sacred space

[journey and change]

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[concept]

book one

Sacred Space - Journey and Change

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Master of Architecture
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"The modern Occidental experiences a certain uneasiness before man manifestations of the sacred. He finds it difficult to accept the fact that, for many human beings, the sacred can be manifested in stones or trees, for example. But as we shall soon see, what it involved is nor a veneration of the stone in itself, a cult of the tree in itself. The sacred stone are not adored as stone or tree; they are worshipped precisely because they are hierophanies, because they show something that is no longer stone or tree but the sacred, the ganz andere."

Mircea Eliade, "The sacred and the profane", 1959, Harcourt, Inc., New York. Page 11-12


Religions developed out of
myths

Myths developed independently
in all different parts of the world

They are told to explain our
environment and to give us
advice for our own situation.


How was the world created?

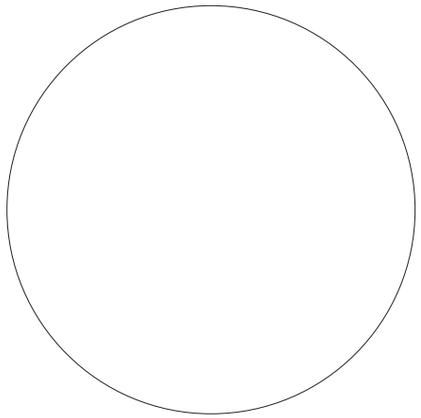
Myths defined whole universes.

Derives from our need to put us selves
in relation to our sourrounding.

Because this relation defines our own position in our personal cosmos.

A cosmos is based on rules of habits.

And offers security that is nessecary for our lives.



A bubble that with its bounderies that
keep the rest outside gives us relative
freedom.

In a sacred space
these boundaries are
usually defined by a book
of myth or the rules are

handed down from former generations.


Today it seems that
the amount of knowledge
we gained in the last century
is enough
for some to define their
cosmos
and explain their being.

Nevertheless, creating our own cosmos still is an essential behaviour

From all the myths I was reading, the ones with

journey

as topic were the most intriguing to me.

I was fascinated that I could find
the journey-theme almost everywhere.

Travelling and facing different tasks
on the way is topic of ancient myths
as well as in modern stories.


The hero
starts at one
point and
might end up in the same, but he himself has
changed.

A reason why the labyrinth
is a metaphor for journey.
Walking a labyrinth can be divided into 3 stages:

The decision of entering the labyrinth not knowing where it will lead to.

The reaching of the centre where the hero has to face a monster.

And the return and maturation of the hero.

All these can be recognized in this little part of star wars

[Star Wars: Episode IV - A New Hope, 1977, min. 110-125]

the hero, luke skywalker, after entering
deeper and deeper into the death star,
with no clue where to go, finally ends
up in a compactor. an enclosed cell.
when we understand water
as symbole for the
subconscious, this is
an interpretation of the
innermost core of his
subconscious. an
undefined “monster”
tiers him under water and
he disappears for a
moment. an essential
scene in the movie for it
showes the maturating of
the hero.

we all know this scene very well. Not because we have seen
this movie time but bcause this is what
we experience when we design.

With courage we enter

the labyrinth of a new project.

We reach “the compactor”

And matured take the experince with us into the next project.

A labyrinth is always frightening.

Where will we end up?

What will we face?

And will we ever make it back?

We are in many labyrinths at the same time.

This requieres courage to enter

experience to reach the center,

faith that we will be able to face what we will find

and endurance to make it back out.

This building

makes the visitor aware

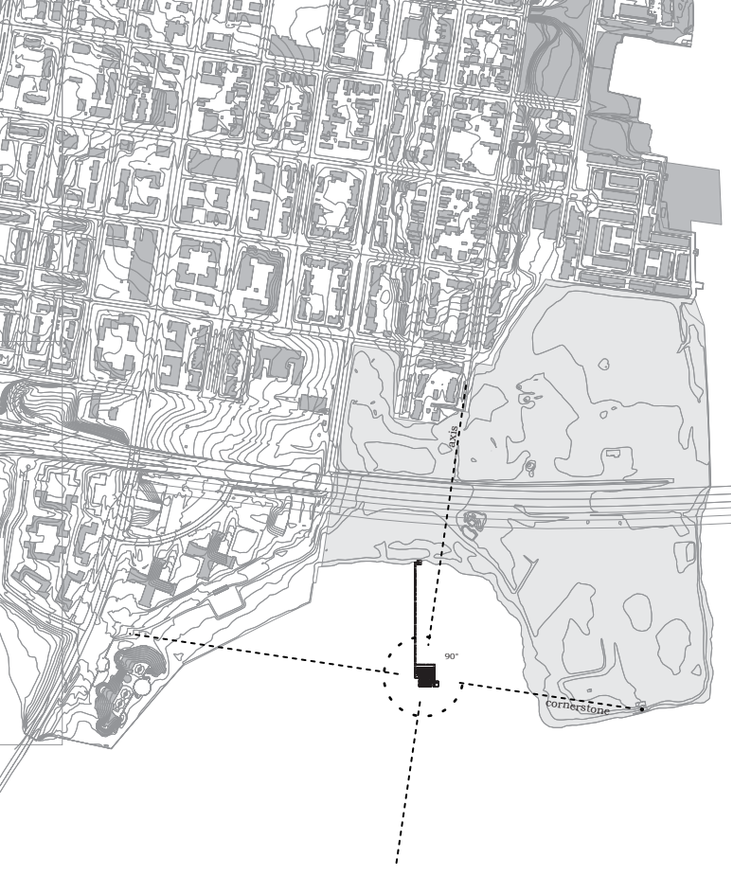
of the labyrinth he is in.

It encourages the attributes that are needed for our quest.

This building is about journey.

[cosmos]

book two



The building is situated in the area of Jones Point Park. This green space lays in the south of Alexandria, Virginia and marks the southern end of the Alexandria waterfront. It is surrounded by the Potomac at three sides. In this green space dogs are walked and teenagers play soccer on Sundays. The area was important historically for the ships that rolled into Alexandria and Washington D.C. as it was an ideal location for a lighthouse that still exists. Although the lighthouse is not in active use today, this oldest river lighthouse remains a tourist attraction.

Much more present in the park is the Woodrow Wilson Bridge and its new construction. With six lanes in both directions it should bring relief to the traffic on the 495 beltway interchange of D.C. With a massive arc like structure that reminds me of a huge stepping dinosaur, it dominates the park both visually and with the noise that originates from the heavy traffic.

Less visible, but much more relevant for the history of the region, one can find the southernmost cornerstone of the Washington Diamond which provided the initial layout for the capitol

[site] 10.000

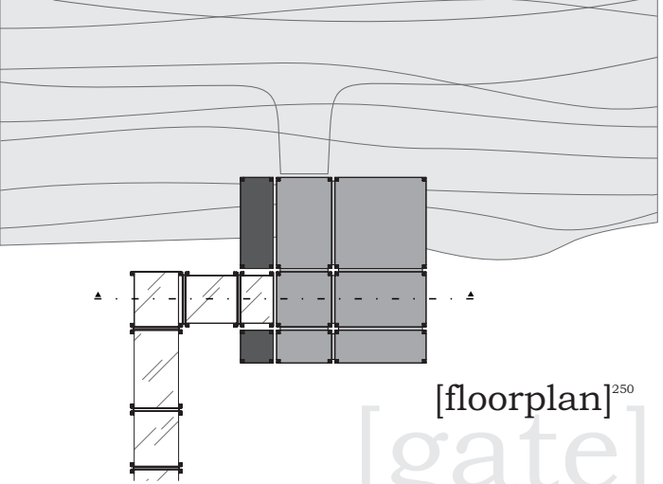
[site]

[location]

of the United States. Each side of the Diamond stretches 10 miles wide. In combination with the street grid of Alexandria that refers to the waterfront and is 7° off a north-south-east-west orientation, the intersection of both defines the place of my building.

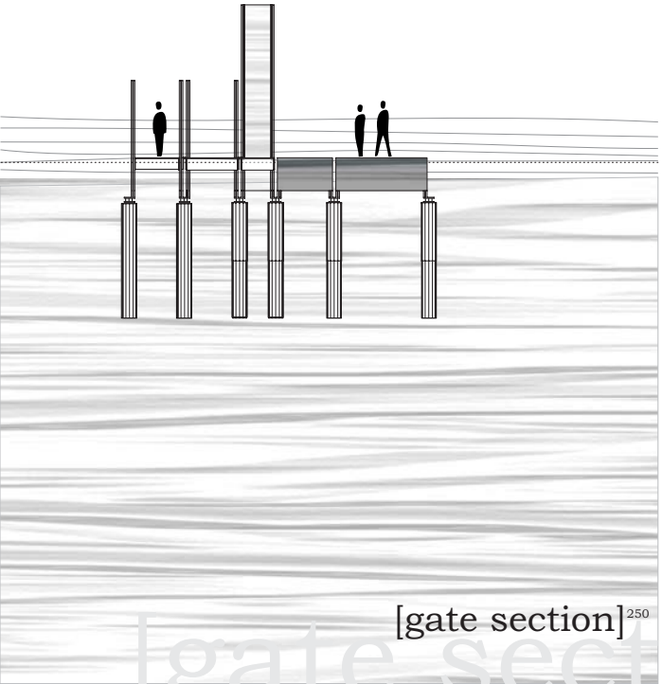
The center pile lies on the section of the virtual extension of the street grid and a perpendicular line that runs through the cornerstone. The building itself is oriented north-south and therefore has no connection to surrounding buildings or other landmarks as they follow the grid of Alexandria. It has almost the same distance to the shore at all sides in relation to Jones Point Park. Not leaning towards one or the other shore, it rests in and of itself with no dynamic element. Even the connecting path with its clear orientation from north to south has a resting character and is reduced to its connective function.

As I will describe further on, water becomes the central element of the conceptional idea. Understanding the fluidity of water as symbol for the subconscious and chaos, the building rises from it as a point of orientation but at the same time only refers to it, not to anything at land.



[floorplan][250]

[gate]



[gate section][250]

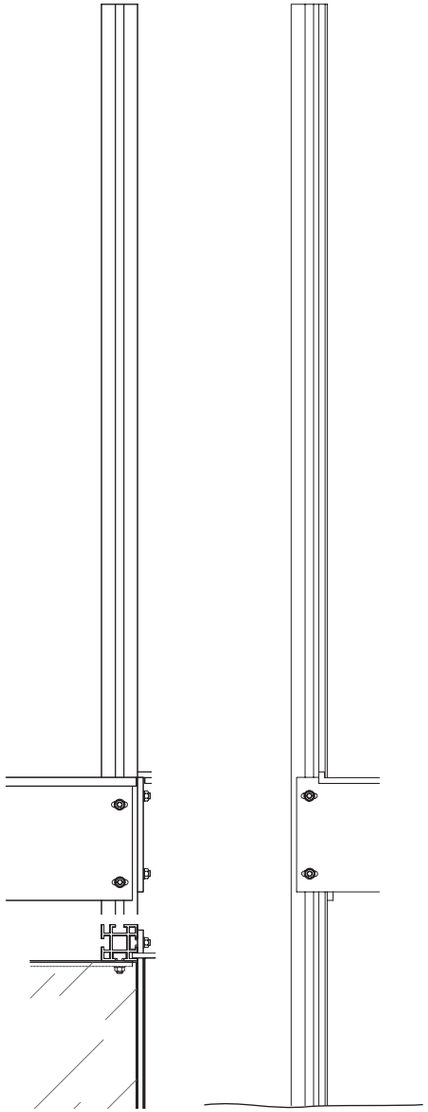
[gate section]

To enter this building it takes a conscious decision. Entering the space is to be

[gate and foot bridge]

understood as an initiation for the visitor. This finds its expression not only in the design of the threshold, the gate that is the quotation to the pier that connects land with space but also in the footbridge and its construction. People will not be confronted with it without being aware where they are going. Nevertheless there is no big street or sign that leads to the entrance. It is more of hidden spot, something one finds by accident.

