

Soaking Sensual Nakedness
Haptic Bathhouse Explorations

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ABSTRACT

How can architecture stimulate an increased haptic experience?

People with sight lack the everyday immediacy of sensory awareness as compared with people with significant sight impairment. When sight is lost, the mind compensates by heightening the other senses for receiving information. In particular, people who are sight impaired depend on their “somesthesis,” or skin sense, for information.

In contrast, people who are sighted do not depend on somesthesis to accomplish everyday tasks. Many may go through an entire day without considering their sense of touch. If awareness exists, it is likely through discomfort such as that first barefooted encounter on ice cold tile first thing in the morning or grabbing a burning steering wheel after it baked all day in the hot summer sun.

Heschong writes “If sight allows for a three-dimensional world, then each other sense contributes at least one, if not more, additional dimensions.” (Heschong, p. 28-29) The sighted rely so heavily on the visual sense for information. They miss many simple tactile encounters along with all their contiguous sensational experiences, constricting the development of these additional dimensions, thus significantly diminishing the depth and complexity of their existence.

This is an exploration of touch, a bathhouse, just south of Dupont Circle in the urban fabric of Washington DC. Experiencing a place where the entire body can intimately converge with a building saturated with tactile opportunities, the surprise of stimulating skin-to-surface encounters will remind us of our wonderful somatosensation. How we feel during these sensual unions will add vividness to our lives and a desire to again search for more tactile stimuli feeding our rejuvenated mindfulness.

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GENERAL AUDIENCE ABSTRACT

How can architecture stimulate an increased tactile (perceptible by touch) experience?

People with sight lack the everyday immediacy of sensory awareness as compared with people with significant sight impairment. When sight is lost, the mind compensates by heightening the other senses for receiving information. In particular, people who are sight impaired depend on their “somesthesis,” or skin sense, for information.

This thesis is an exploration of touch, a bathhouse, just south of Dupont Circle in the urban fabric of Washington DC. The program elements of a bathhouse provide opportunities for physically pairing parts of the entire body with different textures and temperatures. By doing so, our architectural experience will be enhanced with the information gained through our sense of touch, which in turn will reinforce memory of place adding meaning to our existence.

For my mother, Rebecca Marie Wade Forsell
Inspiration, Mentor and Friend

Acknowledgements

Foremost I thank my entire family for their support and infinite positive encouragement. I am grateful to the National Gallery of Art's Design Department for their patience and flexibility nurturing the growth of my architectural development through meticulously high standards. I also praise George Sexton Associates for immersion into the world of architectural lighting broadening my repertoire with another fascinating and essential facet of the built world. I would especially like to thank my thesis committee: Susan Piedmont-Palladino for her savvy erudition and firmness, Director Jaan Holt for his experience and patience, Dr. Paul Emmons for his insight and unending optimism, and the late Dr. Marco Frascari for his legacy of infinite wisdom. I am also thoroughly appreciative to Virginia Polytechnic Institute and State University's College of Architecture and Urban Studies for empowering my personal discovery of and devotion to deep architectural meaning and purpose.

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Preface

During the summer of 1999, my parents traveled from Florida to visit Washington DC. Being their first time in our nation's capital, they had many things on their agenda. My interest in architecture and urban studies had introduced me to a different perspective of the places usual to the five-day visitor, so naturally I wanted to share these experiences. My goal was to challenge their idea of what *good* architecture was through examining the building concepts and materials.



National Gallery of Art, East Wing

The visit to the National Gallery of Art was the most important. I had first taken my parents to the East Building designed by I. M. Pei. It seemed like the perfect opportunity to introduce them to a building designed by a famous architect who had been an integral part of my education. Certainly there was interest in the building because of its initial uniqueness, but communicating my experiential perception was lost on my mother. I did not know why until we walked in the West Building of the National Gallery of Art.

Of course, being in a grand city, we had to enter the West Building from the grand entrance off of the National Mall. My mother immediately reacted to the space. She touched the cool stone of the columns. Because she could wrap her arms around them only so far, she had an idea of their scale. Through their repetition and rhythm, my mother concluded how they were working together to support a very high and heavy ceiling above. As she moved about, she talked louder testing the sound and discovering that there was a rotunda far above. She felt cool next to the rush of falling water in the center fountain. In her own way, she immediately understood that space. My mother loved and never forgot that space.



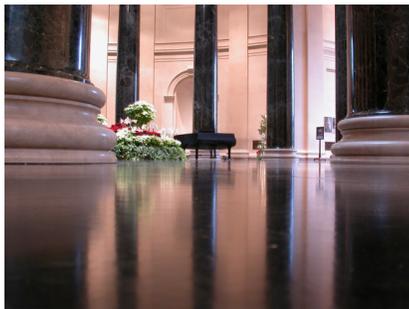
National Gallery of Art,
West Wing

I was devastated. The building that I was proud of and most excited about sharing was quickly pushed aside and soon after, forgotten. Yet, another building that I appreciated but had much lower expectations of its impact on my parents was praised, eagerly talked about, and has remained in my parents' memories to this day as one of the most wonderful buildings they had ever experienced.

Preface

Looking back, I came to realize that my mother's experience in the West Building of the National Gallery of Art was the most enlightening event in the development and progression of my thesis. This time with my mother was the first exposure I had with her since she had lost most of her sight resulting from Diabetes. In later conversations with her, it became clear why she enjoyed the West Building so much more than the East. Why she loves some spaces more than others depends on how she experiences architecture.

My mother had a difficult time maneuvering over the original brick sidewalks in Old Town Alexandria. The uneven and broken bricks were very challenging to balance on and read. Her cane constantly caught every subtle crevice straining her arm and her patience. Contrastingly, she loved the evenly textured marble and wood floors of the National Gallery of Art. Since there was less worry about balance and misread obstacles, her attention was left free to experience the rest of what the building had to offer.



National Gallery of Art, Marble Floor



National Gallery of Art, Wood Floor

I began to realize that her perception of architecture was through the sounds of the space, or through cool comforting breezes, but mostly through her immediate sense of touch. In contrast, I realized that my entire foundation for critiquing architecture greatly depended on my visual perception. Some spaces were completely void of tactile stimulation. How can one draw an opinion of a space when there is very little information to go on?

I now had a directive. The sight impaired shall also be given the opportunity to learn about a space through their own natural information system, their sense of touch.



Collage Recto



Collage Verso

The Mind

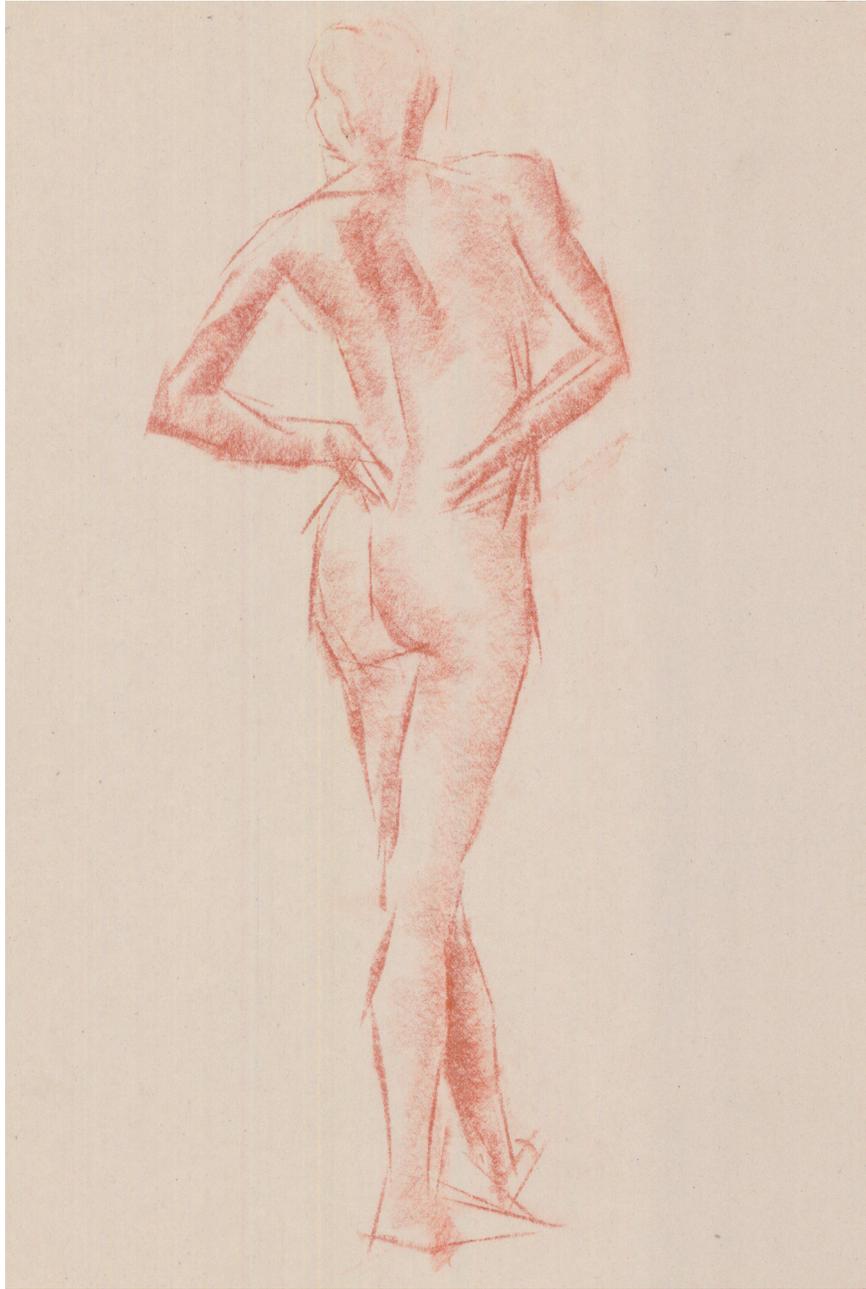


Figure Study

Introduction

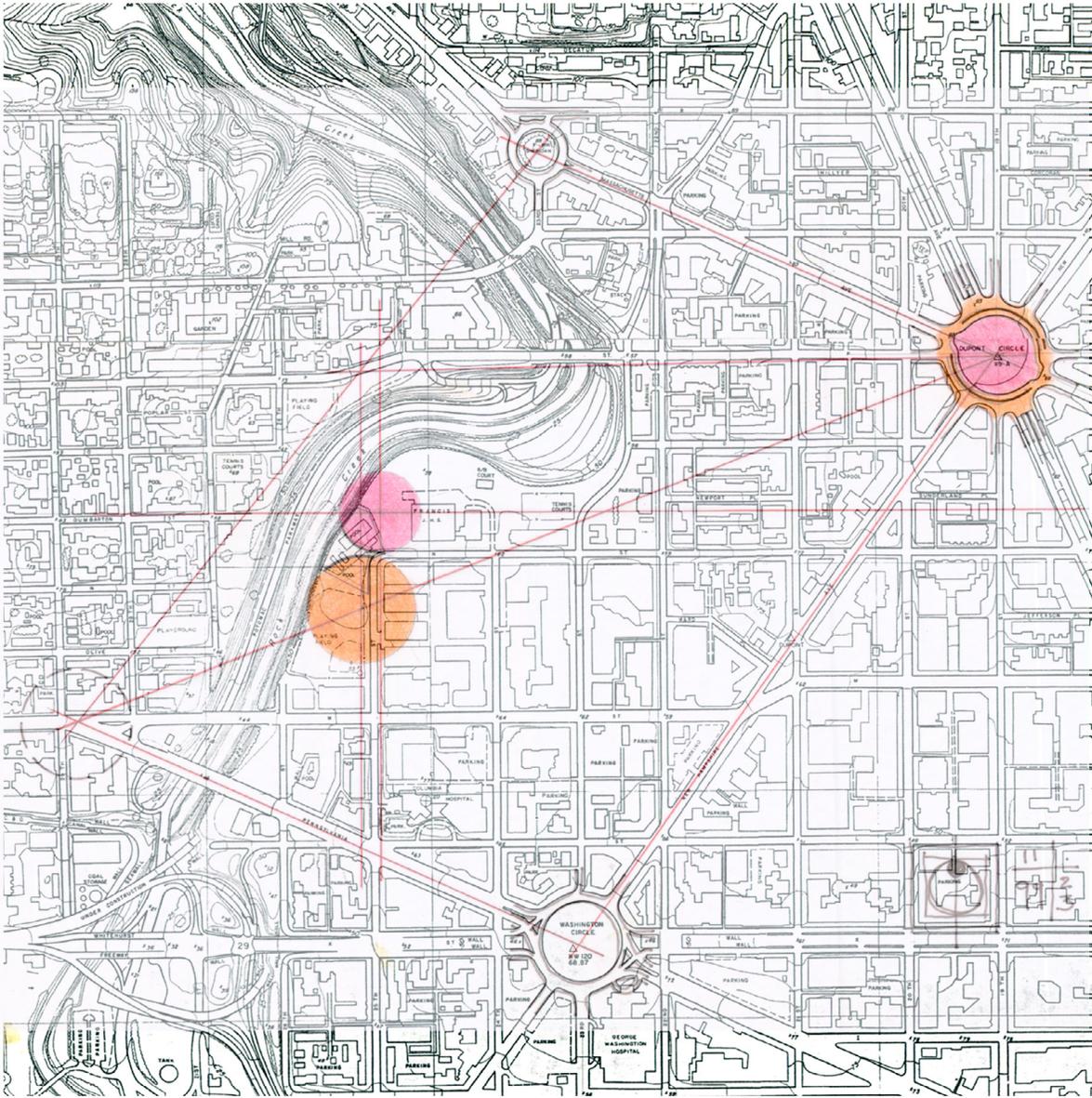
Nakedness is the ideal state for thoroughly experiencing how a constructed environment physically affects the body. When a bench is sat upon, limited physical characteristics can be felt through clothing. The bare skin, the largest sensory organ of the body, can sense minute changes in temperature and texture. Without clothing, one can now begin to distinguish between different areas and levels of sensitivity across the entire body.

“Massage has a positive effect on the body’s physiological and psychological functions. It can help with... enhancing body awareness.” (Maxwell – Hudson, p.16)

The bathhouse sociably and legally incorporates as much nakedness as possible into its use, and purpose. Here, the skin can experience a plethora of different textures against a variety of newly revealed body parts. On a grander scale, the two different extreme seasonal environments, winter and summer, opportunistically elevate awareness of thermal comfort.

Nomadic people of Asia transported Yurts, their small homes. These simple domed structures were designed to withstand months of strong wind and climate changes. When necessary, up to eight layers were added or removed to accommodate these changes. (Pearson, p.29) Today, people wear different layers of clothing as a more refined, modernly portable, personal shelter. Like the Asian Nomads, these layers allow us to be thermally comfortable in almost any condition. However, these layers also mute geographic environmental stimuli thus shielding awareness. By removing the clothing, we again become thermally conscious of these different environments.

This bathhouse would dwell on the edge of Rock Creek Park, an unexpected organic vein within the urban fabric of Washington DC, a few blocks southwest of Dupont Circle. The orthogonally rigid winter side borders Washington’s grid facing the warm south sun. In deliberate contrast, the curvaceous summer side lies within the organically natural whimsy of Rock Creek Park facing the cooler north.



Area Map



Site, Looking Southeast Towards Adjacent Office Building



Site, Adjacent Office Building



Site, Looking Northwest



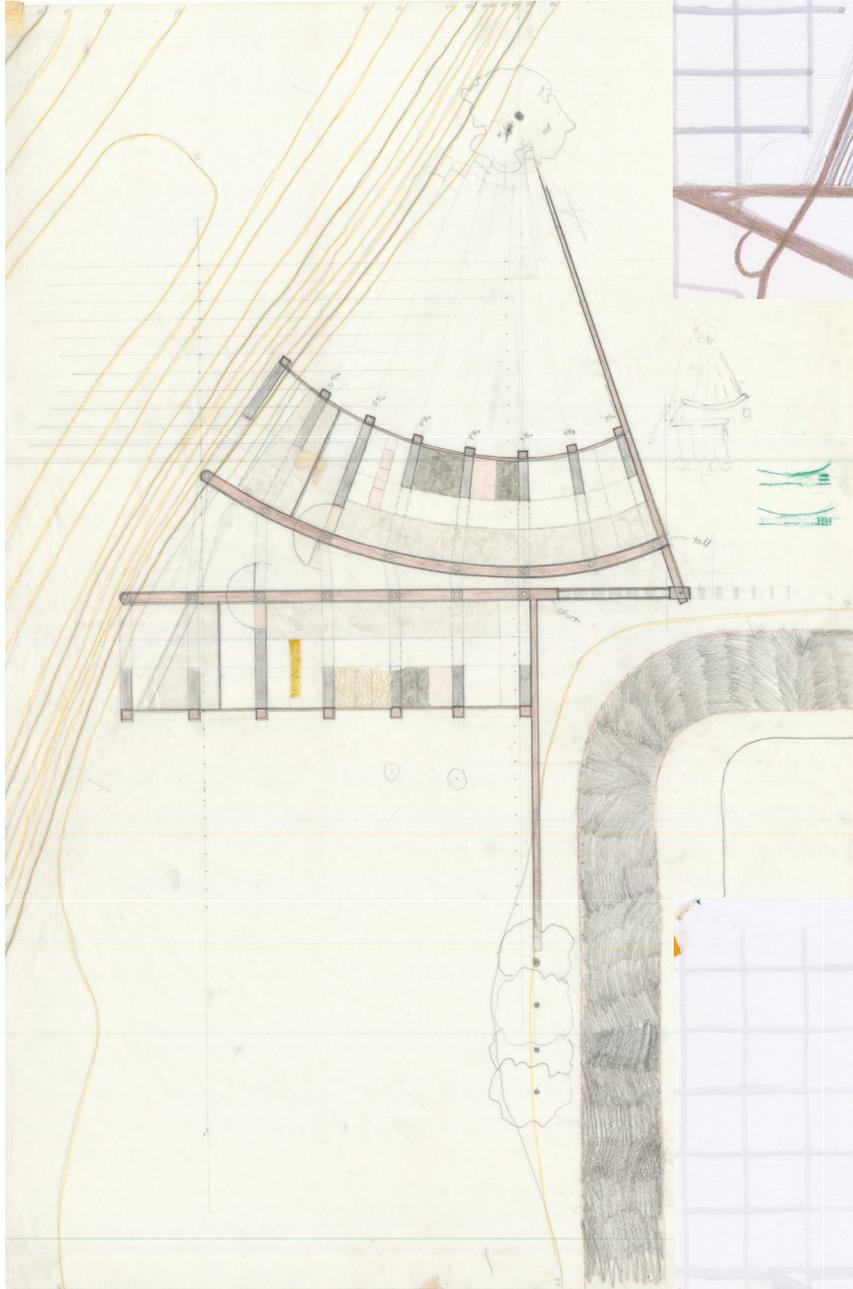
Site, Nearby School



Site, Looking East Towards Nearby School



Site, Looking Northwest



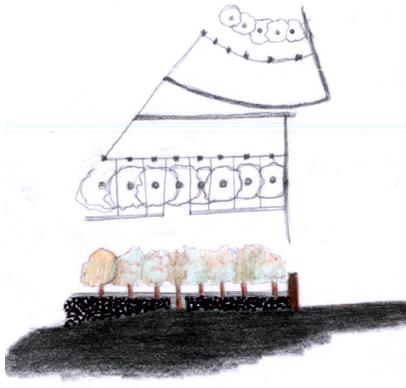
Site Plan



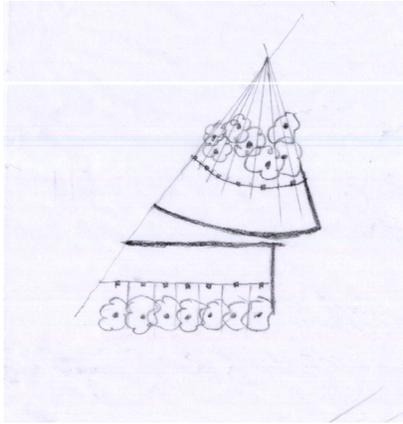
Site Study



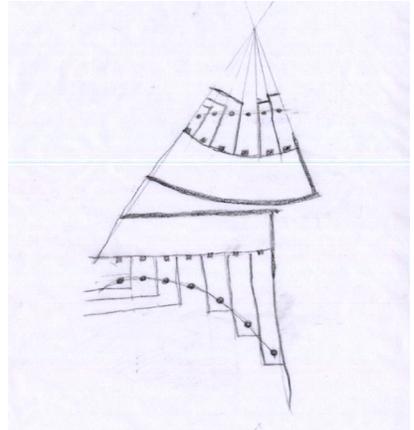
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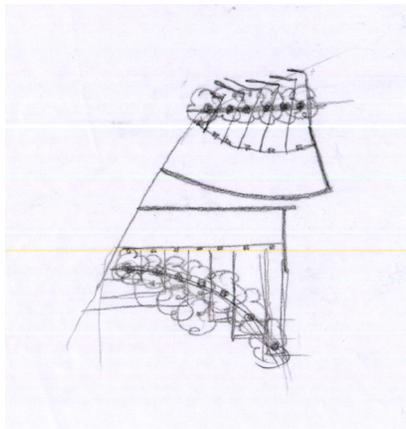
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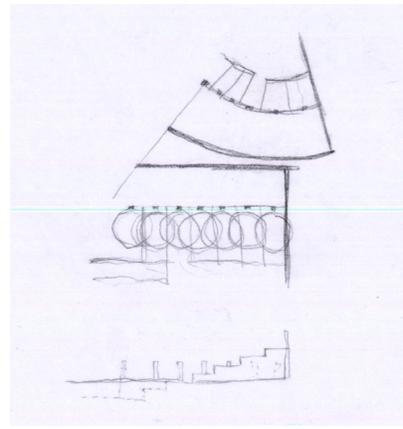
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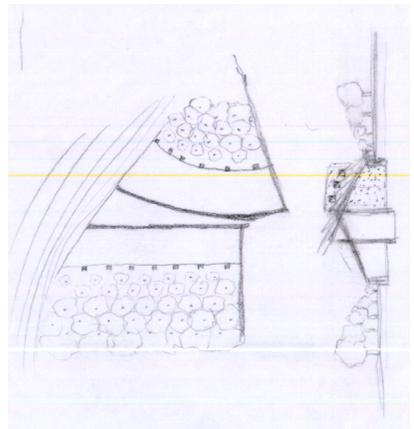
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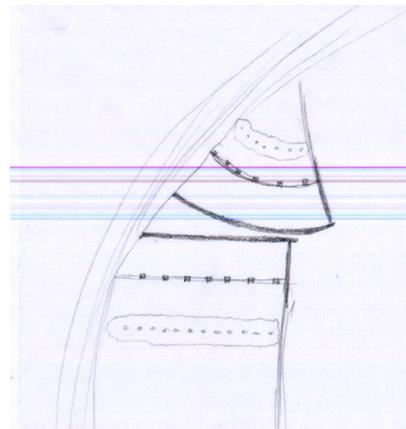
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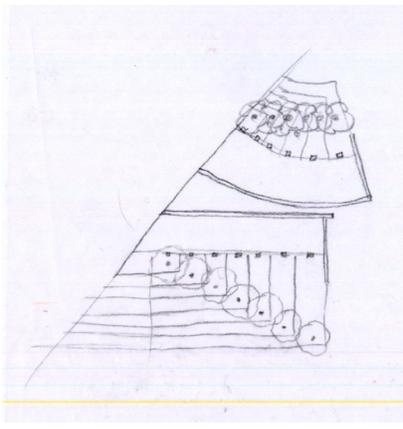
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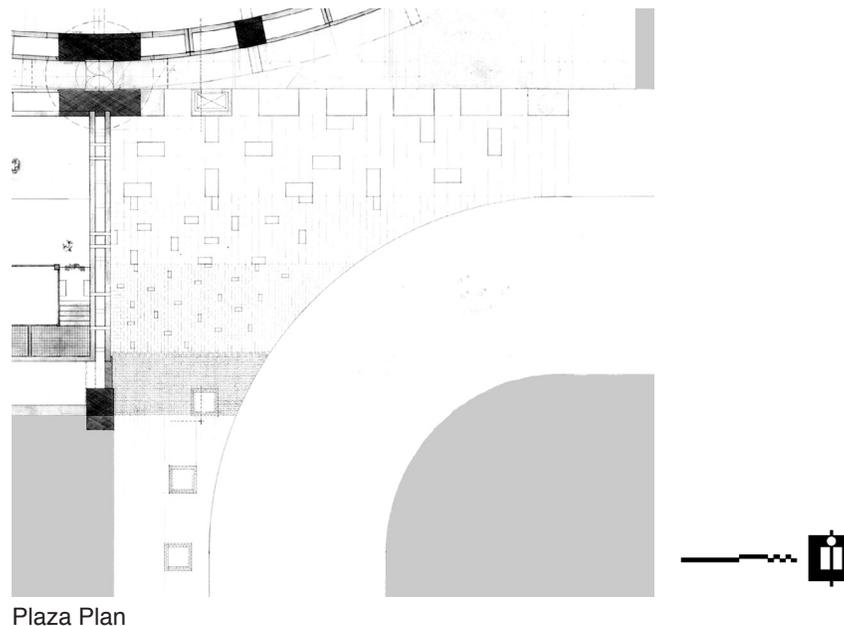


Site Study

Enhanced Sighted Experience

If a person must physically interact with a surface, why not design that surface to enhance their bodily experience?

A person without sight having refined their sense of touch through everyday information acquisition will physically recognize the difference between concrete block and brick. Concrete block, being larger, more loosely composed and somewhat roughly formed with much larger aggregate and air spaces, will feel rough. Brick, being smaller, composed of densely packed particles will render a slightly smoother texture in contrast. The sighted will see that there are essentially two different materials by basic difference in visual size and color. Strategically locating these materials in high touch areas and enhancing physical differences by further refinement of a brick's smoothness and roughing the texture of concrete block, the sighted will be encouraged to heighten their experience of these different materials through both senses sight and touch, adding another dimension to their understanding.



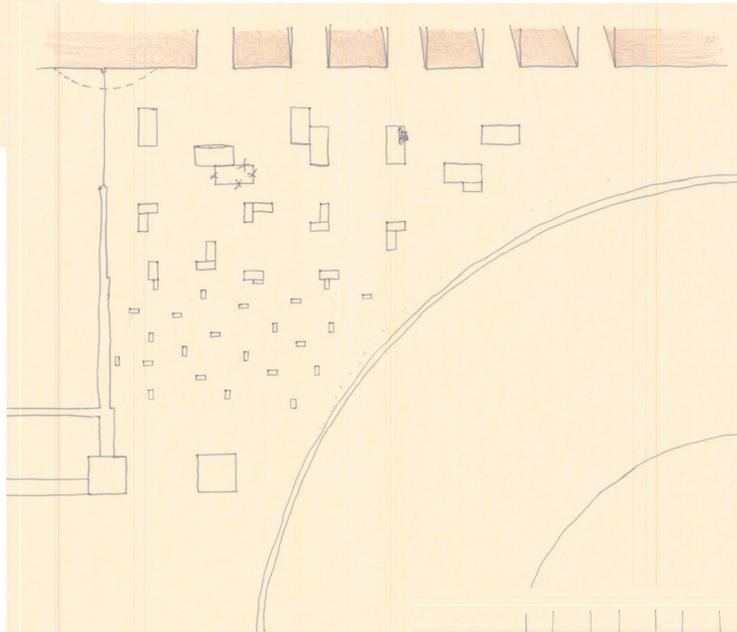
The south plaza reintroduces the sighted to what they may normally take for granted every day, the act of walking. The surface originates with a brick paved floor commonly found in and around Washington DC. Similar to the older unevenly worn and textured brick sidewalks, whole bricks are raised on the surface above all the rest. This jolts each person's awareness of every step taken.

"Construction always precedes, for no art form can originate without it, and the task of art, which is to idealize existing objects, becomes impossible without the existence of the object." (Ford, p. 211) Architecture, the art of construction itself, has the aspiration to converse with its user. A structure's existence is dependent on the user's perception of its existence.



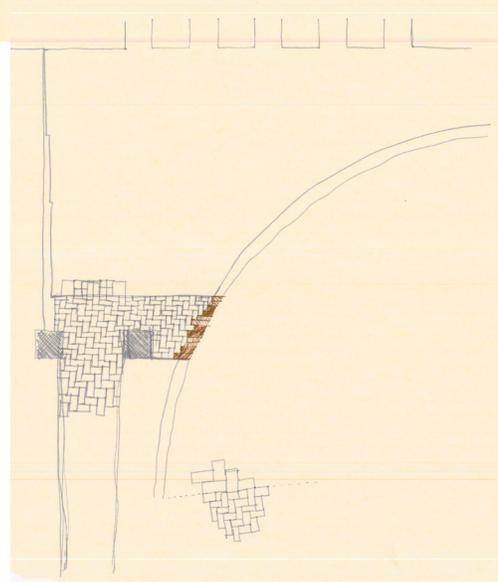
Plaza Plan Study

When one touches the building, one touches construction. And when one touches construction, one touches the builder. The guest's first encounter with the architect begins in this plaza. This heightened initial physical awareness, beginning in this outside room, prepares the guest to maximize their comprehension of the bathhouse experience as the designer's idealization of the existence of architecture.



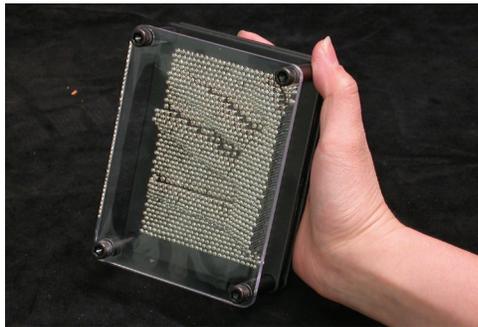
Plaza Plan Study

Someone circuitously traversing across the plaza will notice a transition from brick to concrete block, slightly larger in scale and smoother in field texture. Analogous to the field of brick, concrete blocks in various locations are raised creating more conspicuous obstacles. Closer to the entry, the concrete block is replaced by larger blocks of stone which progressively increase in size. As the scale increases, so does the height of the raised plinths, which then provide opportunities for seating. These elevated plateaus become social places where people, traveling from all directions through the grid may converge and meet.

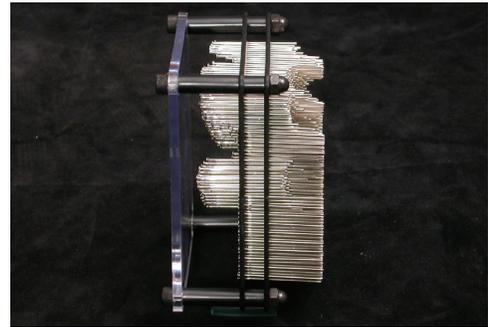


Plaza Plan Study

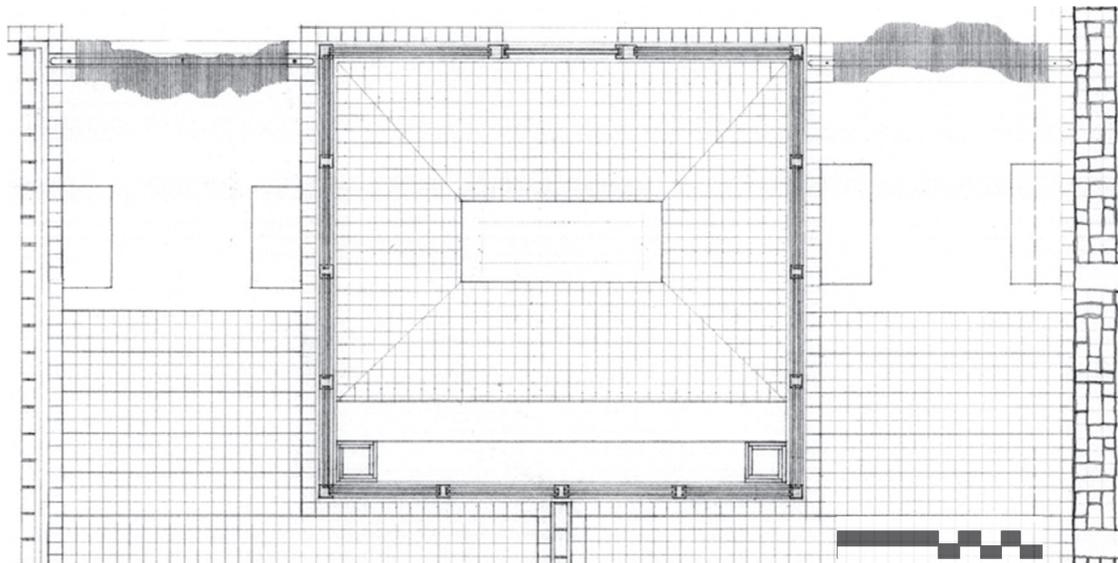
Doors are elements of architecture that require more intimate human engagement. How and where they are touched depend on what lies on the other side. A door to the aromatherapy baths will be touched differently than a door of a restroom stall or even the door through the main entrance. The unclothed bather will be required to carry oils or alcohols and exfoliating Loofahs or pumice stone. Arms full, the bather will be prevented from conventionally opening the door with just the hands. Therefore unusual parts of the body must make contact. The doors are designed to be opened simply with the body, harnessing this tactile opportunity. Since the body's unprotected skin is more sensitive, this situation offers an intensified tactile experience.



Imprinting with the Body



Side View with Imprint



Plan Detail of Entry to Winter Aromatherapy Bath

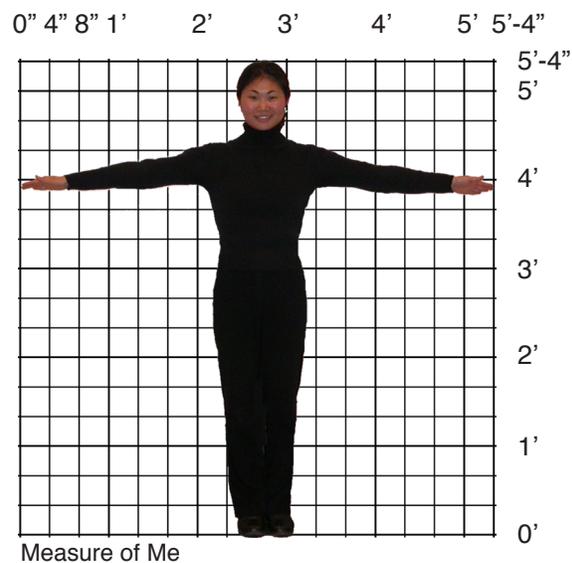
Each door is composed of thousands of little comfortably rounded rods that slide into the panel regulated by applied pressure. The body will feel these tiny rods gently poking the skin. The field of pins will hold the imprint of those encountered body parts in its memory until encountered again in the opposite direction. These doors also become visually stimulating and informative. If a volume is pressed in or protruding out, a bather awaiting an aromatherapy bath will be able to distinguish between occupancy and vacancy respectively

Touching the Building is Touching the Architect

Another method of understanding something is to compare it to one's self. Physically referencing to one's body provides a closer understanding of personal comfort and can lead to more intimate observations.

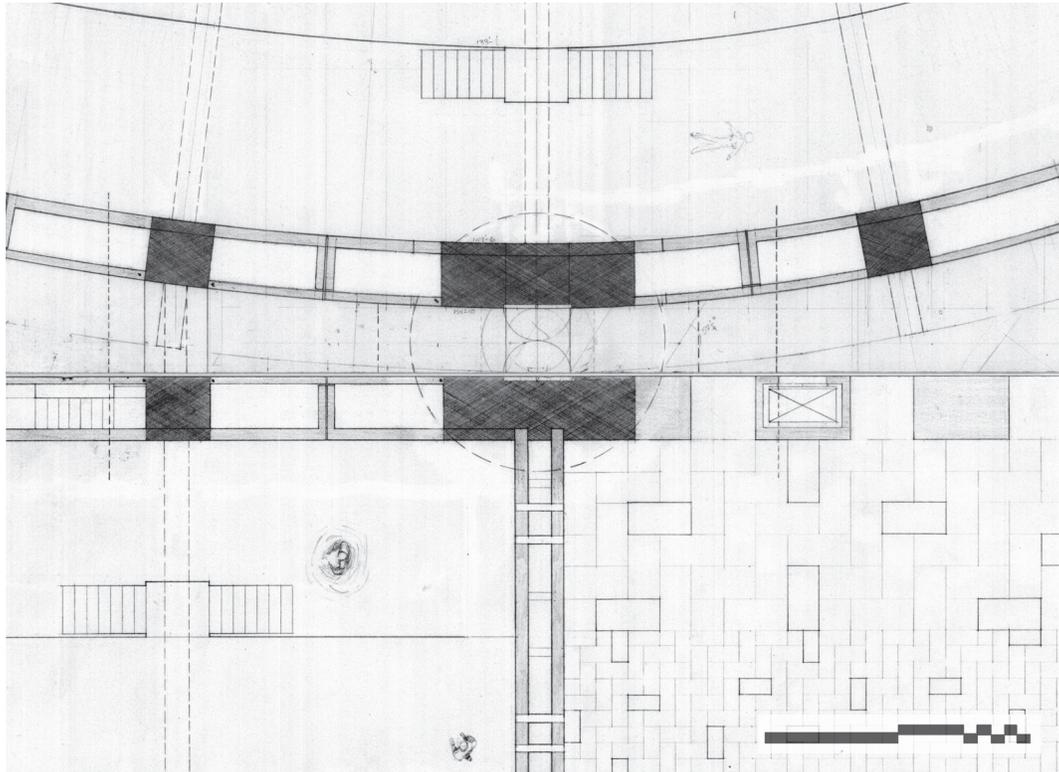
In Christianity, God created the body of man, the most beloved creation in the likeness of Himself. (Zondervan, Gen. 1:26) Philosophically, all architects are gods of their own wondrous bodies of structure. Part of the architect always lies in those buildings from the mental and physical effort to the critical design decisions made based on many years of life influencing experiences. Gian Lorenzo Bernini relayed to Paul Freart, Sieur de Changelou a relationship linking the body to building. He stated that "the beauty of everything in the world (and therefore architecture also) consisted of proportion" and that "the variety of the orders arose from... man's body and woman's." (Rykwert, p. 29-30) Combining these ideas, many physical elements of this bathhouse are not only proportioned on a human body but more specifically, proportioned on the body of the architect.

My own physical measure became the underlying proportioning system for the entire bone structure of the building. Head to toe and fingertip to fingertip of my own arms stretched out on either side measures to be 5'-4". This dimension and proportions of this dimension are integrated throughout this bathhouse.



Richard Neutra recalled "If I want a wood paneling or wainscot to be of a certain height, I stand there, hold my hand at that certain height, and the carpenter makes his pencil mark. Then I step back and look at it from one point and from another, visualizing the finished result with all my powers. This is the only human way to decide the height of a wainscot, or the width of a window." (Ford, p.23) When the designer becomes more personally and physically involved in the design process, the designer will inherently add more meaning to the building. The more personalized the building becomes the more intricacy there is to experience and interpret by the guest.

As one nears the entry, two main walls 5'-4" thick each, begin to converge towards tall wooden doors. One can glimpse through a two inch horizontal slit, which extends one inch below and one inch above my own horizon line of 5'-0", to see if anyone is approaching on the other side. Initial interaction with me begins with the height of that narrow viewing area. The more ease one has viewing, the closer that person is to my own natural horizon line. Those who are either very tall or very short will suddenly become more aware of their own vertical adjustment to see through the opening and therefore their own height with respect to the architect's.

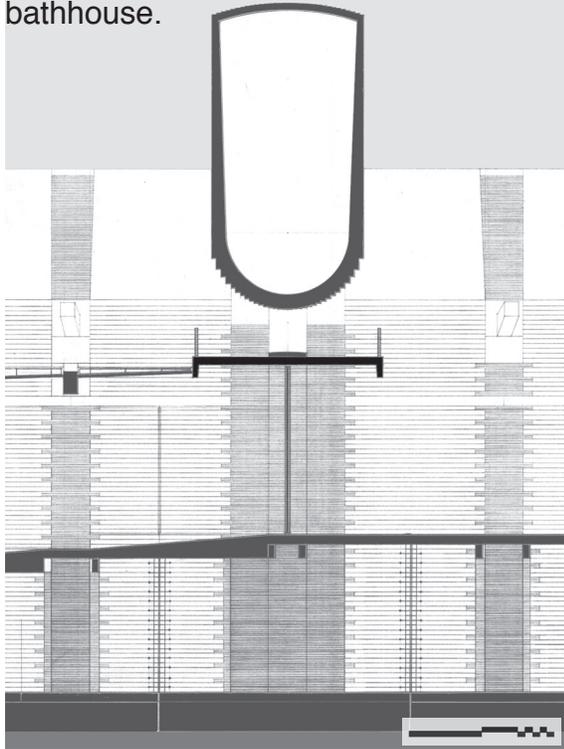


Plan Detail of Entry

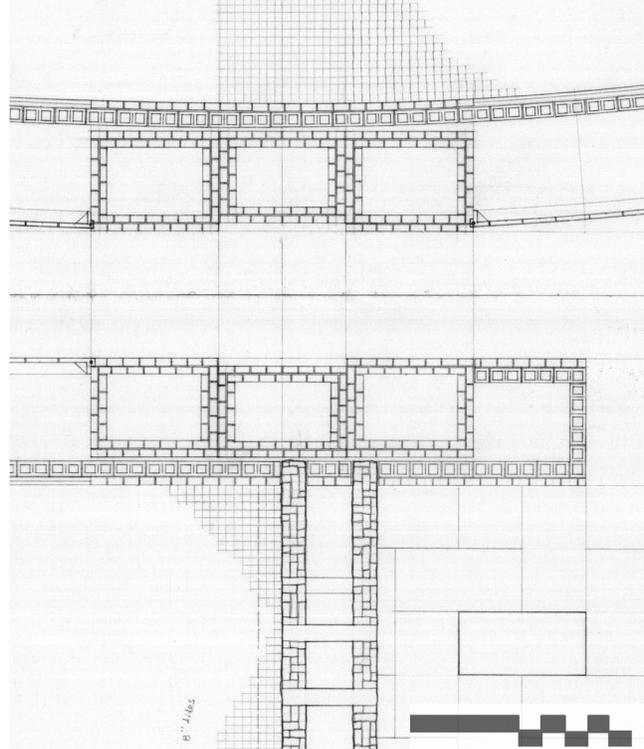
The bather will physically encounter the architect while passing through the doors. The two wooden doors are 2'-8" wide each, half of 5'-4" encouraging the opening of both at nearly the same time. Swinging in opposite directions the bather will use both sides of their body to pass through the middle. If they naturally swing both doors completely open, easily pressing one against each opposing wall, then they can stretch their arms out wider than me and might feel slightly claustrophobic passing through that narrow threshold. However, if they push both doors with plenty of room to spare then they are smaller than me and may feel slightly dwarfed among the wide opening.

The bather now stands in a 5'-4" square bound on the north by a 5'-4" column of the summer side, on the south by a 5'-4" column of the winter side, on the east by the busy urban exterior, and on the west by the serene interior leading to the baths.

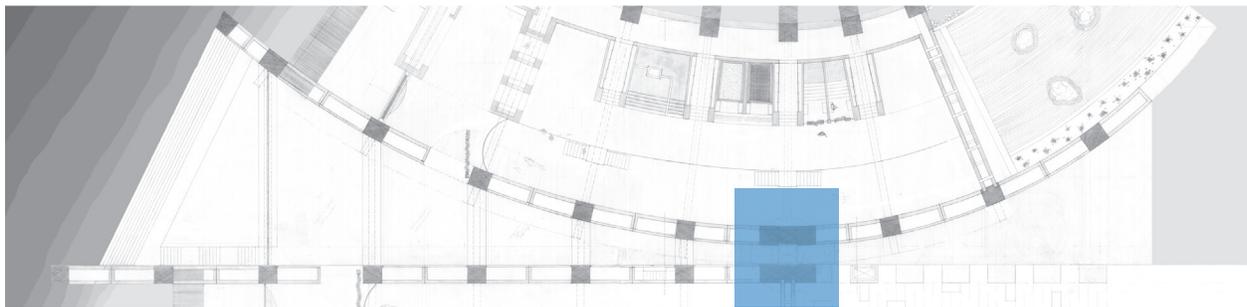
On the inside, the two main walls originate from this square, the navel of the entire building. Above the navel hovers a water tower 256" in diameter equaling 5'-4" multiplied by four, one for each of the cardinal directions, nourishing the essence of the bathhouse.



Section Detail at Entry

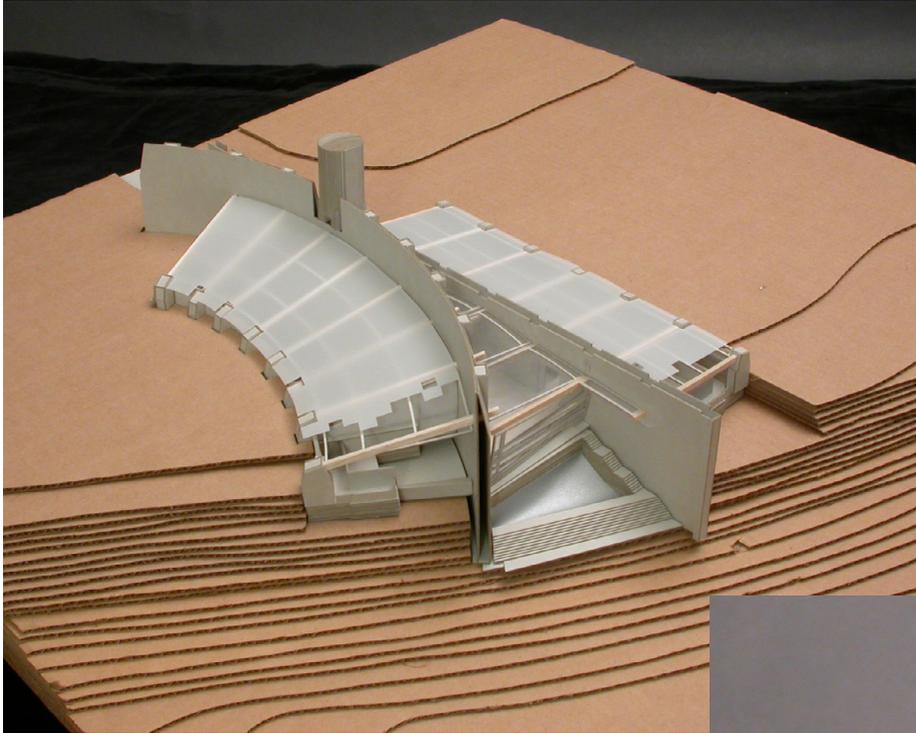


Plan Detail at Entry

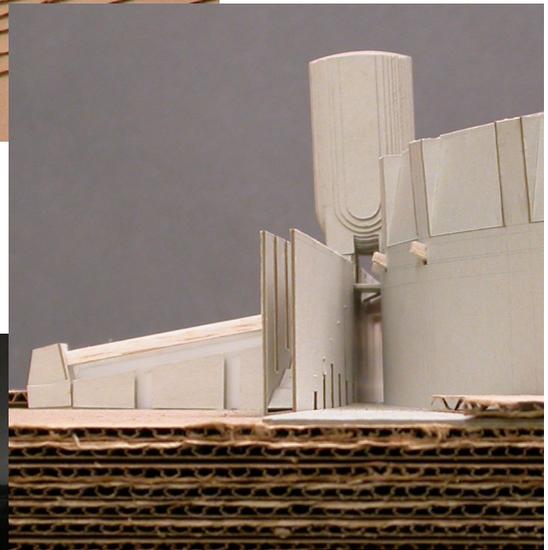


Plan of Central Spine

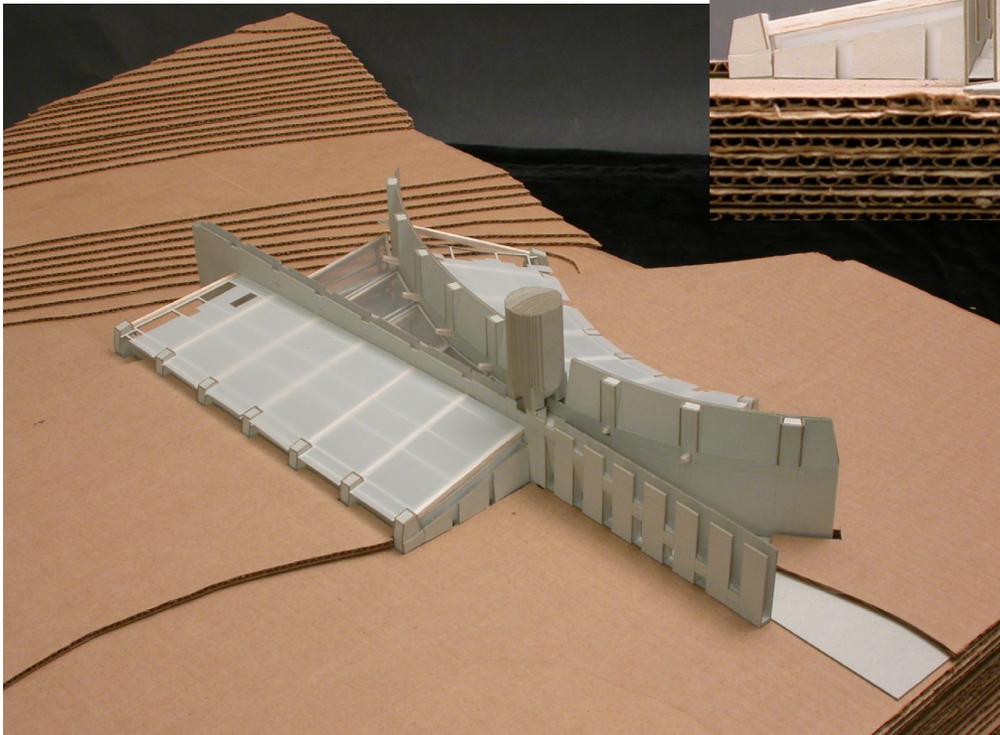
This square landing, aligning with the columns and shadowed by the water tower above, begins the structural understanding of the whole bathhouse. The columns, each 5'-4" square, are spaced 25" apart. Since the landings are all aligned with the columns, the bather will be able to compare their stride to mine on each 25' stretch of ramp which is ten of my own paces. They may naturally land on the flat landing, or have to adjust their stride. This articulation is further enhanced by the sun and the seasons. Every sunny day at noon and especially on June 21st, the summer solstice when the sun is highest in the sky, the rhythmic shadows cast from each beam draw visual emphasis to each column and landing.



