

Aligning  
Mind,  
Body, and  
Spirit  
Through Breath  
in Architecture

Katie Elizabeth Barrett

thesis work 2010-2011

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## Master of Architecture

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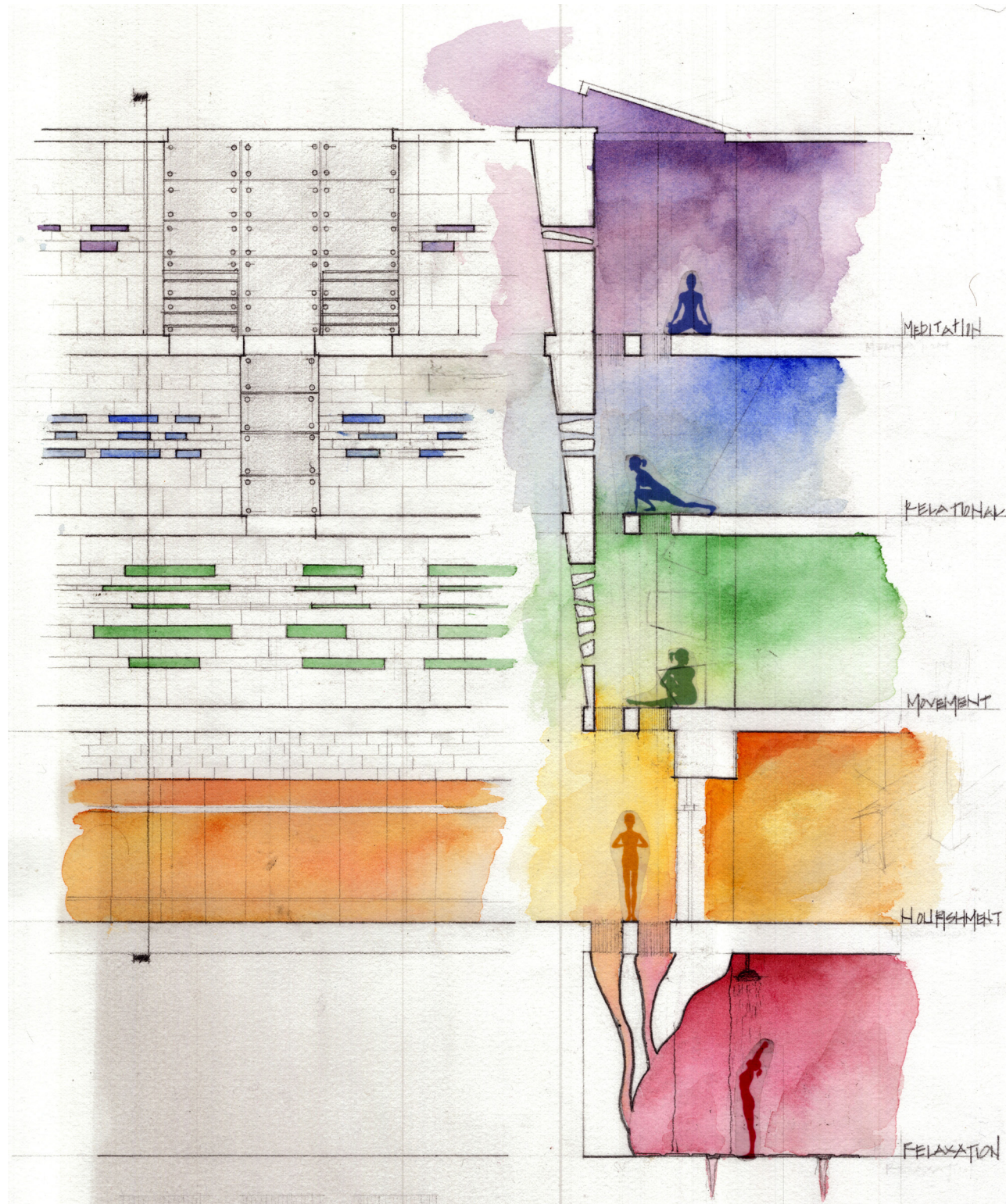




figure 1, collage [fair use]

## Aligning Mind, Body and Spirit Through Breath in Architecture

by

Katie Elizabeth Barrett

abstract

At the root of all living beings is our breath -- without it, we are not alive.

Eastern practices such as yoga and meditation are conveyed through the awareness of our breath and the encouragement to be present in what our physical bodies are telling us. This awareness is a huge influence in architectural design. Building well and thinking well are in turn living well, and this architectural thesis served as a journey in discovering how human health can manifest itself in a physical building.

The architectural project is an Institute for Being and is located in the Shaw neighborhood of Washington, DC. The program of this project consists of spaces to encourage people to seek their own path in spiritual grounding within the otherwise hectic urban context.

Thank you

to my thesis committee for their constant encouragement and for cultivating an atmosphere that challenged the limits of my architectural sensibility.

to my colleagues, in particular, Sam Bennett, whom I now consider a lifelong friend after this journey; Bryan Montanio, for the intense, motivational studio dialogues; Jessica Turrin, Adele Boyle, Emily Scali, and Anna Badyoczek for their intellectual support at the beginning, middle and end of my time at the WAAC.

to my parents and sister, who have always bolstered my confidence and supported me with strength and guidance in all of my endeavors.

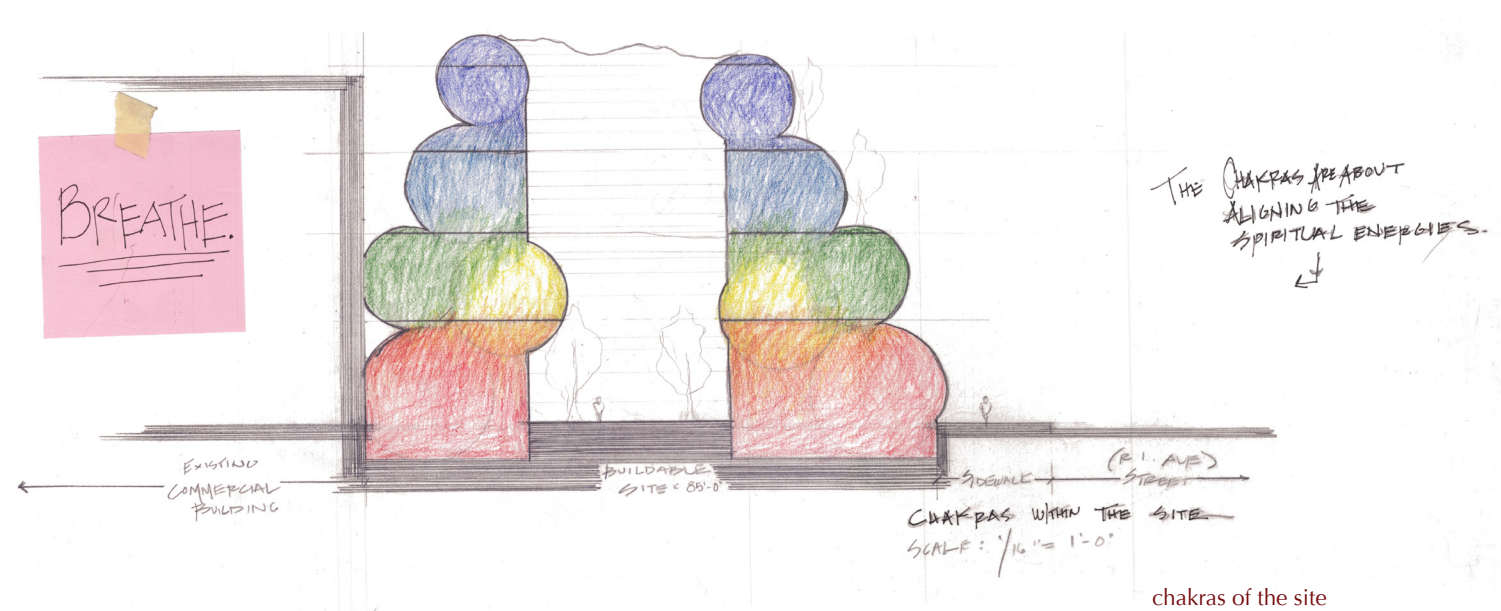
and to John, for never allowing me to settle on a notion without being able to defend it or an opinion without justifying it, and reminding me every day that if you aren't learning, you aren't living.



figure 2, assemblage [fair use]

acknowledgements

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the thesis

“A walk through a forest or a Japanese garden is invigorating and healing because of the essential interaction of all sense modalities reinforcing each other; our sense of reality is thus strengthened and articulated.”

--Steve Holl, *Questions of Perception: Phenomenology of Architecture*, pg 30

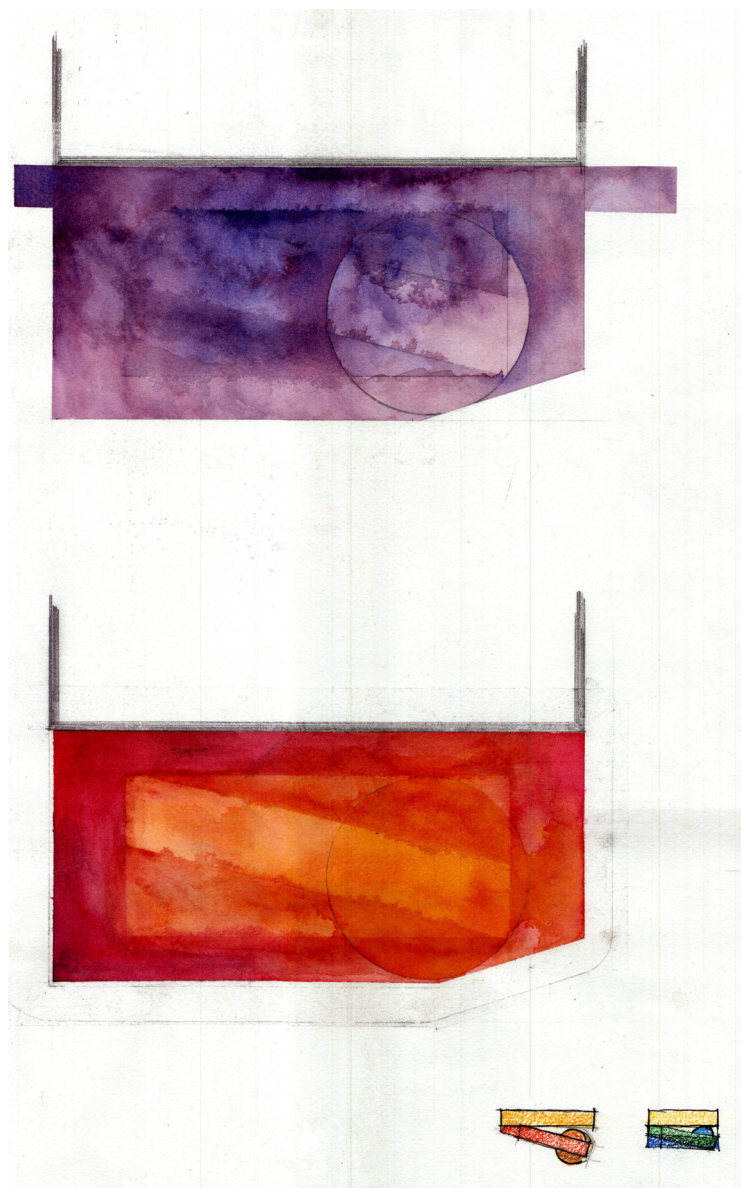
Architecture has been known to astound people, move humans to tears, warm the heart, or isolate people. However, many believe that not only does architecture have the ability to affect us on an emotional level, but it also can make us physically ill or, on the other hand, heal our ailments. Those who follow the ancient teachings of Vastu Shastra believe that not only does architecture have the ability to heal us, but it can also boost our energy and uplift our spirits.

The teachings of Vastu Vidya, or Indian Architectural Theory, explain that architectural design can employ a holistic approach, where a number of factors (including orientation, adjacencies, siting, building materials, and the built form) are all considered. This teaching shows that the building can in fact discharge a positive (or negative) effect on the inhabitant's health.

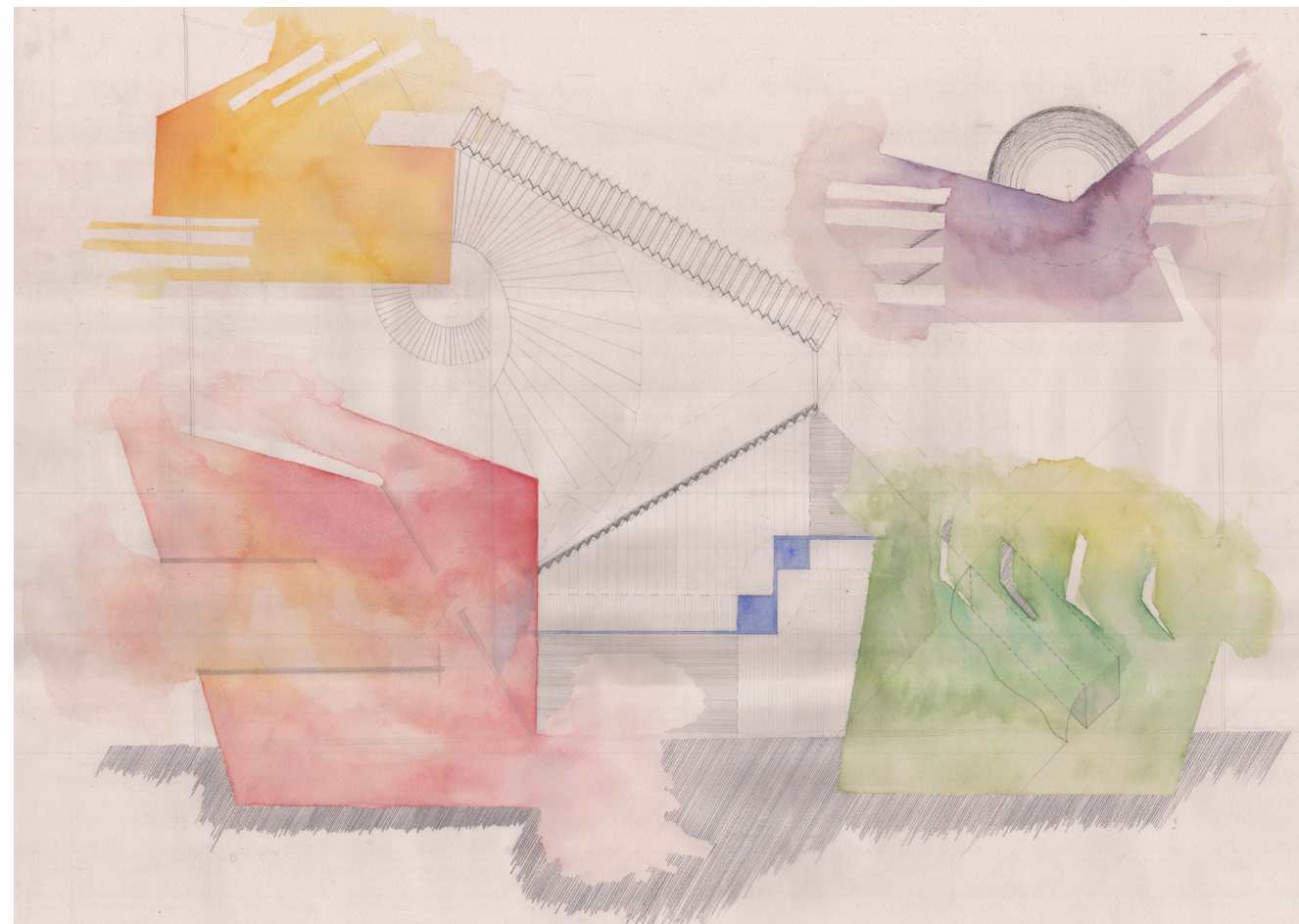
The Chakras in Hindu and Ayurvedic medicine display the same relationship to the body. “Chakra” is a word which means “turning” or “wheel” and signifies sources of energy throughout the human body.<sup>1</sup> The seven principal chakras are said to reflect how the unified consciousness of humanity, or the immortal human being and her soul, is divided to manage different aspects of earthly life including body, instinct, vital energy, deeper emotions, and communication.<sup>2</sup> You are said to be at your most healthy when your chakras are aligned and harmonious.

The inhabitants of a Vedic building will typically practice controlled breathing exercises and meditation to achieve Prana in the Brahmastan of the building. Prana practice is said to be vital and life-saving in Ayurveda medicine. It enters the body through breath and is sent through the bloodstream, which is why it is most beneficial to practice in what is considered the lungs of the building.

1 Chimnoy  
2 Ibid.



spatial energy studies

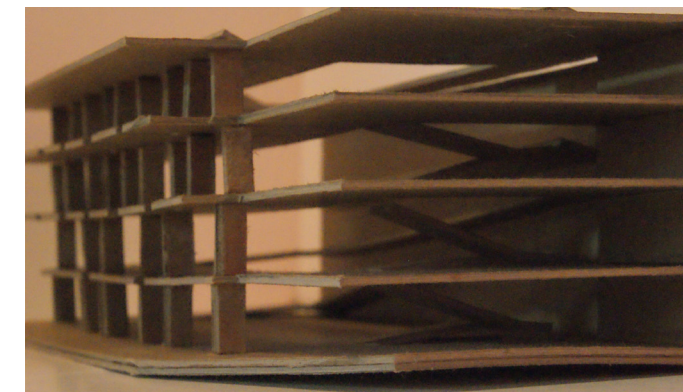


theoretical watercolor study

The analysis of Eastern architectural theory does not only include the practice of building, but also the meditation practices that are performed and lived throughout this ancient system of knowledge. Maharishi Mahesh Yogi introduced the Western world to Vedic Architecture and the practice of Transcendental Meditation nearly 50 years ago. He also introduced Ayurvedic preventive medicine 20 years ago.<sup>3</sup>

In 2006, the National Institute of Health published a manuscript entitled “Cardiovascular Disease Prevention and Health Promotion with the Transcendental Meditation Program and Maharishi Consciousness-Based Health Care.” Maharishi Consciousness-Based Health Care is a comprehensive system of prevention-oriented natural health care. The Maharishi Consciousness-Based Health Care

3 Schneider



circulation study model

system has its origin in the ancient Vedic civilization of India, which is the oldest continuously-practiced system of knowledge in the world.<sup>4</sup>

The Maharishi Consciousness-Based Health Care system draws harmonies from Vedic literature, including diagnosing, preventing, and providing therapeutic remedies. These practices are said to holistically enhance the body's innate ability to self-repair, and they positively affect homeostatic instruments; therefore these practices strengthen the body's intrinsic ability to prevent disease and promote health. In Ayurvedic medicine, when a disease is treated, it is addressed at its root cause, which is essentially a disruption of the body's inner intelligence.

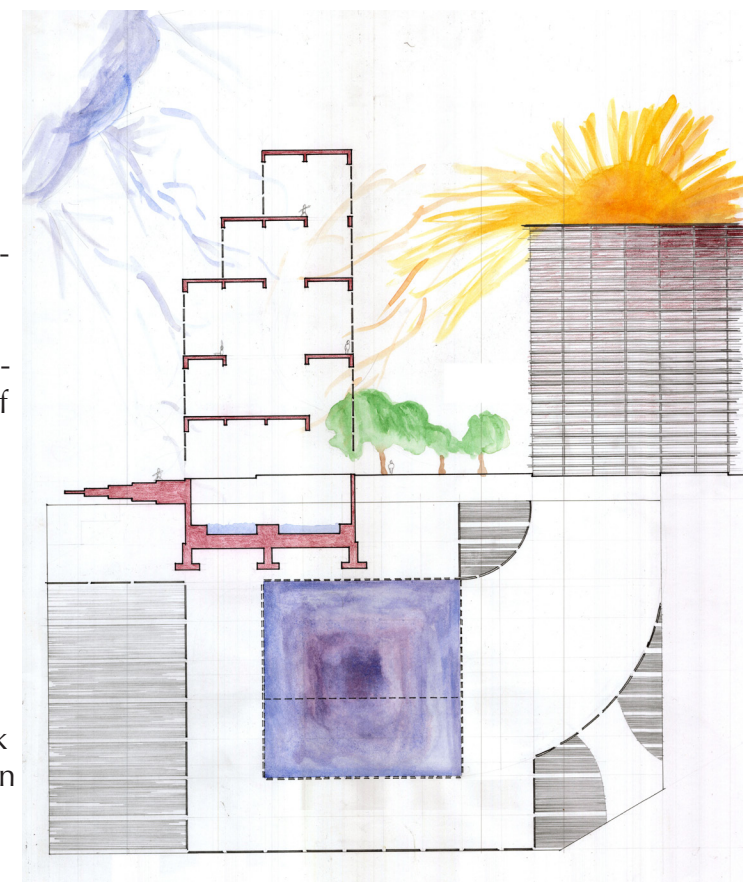
A subset to Ayurvedic medicine is Yoga. Yoga uses both physical exercises and breathing techniques to help you achieve physical and mental well-being. There are several different branches of yoga, one of which is Vinyasa. "Vinyasa" means breath-synchronized movement in Sanskrit.<sup>5</sup> Thus Vinyasa is a dynamic type of yoga during which you use progressive series of postures while performing breathing exercises. Each movement is accompanied by one breath, both an inhalation and an exhalation. The postures are not held in a fixed position for long, and they usually flow with rhythm to achieve synchronization.<sup>6</sup>

4 Schneider  
5 Scott pg 14  
6 Ibid, pg 14

Vinyasa yoga has several physical and mental benefits. Performing the Vinyasa yoga "asanas" creates internal heat and the circulation of this heat helps to purify the muscles and organs by expelling unwanted toxins from the body in the form of sweat.<sup>7</sup> Thus, the body is rid of harmful substances, which makes it healthier. Vinyasa yoga is also practiced to achieve Prana, as each movement accompanies one breath of inhalation and then next a movement in exhalation.<sup>8</sup> This practice, when done with the human body, is analogous to the design and function of architecture. Applying Vinyasa's healthful benefits to a building's design could greatly improve the health of that building's inhabitants.

Eastern and western traditions reveal a struggle between balancing the "spiritual" side of architecture and the "material" side of building science. In the same way that a person who practices yoga incorrectly can actually injure himself or herself, one could make the parallel claim that incorrect practice, or un-holistic application of the teachings, may actually be detrimental to the building. It is of the utmost importance to see the building as a whole and then to look beyond and see how the building acts within the town or city and, even further, at how the city interacts with the Earth. The Vastu Shastra proves that in order for there to be both a healthy space to dwell in as well as healthy inhabitants, all aspects must work in harmony.

