichu Art Museum

Architect: Tadao Ando

Location: Naoshima, Japan

Construction: 2002-2004

Chichu Museum of Art is located on the island of Naoshima, on a hill covered by remains of an old salt works. It houses a permanent exhibition of the work of three well-known artists. The idea of “submerging” the buildings to protect the landscape was taken a step further than projects with the same intent so that the entire volume of the museum was built underground.

Geometric voids visible on the landscape delineate sunken spaces and are the only elements that reference this structure without axuality and directionality. Only the outline of these “buried” spaces can be seen on the surface (Dal Co, p. 374).



Figure 5-39

Upon arrival, visitors approach a ramped walkway leading up to an opening in a semi-detached concrete wall that slices across the hillside and serves as the building’s entry facade. Once past the threshold, they find that sunlight disappears and a disorienting semidarkness takes over. Devoid of signage and other identifying features, a tunnel-like passageway separates the outside world from the museum’s somber interior (Pollock, Architectural Record Online).

The museum was intended, (physically and mentally), to be visited with light as a guide. It consists of dark transitional paths between, gallery spaces and day-lit atrium spaces. The interior provides visitors with various spatial experiences as they move through, based on incorporating direct and indirect lights penetrating through the voids above. Form is used to create the perception of depth, with light penetrating the darkness to highlight individual spaces.



Figure 5-40



Figure 5-41

5.7.4 Moses Bridge

Designer: RO & AD Architects

Location: Halsteren, The Netherlands

Construction: 2011

The West Brabant Water Line was once a defense-line consisting of a series of fortresses and cities with inundation areas in the south-west of the Netherlands. It dates from the 17th century but fell into disrepair in the 19th century. When the water line was finally restored, an access bridge across the moat of one of the fortresses, Fort de Roovere, was needed.



Figure 5-42

It was, of course, highly improper to build bridges across the moats of defense works, especially on the side of the fortress the enemy was expected to appear on. Consequently the RO & Architects designed an invisible bridge. It is constructed entirely made of wood. The bridge lies like a trench in the fortress and the moat, shaped to blend in with the outlines of the landscape.

It can not be seen from a distance because the ground and the water come all the way up to its edge (Jett, ArchDaily).



Figure 5-43 & 5-44



Figure 5-45

5.8 Design Components

5.8.1 Site Analysis and Reconfiguration

Since the design proposal explores the act of movement as the fundamental element for forming embodied memory of space and transforming that 'space' into 'place', it was crucial to maintain an effortless pedestrian flow on and around the site. As a result, an effort was made to create a seamless transition from the site to the tunnel.

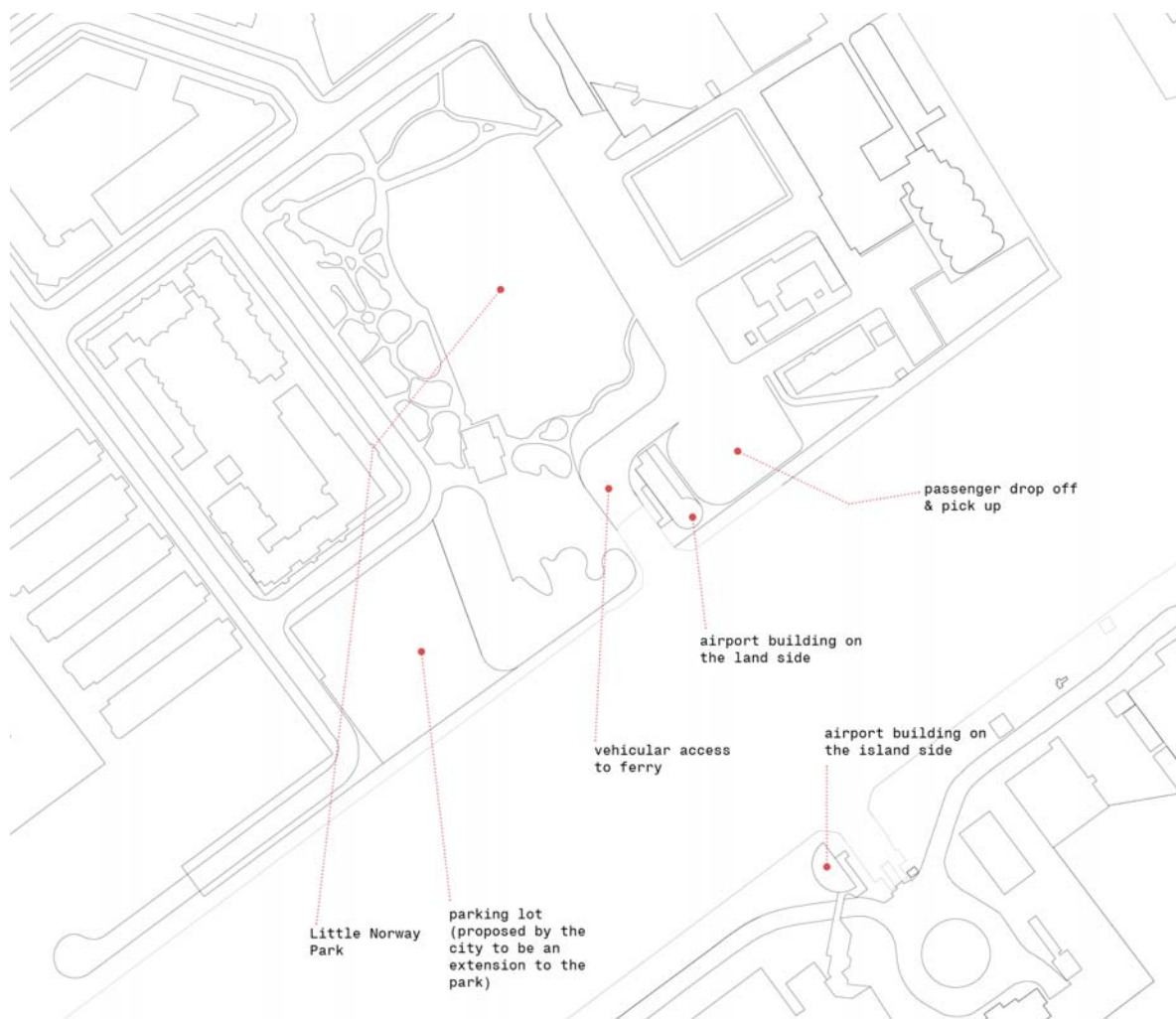


Figure 5-46: Existing Site Condition

On the land side, since the road serving the passenger pick up/drop off area dominates the site, for pedestrians access to and around the site takes place predominantly through the Little Norway Park.

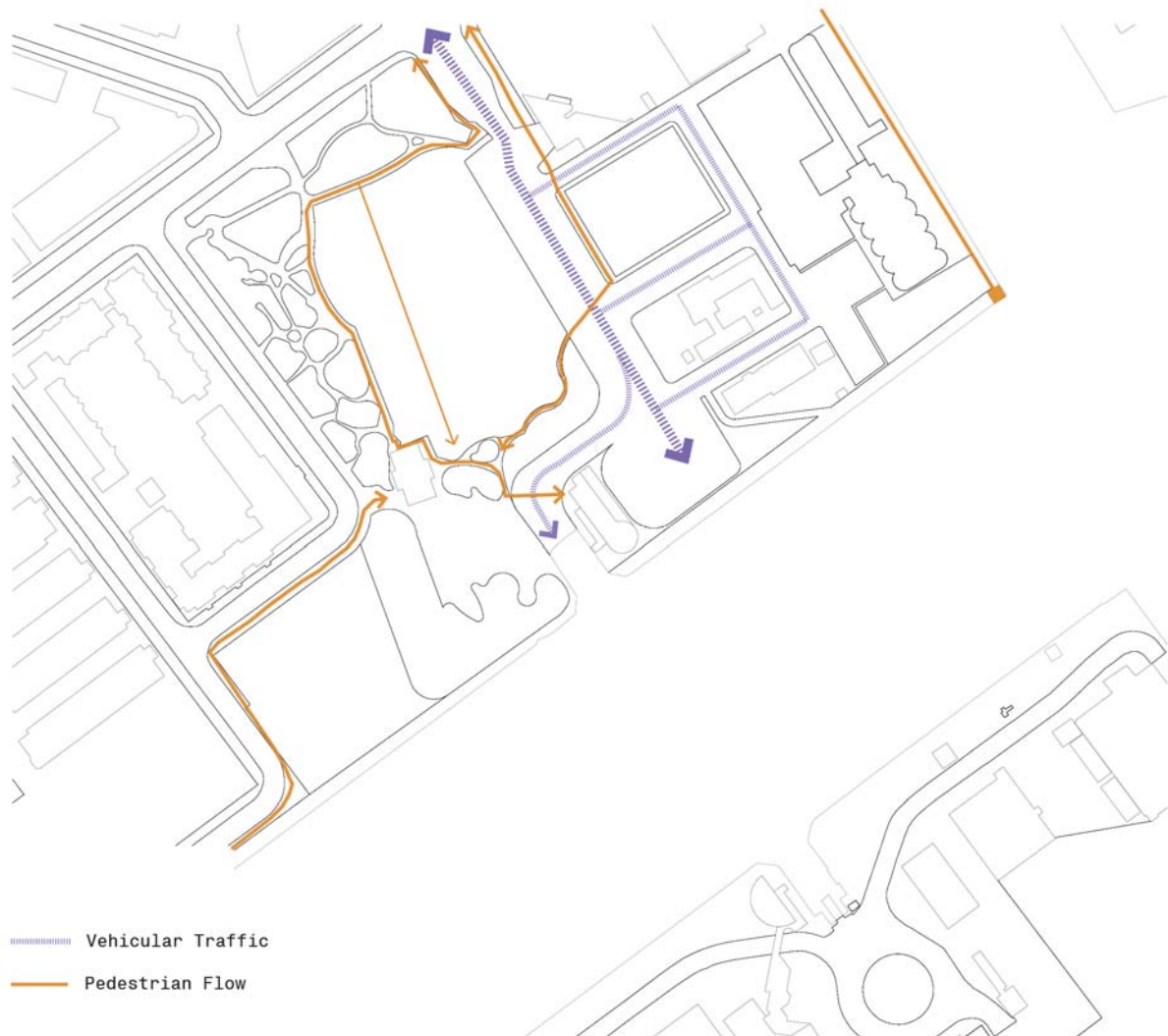


Figure 5-47: Vehicular and Pedestrian Movement Patterns



Figure 5-48: Redesigning the site included transferring the existing drop off/pick up area to one level below grade, which would be accessed through a ramp. It also involved relocating the ferry dock on the land side to minimize the vehicular traffic and its conflict with the pedestrian flow.



Figure 5-49: Two structures one on the land and another on the airport side are proposed to replace the existing ones. The new structure on the land will have a link to passenger drop off/pick up area and both structures will have direct connections to the tunnel.

5.8.2 The Tunnel

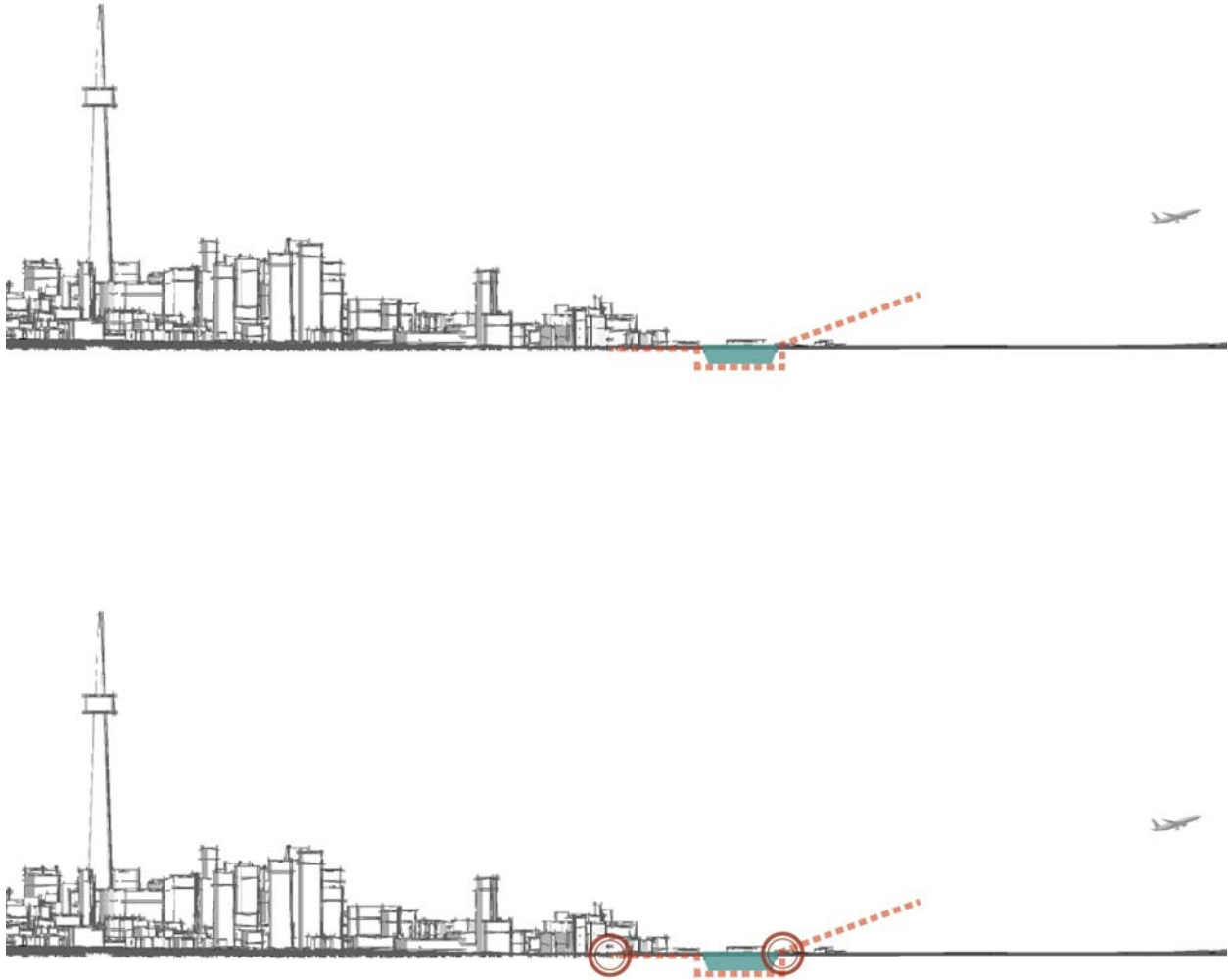


Figure 5-50: Designing the tunnel begins with mapping out the travel path from one side to another. On the land side, the path is very much part of the City and continuation of its movement and flow. On the Airport side, the same path is disengaged and disconnected from the context. As a result, tunnel's arrival/departure point in the City is placed further away from the edge, to be part of the urban fabric, while on the Airport side it is situated at the edge, right before the disconnection takes place.