In order to prepare visitors as to what they should expect on the other side of the narrow path, the gate, its platform and the footbridge follow the same ideas and same ways of construction and material as the building does. Even its



[foot bridge][25]

[detail]

geometry and proportion is a simple variant of the main floor plan.

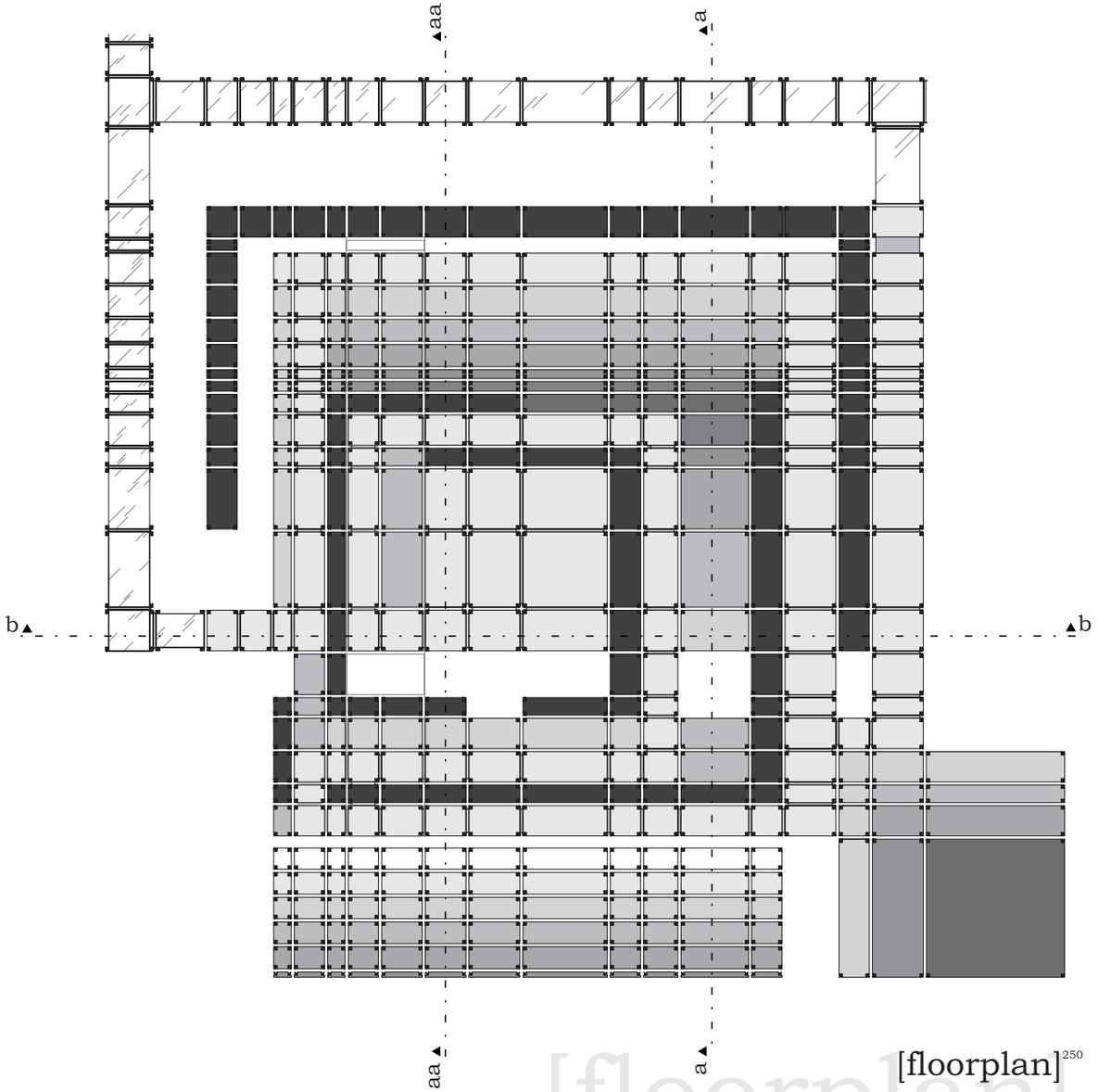
Before entering the footpath from the north, there lies a platform, like the core of the main building, it is seven by seven meters offering a straight view onto the north wall of the building that is tall and almost completely closed; only at special times during the day, light pierces through slots that I will describe later on in more detail. The whole scene is not built to be inviting. The wonder about the arrangement and the curiosity should start a process in the visitor's mind that might conclude with a step through two tall sediment towers that mark the gate. These are an extension of the most western wall of the building. Between the two towers the footbridge already begins and braids together the gate and the footbridge.

The footbridge is clearly visible as the only connection between the land and the building. It is made out of the formwork from the construction of the building. To support its skeleton appearance, glass panels are used to create the continuous surface so the walker can study the characteristic steel piles and the metal formwork sheets. Walking on glass should prepare the individual for the insecurity that a change can bring. The glass operates as symbol for water and therefore the subconscious that we have to cross before reaching an island in the chaos.

[gate and foot bridge elevation east]

The second book will explain the architectural cosmos I planned: the rules that support my concept, the proportions and how the different aspects relate to each other. It will provide all information about the actual building.

For reference, all scale information is metric in measure.



[floorplan]250

[floorplan]

[square]

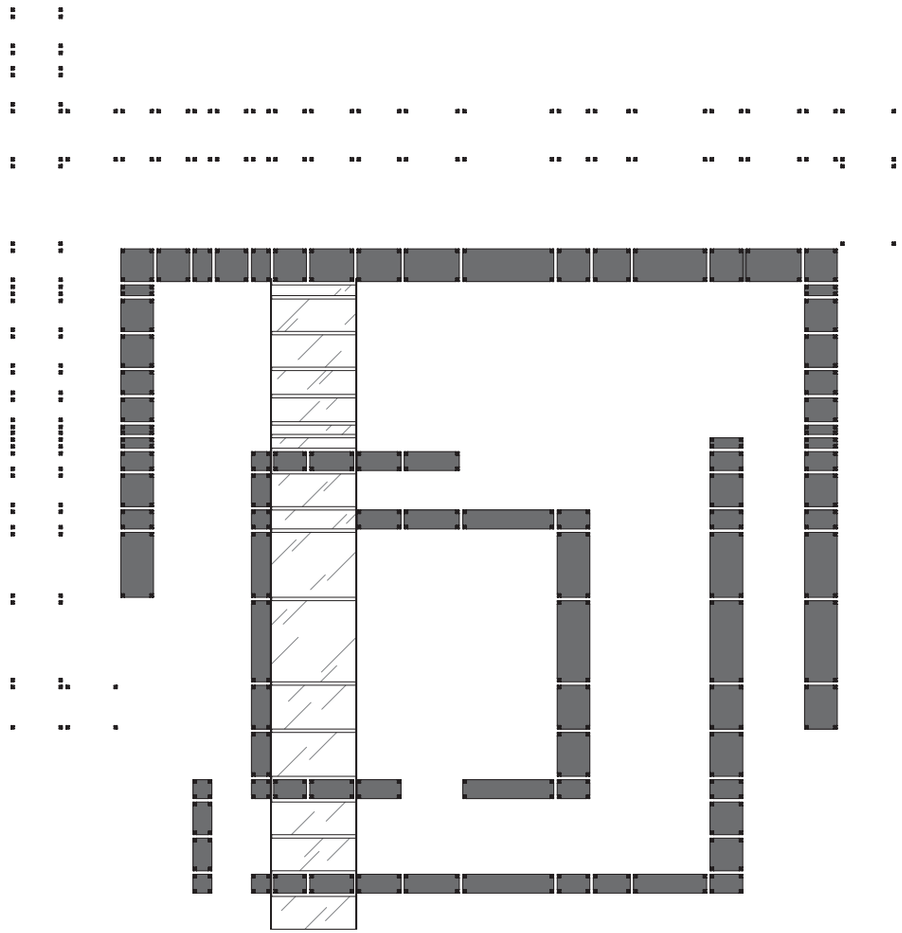
The basic geometry of the floor plan is the square. This form is easy to recognize. It offers more security when one can understand a basic geometry. The four sides correspond to the four directions of space.

[brackets]

The walls (displayed black) do not enclose but are open to one side and the two opposite sides do not extend to close the square. This is to offer security and protection, but it also has a direction to it. It is facing somewhere. This is to be understood as a symbol for the starting point where we begin our journey. The save spot opens to a new horizon and we are invited to start moving.
The brackets also imitate the protecting hand: a warm gesture with a fatherly calling to take our lives within in our hands and initiative enough do something about it.

[access]

The access is via the glass footbridge from the north. One entrance is from the west side. This is where the labyrinth begins: the path through the building with a series of spaces that correspond and refer to each other, and like the labyrinth its ends up at the center. The access from the top at the east side opens toward a slim version of the space. Passing by the east-bracket of the most outer wall, you reach the southern portion with the steps that invite to rest and enjoy the scenic view over the Potomac

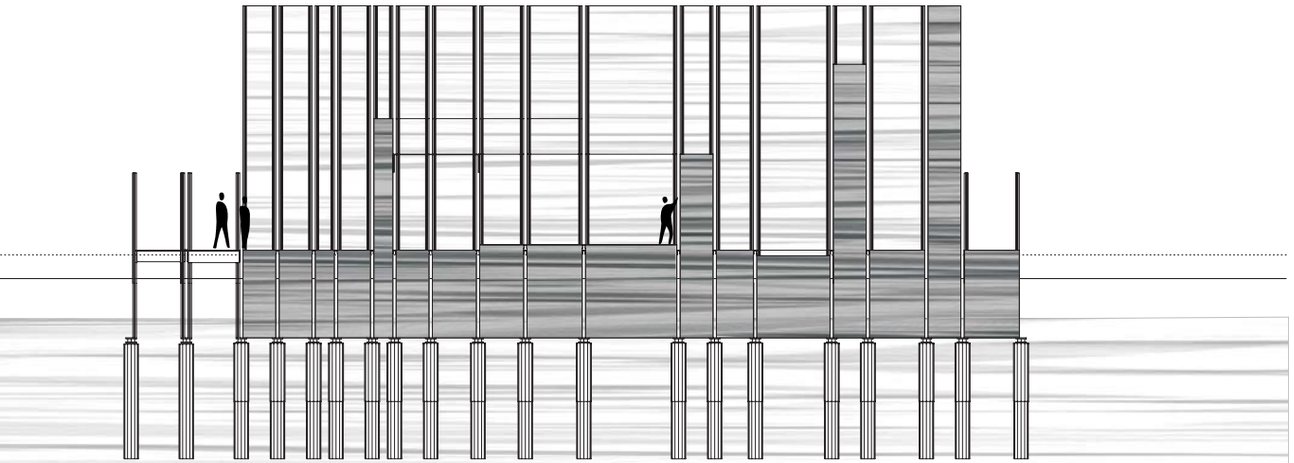


[refl. ceiling plan][250]

River. This access serves as a catalyst. When sitting on the steps one might become curious and although with no initial intention to do so in the first place one might end up meandering through the building.
In both cases I made sure that the threshold between the footbridge and the building, the glass surface that hovers over the water and the concrete floor that rises from the depths of the Potomac, is clearly perceivable.
To enable wheel chair and stroller access, little connectors bridge the gaps between the sediments towers. Glass sheets with a tint of green connect to the well defined labyrinth-like path throughout the structure ensuring that one is always able to walk, even with maximal high tide.