7 Scott, 15  
8 Ibid, 15



frontispiece



the site



waltha t. daniel/shaw library entrance/7th & R Street NW



montage with thesis design

From a perspective of health, it was very important to select a site that was centralized in an urban setting and had optimal community connectivity. The site is one block away from one of the Howard/Shaw metro stop exits on DC metro's Green line. It is contained in an extremely "walkable" neighborhood -- within a half mile radius of the site's tight urban fabric there are numerous local amenities such as schools, restaurants, and spiritual institutions (see map to the right.)

At the beginning of my thesis process, one of the new DC branch libraries, the Watha T. Daniel/Shaw Library was under construction. It is located catty-corner to the site, on the island between Rhode Island Avenue and 7th Street NW and, as of August 2010, has since been completed and opened. The library proves to have a lively and positive presence in the neighborhood. It contributes greatly to animation of the street life, and would theoretically help to sustain the success of a proposed project such as a Wellness Center, which would have a strong public face.

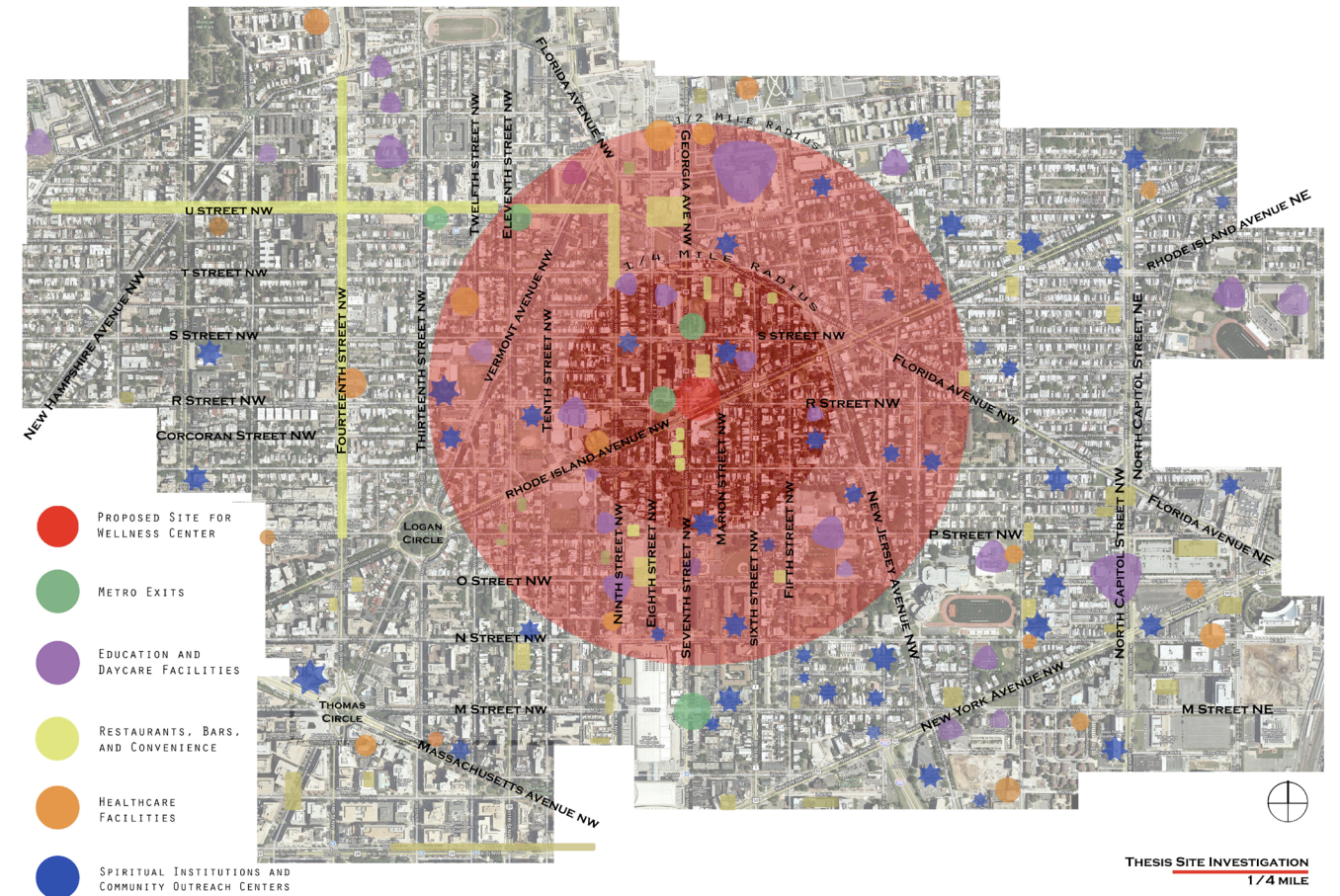


figure 3, google map [public domain]



figure 4, sanborn maps,1903 & 1927, overlaid [public domain]

The body is an ever-present aspect to Indian architecture. One basis of ancient Vastu Shastra architecture is the implementation of the Vastu Purusha Mandala.<sup>9</sup> This is a diagram that is traditionally divided into a nine-by-nine grid (although there are variations depending upon whether the program is sacred or profane).

As Hindu legend has it, 45 gods and divine spirits held down the demon that fell to Earth and each part of the demon's body holds significance within the building. For example, the location of his head is a place of worship, where his two legs lay bear the weight of the building, and the Brahma, or central open space, is located at his navel.<sup>10</sup> The Brahma, or central courtyard, is the energy heart and lung of the house. This part of the house should always be left open and free of obstructing elements (pillars or walls) and mechanical services. It is best if this portion, at least, is directly in contact with the Earth.

It is traditional, where climate permits, to leave the Brahmastan open to the sky so that the building attracts the energetic space surrounding the Earth. When there is a roof over the Brahmastan, then there should be a natural light source, a skylight or cupola, at the roof. Also, if possible, a small vertical passage can be provided at the apex of the center.

Vastu Shastra prescribes a standard placement of rooms, built around this silent space. As the Brahmastan produces a feeling of peacefulness, all the other activities of the building revolve around the central core, which is lit from five main directions. Everything centers around the Brahmastan; if this is spacious and light, then all the rooms around it also have this quality.<sup>11</sup>

9 Sachdev, 28  
 10 Chakrabarti, 80  
 11 Hughes

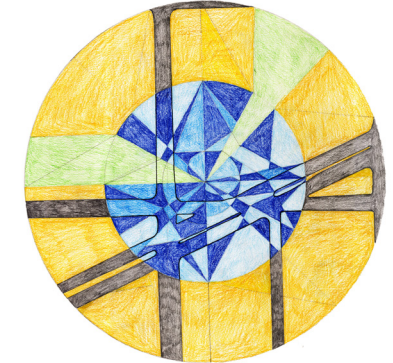
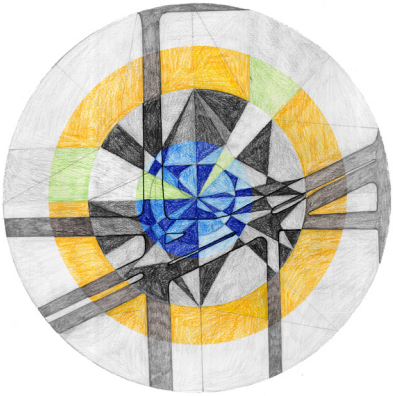
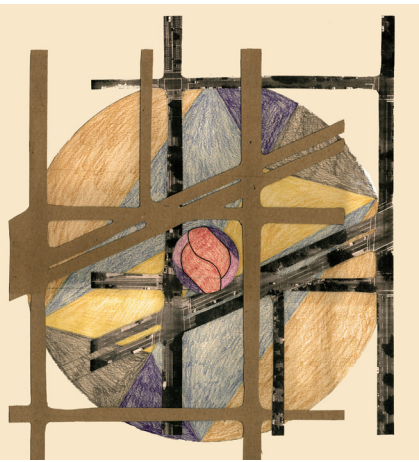
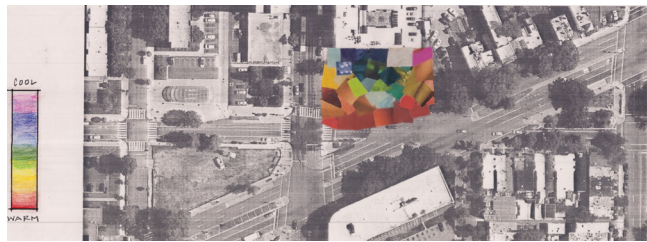


figure 5, collage with Hindu Chakras Wheels [fair use]

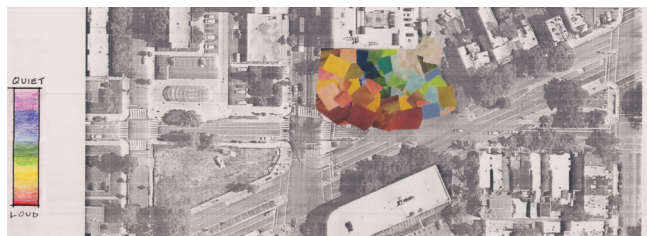




site sun study



site pressure study



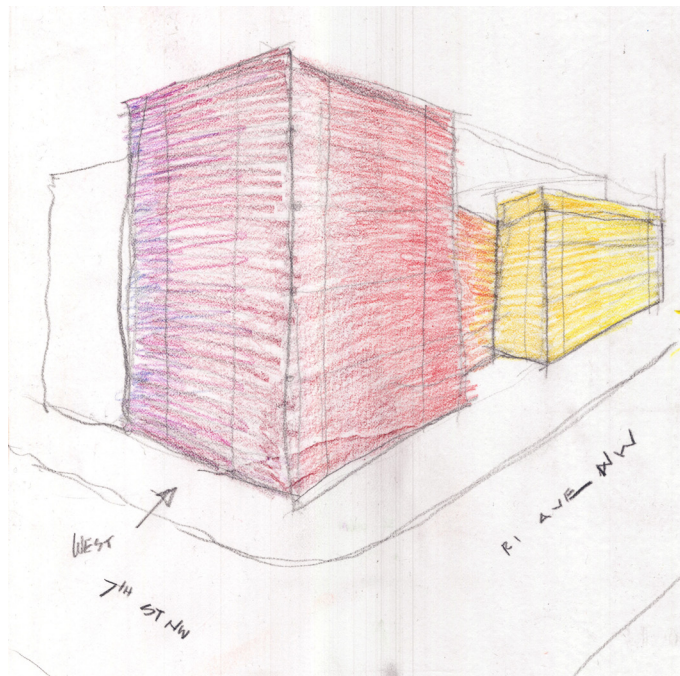
site sound study

figure 6, google maps [public domain]

I discovered while investigating the site and keeping in mind the intention of the thesis, that the orientations of the building prove to be quite important. I studied and spent time exploring how the massing could be broken up so that the crucial aspects that are a part of the theoretical design could come into alignment with the environmental strengths of the chosen space. Thought was given to how this elected urban site could become grounds for sacred occurrences.

Environmental inquiries of the site were meant to inspire ways that the human body could intervene. Planning became about the scale of this urban realm, and the building itself became visualized as a body in the city. Holl illustrates this concept: "As buildings lose their plasticity and their connection with the language and wisdom of the body, they become isolated in the cool and distant realm of vision. With the loss of tactility and the scale and details crafted for the human body and hand, our structures become repulsively flat, sharp-edged, immaterial, and unreal."<sup>12</sup> This raises the question: how can this structure materialize through a skin and skeleton in this specific environment in the most healthy and holistic way?

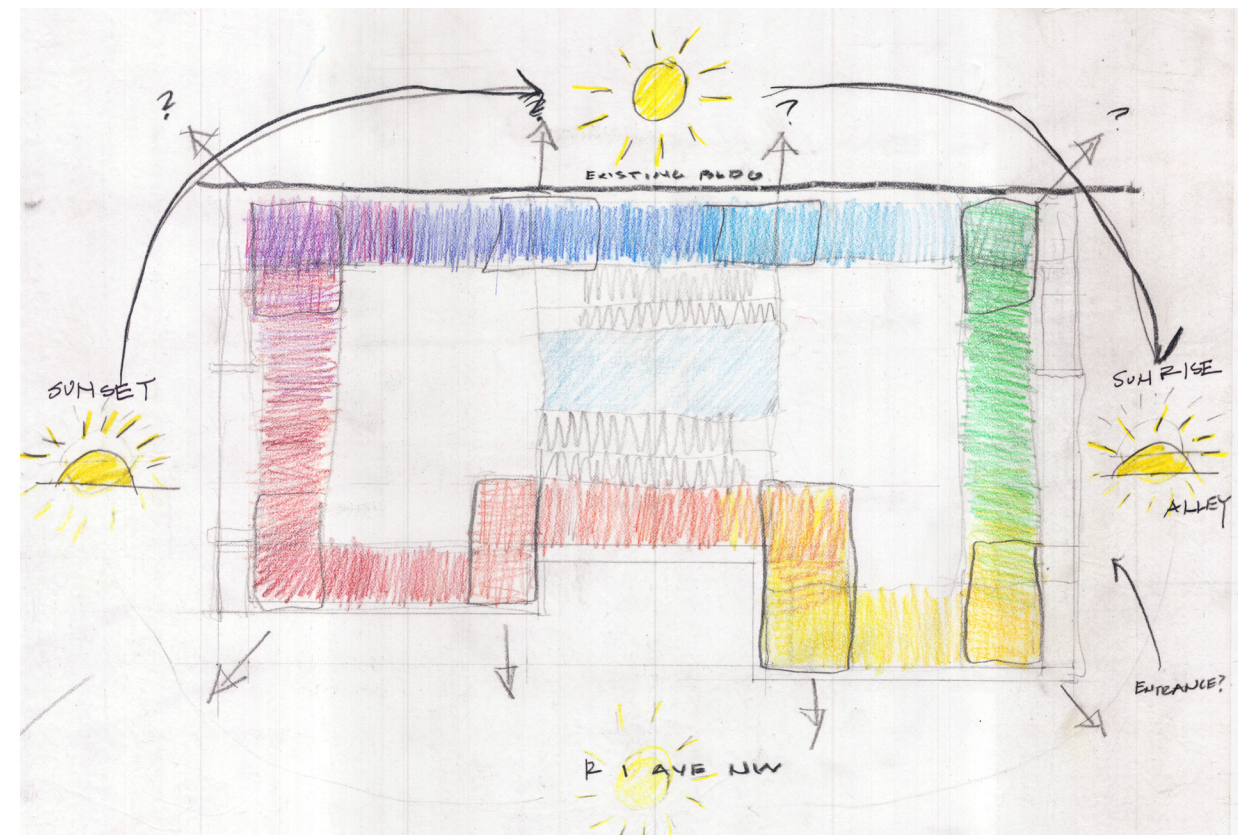
My intention for this thesis design was to reconnect materiality, environment, and air through a craft that has seemingly become detached and at times devoid of authenticity in modern times.



solar study over massing



site/washington dc - figure-ground



solar study in plan

the program



figure 7, Carbonetti (watercolor) [fair use]

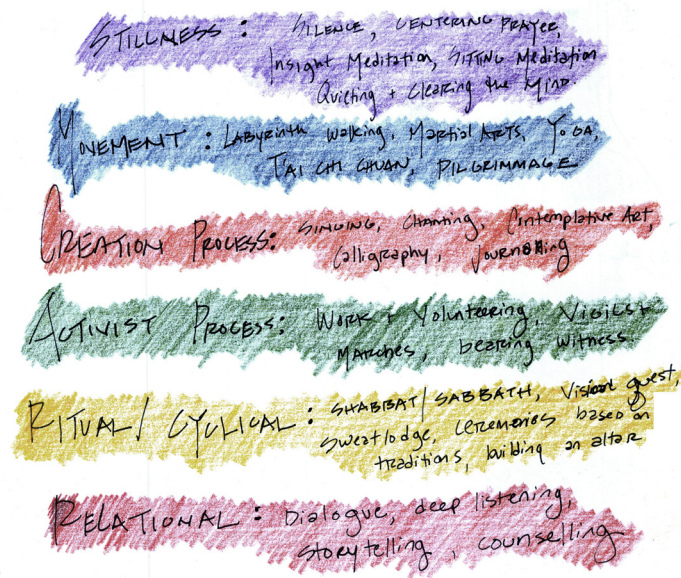
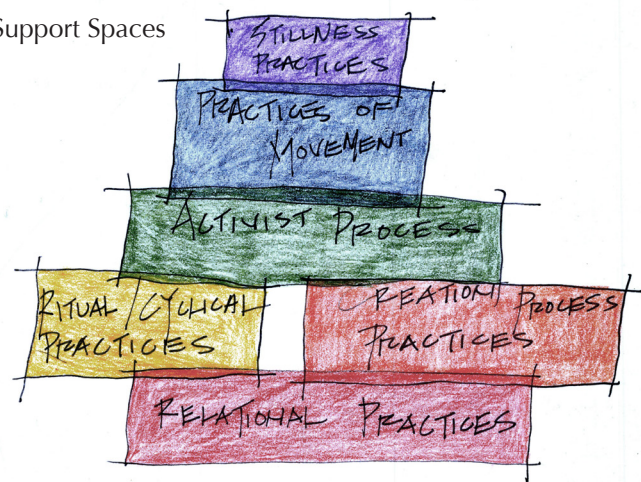
In the spirit of holistic living, the program was developed with the attitude that this building would provide spaces that would promote wellness and self-betterment. The building is intended to host a variety of spaces that encourage spiritual grounding within the urban context, which is at times hectic, overwhelming, and spiritually daunting. A similar type of facility which welcomes this program is successfully described: "...Combining leisure, nutrition, health, and education under one roof is a more effective way of reducing health inequality than a prescription for Prozac."<sup>13</sup>

The Institute is meant to inspire the individual's motivation to achieve optimal health through the demonstration of what it means to have optimal health in architecture.

13 Baillieu, 54

Program:

- Massage
- Hydrotherapy Pool
- Steam Room
- Sauna
- Cold Water Plunge
- Men's and Women's Locker Rooms
- Organic Snacks and Smoothie Cafe
- Cafe Seating
- Yoga Studios
- Small Office spaces for Talk Therapy
- Large Meeting spaces for Group Therapy
- Waiting spaces for Therapy patients
- Space for Guided Meditation
- Space for Individual Meditation
- Exterior Green Space
- Support Spaces



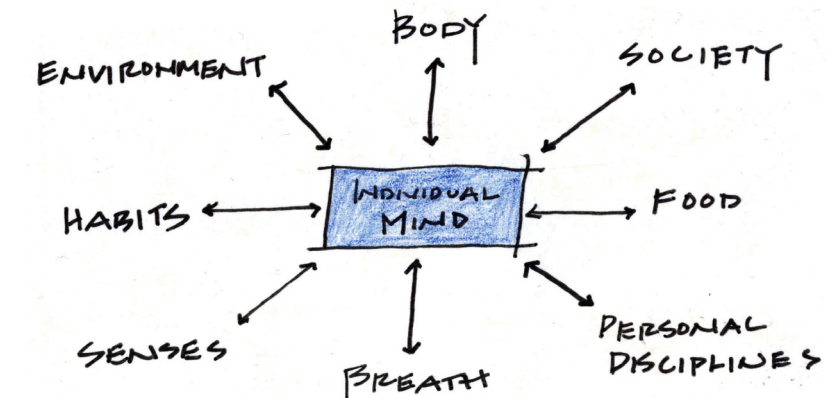
hierarchy of program

Because this thesis project is an Institute for Being and the design was approached taking into account that the whole of the building cannot exist without the parts which make it, the building could not be planned using the typical planning techniques. None of these programmatic elements (as designed within the umbrella of this thesis) will function without the support of the others. The program is thus to provide spaces that meet the functional criteria for each of the principles of "being."

The spaces are not meant to be discrete, but rather to overlap, connect, and be interdependent, like the anatomy of the human body and the tendencies of the individual mind.