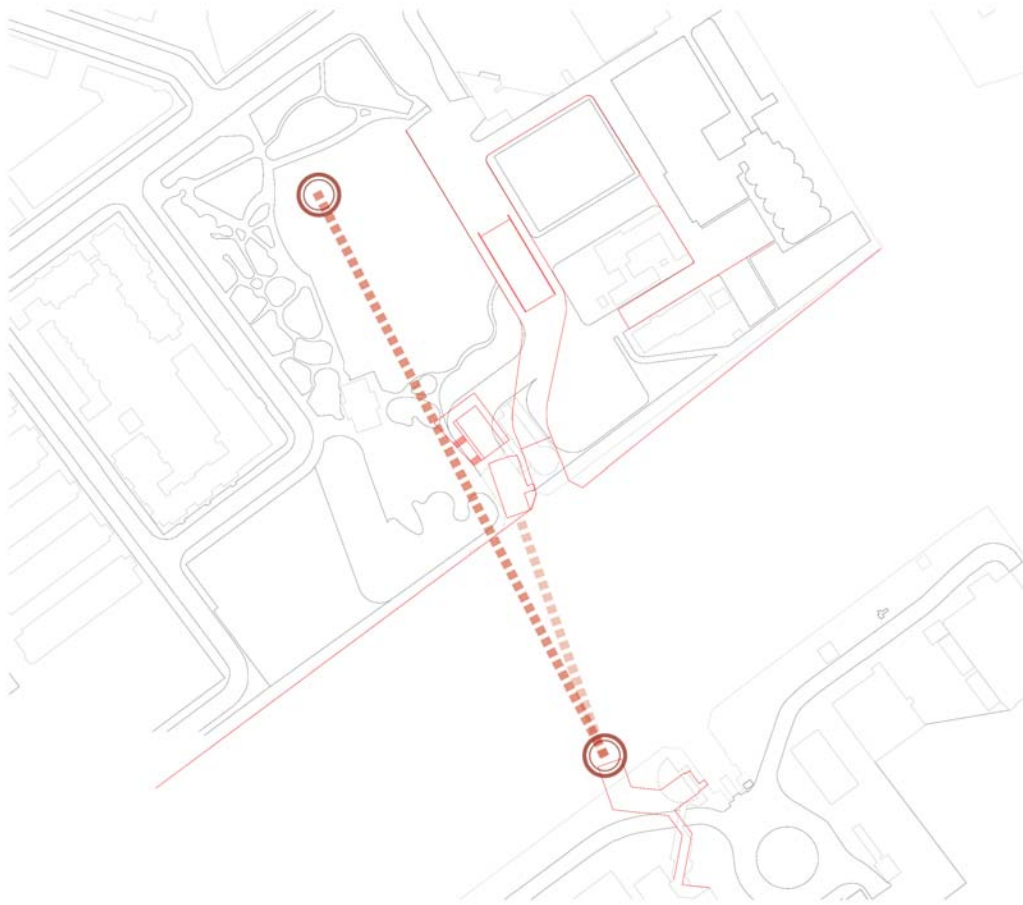


Figure 5-51: Plan view of the travel path diagram, showing arrival/departure points on both sides. On the land side, the point is part of the Little Norway park, with highest level of pedestrian movement, and in proximity to the Queens Quay West an eventful part of the Harbourfront's context.



Figure 5-52: Design parti begins with two straight Lines representing the path



Figure 5-53: The path changes direction to place travellers in dissimilar experiences



Figure 5-54: Change in width makes travellers to move with altered speed



Figure 5-55: Moment of pause is added to stop the travellers and let them interact with the setting



Figure 5-56: Journey from the land starts as a seamless transition from the park, which eventually leads to the tunnel

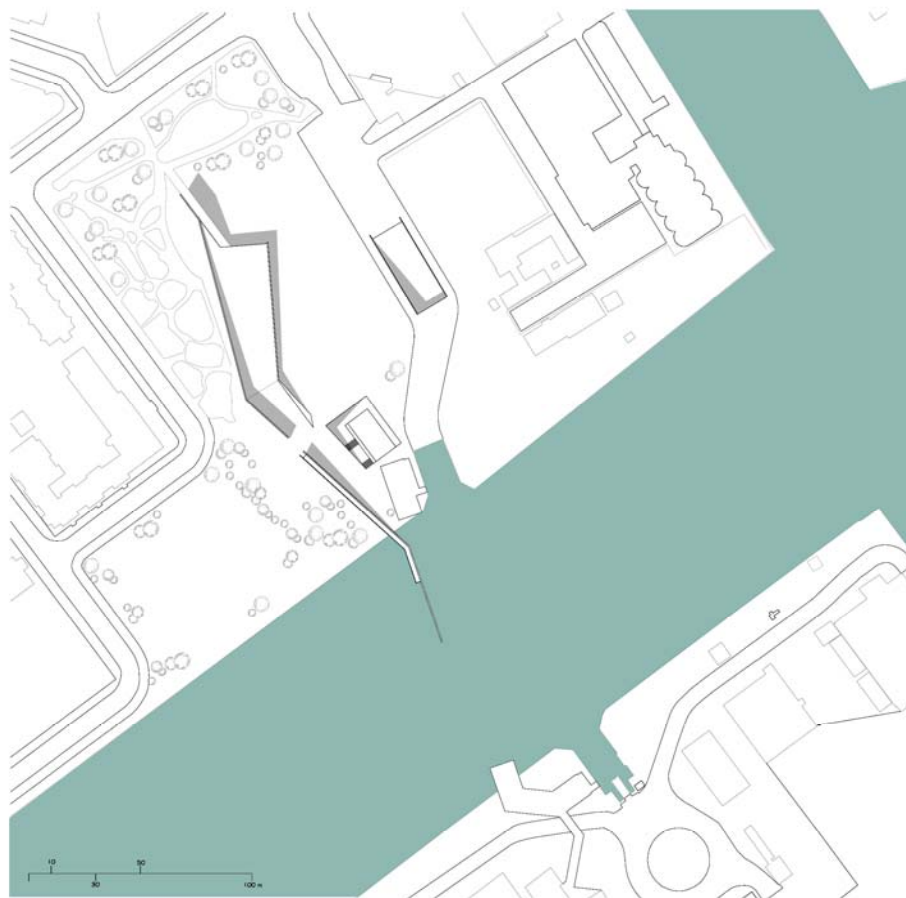


Figure 5-57: Proposed Site Plan

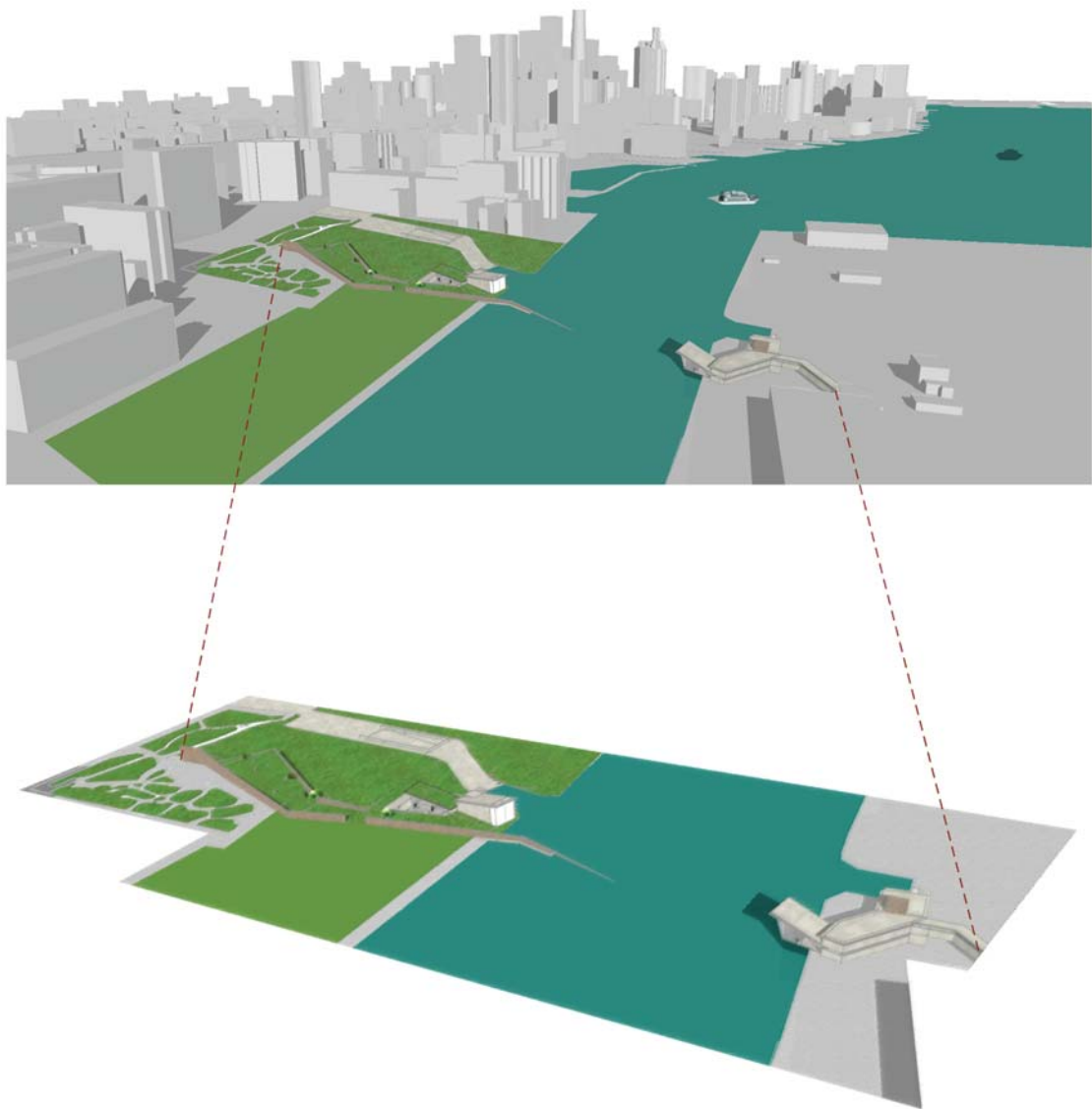
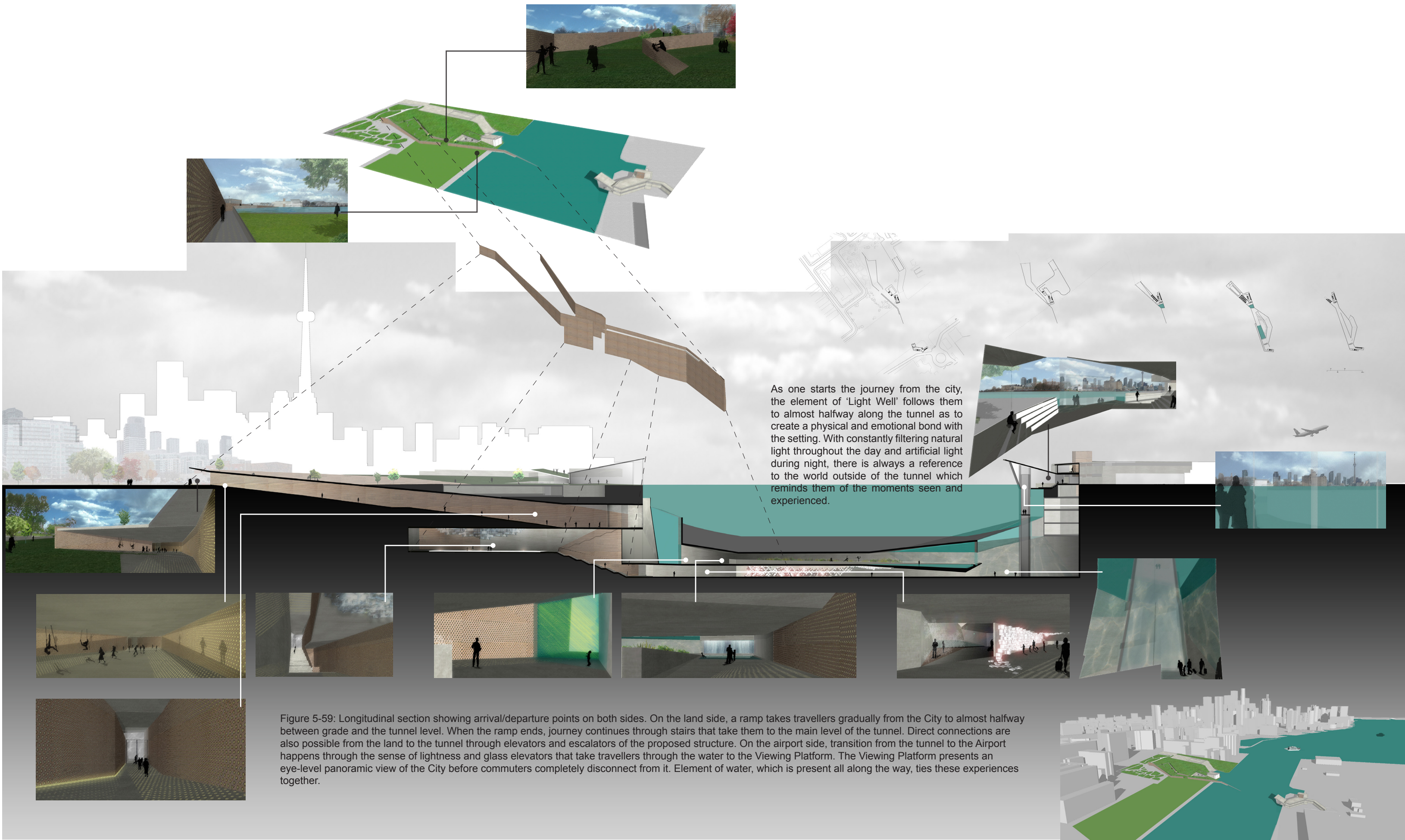


Figure 5-58: Proposed bird's eye view of the site and context



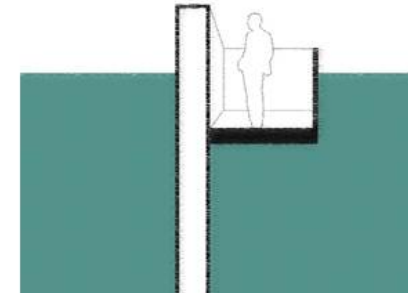
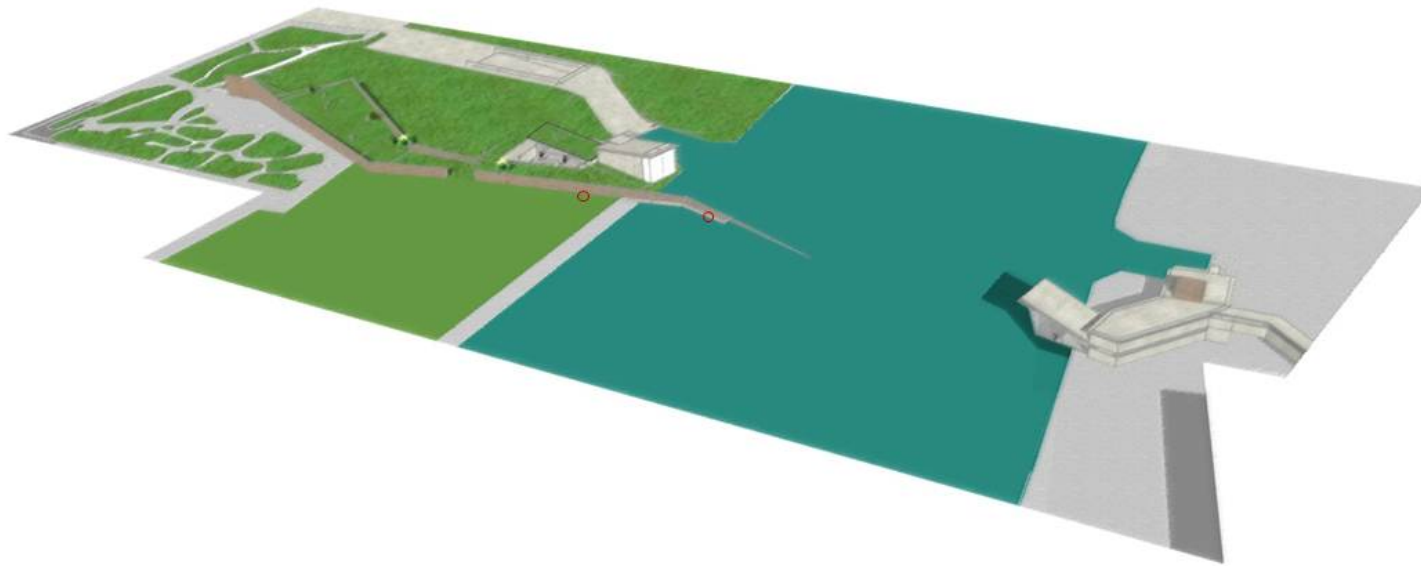


Figure 5-60: Beginning of the journey on the land side where an emotional bond is made with the context and element of the path. Here, traveller is taken very close to the water, hence is not able to touch it; s/he is still an observer. Furthermore, they get to know the element of 'Light Well', a perforated rusting metal in reference to the once industrial character of the context. Light Well follows travellers all the way to the tunnel, constantly reminding them of the moments seen and experienced. Also by filtering the natural light during the day, there is always a link to above, to the world outside of the tunnel.