Overall View from Northwest



Entry View from East



Overall View from Southeast

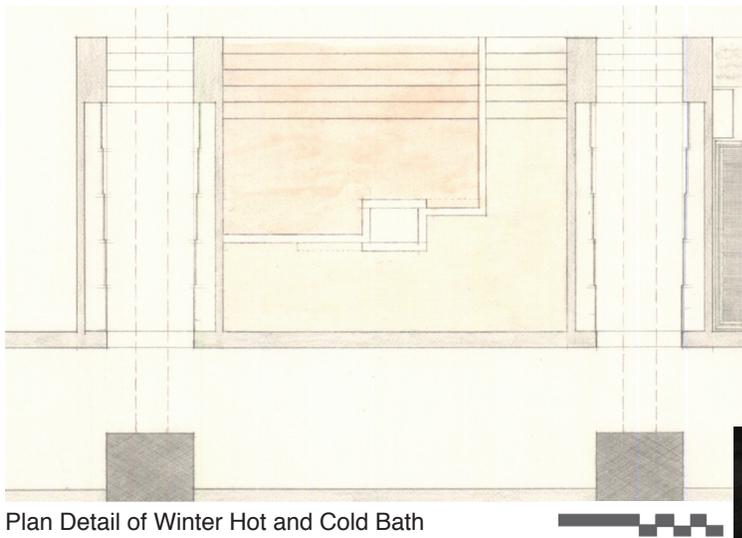
Tactily Designing for Touch

Beginning with the experiences of the user without sight and then including the user with sight, we must first return back to the source, the experiences of the designer. The architect must initially develop a solid foundation of experiential understanding in order to then challenge assumptions developing new ideals. For this to begin, it was essential to physically experience the bath and all of the bodily actions/reactions that emerge.

The most incredible experience based design decision was to design for the nude bather. From the beginning the idea that the bathers would be unclothed lingered deep in my mind as a possibility. However, in this case, my own pre-disposition made it difficult to justify this obvious position. The potential of exploring haptic opportunities involving the entire naked body seemed lost to convention.

In the late fall of 2001, I flew to Switzerland on a pilgrimage to challenge my conventions and fully experience the European thermal baths. Personally, removing clothing removed all inhibitions of bodily imperfections and self-awareness. I began to experience many common surfaces in a new way with heightened acuity. The bathhouse evolved into a raw, pure place of cleansing. Parts of the body that were normally protected from all architectural surfaces were suddenly wildly exposed absorbing all kinds of strange and wonderful sensations. I knew in my heart and throughout my entire body after that cathartic experience that the bathhouse I was designing would be for unclothed bathers. I now had the confidence and solid justification to convince others that this was right and appropriate, not only for the design of the bathhouse but also for the exploration and progression of the thesis.

Late November, the higher altitude of Switzerland warrants snow. I was about to understand the invigoration one would experience moving back and forth from extremely hot to the extreme cold, through this intense seasonal environment. I reclined in the elevated hotter benches in the sauna, pulling down a wooden footrest, my legs reaching towards the ceiling. Lying still, my breathing grew heavier as tiny beads of sweat formed and rolled down the surfaces of my skin. I could feel my body temperature rise as the nearly intolerable wave of heat consumed me. Unable to endure more, I released the wooden footrest and lowered my legs. Slowly, nearly lethargic, I rolled myself up to a sitting position and slid gently down to stand on the floor. As the edge of the towel nearly grazed the floor, hanging from my left hand, I reached with my right and opened the door to leave. Subconsciously searching for a way to cool down my emanating bare body, I migrated towards the door leading outside. With slight hesitation, my left hand barely clutched the towel as I pushed open the door. A gush of sharp fresh brisk winter air engulfed and energized me as I walked barefoot through the snow to a long reclining chair. I draped the towel over the head of the chair so it would not get soiled, sat and leaned back facing the sun. With snow all around me, and a clear blue sky above, my thermally heated body began to exude little steam swirls rising off my skin. After about 10 minutes my body had cooled down and I rose making my way back inside as my feet began to hurt on the frozen ground beneath. I felt the most intense form of invigoration confirming how important it was to have adjoining hot and cold sensations.

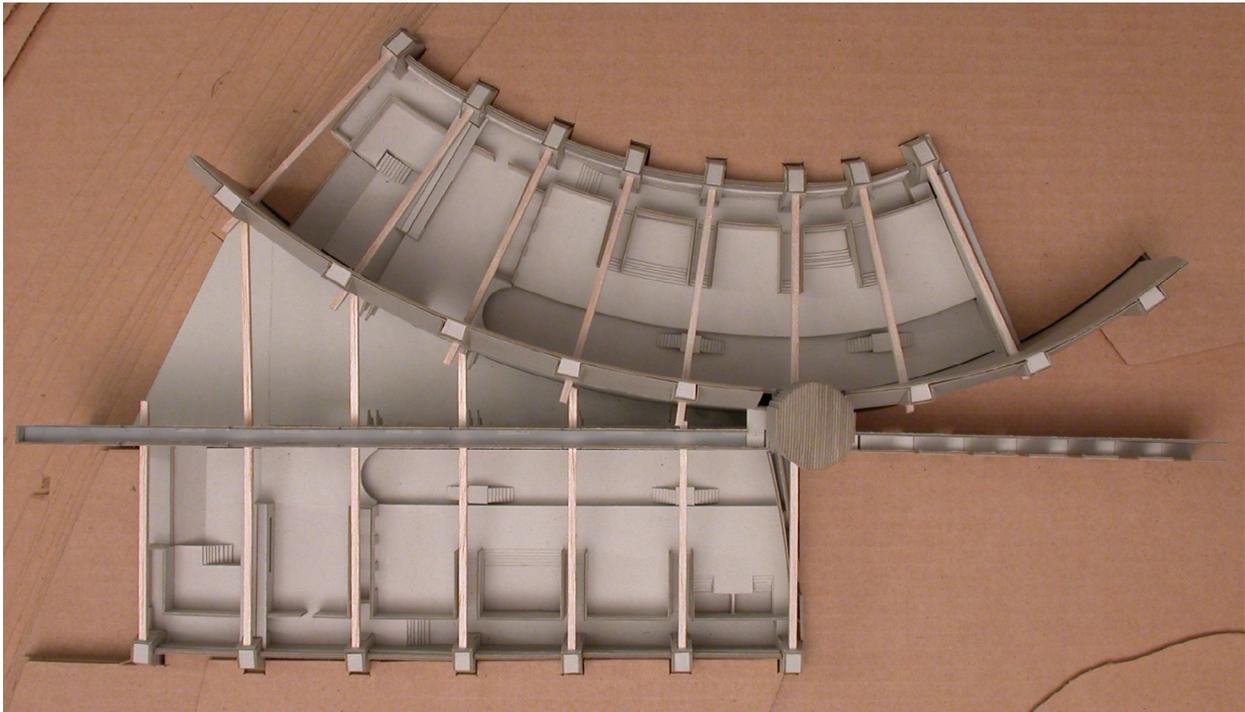


Plan Detail of Winter Hot and Cold Bath

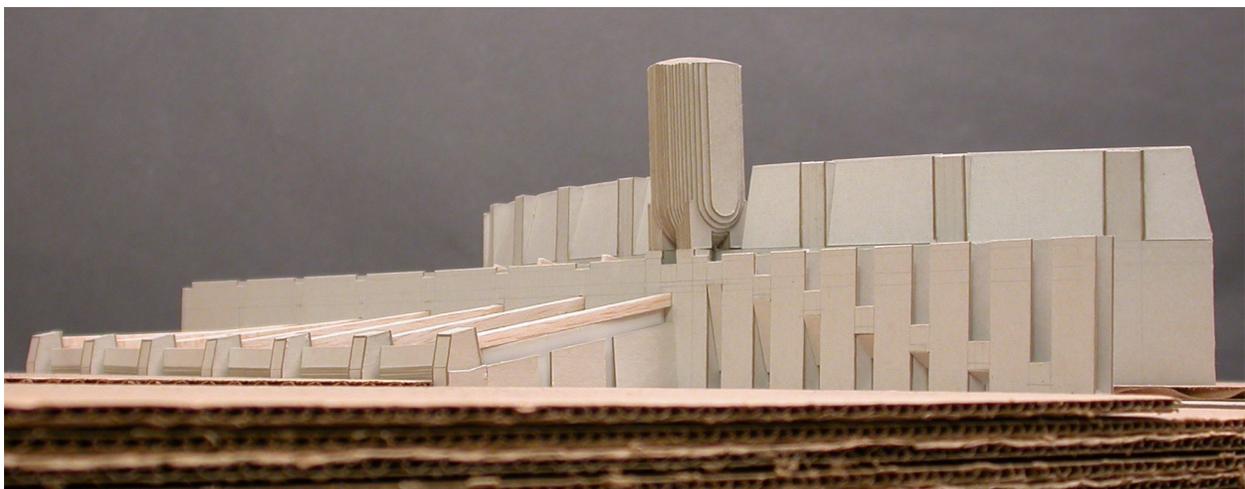


Study Model of Winter Hot and Cold Bath

As tactile observations are important to informing the design of the experience, physically touching the design process is important to a saturation of meaningful parts. On paper, the water tower always remained an unresolved element in the project. Through drawing, using water's natural characteristics, a general volume was designed on paper through plans, elevations, sections, and perspective vignettes. Still missing was the sensuality and weight one should experience through a close and personal encounter with its belly when walking under it on a special bridge. It was through the model building process when the Eureka moment where sensation, material, and construction were realized.

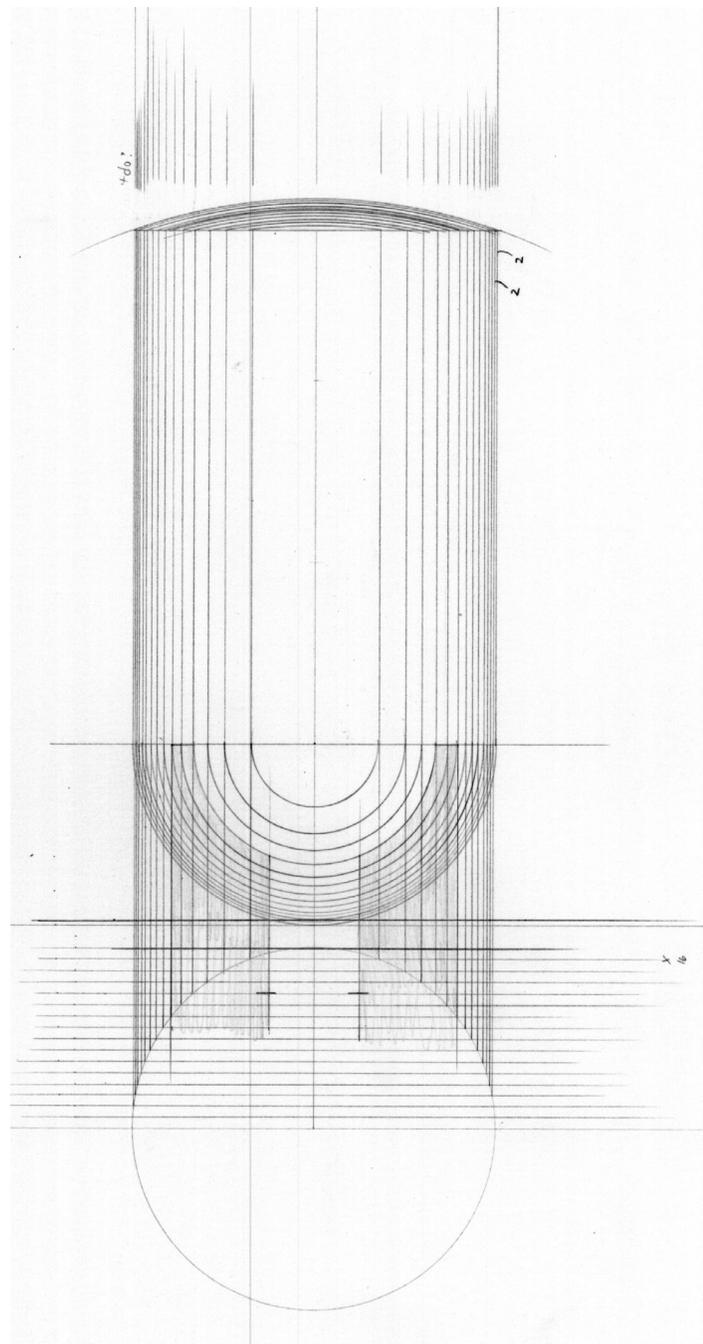


Plan View



Southeast Elevation

At a scale of 1/16"=1'-0": the model of the building and the site was near completion. All that remained was the water tower. It had to maintain a scaled sense of volume and density. Reflecting back on the existing site model, the dense massive earth was constructed through the stacking of corrugated cardboard layers. This technique allowed for contour definition and a properly built up volume of land. Another part of the model that came to mind was the dams at the west ends of the main summer and winter pools. These dams are site cast reinforced concrete. The forms for the concrete are made of wood clamped together, ends facing in like many hundreds of supportive walls, countering the weight of the concrete. This concrete is now imprinted with the history of its making, tactily available for us all to feel and see. Combining the physics of the dam and the scaled down volumetric representations of the earth contours, it made sense that the water tower should consist of layer representation as well. Instead of horizontal stacked layers, vertical upright sections were chosen to literally counteract the unnaturally elevated volume of water's gravitational potential energy to fall straight down back to the earth.



Template for Model Construction

The model building process also answered questions of form, material, and construction. The water tower would be cast concrete in a form creating the same layered texture as the model. This design also fulfilled the sensual encounter. As one passes under the belly of the water tower, the curvature naturally squeezes each layer closer together for a more refined sensation at that moment. Those who are familiar with Newton's Third Law of Motion can delightedly meld with all this weight hovering directly above with just the slighted pressuring touch from below.

Trades Immersed in Haptics Through Construction

Understanding material tectonics and human abilities, an architect can tactily intensify the experiences and memories of craftsmen through their involvement in the construction of a building.

“Craftsmanship is continued and familiar practice, which is carried out by the hands in such material as is necessary for the purpose of a design.” (Granger, p.7)

Each craftsman should be given the opportunity to add a bit of themselves to the making of a building as well as the ownership of personal physical memories of its creation – a moment in each building’s history specially shared with those craftsmen alone.

Buildings should be created encouraging its inhabitants to partake not only in a structure’s present existence, but also in a structure’s tactile history. A building constructed of many small, but when combined, extremely strong bricks develop a more tactile human history than one constructed of a massive steel frame.

Unit masonry, a very humanly involved material was chosen as the main building system in this bathhouse. Bare hands compose long walls and strong columns. Without tools, a brick or concrete block can be picked up by hand from a palette, prepared with mortar, and laid next to the others.



Winter Stone



Brick



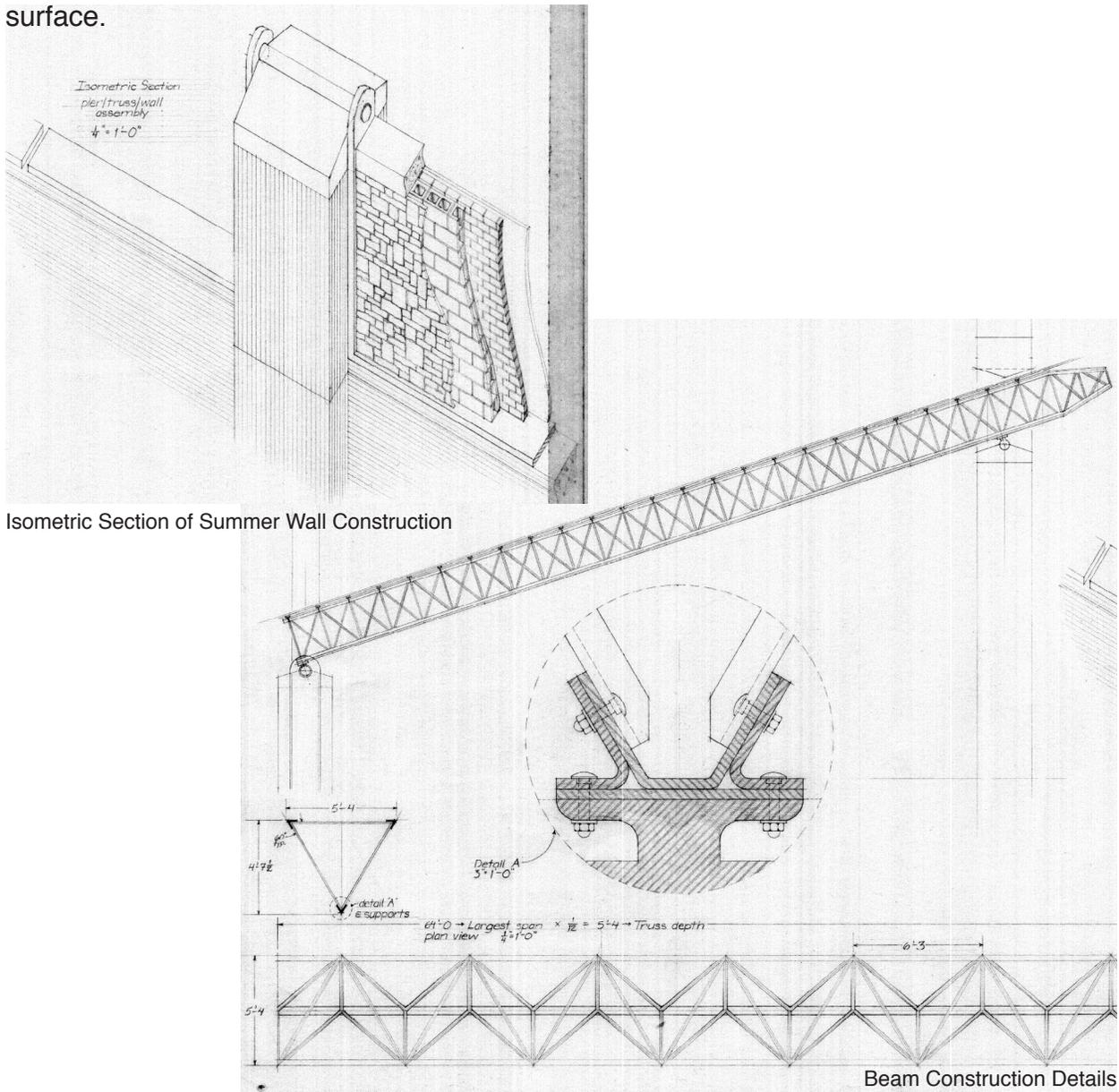
Summer Stone



Concrete Block

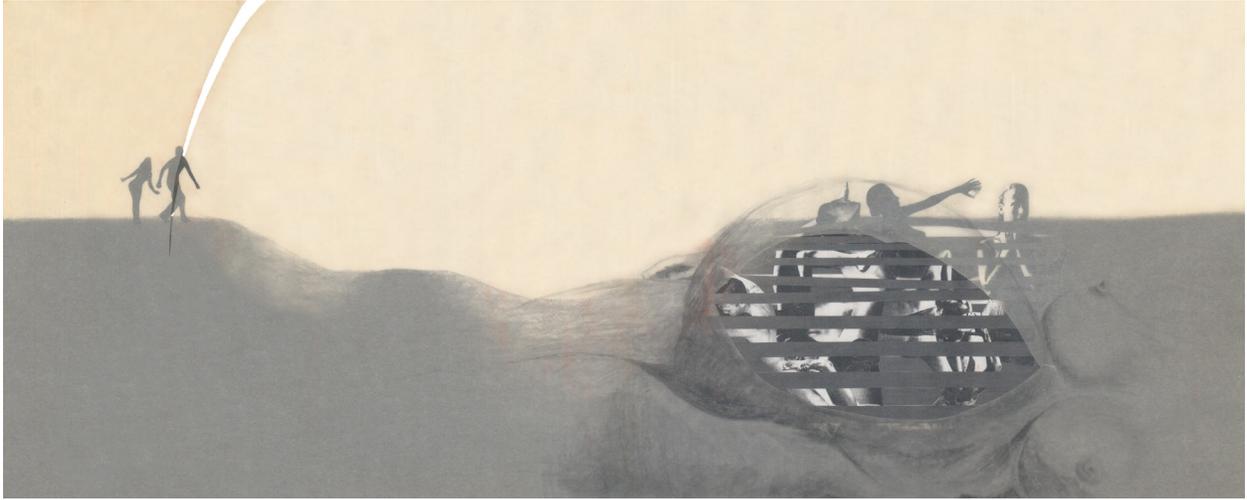
Time of construction should be timed by human ability. Machines speed up the time to construct a building, however, that time is foreign to the body. Machines can do inhumanly possible activities but should not replace the humanly possible abilities.

Like the time of construction, there is also an inherent time of materials. Each material has different physical histories. A natural mass of stone is made by thousands of years of pressure applied to different elements combining and hardening in the earth. Finally one day that stone is cut out of the earth in blocks or tooled by sculptors. Once transported to the site it is hand placed by skilled masons. After installation, usually only one of its surfaces is available to be touched. The weight of the stone and the touch of the mason's hands are embedded in its memory and we only get a glimpse through its surface.



The Body

Models and Drawings

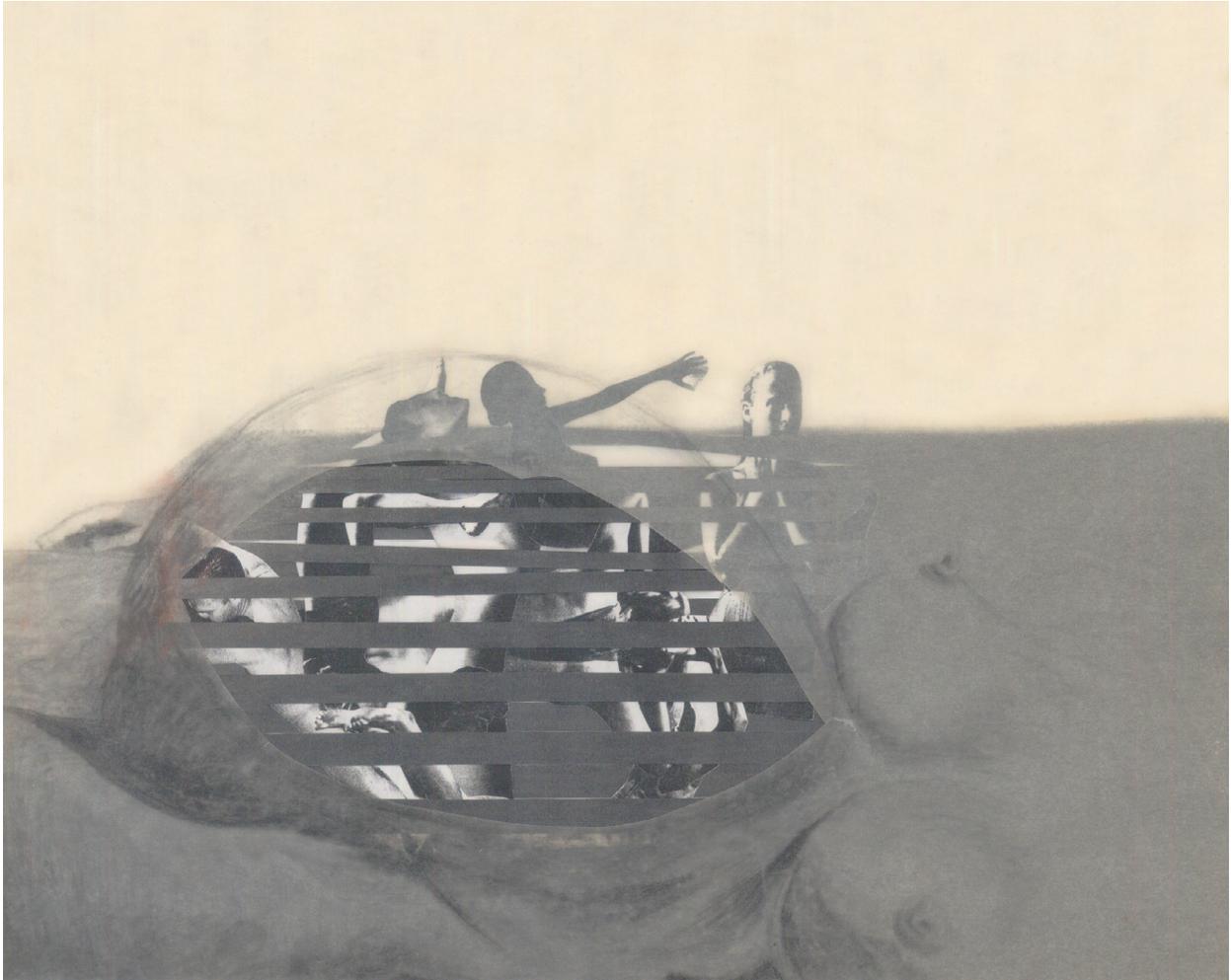


Site Collage

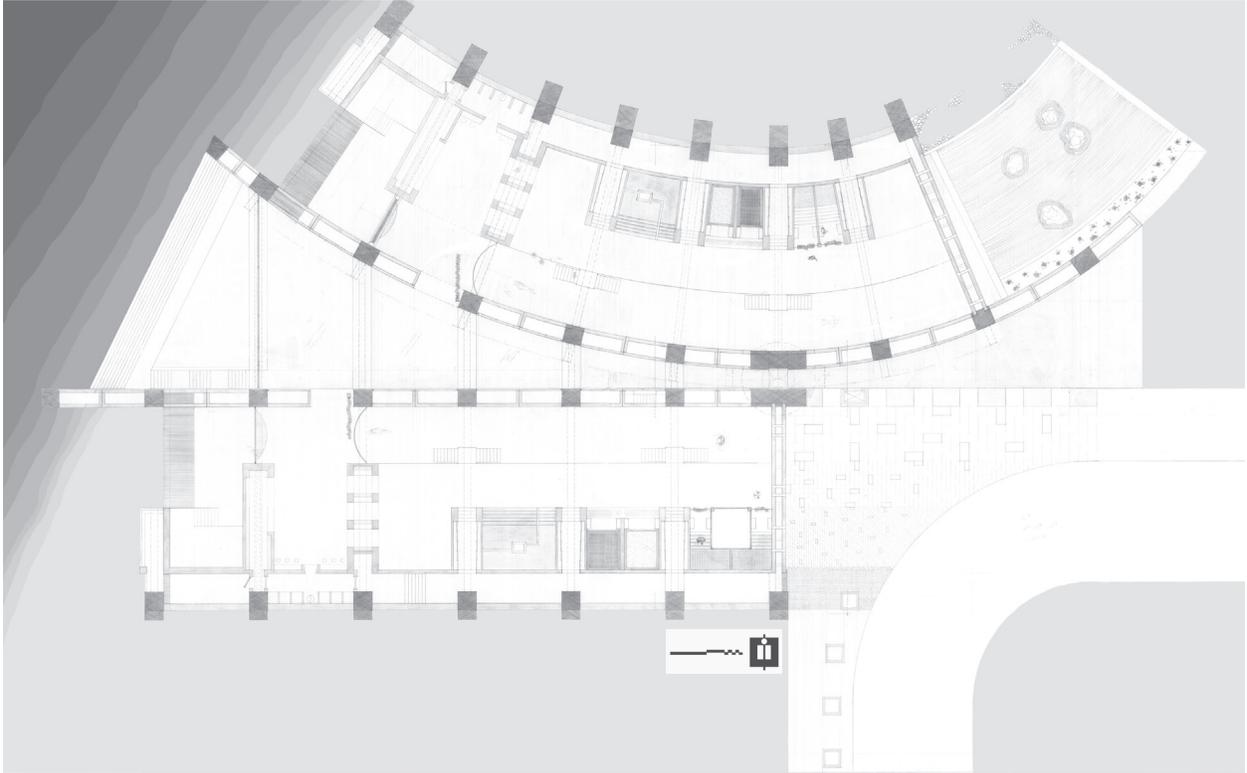
“In the Judeo-Christian tradition, baptism is still a rite of passage,
a dunking ritual not unlike rebirthing.”
(Vienne, p. 61)



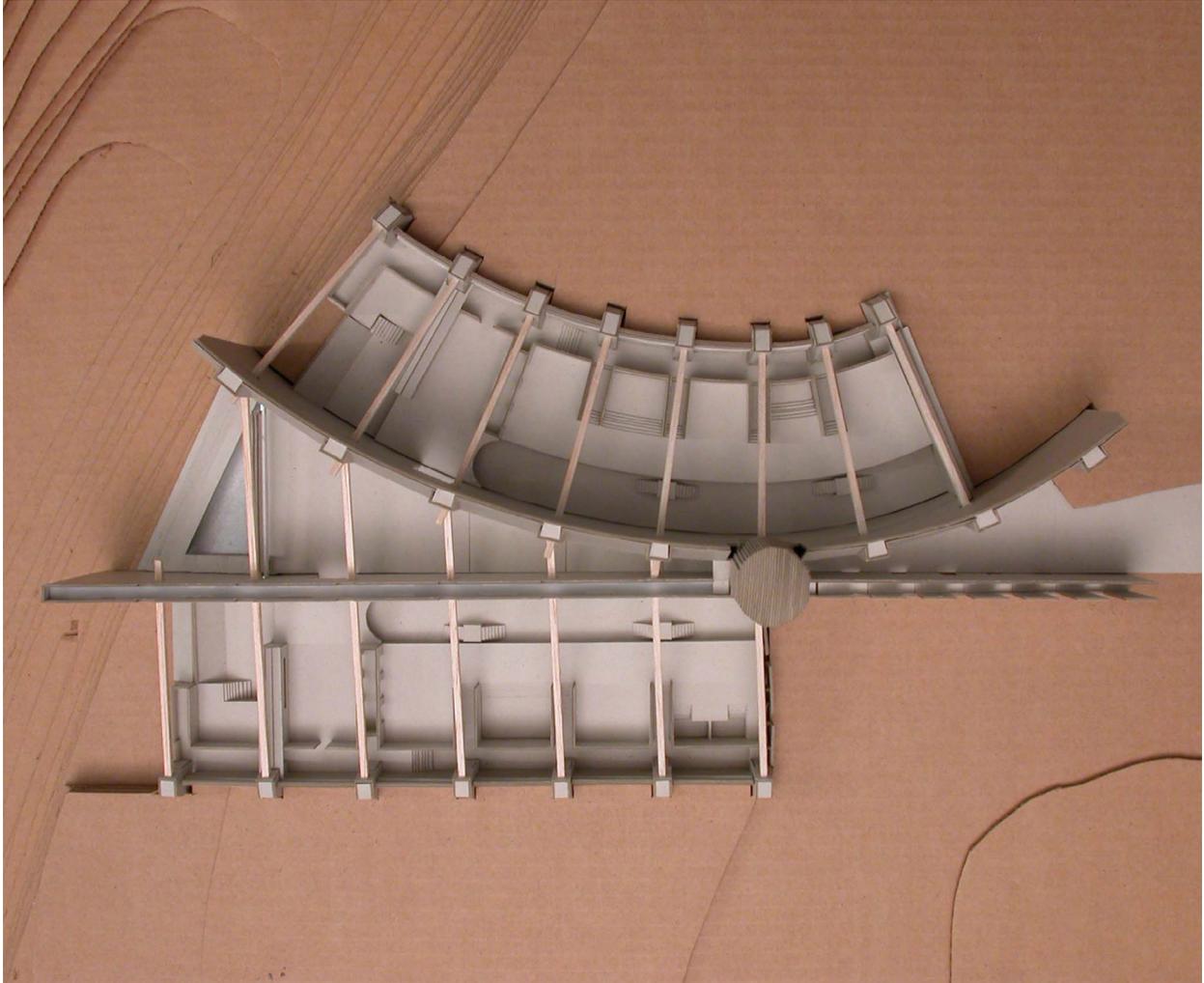
Site Collage Left



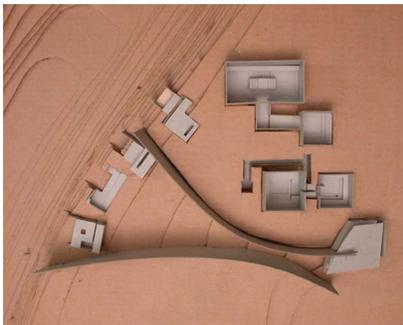
Site Collage Right



Ground Level Floor Plan



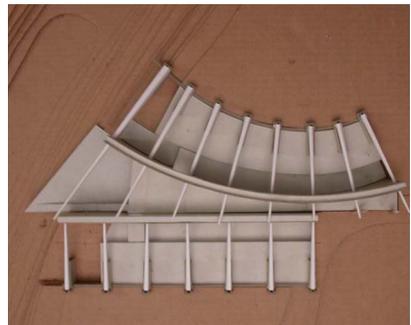
Ground Plan



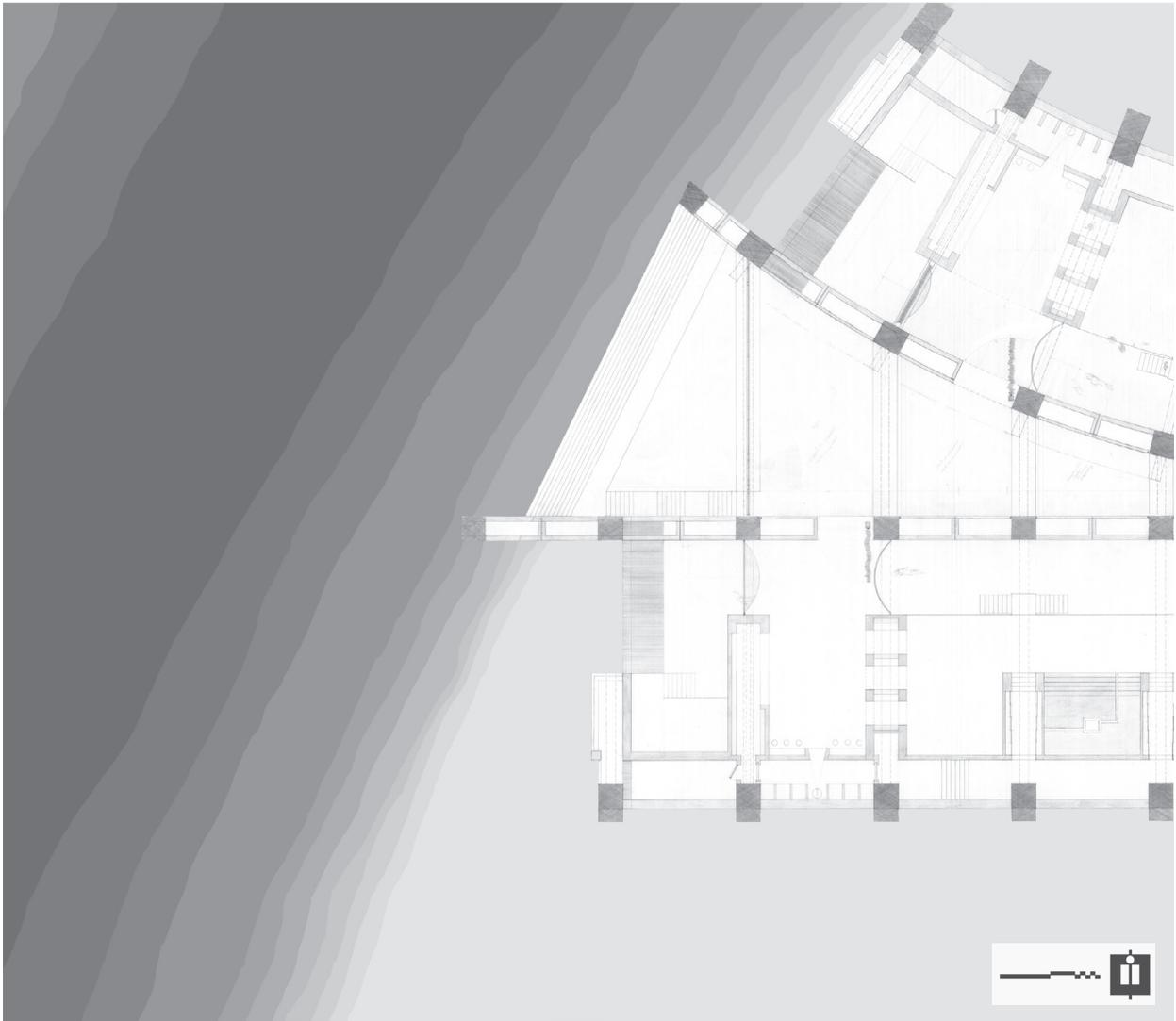
Study



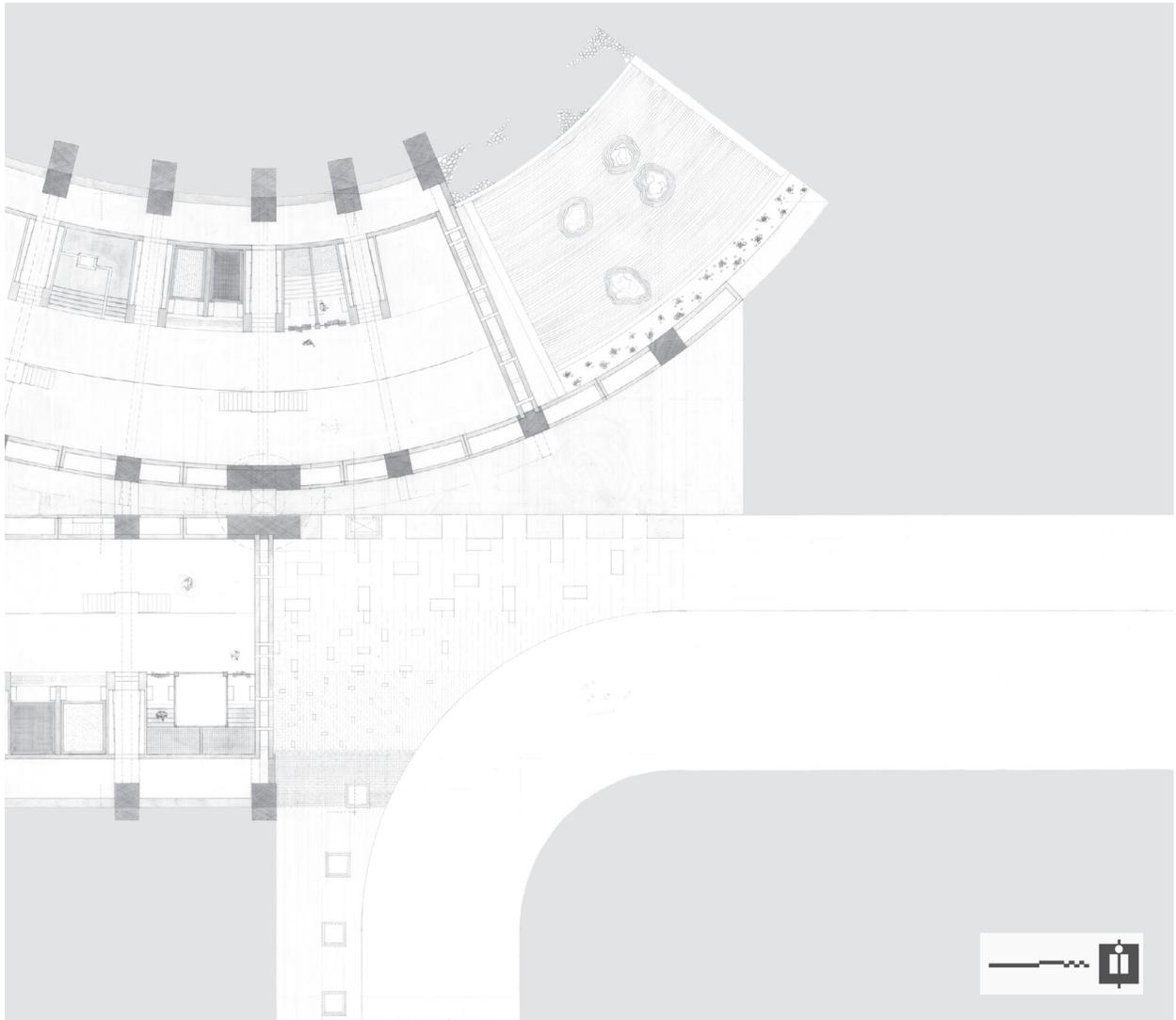
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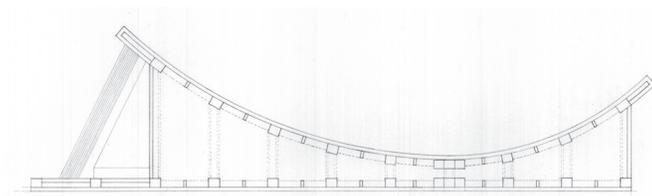
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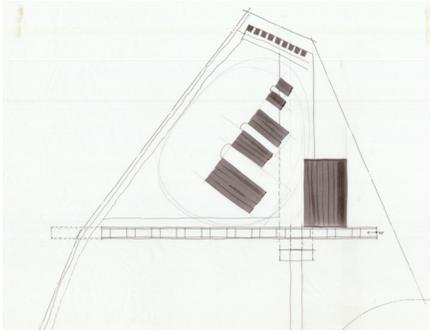
Ground Level Floor Plan



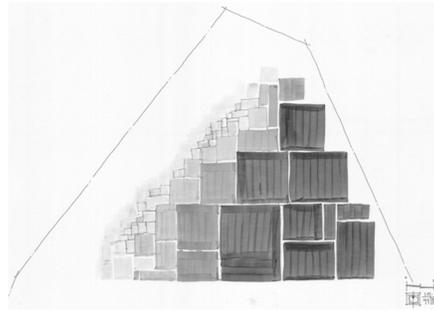
Ground Level Floor Plan



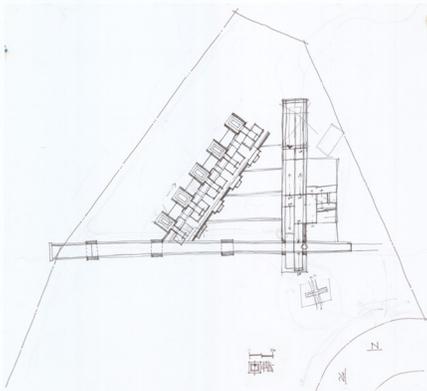
Basement Level Floor Plan



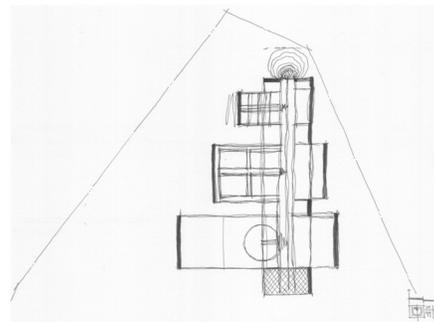
Massing and Plan Study



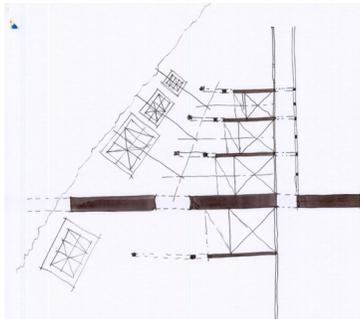
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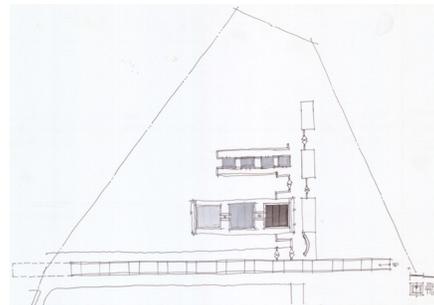
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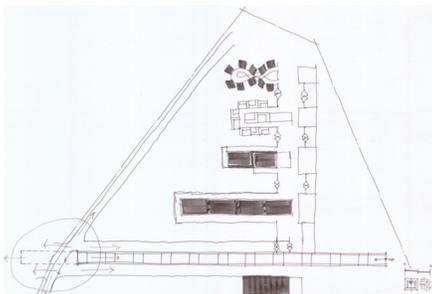
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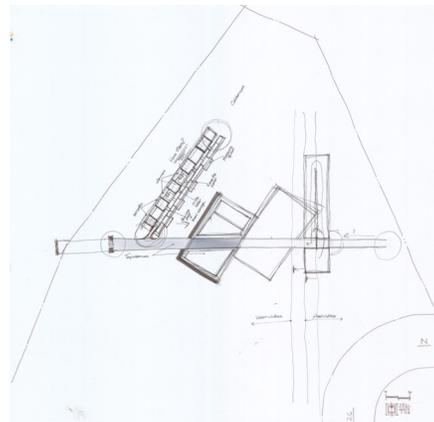
Massing and Plan Study



Massing and Plan Study



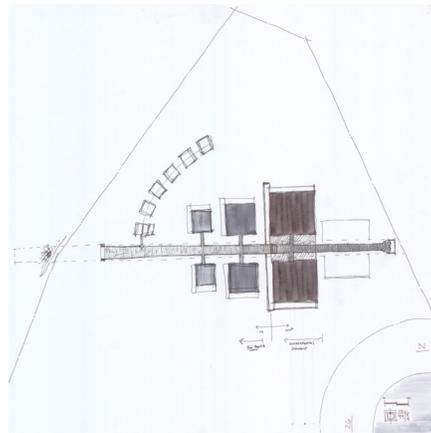
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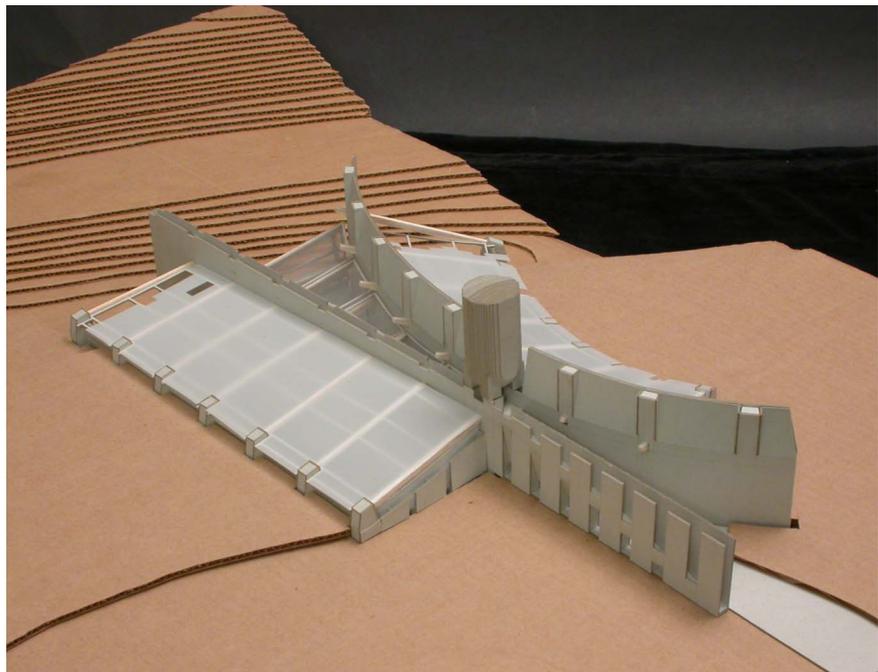
Massing and Plan Study