[glass roof]

As stated before, the water is a symbolic reference for the subconscious. The visitor should be able to experience an awareness of his needs and desires. He becomes fully conscious of himself, of his abilities and of his restrictions alike. And while he is experiencing this level of personal development, the glass roof (an interpretation of another water surface) should display that there is always another, higher lever of development. This hint does gradually sink into the visitors mind with the roof becomes both more present or less present on his way through the building. Especially

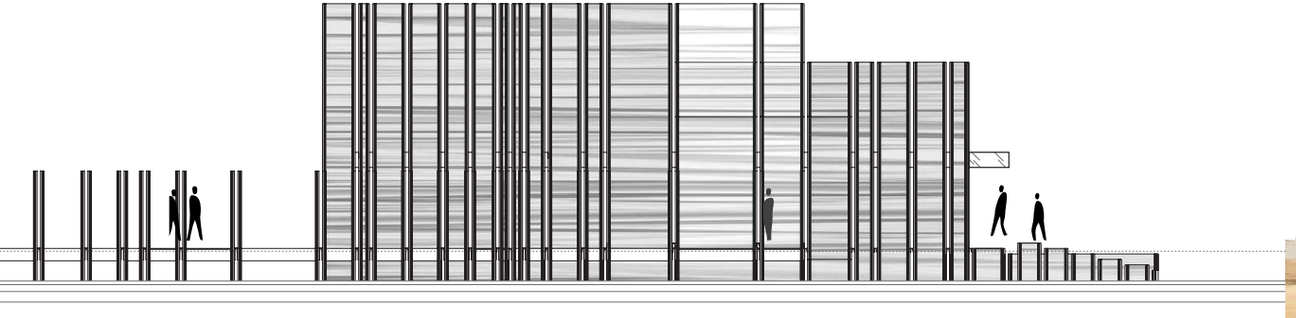


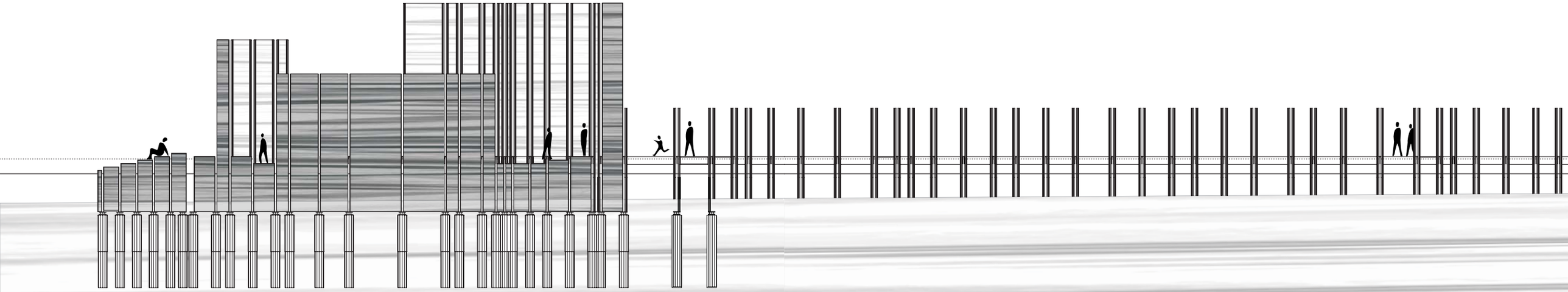
[section b][250]

right before he enters the open center of the labyrinth; the next Level of development, symboliezed by the roof, is peculiar present. This effect of compression enhances the experience of the open sky at the buildings core.
It becomes clear that it is a straight, axiomatic thought which hopefully motivates the individual for another visit. This is the reason for the straight layout of the roof.
The adventurous glass beam spans over a distance of eight meters. Multiple layers of security glass glued and screwed together are attached to the steel piles in the same way like the metal formwork during the process of construction. This construction supports the idea of having an element that causes people to question: how can this not collapse?
The glass itself has a light green tint and is reflective on the under surface. One can see his reflection when crossing underneath, or speaking metaphorically: the individual can see oneself already deep within the next level of development.
The reflective surface will enhance the compression effect just before the center as well. It also multiplies the effects of such reflection from the light that pierces through the slots between the sediment towers and hits the water in the channels depending from the level of tide.

[south]250

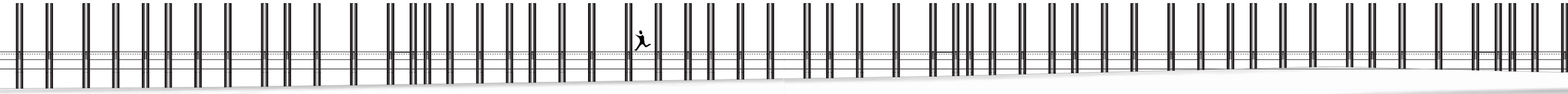
[west]250

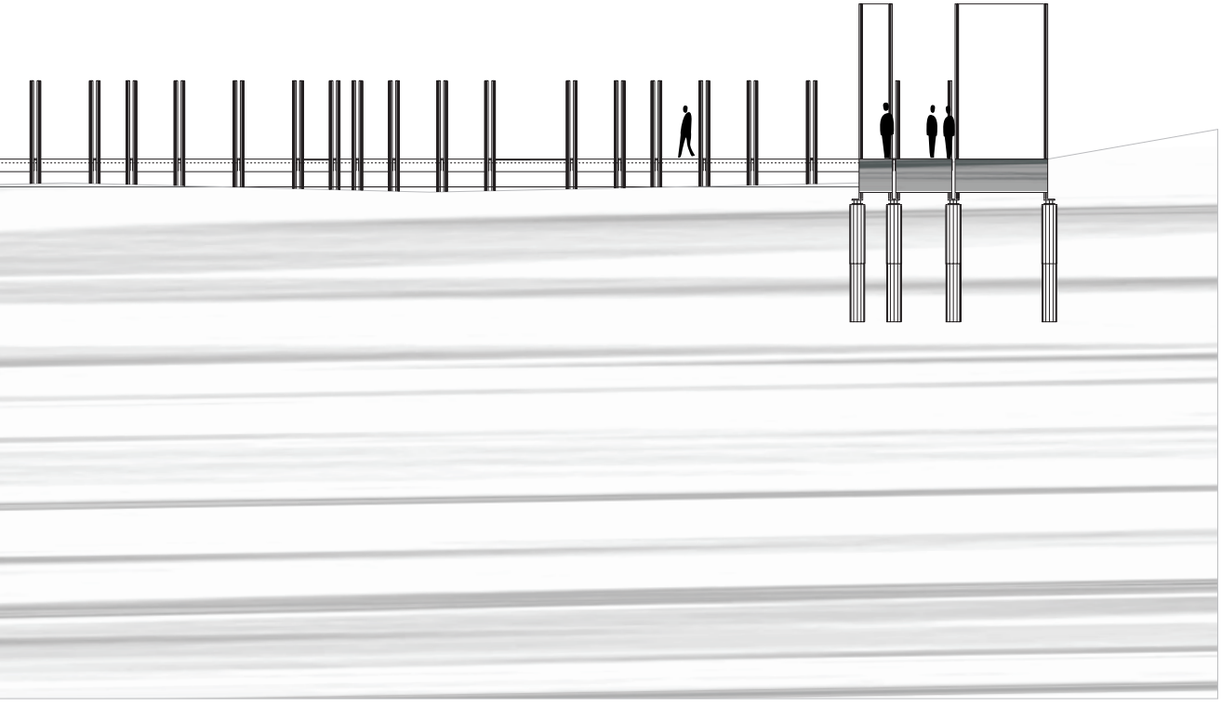


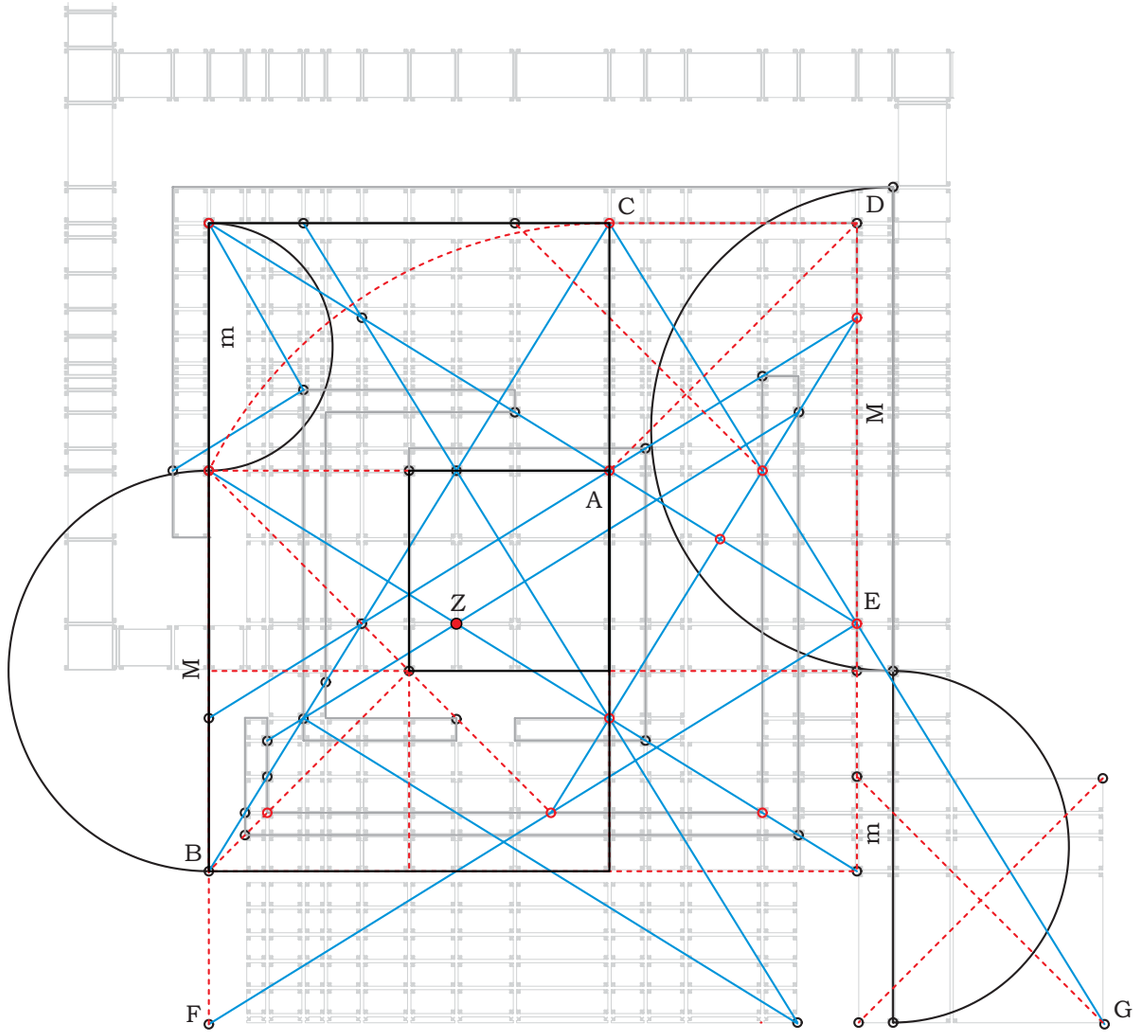


[section aa]250

[section aa]