*"While nature is important for the community, I also feel that it is important for the individual. If he is able to take in and enclose his own piece of air, sky, and rain, he will have a much stronger awareness that he is living, that he has been given life."*

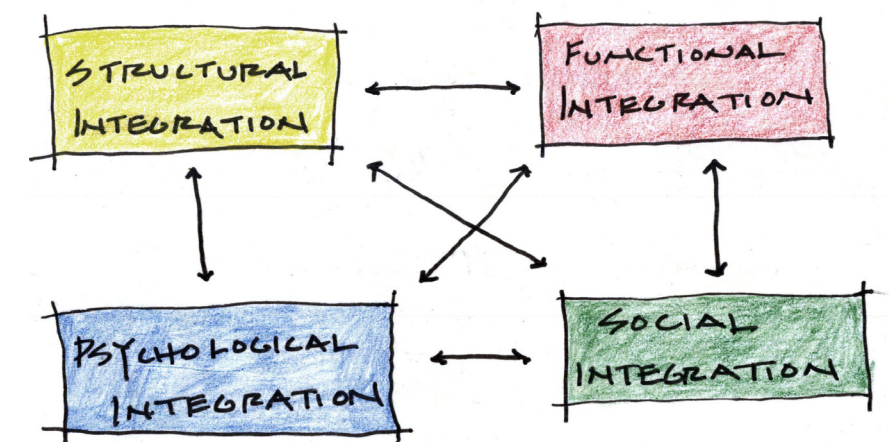
-- Tadao Ando, "Interview with Ando Tadao" pg 132



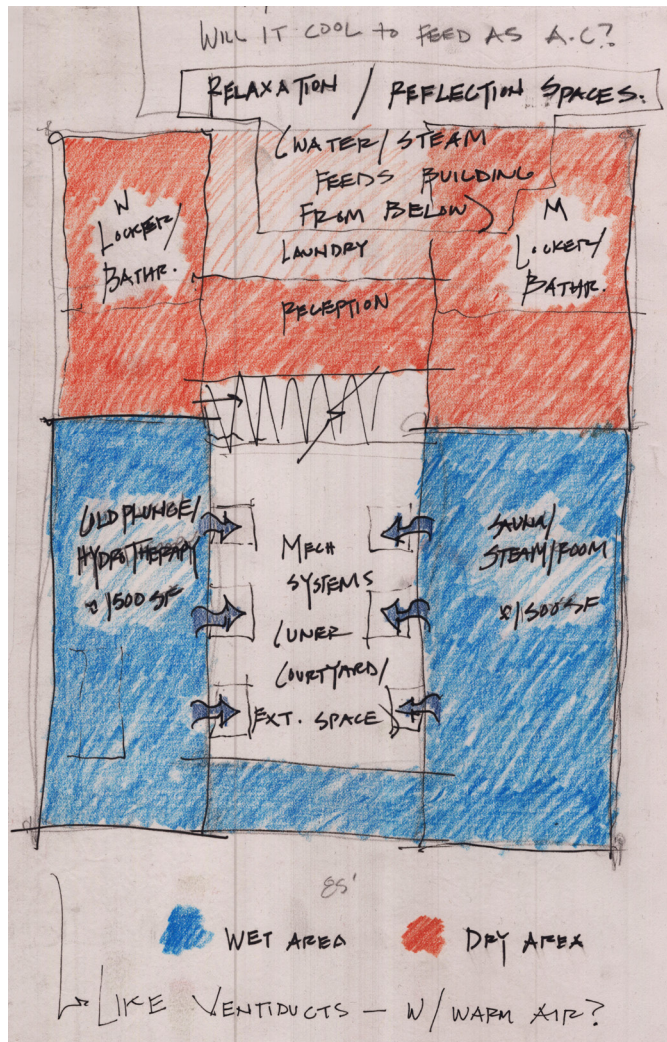
human individual



figure 8, Carbonetti (watercolor) [fair use]



human relationship



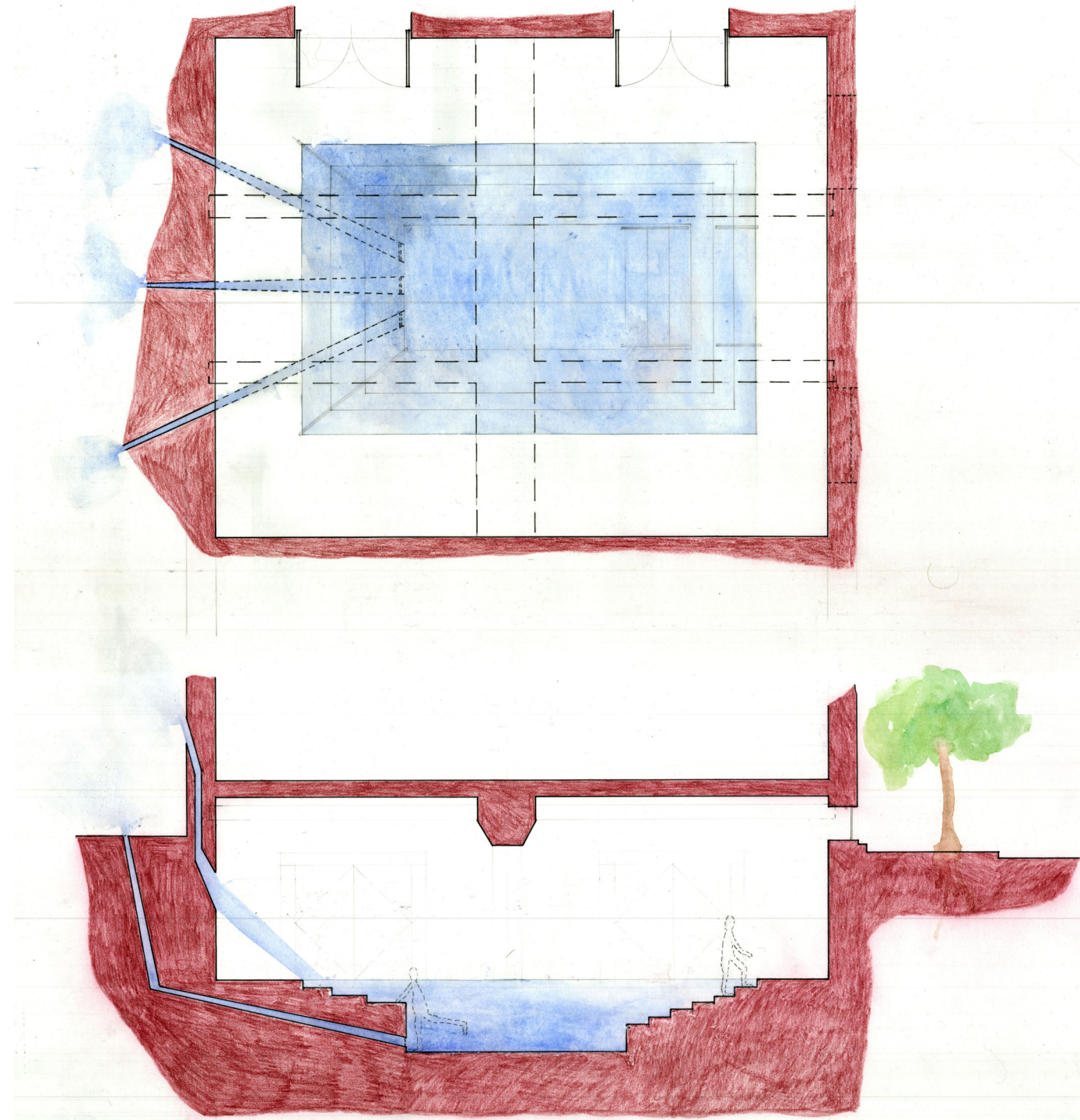
concept sketch of pool floor

As a part of the diagram of the program, I considered how these spaces would help to guide the building's systems such as ventilation, heating, and cooling. These studies were the driving factor in the sectional organization and layering of program (See "Hierarchy of Program" diagram, page 12). The basement became the natural space for wet areas, and because this space inherently "breathes" steam, a system that would benefit from this was naturally the mechanical systems. Along the same lines, I began to explore venti-ducts, as described on the next page, to feed the building the air from the wet spaces below.

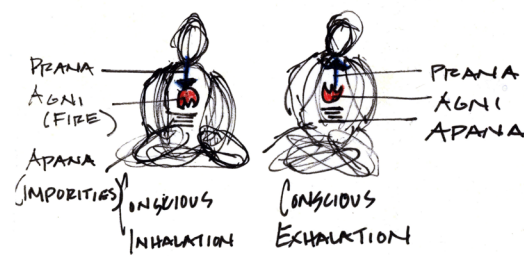
The way in which the air is siphoned through the building was seen in the same way that breathing techniques are performed during the practice of yoga. Through fluid movements, breath is inhaled and exhaled. In a yoga studio, the atmosphere of the room becomes thick and those practicing can sense the changing in temperature and humidity. It is a palpable sensation in the air and helps to contribute to the yogi's positive and healthful experience.

THE MEANS AND THE END.

YOGA => "YUJ" (ROOT "to join") ; "SAMADHI" (ROOT "A state of mind")



watercolor study of hydrotherapy pool

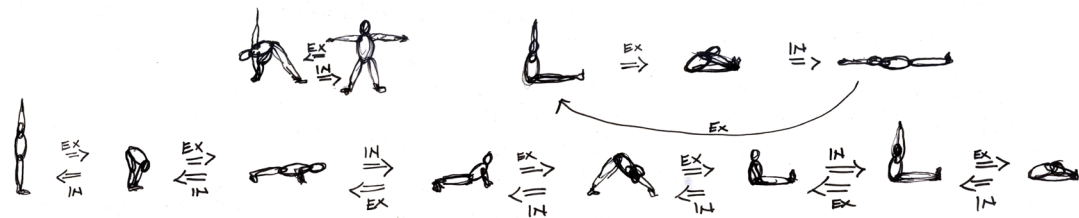


"A therapy without medicine,  
A surgery without tools."

- K.G. MURARI

PRACTICE SHOULD.....

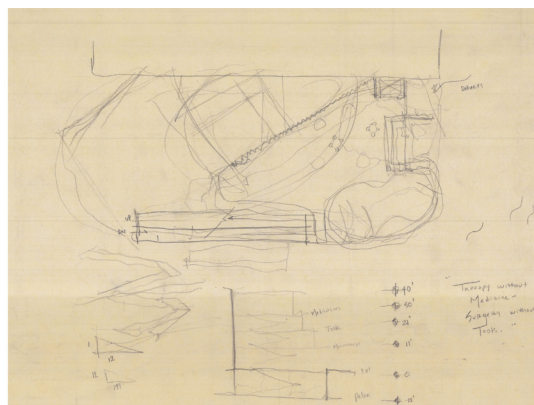
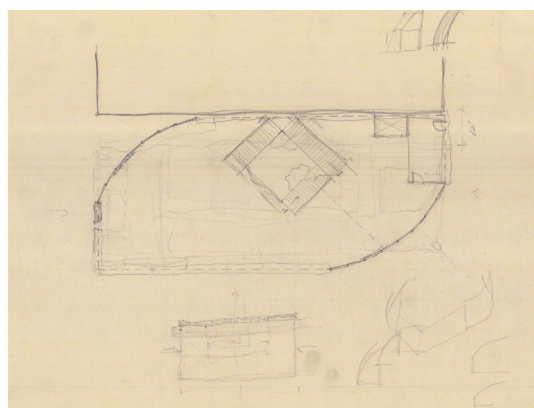
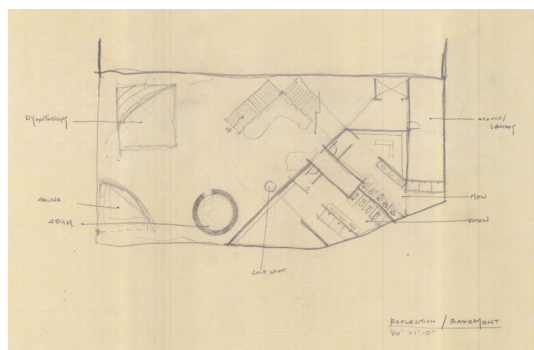
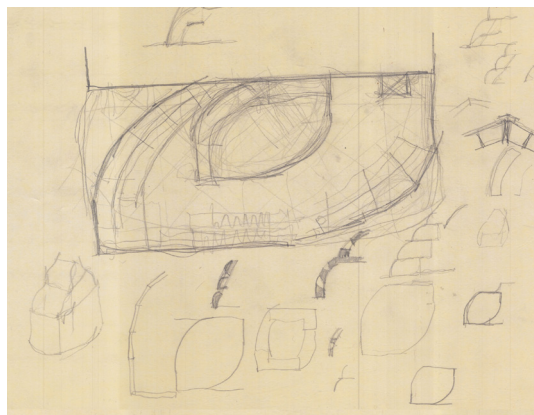
1. MAKE THE BODY STRONG + FLEXIBLE.
2. EMPHASIZE THE SPINE.
3. ADAPTED TO ACHIEVE YOUR GOAL.
4. PROCEED IN INTELLIGENT + ORDERLY STEPS.
5. USE THE BREATH TO INTEGRATE BODY + MIND.
6. USE BREATH TO ADAPT POSTURES.
7. USE THE BREATH FOR FEEDBACK.



SEQUENCES OF POSES, STAYING AWARE OF YOUR BREATH

the design process



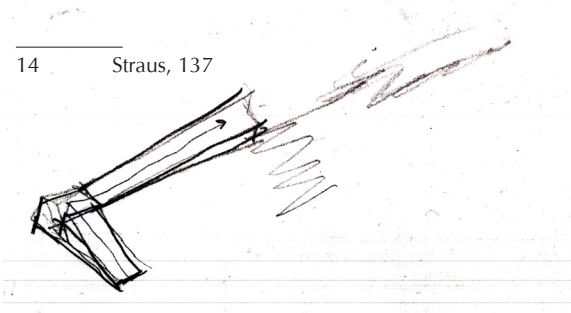


process sketches

This thesis posed the opportunity to explore the design of a building for healing versus designing a building for well being – I asked, is a place for wellness suitable for those who are already sick? I believe so. Something as simple as bad posture can affect your health, but more often than not, bad posture is usually rooted in deeper emotional issues (whether it is a lack of confidence or even fatigue). Those who are healthy do not typically need to think about the simple acts of walking, breathing, or seeing. So when there are issues with these basic bodily functions, it startles us.<sup>14</sup> Therefore, those who seek the help and guidance of therapists may be finding that they are having issues with the most banal human actions, such as the arts of standing and walking.

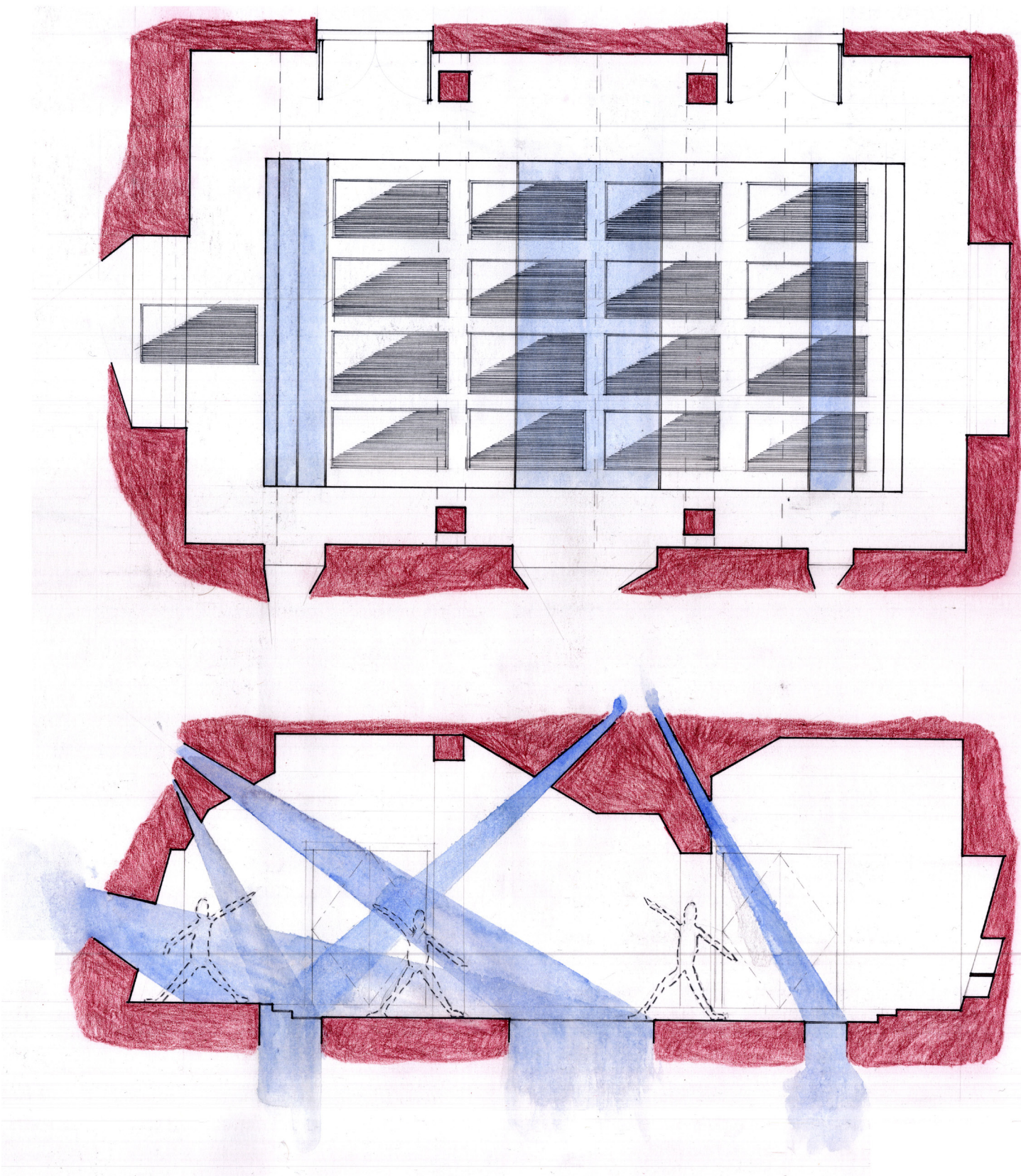
The parti was about creating a diagram where the “uprightness” of the building is exemplified through the main atrium’s columns. The program is layered from communal spaces to introverted and individual-oriented spaces, all throughout encouraging a state of contemplation. The drawings were a mode in which these intentions were infused. The physical and mental anatomies are intertwined in the experience of the design of the drawings and in turn the design of the buildings.

The main element that braids this upright spine of the building is an accessible ramp which spills users to each floor, as well as a grace-note stair that dances from the half-point run of the stair, up to the floor above.

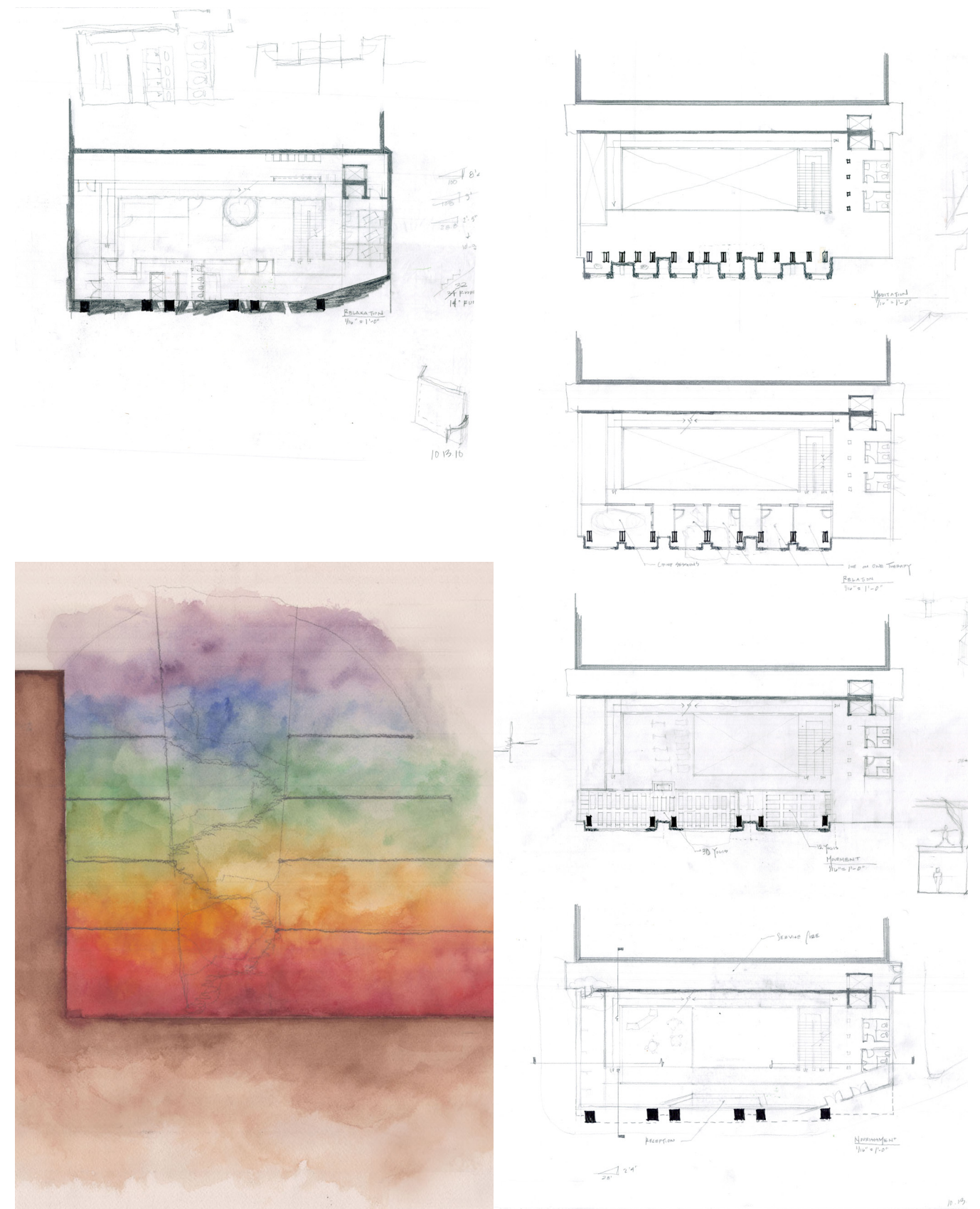
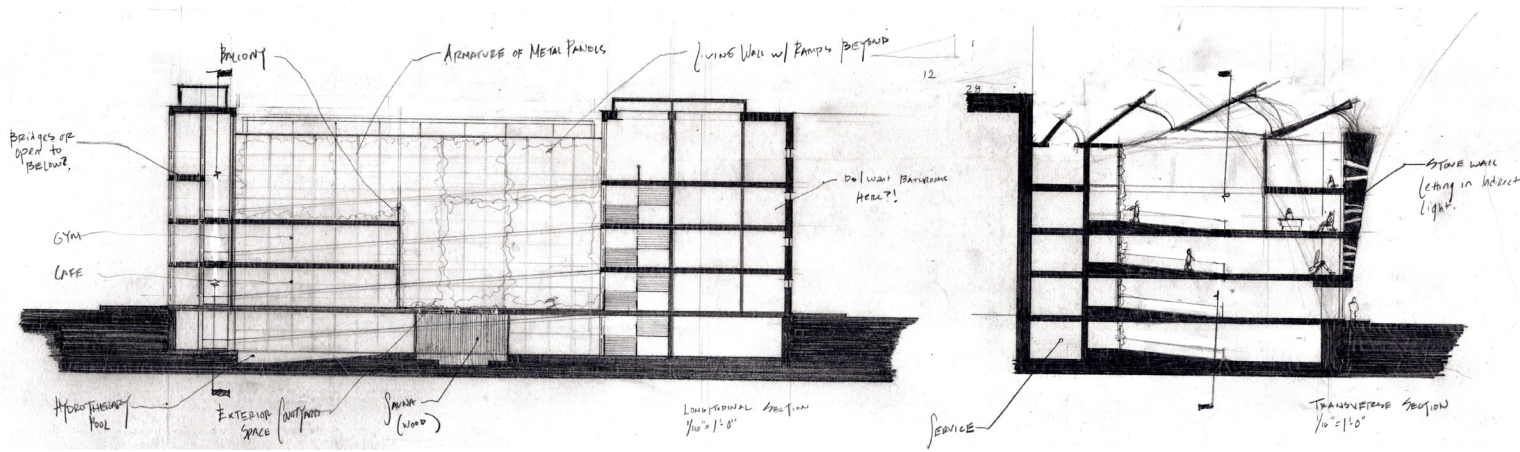


14 Straus, 137

ramp concept



watercolor study of small yoga studio

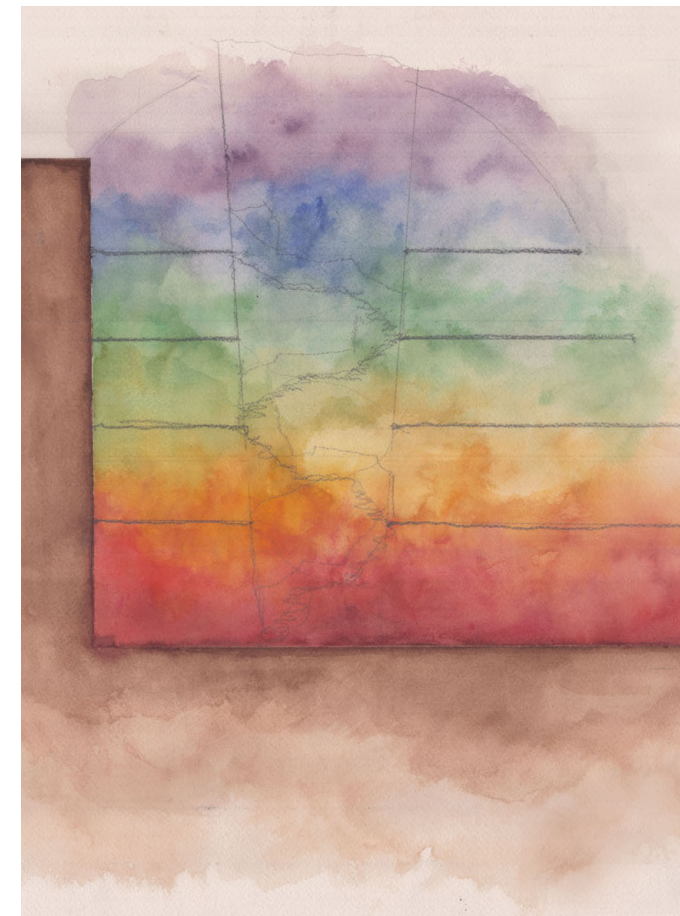


yoga postures influencing building envelope

In order for the body to feel as though it is holistically working within the space of the building, the sectional relationship became a crucial point of exploration. The spaces, as they are stacked, must relate to each other, the same way that our organs work together, and that the chakras are aligned in an affirmation of harmony.