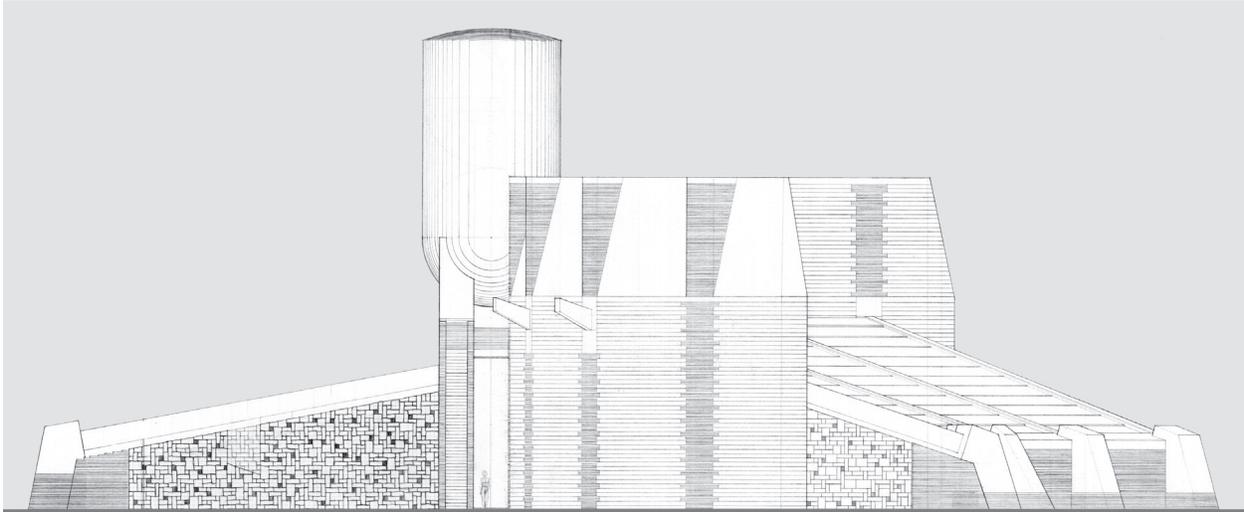
Overall View from the East



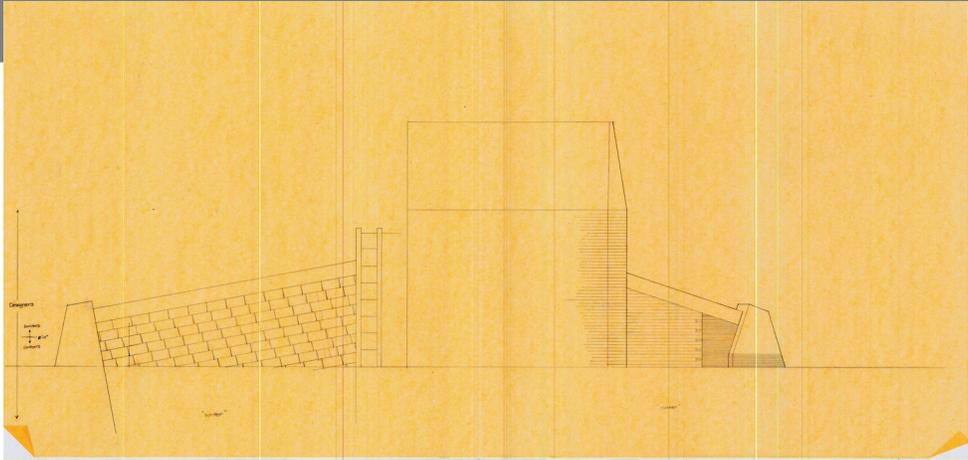
Massing and Plan Study



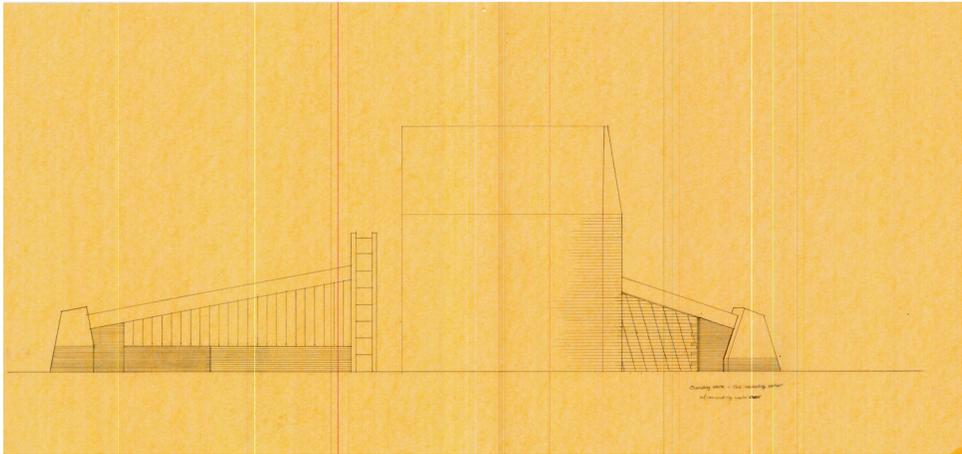
Overall View from the Southeast



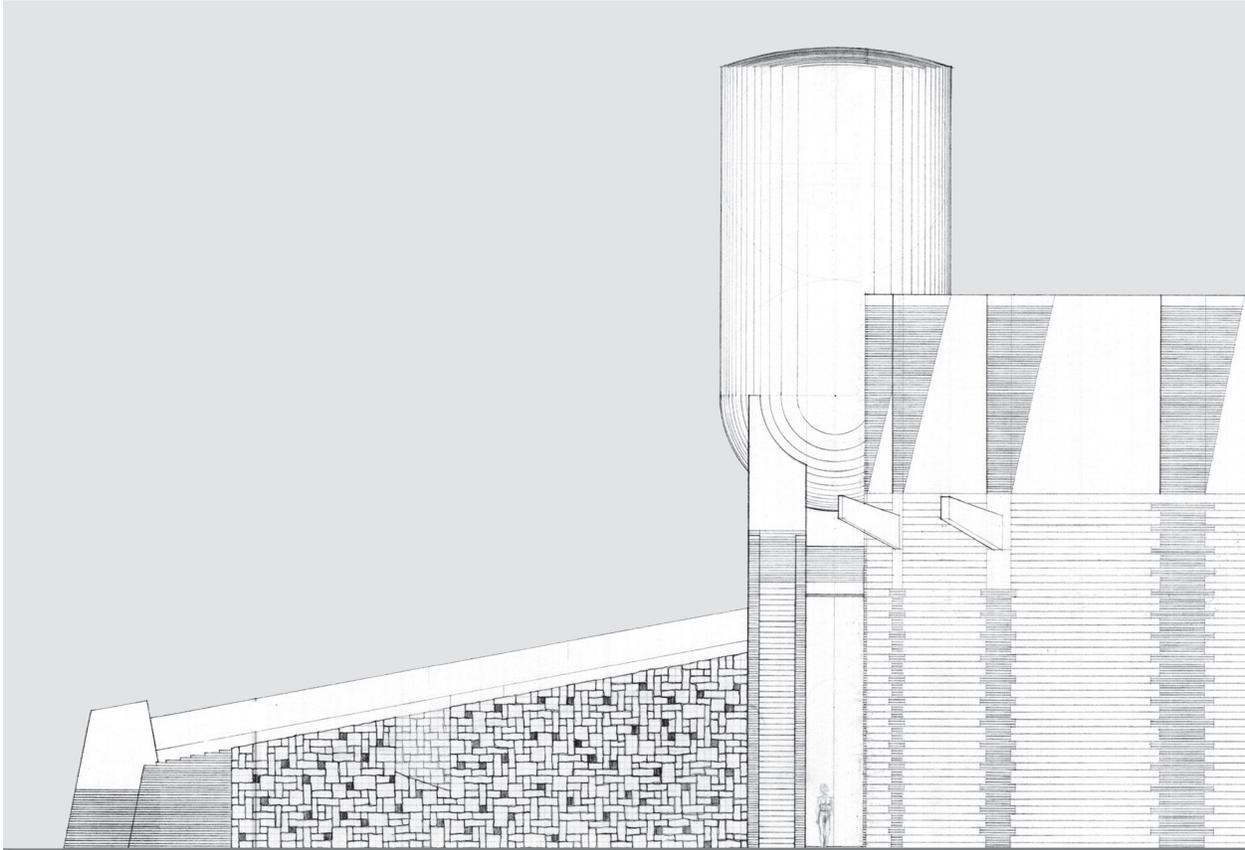
East Elevation



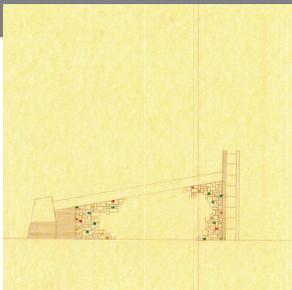
East Elevation Study



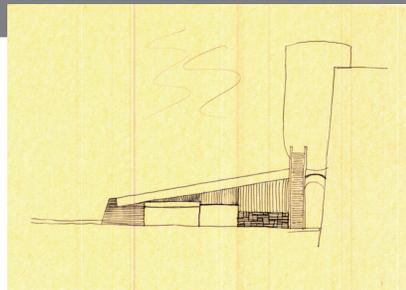
East Elevation Study



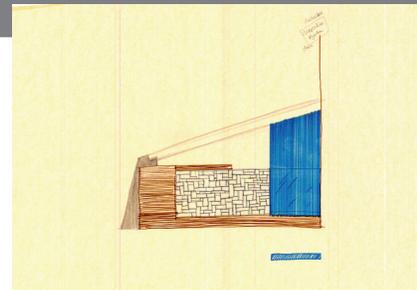
East Elevation



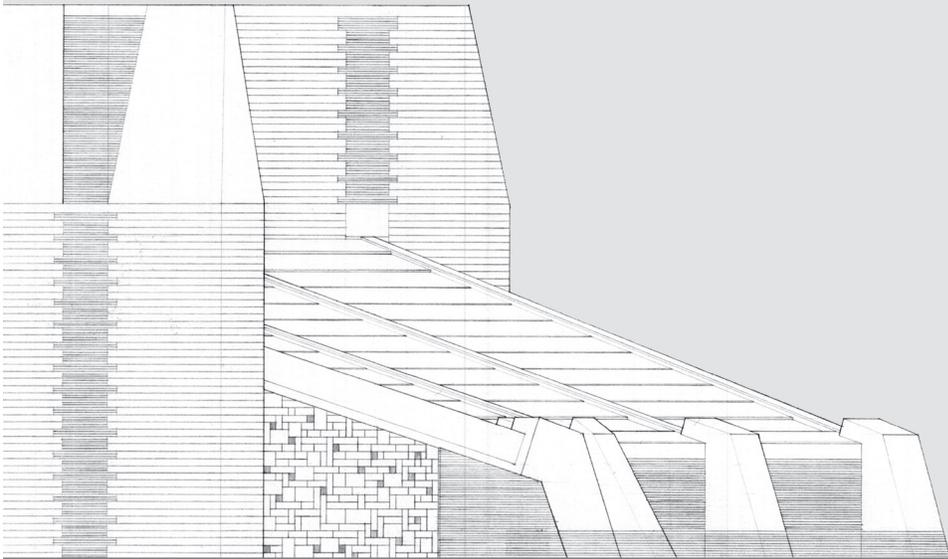
East Elevation Study



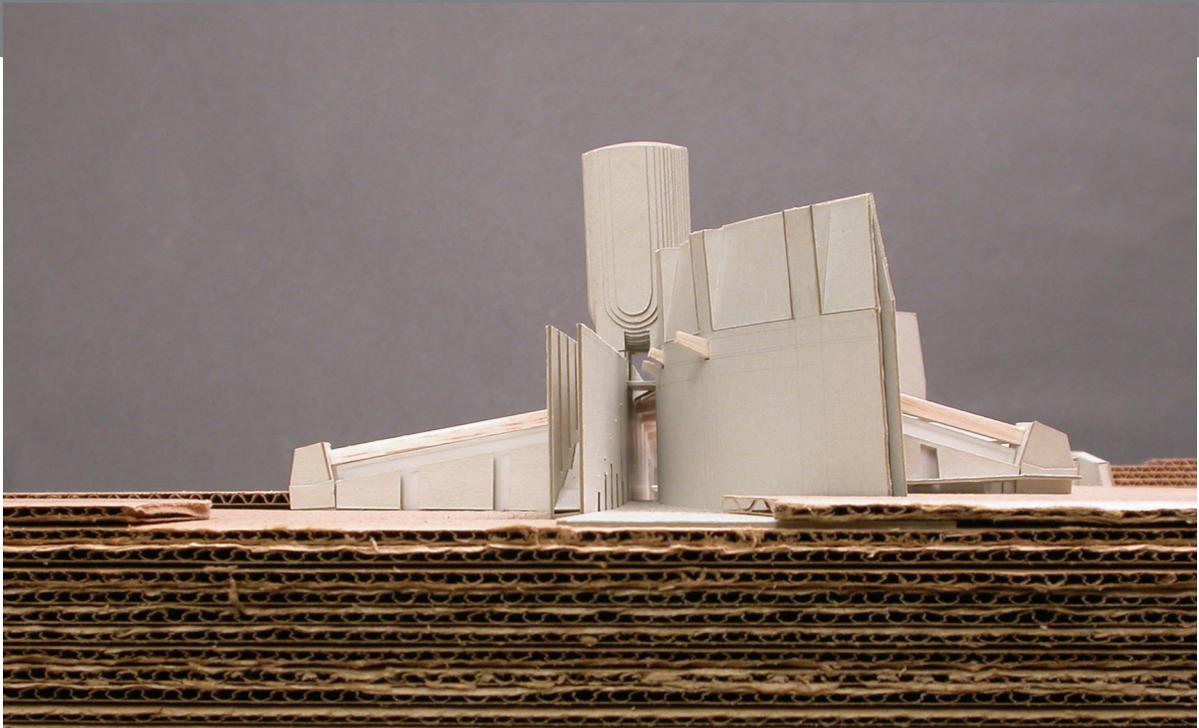
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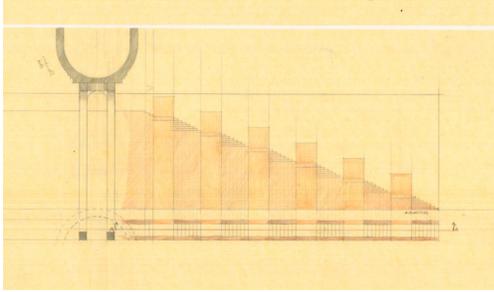
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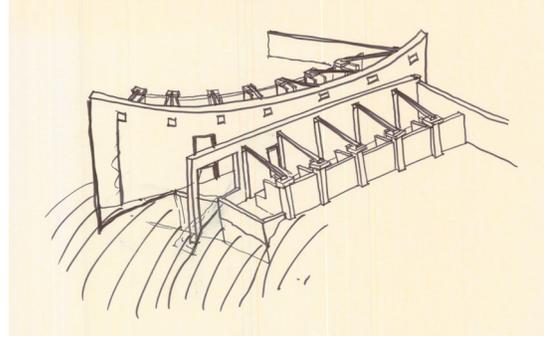
East Elevation



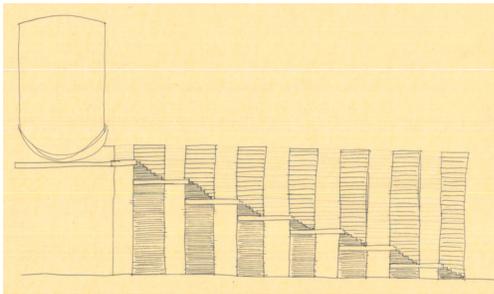
East Elevation



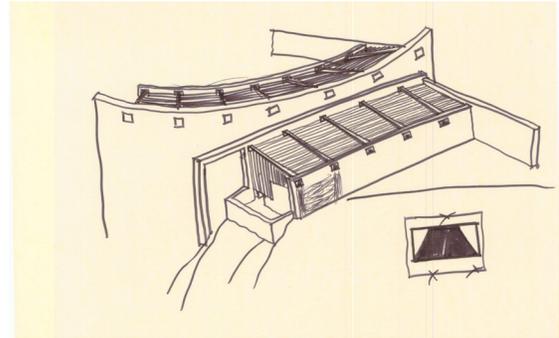
South Elevation Study



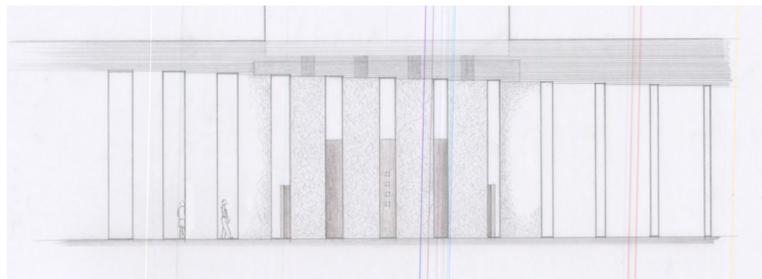
Winter Study



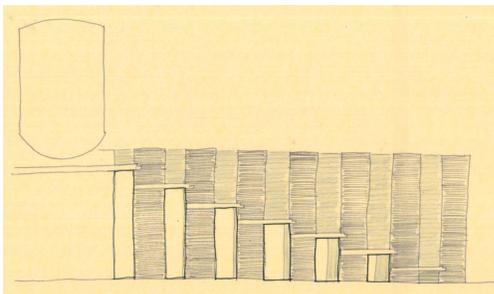
South Elevation Study



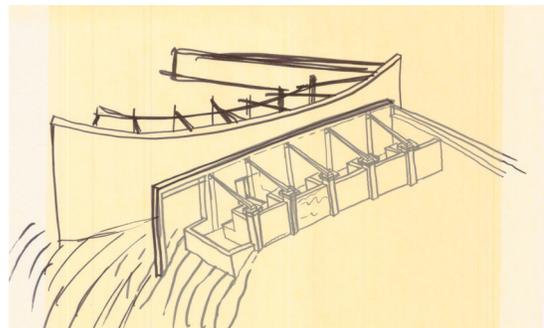
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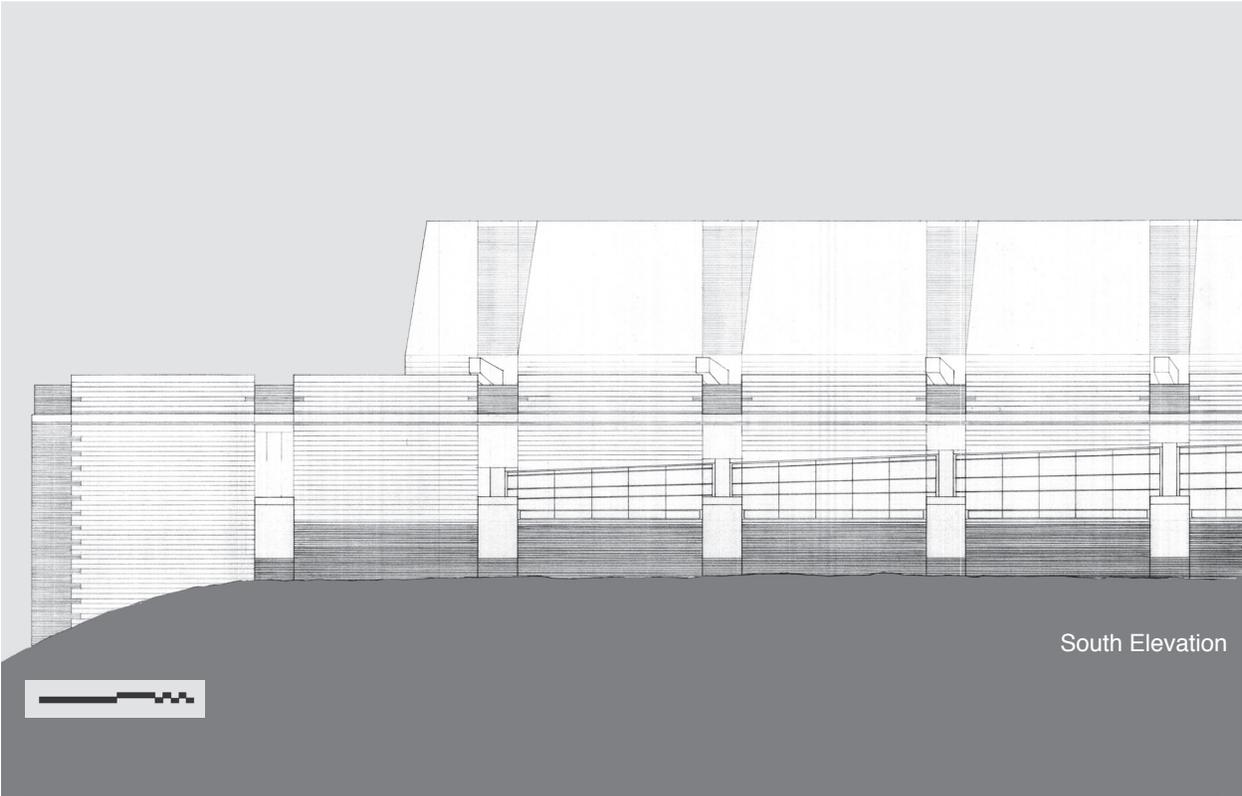
South Elevation Study



South Elevation Study



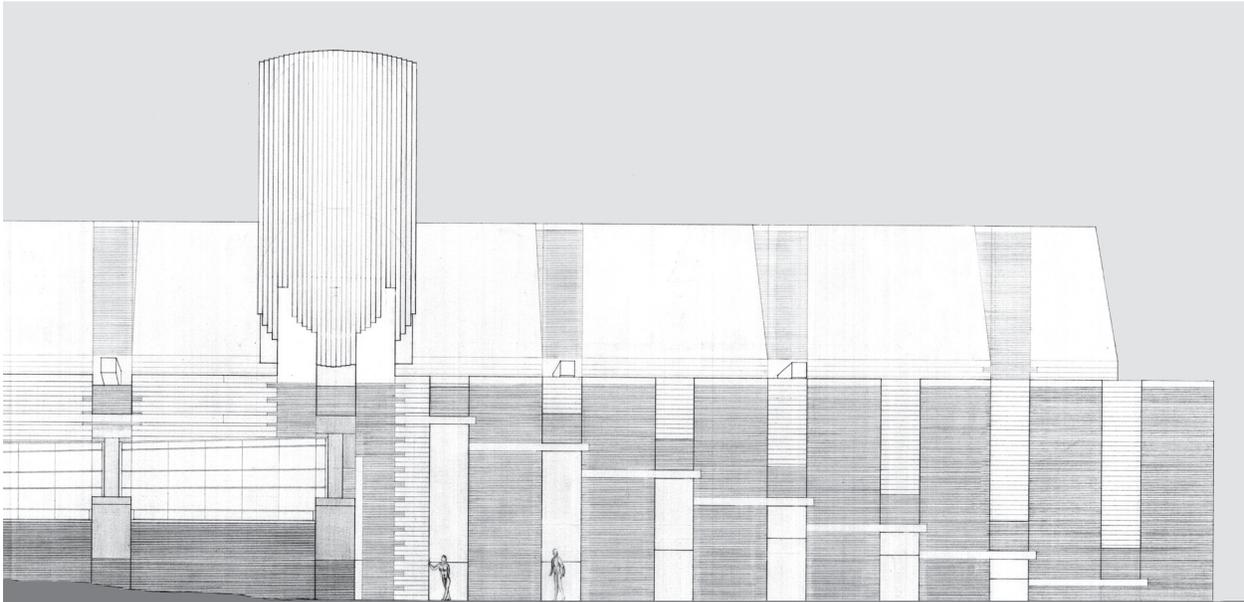
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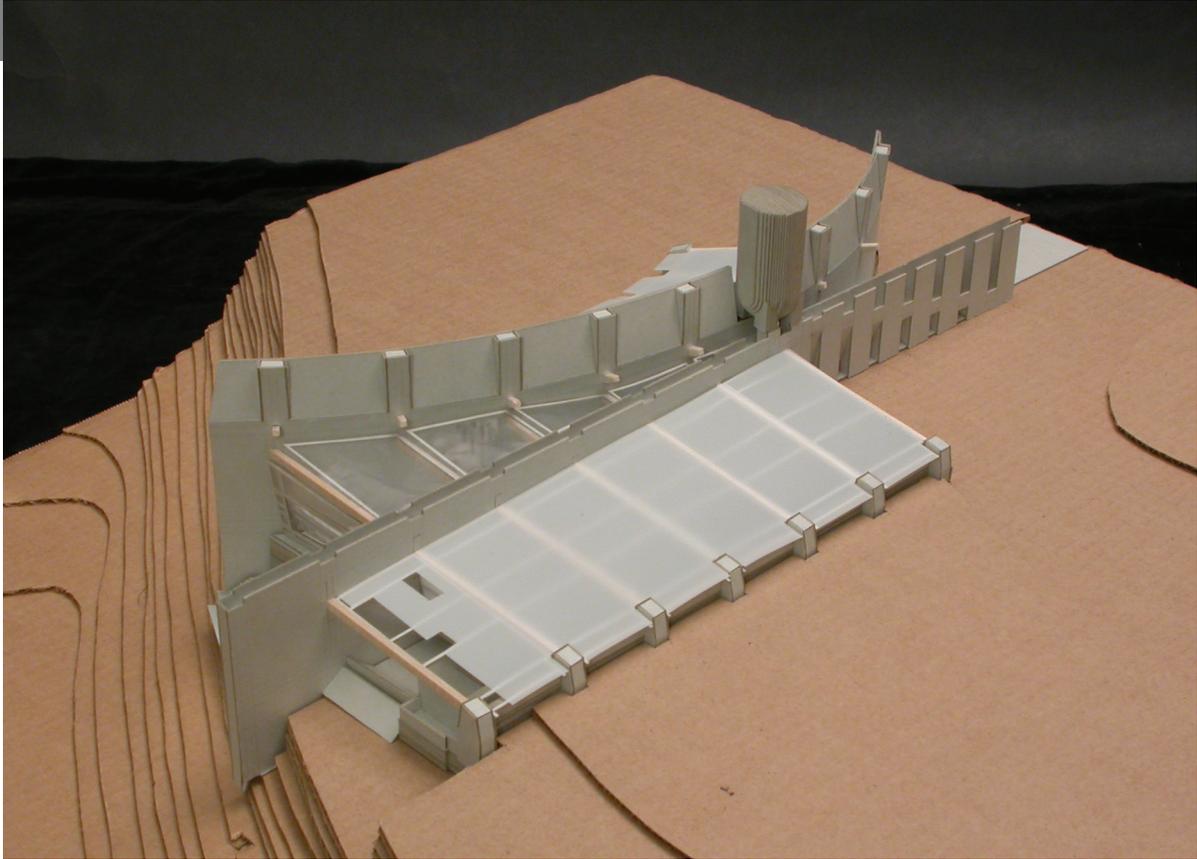
South Elevation



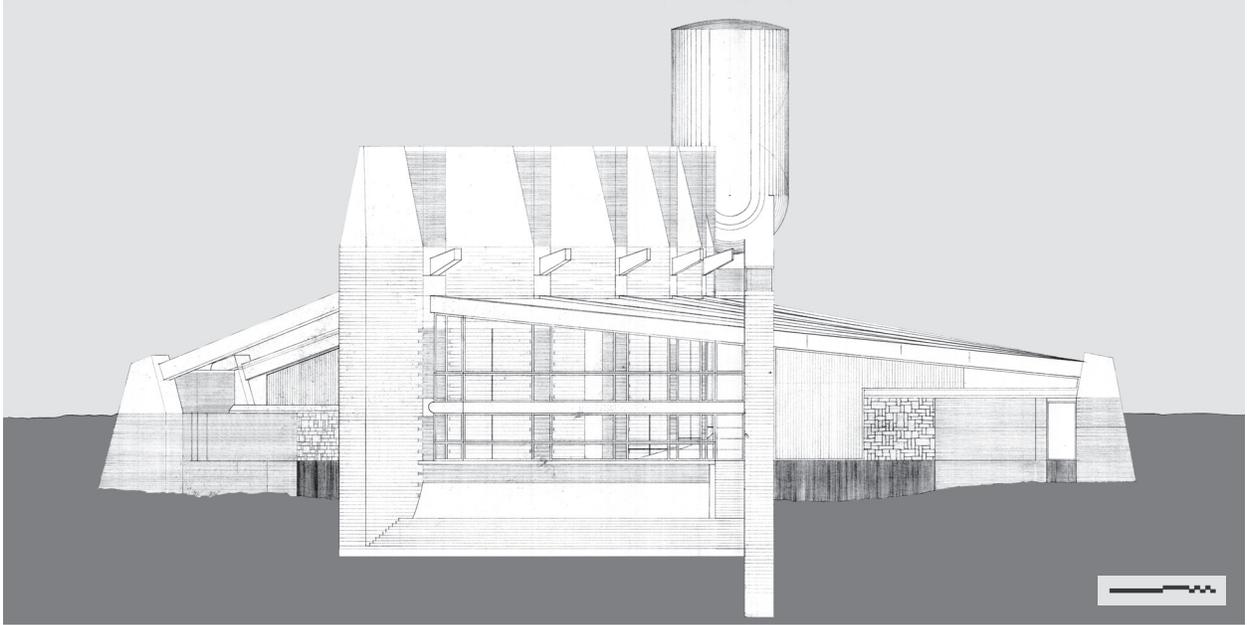
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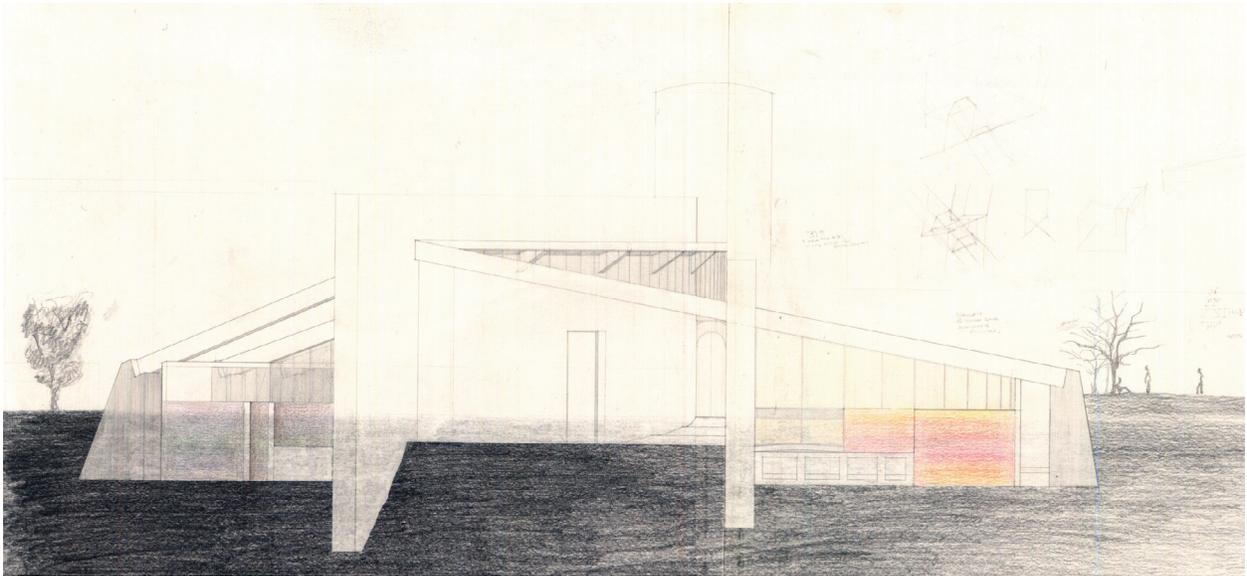
South Elevation



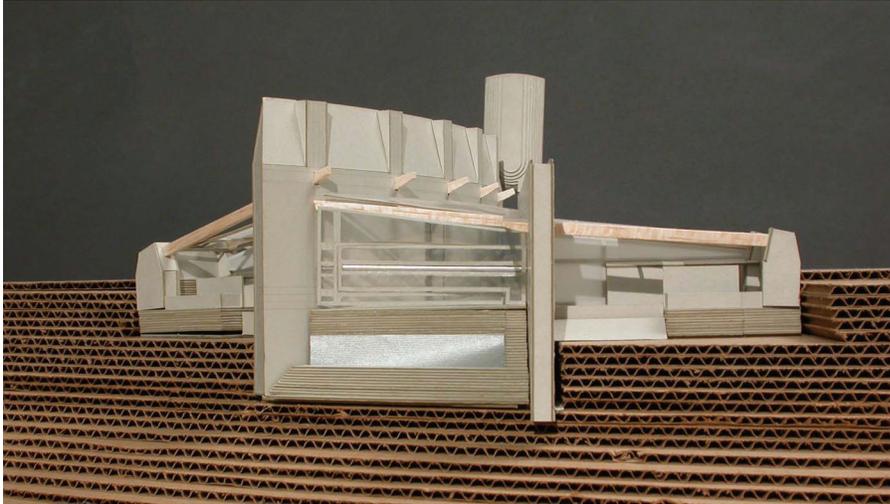
Overall View from the Southwest



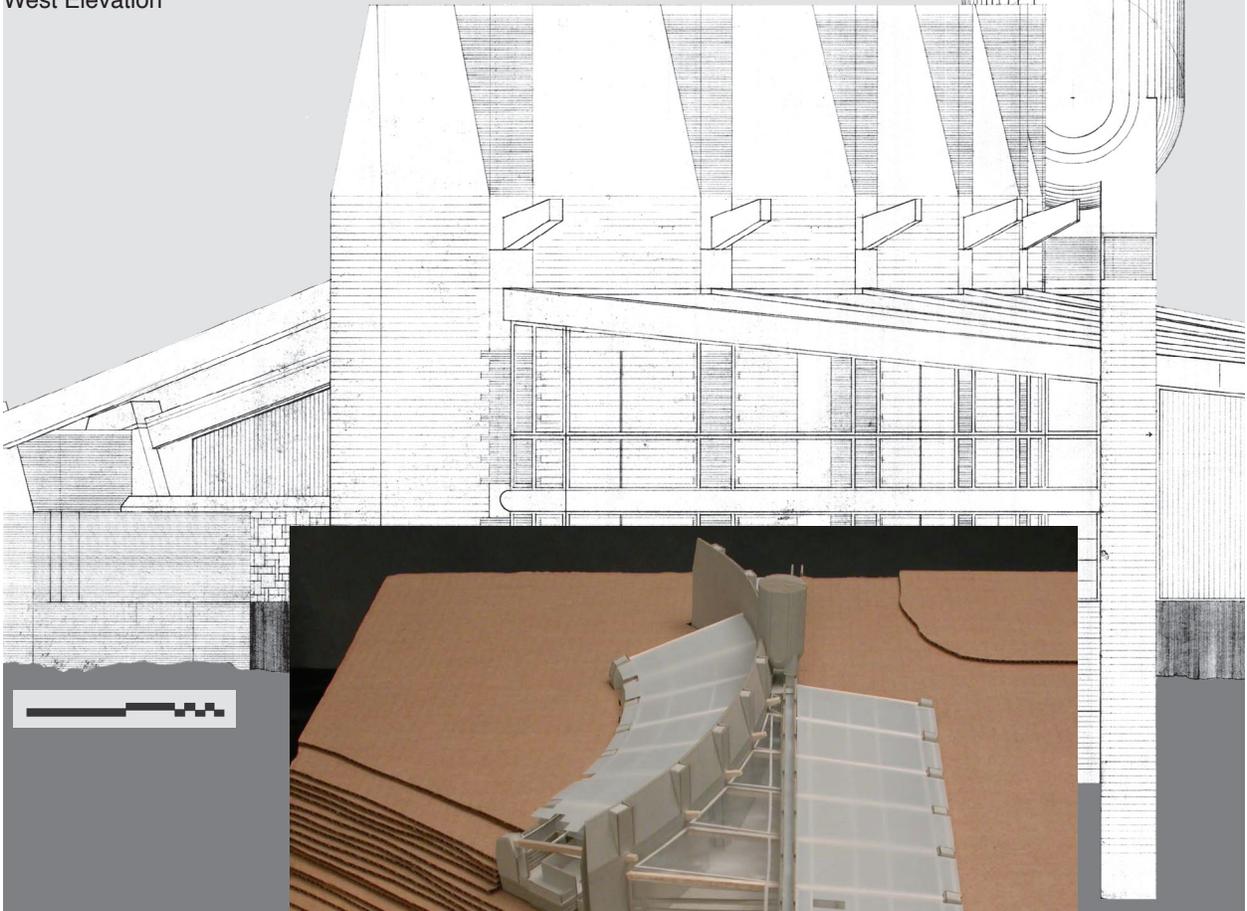
West Elevation



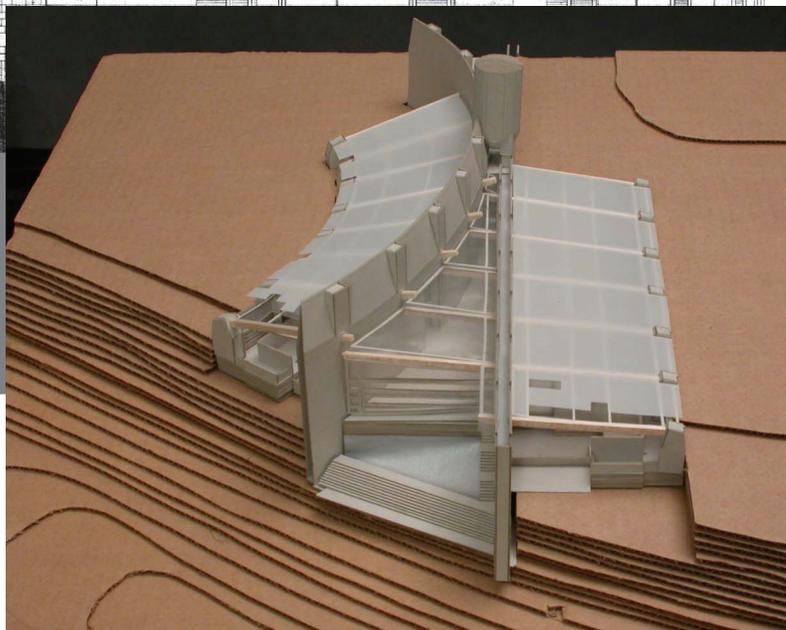
West Elevation Study



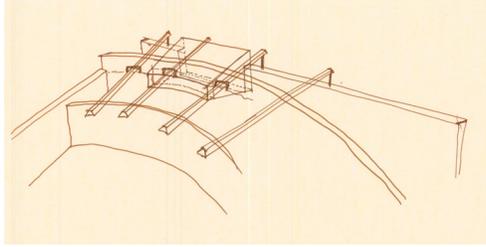
West Elevation



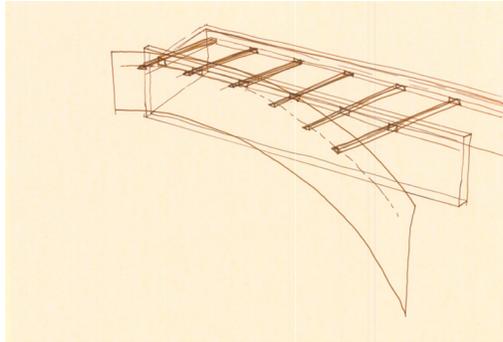
West Elevation



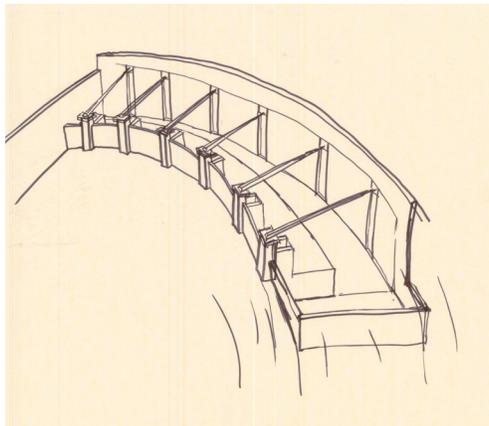
Overall View from the West



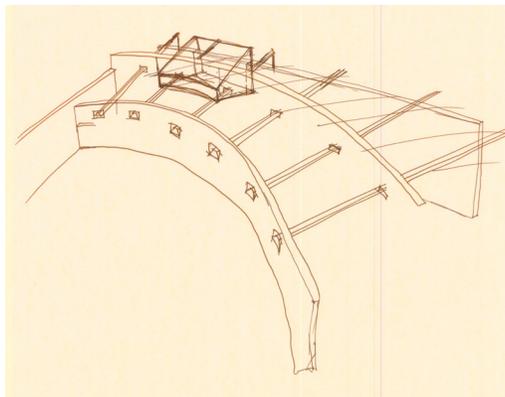
Summer Study



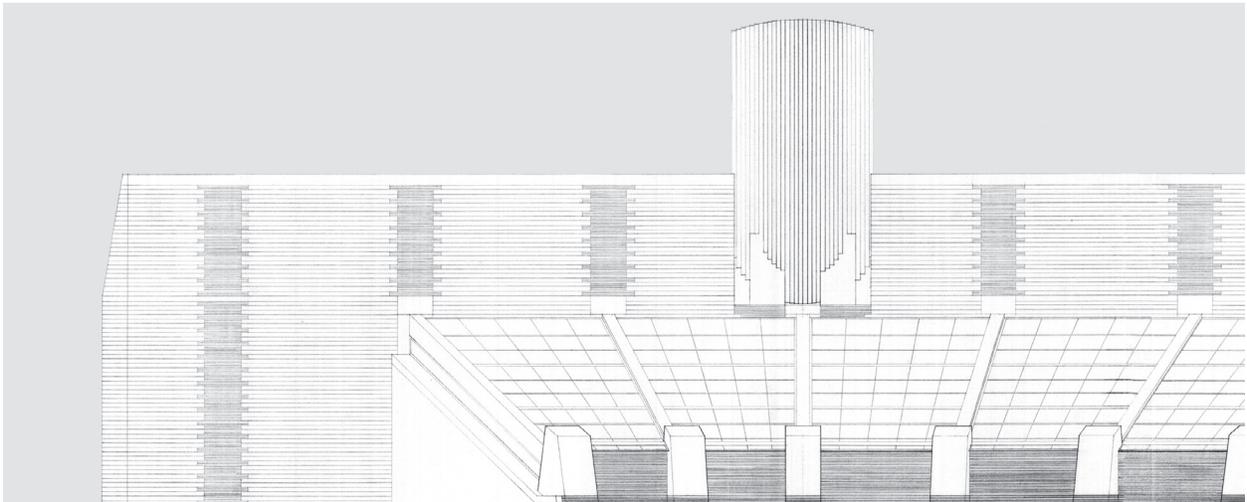
Summer Study



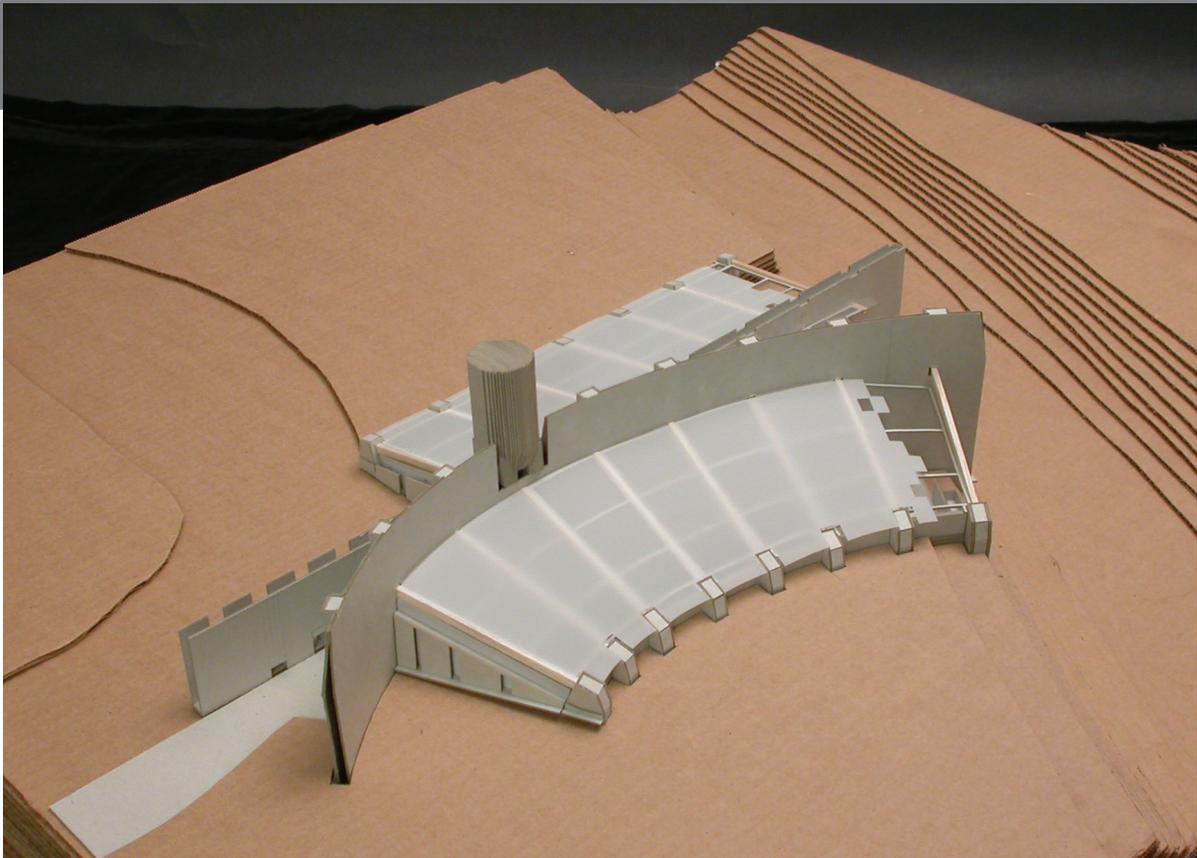
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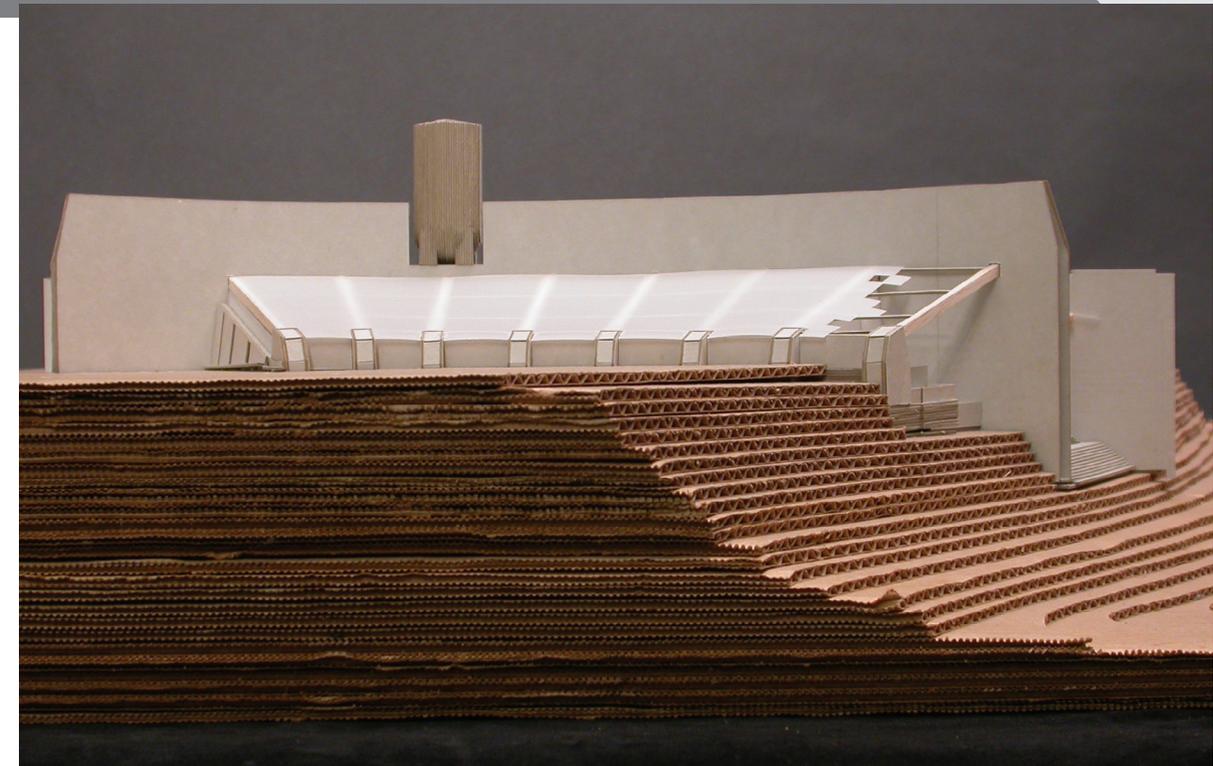
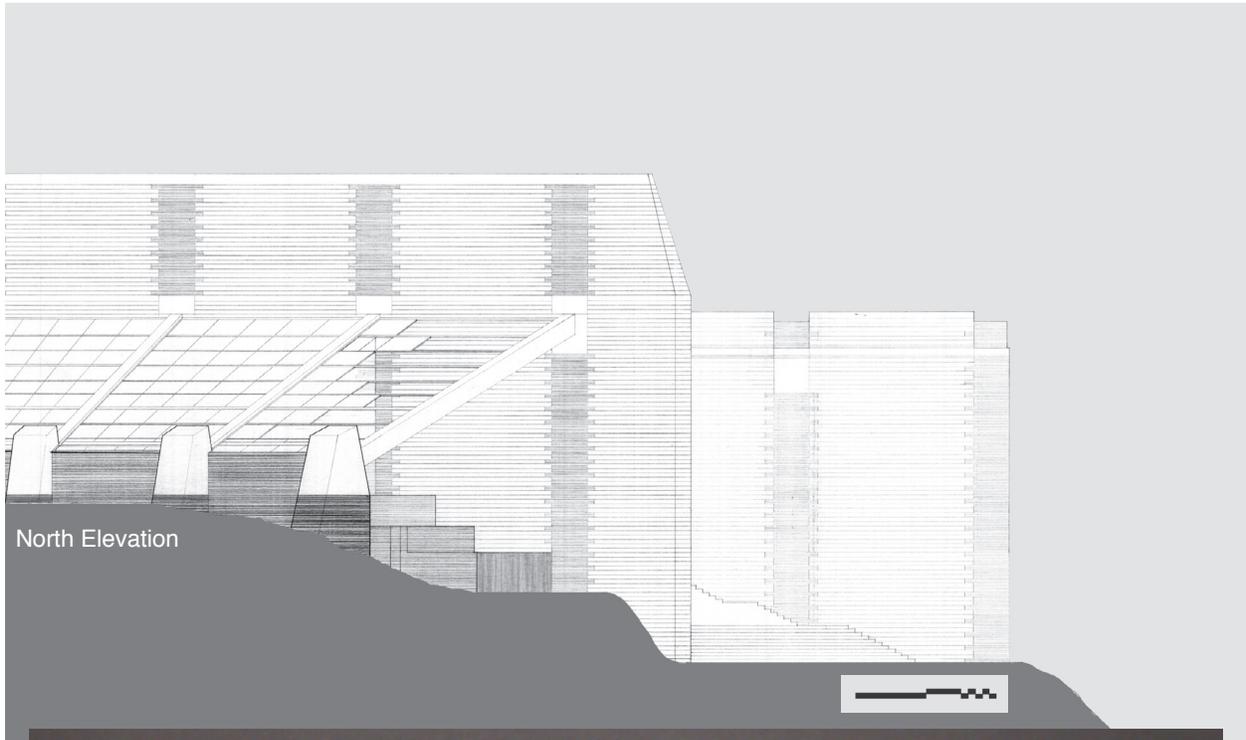
Summer Study