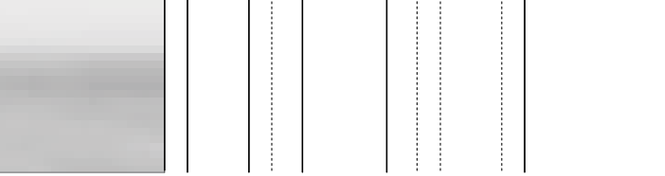


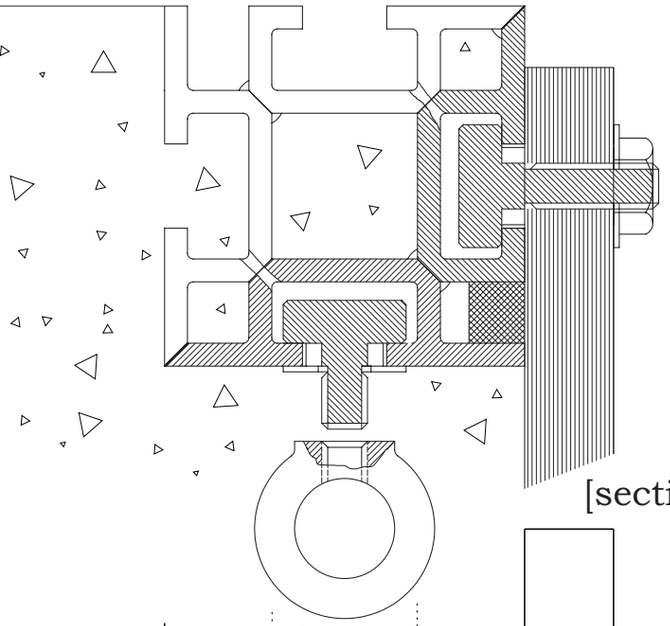
The claim to create a cosmos causes a necessity to establish an order in which the relation of the parts stand to each other as well as for a clear point where the structure is linked to the spot: a core or center.

Inspired by the three levels heaven, cosmos, chaos and the four sides of the basic geometric form, the center is formed by a seven by seven meter square. In numerology, three is a symbol for the divine and four metaphoric for the universe. The sum of the divine and the universe is everything. Three plus four equals seven.

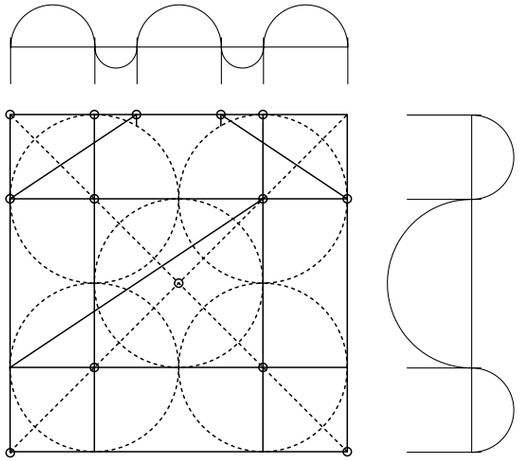
Because the building should serve as a cosmos for people, the ratio which links it together is inspired be the golden ratio. It does frequently appear in geometry and is found in the Fibonacci number sequence. This number sequence has been noted to appear in biological settings, such as branching patterns of leaves in grasses and flowers, spiral patterns in horns and shells etc. Its connection to nature made it my choice for the proportion as well as it is very pleasant for the human eye as might result in its appearance in nature.

In the construction drawings you can see the point “Z” which is where the building is linked to the crossing of the two axis. All other relations are based on the seven by seven square and the golden ratio including the elevations. Only they vary with the tide level.



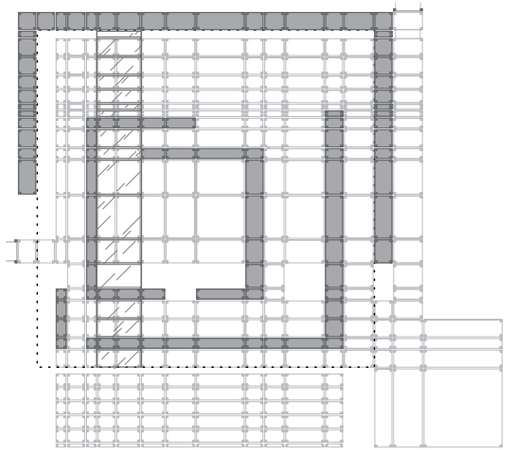


[section] 2.5



[geometry] 2.5

[floorplan] 500



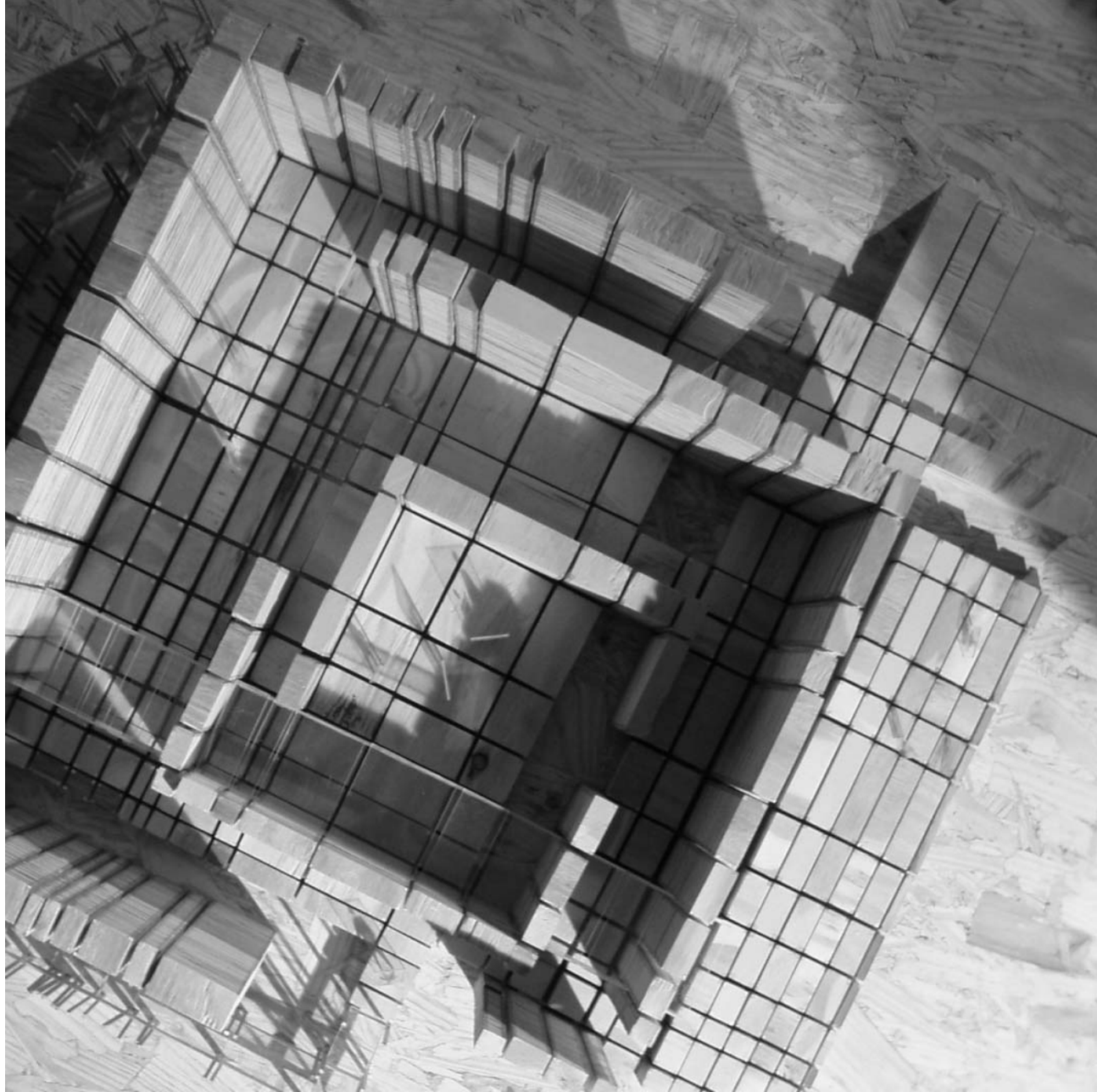
The vertical steel element connects all three layers that are important for the main idea of this design: The sky with the sediment towers with the water. For this linking to occur, it needs to appear very strong. To emphasize this bracing function, this part is is designed with great sophistication. This makes it contrary to the rough concrete and with such a contrast, I strongly link both materials together. Not only is the materiality different to the rest of the building but also the amounts and kinds of tasks involved with it. While the concrete simply divides space, the layers of sediments the piles have several tasks. I already mentioned the connection of the three layers. With the reflective properties of the stainless steel, it will blend into the sky. Sunbeams will reflect and give it a sense of light bars at certain sun constellations.