The parti developed to a point in which each floor plan could help to describe what programmatic element was occurring on that specific floor. Therefore the facade also, in section, would tell the same story. Since the bottom floors housed programmatic elements that were conducive to group-oriented activities, the bearing wall became carved with larger alcoves, and as you moved up through the floors towards activities such as talk therapy and then meditation, these carved alcoves become smaller and smaller.

The service core, which is located along the party-wall, north edge of the building is an efficient way to contain the locker rooms, rest-rooms, and elevators. This core is tucked away in the back of the building so that prominence is given to the ramp and stair.

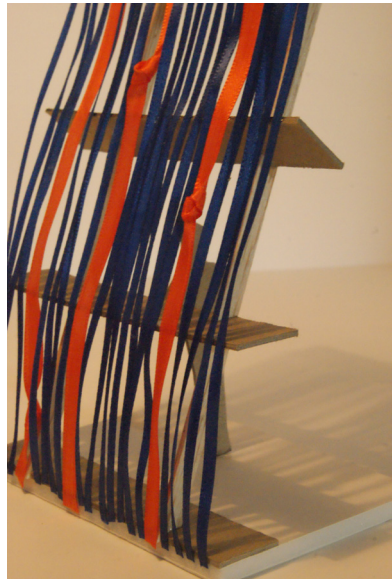


strata of air

process sketches exploring parti



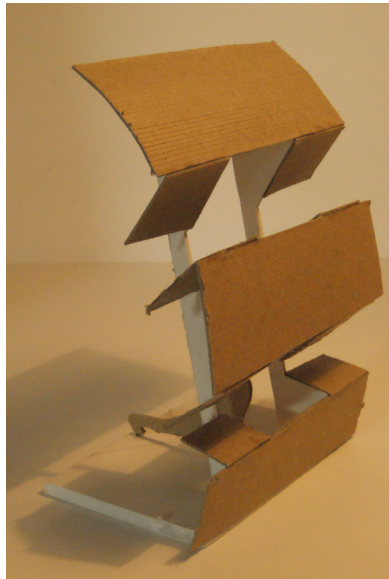
exterior



exterior



exterior



exterior



interior

body movement influencing structure



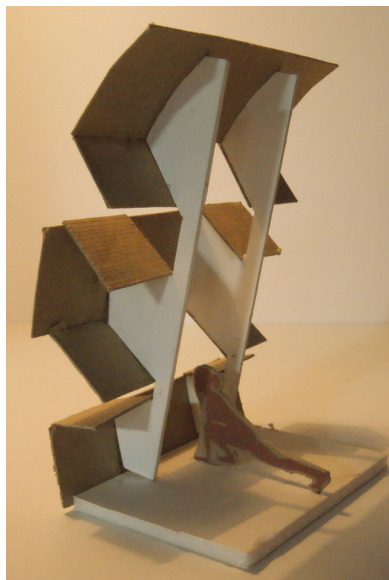
interior

body posture influencing skin



interior

body profile influencing interior treatment

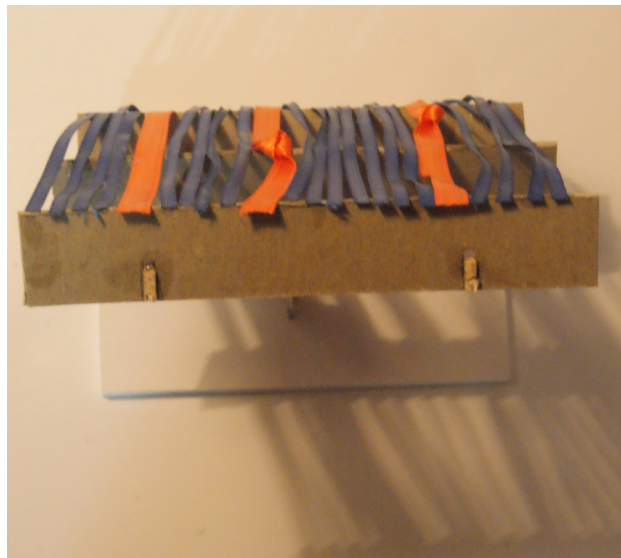


interior

body verticality influencing fenestration



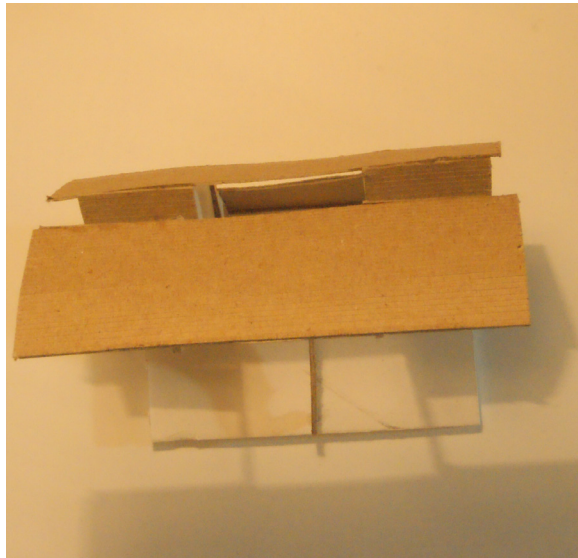
plan



plan



plan



plan



study model - exterior

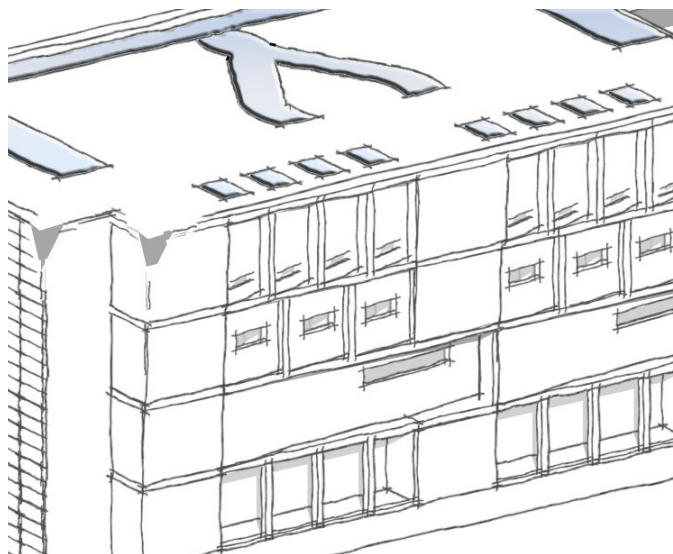
The main south facade was designed in a way in which the stone became carved out and channels reach from the basement space where the spa is up to the meditation level. The sensibility given to this system is about a place where the air can circulate through these burrowed shafts. I saw this system as an opportunity to assert the learned contributions of Galileo and Descartes to modern science, in which their use of technology and reductionism installed a rational rubric on existing spiritual and philosophical delicacies.<sup>15</sup> This Galenic theory is truly about humanistic sensibilities, and truly achieving the art of living well. Air becomes the thread which ties together the physical and the metaphysical, and it exemplifies a healthy spirit as well as physical vitality.<sup>16</sup>

This system within the stone wall essentially became a pneumatic device to the visitors of this building, as all programmatic elements exist along this wall and were exposed to obligatory ventilation being driven up from the bowels of the building up wards.

Cornaro eloquently describes a space which uses natural air to make spaces comfortable, commenting on the cooling breezes of villas in Veneto, Italy:

"I have avoided...remaining for any length of time in poorly ventilated places and have been careful not to expose myself too much to wind and the sun; for these things, too are great disorders...and in my chambers, I am defended from the great heat as well as from the great cold, the mortal enemies of the old age, because I fabricated them according to the laws of architecture which may prolong human life."<sup>17</sup>

15 Bettmann  
16 Emmons, pg 89  
17 Cornaro pg 48,56



axonometric massing

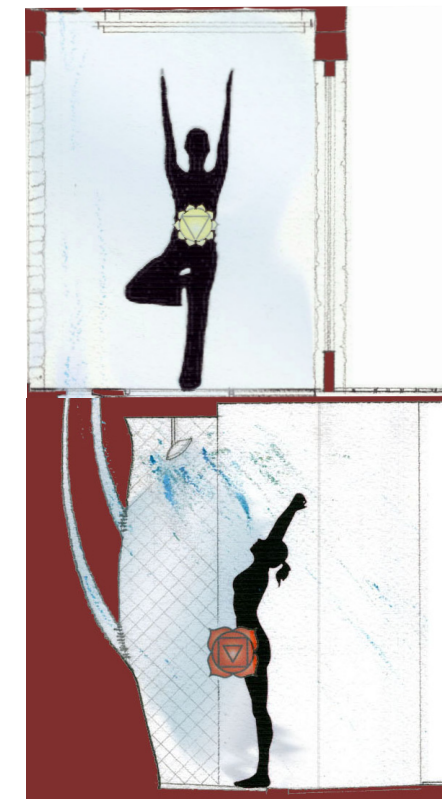
Air, being the source in which human's consume oxygen, acts as the life saver for people. People's comfort level depends on different things like airflow, temperature, pressure, humidity level, etc. Therefore air is one of the most powerful sources of our survival. Pneumatic devices beneath a room will generate fresh winds which are channeled through the walls of the room.<sup>18</sup>

On the ground level, portions of the south facade are enclosed and a veil is created along the glass from the steam and air which rises from the wet spaces below. This condition becomes a signifier to those walking along the street what is occurring in the building, as well as creates an intriguing place for visitors to inhabit.

18 Kenda, 107

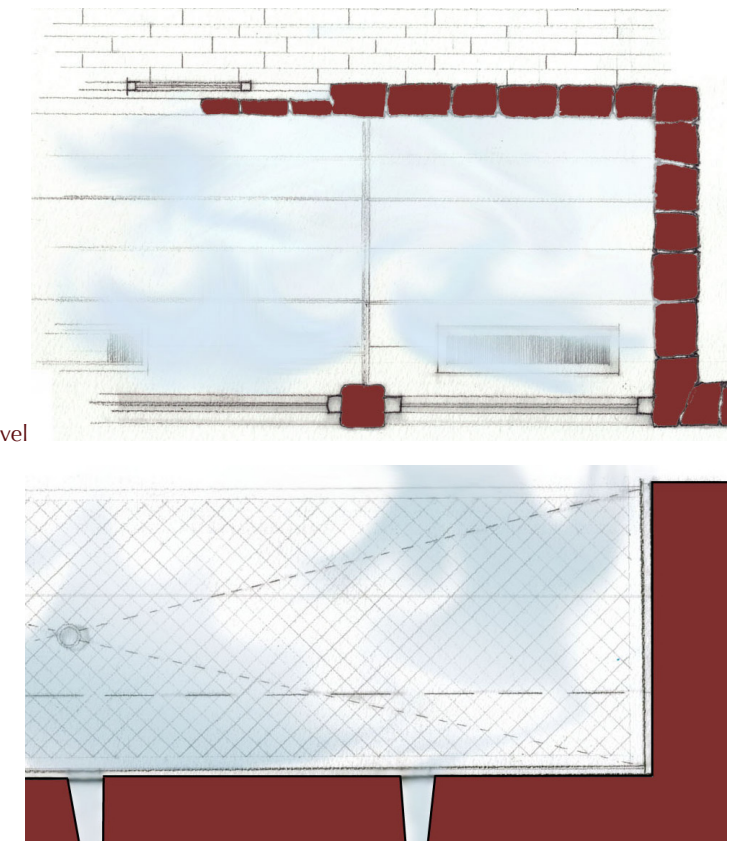


study model - interior

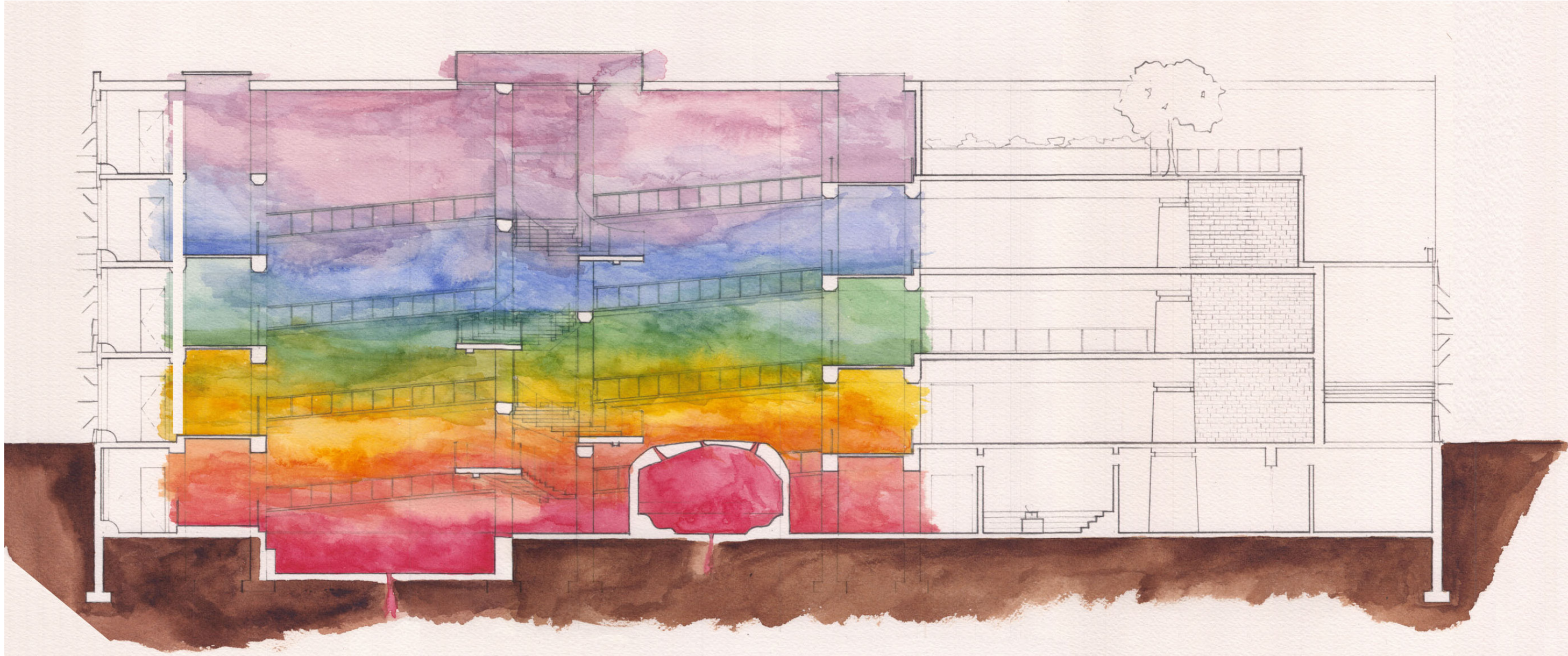


nourishment level

reflection level



plan detail



strata of energy section  
the final project

## A Narrative

An approach to the Institute of Being from along R Street in Northwest Washington, DC gives glimpse to an undulating stone wall. The façade expresses the nature of the building as not necessarily something severe and institutional; its shaped as a building that draws you along Seventh Street and around the curving entrance, to a main revolving door on the east. In terms of height and mass, the Institute sits well with its neighbors and internal activities are read from the Seventh Street elevation.

As Hall describes, "The use of the term façade is in itself revealing. It signifies recognition of levels to be penetrated and hints at the functions performed by the architectural features which provide screens behind which to retire from time to time."<sup>19</sup> A tawny stone-clad wall extends the full height of the building, connecting -- physically and metaphorically-- the disparate functions housed inside. Much effort was made to make the building accessible but still have a dynamic quality; it reflects the active nature of the uses inside and the broader aim to activate and change the community.

Coming forth through the revolving door reveals a static orthogonal plan that has been broken by the oblong café, a sort of brain of the building that attaches itself to the heart and main body of the institution. Crossing this threshold shows the visitor a space bathed in color and light, and the smooth concrete underfoot and upward thrust of taper columns frames the central, enclosed courtyard of circulation. Educational canons combine multiple points of view: mixing Eastern and Western traditions -- feeding the visitor's body, mind, and spirit. The building encourages inward contemplation and outward engagement with the community and society at large.

Once you are funneled through the "brain," you spill into the dramatic atrium space, the heart, which is a container for all of the building's main circulation. The circulation in plan becomes mandala-like, weaving visitors through space, leading them towards healing, in the same sense that the practice of drawing mandalas themselves provided a therapeutic repose. The ramps which lace throughout the atrium not only serve as a main circulation, they also help to orient the user in space, after all, to be disoriented in space is to be psychotic.<sup>20</sup> The inclined walkways, broken up by the grace-note stair along the journey upwards, constantly reminds the visitor of their posture as they glide through space. A grasp for the railing and leveling off at a landing evokes the thought that, yes, my body can be manipulated, but yet I am always in control of these manipulations.

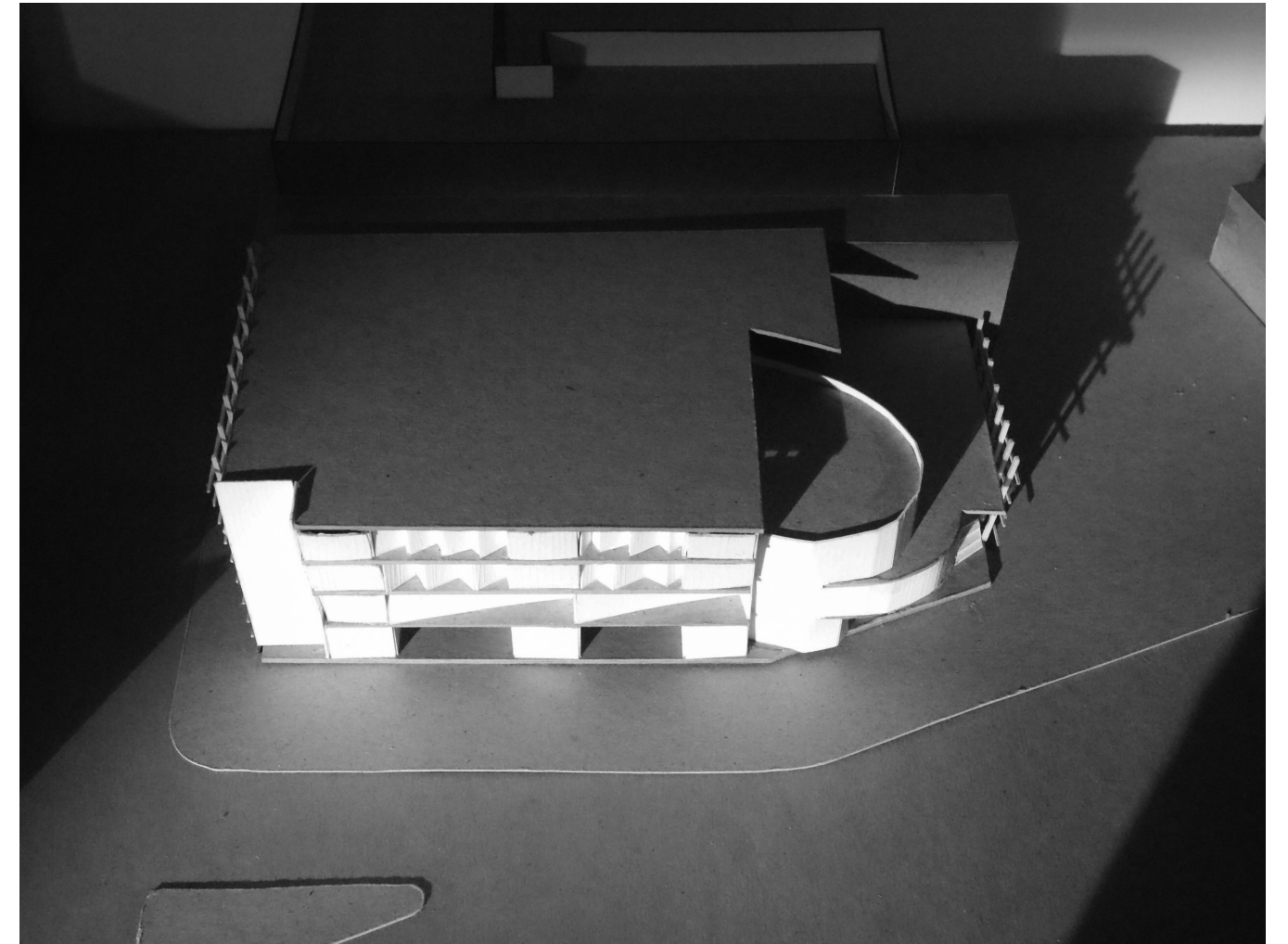
Quality and color of the natural light, which spills from the roof four floors above, are important to how the building is perceived on the interior. The apertures along the south wall become smaller and more numerous as you move to the fourth level. Their sill heights relate to the function of the space, where during meditation, the floor is the work plane. On the second floor, for movement, the studio spaces are enveloped in the stone cladding, and aside from some audible breathing and the instructor's detailed instructions, the space is serenely quiet.<sup>21</sup> The holistic sense of the building means that many main spaces serve double and sometimes triple duty, such as the speaking space on the third floor. As the visitor winds up to the fourth floor, a place for meditation, a cork floor helps to mitigate acoustical reverberation and protect the space from distractive echoing.