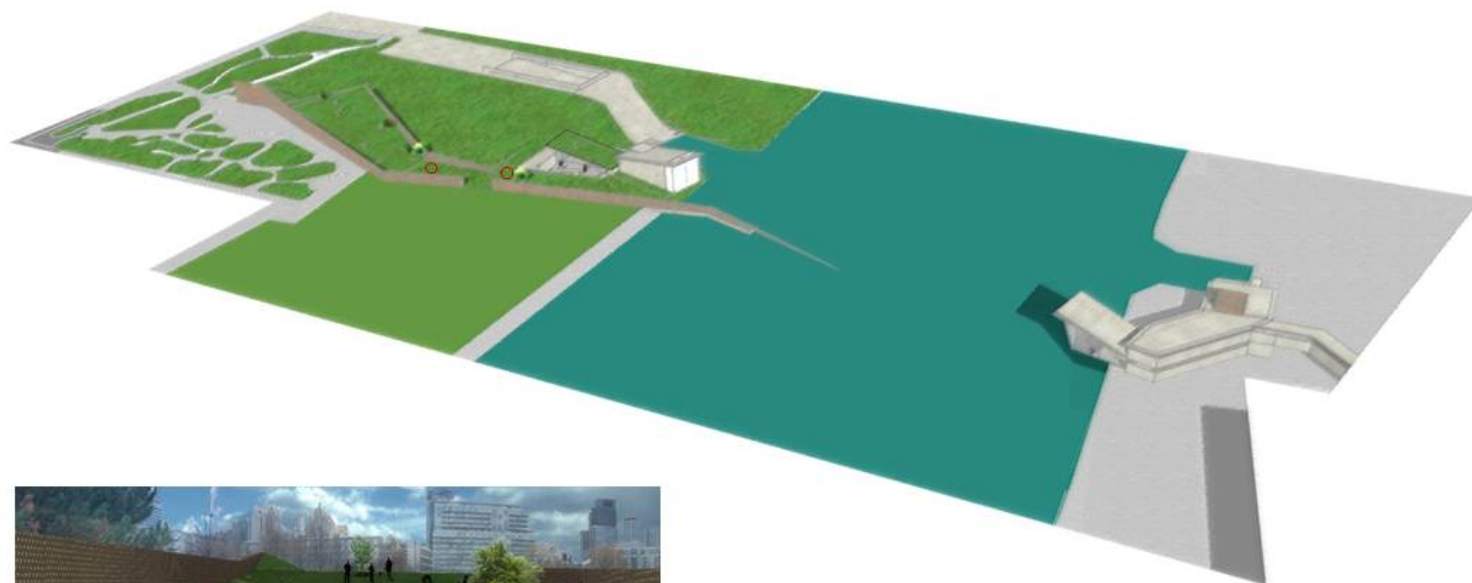


Figure 5-61: Continuity that forms attachment between travellers and the setting

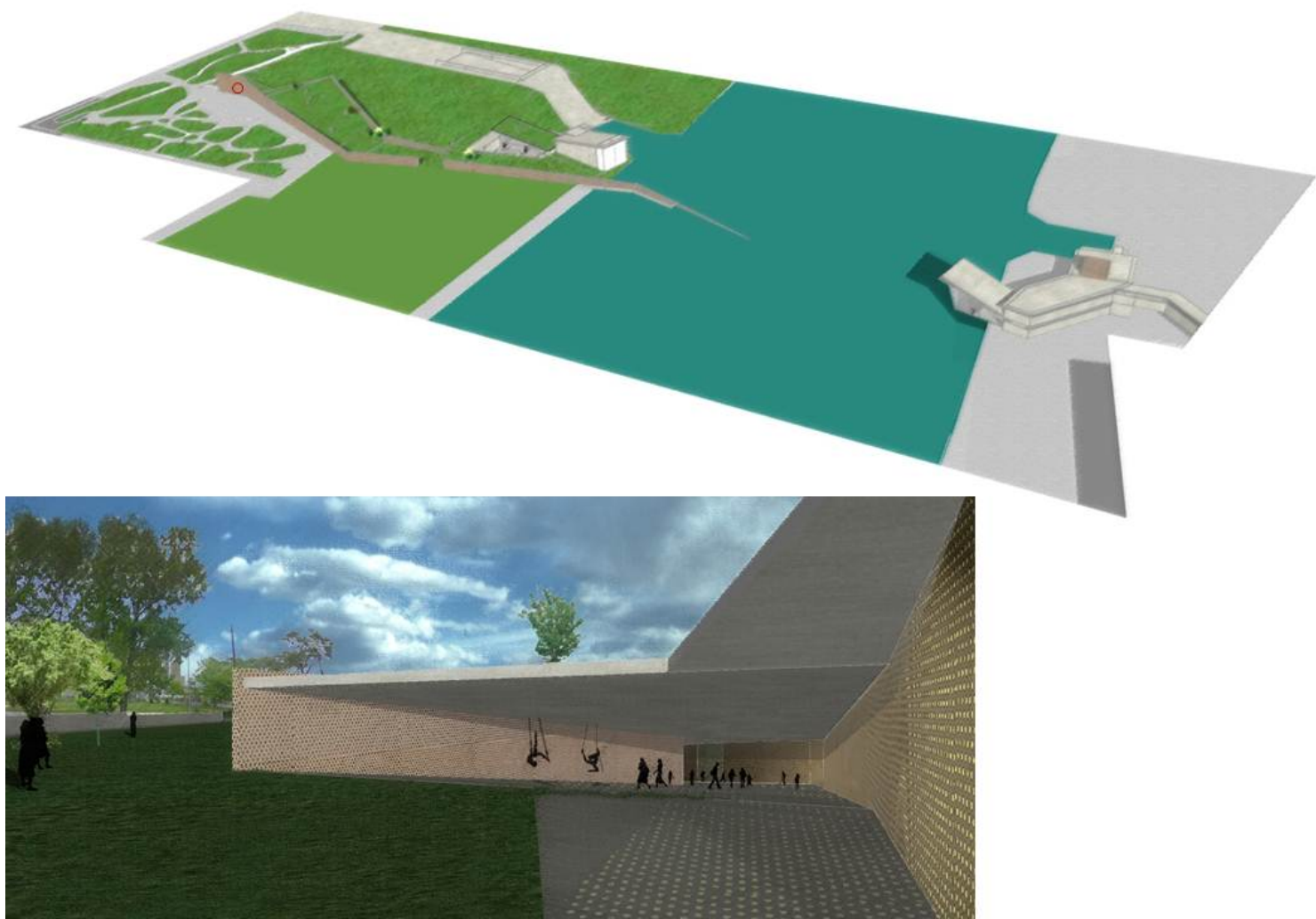


Figure 5-62: As one approaches the tunnel, extensively wide opening of the arrival point, dissolves the boundary between in and out, creating a seamless transition from the park to the tunnel.

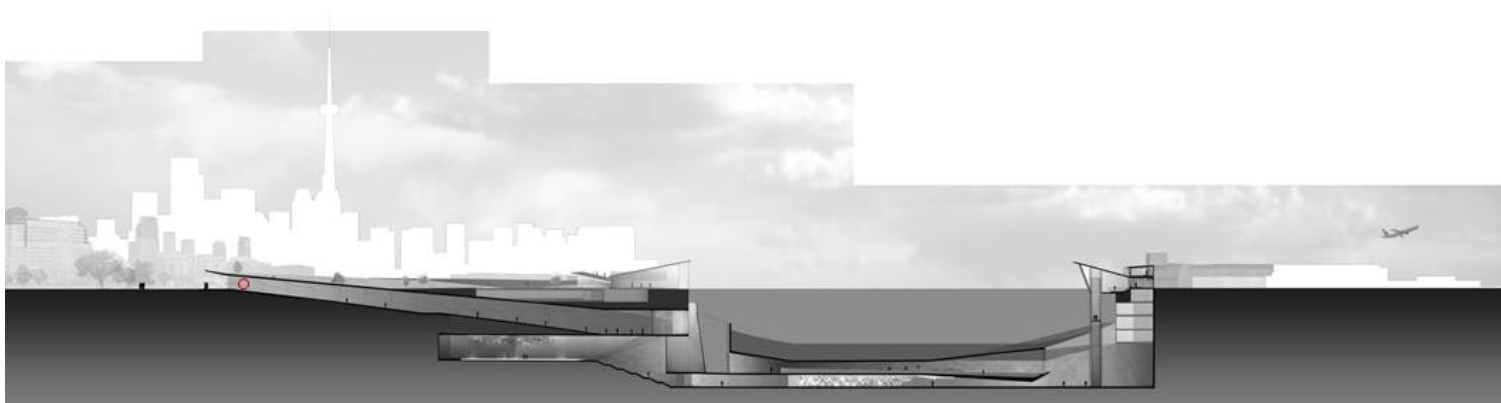


Figure 5-63: Once the journey begins down the ramp, light level decreases and skin registers change in temperature. As well, through the element of Light Well, traveller becomes aware of leaving the land behind.

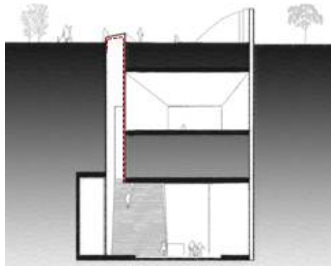
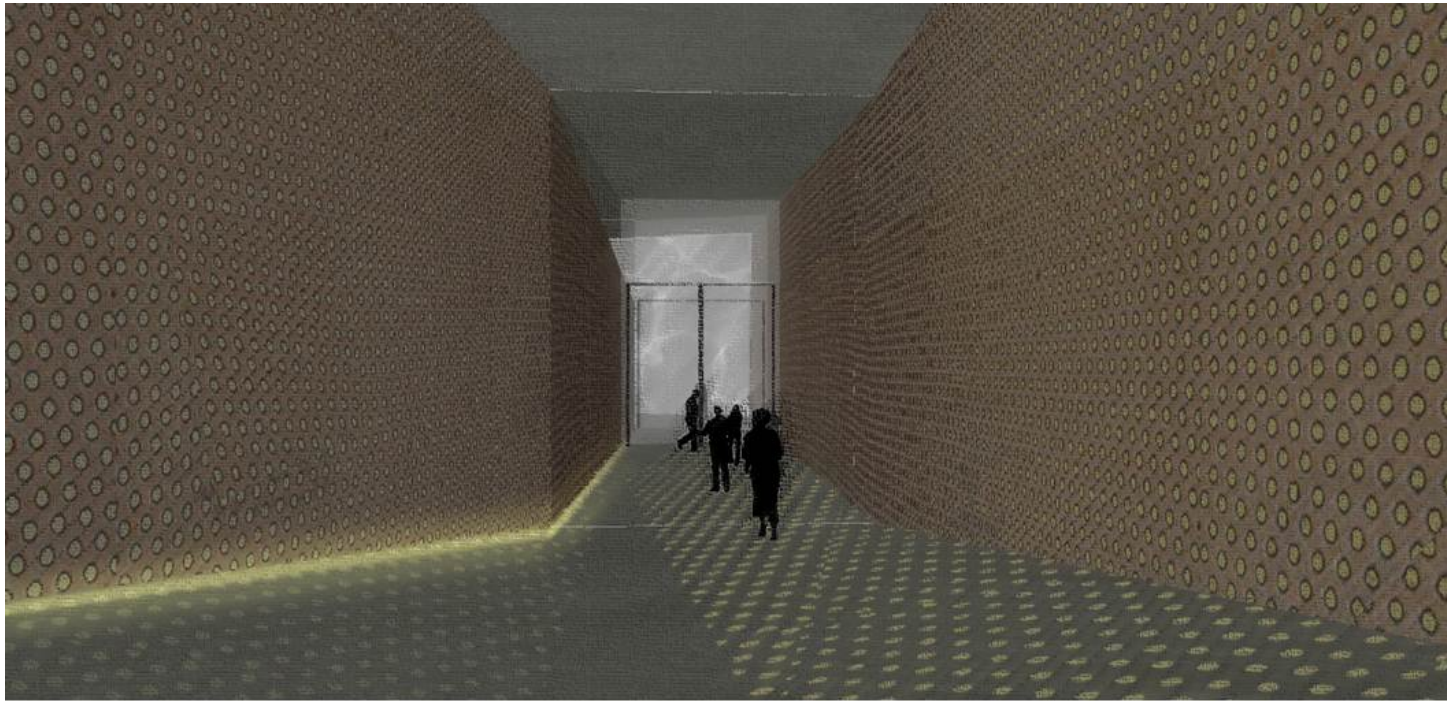


Figure 5-64: By getting closer to the end of the ramp, almost halfway between grade and the tunnel level, reflection of the light passing through the water provides travellers with a means of sensing depth. Here, portion of the Light Well opens up to become extension of another space.