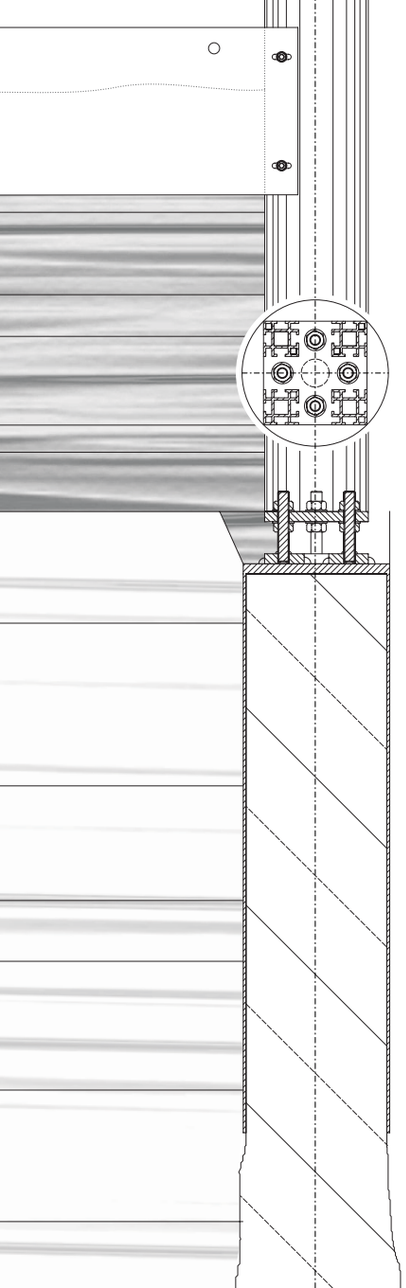
The piles communicate the making of the building to the visitor, in that sediment towers at floor level, one can see the section of them. With the grooves for the sliding formwork and the grooves for the bolts that support the bracing for the construction it is possible to understand the different steps of erecting the building.

Again from the seven by seven meter square in the center, the proportion of the pile originates. Until its very detail, all measurements are related to each other in the golden section. It

also displays the main idea of the floor plan so that it is possible to get an idea of the whole when looking at the detail.

The pile is made from four similar elements which are produced in extrusion moulding. Only two differ in a little detail. They have a little extension that forms the square that you can see in the section on the low left side. These four bars are welded together to form one pile. The pile has two sides that will be on the outside of the completed sediment towers and two that will only be exposed to the concrete because they face inward. The center groove at the exposed parts will hold the formwork. With nuts and bolds the metal sheets will be attached and in the second groove a sealing will keep the concrete from running between formwork and pile. The sealing will later be removed. The sides that will face the concrete have the same groove to hold a ring nut. When the foundation is made and the piles are erected in groups of four, the ring nuts will be attached. With steel rope, the four edges, that are the piles, will be connected and prevent the sediment towers from bending and twisting during the construction process. This stiffening also supports the sediment towers as reinforcement. Keep in mind that the four piles on one foundation belong to four different sediment towers.





[foundation]

[foundation][25]

The connection between the sediments of the river and the artificial sediments is a key point of the building. The difficulty in the formulation lies between the constructive demands and the conceptual connection to the whole idea. During my investigations on the foundation it became clear that a continuous structure, which was my first choice to connect sediments, water, building and sky, would cause many problems. The design of this joint therefore became an interesting task.

After erecting a caisson around the whole site, a crane drills holes in the sediments and reinforces the walls of the hole with a steel tube. Its length will have to be determined from an engineering perspective and after an analysis of the geological givens. On the top it will be closed and with high pressure, concrete will be pressed though a valve. This will create a “blob” at the end of the tube that will guide the forces in the ground. The top plate will serve as the base of the column. To be able to adjust the position of the pile horizontally, another plate will be welted on this base freely. Four rods are attached to it. These enable the vertical positioning and make sure the pile can be erected vertically by winding bolts up or down. The bolts hold the forces from the pile, which consist of four parts that are welted onto a base plate as well with four holes that fit on the now adjusted four rods. The pile will be tightened with another four bolts.

During the process of pouring the first walls, concrete will slip in the space between the top of the foundation and the base of the four piles. The space between the base of the piles and the top of the metal tube is 11.3 cm, same as the width of the space between the four piles.

[light and tide]

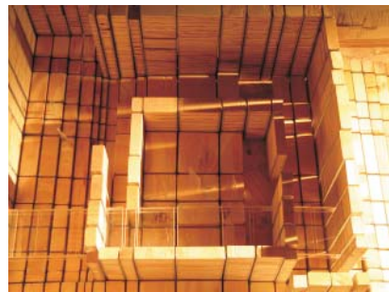
Although the building is a cosmos of its own, the connection to the real cosmos is given at any time. That is important because it raises the importance of the artificial cosmos I created when it is linked to the cosmos that is the origin of our being. With a dedicated reaction and interaction with the sun and the moon I again refer to much older myths. The sun has always played an important part in many explanations of the world because it is understood widely that our being depends on it very much. The moon on the other hand has always, more than any other thing, been symbol for change and rebirth. With its cycle of dying and rebirth it is a strong image of renewal. Both, the sun and the moon play an important role in the layout of the structure. While the sun has a direct and immediate effect the moon's role is indirect as the main reason for the tides of the water.

As I explained earlier, the sediment towers do not touch each other. Between every element is an 11.3 cm gap. The grid that originated from this fact has a strict north-south-east-west orientation. On its way, the sun hits the slots and at the right time pierces through the whole building. In wintertime this would be from south to north at noon and in summer time as well east to west and west to east. At all other times, the sun might pierce one or the other slot but never the whole building. It is

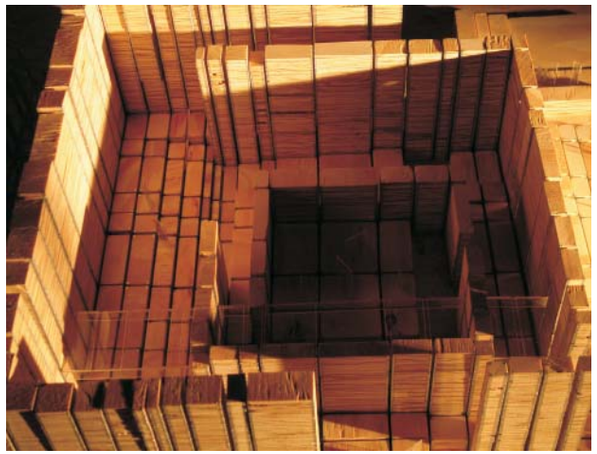
important that this solstitial event occurs not only once a year or less. This would suggest a point in time that is right. But this building is about journey and the people should be able to experience it every day to see the change. The ones that walk their dog in the morning, those who eat lunch at the shore and the people that run after work along the waterfront and pass by Jones Point Park.

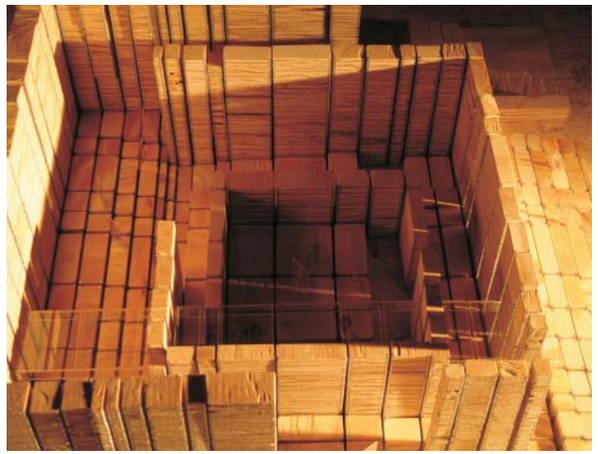
The channels of the grid between the sediment towers will be filled with water. At high tide, most of the towers will be underwater. When the light hits the water it will reflect and the aggregate in the concrete layer will reflect as well. The glass from the roof will reflect the light from the water back. Not to forget the stainless steel piles. At special times of the day, the whole building will be lightened by the reflected sunlight. The tide that is responsible for the water level is a relevant aspect. The tide also is not directly linked to the sun, night and day. Only every 17 years, the sun and the moon are in the same position again.

I imagine a crowd of people that meet every day right before the time of the complete sun piercing, waiting for the moment when the building seems to be fully flooded by bright sun light. The shadows will move and within three minutes the event is over. The people wait and sit for another couple of minutes; some talk,



some sit there with their eyes closed. The water keeps rising while the sun starts to set. The little waves that run through the channels are seen on the layers of concrete as reflected sunlight. Some areas dive into shadow. Some are lightened for the first time of the year.





After creating the first point from the axis, the dimension for the caisson can be set. A crane arrives the drilles the wholes and prepares the foundations.

The concrete for the foundations is brought in and pressed in the prepared metal tubes. The center Pile is erected and adjusted vertically.

From the center to the outside the piles are erected. Meanwhile in the center the workers start with the installation of the metal rope reinforcement and the metal from work sheets.

When all formwork is in place, the first concrete is poured. Layer by layer the concrete is poured and for each layer, the formwork is raised.

When the sediment towers are done, the formwork is removed and installed at the foot bridge where the piles have been constructed already.

The gate is made before the glass sheets for the foot bridge are installed.

In the main structure the workers have begun to polish the floor.

[chronological steps of erection]

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[images]

Unless otherwise noted, photos and work are by the author

Pictures of model made by Anja Hoppe, Werner Nehrlich and Sebastian Gaiser

Photographs in book I: concept

Pages 10-11, 18-19 and 28-29 with friendly permission of Richard Nolthenius

[thank you]

Jaan
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WAAC all stars

[education]

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Patzner Architekten Stuttgart, Germany
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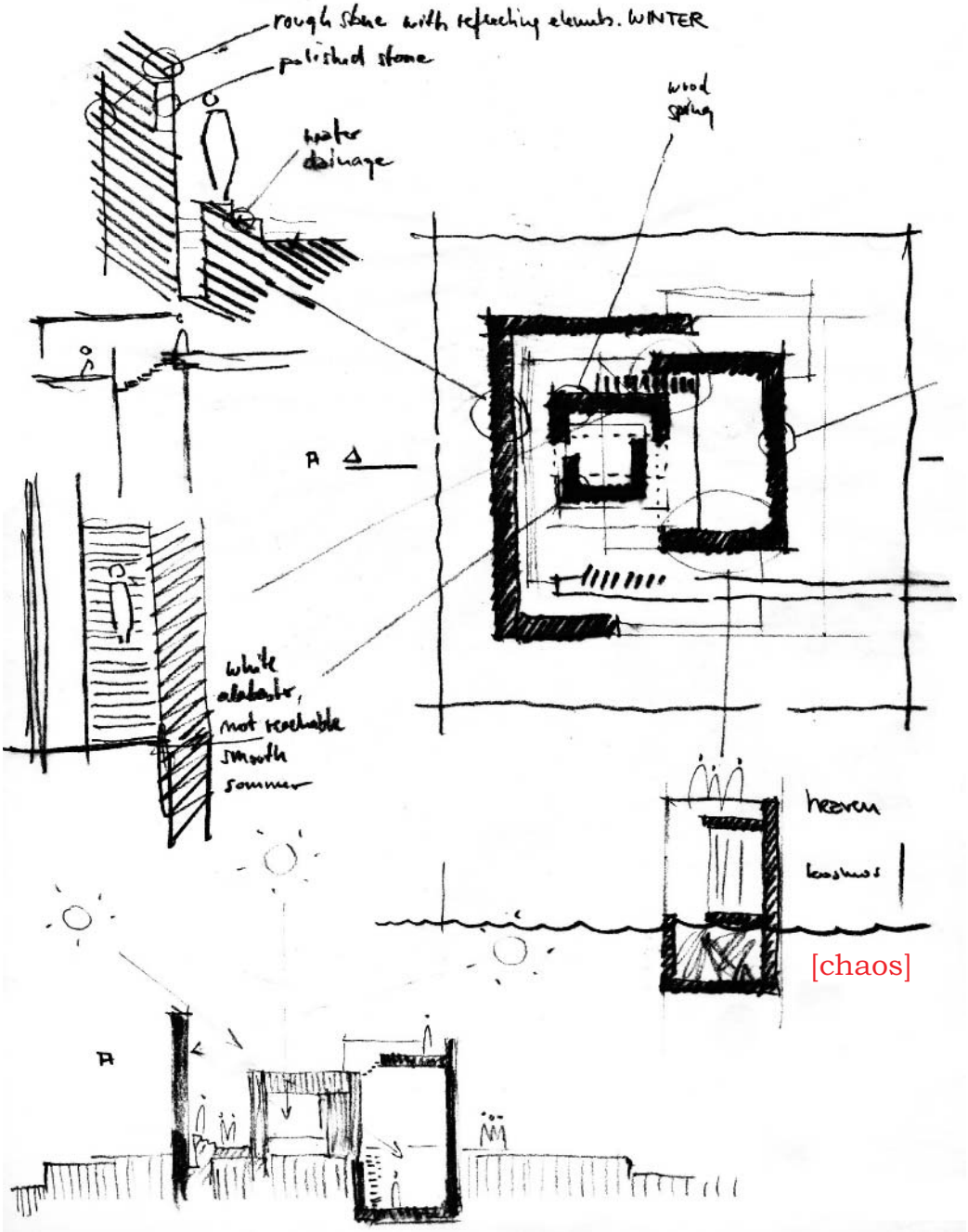

rough stone with reflecting elements. WINTER
polished stone
water drainage
wood spring
white alabaster, not reachable
smooth
summer
heaven
[chaos]