Contemplative practices are encouraged and ever-present.

<sup>19</sup> Hall, pg 104

<sup>20</sup> Ibid., 105

<sup>21</sup> Tully



massing model in site



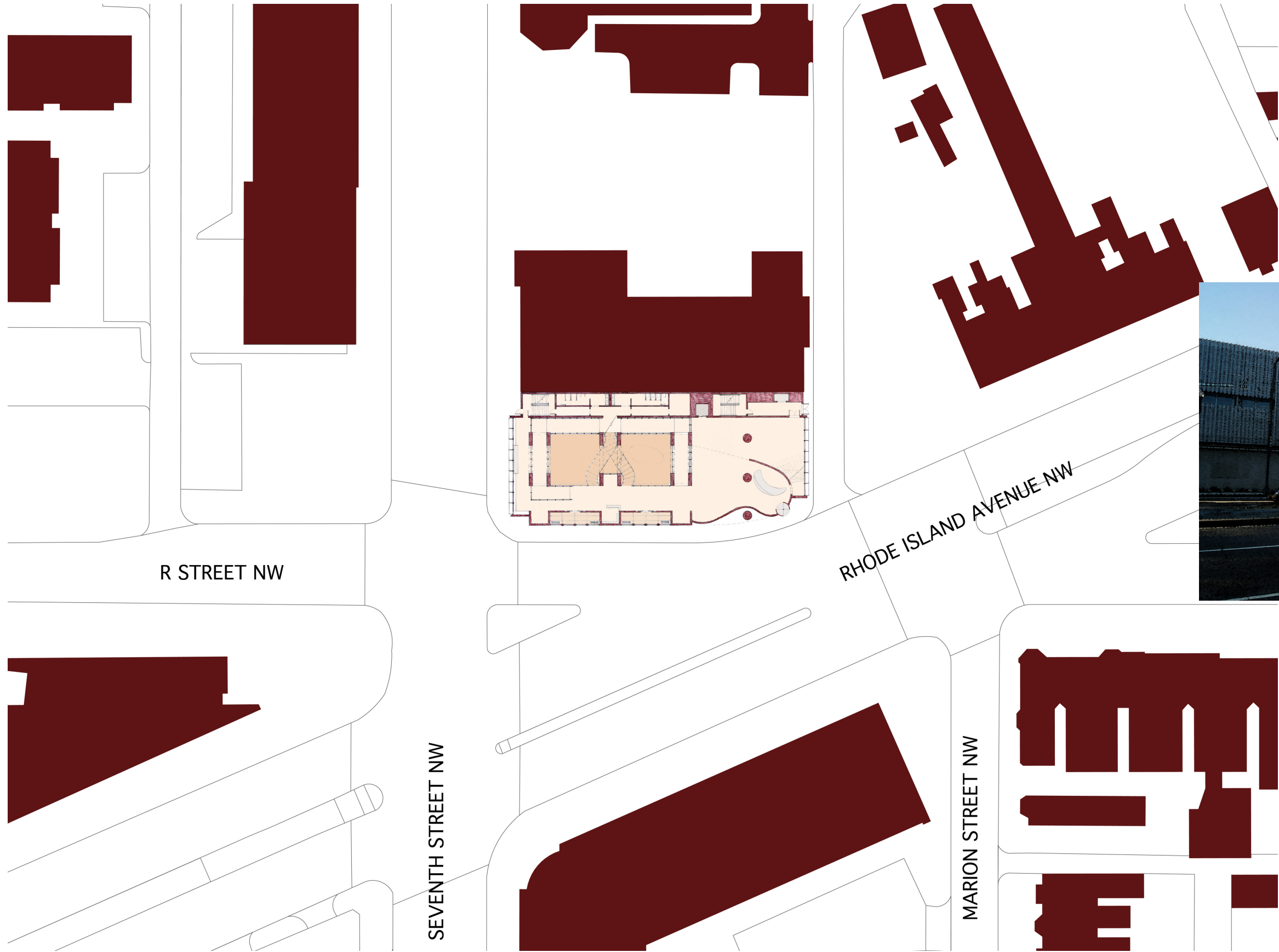
*"I experience myself in the city, and the city exists through my embodied experience. The city and my body supplement and define each other. I dwell in the city and the city dwells in me."*

-- Juhani Pallasmaa, *The Eyes of the Skin: Architecture and the Senses* pg 40



entrance from rhode island avenue nw

the plans



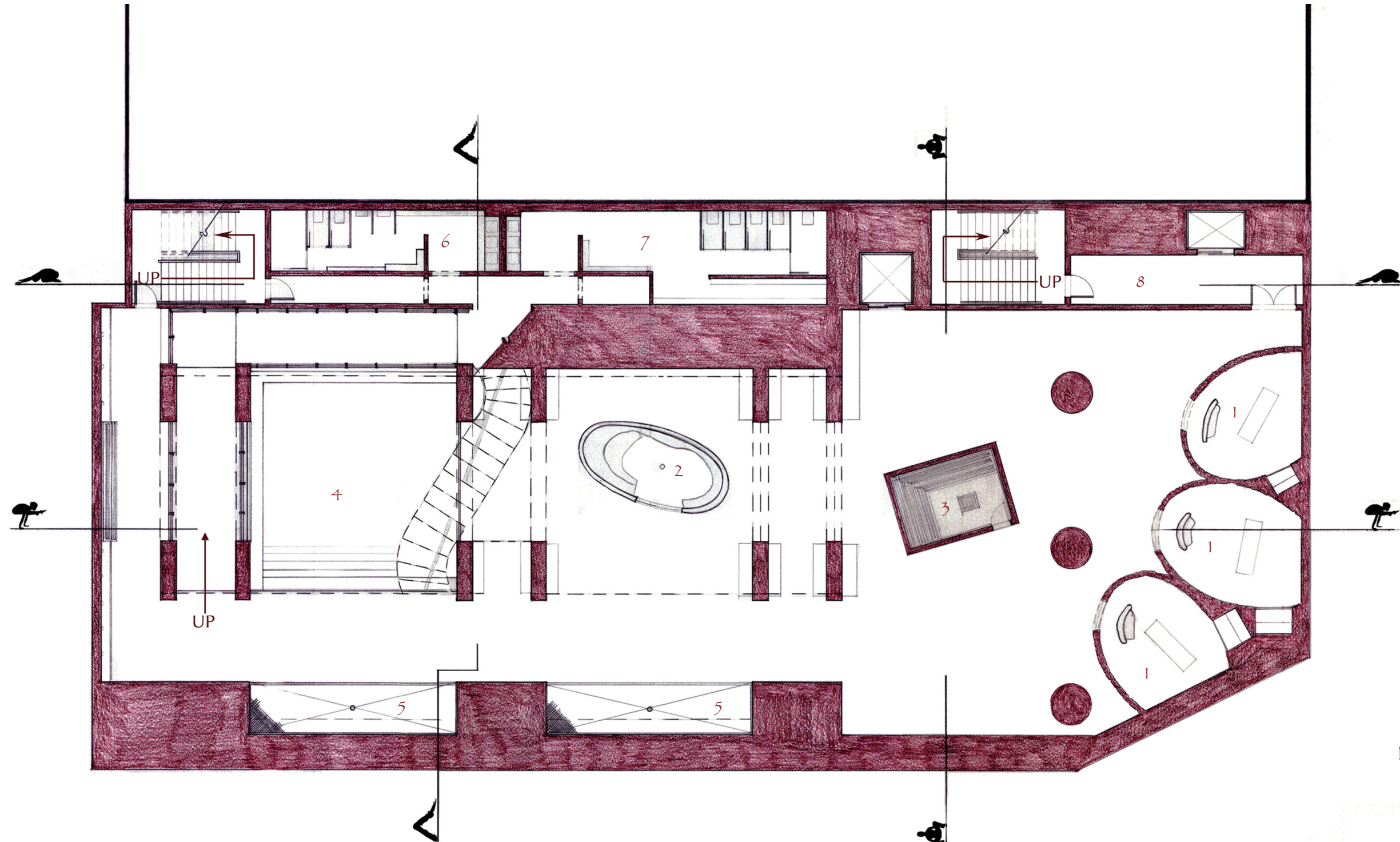
massing in site



site plan

urban context figure/ground with ground floor plan





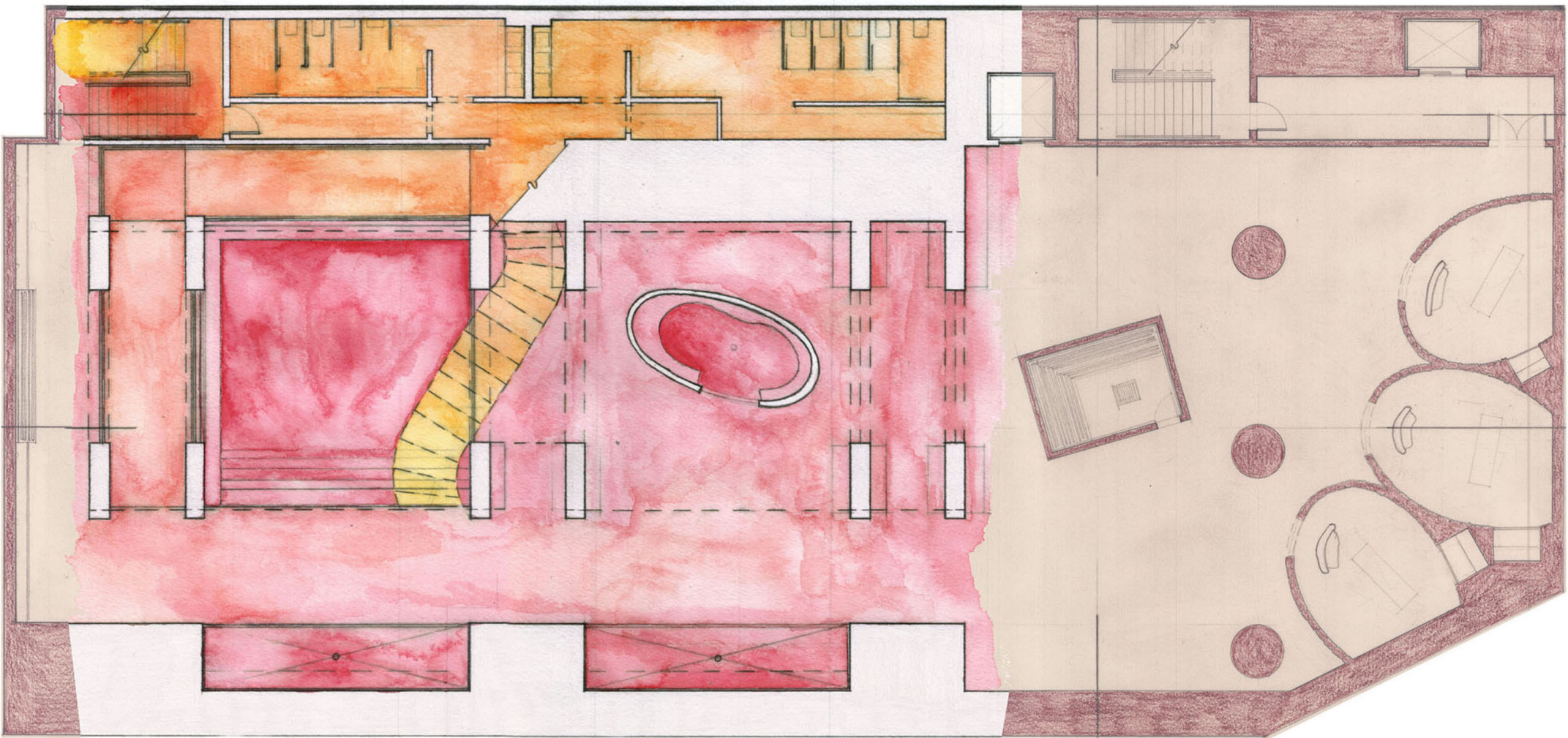
- 1 massage
- 2 sauna
- 3 steam room
- 4 hydrotherapy pool
- 5 communal shower/cold rinse
- 6 men's locker room
- 7 women's locker room
- 8 service

basement level plan



*"Our own body is in the world as the heart is in the organism: it keeps the visible spectacle constantly alive, it breathes life into it and sustains it inwardly, and with it forms a system."*

-- Maurice Merleau-Ponty,  
*Phenomenology of Perception*, pg 203



spacial relationship

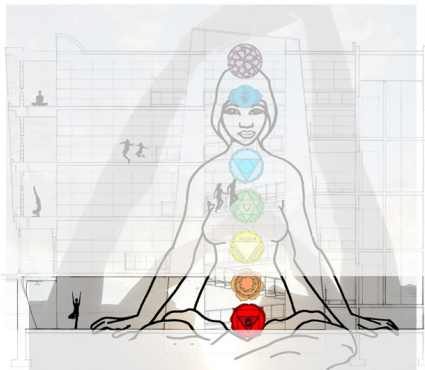
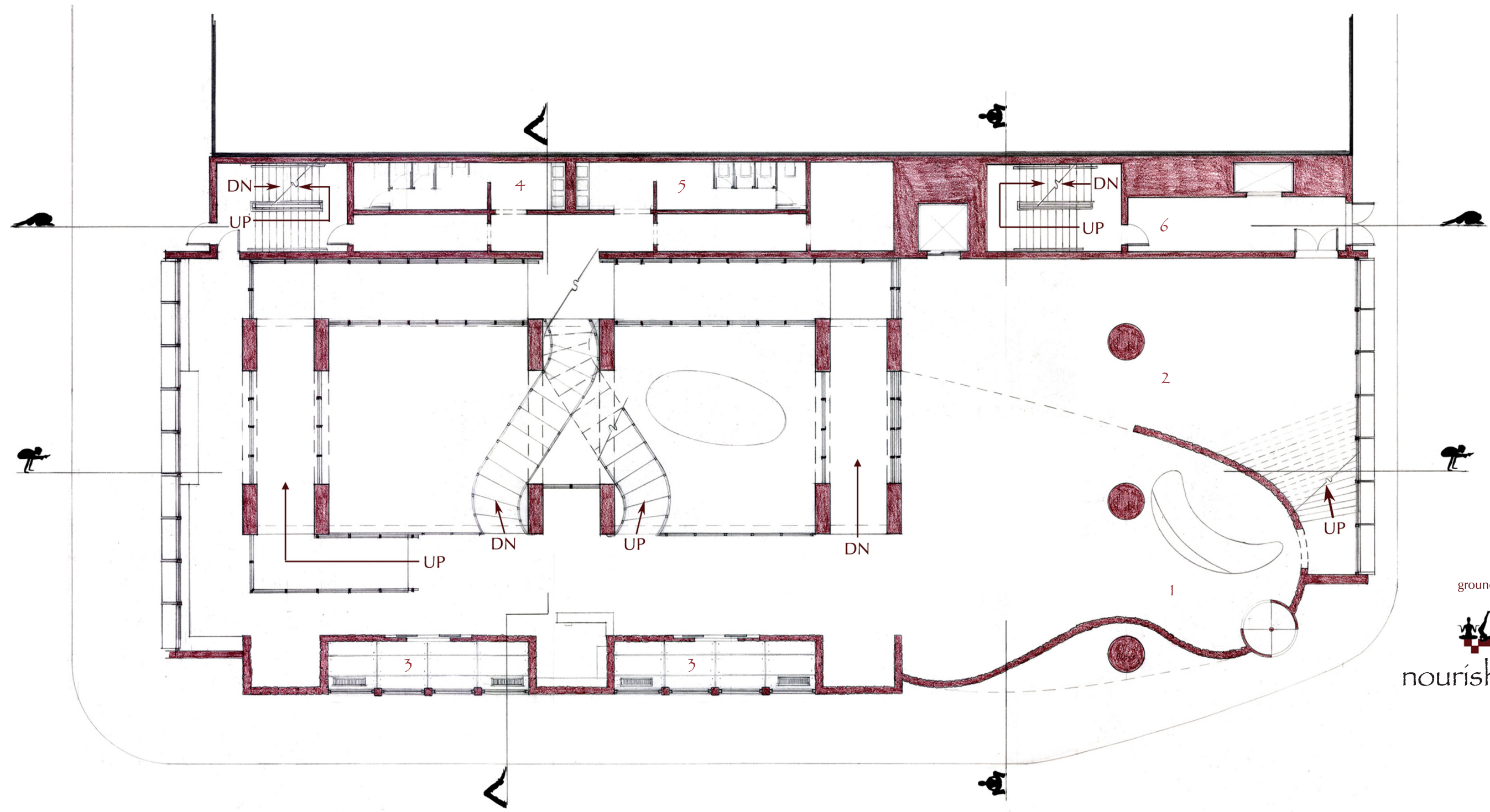


figure 9, chakra collage [fair use]

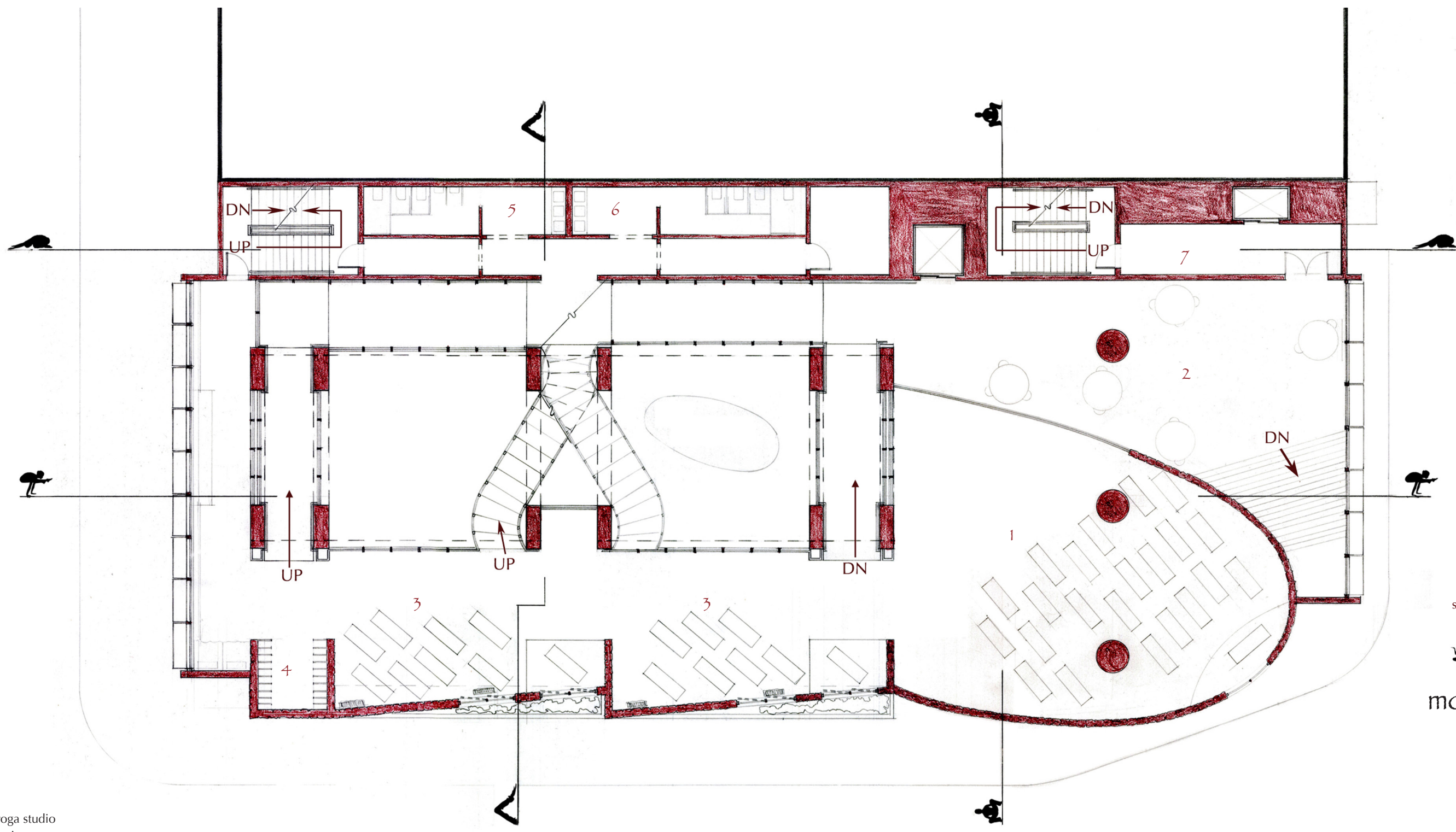


ground level plan  
  
 nourishment  


- 1 cafe - counter/front of house
- 2 cafe - back of house
- 3 uplift steam
- 4 men's restroom
- 5 women's restroom
- 6 service



figure 9, chakra collage [fair use]



- 1 large yoga studio
- 2 cafe seating
- 3 small yoga studio
- 4 mat storage
- 5 men's restroom
- 6 women's restroom
- 7 service

second floor plan

movement

*"Clarity, control, peace – these are the attributes one associates with the discipline of yoga."*