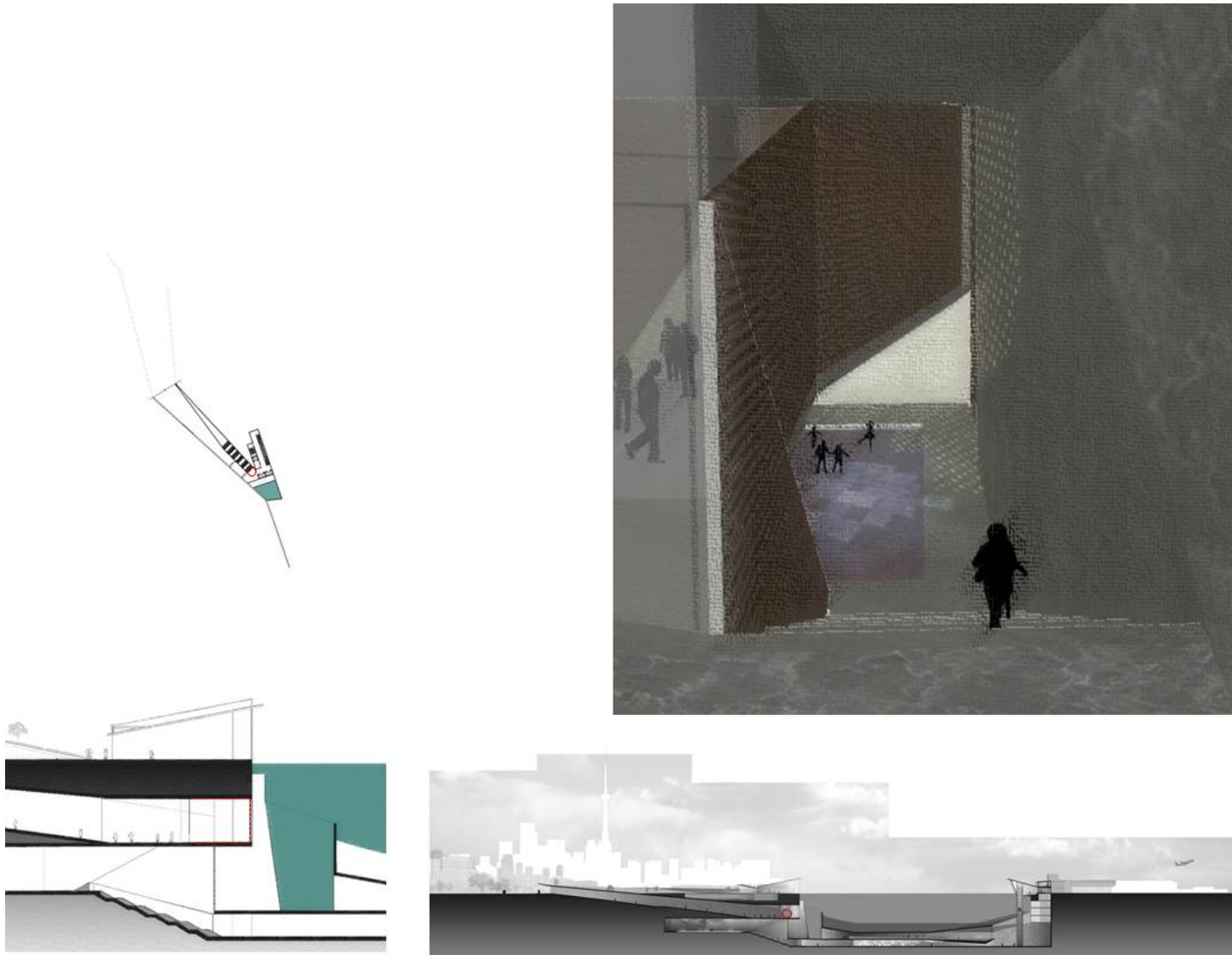


Figure 5-65: While the ramp ends, journey continues through stairs that leads travellers to a skating rink, where water is experienced in its frozen state and generates an activity that welcomes not only airport users but also passer-by from the City.

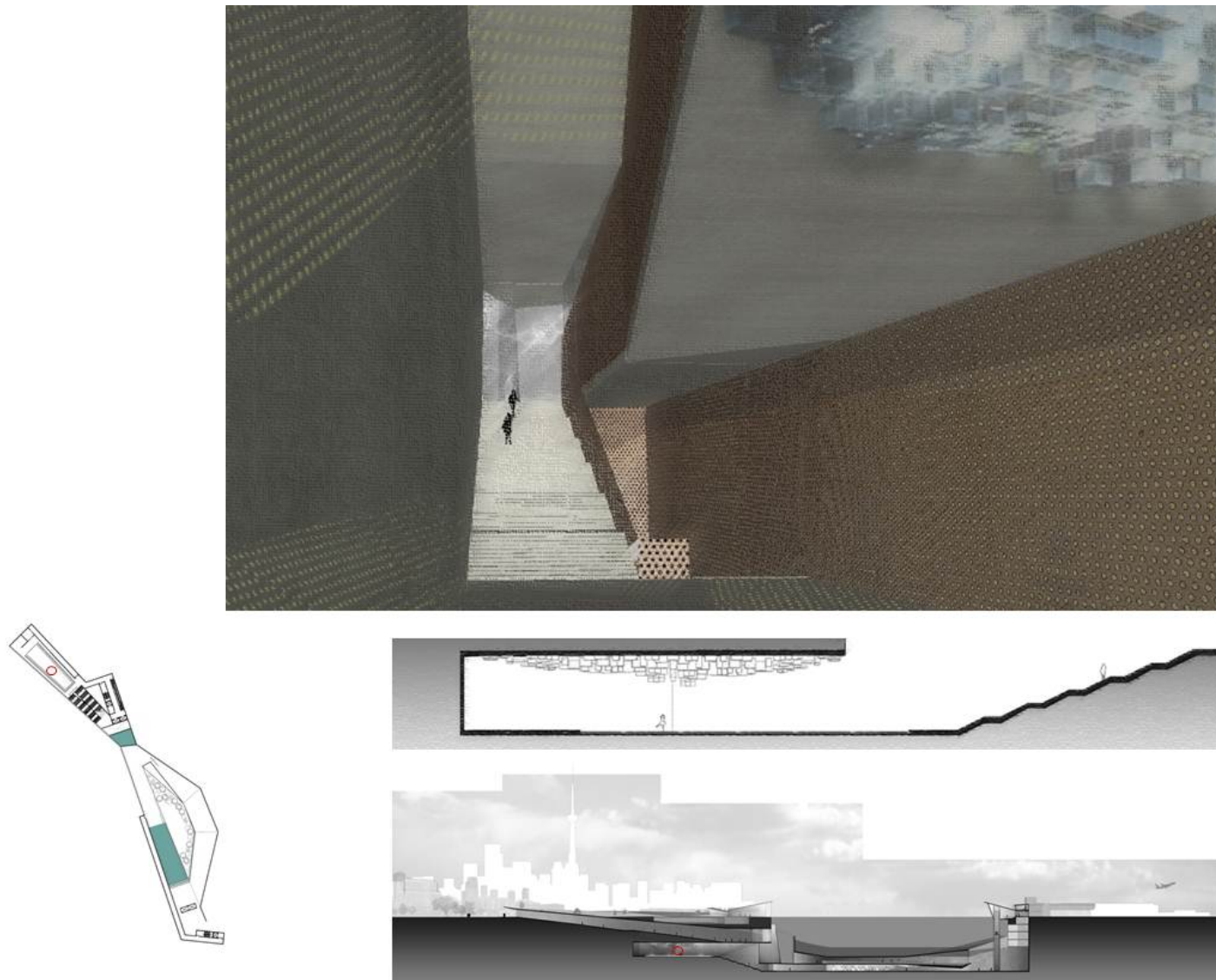


Figure 5-66: Portion of the Light Well opens up to hold movement through the stairs and create an unexpected light penetration from above

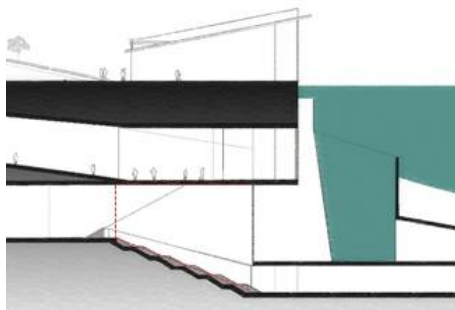


Figure 5-67: Stairs leading to the main level of the tunnel

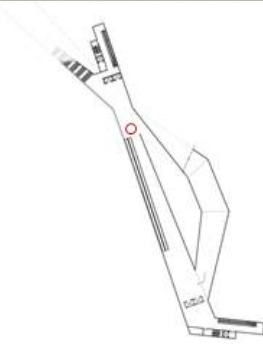
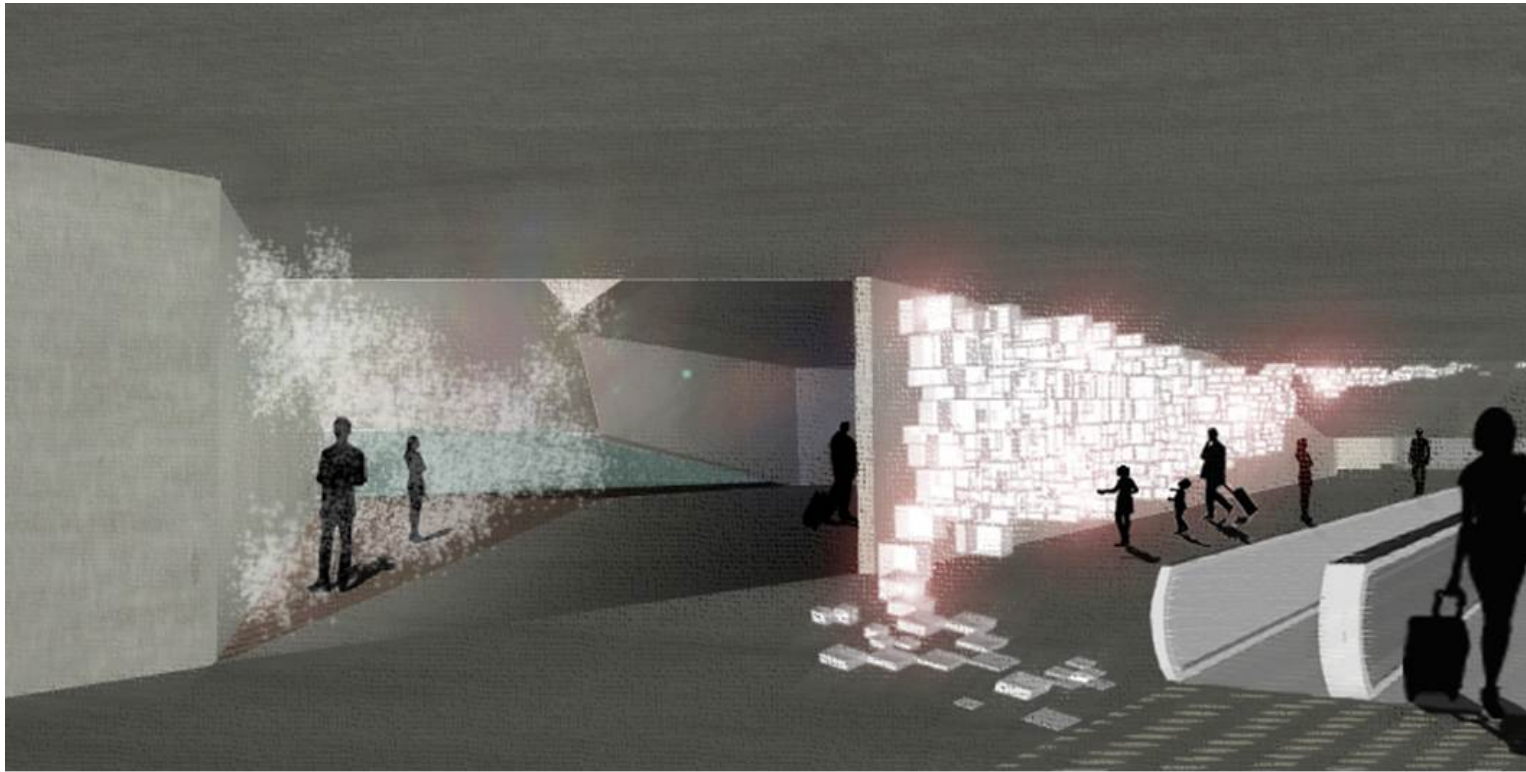


Figure 5-68: When travellers arrive at the main level of the tunnel, they are faced with a moment of pause where they pause and interact with the setting

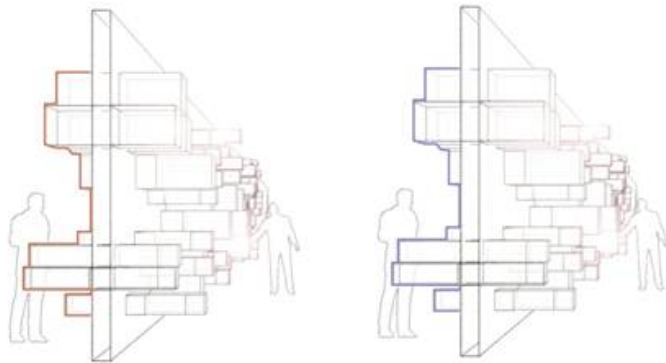
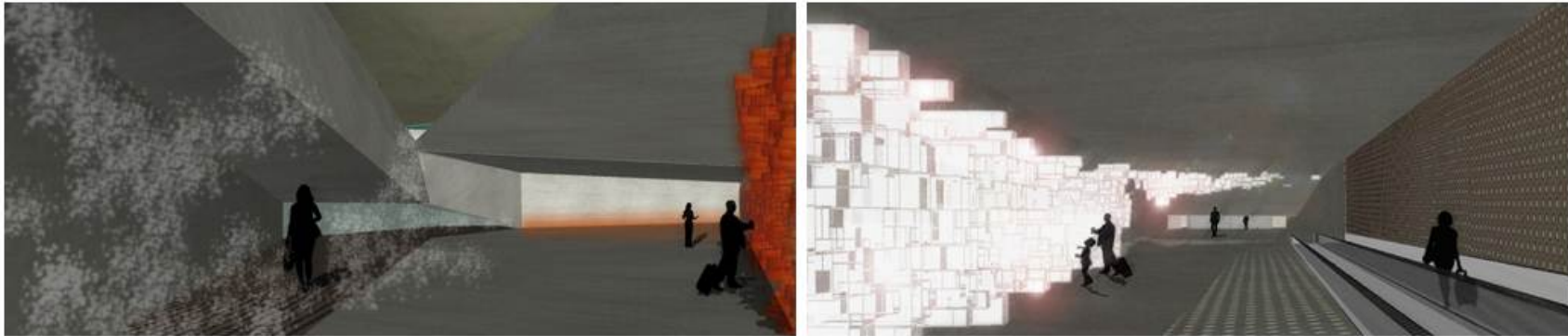


Figure 5-69: Moment of Pause holds within itself an interactive wall, through which on one side travellers change the amount of light in the space by pushing in moveable elements and changing the texture on the other side. As one witnesses this transformation s/he is encouraged to touch, only to realize that by doing so temperature of the elements change from warm to cold or cold to warm. Water is also present in the Moment of Pause and is experienced in its vaporized state. Here, travellers inhale the water.

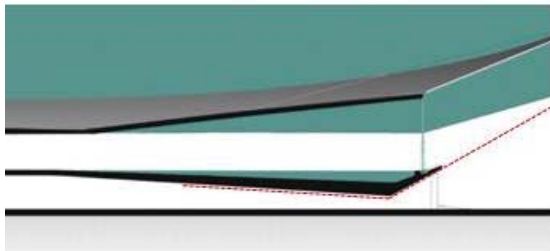
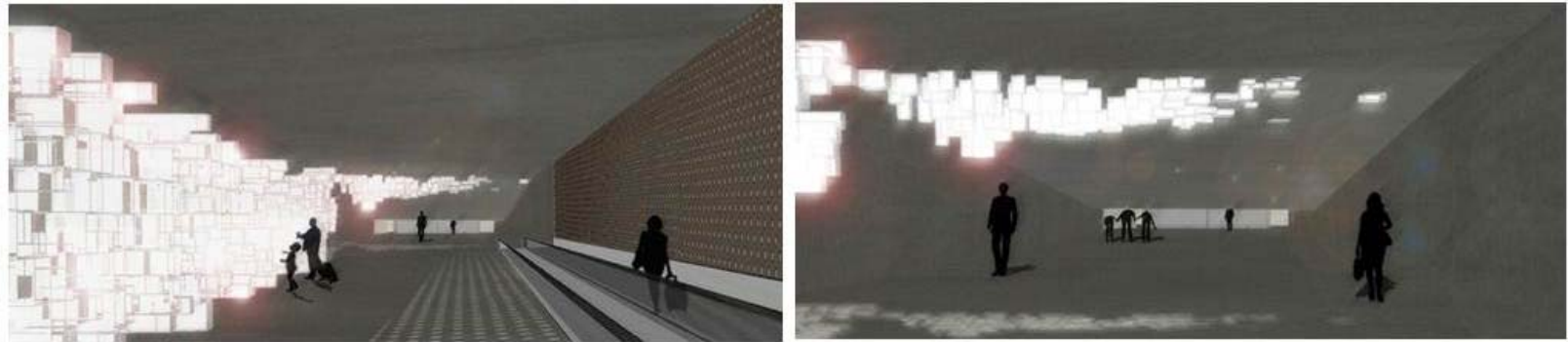


Figure 5-70: While one continues travel towards the Airport they are challenged by a physical, visual and emotional threshold, where space is compressed and they are visually disconnected from the other side. In order to cross the boundary, travellers are forced to bend down and to experience a change in orientation of the body.