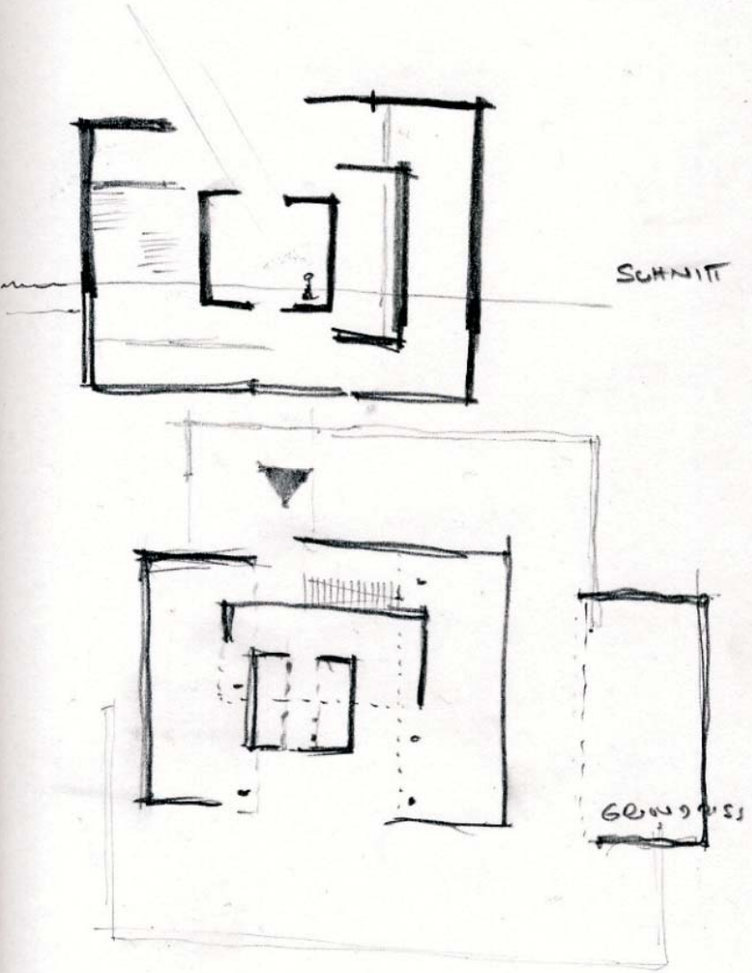
book three

In this book you will find most of my sketches and concept models I made during this thesis. This final book should give you a clue about what lays beneath my surface. In a sense it is another thing above the level of the subconscious.

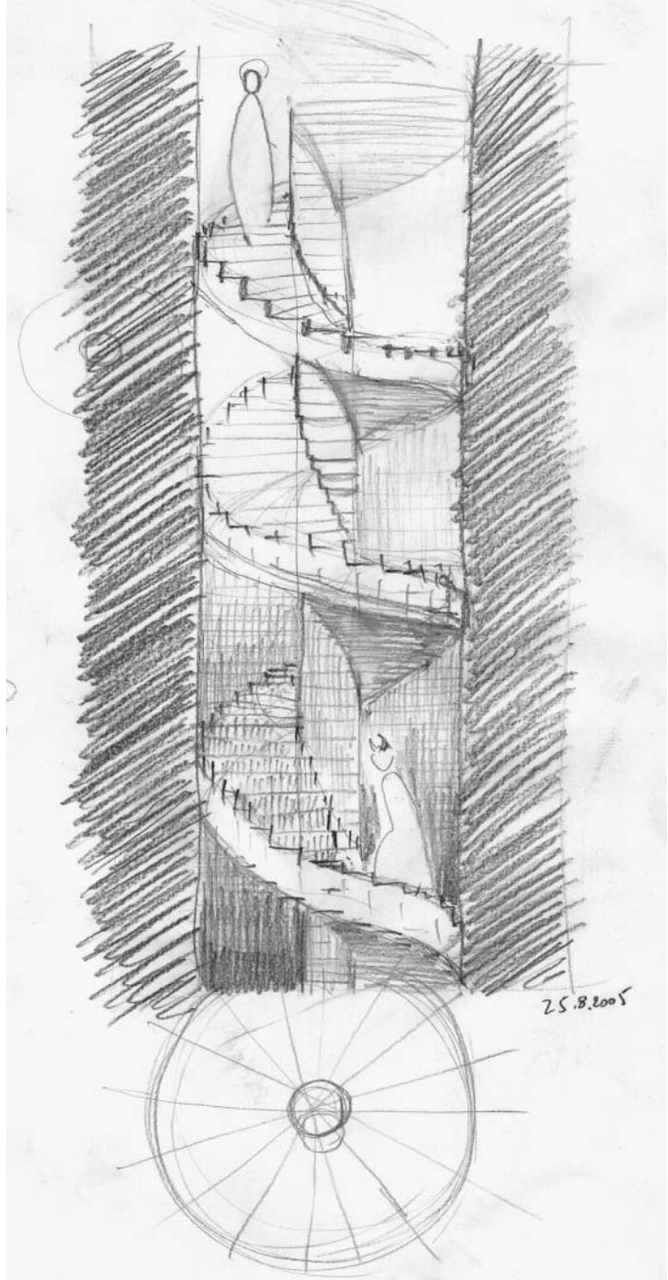
It is complete chaos.

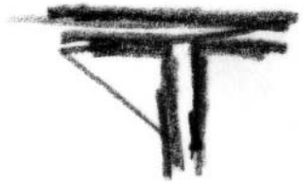
22.1.01

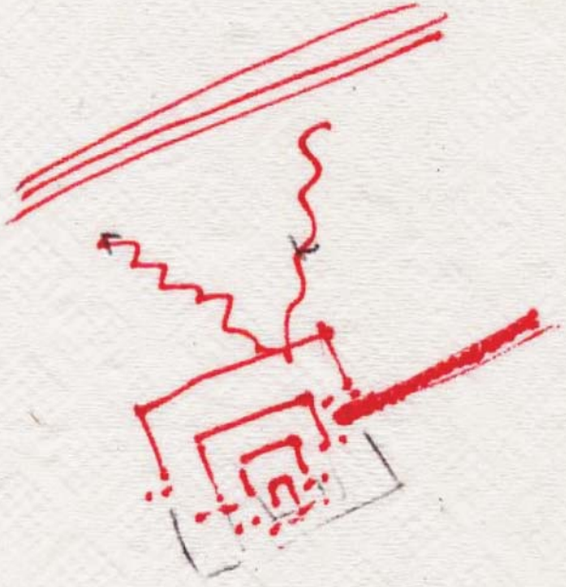
ONION

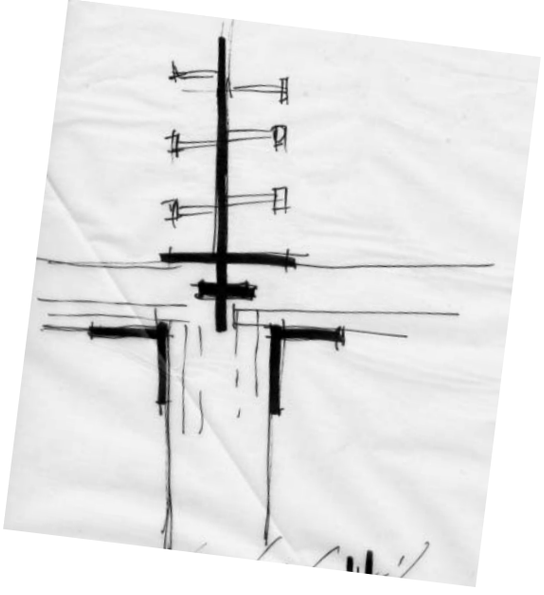


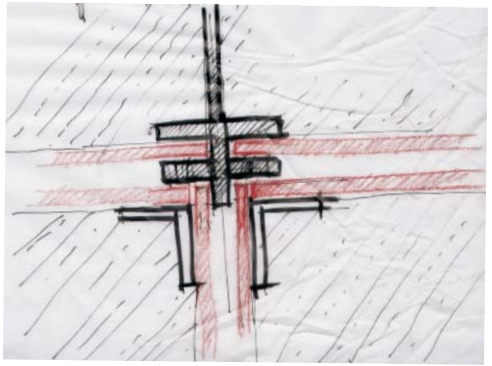
Schalen unterschiedlich im
innern.