-- Deborah Singmaster,  
"Simple Approach Helps Yoga Hall Unite Mind and Matter."  
pg 18



spacial relationship



movement

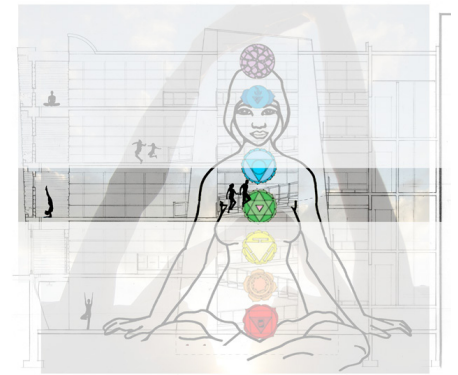
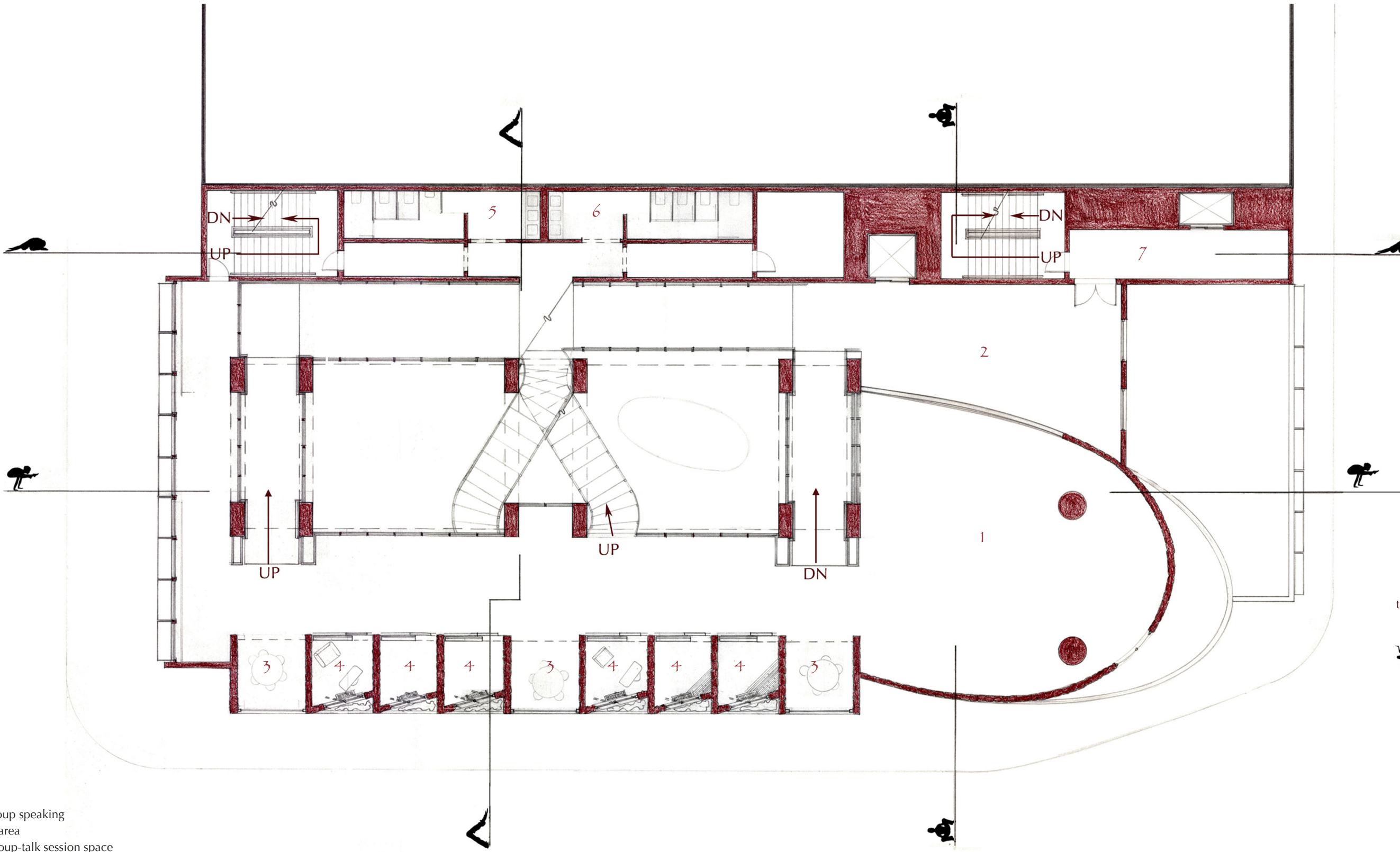


figure 9, chakra collage [fair use]

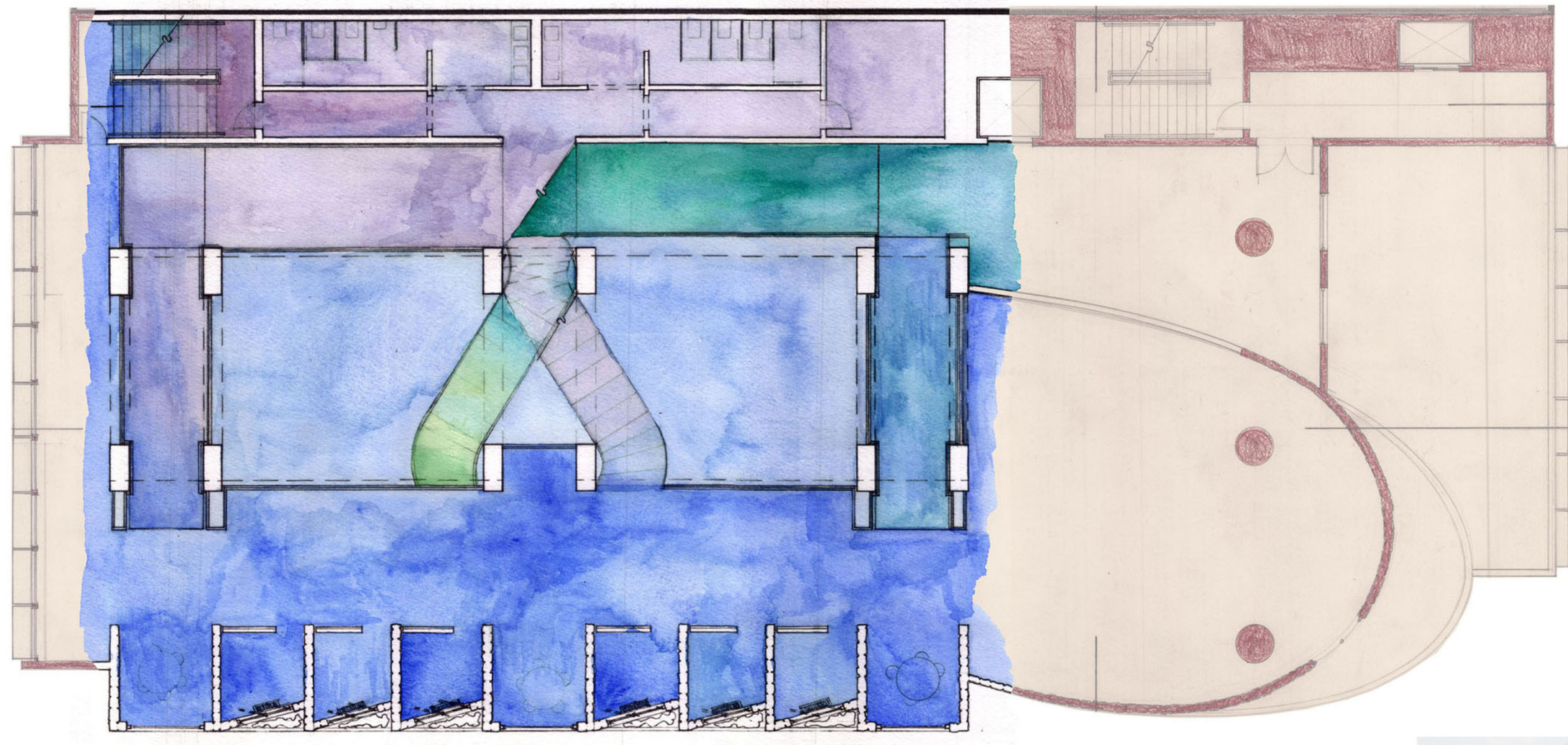


- 1 large group speaking
- 2 waiting area
- 3 small group-talk session space
- 4 one-on-one talk space
- 5 men's restroom
- 6 women's restroom
- 7 service

third floor plan



relation



spacial relationship

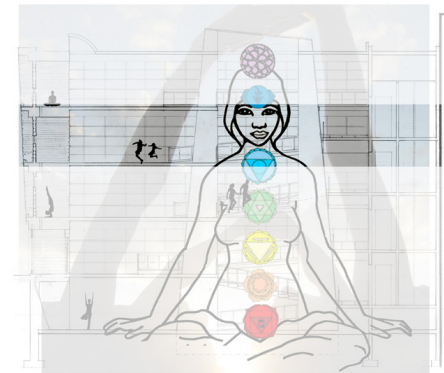
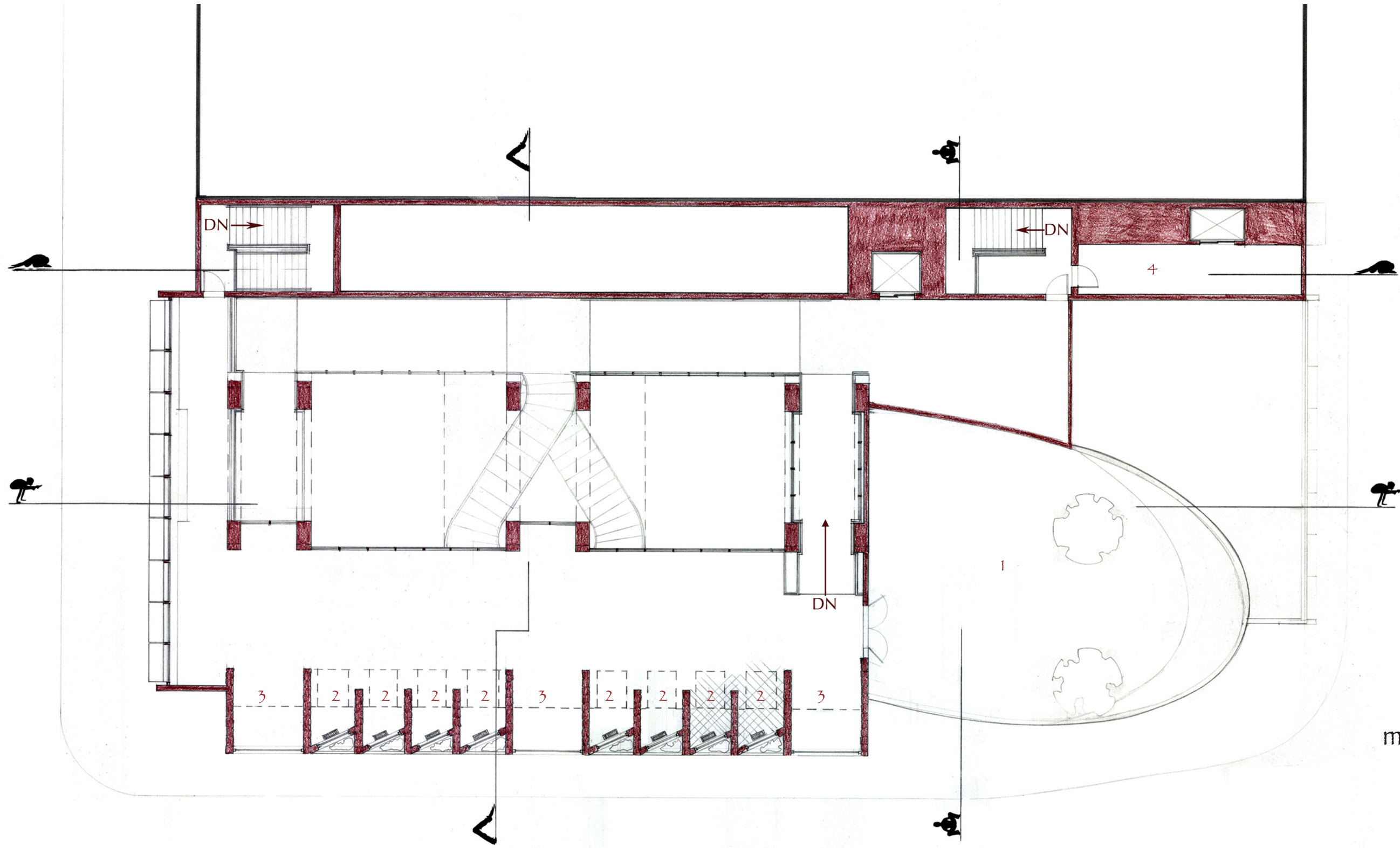



figure 9, chakra collage [fair use]






- 1 exterior courtyard
- 2 individual meditation spaces
- 3 small group meditation
- 4 service

fourth floor plan



meditation



*“The most essential auditory experience created by architecture is tranquility...Ultimately, architecture is the art of petrified silence.”*

-- Juhani Pallasmaa, *The Eyes of the Skin: Architecture and the Senses* pg 51



spacial relationship



meditation

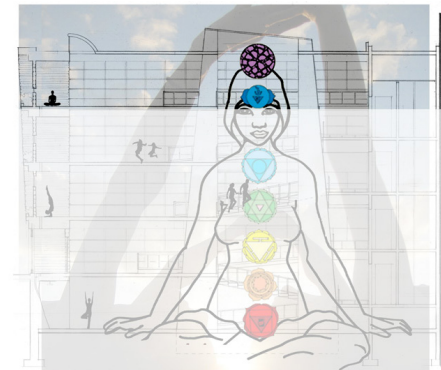


figure 9, chakra collage [fair use]

"...Cross-cultural similarities exist, and they rest ultimately on the fact that man is the measure of all things. This is to say, if we look for fundamental principles of spatial organization we find them in two kinds of facts: the posture and structure of the human body, and the relations (whether close or distant) between human beings."

-- Yi-Fu Tuan, *Space and Place: The Perspective of Experience* pg 34

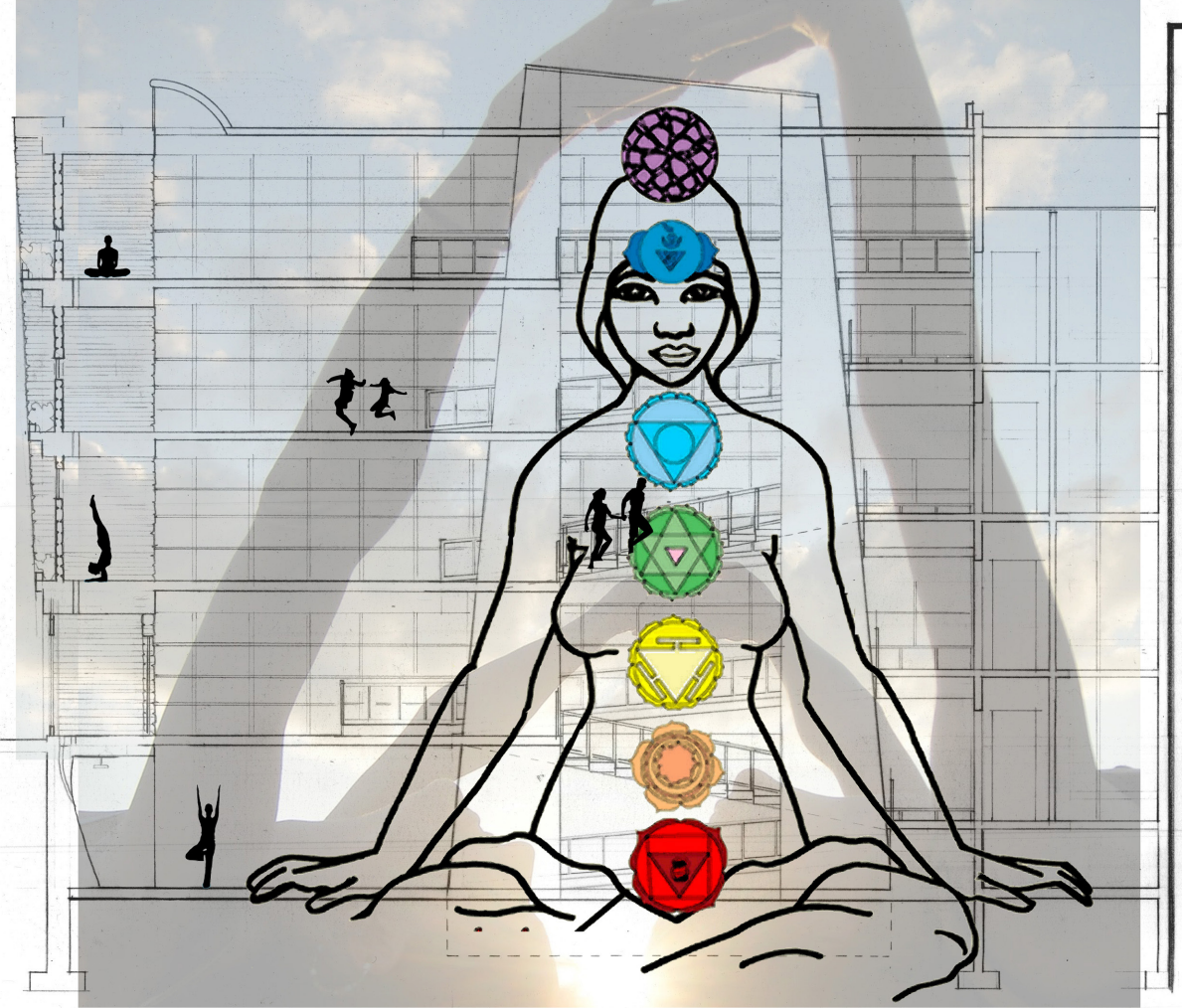
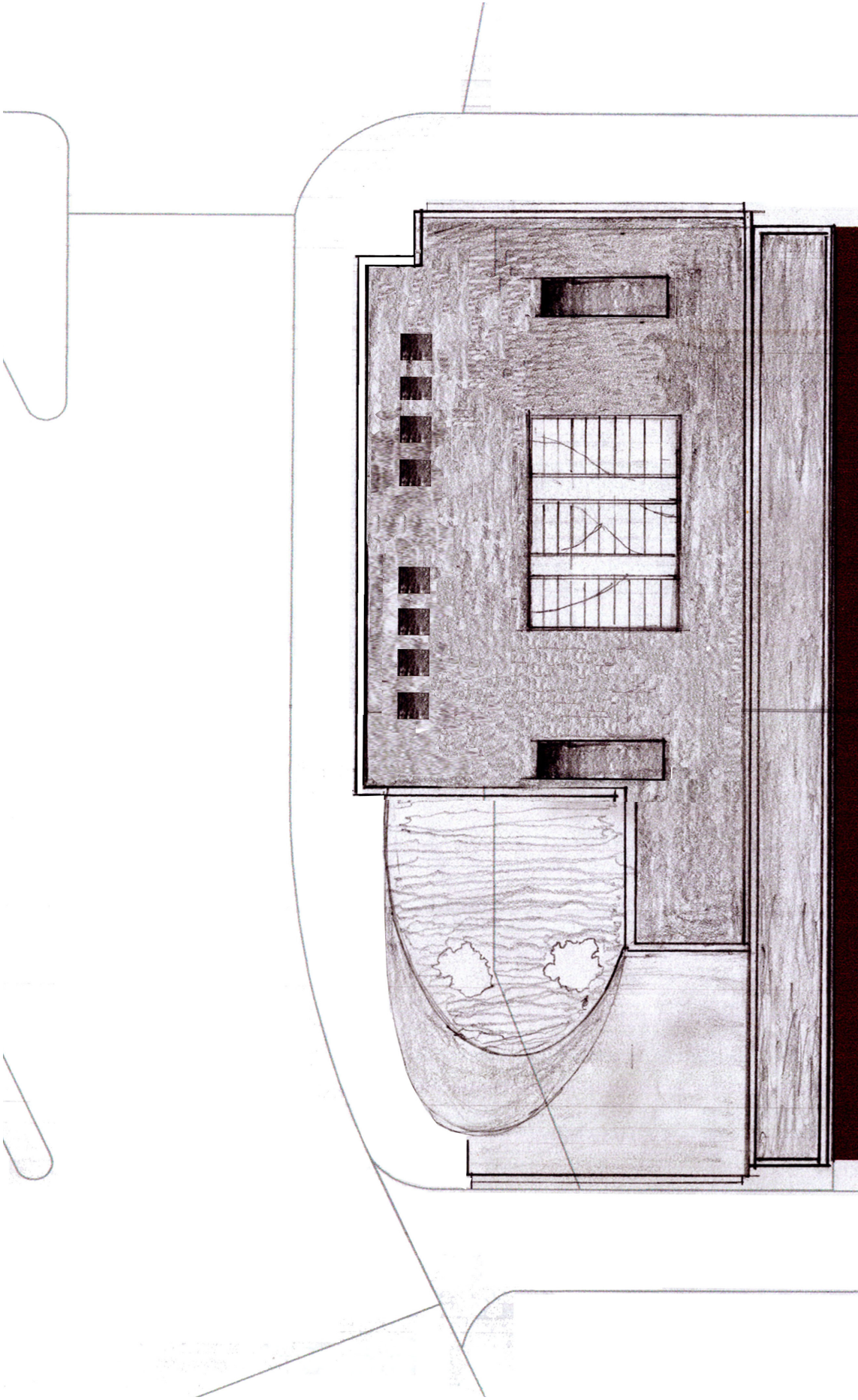


figure 9, chakra collage [fair use]