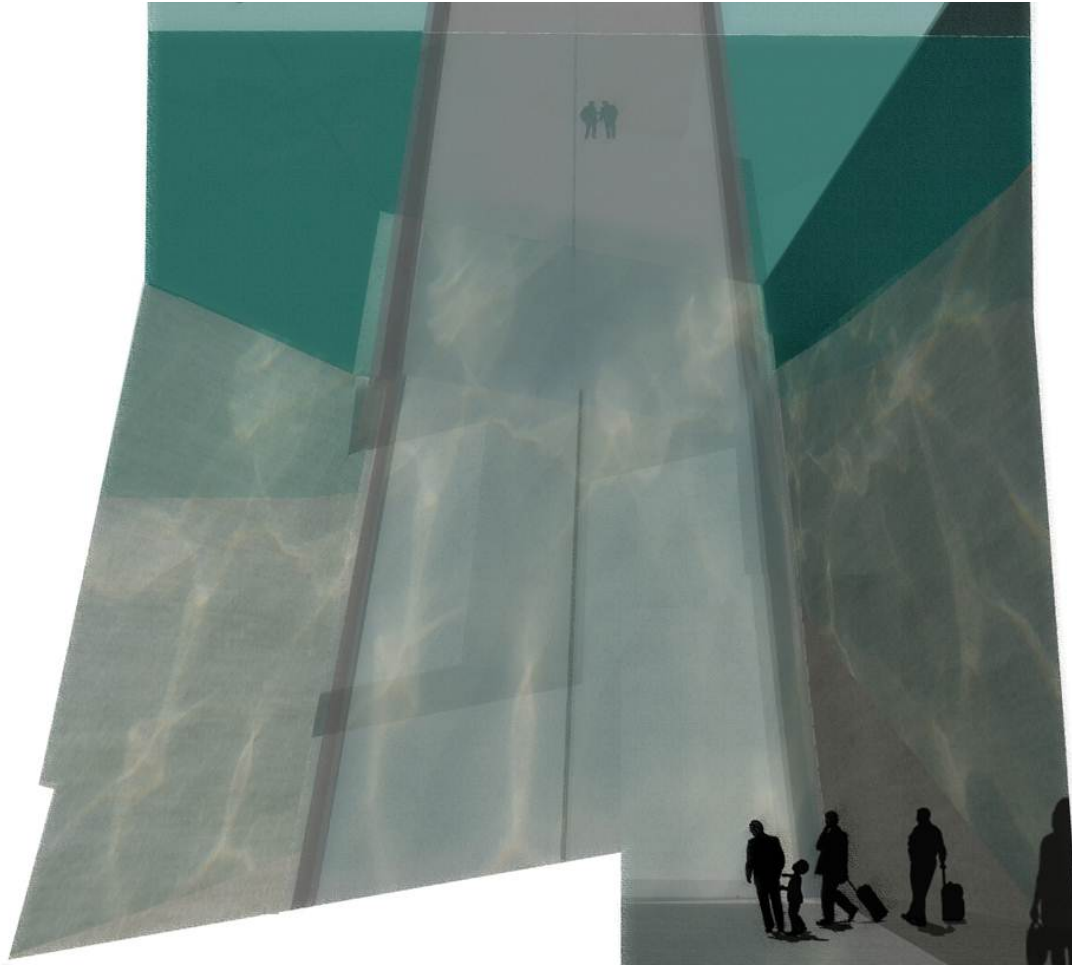


Figure 5-71: As they cross the boundary, travellers are faced with a sudden moment release through vastness of space and transformation of light and transparency. Here, two glass elevators take them through the water to the Viewing Platform.



Figure 5-72: For those who have never been to the City, tunnel acts as a gateway. First experience of the City is observing it from above as spectator.



Figure 5-73: On their way from the plane to the Viewing Platform, commuters are visually disconnected from the City.

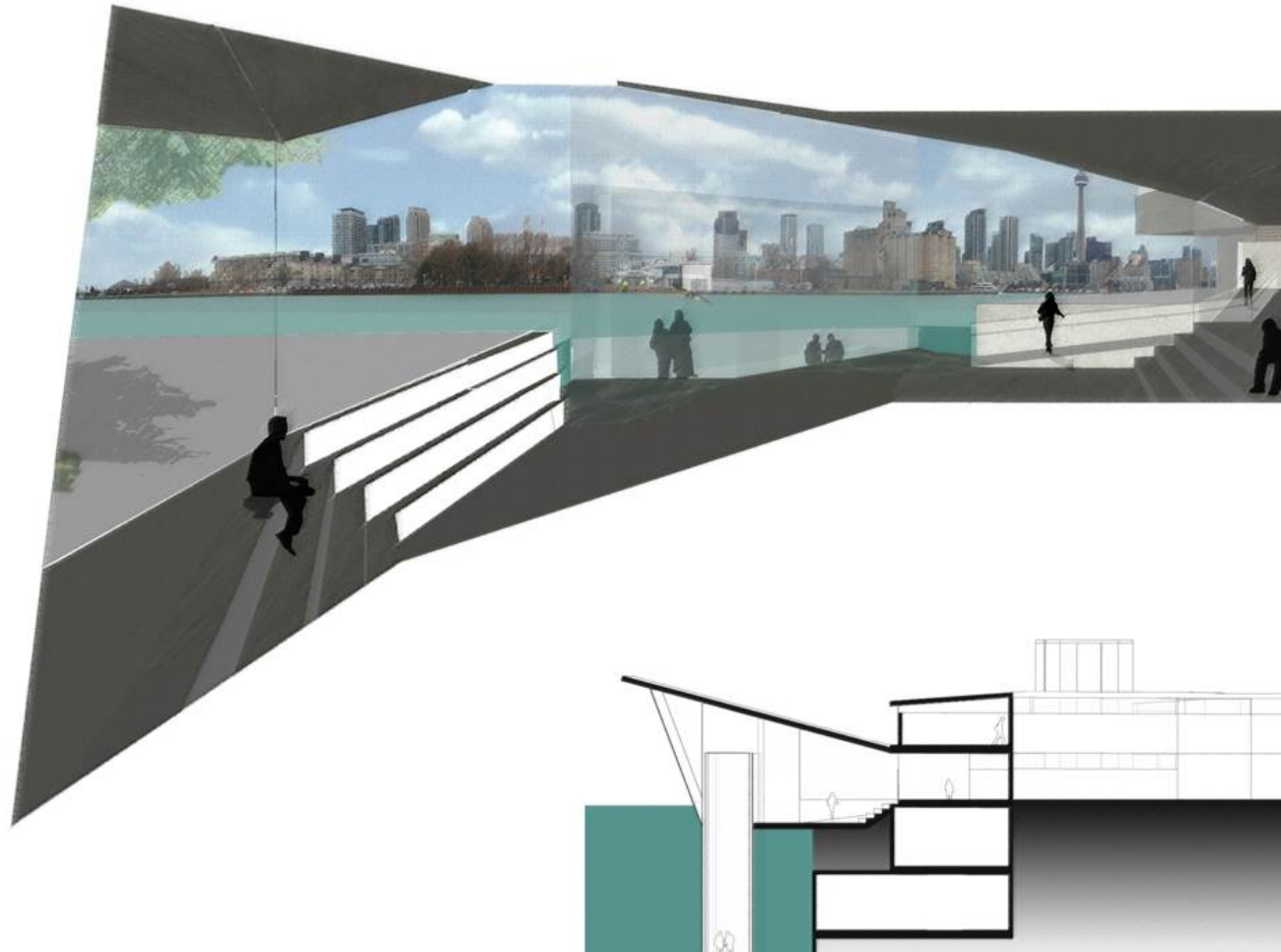


Figure 5-74: Viewing platform for the first and last time after landing, provides a panoramic view of the City. Being partially sunken in the water, a connection is constantly made between main elements of the setting: the City, water, and the air. Here, two glass elevators take commuters through the water to the main level of the tunnel.

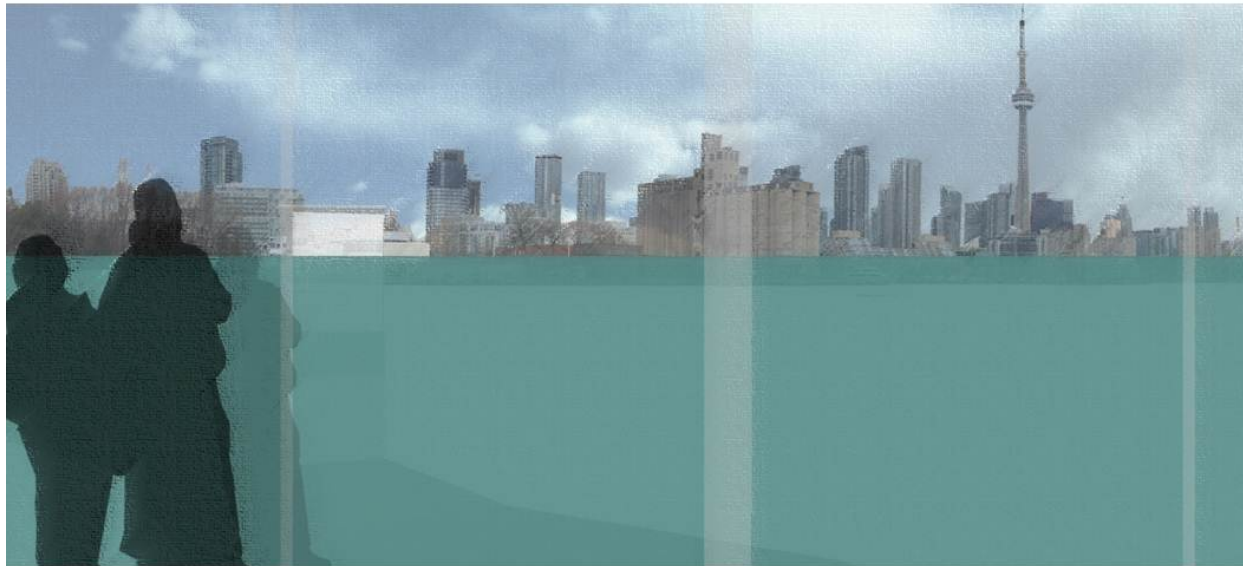


Figure 5-75: As the elevator leaves the Viewing Platform, the image of City, waiting to be experienced gradually disappears.

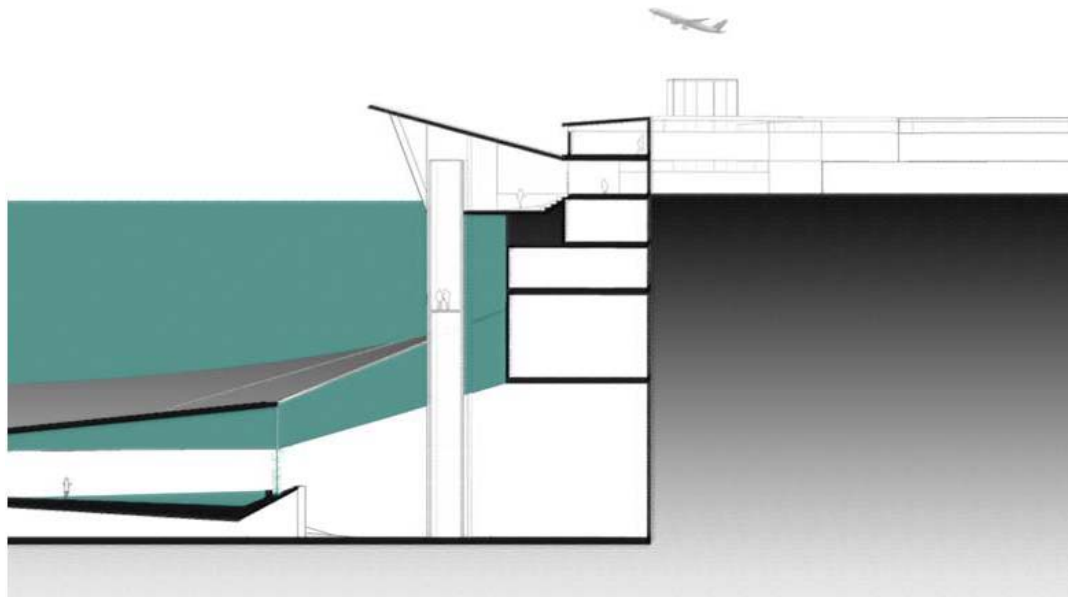
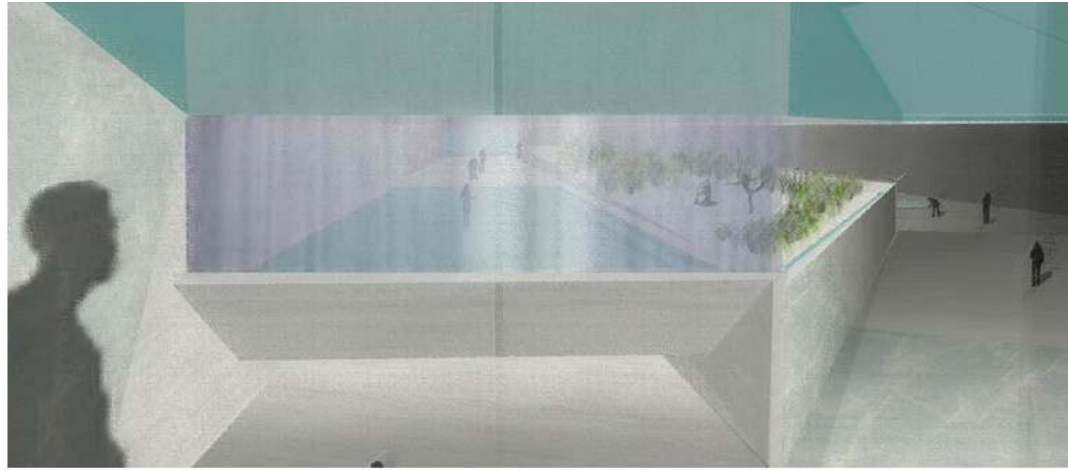


Figure 5-76: When the elevator passes through the threshold of water, portion of the tunnel that gradually takes the commuters to another level is unveiled.