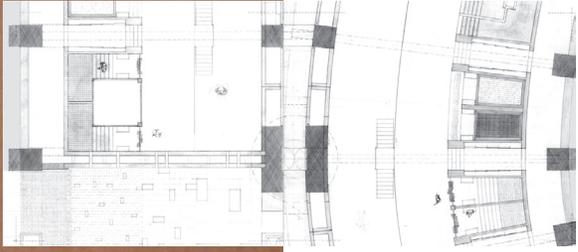
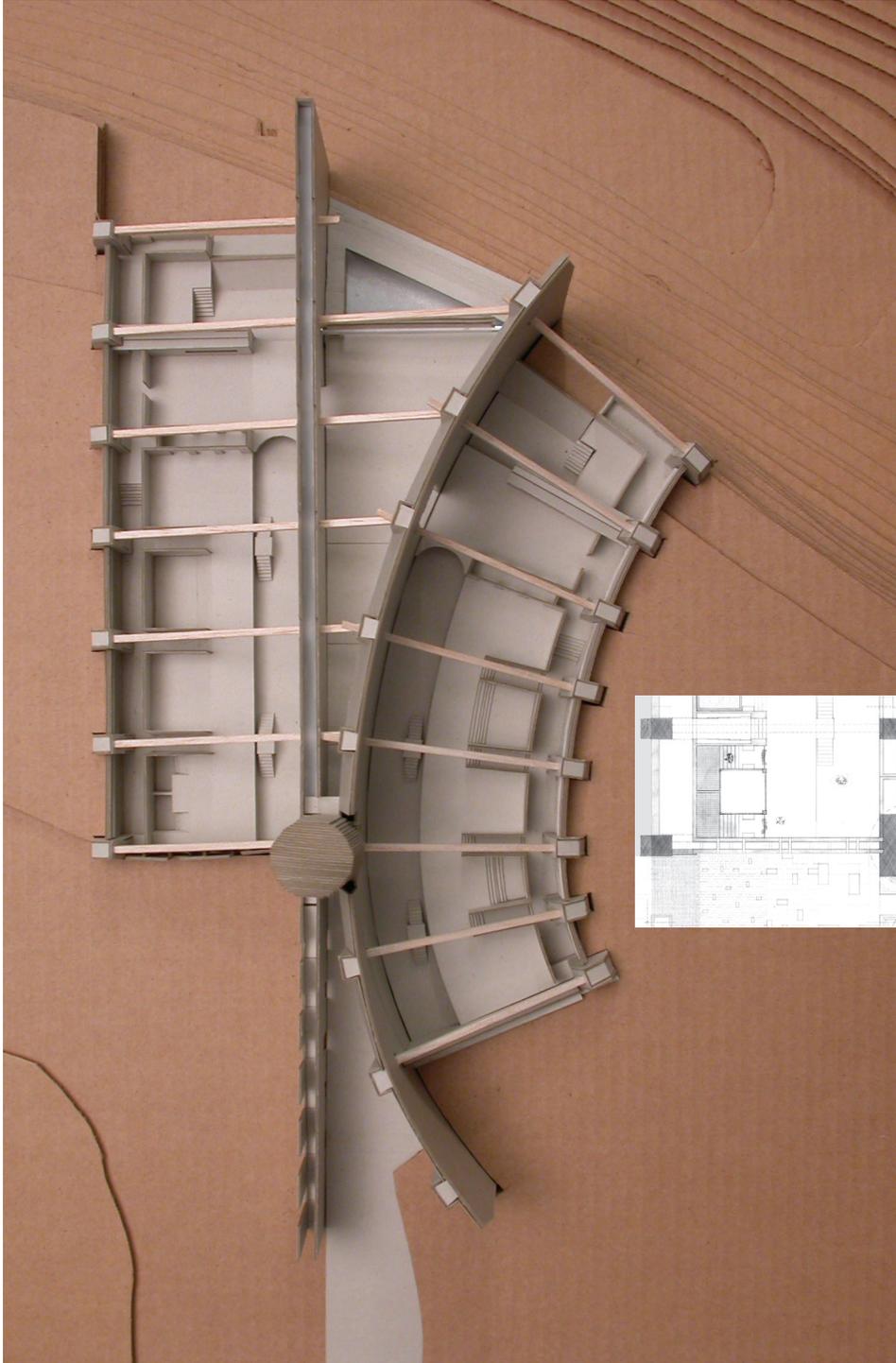
North Elevation