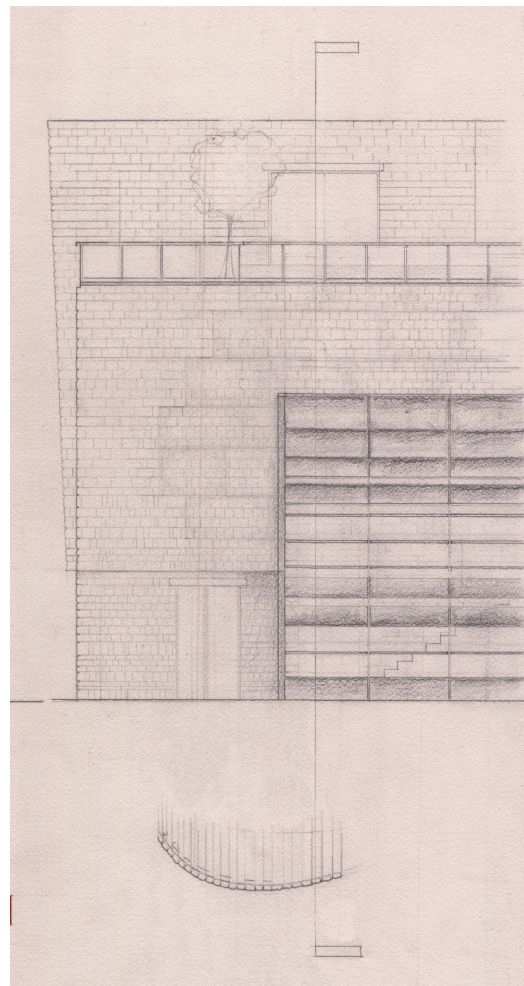


roof plan

realization



the sections & elevations

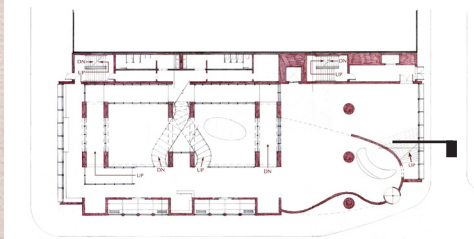
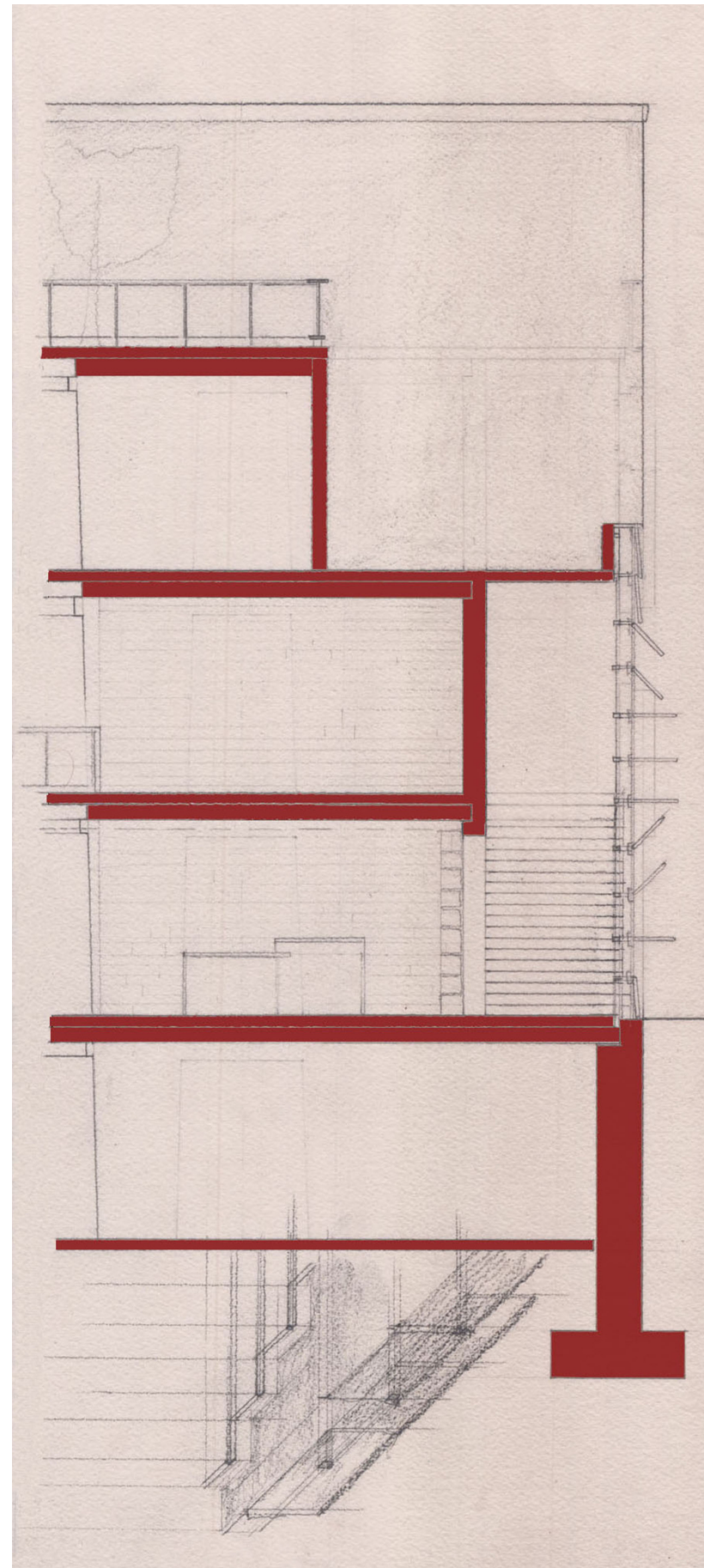


partial elevation



*"A re-assertion of the human body as the locus of experience (whether on the street or from the 50th floor) as well as a firm aim to re-establish roots in the perceptual world with its inherent ambiguity presents us with new questions of proportion and scale in the development of future architectures."*

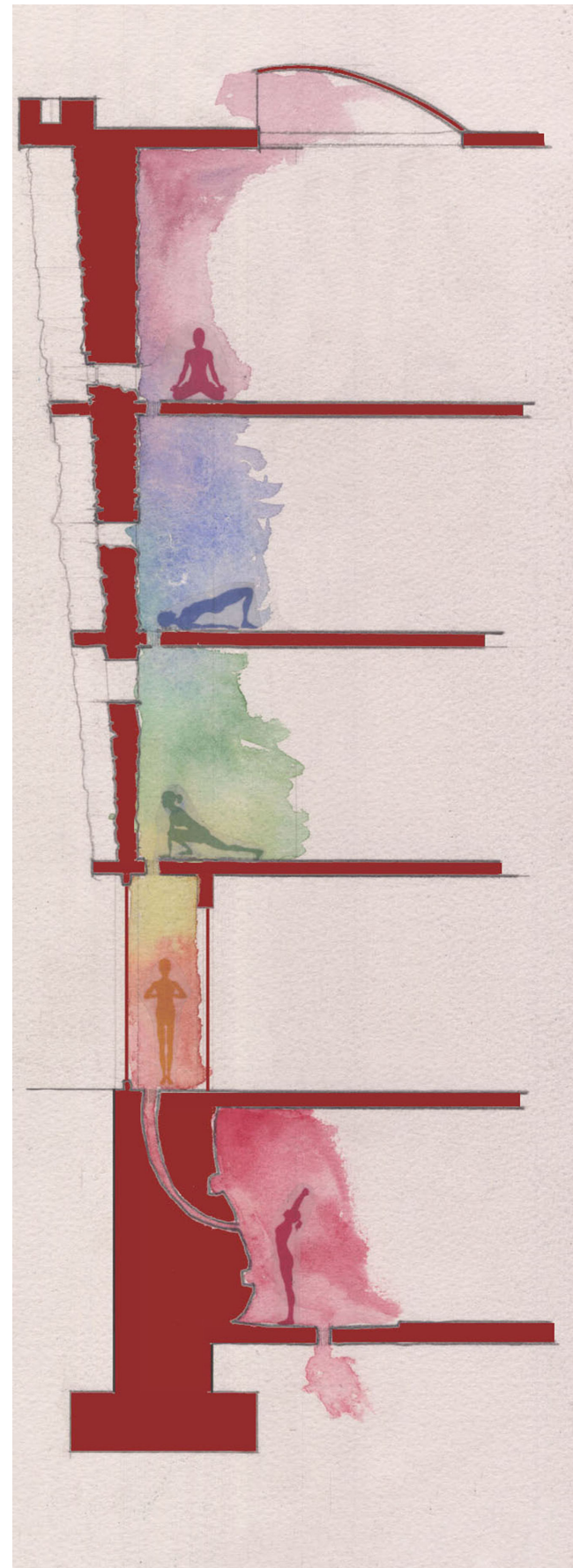
-- Steven Holl, *Questions of Perception: Phenomenology of Architecture* pg 116



wall section

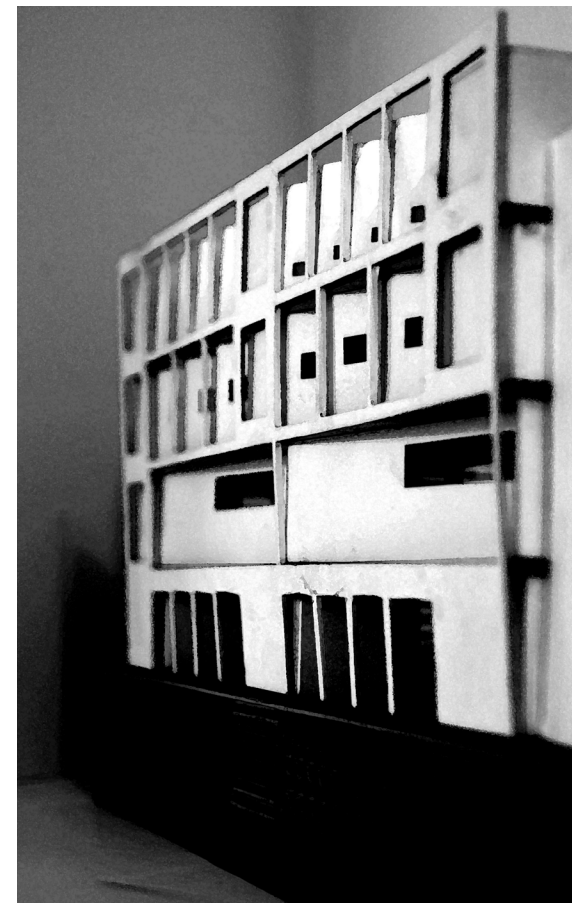
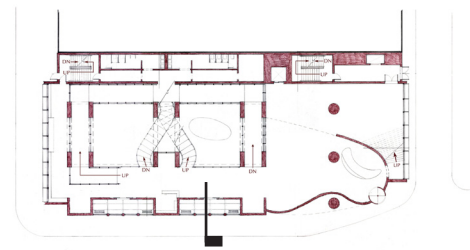


east



*“Architecture holds the power to inspire and transform our day-to-day existence. The everyday act of pressing a door handle and opening into a light-washed room can become profound when experienced through sensitized consciousness. To see, to feel these physicalities is to become the subject of the senses.”*

-- Steven Holl, *Questions of Perception: Phenomenology of Architecture* pg 40

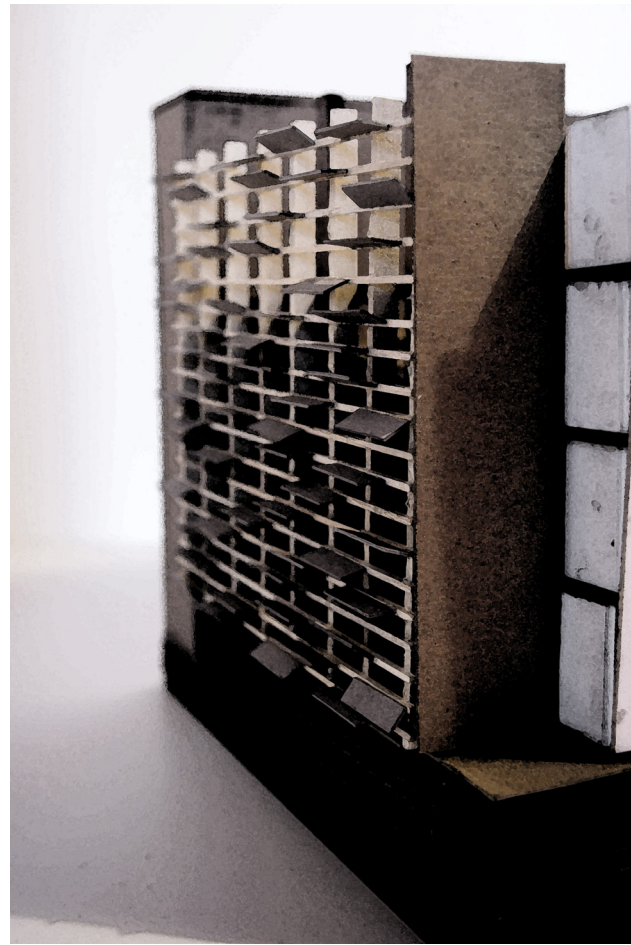


stone south facade on rhode island ave NW

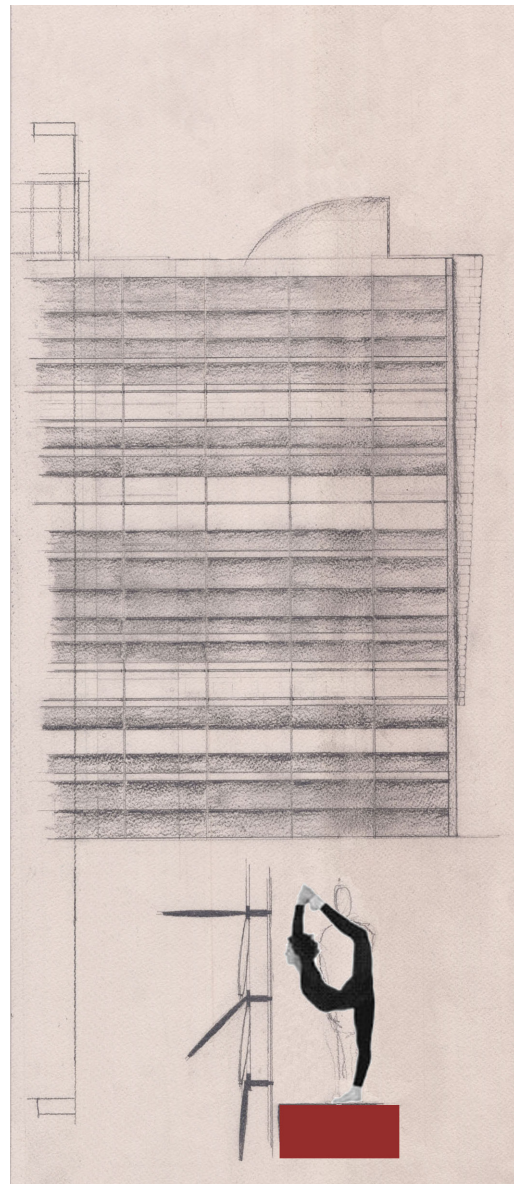


partial elevation

south



copper fin west facade on r street NW

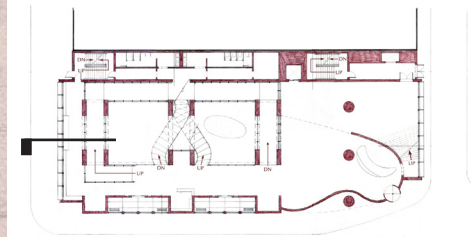
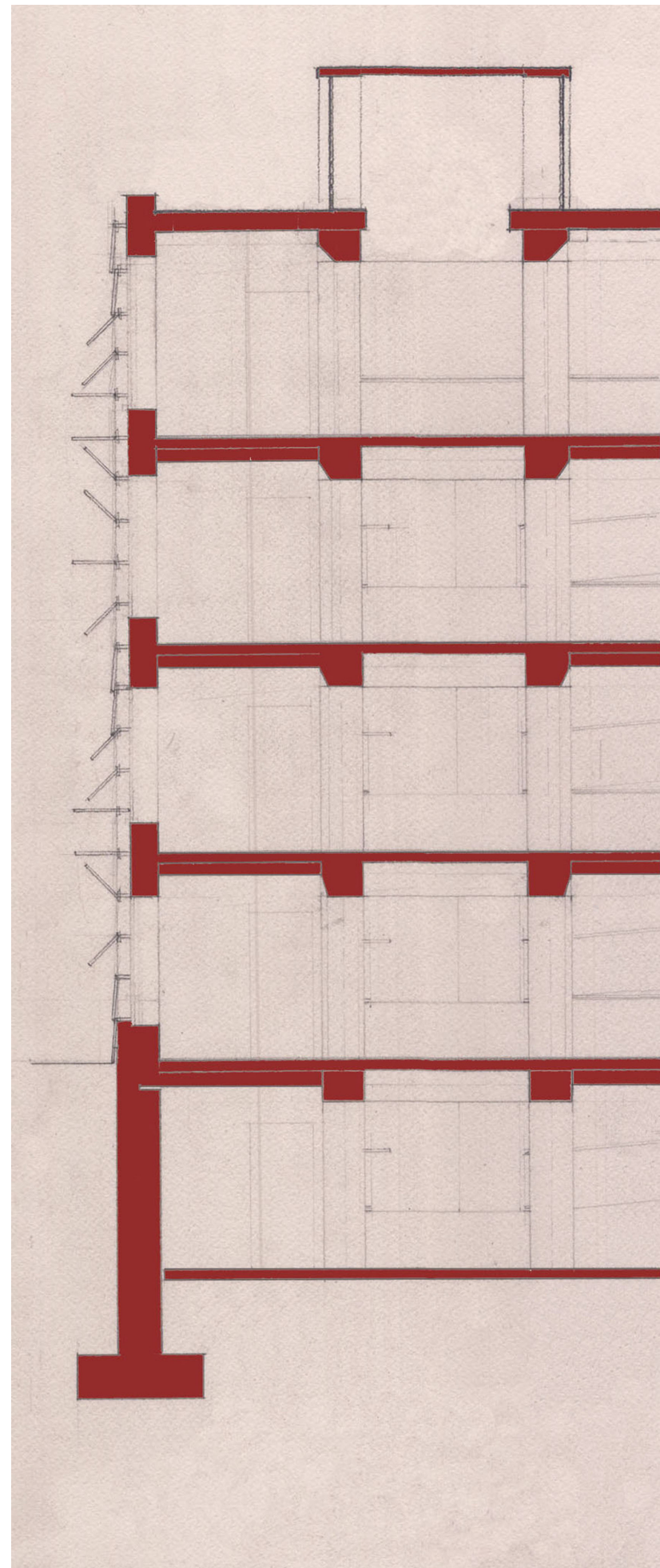


partial elevation



*"Our contact with the world takes place at the boundary line of the self through specialized parts of our enveloping membrane."*

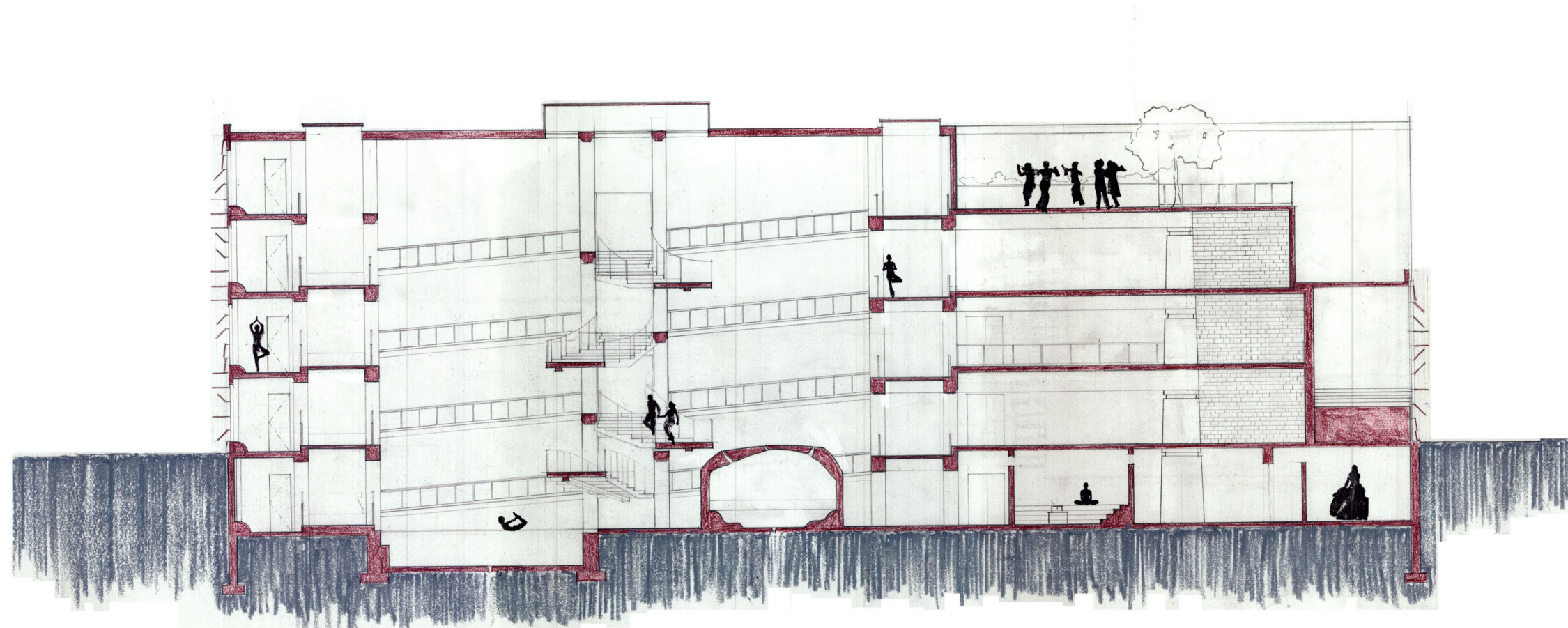
-- Juhani Pallasmaa, *The Eyes of the Skin: Architecture and the Senses* pg 10-11



wall section



west



longitudinal section



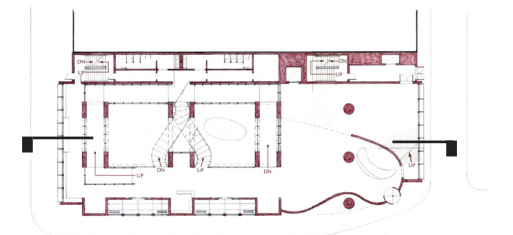
firefly pose



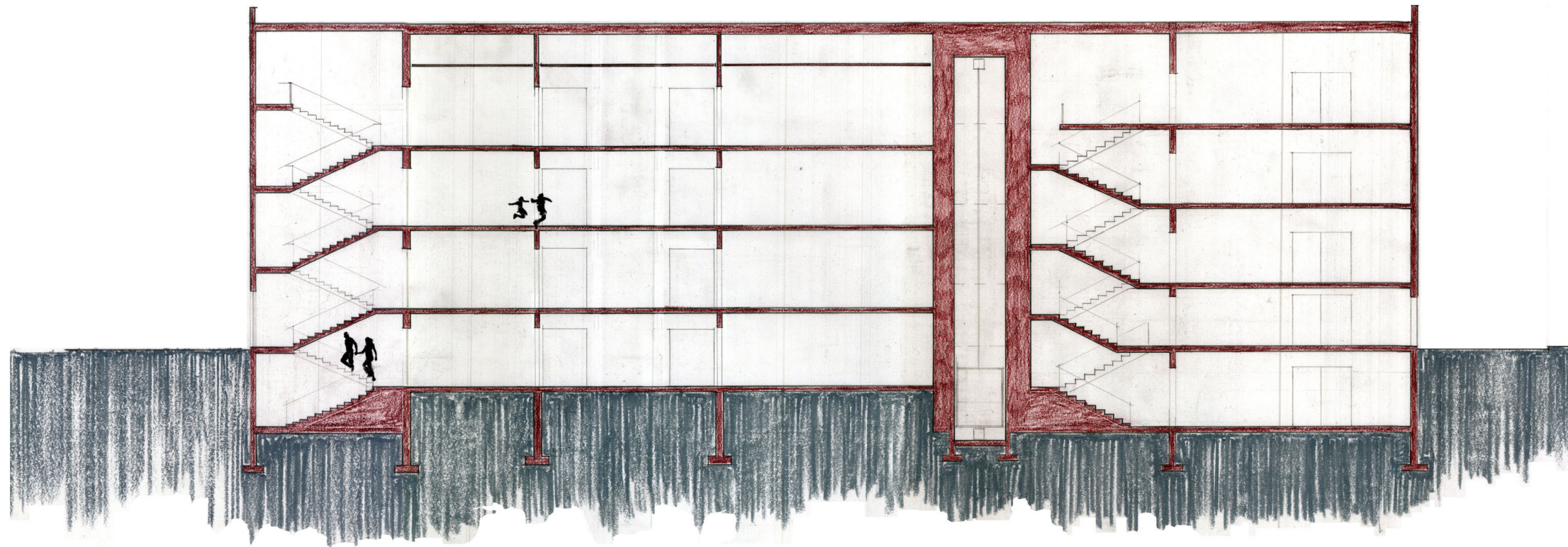
atrium in final model

*"The body is man's first and most natural instrument...or more accurately...man's first and most natural technical object...is his body."*