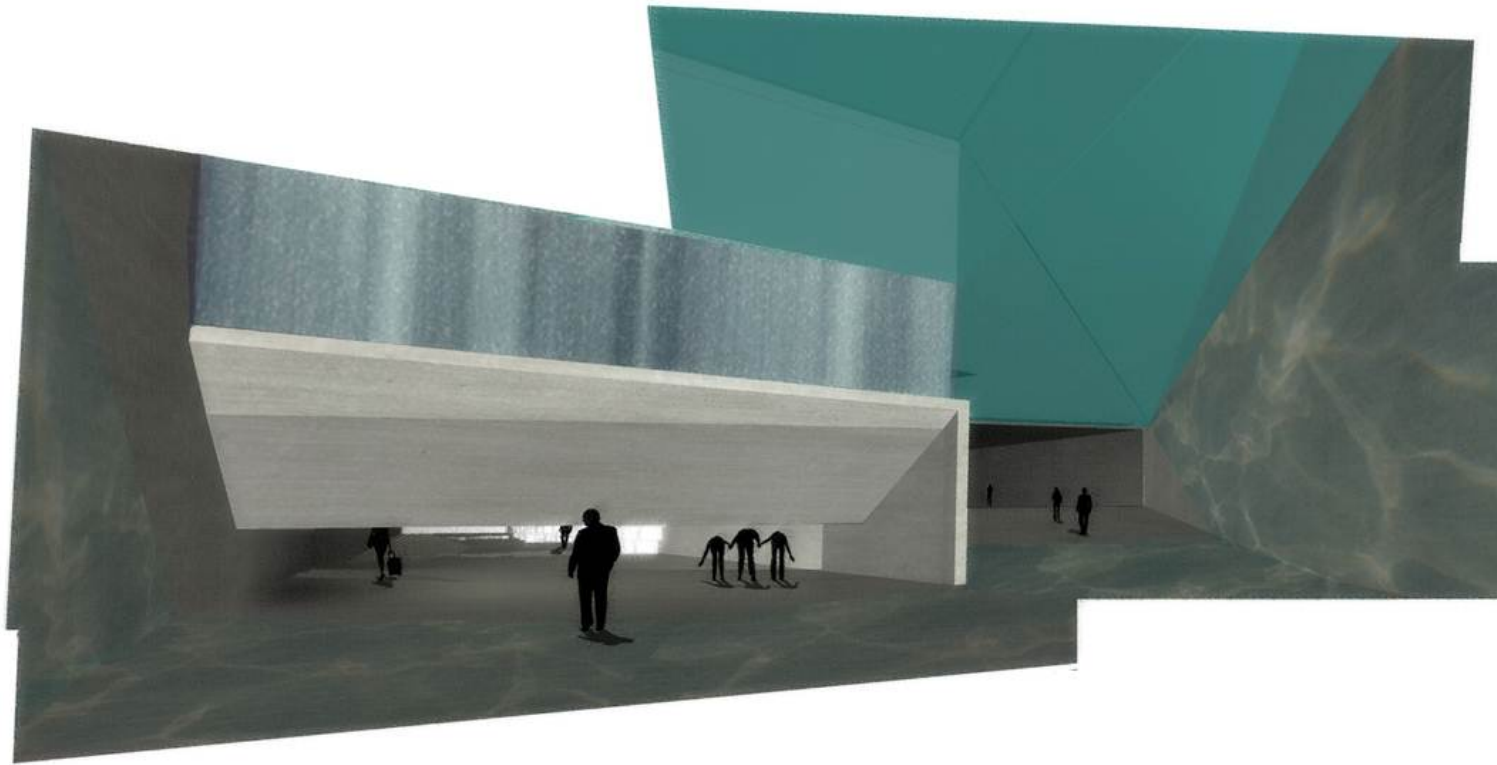


Figure 5-77: Since the traveller is visually disconnected from the main path (left), s/he unconsciously takes the path that is seen when the elevator is landing (right)

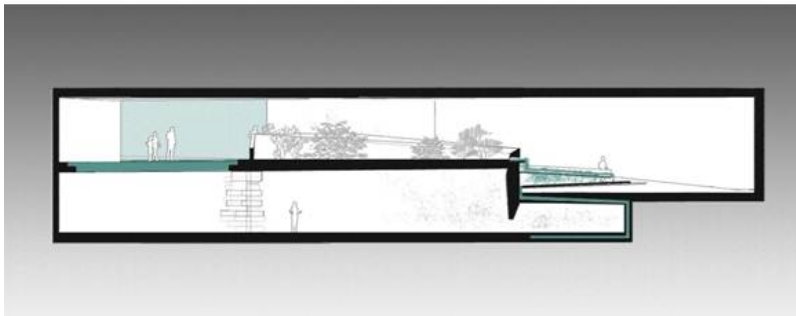
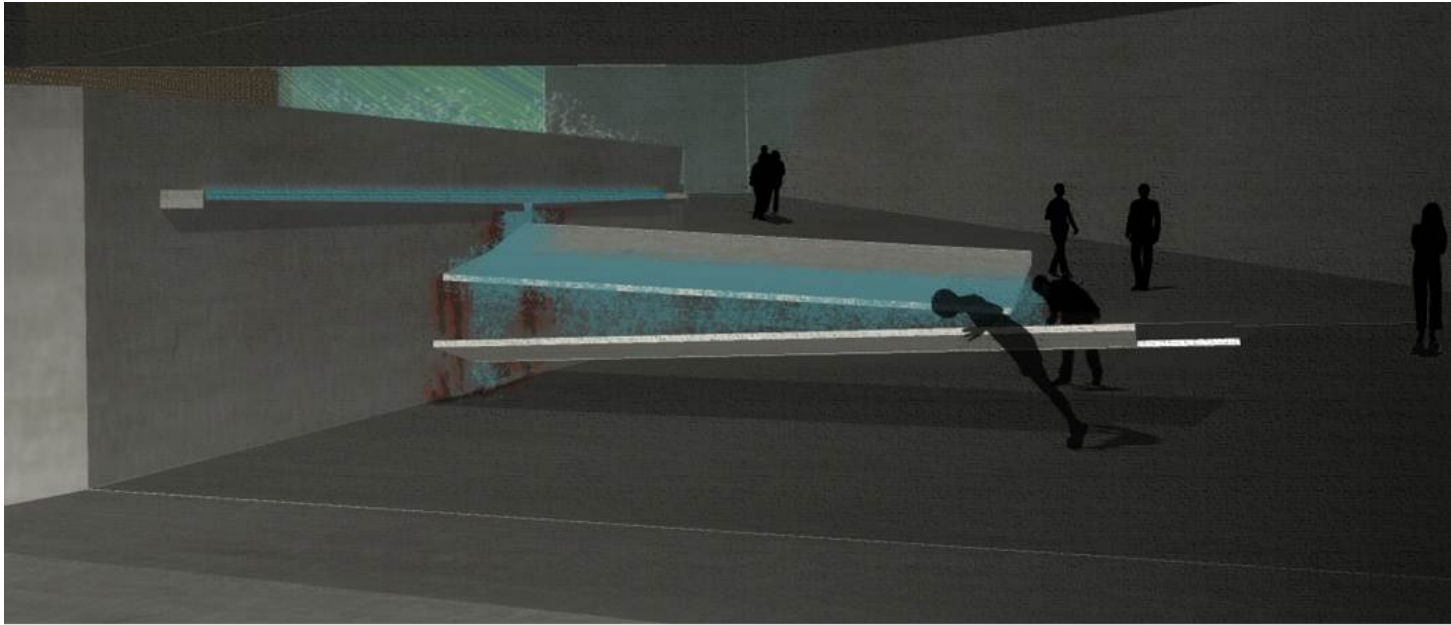


Figure 5-78: Almost halfway along the path, sound level is reduced and commuter has a chance to taste water, the same water that is inhaled in the Moment of Pause

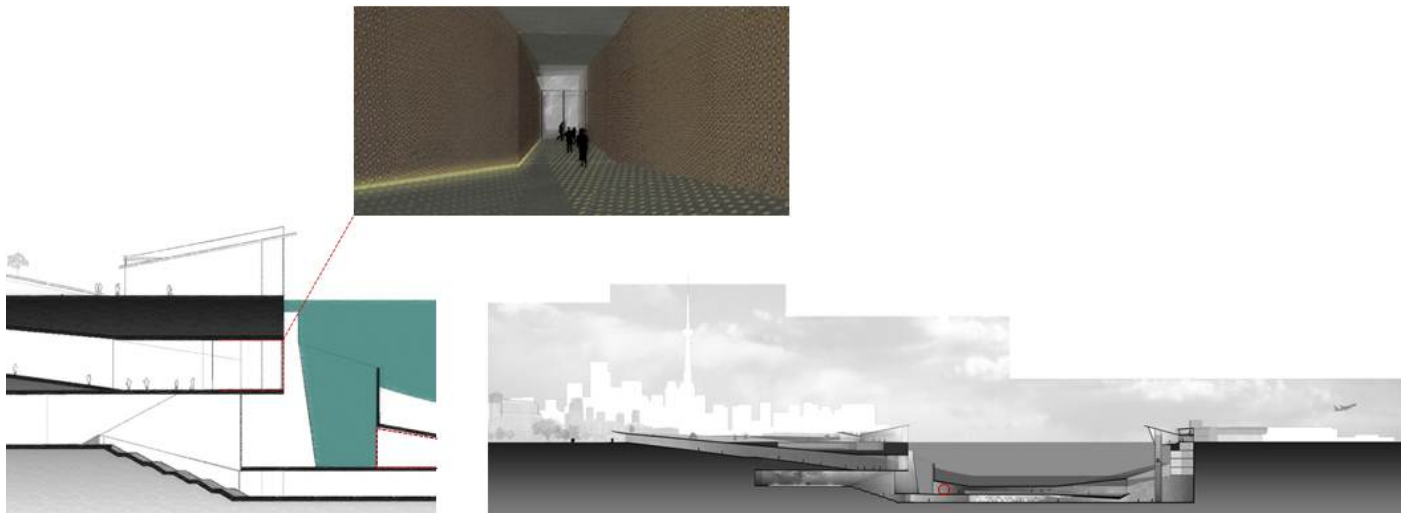
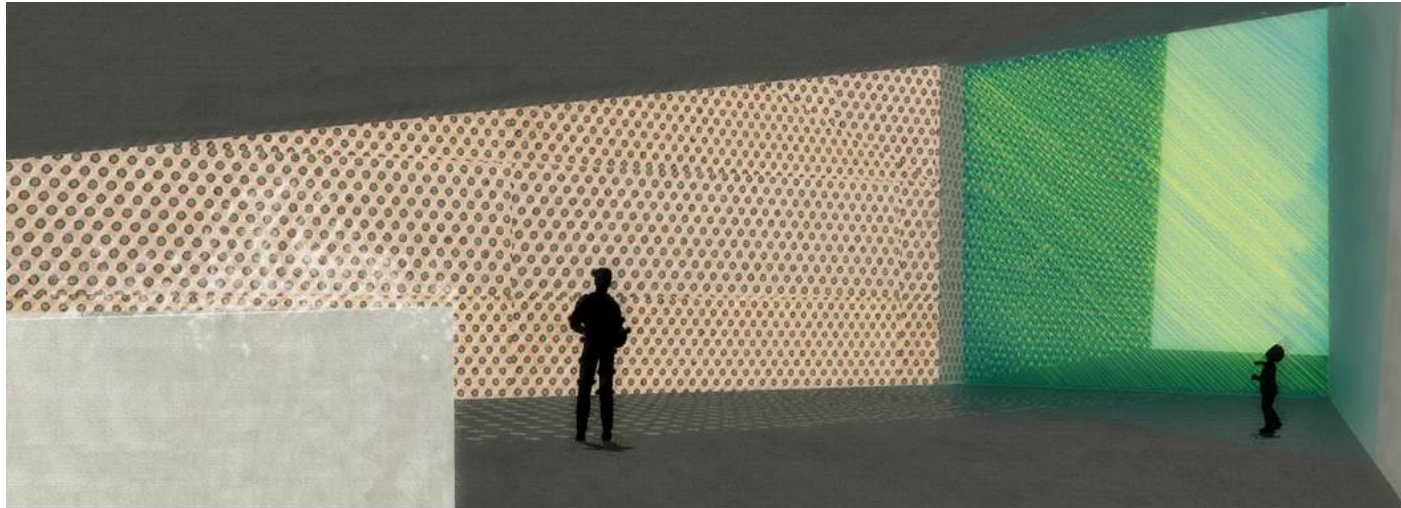


Figure 5-79: When the path reaches the second level of the tunnel, travellers are left with a dialogue between water and the element of Light Well, which is yet to be discovered on their journey towards the City.

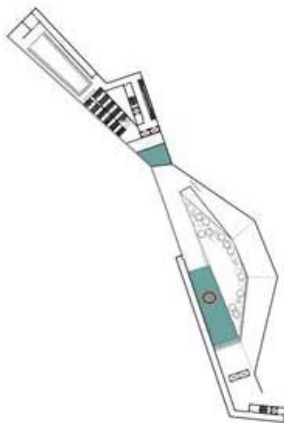
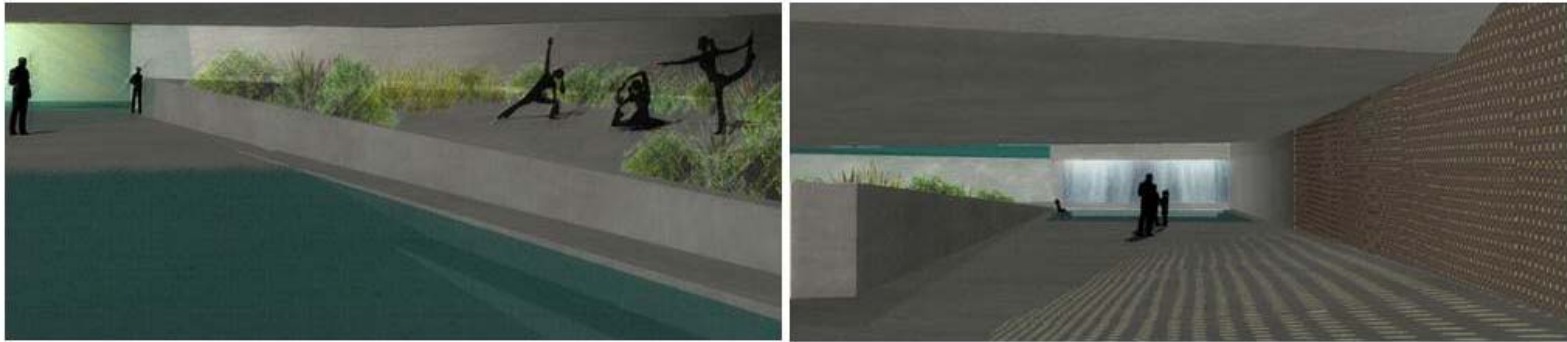


Figure 5-80: Commuter moves even further to the point that is acoustically isolated from the surrounding and the only sound being heard is the sound of falling water, the same water that is tasted and is inhaled. Furthermore, one has a chance to stand in the water and interact with it physically and emotionally before walking down the same path towards the City.