Overall View from the Northeast



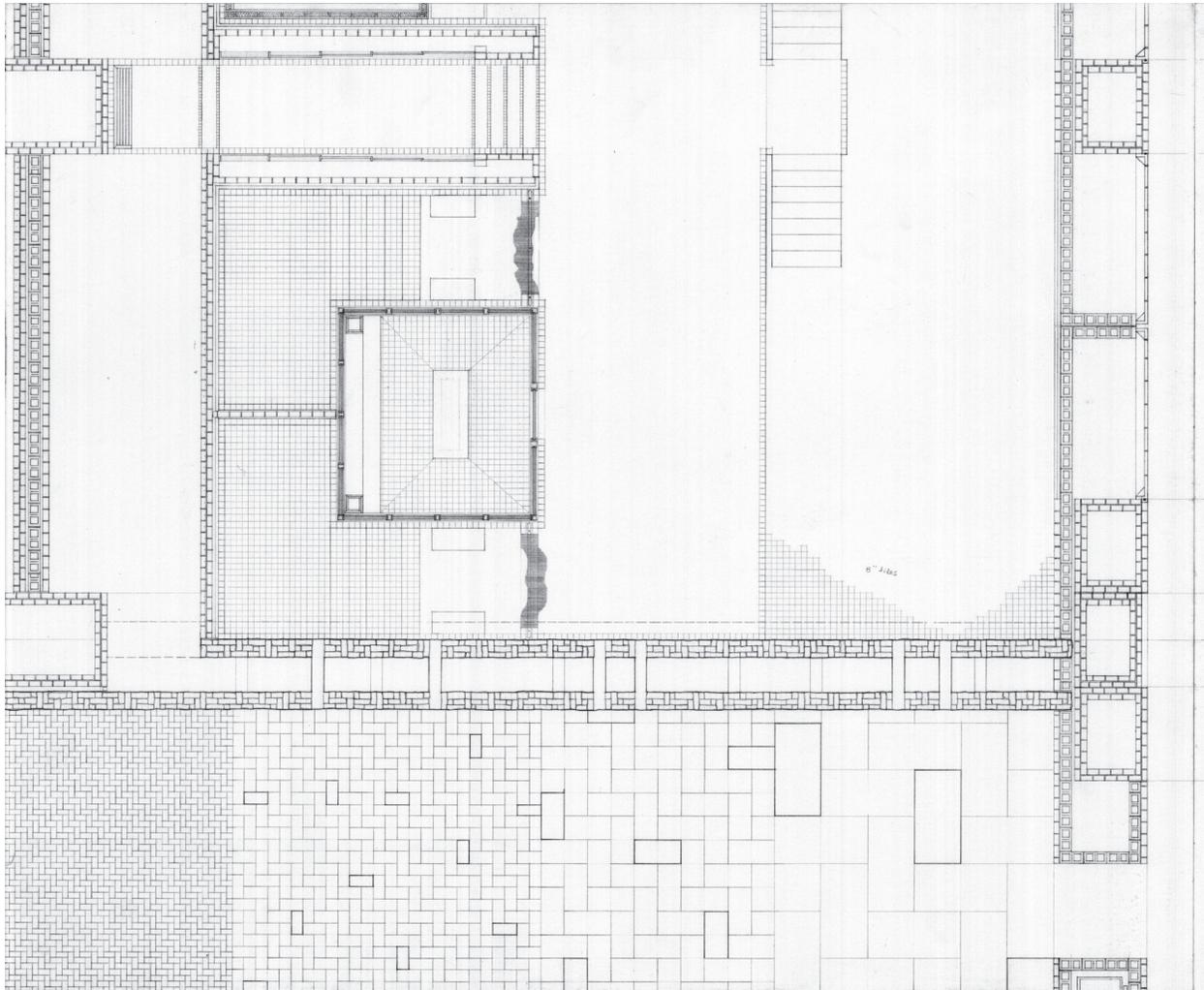
North Elevation



Entry Plan Detail

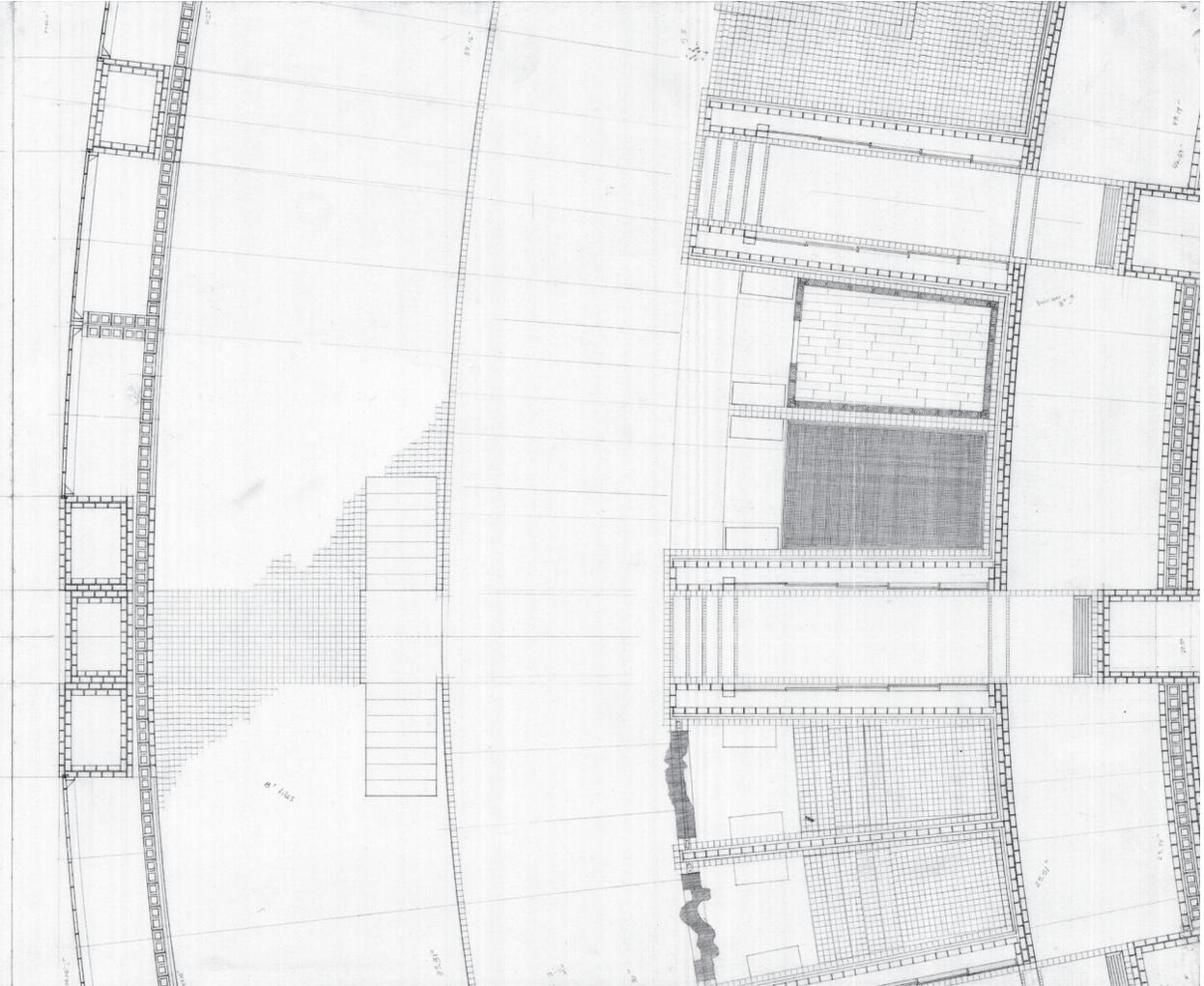


Plan



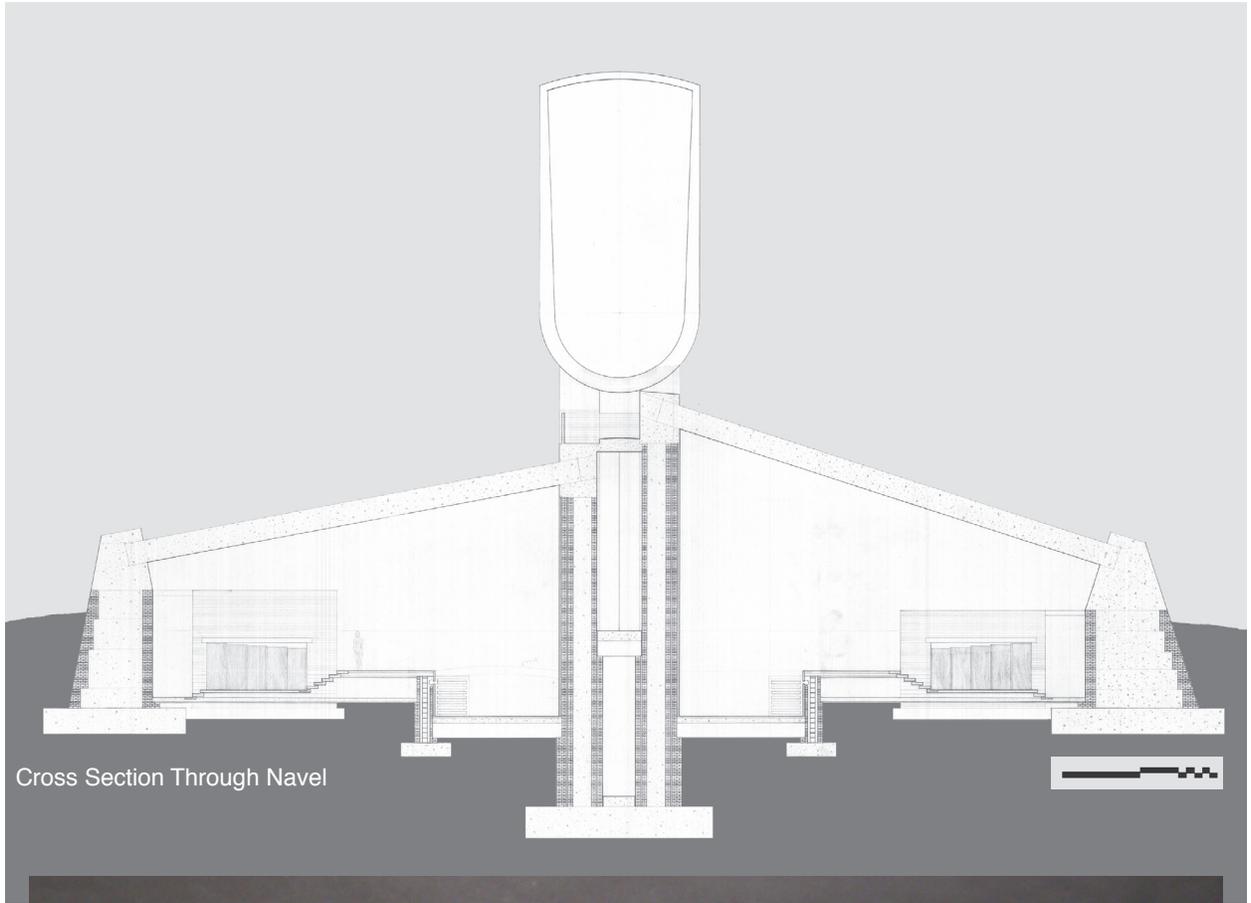
Detail Plan of Winter Side



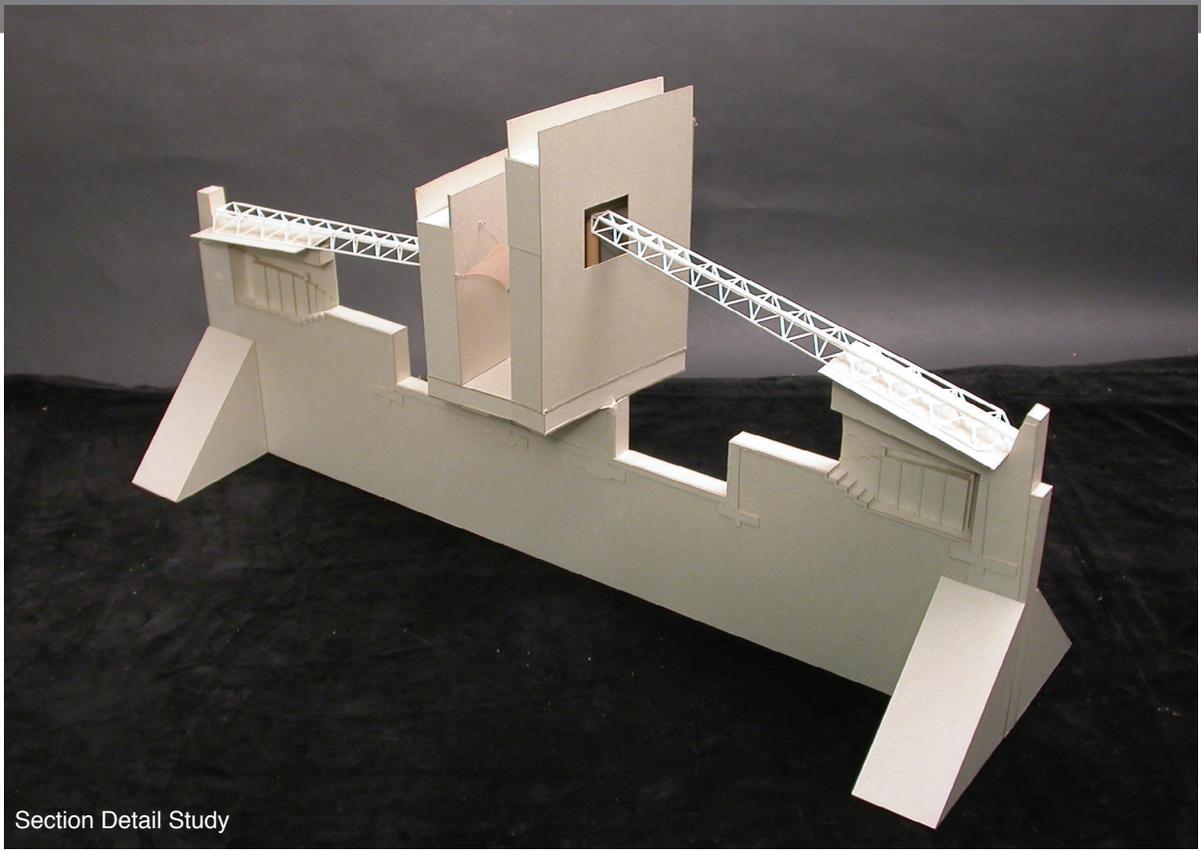


Detail Plan of Summer Side

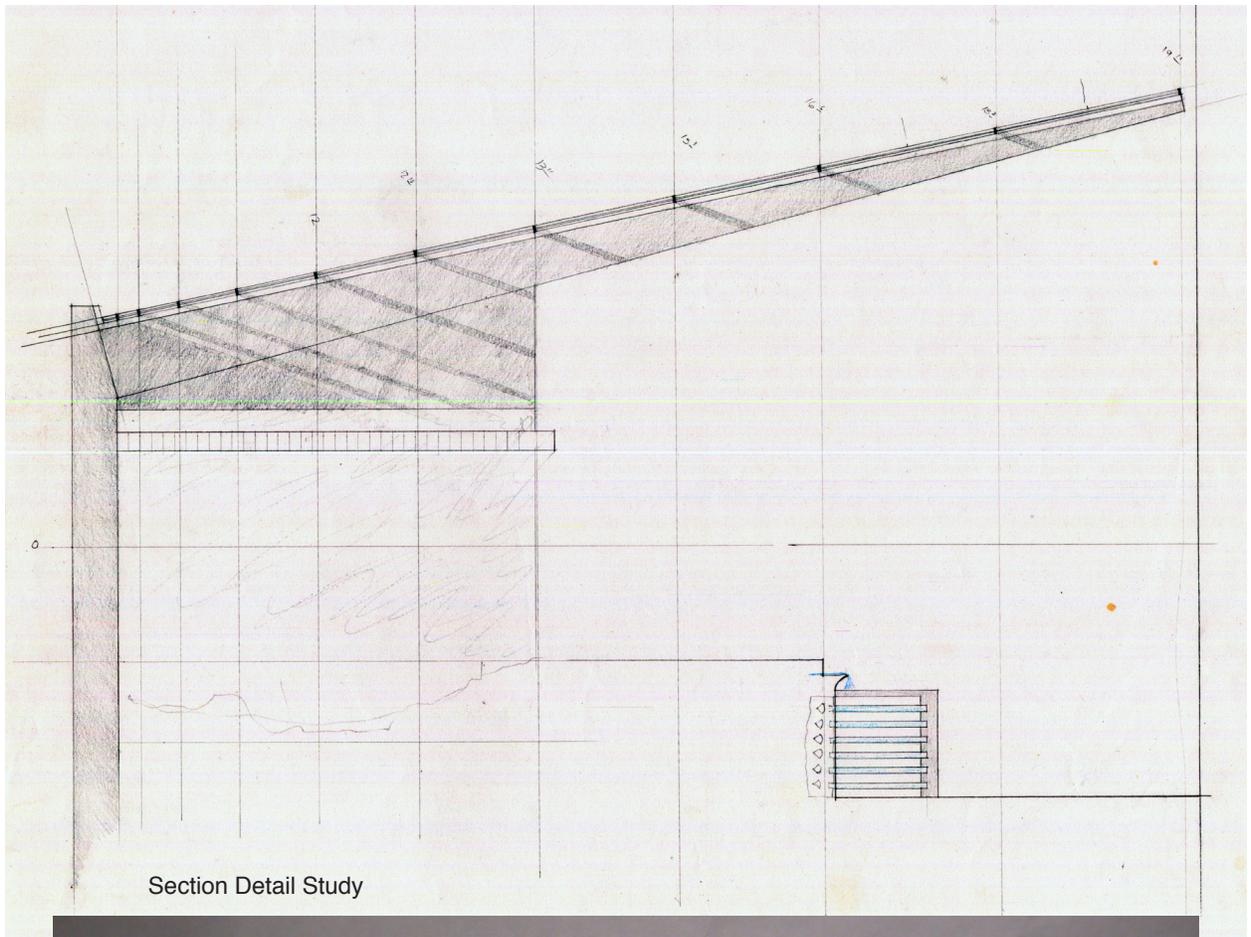




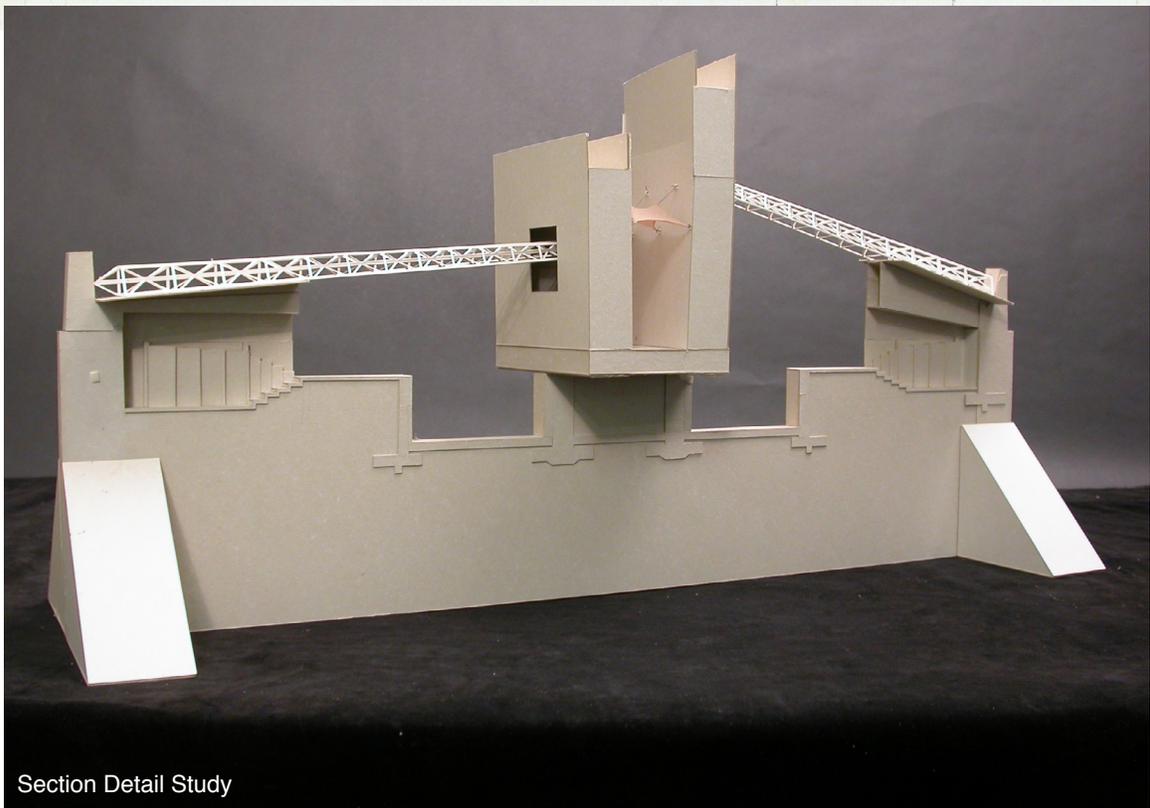
Cross Section Through Navel



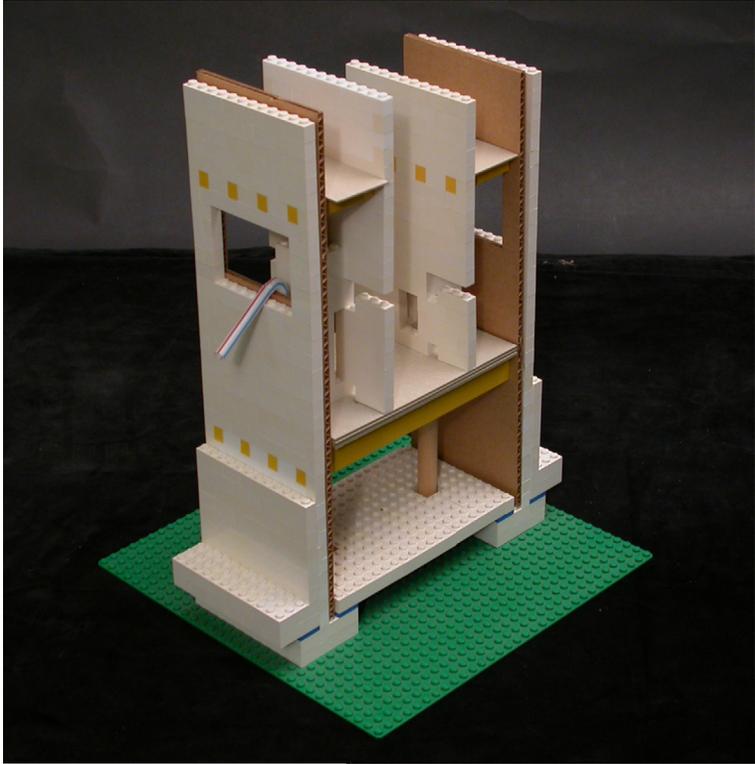
Section Detail Study



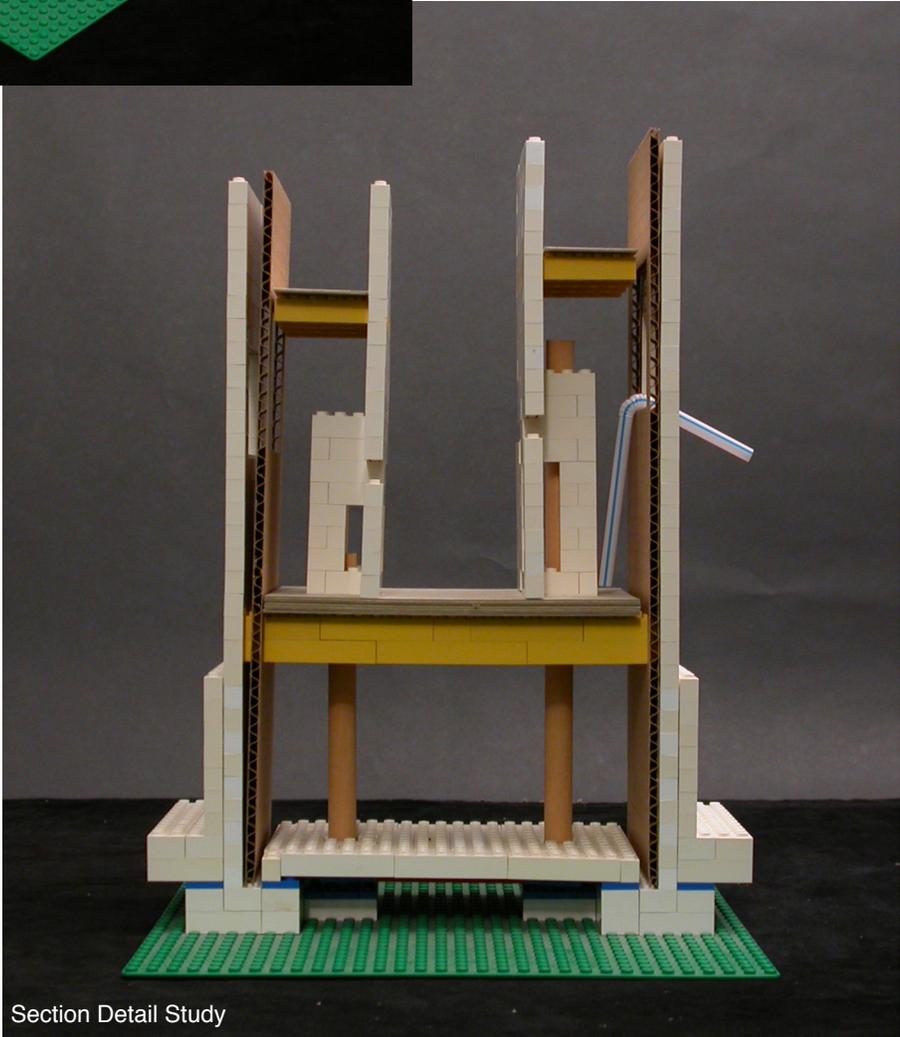
Section Detail Study



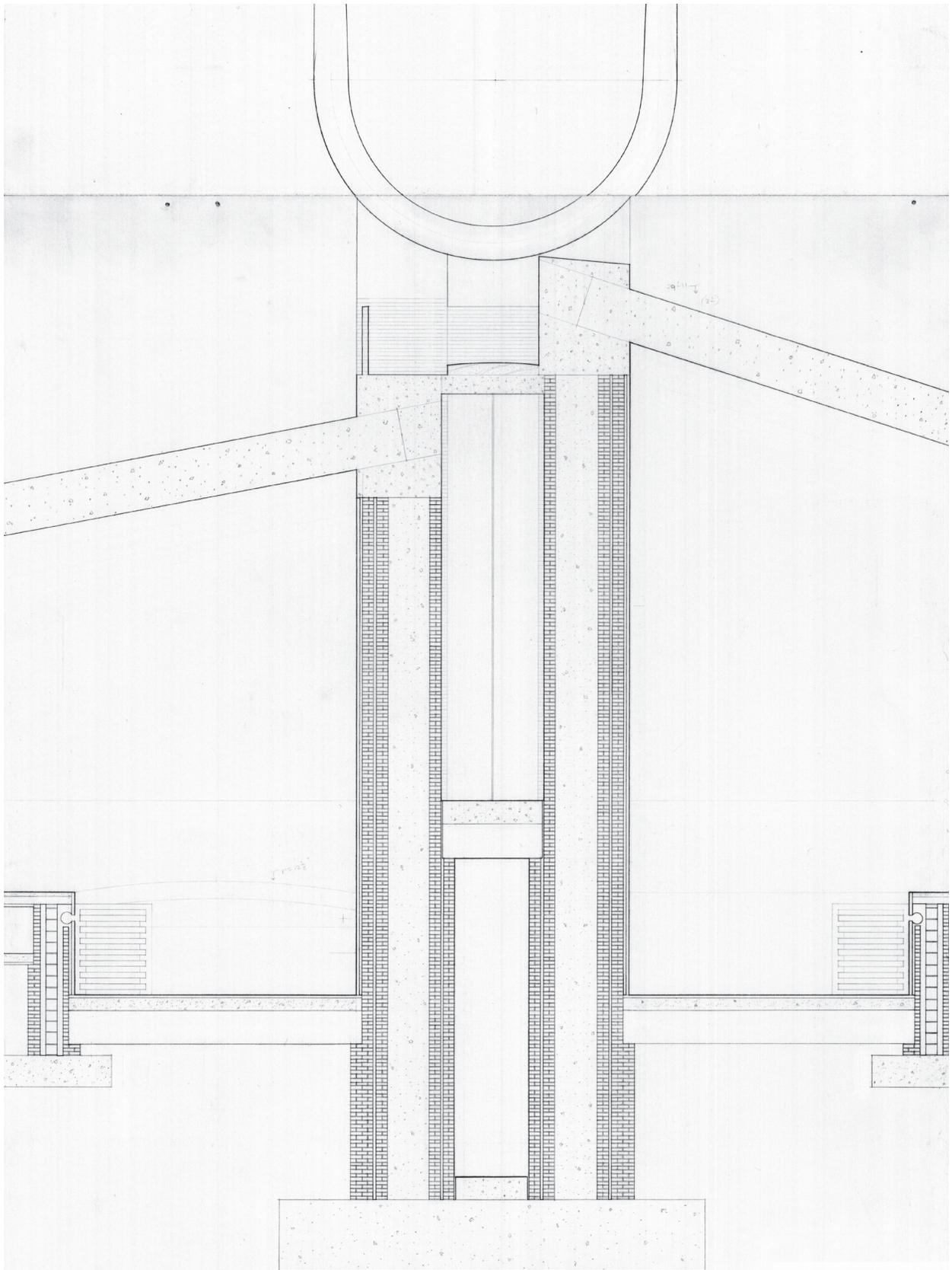
Section Detail Study



Section Detail Study

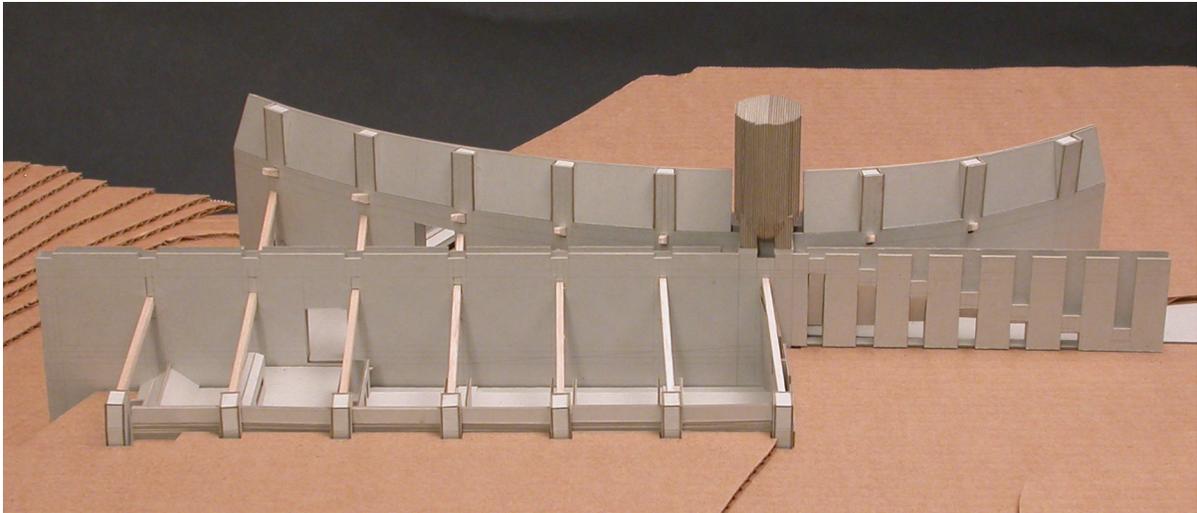


Section Detail Study

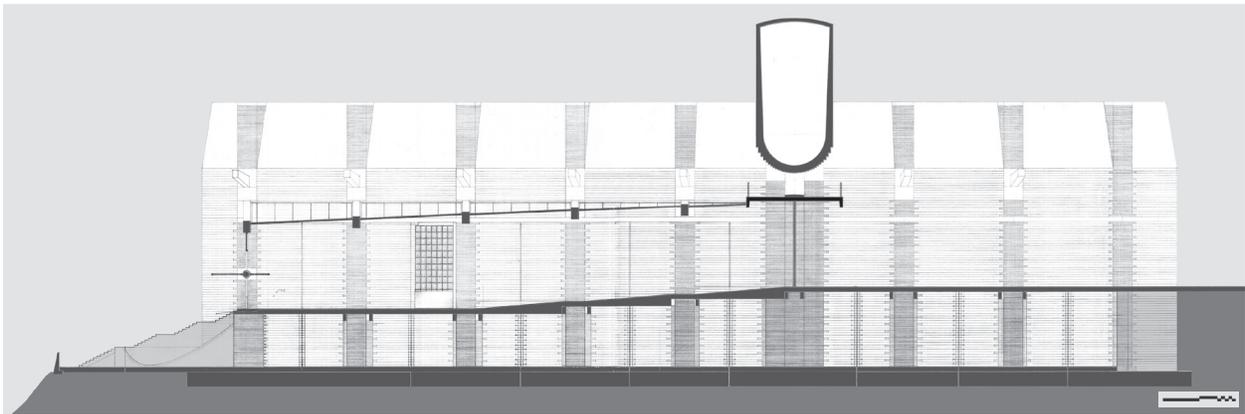


Section Detail Through Main Walls

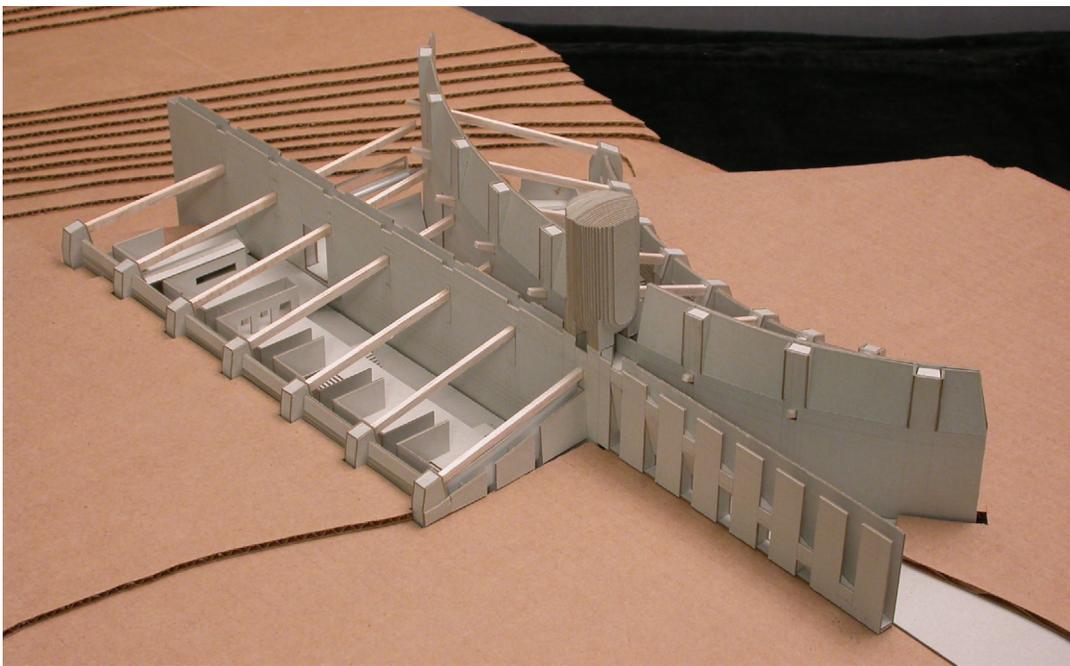




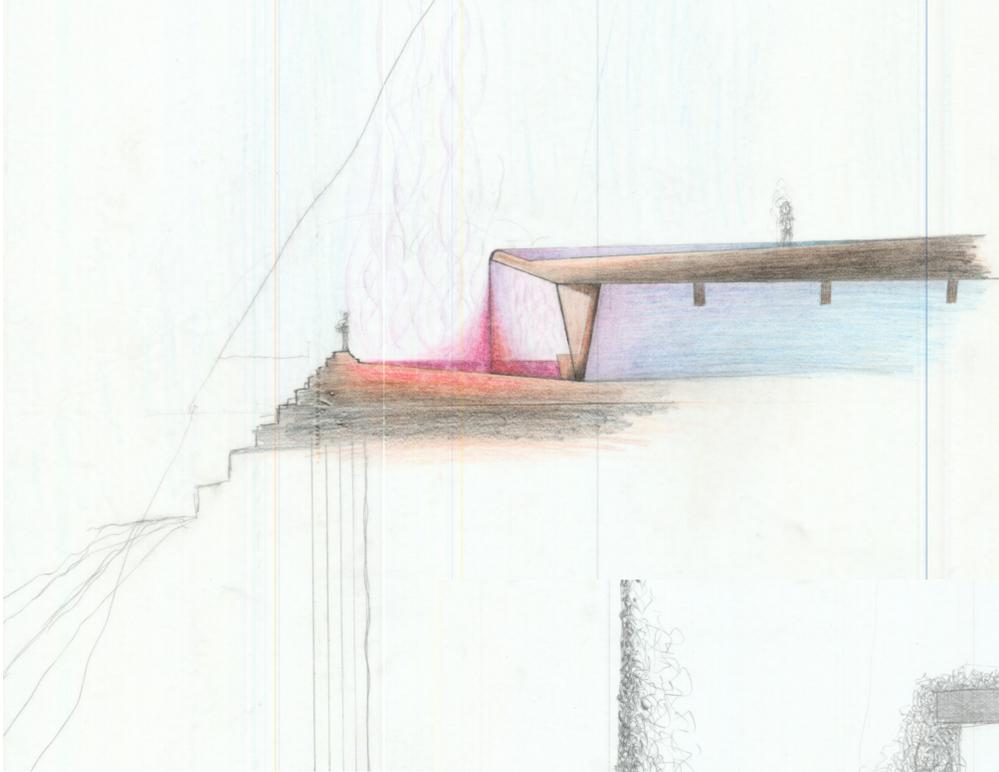
Section View from South



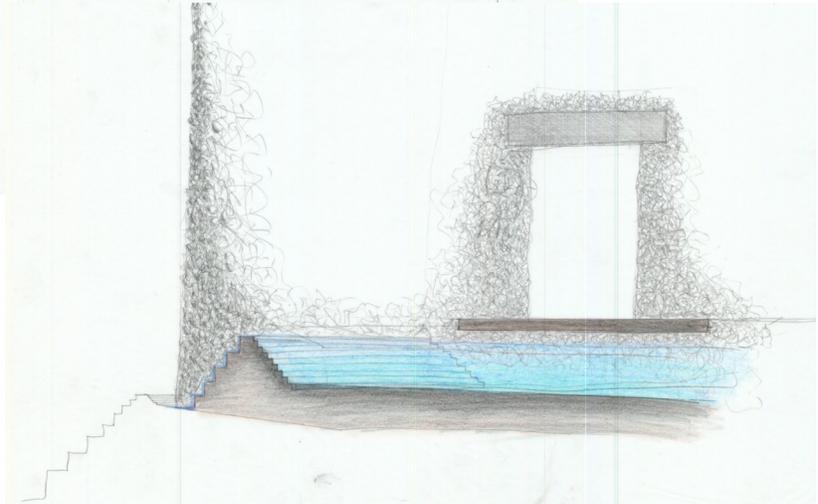
Section Through Central Spine



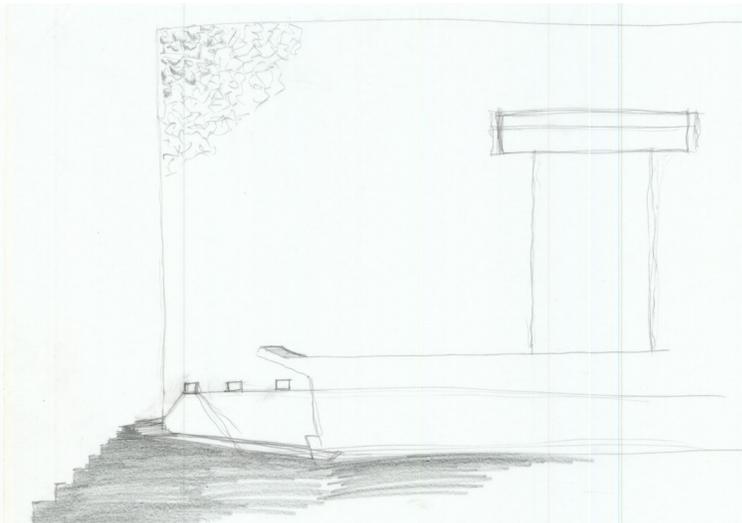
Section View from Southeast



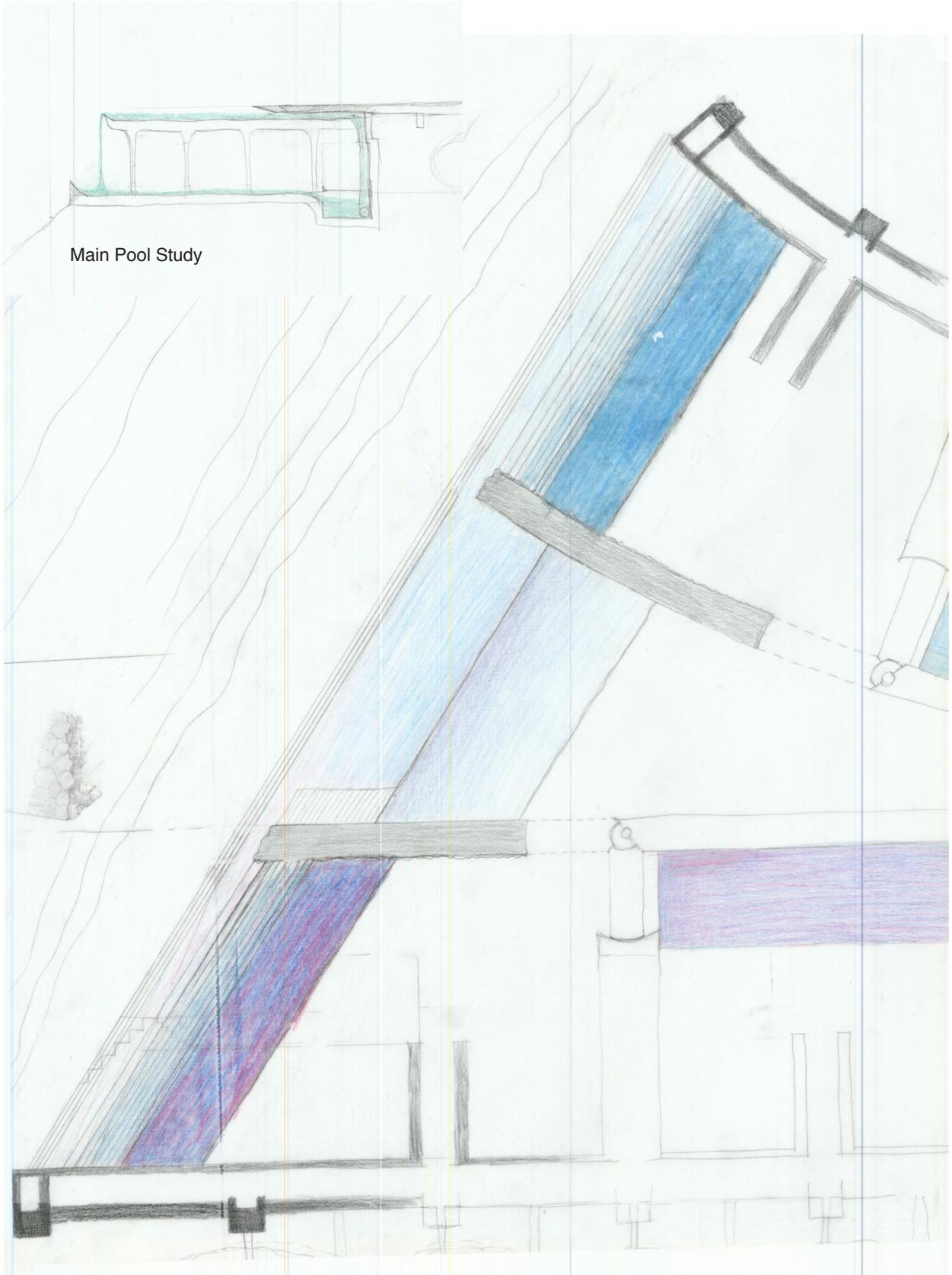
Main Pool Study



Main Pool Study

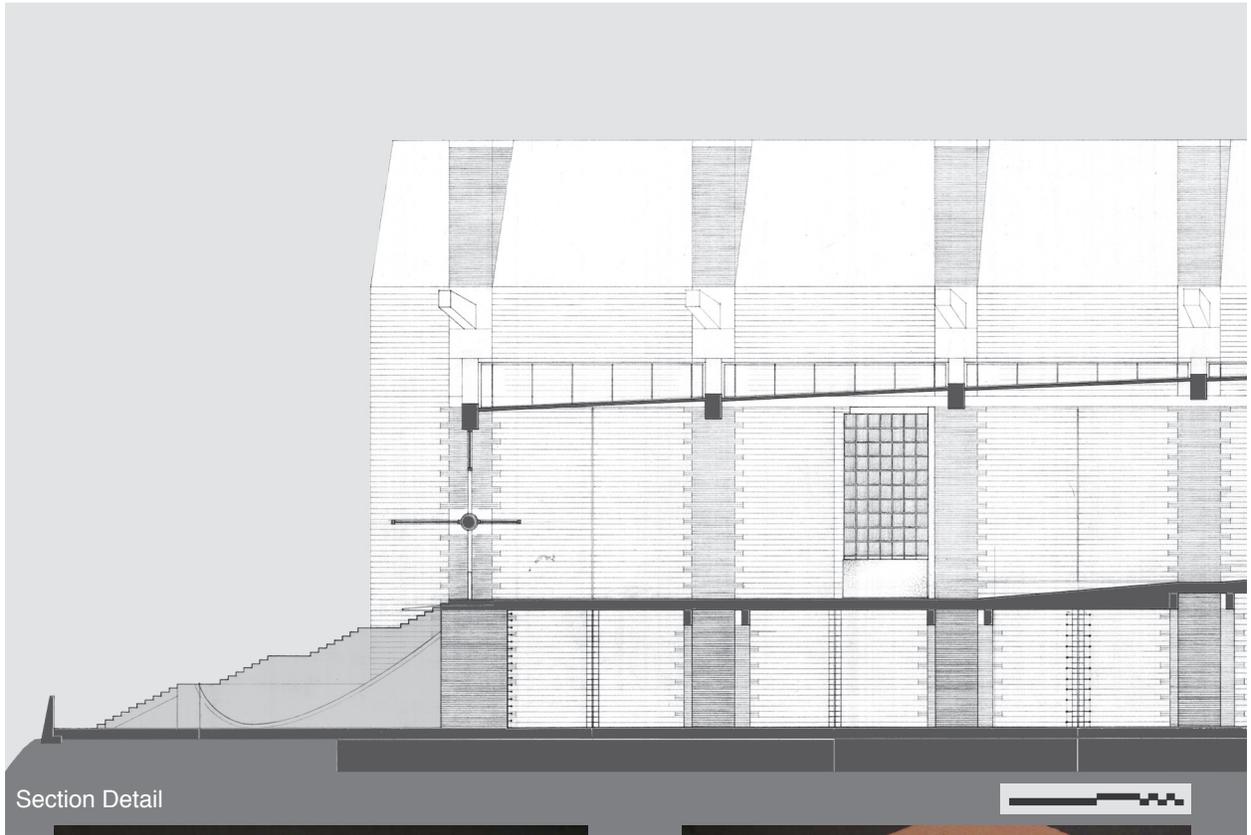


Main Pool Study

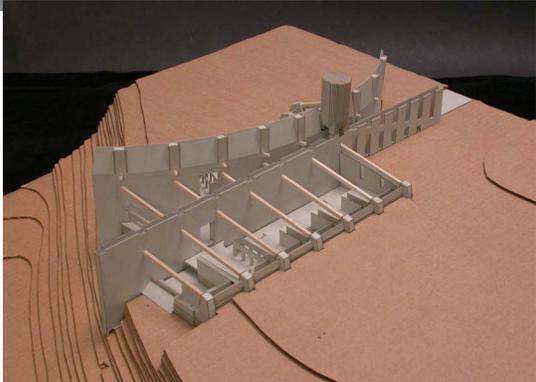


Main Pool Study

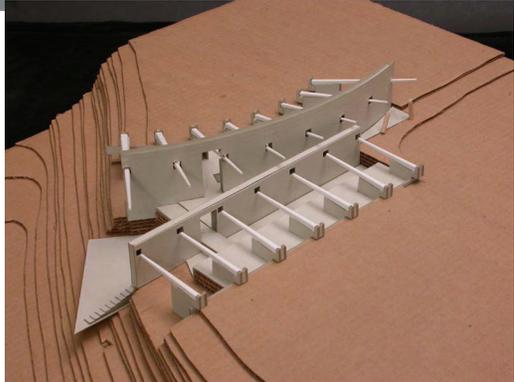
Main Pool Study



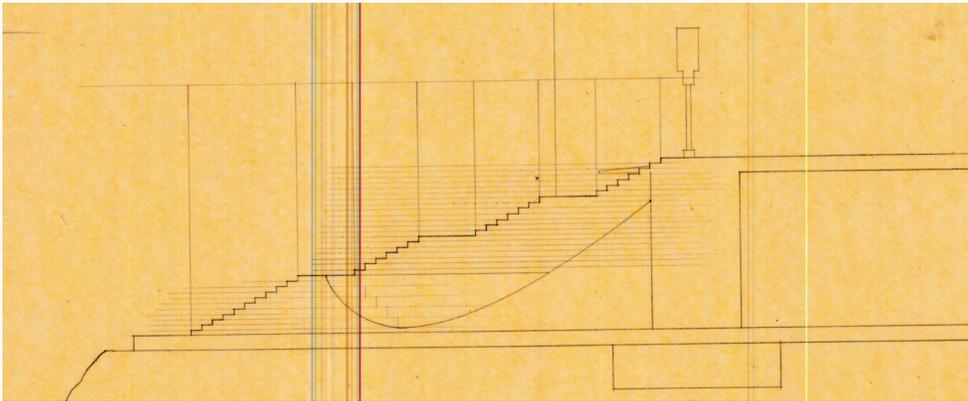
Section Detail



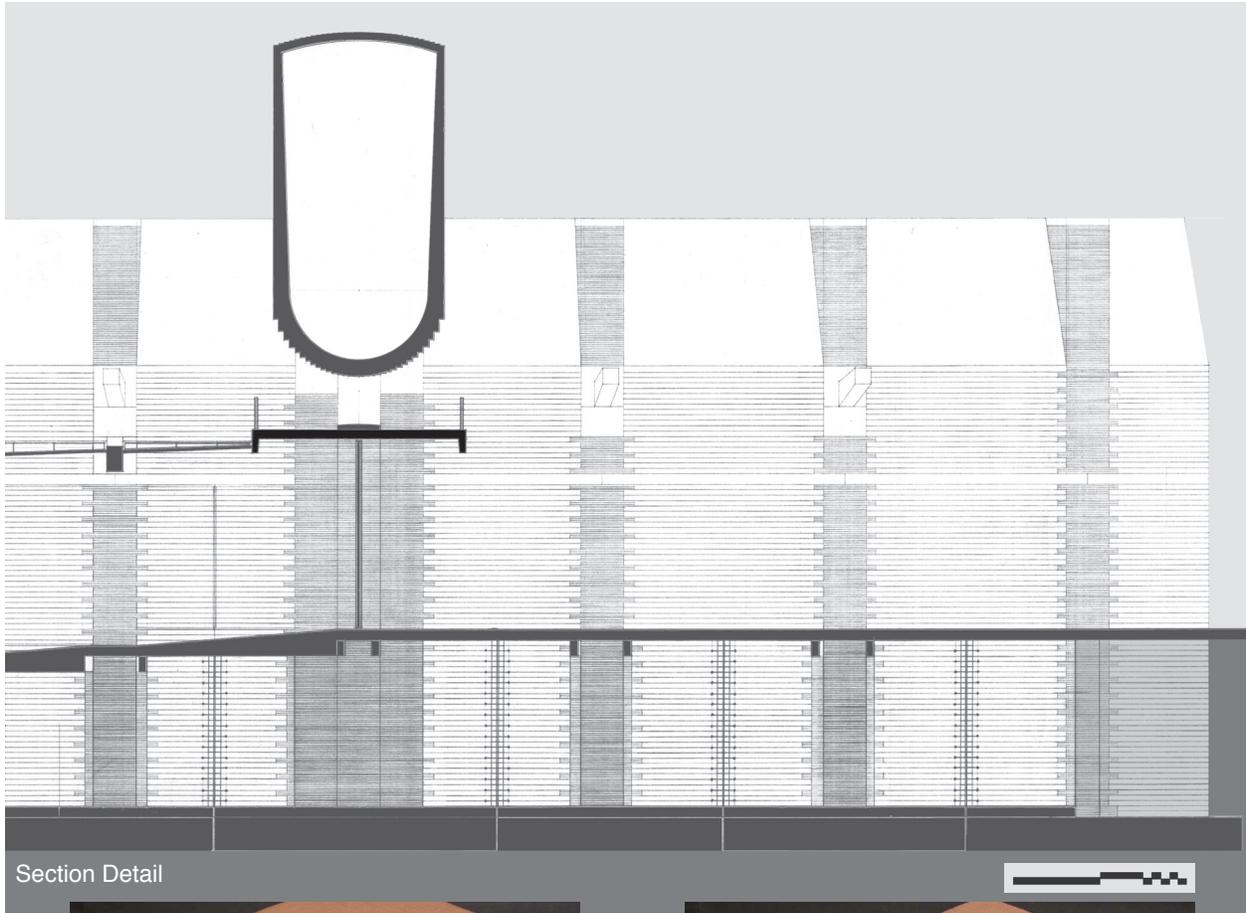
Section View from Southwest



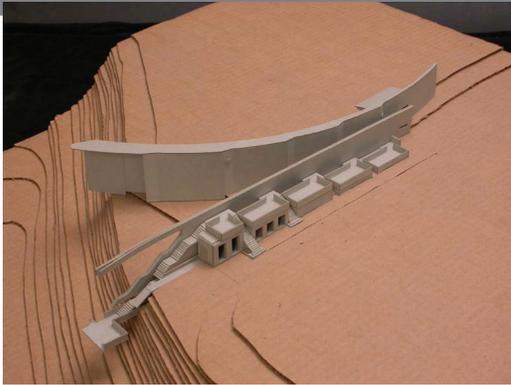
Study



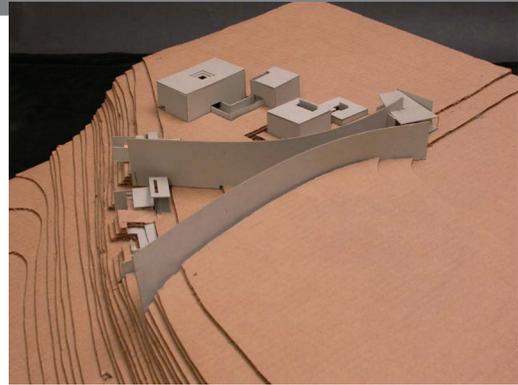
Main Pool Study



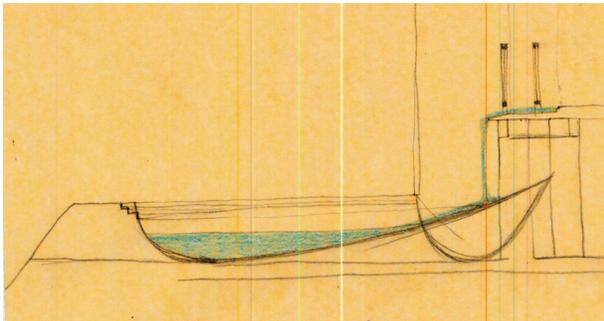
Section Detail



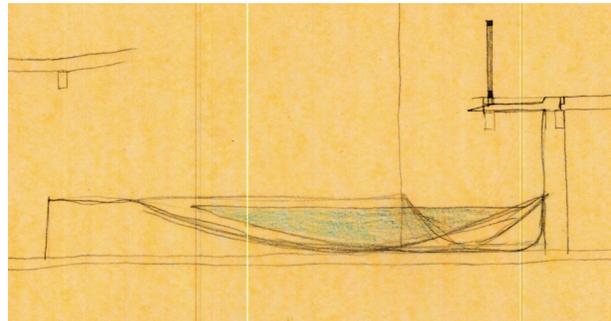
Study



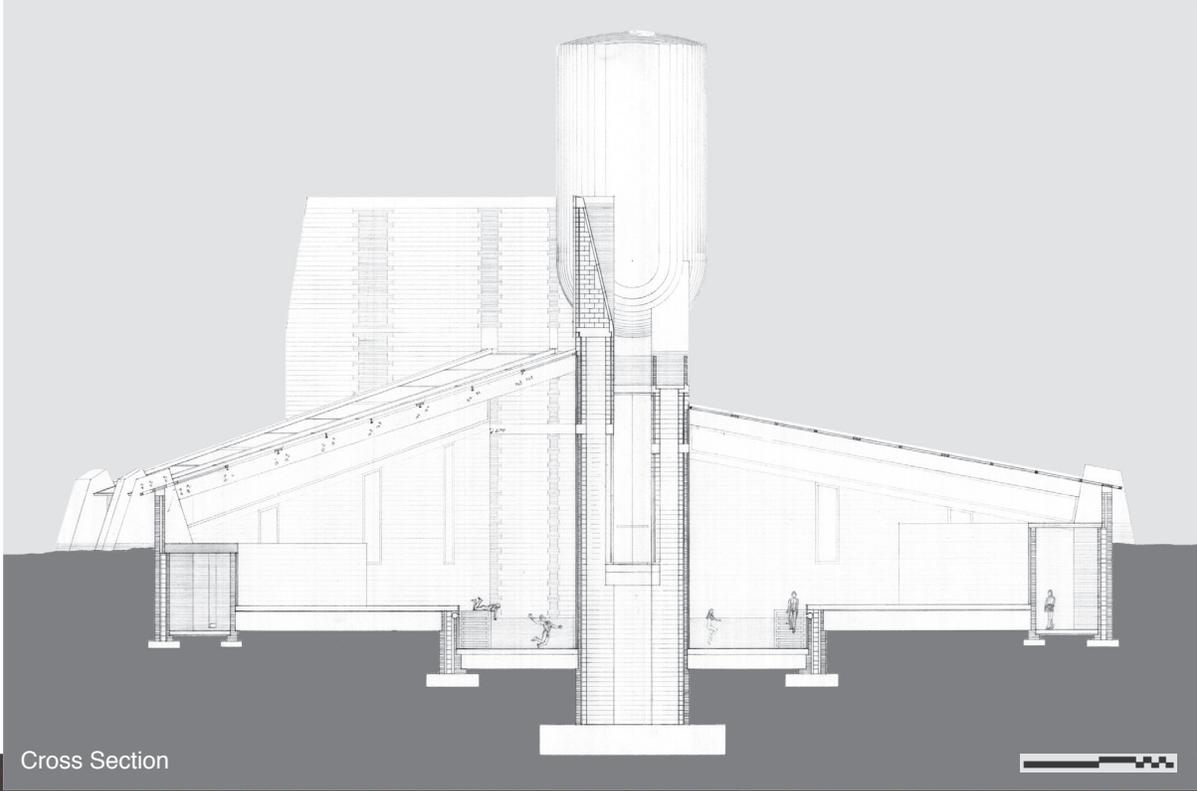
Study



Main Pool Study



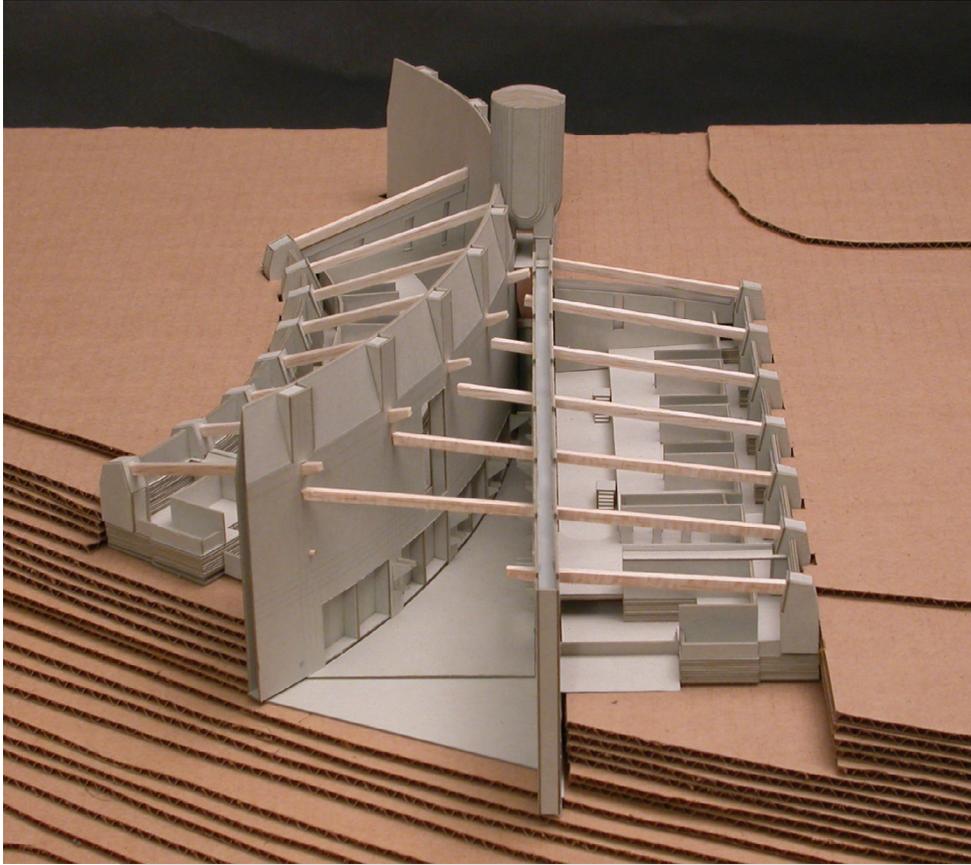
Main Pool Study



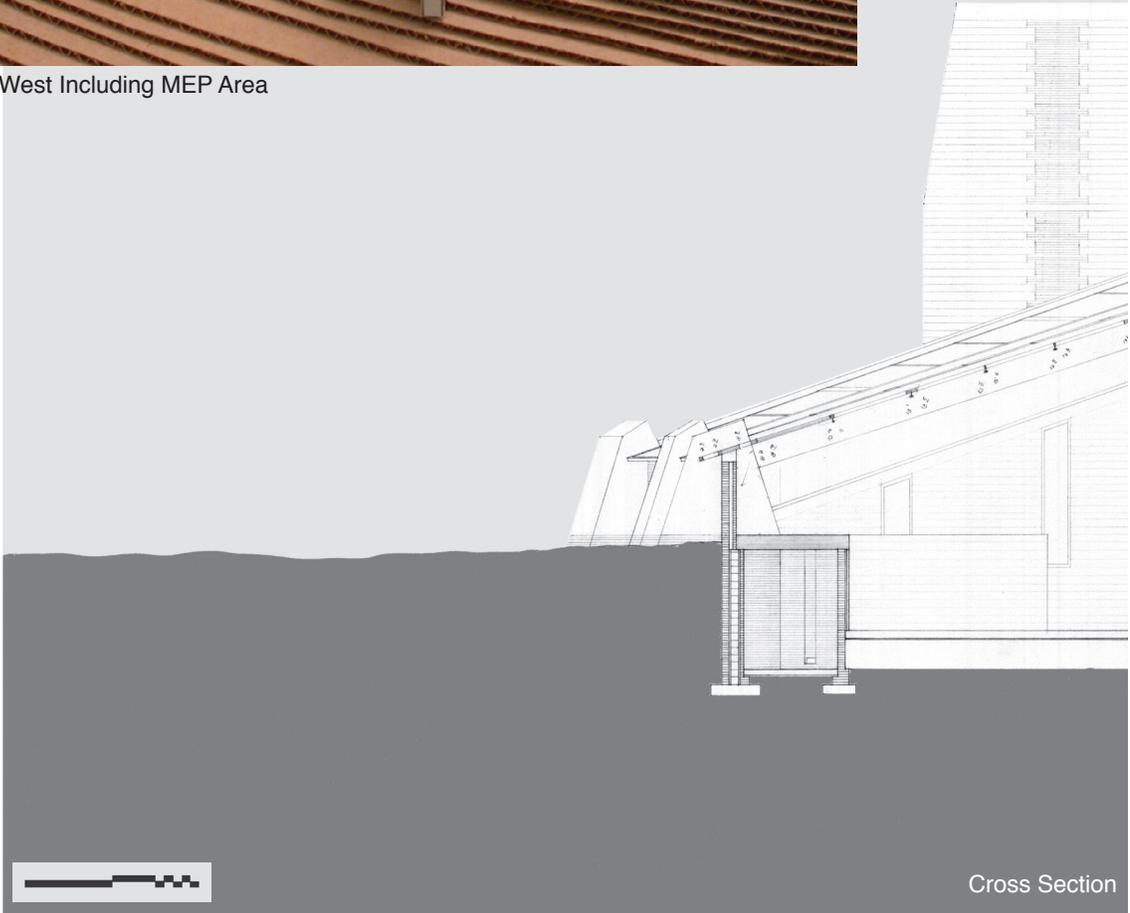
Cross Section

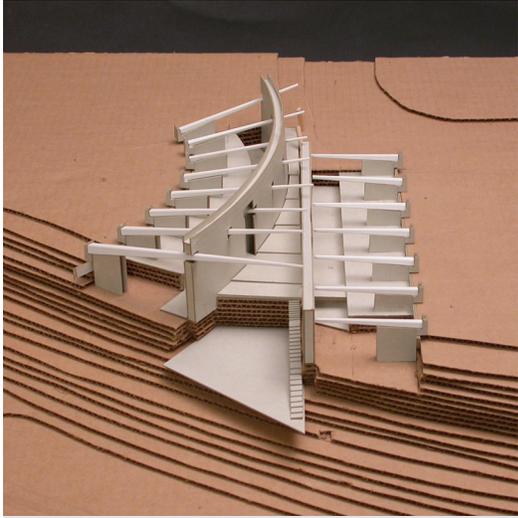


View from West Including MEP Area

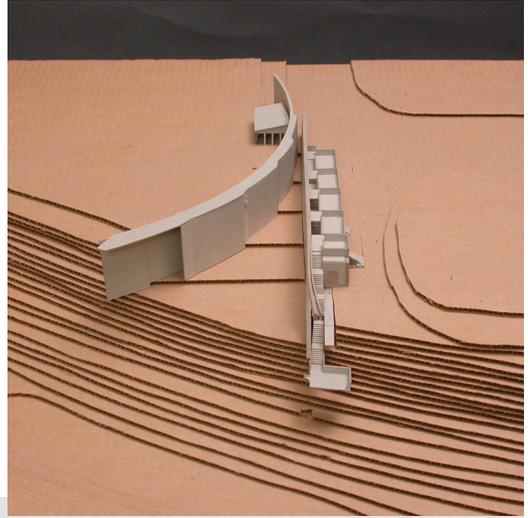


View from West Including MEP Area

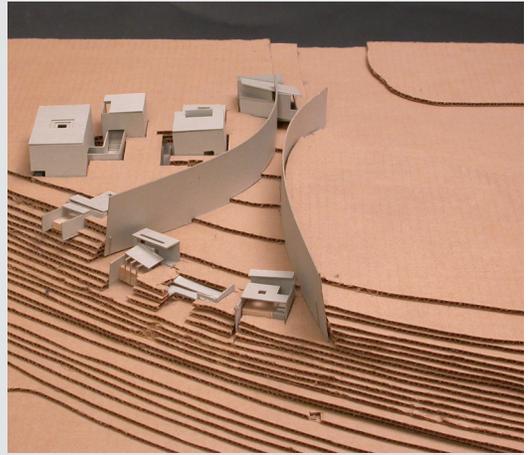
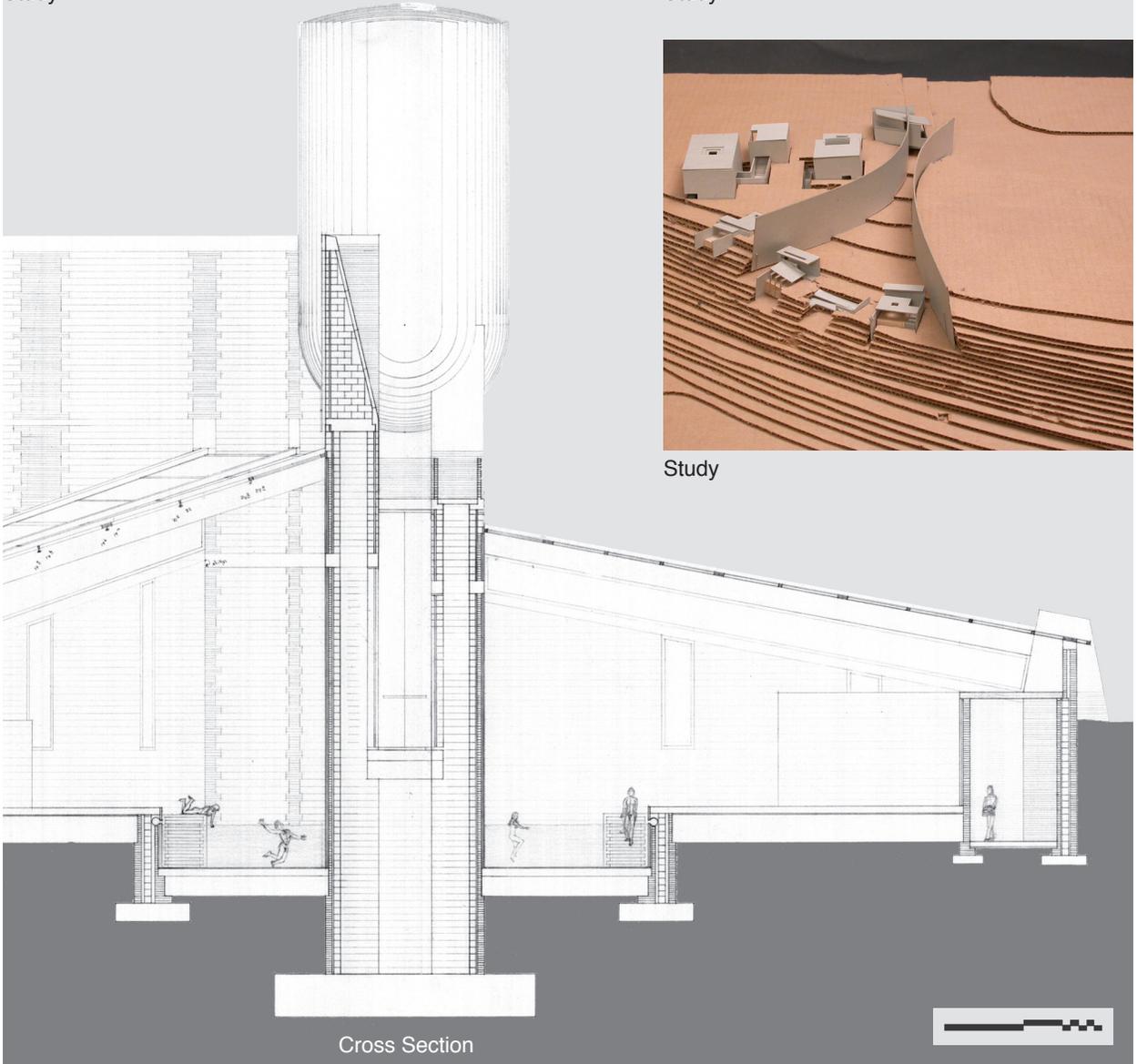