-- Marcel Mauss, *Sociology and Psychology: Essays*, pg 104



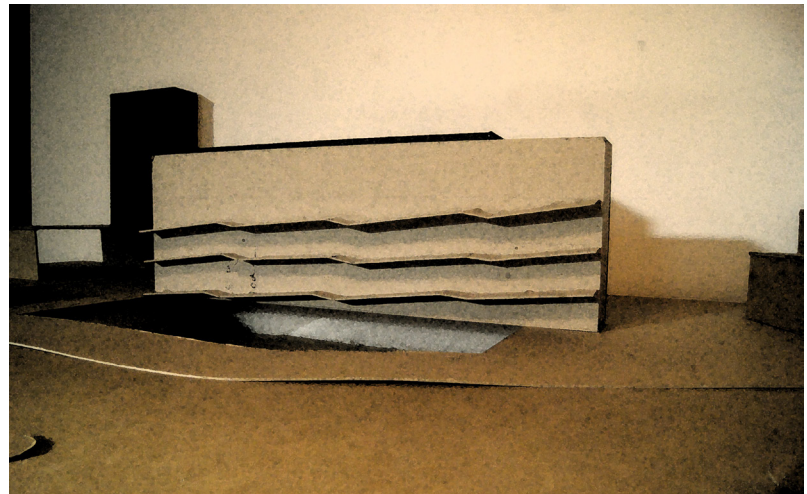




longitudinal section



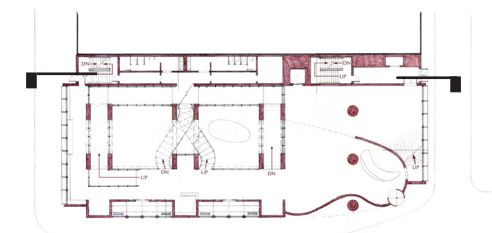
child's pose



service core study model

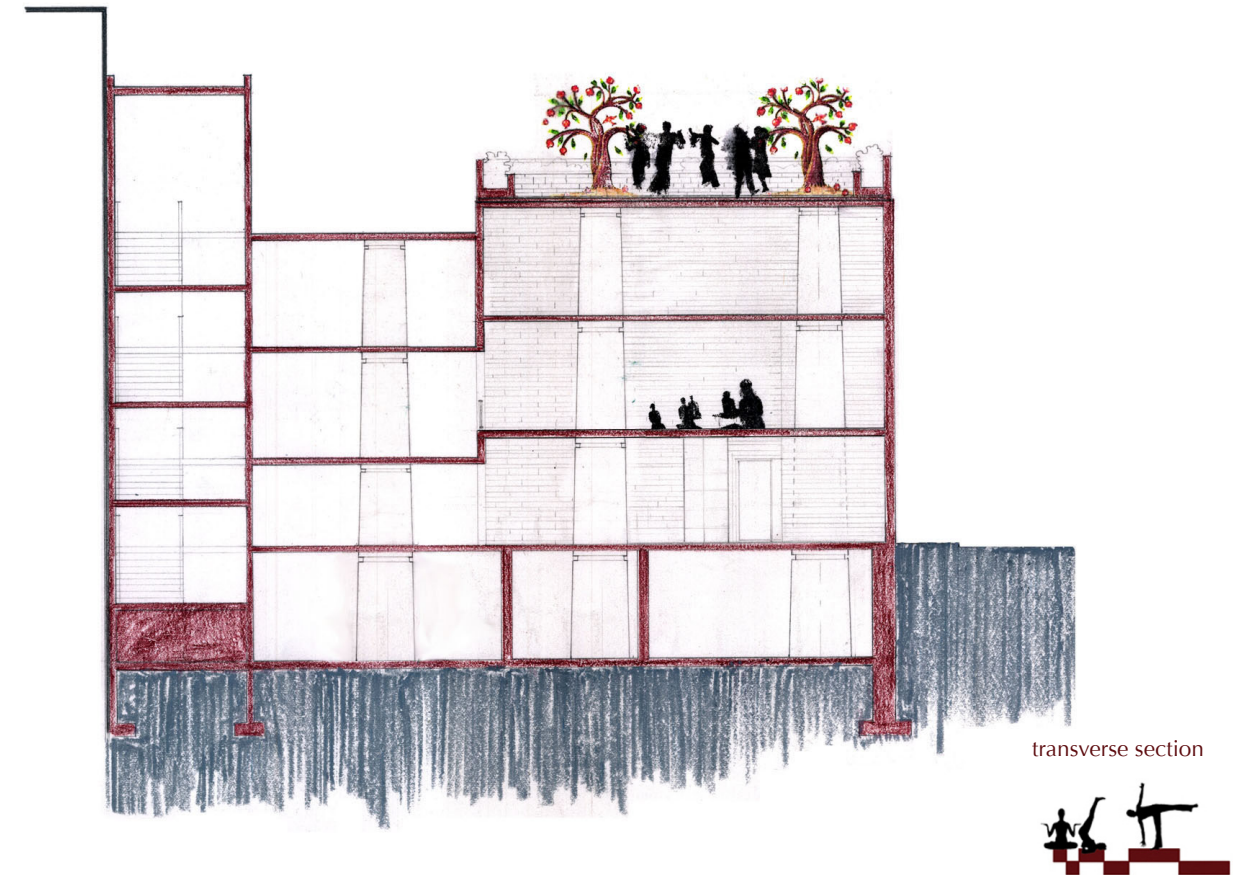
*"Spatial construction expresses that desire in the projection of the body into space, in the enactment of the interaction of the body with structure, and in the dialectic within structure, as being simultaneously tectonic and threatening, signifying and devouring, facilitating and dissolving. Such is the role of the body in the theory of making, in the projection of spatial construction as the manifestation and the experience of life."*

-- John Hendrix, *The Body in the Theory of Making*, pg 156





cafe stair beyond copper fin facade

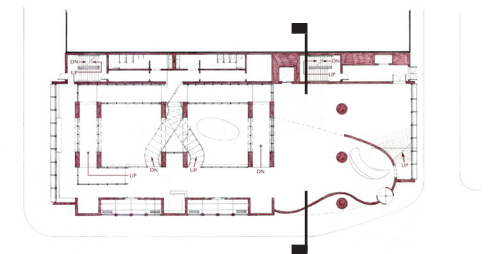


transverse section



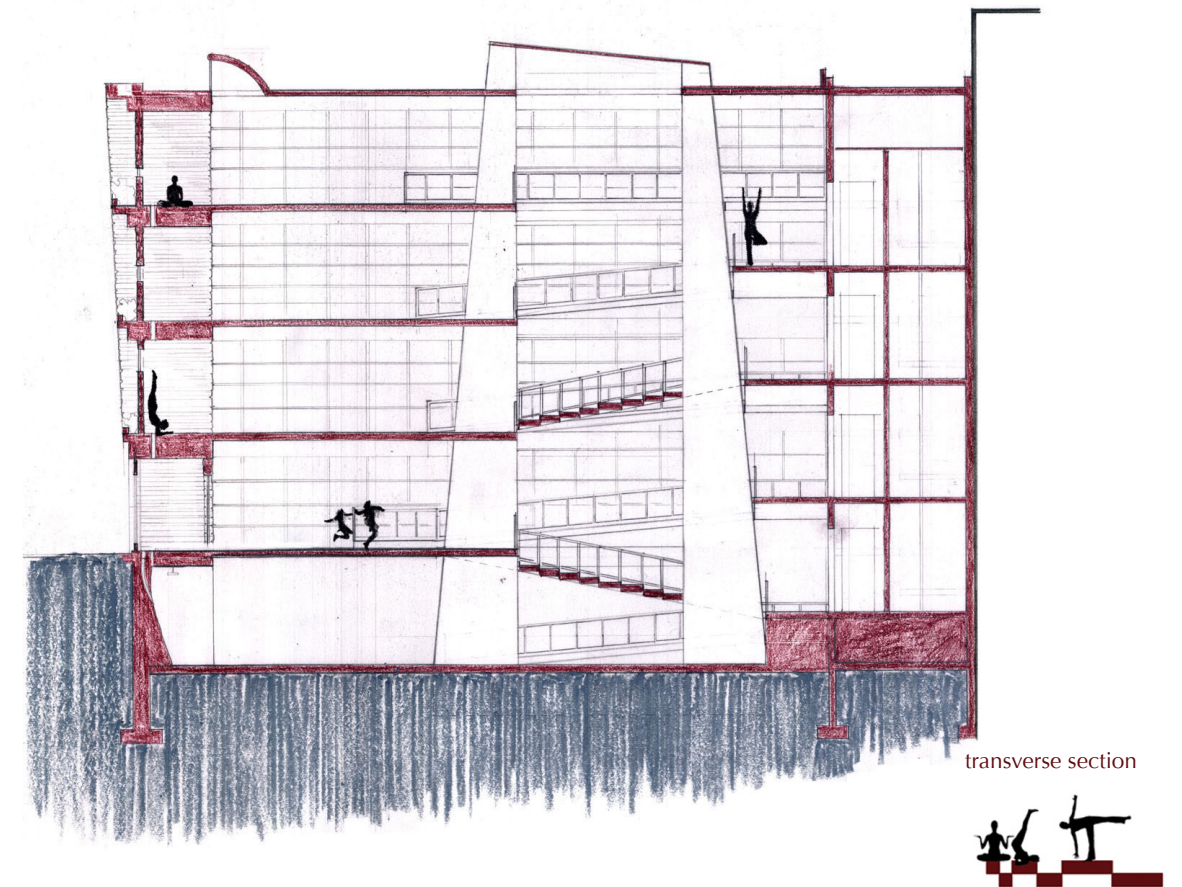
*"In contrast, commitment in therapeutic social order is to the Self-a courtesy title, borrowed from sacred order to describe the therapeutics' never-ending process of mask selection. The therapeutic seeks not salvation, but fulfillment; and since self-fulfillment, the self as project, is the goal rather than a by-product of communal commitments, any means will do to achieve it-art, science, even apparent 'communal commitments:' including religious ones."*

-- Philip Bess, "Peter Eisenman and the Architecture of the Therapeutic." pg 54





tapered columns/grace-note stair

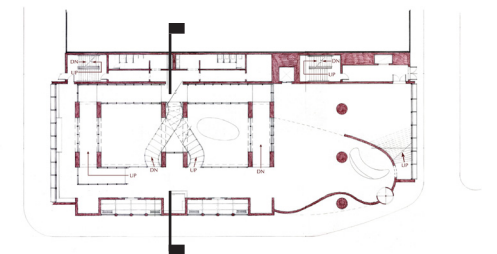


transverse section

 downward dog

*"We suggest that happiness be seen as the outcome of the transversal meaning of the art of living well with the arts of building well and thinking well. In this triadic amalgamation, happiness implies intellectual and sensual activities that should be leading to consequence, but cannot be used for setting standards."*

-- Paul Emmons, "The Unsustainability of Green Design: Pneumatological Architecture in the Veneto and Virginia." pg 7



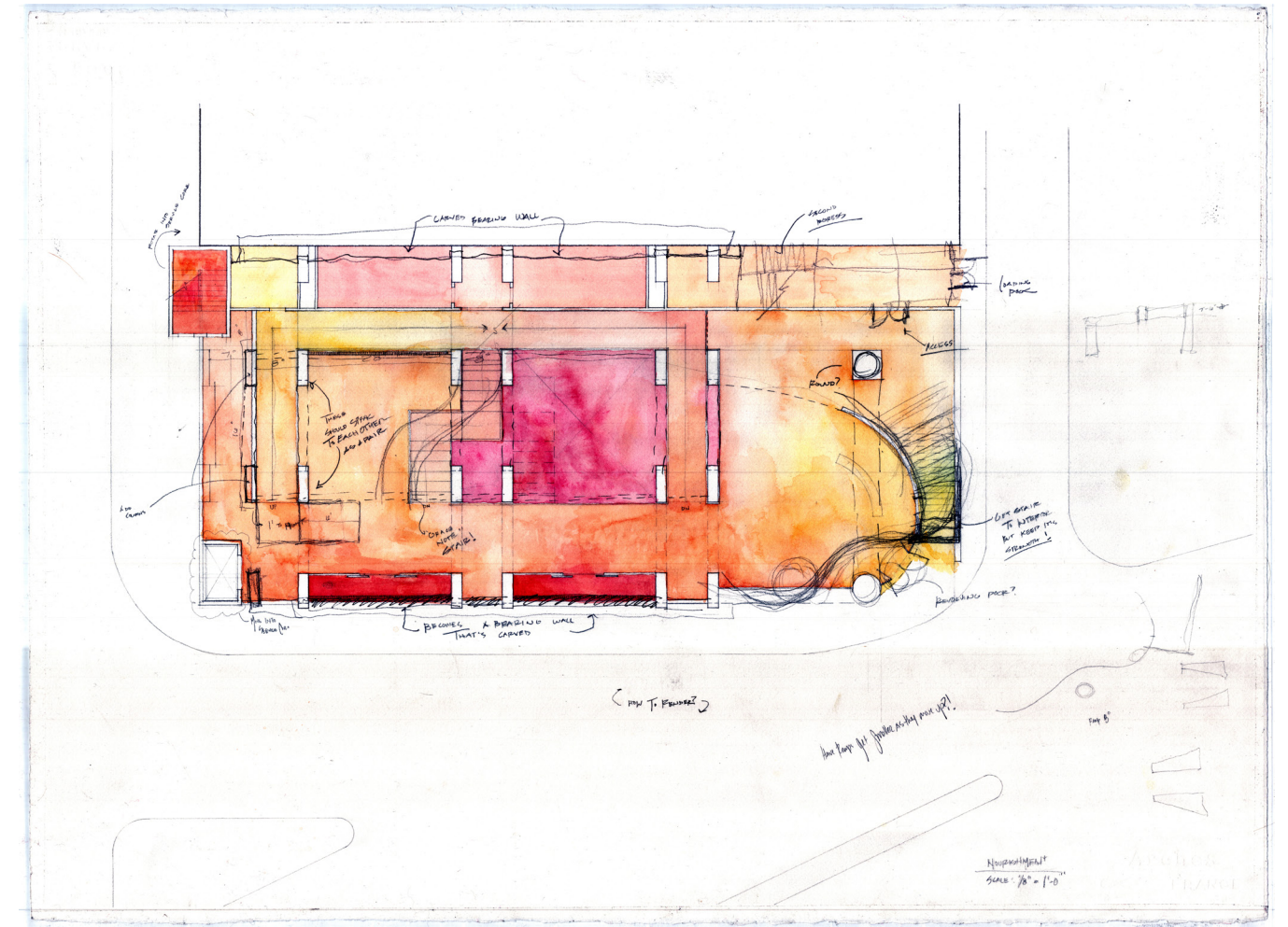
Most of my drawing exploration employed the use of watercolor as this media gave me the greatest flexibility to allude to air. Air is represented in a way in which it is seen as being the “poched” space, as opposed to the structure, which is typically and traditionally how architectural drawings are produced.

*“Unlike anything else, air is most often indicated in drawings by the complete absence of marks, the pure white drawing surface. For air to be known visually, it must therefore be perceived indirectly through signs.”*

- Paul Emmons & Marco Frascari, “Making Visible the Invisible: Signs of Air in Architectural Treatises.” pg 90

Watercoloring my drawings provided a way for the thesis to translate itself into the representation of the building through drawings. The variations in the colors and density of water to paint speak to what is happening with space, specifically with changes in elevation, without requiring annotations. The gradient of exerted colors have a relationship to the representation of the chakras, as well as correlating to the layering of thermal energy in air (warm air in spaces of the basement to cool air at the meditation spaces).

A process such as watercolor also lends itself the opportunity for the painter’s body to really become present within the drawing, for the painter (and the observer of the drawing) to be able to smell the materials. A texture and irregularity to the “finished” product becomes present, just the same as air is felt to the human body while moving through space.



process watercolor

*“A work of architecture incorporates and infuses both physical and mental structures. The visual frontality of the architectural drawings is lost in the real experience of architecture. Good architecture offers shapes and surfaces moulded for the pleasurable touch of the eye.”*

-- Juhani Pallasmaa, *The Eyes of the Skin: Architecture and the Senses* pg 44

medium/media



The decision to pursue the topics of this thesis came from my own personal desire for clarity. My chosen career path of architecture has opened the door for opportunities to create life-enhancing contributions that address all the of the human senses simultaneously. It is about fusing our image of self with our experience in the world.

My personal practice of yoga has provided the invaluable lesson regarding the importance of the journey, over the destination. Preparing yourself to take a pose and focusing on every muscle, every strain in your body, and being aware of your breath while going into that pose, is far more significant to the process than the final stance that you take.

I found the same to be true throughout my thesis process. Each time I prepared to draw or build, I not only asked myself how the end result could tell the story of my thesis, but how could the process of making this drawing embody these concepts? The relationship I had with my drawings was much more intimate keeping this in mind throughout the design process.

I've learned that the architecture we create is about these relationships, and inherently, it is also about the self -- it takes our experiences and strengthens our sense of reality. I expect to use the realizations I've made during this journey to inform my own life's decisions to physical and mental health betterment.



achieving tranquility

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bibliography

**figure 1 (collage on page iii)**

girl in elevator: Walker, Tim. *Vogue UK*, editorial, "Tales of the Unexpected," December, 2008. [fair use]

**figure 2 (assemblage on page v:)**

drawing: Boullée, Etienne-Louis. "Cenotaph for Newton." "Architecture, Essay on Art." London: Alec Tiranti, 1953. [fair use]  
 drawing: Semper, Gottfried. "Parthenon Polychromie." *The Four Elements of Architecture*. Publisher: Unknown, 1851. [fair use]

**figure 3 (maps on page 10:)**

google maps of site: (accessed February 24, 2010) [public domain]

**figure 4 (map(s) on page 11:)**

Sanborn Map of Washington DC circa 1903 & 1927 (overlaid) from *VT Imagebase, Digital Sanborn Maps*, Digital Library and Archives, University Libraries, Virginia Polytechnic and State University, < <http://sanborn.umi.com.ezproxy.lib.vt.edu:8080/dc/1227/dateid-000002.htm?CCSI=8872n>> (accessed January 28, 2010) [public domain]

**figure 5 (mandala collages on page 12:)**

diagram of chakras: Hindu Chakras Wheels: *wheels of psychic energy that awaken the greater energy of kundalini*. Image No. 0023122: The Granger Collection, NYC. [Fair Use]

**figure 6 (maps on page 13:)**

google maps of site: (accessed February 24, 2010) [public domain]

**figure 7 (watercolor on page 17:)**

Carbonetti, Jeanne. *The Yoga of Drawing: Uniting Body, Mind and Spirit in the Art of Drawing*. Watson-Guptill, 1999. [fair use]

**figure 8 (watercolor on pages 18:)**

Carbonetti, Jeanne. *The Yoga of Drawing: Uniting Body, Mind and Spirit in the Art of Drawing*. Watson-Guptill, 1999. [fair use]

**figure 9 (collages on page 42, 46, 50, 54, 58, & 59:)**

chakra diagram: < <http://www.chakradance.co.za/chakras.php>> (accessed January 25, 2010) [fair use]  
 dual yogis: Michelle Myhre practicing <[http://2.bp.blogspot.com/\\_VIm2M1qGqew/TNmNRwD0NyI/AAAAAAAAABXg/x9PBaSzIYjI/s1600/yoga-pictures-at-grey-wolf-030.jpg](http://2.bp.blogspot.com/_VIm2M1qGqew/TNmNRwD0NyI/AAAAAAAAABXg/x9PBaSzIYjI/s1600/yoga-pictures-at-grey-wolf-030.jpg)> (Accessed November 19, 2010) [fair use]