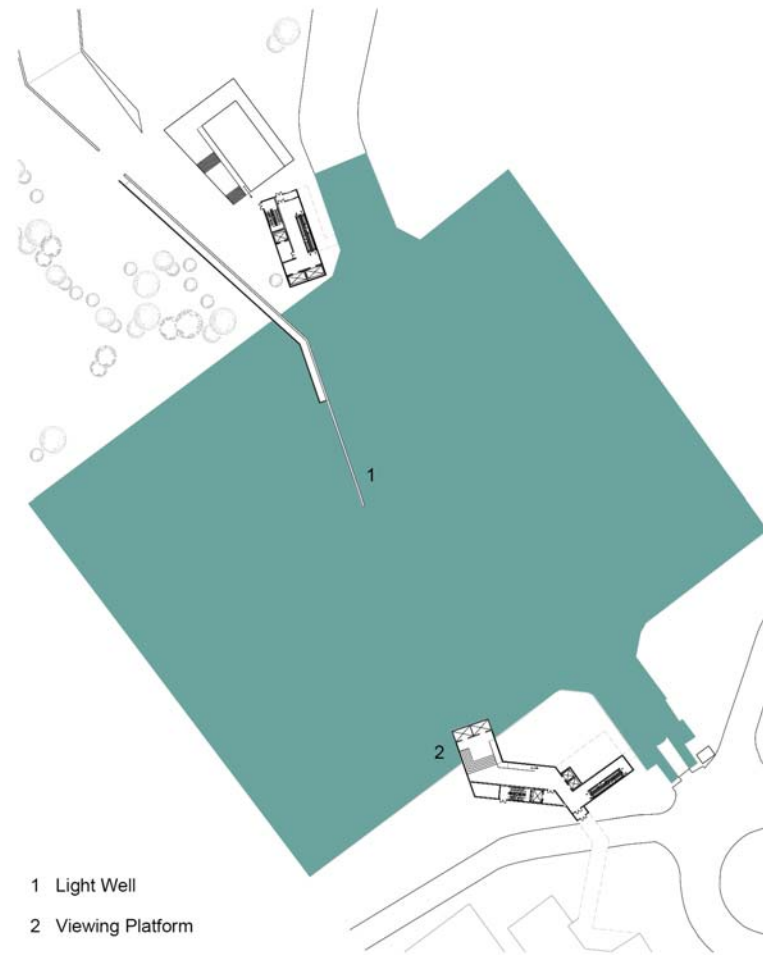


Figure 5-81: Ground Floor Plan, Scale: 1/1500

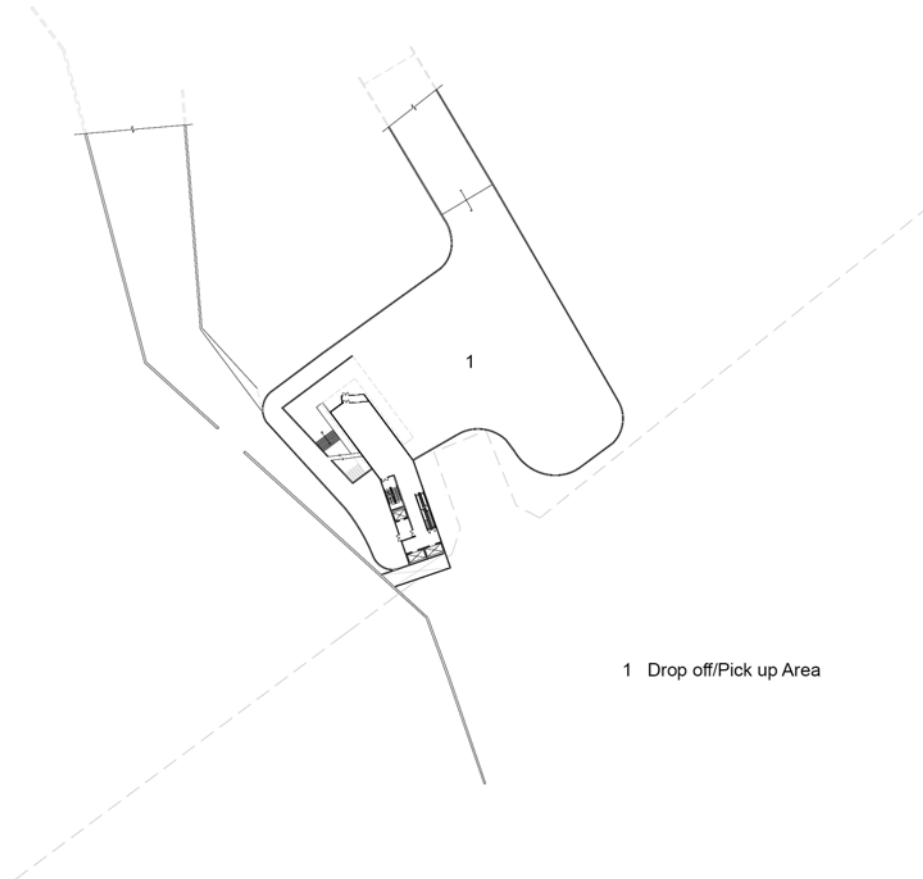


Figure 5-82: -1st Floor Plan, Scale: 1/1500

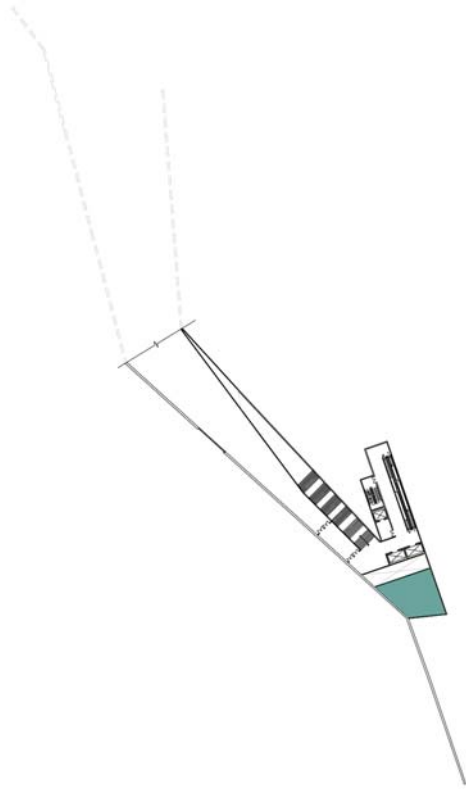
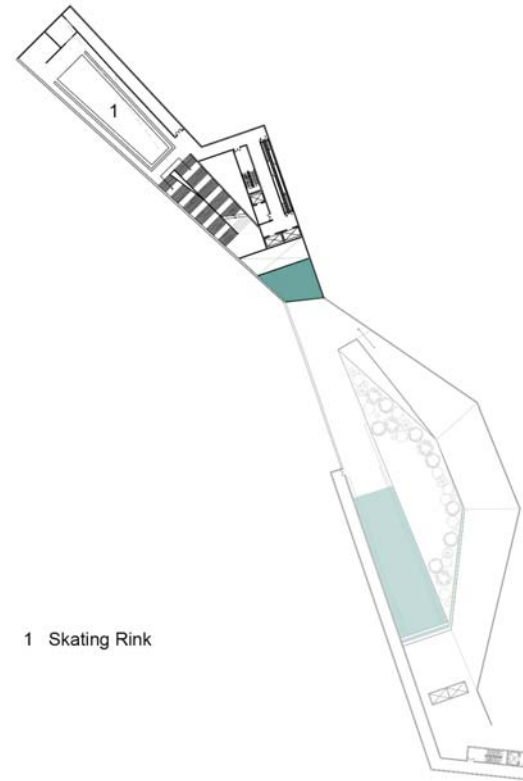


Figure 5-83: -2nd Floor Plan, Scale: 1/1500



1 Skating Rink

Figure 5-84: -3rd Floor Plan

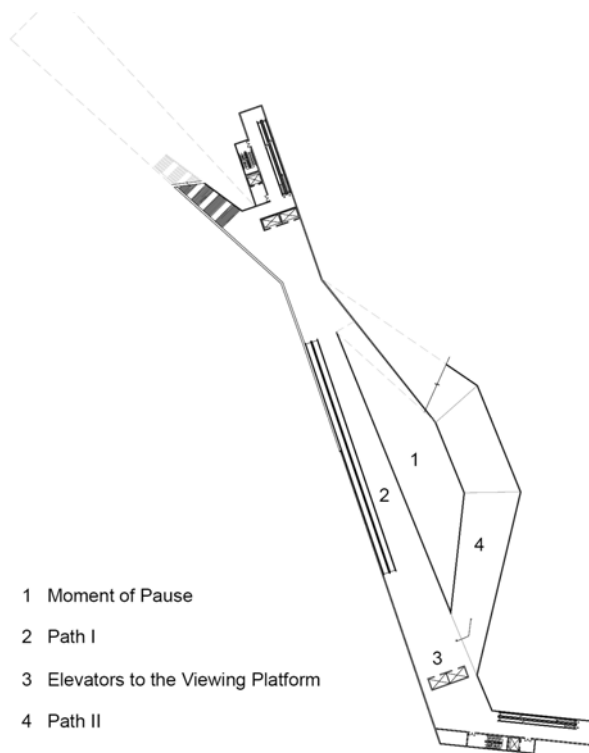


Figure 5-85: -4th Floor Plan, Tunnel's Main Level
 Scale: 1/1500

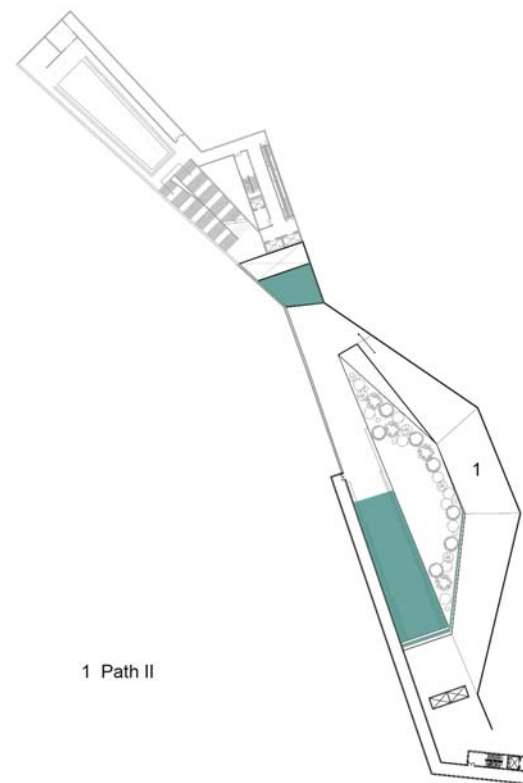


Figure 5-86: -3rd Floor Plan, Tunnel's Upper Level

6.0 Conclusion

Physical feature alone do not form a Place. It is through the relationship between human emotional and physical sensitivity and the location that Place is distinguished from undifferentiated sameness of Space. An important characteristic of a Place is memory; through memory meaning is attached to Space. Here, memory is not solely a mental task; it is also an act of embodiment. Every Place can be remembered partly because it unique, but partly because it has affected our bodies and generated enough association to be held in our personal worlds. Therefore, creation of Place depends partly on its ability to form embodied memory. Senses, basic orientation of body and movement are three key elements to form embodied memory of Space and transforming that into Place.

Movement of the body is perhaps the most fundamental element of forming embodied memory. Movement of the body if is not one of our five senses, provides us with a measure to perceive space; to move closer, move away, go around, go up, go down, go into, escape, are all actions that invite us to arrange for ourselves what we want to see, hear, feel, smell, and touch in a certain environment. As well, movement and orientation of the body are closely related. Movement is physically and conceptually defined by path.

Place does not always live in isolation; it may live in relationship to another place. A city becomes a place not only through places it holds within itself, but also through experience of moving from one place to another. Purposeful movement, movement that is directed towards places provides us with a memorable world of events.

Moving from one place to another holds within itself elements of path and threshold. Path enables us not only to move from one place to another, to go next to or to cross places, but also helps us to remember things seen and experienced. Furthermore, each relationship between places provides us with separation and connection, break and continuity, boundary and crossing. Threshold and spaces of transition become places themselves.

The design project centered on the act of movement, attempted to prove that by changing the way one moves through a Space, in a manner that physical features of the setting are recognized and transformed into meaningful elements, embodied memory is formed and Place is created.

7.0 Appendix

Chapter 17

ISLANDS TUNNEL

1935 / Partially built

DEBATE ABOUT THE NEED TO construct a “fixed link” to the Toronto islands has been a recurrent feature of the city’s history. Any number of proposals have come and — invariably — gone. But a 1935 plan to construct a tunnel under the western gap was different from the others: they actually started to build it.

Given how tantalizingly close the islands are to the mainland — especially at the western gap — it’s no surprise that by 1935, various schemes to provide a link between the islands and the mainland had been considered (Fig. 17-1). In 1894 (two years after the introduction of electric streetcars), streetcar service was proposed to the island via a swing bridge across the western gap. Plans prepared three years later by the Harbour Commission’s engineer, Kivas Tully (Fig. 8-1), showed a variation on this proposal, with the streetcars crossing the western gap in a tunnel instead of a bridge. A plan by the city’s parks commissioner in 1909 kept the tunnel, but replaced the streetcars with automobiles.

While the proposals were intriguing, two developments in the early years of the twentieth century would eventually lead to shovels actually being put in the ground. First, in 1913 the federal government had agreed to spend \$800,000 on the construction of two moveable bridges to the islands, one across the eastern gap and one across the western gap. This commitment was in support of a \$20-million plan for the entire lakefront prepared by the Harbour Commission. Although the money never materialized, some twenty years later local politicians had still not forgotten the commitment to provide it. The second development that ultimately led to tunnel construction happened ten years earlier: in 1903 the first successful power flight was reported by the Wright Brothers.

It was the dream of an island airport that finally provided the hard-nosed rationale that would make a fixed link to the islands a “necessity.” In the 1920s, seaplanes were using the Toronto Harbour and, by 1929, airmail service between

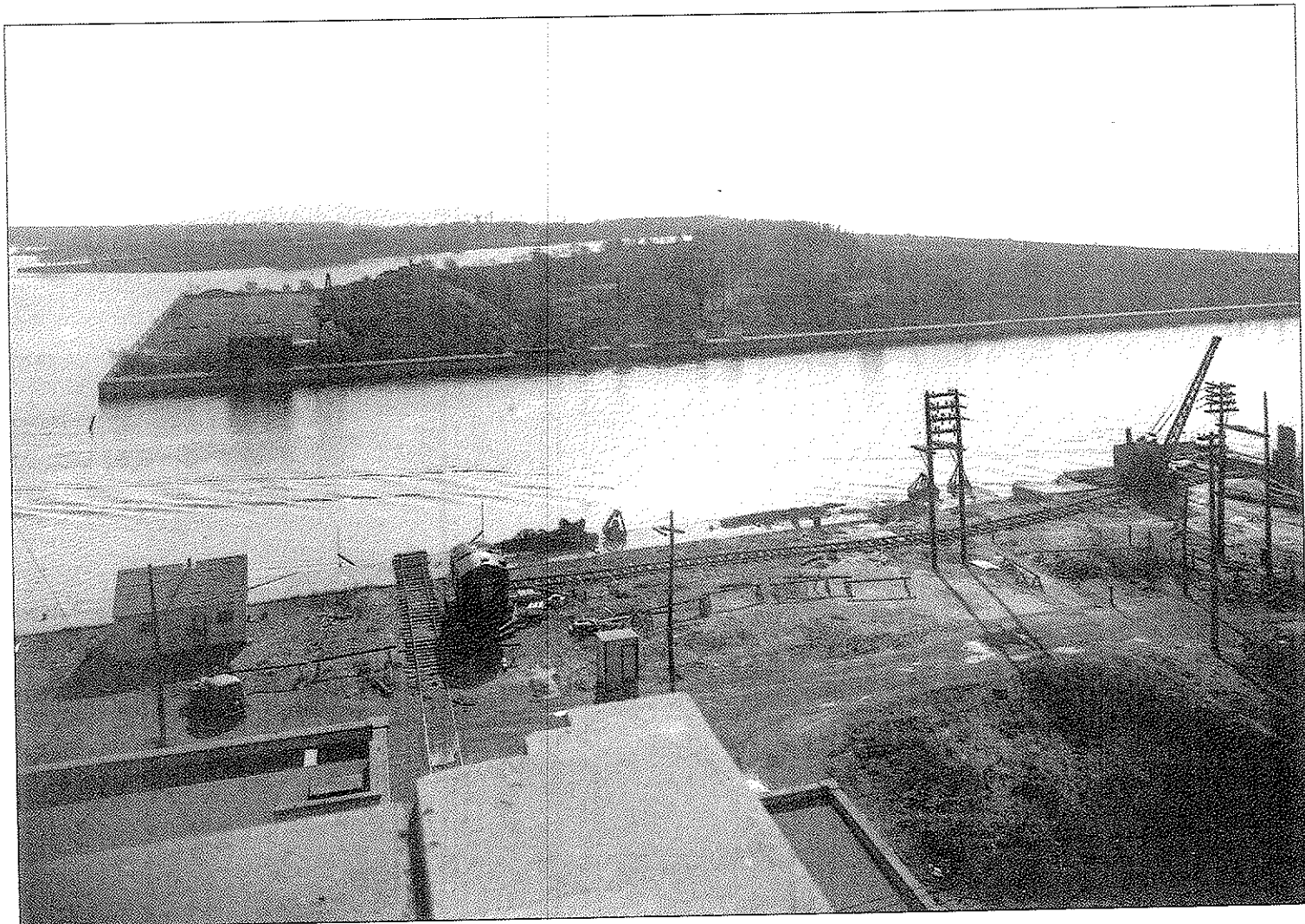


Fig. 17-1. An aerial shot across the western gap. Given how close the islands are to the mainland, it's no surprise that there have been many proposals for bridges and tunnels over the years. This photograph was taken to chronicle construction that began on a tunnel to the islands in 1935. [Toronto Port Authority Archives. PCI/1/11181]

Toronto and Buffalo commenced, again using amphibious planes (the service was discontinued in 1931). That same year, Toronto city council gave the Harbour Commission funds for preliminary work on an island "air harbour" across the western gap. A fixed link to the mainland was considered an integral part of any airport plan. A 1934 report prepared for the Harbour Commission recommended a tunnel instead of a bridge, however. The view was that, although a tunnel would be more expensive initially to construct, over the long run, it would be less expensive to operate; a lift bridge would require staff and would have to be opened six to seven thousand times a year. At a time when ship traffic was expected to increase significantly (the rebuilt Welland Canal had recently opened), this was more than an inconvenience: with a lift bridge there was always the possibility of a maritime collision, a hazard that a tunnel eliminated.