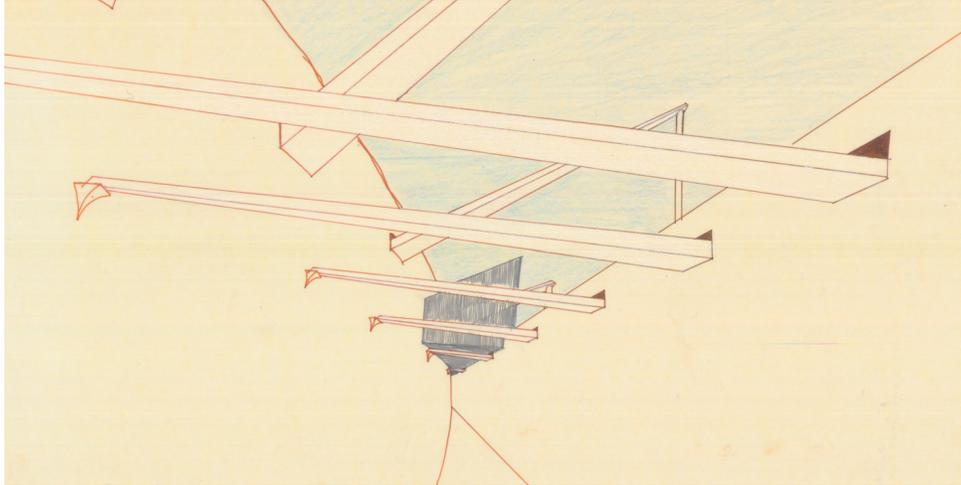
Study



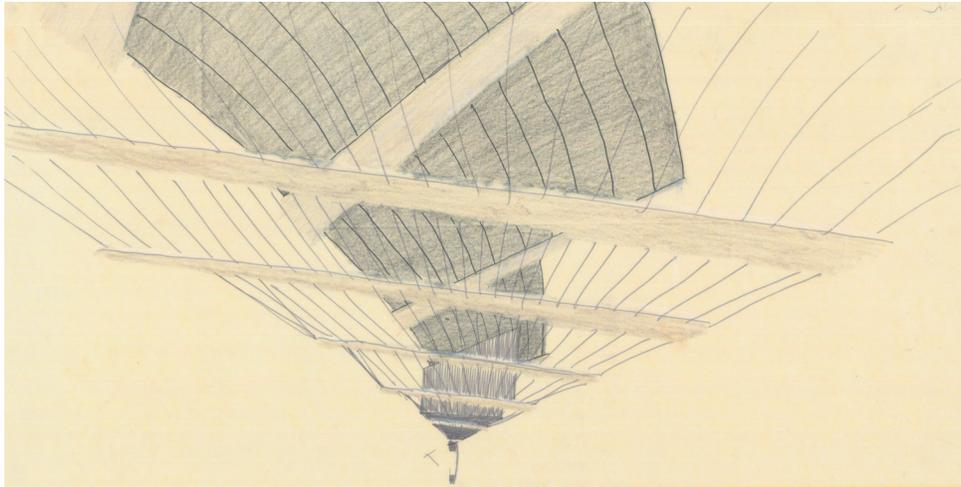
Study



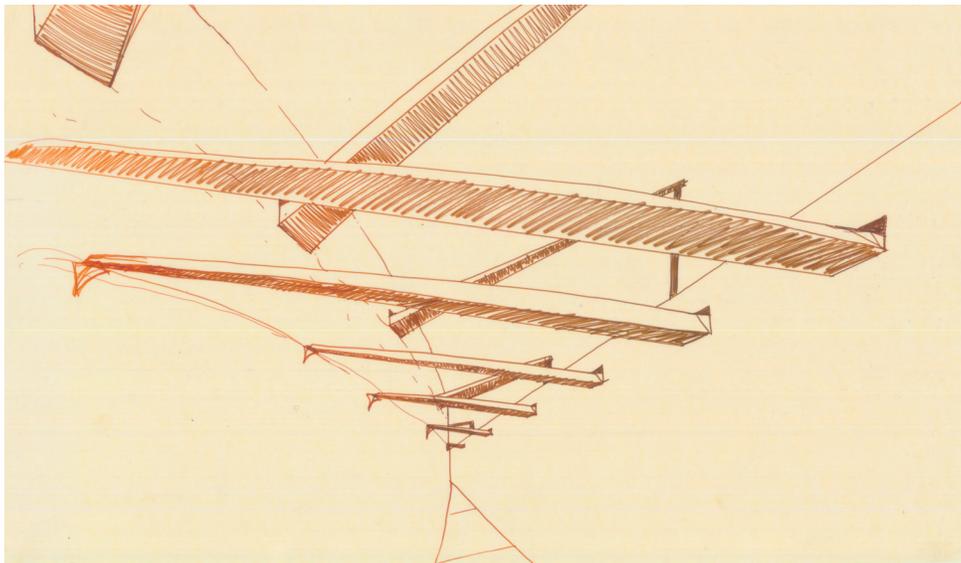
Study



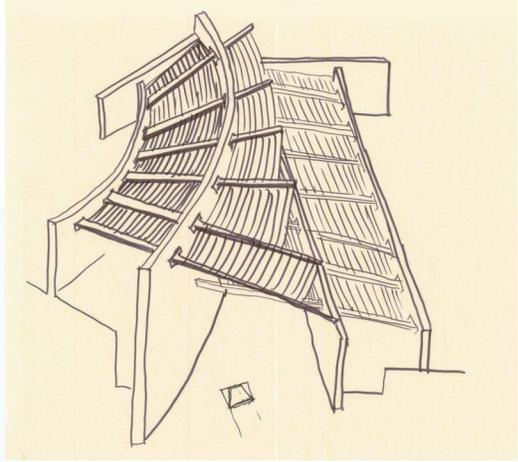
Ceiling Study



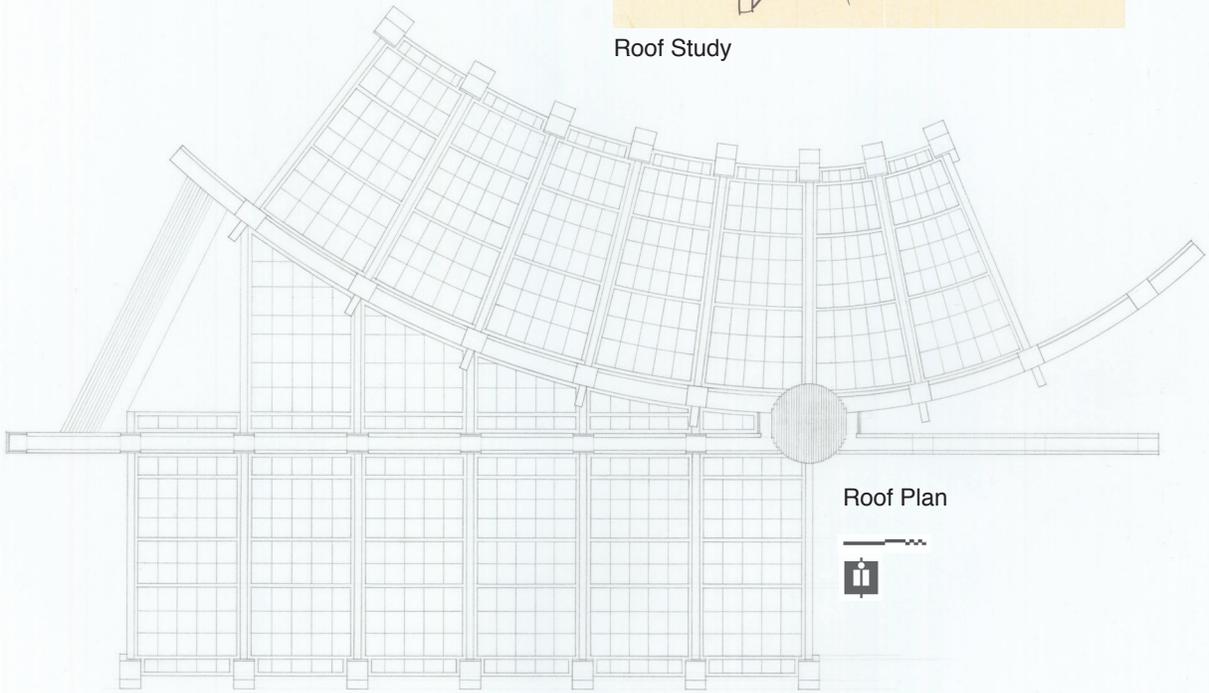
Ceiling Study



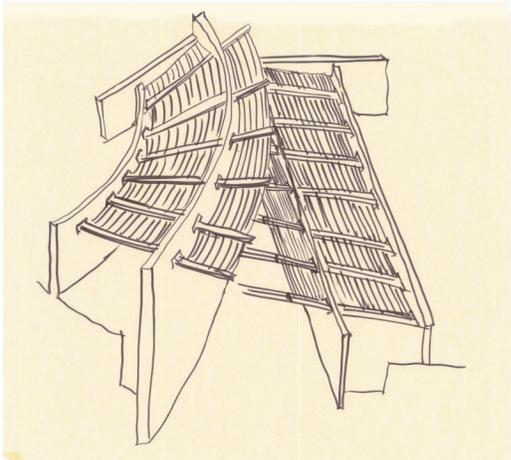
Ceiling Study



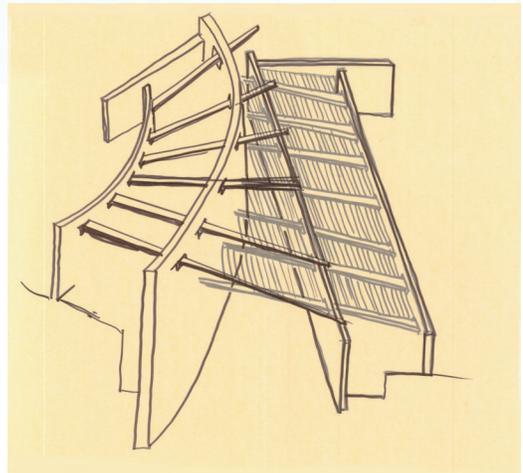
Roof Study



Roof Plan



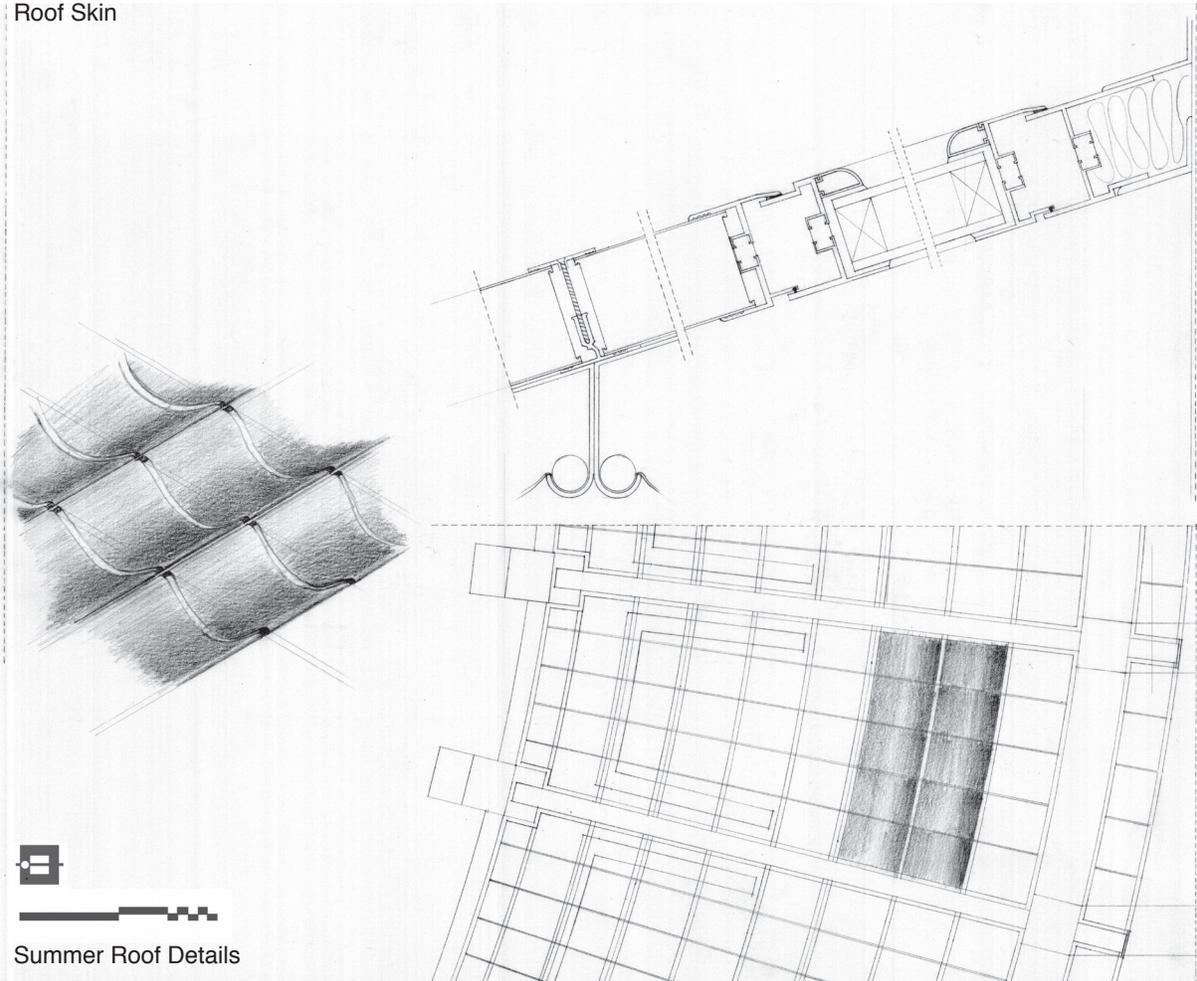
Roof Study



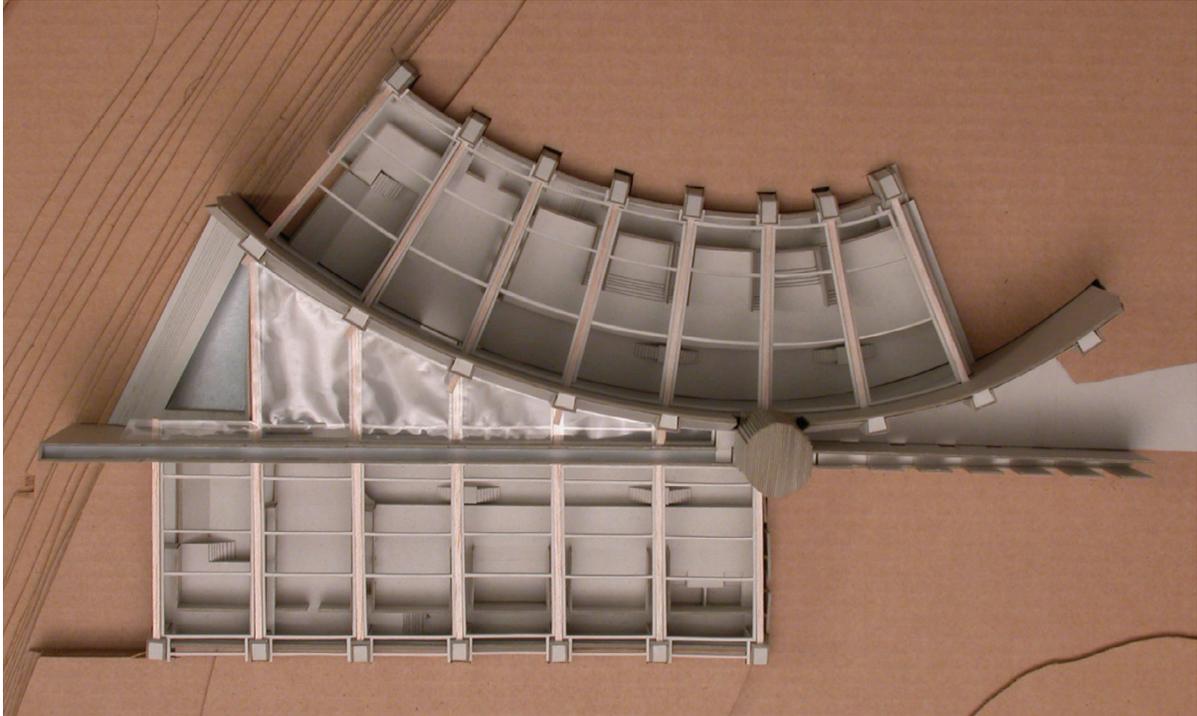
Roof Study



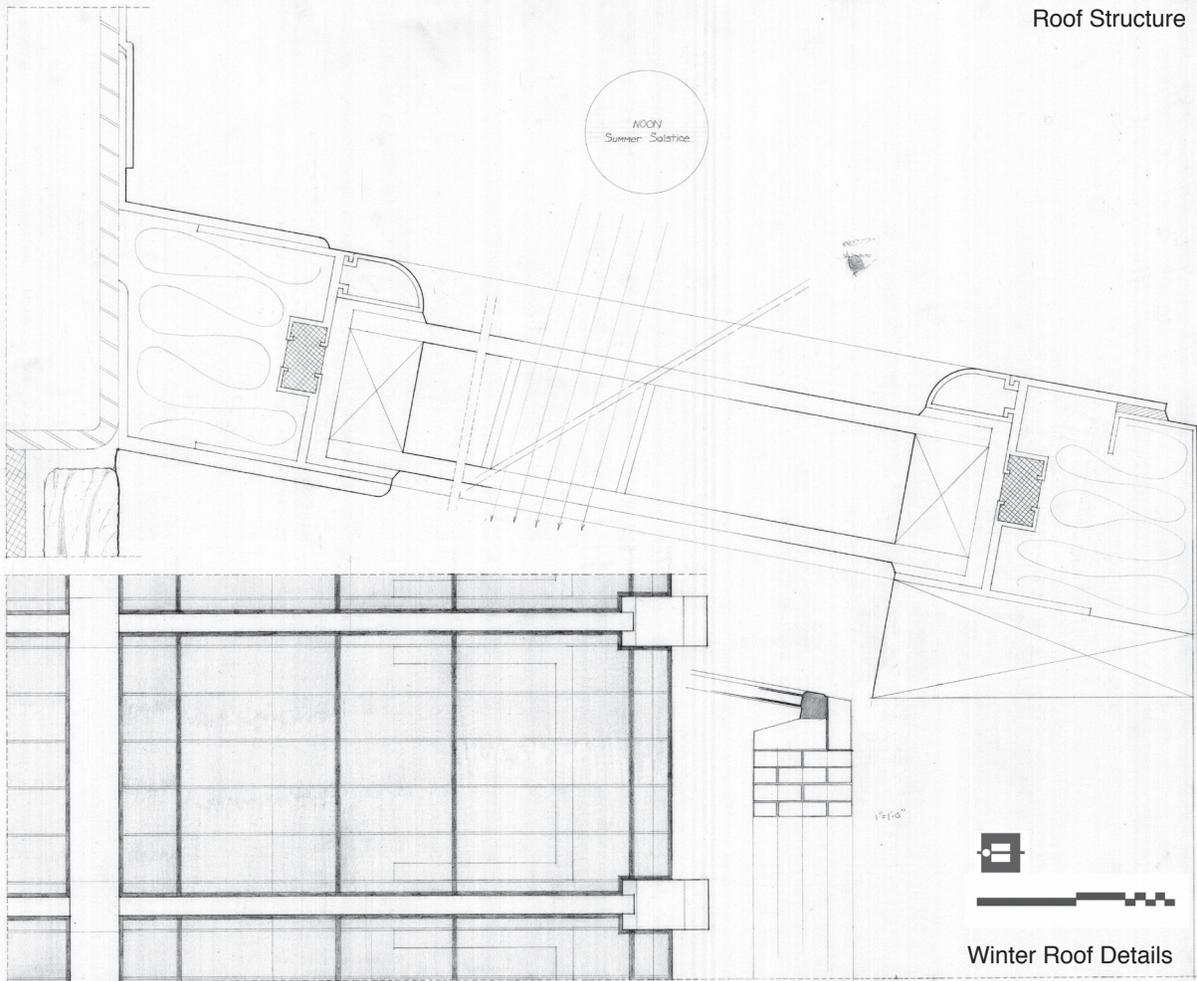
Roof Skin



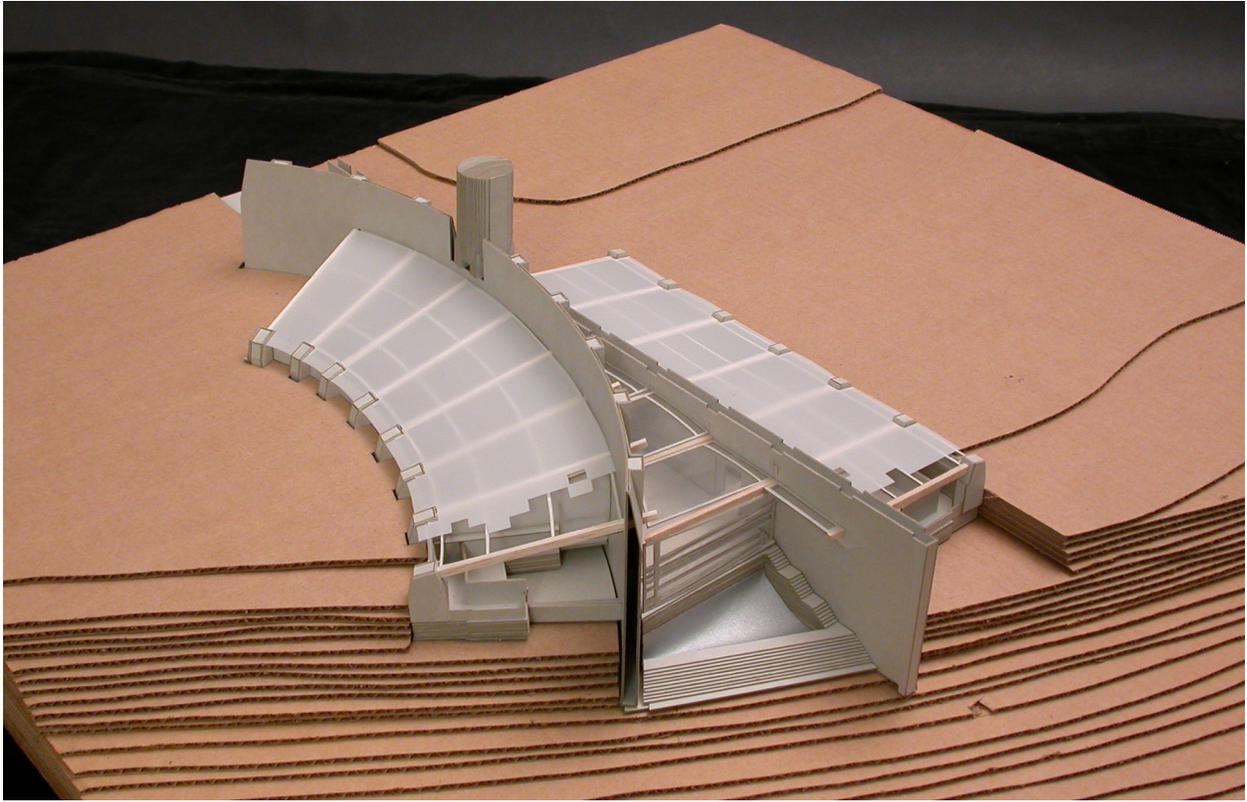
Summer Roof Details



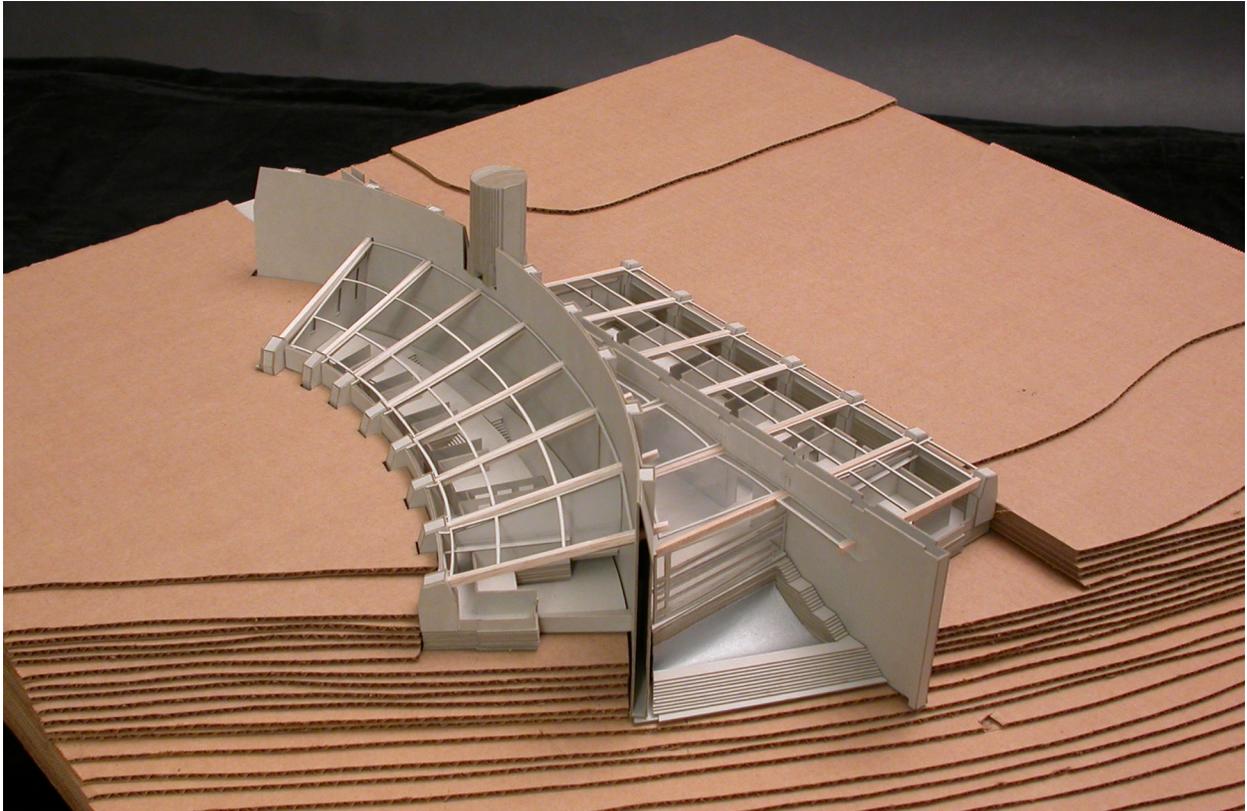
Roof Structure



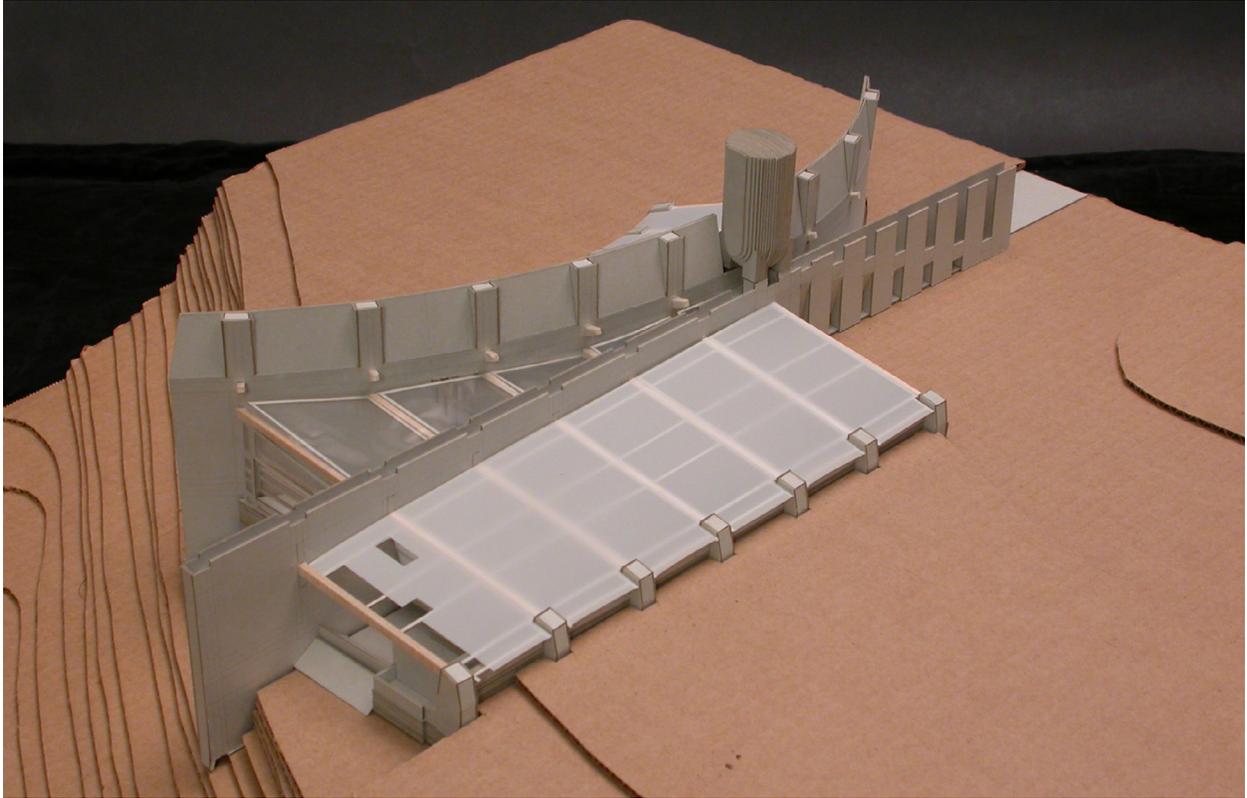
Winter Roof Details



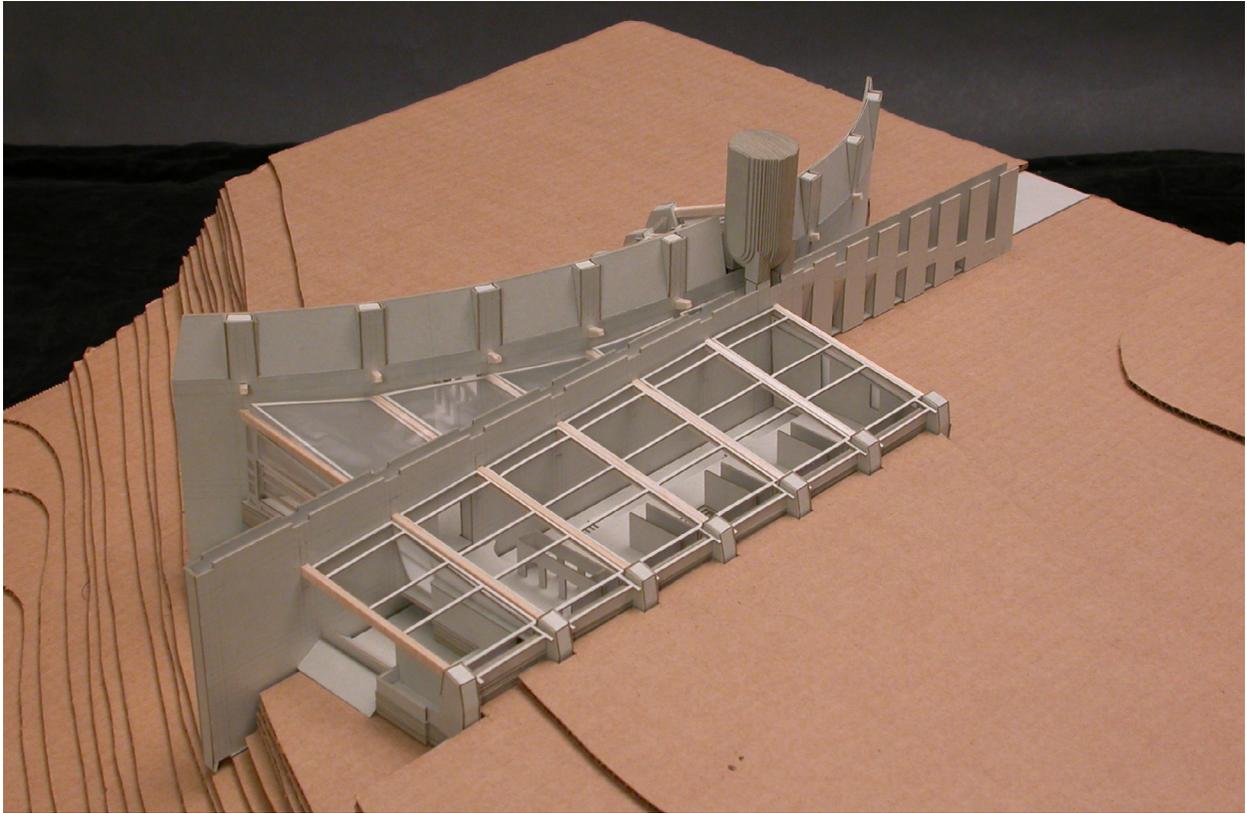
Overall Roof Skin View from Northwest



Overall Roof Structure View from Northwest



Overall Roof Skin View from Southwest



Overall Roof Structure View from Northwest

The Skin

Materials



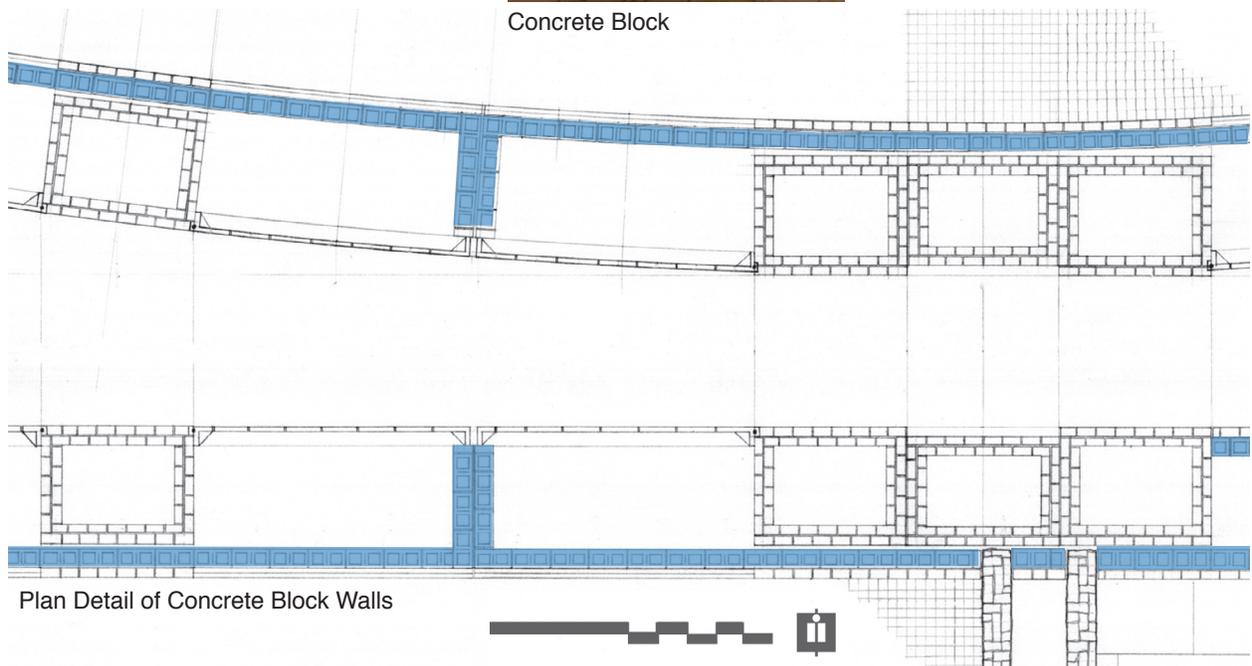
Impression of My Feet

“Through your feet, you can channel excess energy into the earth. You’ve probably noticed that the first thing most of us do when we get home is kick off our shoes. With that gesture, we reestablish direct contact with the ground. Through the soles of our feet we release painful tensions.” (Vienne, p. 46)

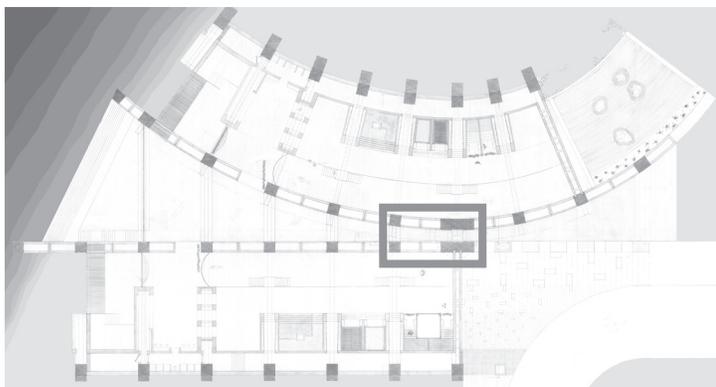
“Choosing sand [to be mixed for mortar] by the sound it makes when rubbed in the hand... “
(Granger, p.95)



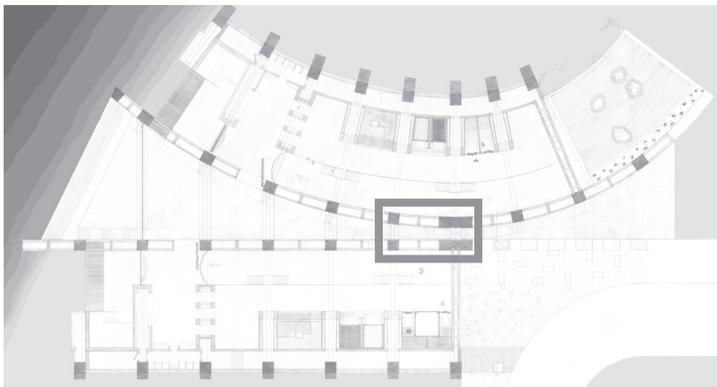
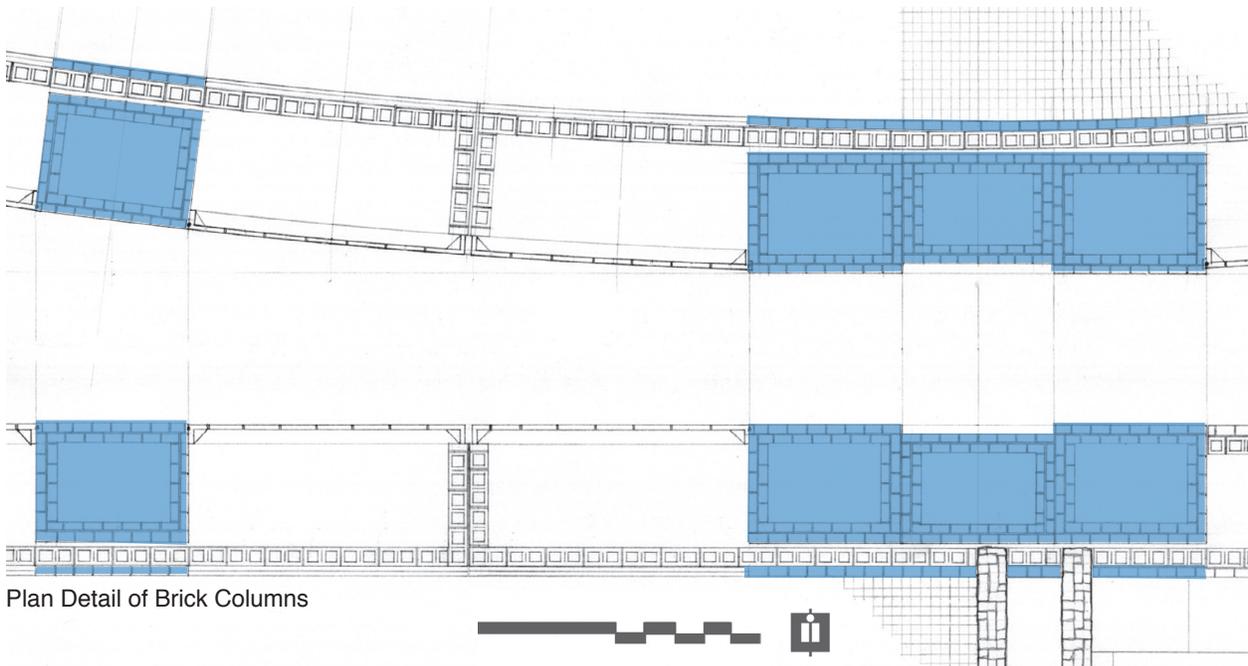
Concrete Block



Plan Detail of Concrete Block Walls



Key Plan

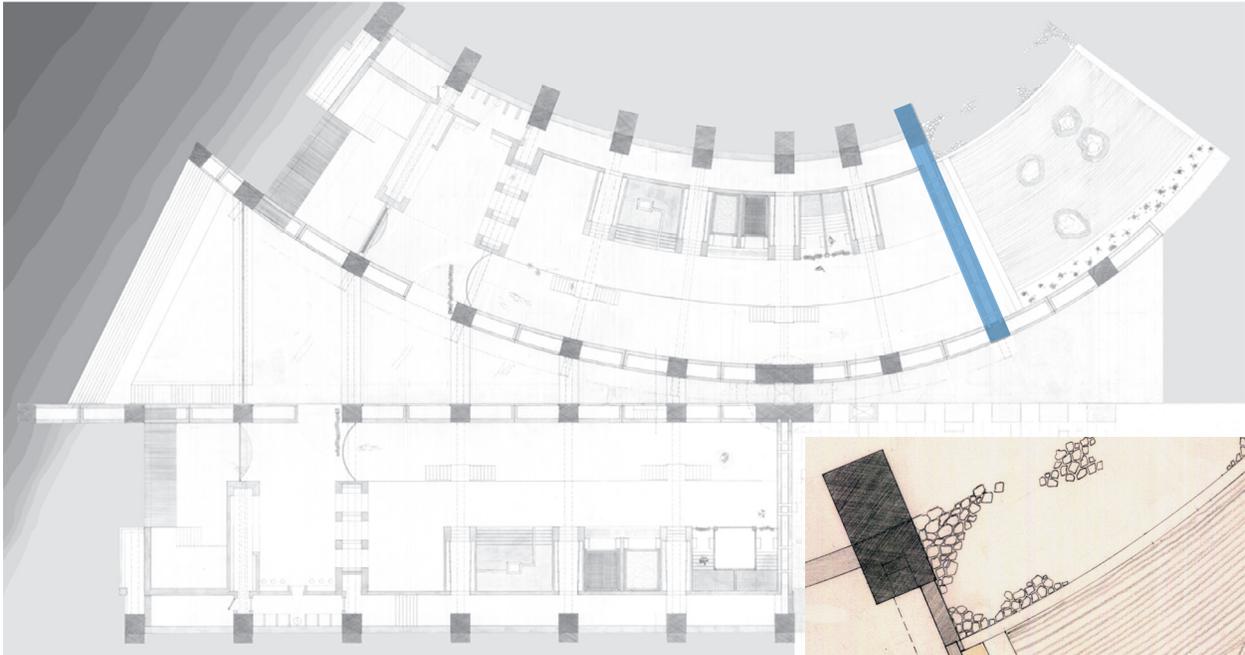




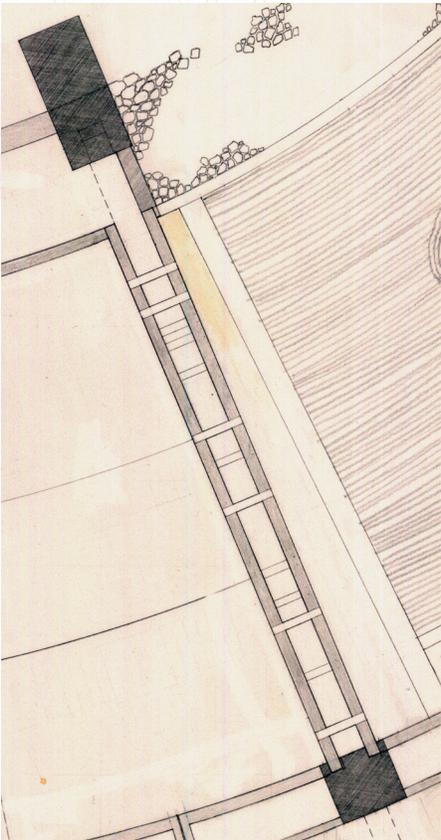
Summer Wall Stone



Summer Wall Stone



Key Plan

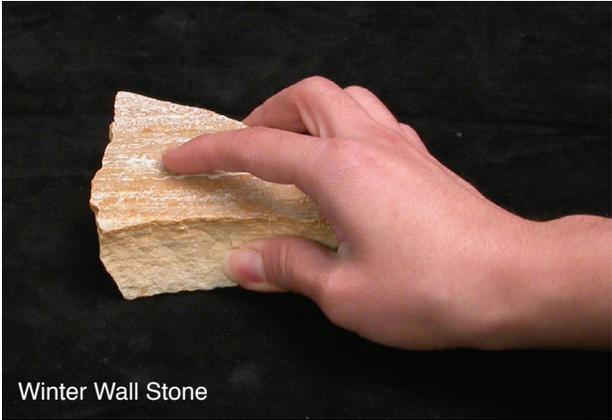


Plan Detail of Delineation Wall for Summer Side

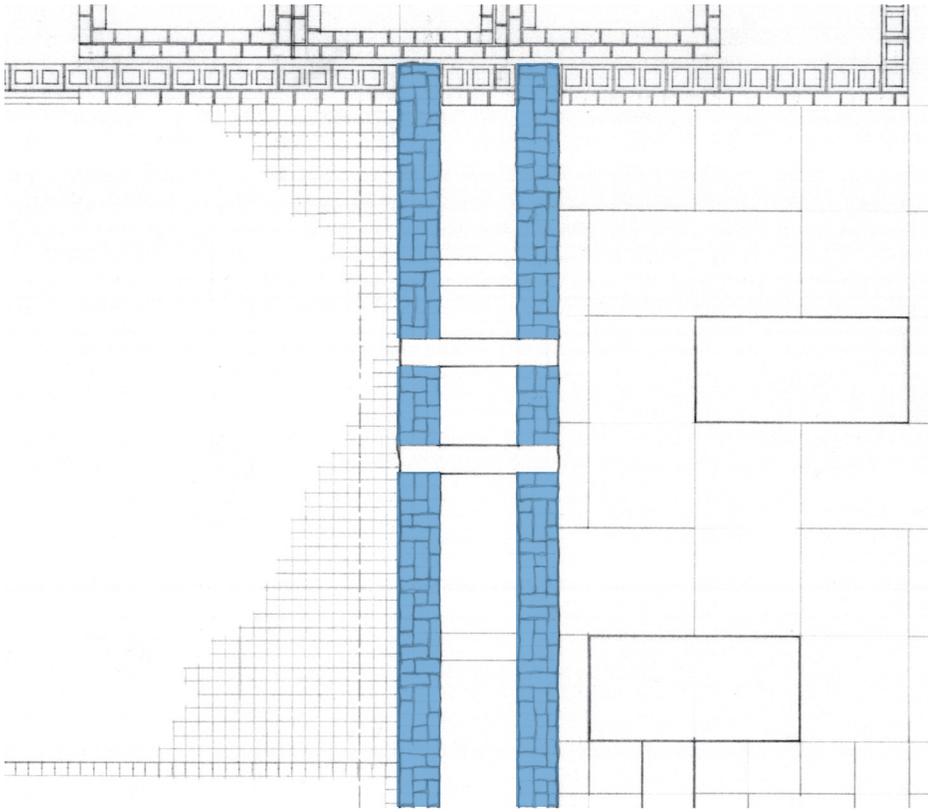




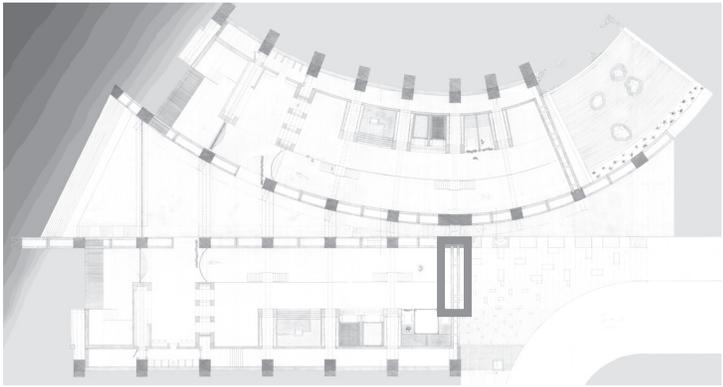
Winter Wall Stone



Winter Wall Stone



Plan Detail of Delineation Wall for Winter Side

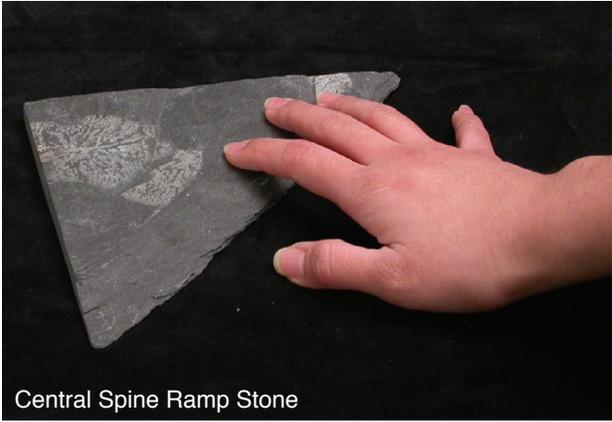


Key Plan

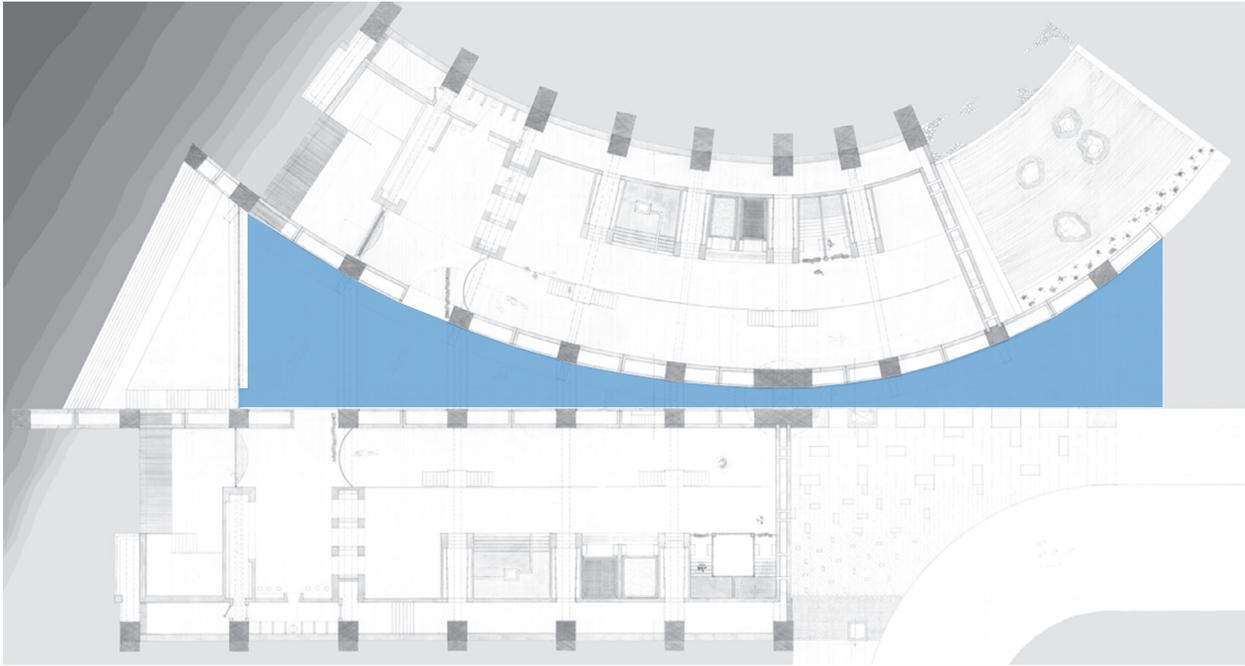




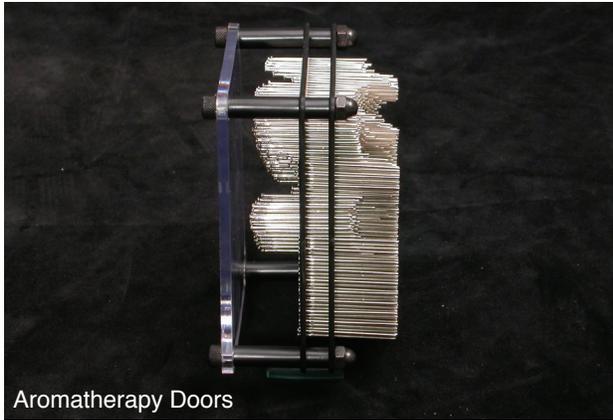
Central Spine Ramp Stone



Central Spine Ramp Stone



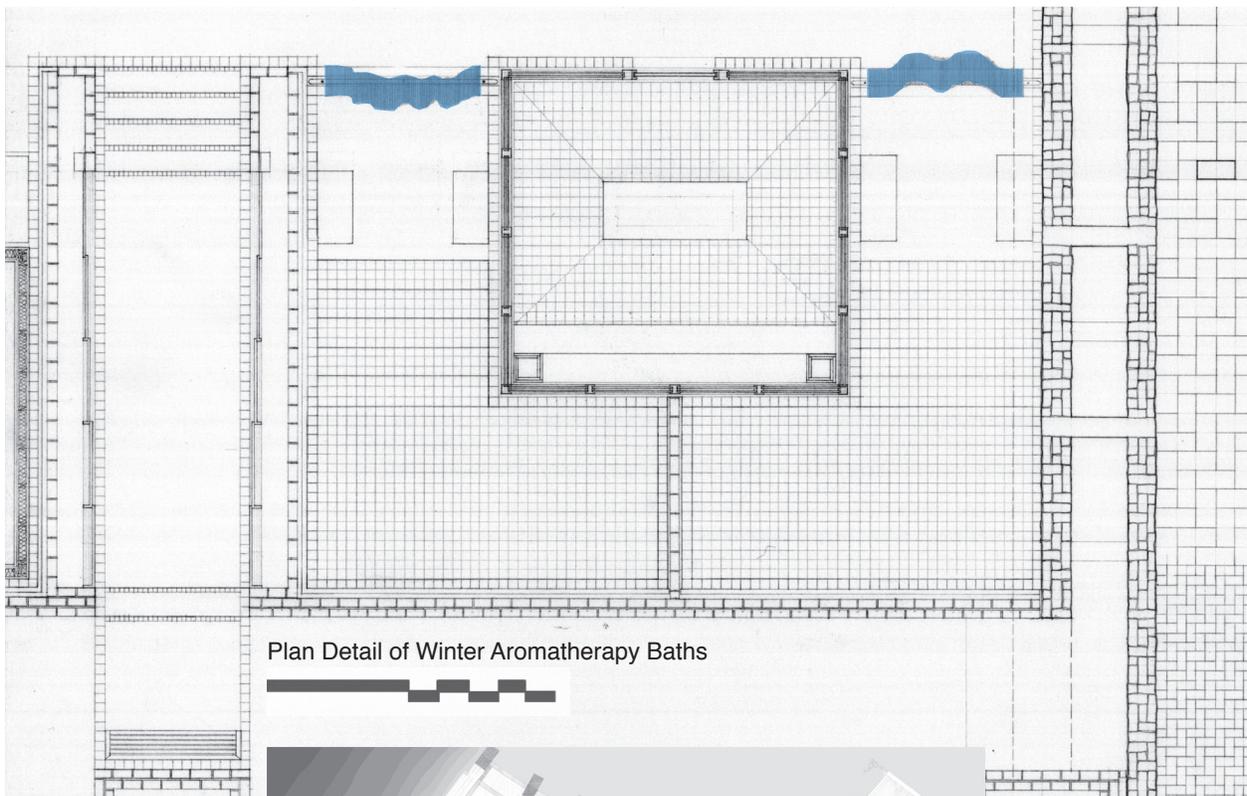
Key Plan



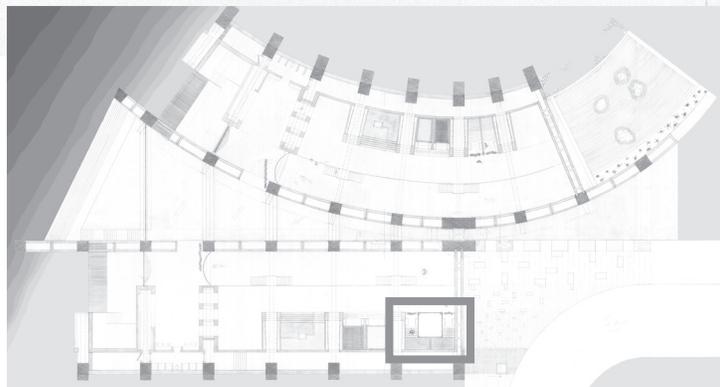
Aromatherapy Doors



Aromatherapy Doors



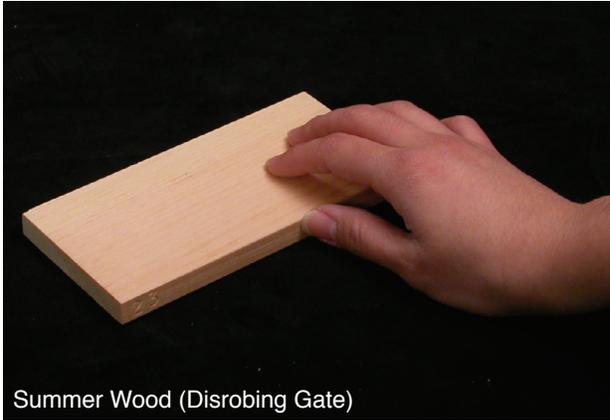
Plan Detail of Winter Aromatherapy Baths



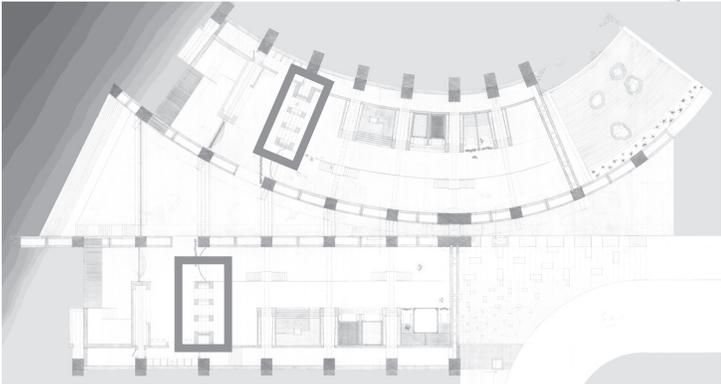
Key Plan



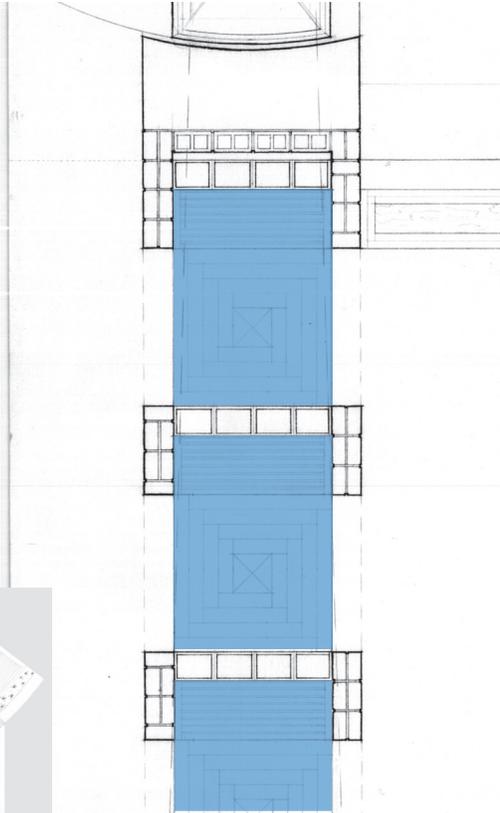
Summer Wood (Disrobing Gate)



Summer Wood (Disrobing Gate)



vKey Plan



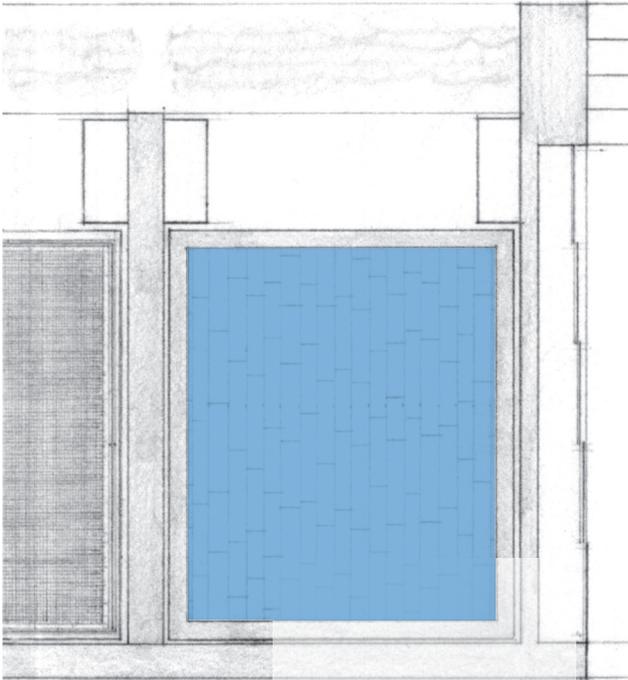
Plan Detail of Disrobing Gate



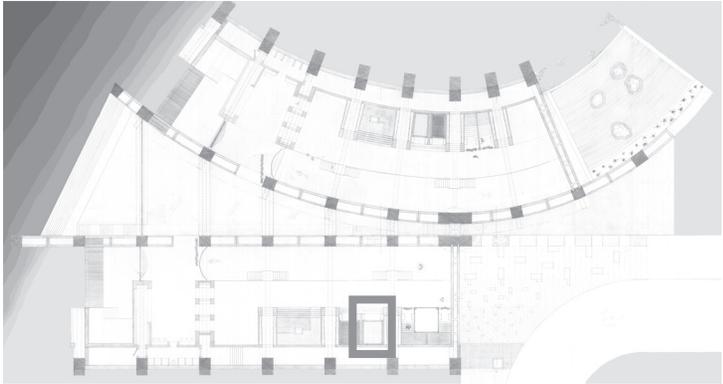
Winter Wood (Sauna)