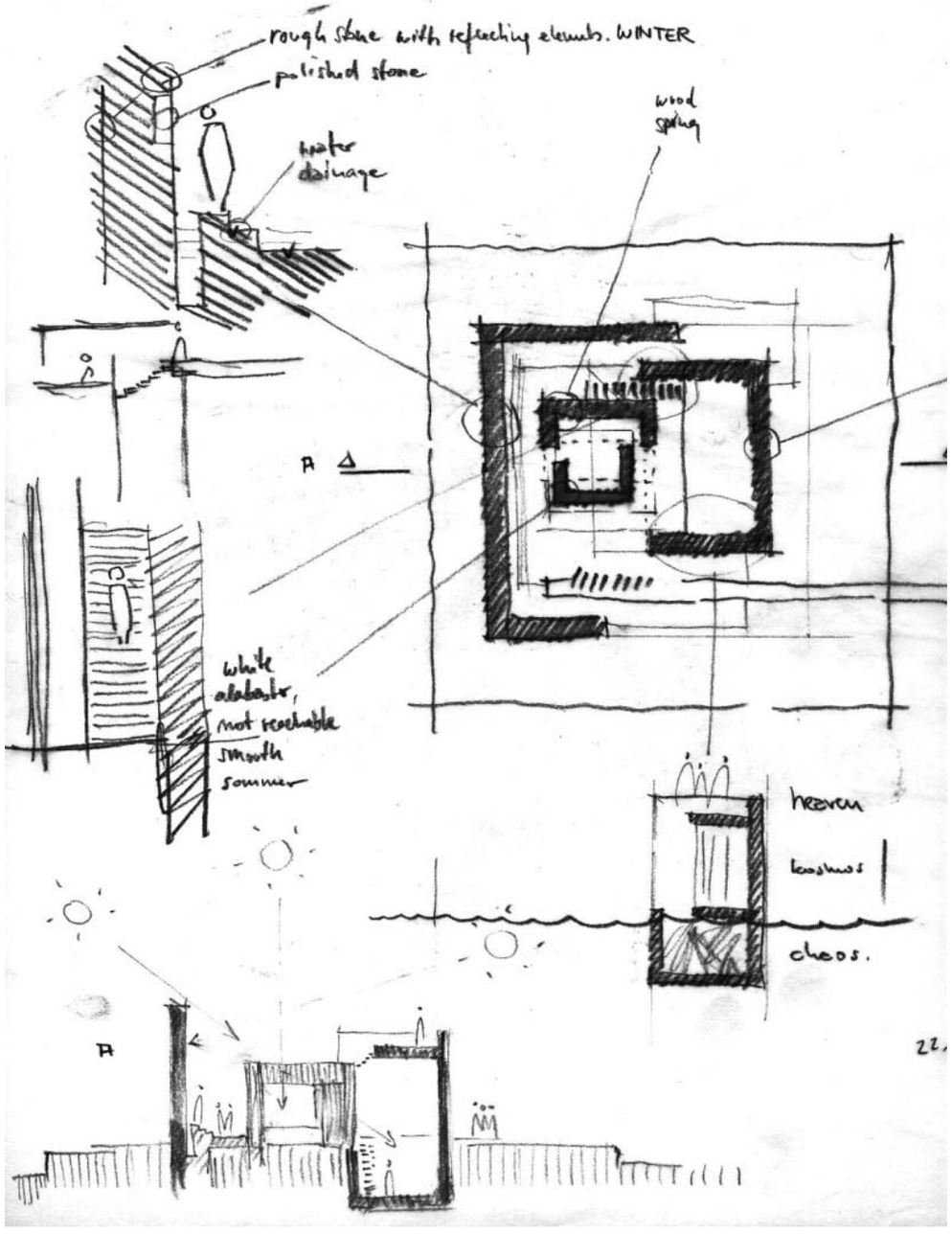


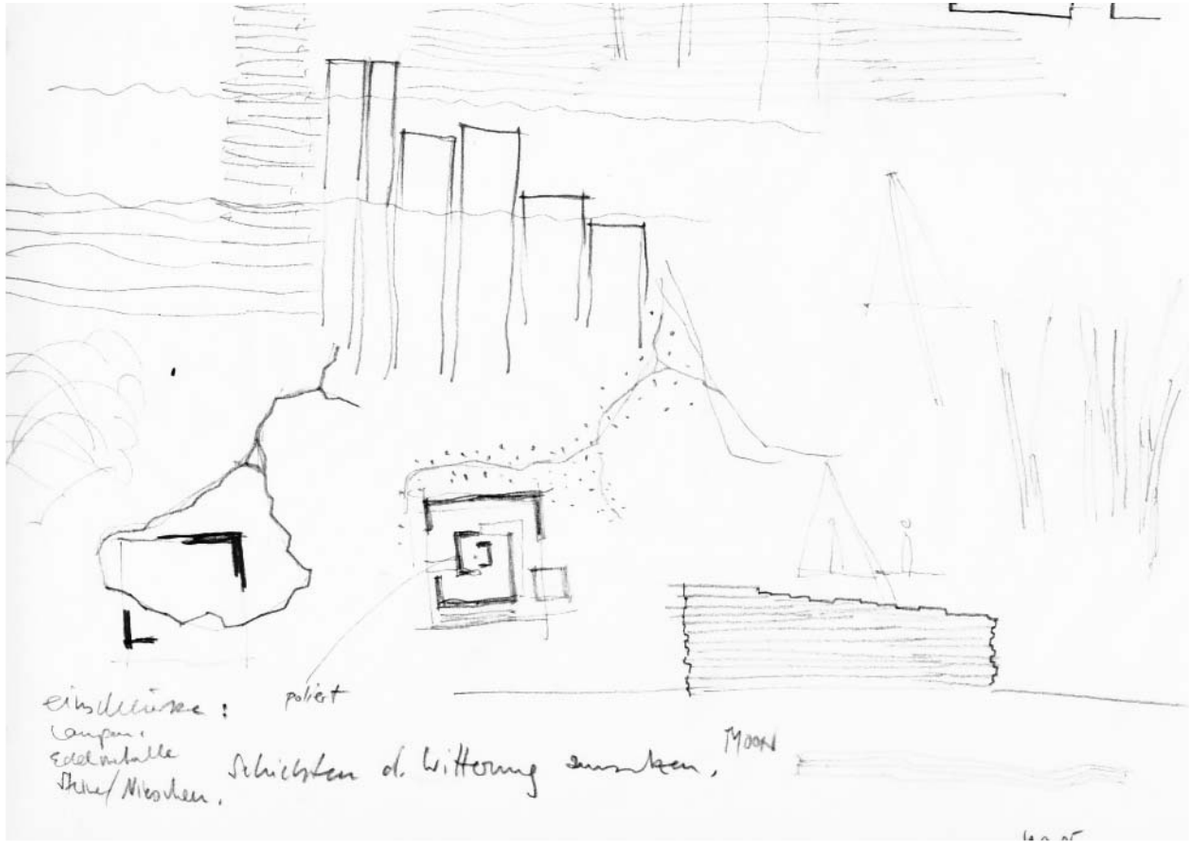


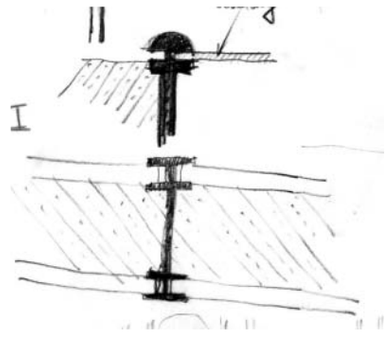







rough stone with reflecting elemts. WINTER
polished stone
water drainage
wood spring
white alabaster, not reachable smooth summer
heaven
kosmos
chaos.
22.


poliert
Schichten d. Witterung
MOON


II
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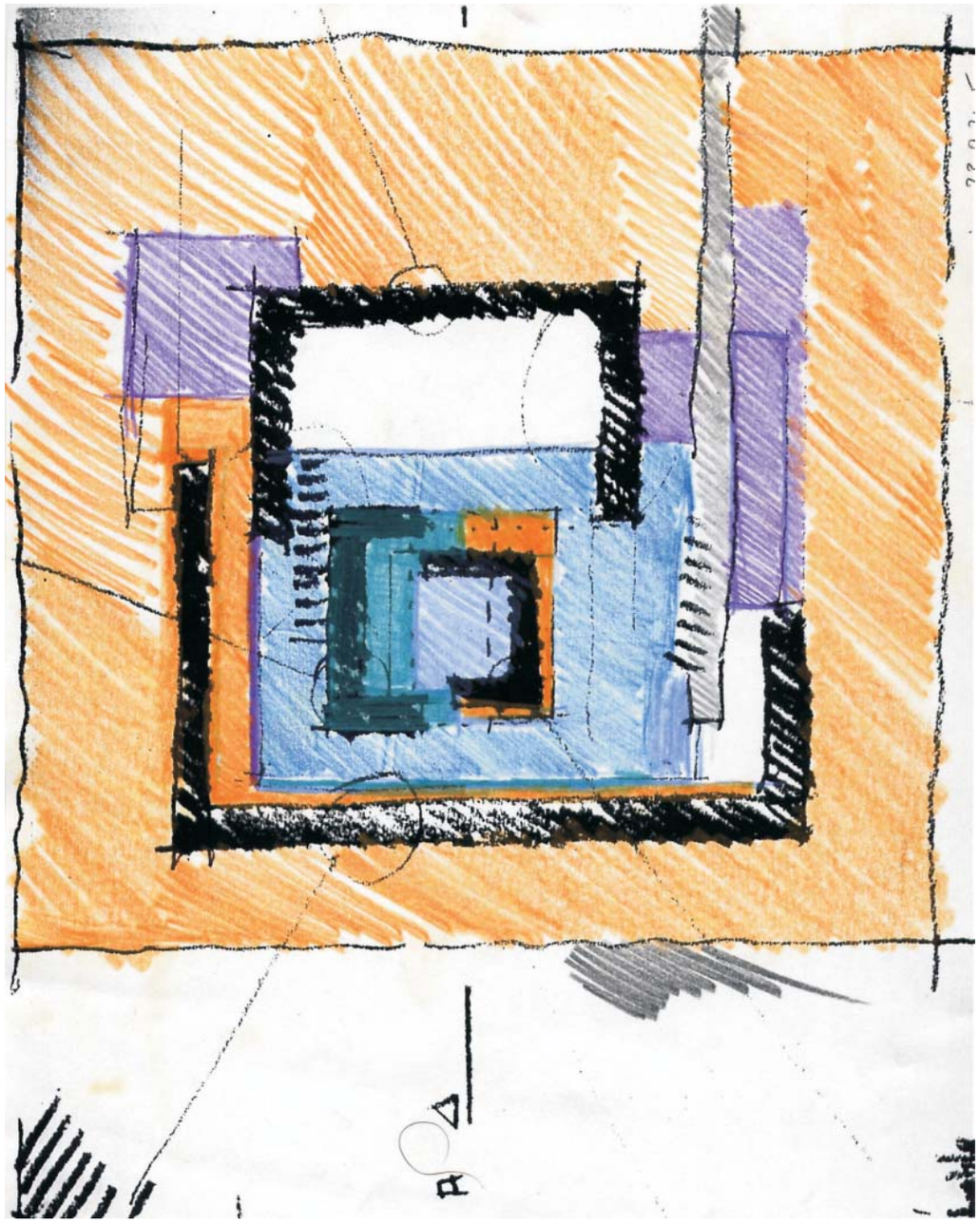
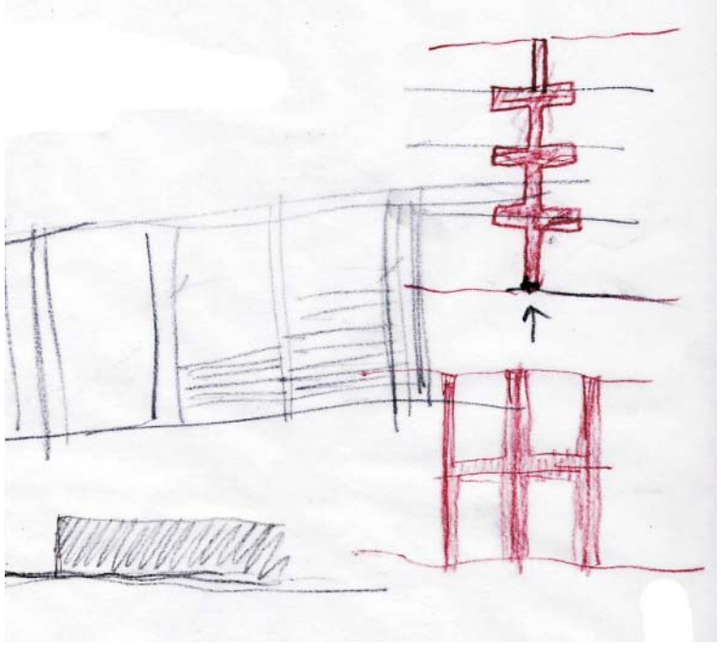
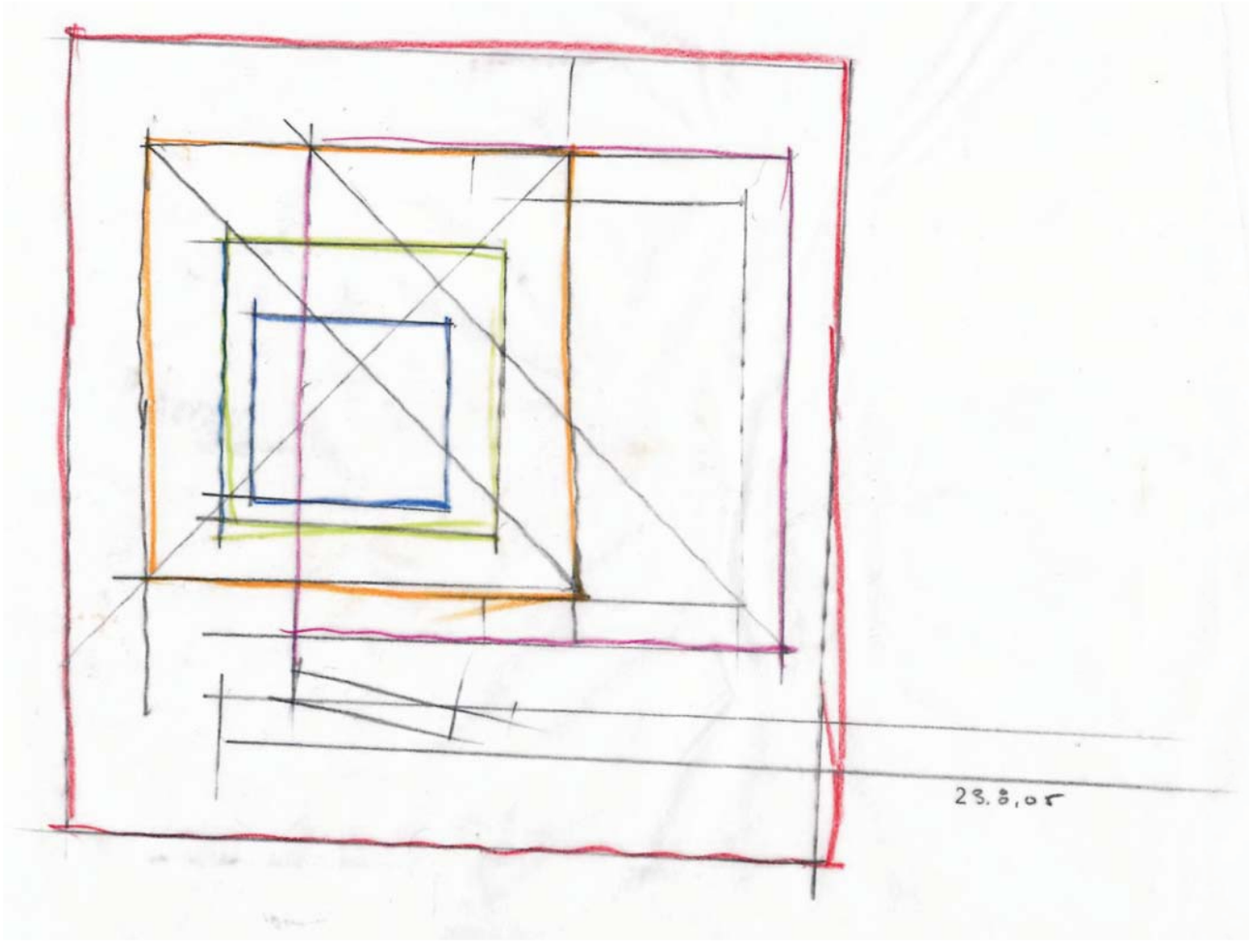