In February 1935 Mayor James Simpson went to Ottawa to meet with the minister of public works, H.A. Stewart, to try to get federal funds for the project. Two months later, the government included \$1 million for the tunnel project in a bill that allocated money for various relief works across the country. The government wanted the bill to receive royal assent before the Easter recess, but the tunnel was harshly criticized by Liberal members of the House, who called it "a tunnel to a summer resort." They wanted money spent on slum clearance, an idea that had been advocated the previous year in a report by Ontario's lieutenant governor, Herbert Bruce. After seven hours of debate, the bill failed to clear committee. When the House resumed sitting in May, a Liberal motion to reallocate the tunnel money was ruled out of order, and the bill finally passed.

The ride wasn't any easier at city council. City staff were of the view that if the tunnel were built, it would result in pressure to allow automobile traffic on the islands, which would be incompatible with its role as a public playground. It

was a well-founded fear: plans prepared in April 1935 already showed the tunnel linking up with a "Boulevard Drive" on the island, part of a forty-five-mile ring road around the city that the Harbour Commission had been championing since 1921. And then there was the money issue. The Harbour Commission informed council that the federal government would not tender the contract for the tunnel until assurances had been received that the city would approve some \$425,000 of additional funds, \$119,000 for paving and ventilation in the tunnel and an additional \$305,000 to be spent by the commission in developing the airport. Moreover, the city would be responsible for the tunnel's ongoing maintenance.

Councillor Sam McBride (Fig. 17-2) argued that on these terms, the federal government's \$1-million gift was actually an unending liability for the city. His research showed that municipal airports across North America were money-losers. And anyway, he warned council, only "murderers and millionaires" travelled by air. The debate at council was acrimonious, going into the early hours of the morning. But when a vote was finally taken at 2:30 a.m. on August 8, the tunnel got council support by a vote of fifteen to seven.

Things moved relatively quickly from that point. Tenders were received the next month and a construction contract was signed in October. The tunnel would be 1327.7 feet long, including approaches, and have an interior width of fifty-five feet, four inches. Forty feet of that would be taken up by roadway, with additional provision for two seven-foot sidewalks. From the ceiling of the tunnel to the top of the road would be fourteen feet (Fig. 17-3). Work began almost immediately and proceeded quickly. Underground utilities were moved out of the way on the mainland, the channel was dredged and steel piling and crib bedding were installed in the channel as part of a temporary coffer dam to keep water out of the work area. Most dramatically, the sea wall on the northern part of the western gap was broken as the first step in digging under the lake bed (Figs. 17-4, 17-5).

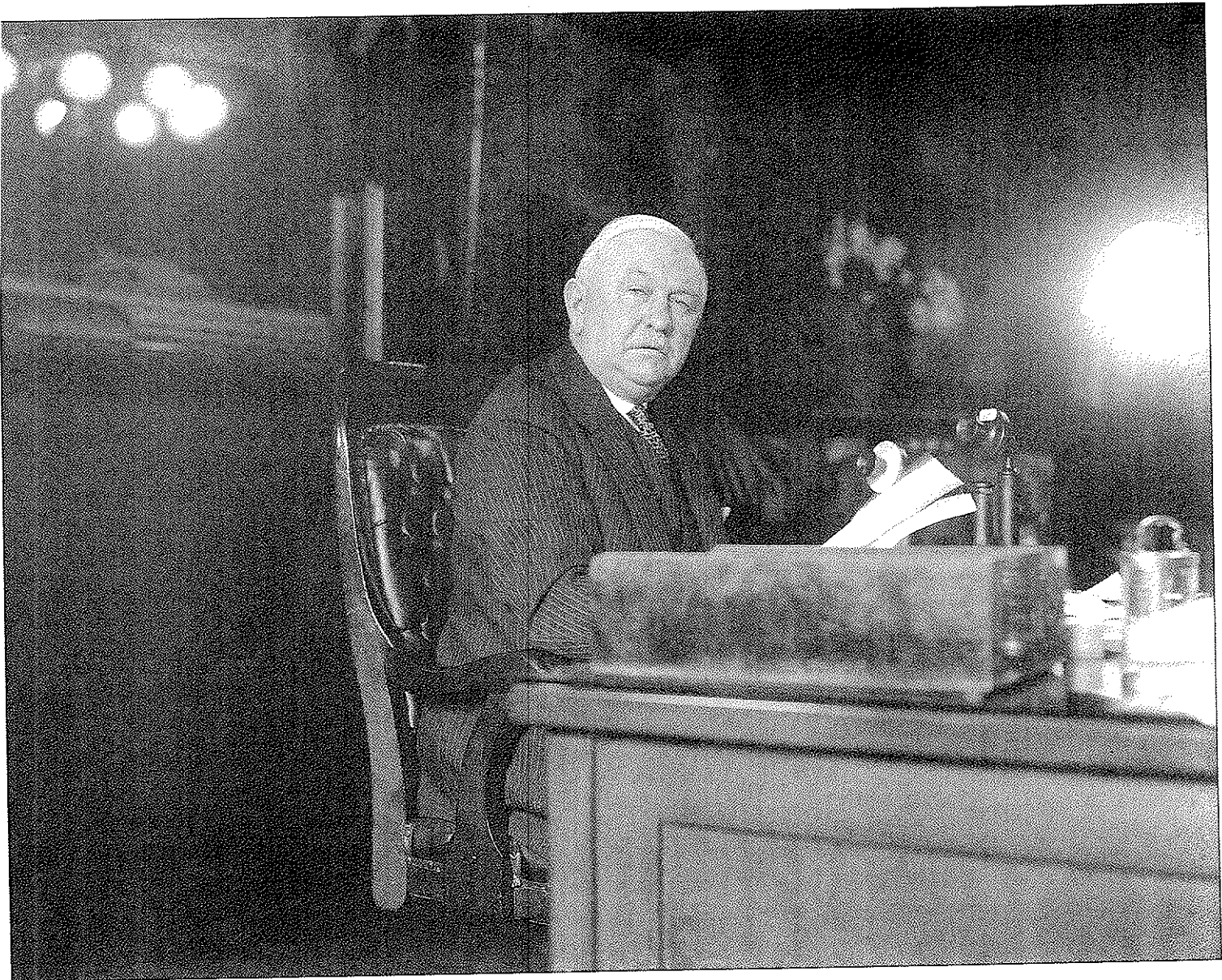


Fig. 17-2. Samuel McBride, whose election as mayor in 1936 ensured the Toronto islands tunnel project would stay dead. [City of Toronto Archives. Series 1057. Item 3517]

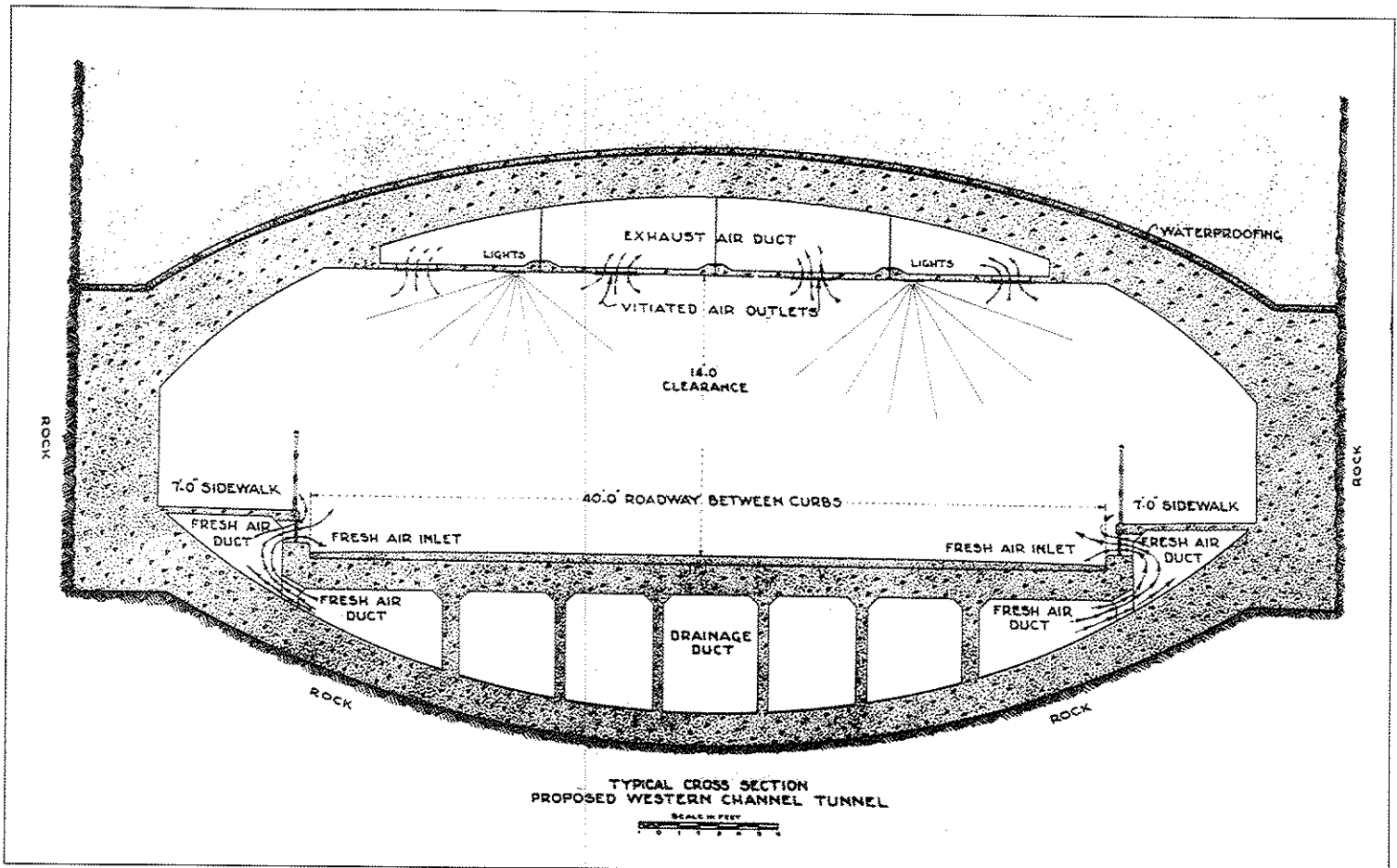


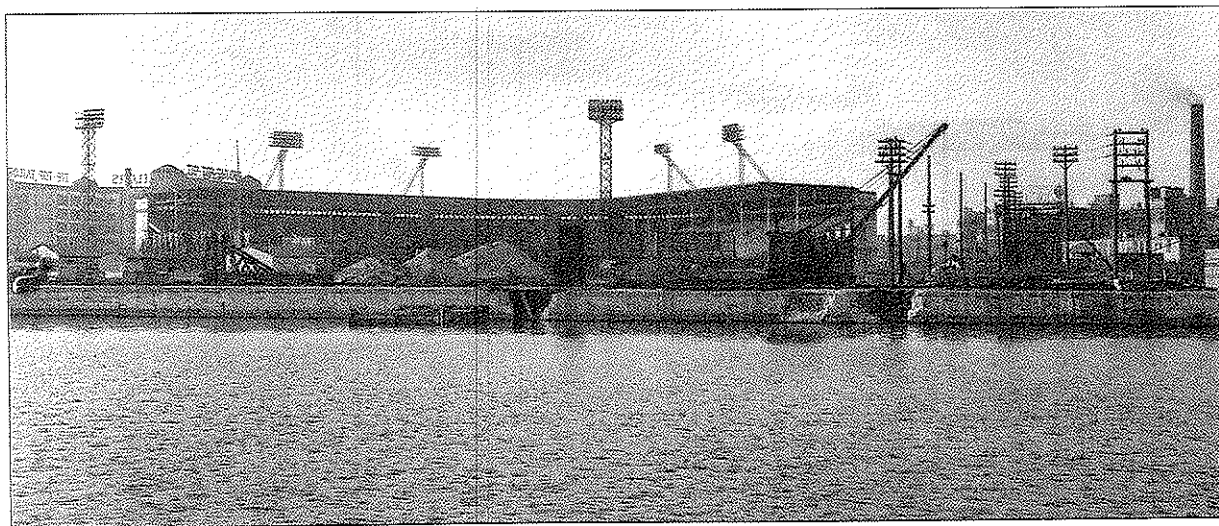
Fig. 17-3. A cross-section of the tunnel shows accommodation for vehicular and pedestrian traffic. A conduit below the road bed would carry utilities from the mainland to the island. [Toronto Port Authority Archives, PC1/1/11180]

But on October 14, 1935, R.B. Bennett's Conservatives were defeated by William Lyon Mackenzie King's Liberals. The party that had opposed the project was now the government. The events that followed were inevitable. On the evening of Tuesday, October 29, a telegram was sent by the new federal minister of public works, J.A. Cardin, ordering the work suspended (as part of a review of all major contracts

signed by the previous government). Work carried on till noon the next day, when the city's commissioner of public works, R.C. Harris, relayed the stop-work order to the construction site. The city's board of control voted to send Mayor Simpson to Ottawa to persuade the government to reverse its decision, but it was futile. In the last week of the year, the federal government officially notified the contractor that the



Fig. 17-4 (top). Work on the islands tunnel began and ended in the fall of 1935. This photograph is stamped October 15, 1935, eleven days before the federal government sent a telegram ordering that all construction be stopped. [Toronto Port Authority Archives. PC1/1/11136]. **Fig. 17-5 (bottom).** This shot shows the breaks made in the seawall of the western gap during tunnel construction. In the background is Maple Leaf Stadium, which had been built by the Toronto Harbour Commissioners in 1926. Demolished in 1968, it lives on only in the name Stadium Road, near Bathurst Quay. [Toronto Port Authority Archives. PC1/1/11194]



contract had been terminated. A few days later, on New Year's Day 1936, Samuel McBride defeated Simpson for the mayor's job. His opposition to the tunnel had been a very public part of his platform. The tunnel project was truly dead. The holes that had been made in the north wall of the western channel were filled in August 1936.

The Harbour Commission had warned that if a tunnel wasn't built, the airport project would also have to be shelved. But the island airport was up and running by 1939. Access was by ferry.

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