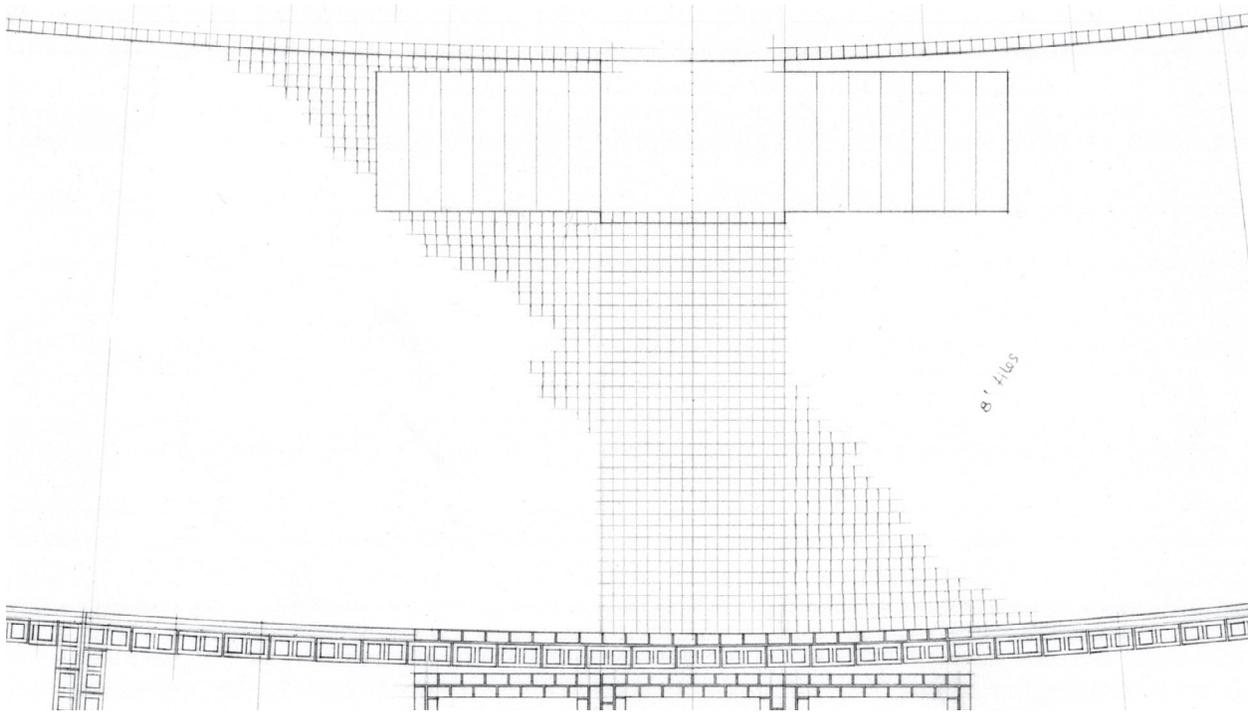
Winter Wood (Sauna)



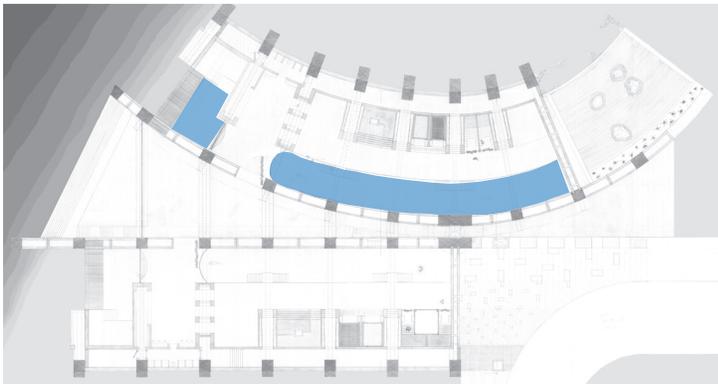
Plan Detail of Winter Sauna



Key Plan



Plan Detail of Summer Main Pool



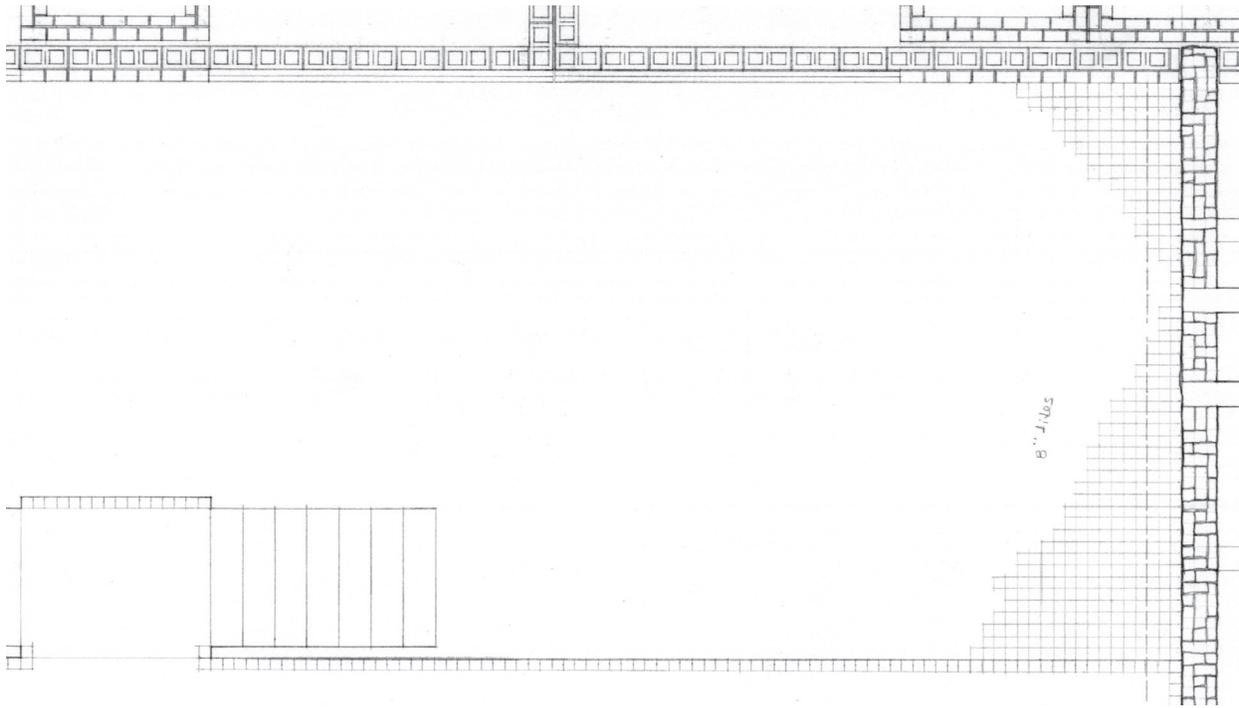
Key Plan



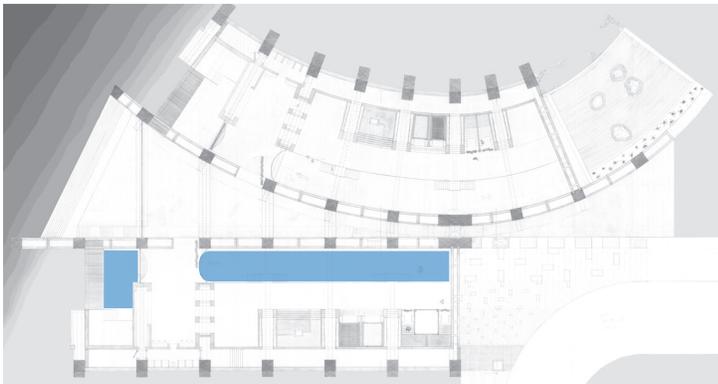
Winter Main Pool Stone Tile



Winter Main Pool Stone Tile



Plan Detail of Winter Main Pool



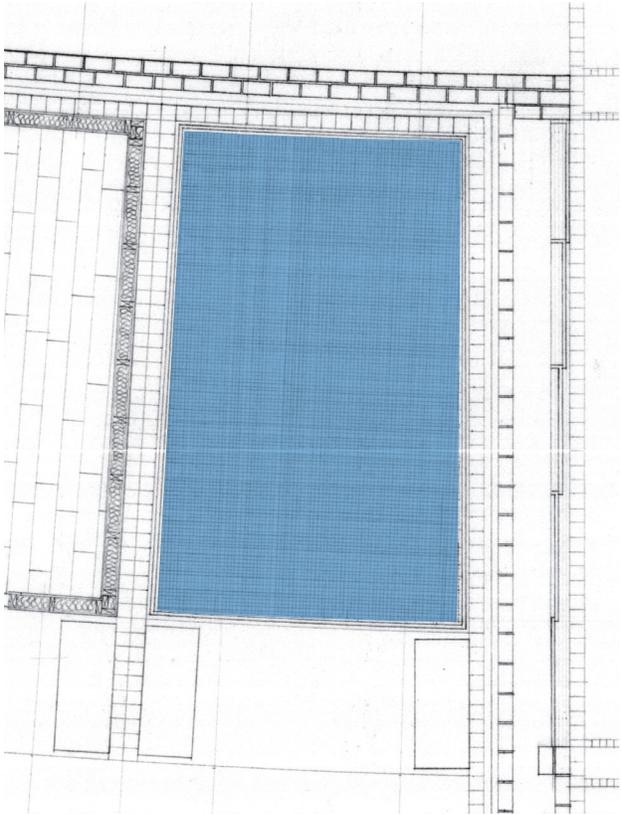
Key Plan



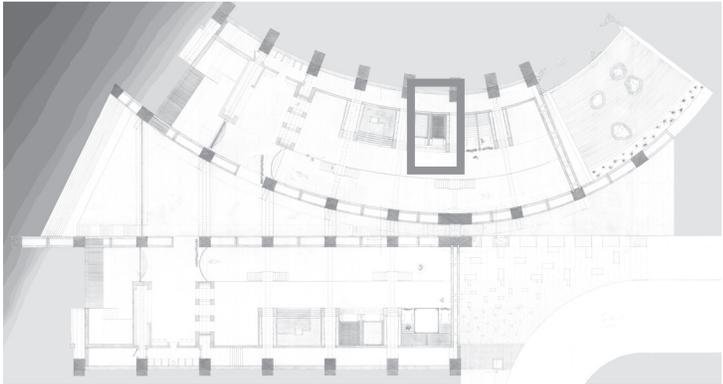
Summer Steam Room Tile



Summer Steam Room Tile



Plan Detail of Summer Steam Room



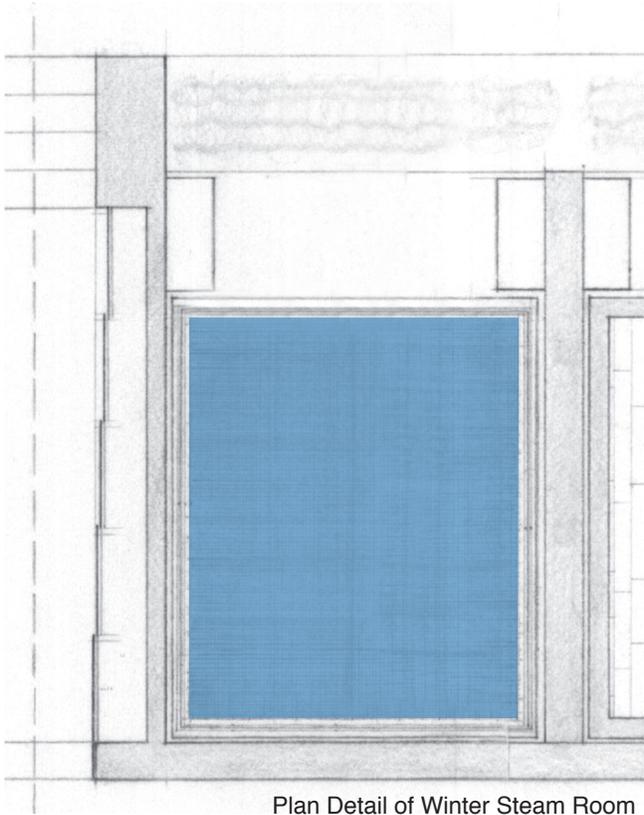
Key Plan



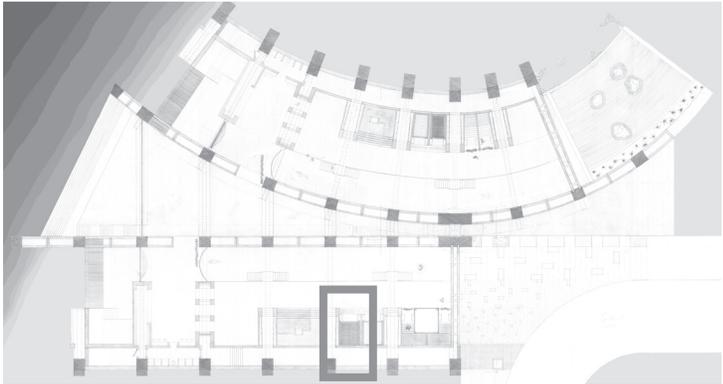
Winter Steam Room Tile



Winter Steam Room Tile



Plan Detail of Winter Steam Room



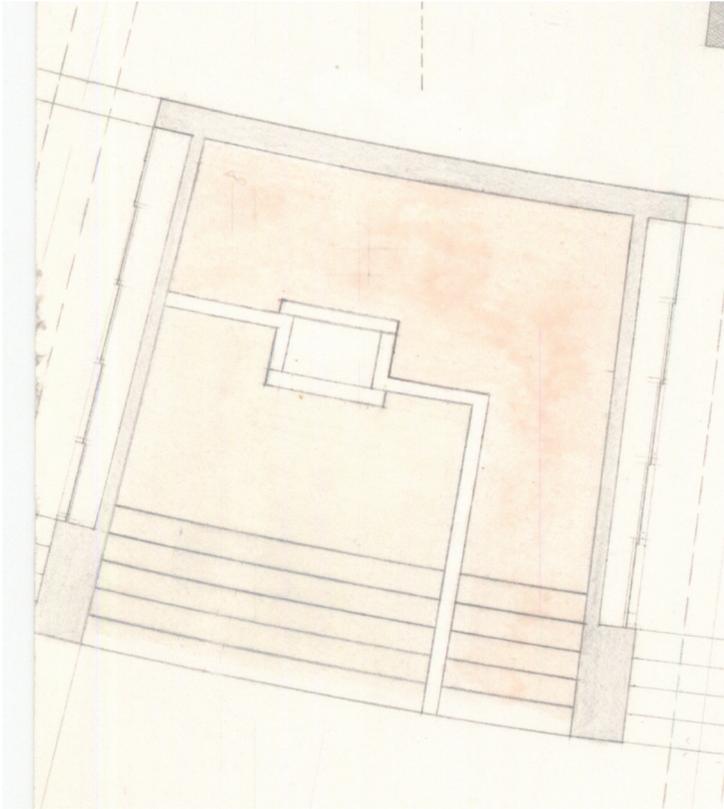
Key Plan



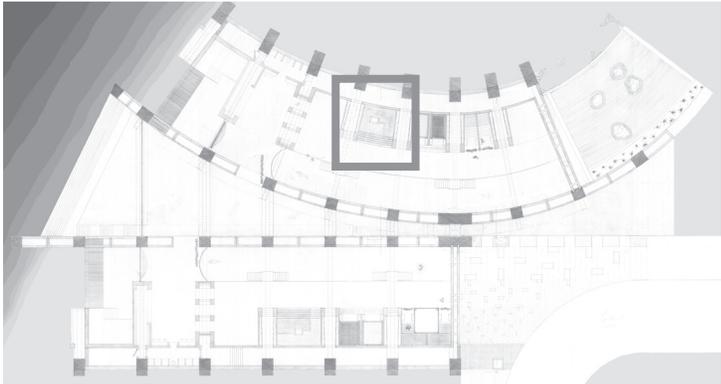
Summer Hot Bath Stone Tile



Summer Cold Bath Stone Tile



Plan Detail of Summer Hot/Cold Antipodal Flash Baths



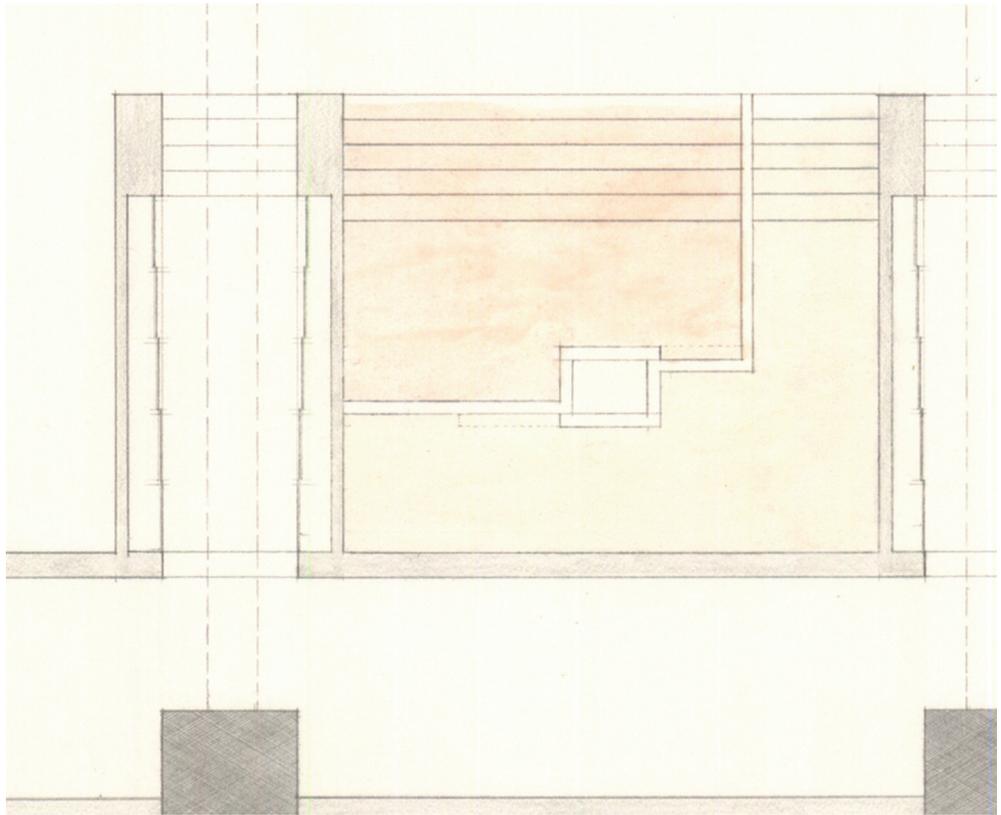
Key Plan



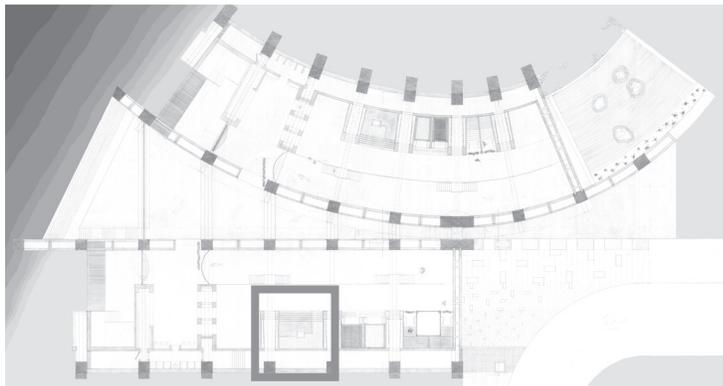
Winter Hot Bath Stone Tile



Winter Cold Bath Stone Tile



Plan Detail of Winter Hot/Cold Antipodal Flash Baths



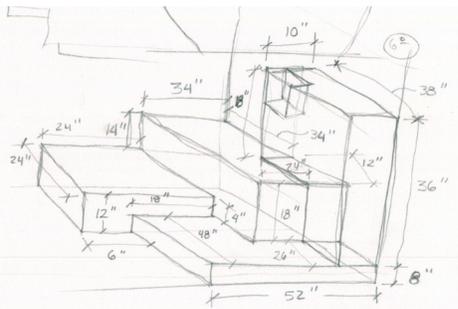
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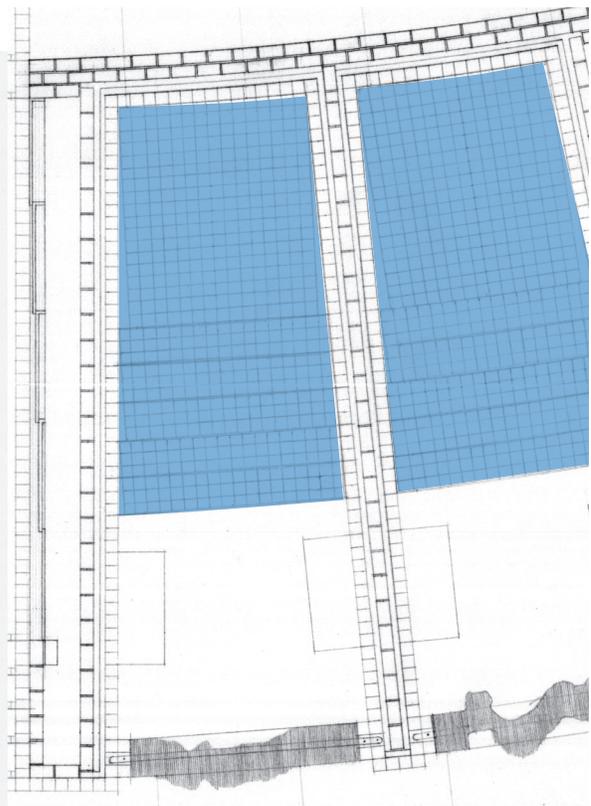
Summer Aromatherapy Tile



Summer Aromatherapy Tile

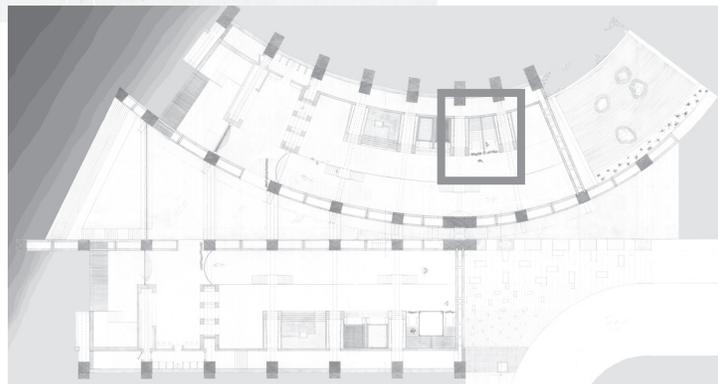


Detail



Plan Detail of Summer Aromatherapy Rooms

Study for Aromatherapy Cooling Treatment Plateaus



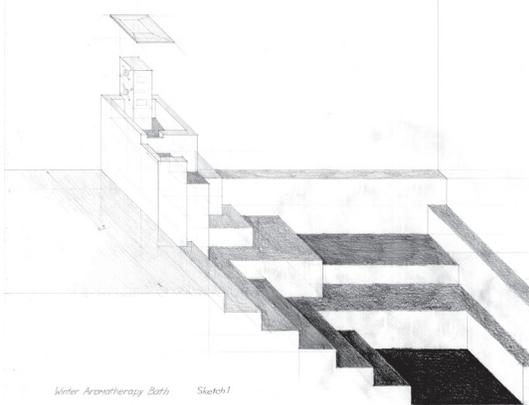
Key Plan



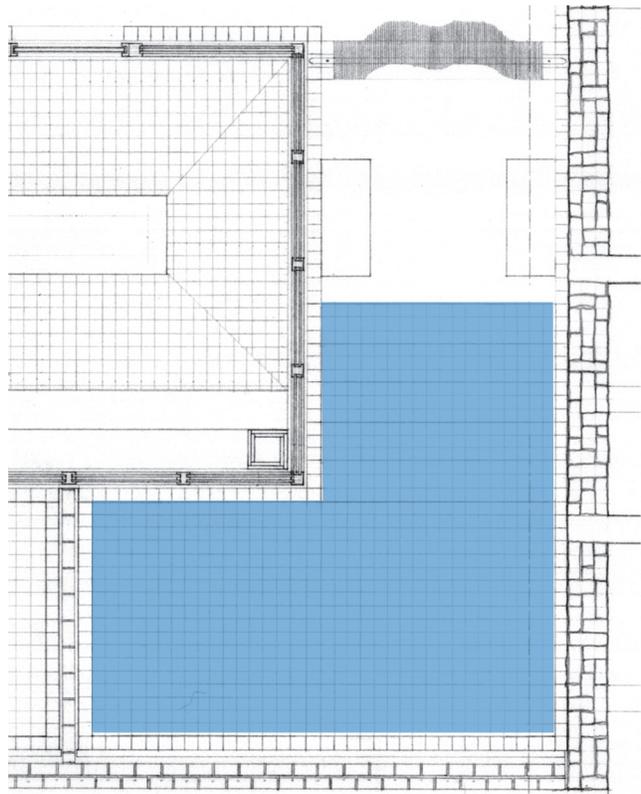
Winter Aromatherapy Tile



Winter Aromatherapy Tile

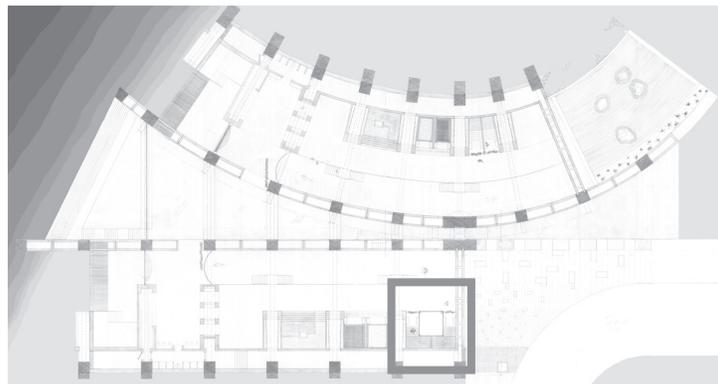


Study for Immersion Soaking Baths



Plan Detail of Winter Aromatherapy Room

“The skin is also a significant organ of communication, telling us what it is hot, cold, wet, dry, rough, or smooth; it transmits pressure, itching, pain, or pleasure. Sensations of touch instantly evoke reflexes. All our senses can be profoundly influenced through immersing our skin in water or surrounding it with aromatic steam.” (Ryrie, p.116)



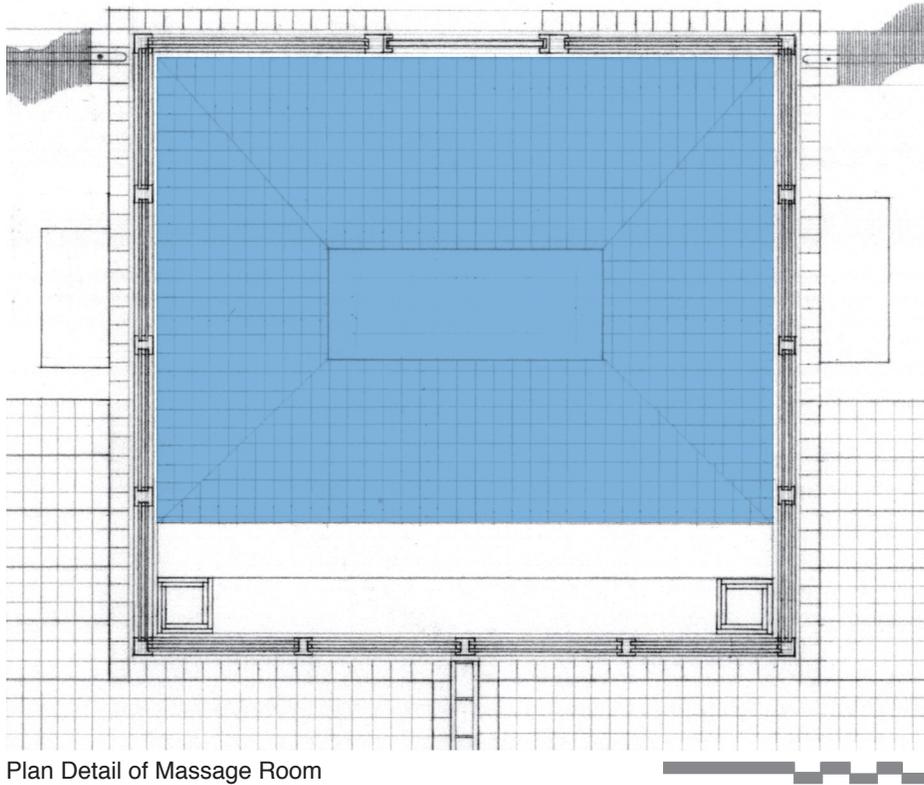
Key Plan



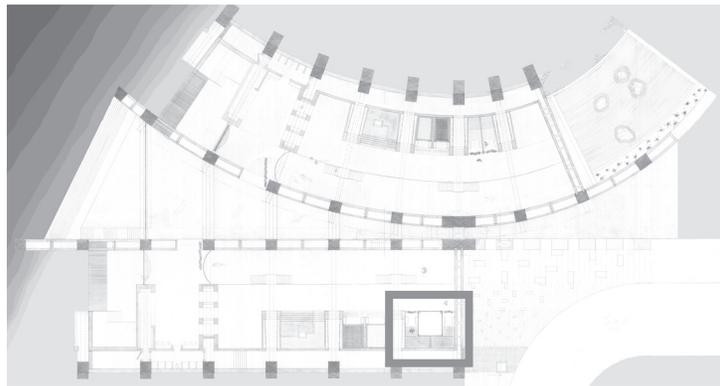
Massage Room Tile



Massage Room Tile



Plan Detail of Massage Room



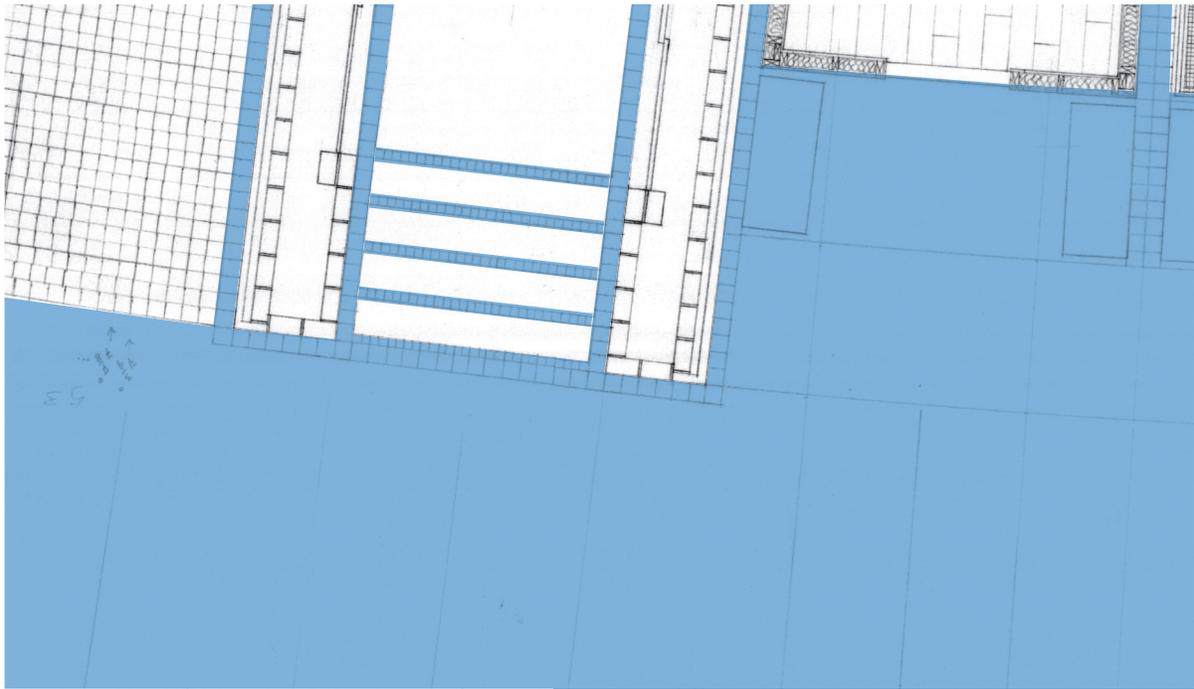
Key Plan



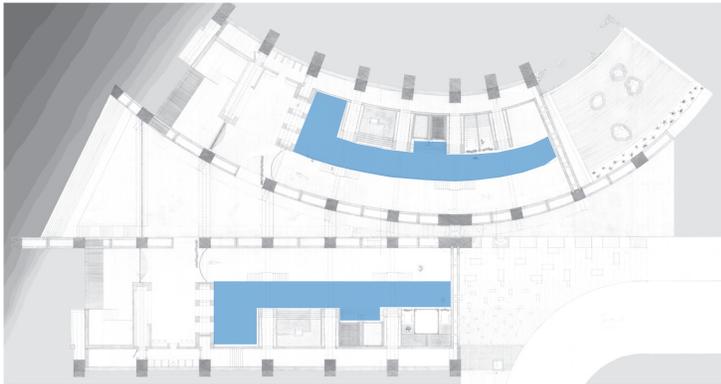
Summer Tile Bordering Cork Floors



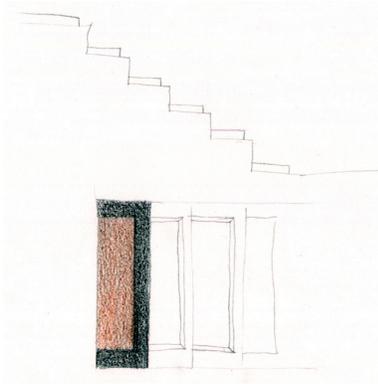
Winter Tile Bordering Cork Floors



Plan Detail of Tile Thresholds Between Main Floor and Special Areas (Summer Shown Here)



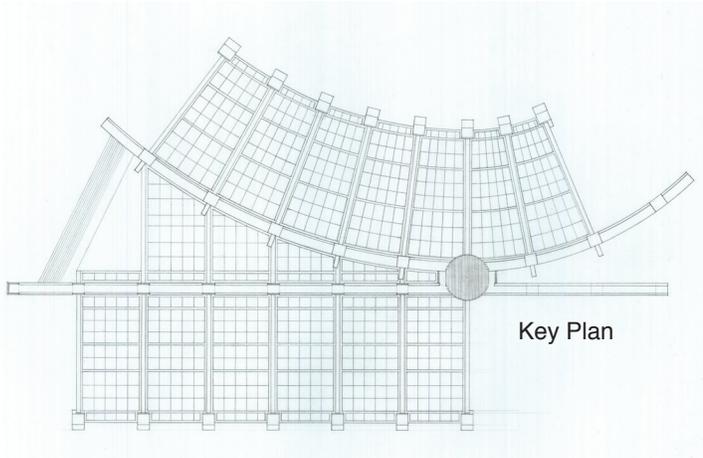
Key Plan



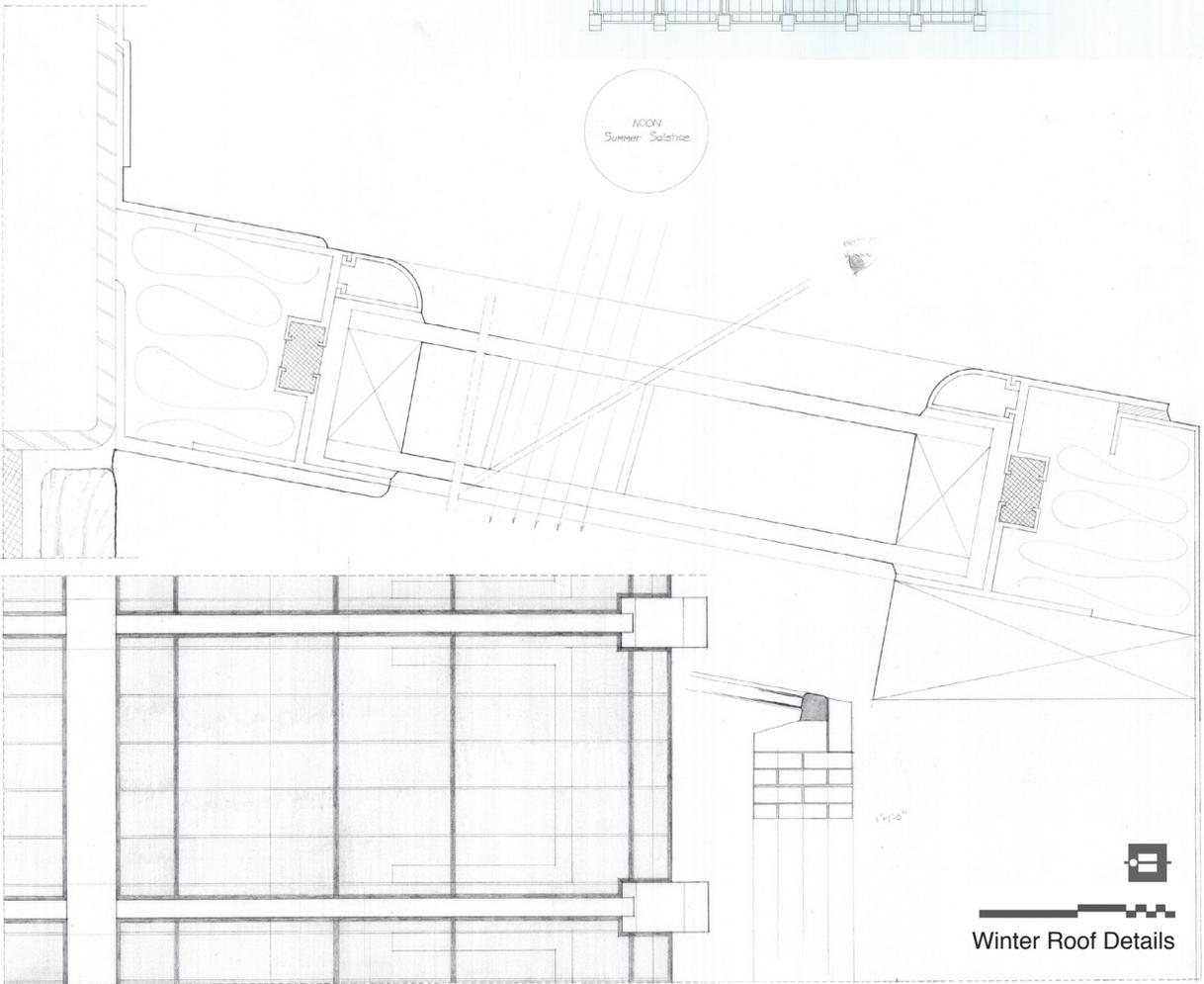
Cork and Tile Step



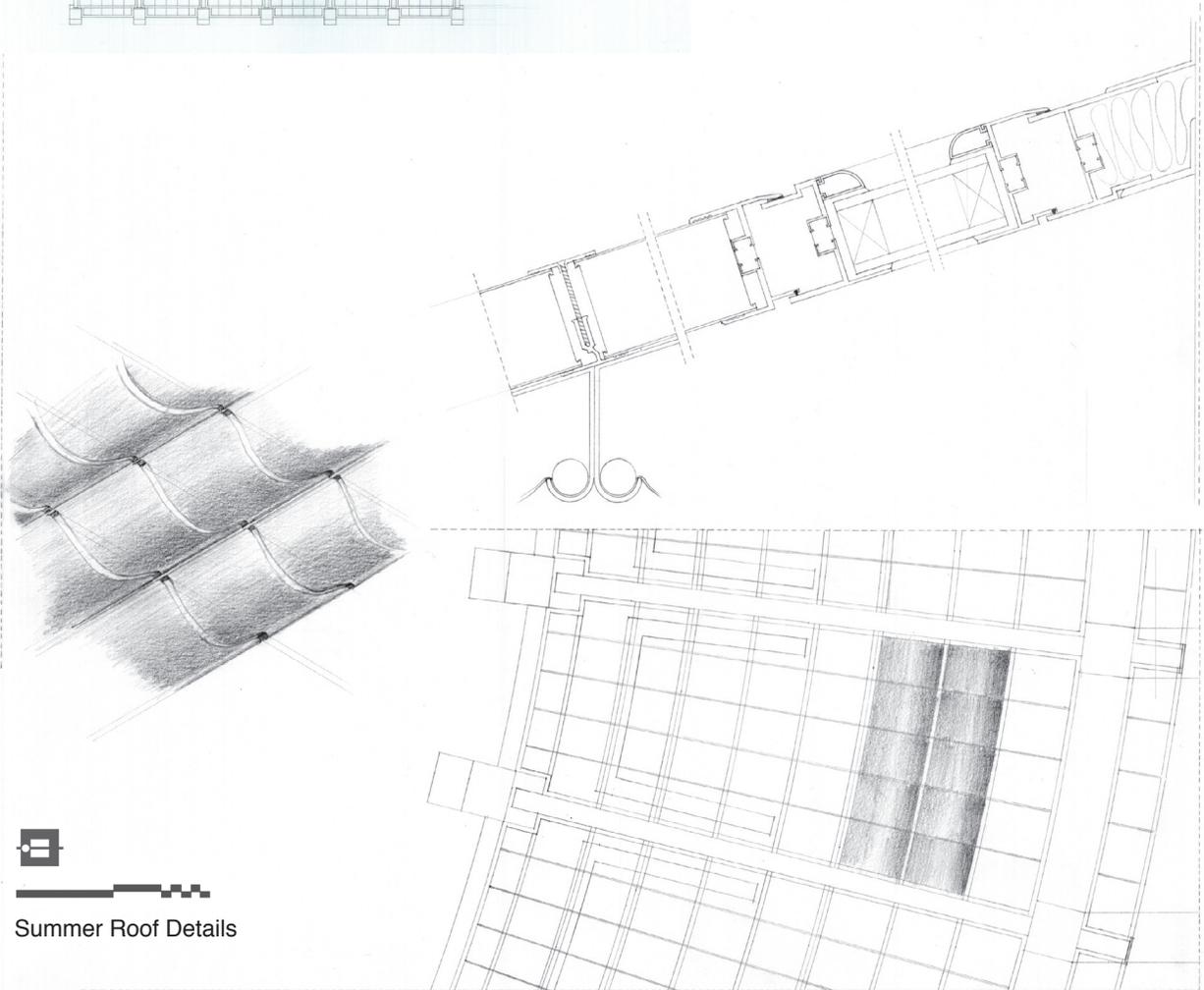
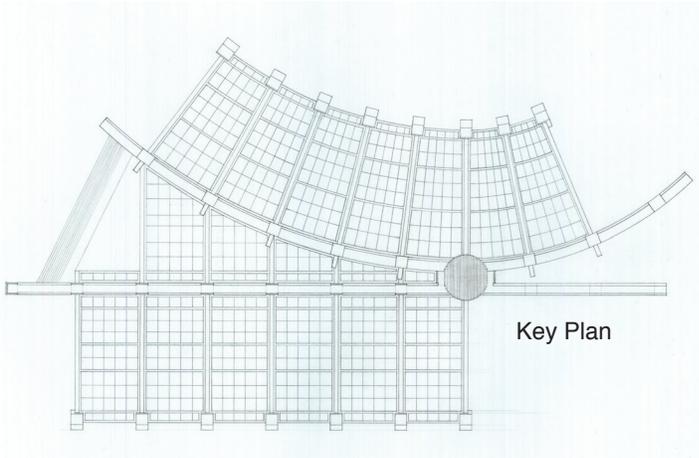
Roof Panels,
Summer (Clear) / Winter (Frosted)



Key Plan



Winter Roof Details

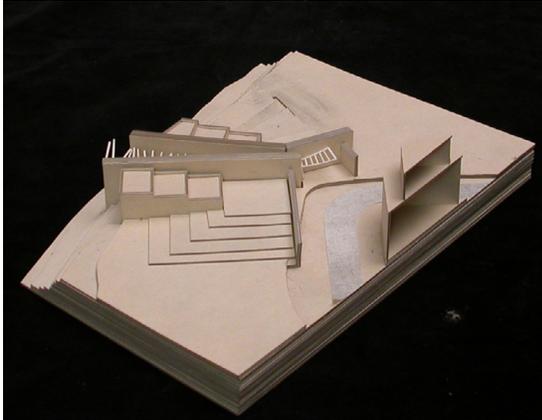


Accoutrements

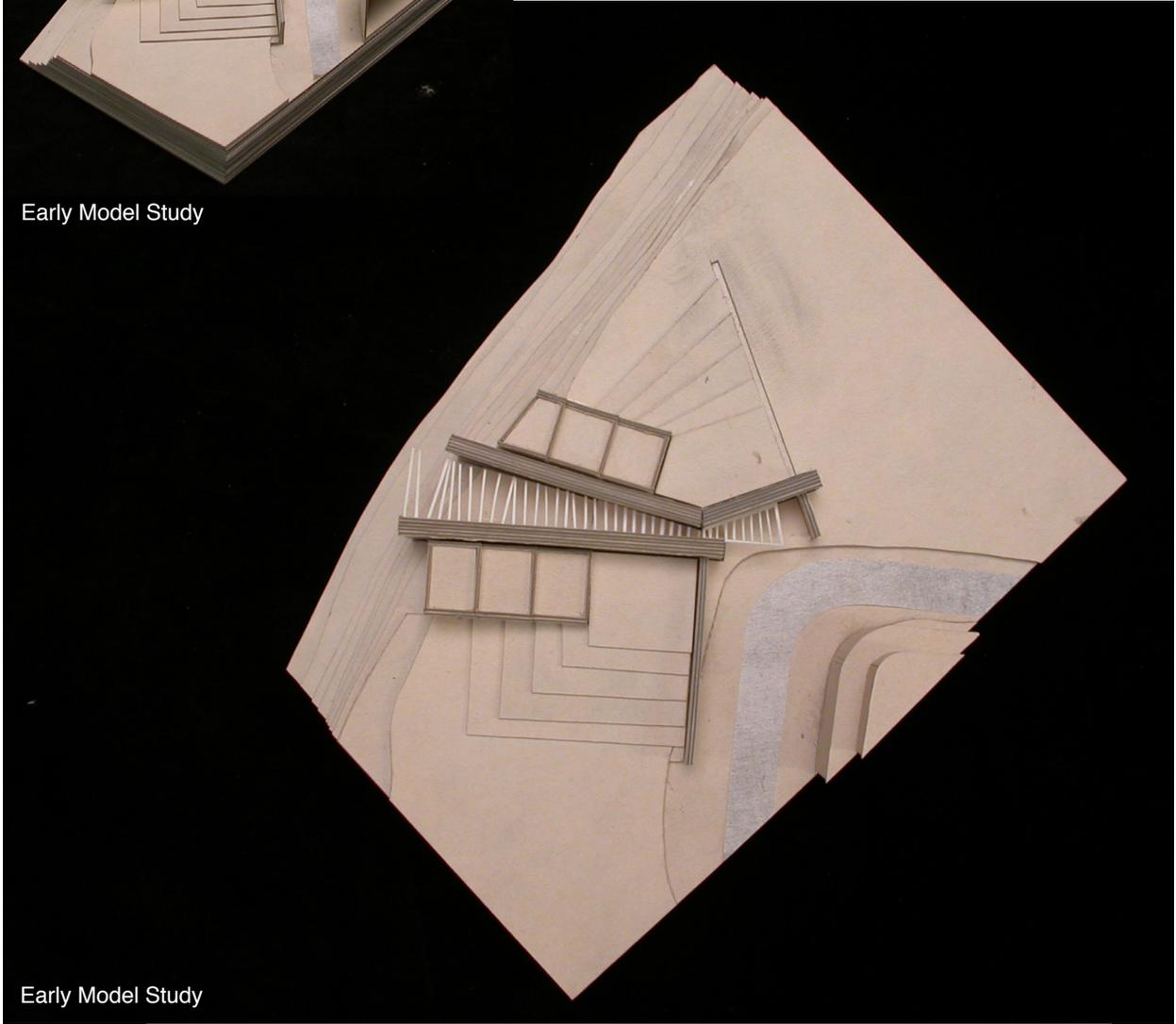
Study Models, Concept Sketches, and Details



A Little Bit of Visual Sorbet (Beaker and Bunsen)



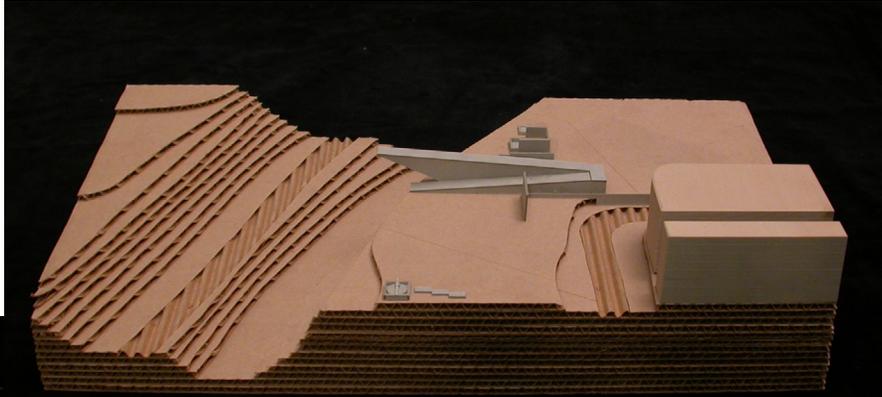
Early Model Study



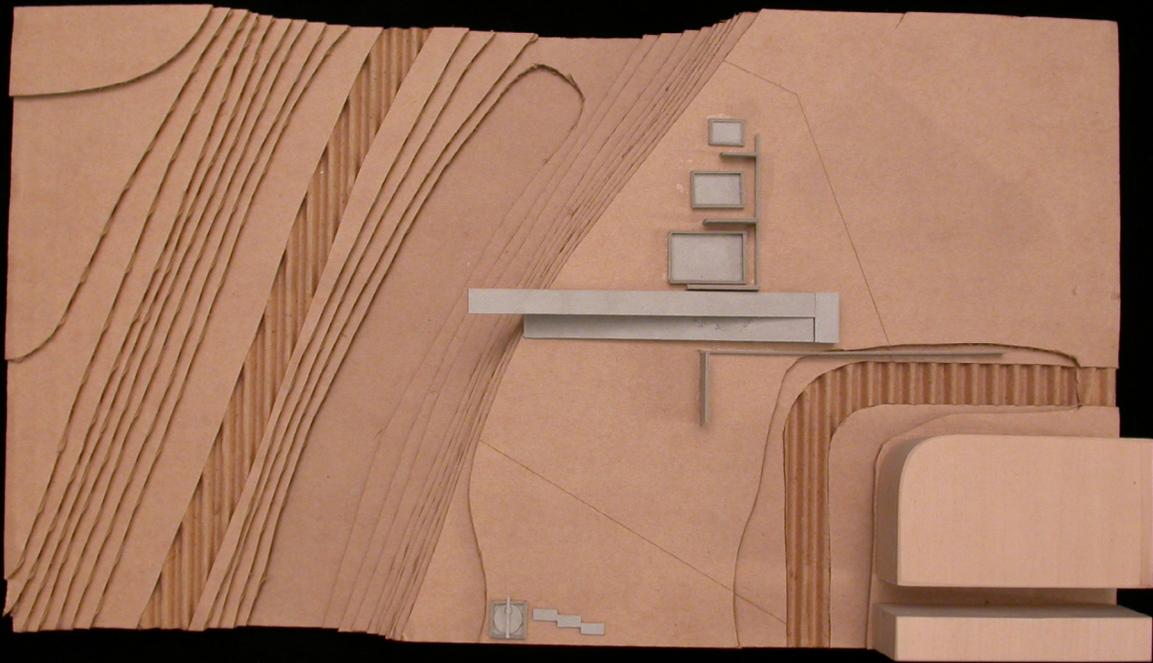
Early Model Study



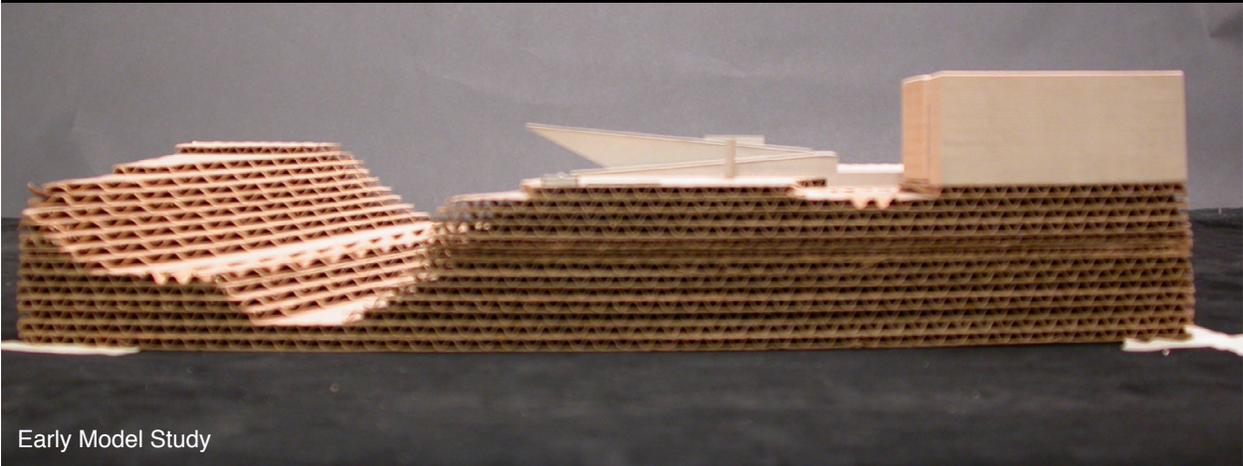
Early Model Study



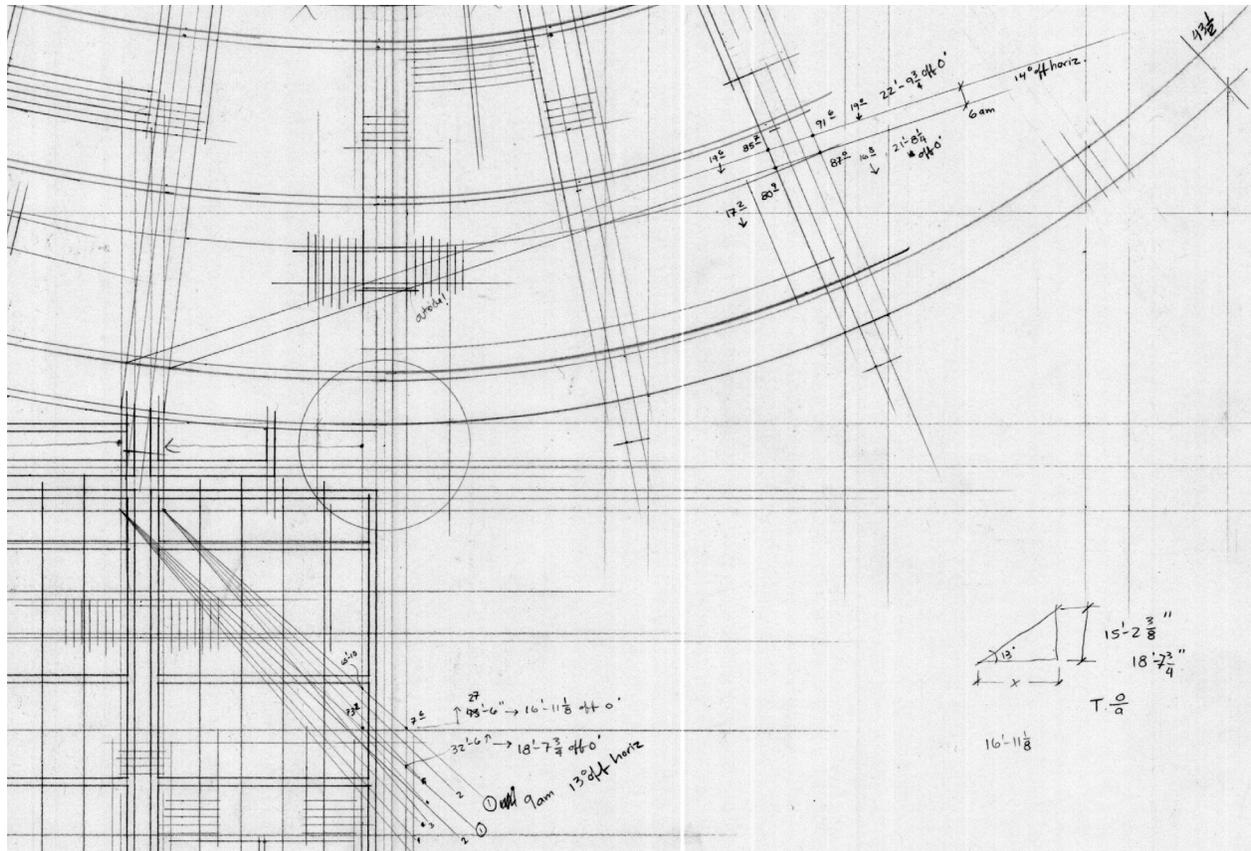
Early Model Study



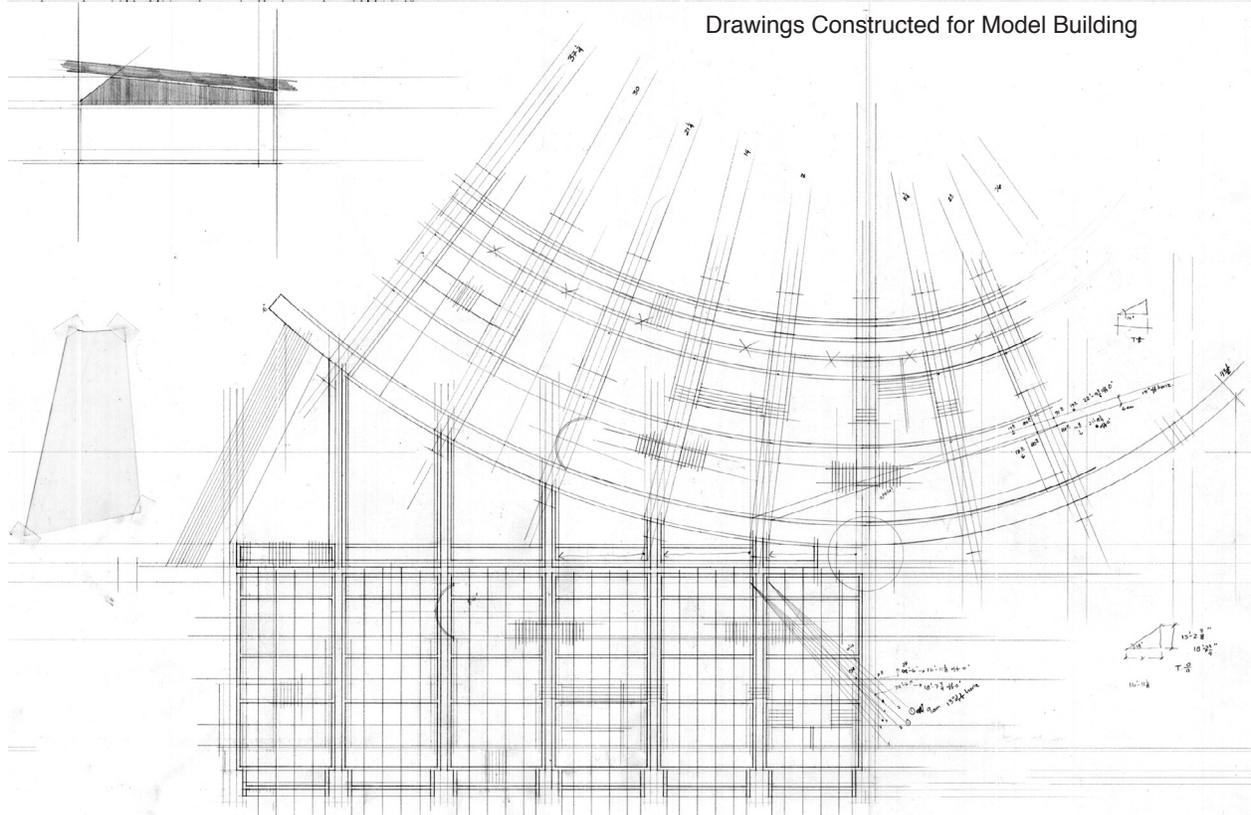
Early Model Study



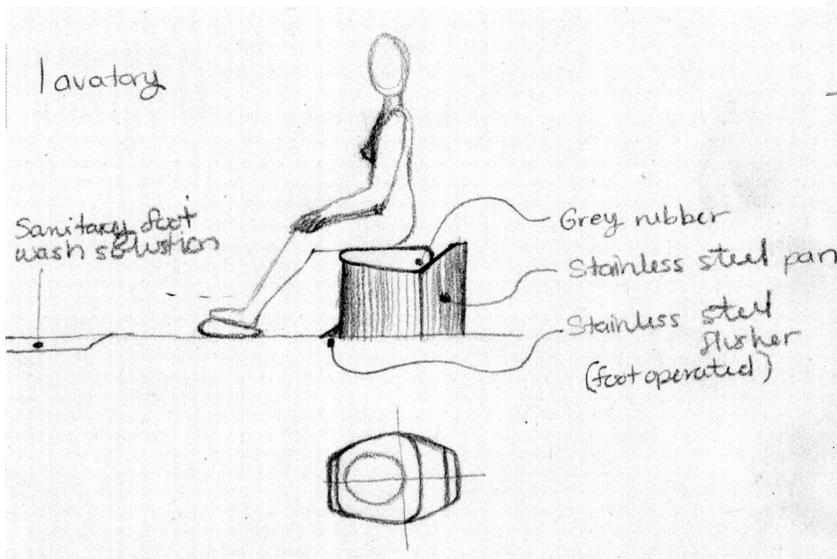
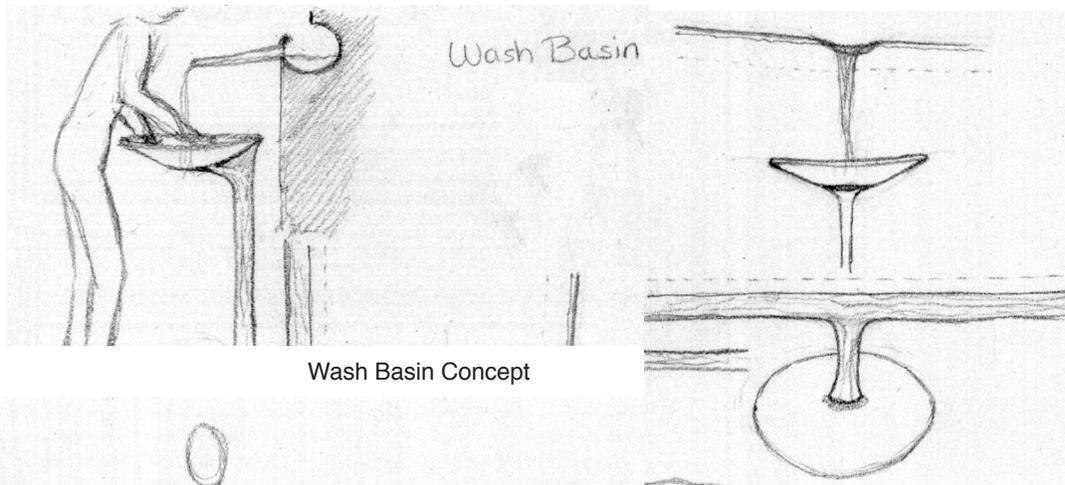
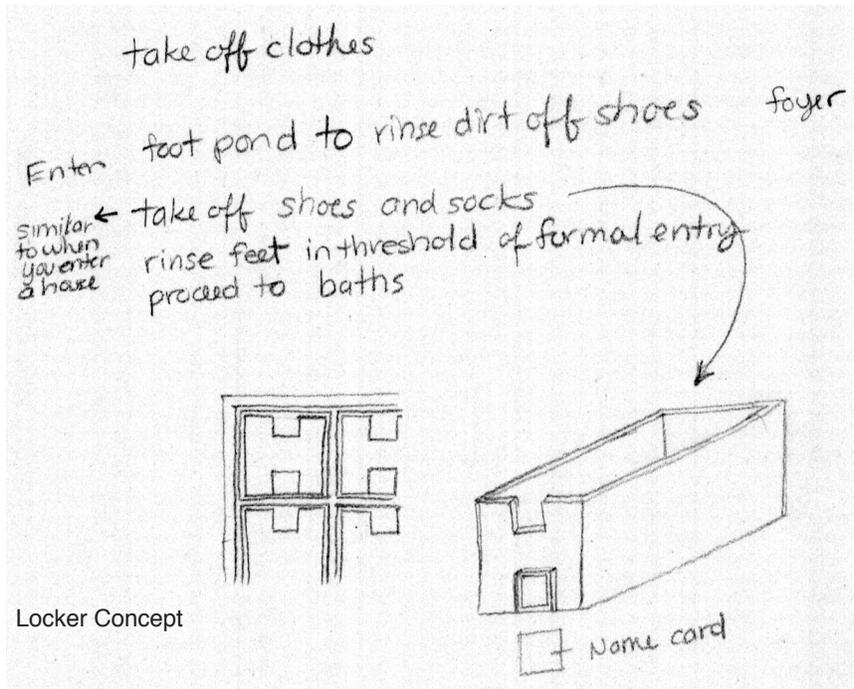
Early Model Study



Drawings Constructed for Model Building

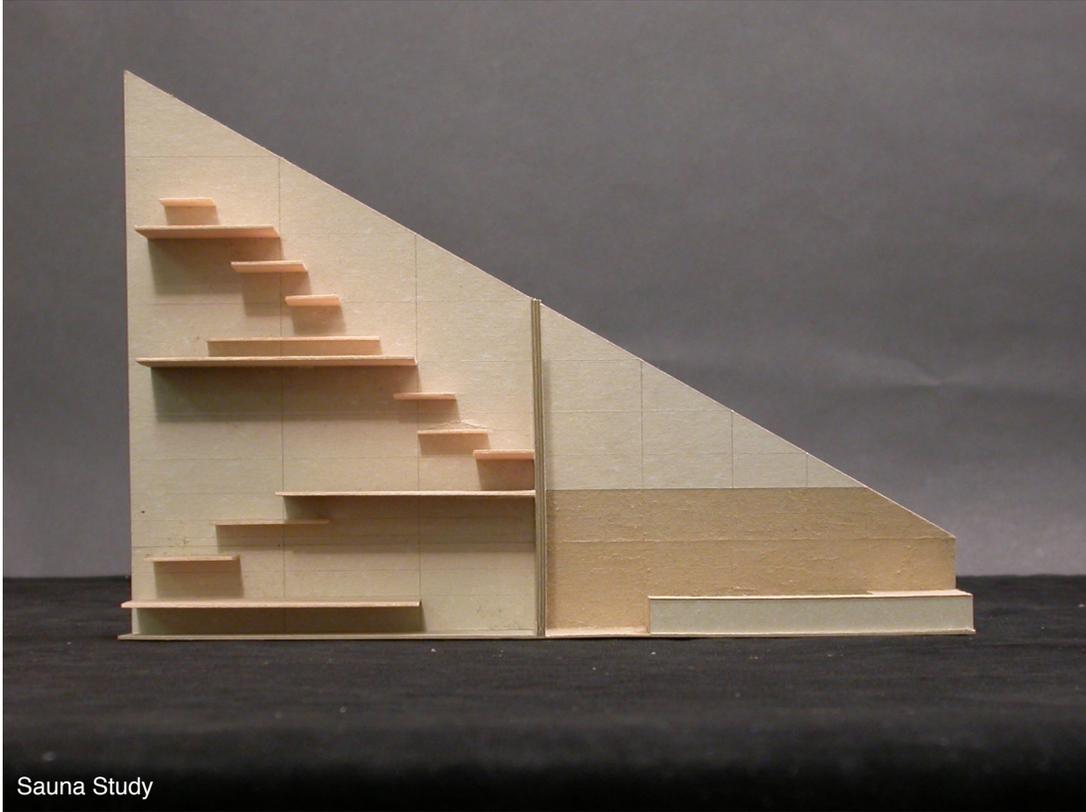


Drawings Constructed for Model Building





Sauna Studies



Sauna Study



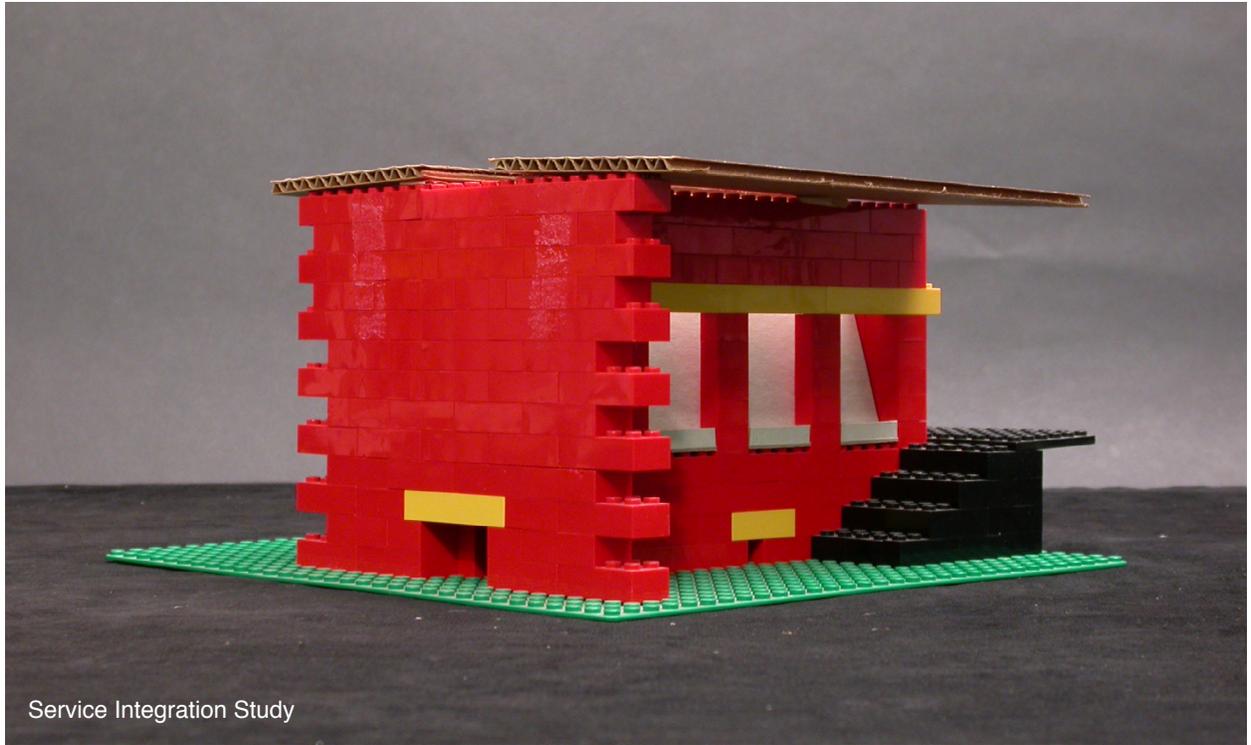
Sauna Study



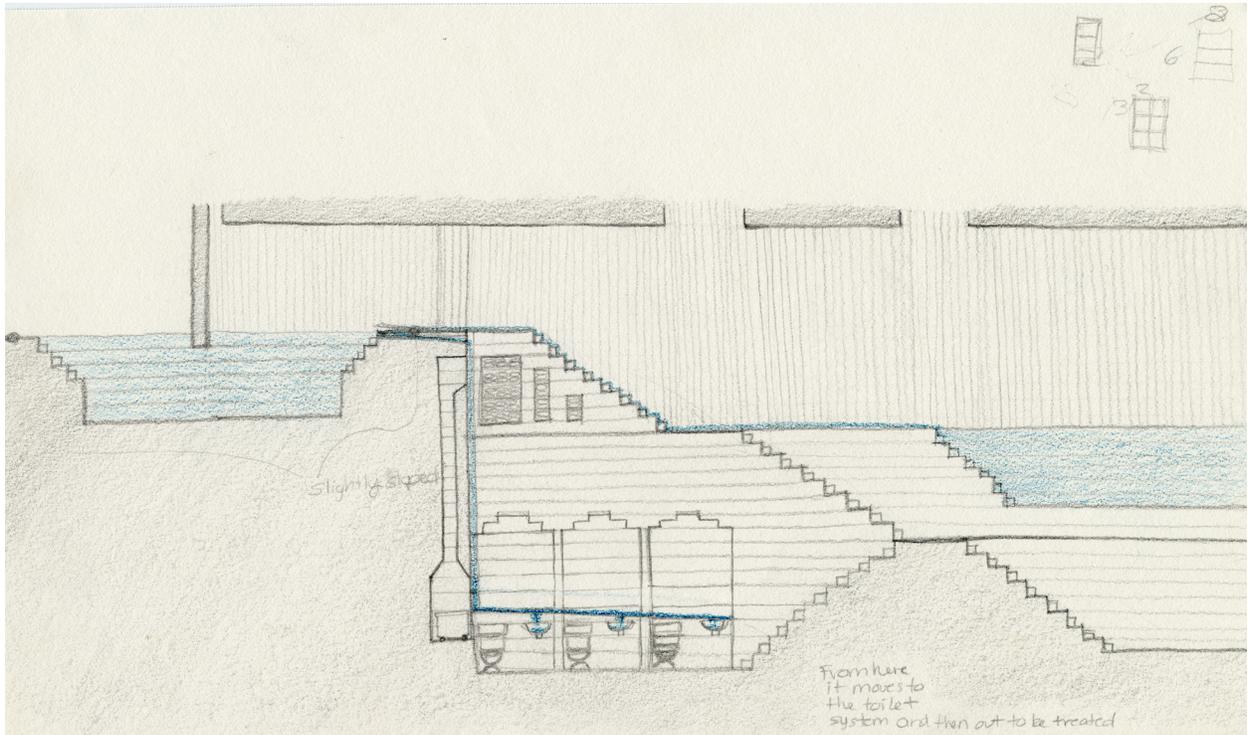
Service Integration Study



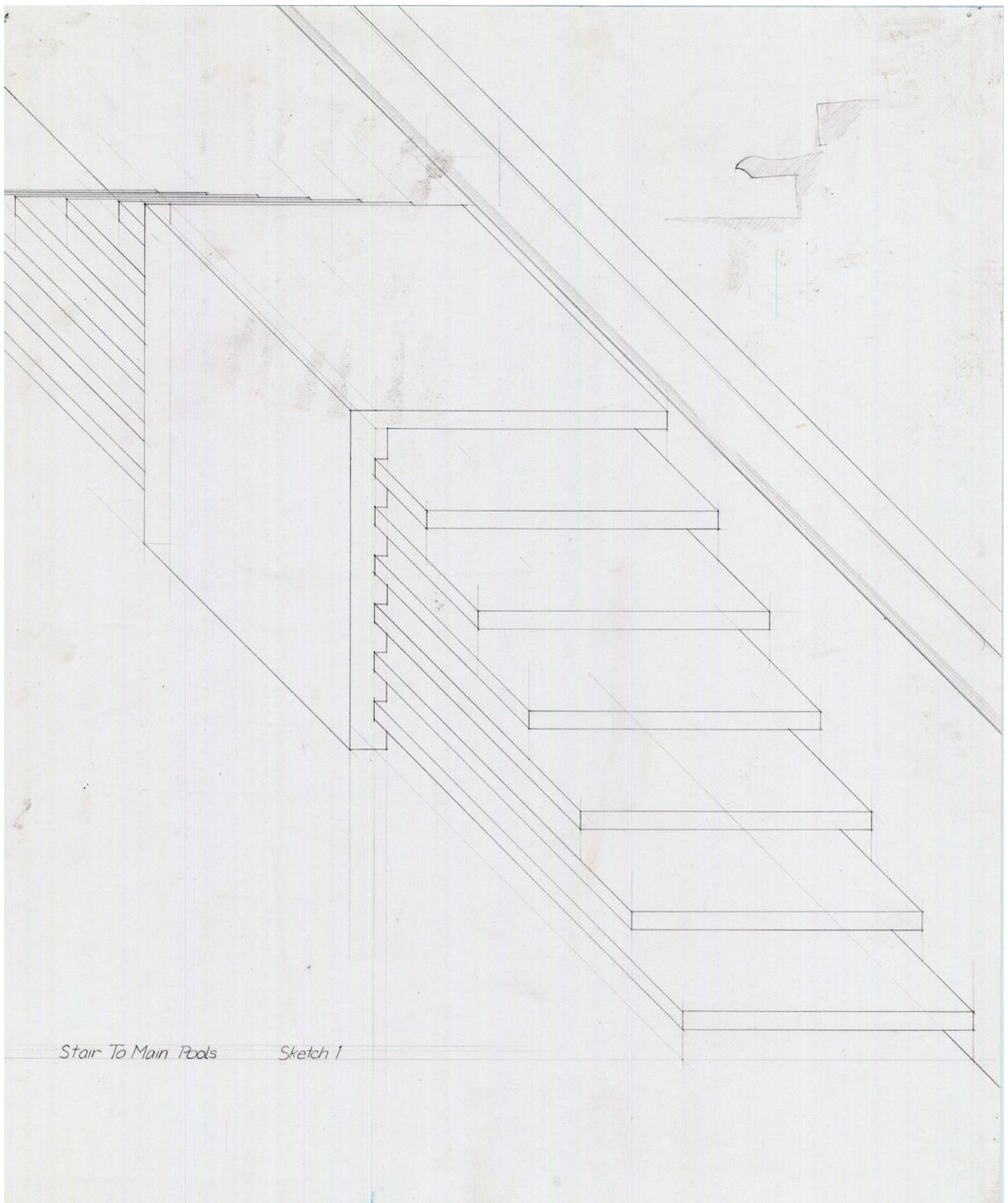
Service Integration Study



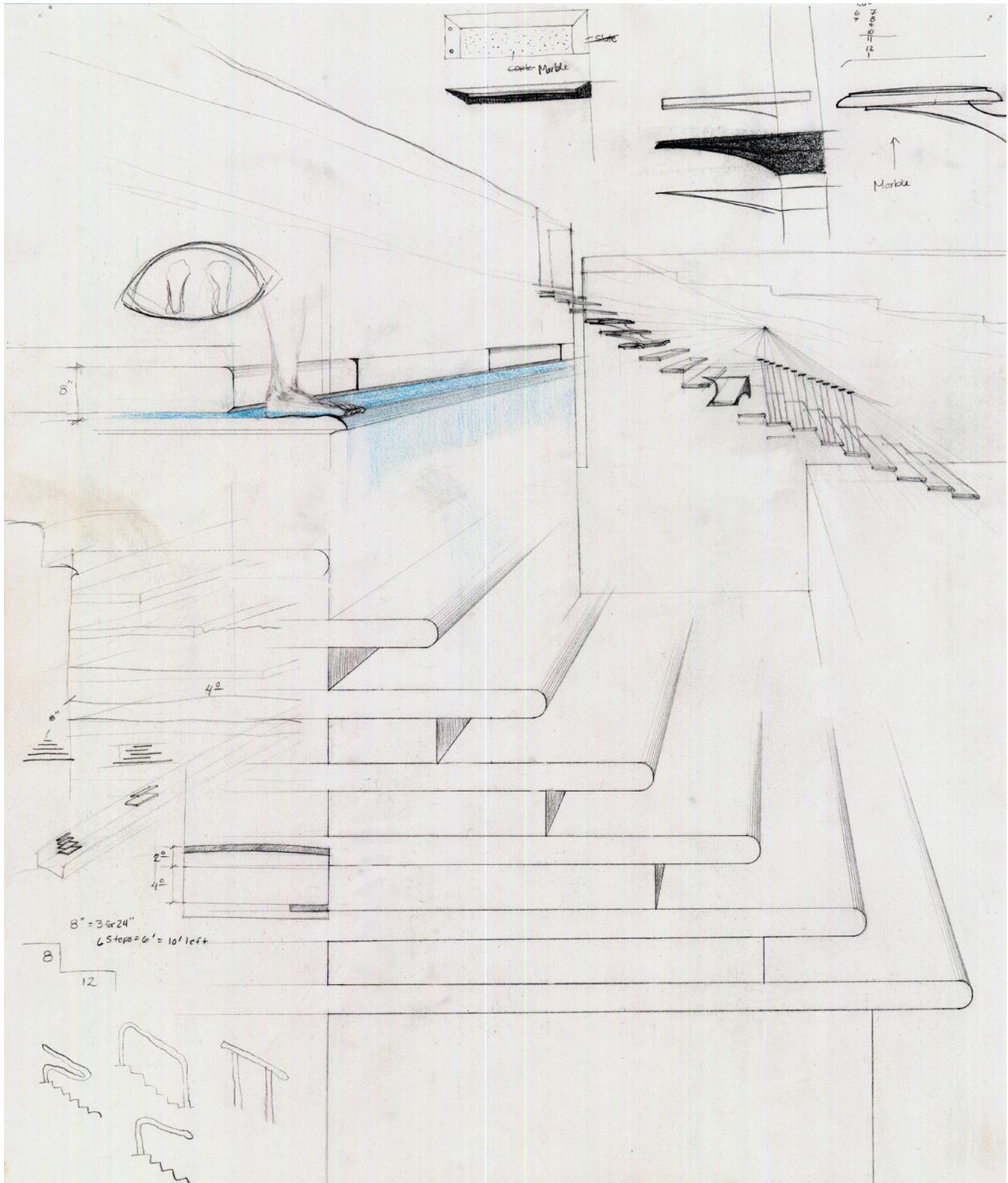
Service Integration Study



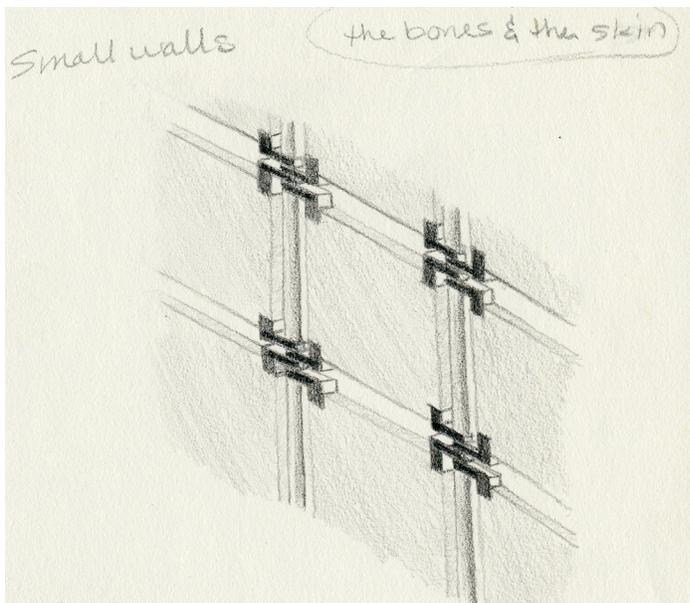
Service Integration Study



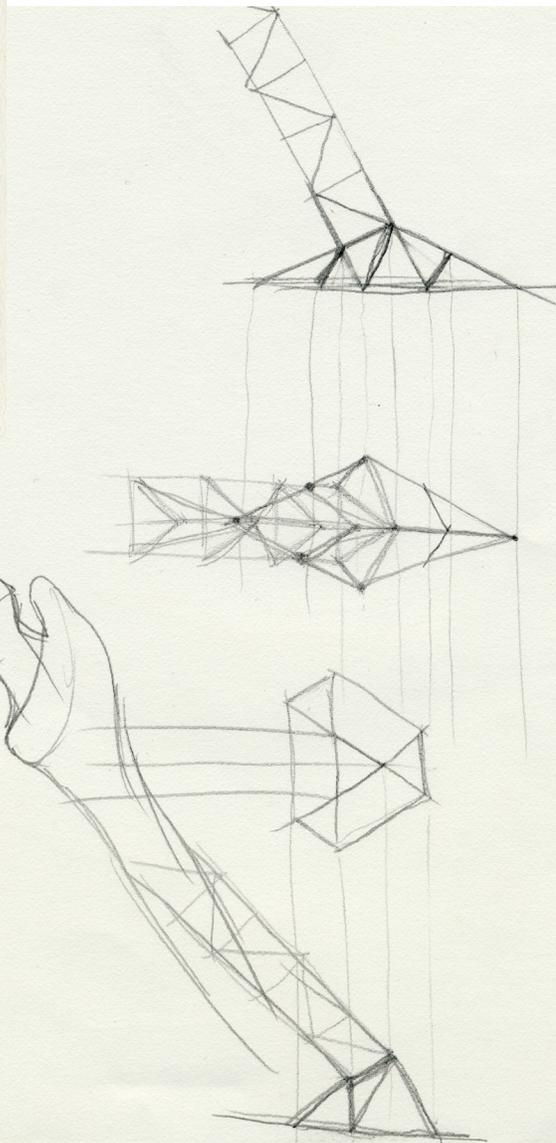
Main Pool Stair Study



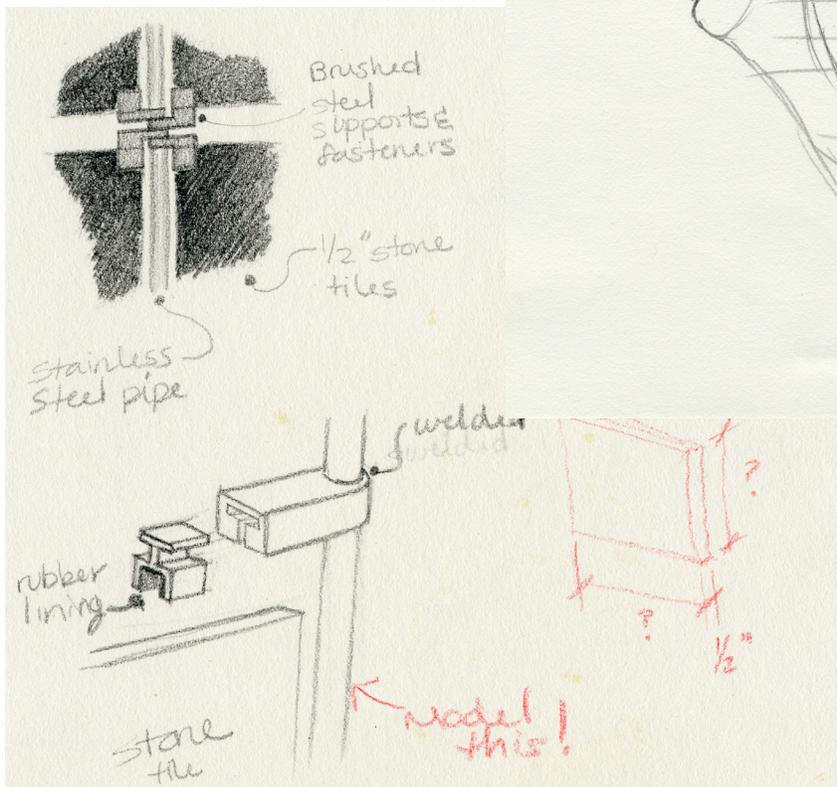
Main Pool Stair Studies



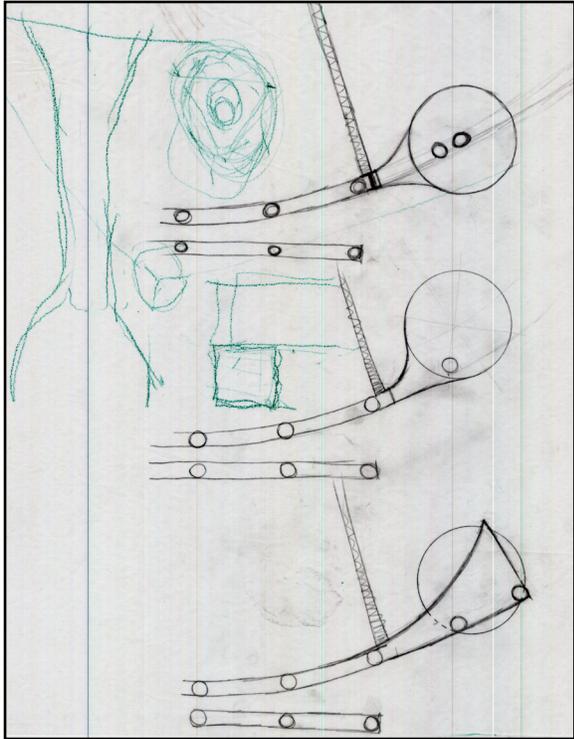
Wall Study



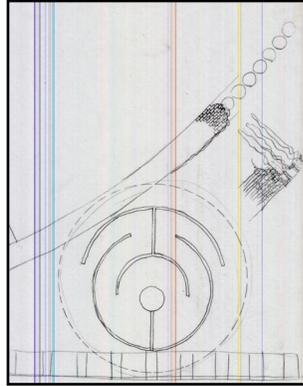
Structural Studies



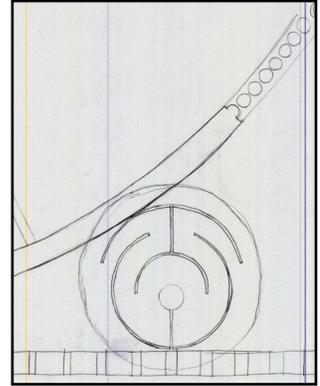
Wall Studies



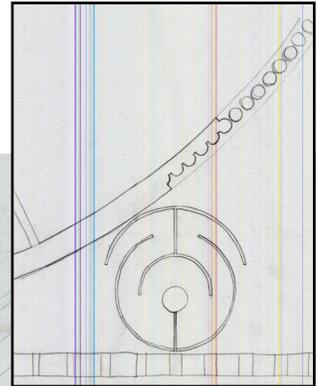
Entry Studies



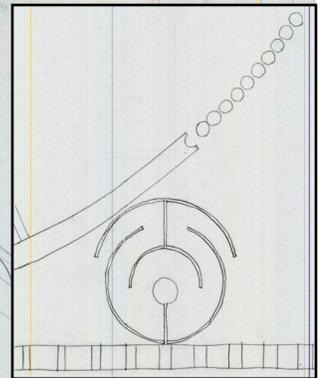
Entry Study



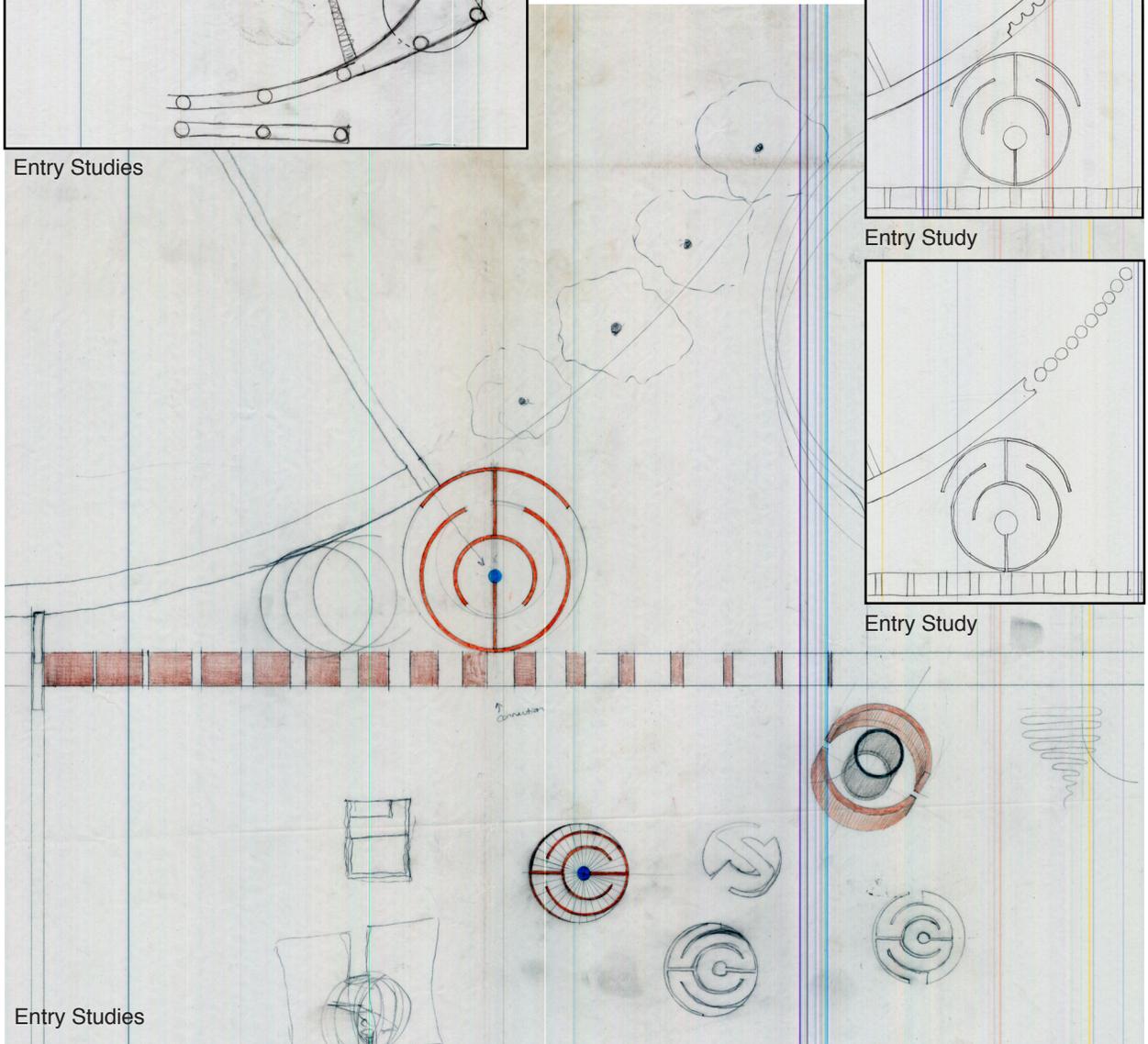
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Conclusion



Figure Study

A Forgotten Home Remedy
From *The Art of Doing Nothing* (Vienne, P.65)

Before the invention of antibiotics, people in Europe cured their colds by dunking their arms in hot water. It induced a short term high fever and was believed to rid the body of toxins.

~ Pull a chair in front of your wash basin and stack a couple of pillows on the seat so that you can sit comfortably in front of the sink, as if you were at your desk.

~ Get into your pajamas, tie your hair up [if necessary], and roll up your sleeves. Check the clock. The procedure should last no more than twenty minutes.

~ Cover your head and face with a fresh towel.

~ Cross your bare arms in front of you and submerge them.

~ Every five minutes, raise the temperature of the bath by reaching out and adding hot water right from the tap.

~ The steam releases sweat from every pore of your skin. You are a rosy – and drippy – mess.

~ Your twenty minutes are over. Get up, dry your arms and your face, and go straight to bed. You should sleep like a baby and wake up full of energy.

“... a contemporary problem: the sensory deprivation... the tactile sterility which afflicts the urban environment.” (Sennett, p.18)

What happens to our understanding of a built space as humans become further and further removed from construction? Will scale-less computers, used as design tools, and heavy construction machinery inadvertently lead designers away from the human scale and continue to obviate tradesmen? Will the relentless use of crude material obliterate the already endangered species of the craftsman? What if we, as humans, have an innate need to be able to relate elements of an environment to our own bodies in order to connect with place? And what if that need, which is dependent upon our senses, is void of tactile opportunities, most important for verifying existence? Might buildings' tactile existence influence the success or failure of architectural phenomenology?

Architects can design buildings on machines. Clients can choose designs based on machine generated renderings. Machines can calculate structures, standardize construction details, and even standardize aesthetic details. Parts can be made by machines and installed by machines. Factories can produce artificial “earthy” materials. Essentially, whole buildings can be designed, erected, and prepared for inhabitation by an army of machines run by computers so far removed from human existence.

With every technological advance, there are potentially more levels of human removal. When humanity is removed from process, there are so many lost tactile opportunities and challenges that never get a chance to be addressed or even discovered.

Could the reason that we invent machines to do work for us is because we are no longer sensorially stimulated by doing it ourselves?

“Since ornament is no longer organically linked with our culture, it is also no longer the expression of our culture.” (Ford, p.229) When design neglects tactile sensitivity, the building cannot be an expression of us. And therefore lessens its effectiveness as a vehicle for preserving the legacy of our physical existence.

Phenomenology, “A return to things – A phenomenology of architecture is needed,” says Schulz. (Schulz, p. 8) He goes on to comment that some philosophers who have approached the problem of our “life world” have used language and literature as sources of information. Literature which itself is really only an analogy of architecture cannot solve this problem since a thing is not truly understood as a thing unless it is experienced in its “thing-ness” way. Similarly, Heschong writes “If we can touch something, we are persuaded that it is not an illusion or a hallucination but that it is very real.” (Heschong, p. 28-29) Architecture exists in the physical realm. We do not doubt that which we can touch. Sight can be deceptive. Touch is definitive. This is not to imply that we must be able to feel every single element of a building. What it should discourage is the disregard of attention to those parts that will inevitably come in contact with the human touch.

With design consideration for the physical experience of people without sight, the potential for tactile experience of the sighted expands. This amplification builds upon the physical experiential dimension reinforcing impression of place and training muscle memory to seek sensory stimulation in every new environment encountered.

As an architect, you possess the power of creation. Choosing to foster human attachment to place ensures your legacy on humanity.

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