End of wall
Beam
Wall

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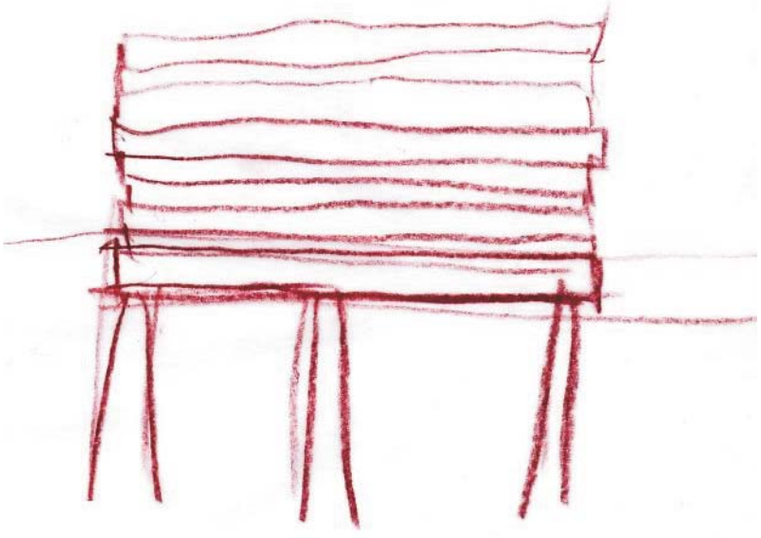

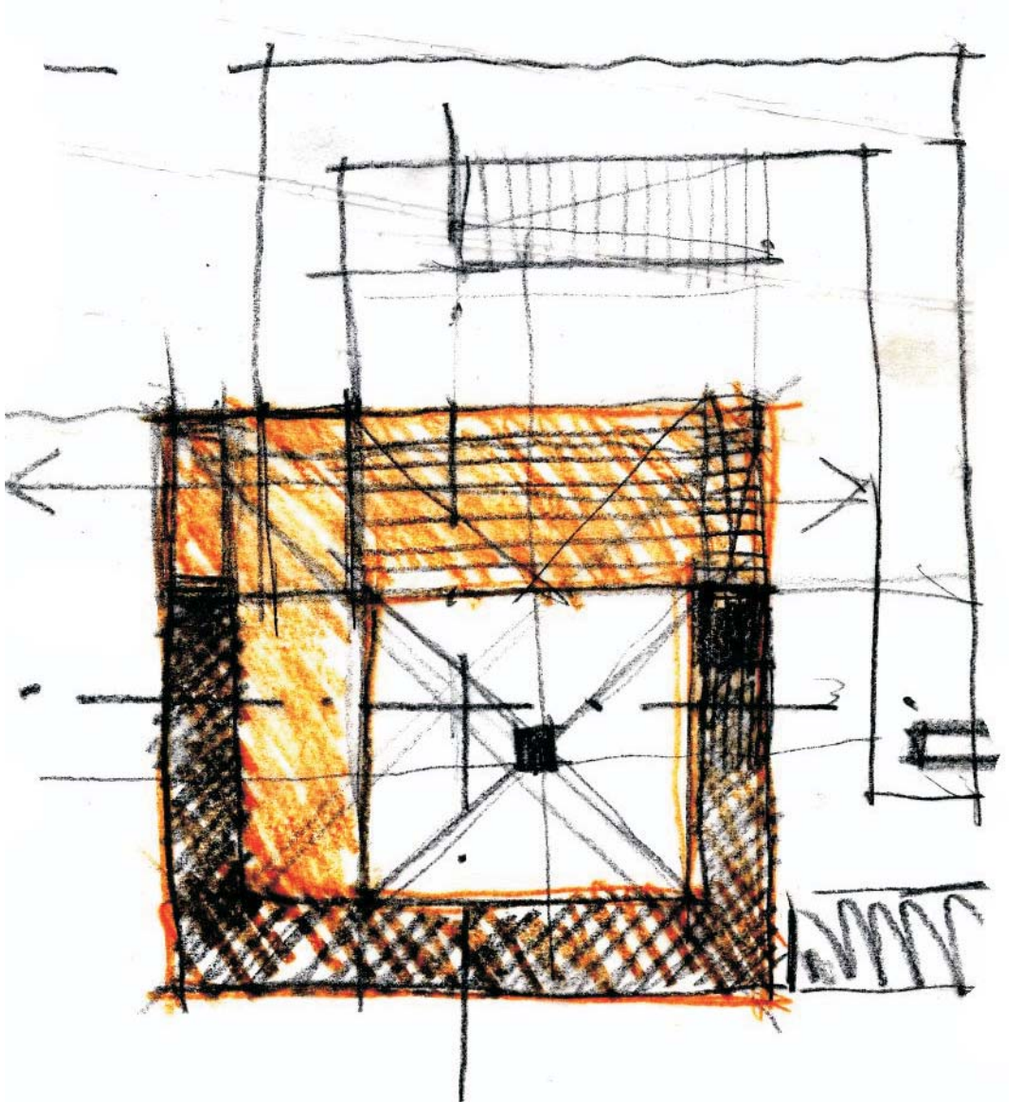

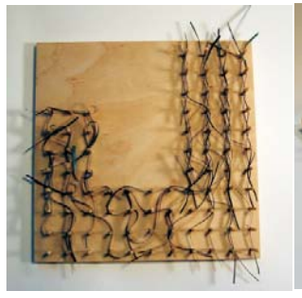

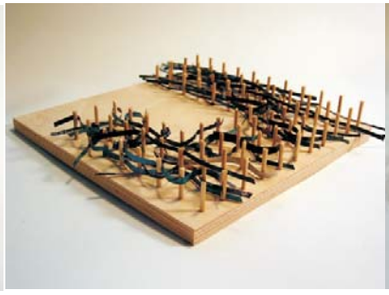

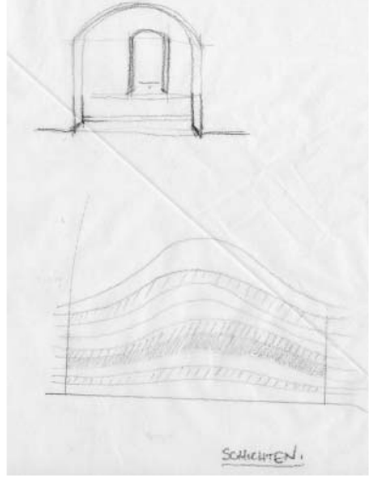
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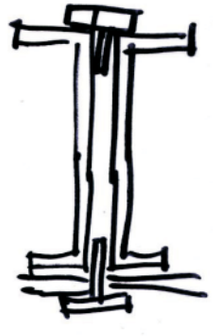

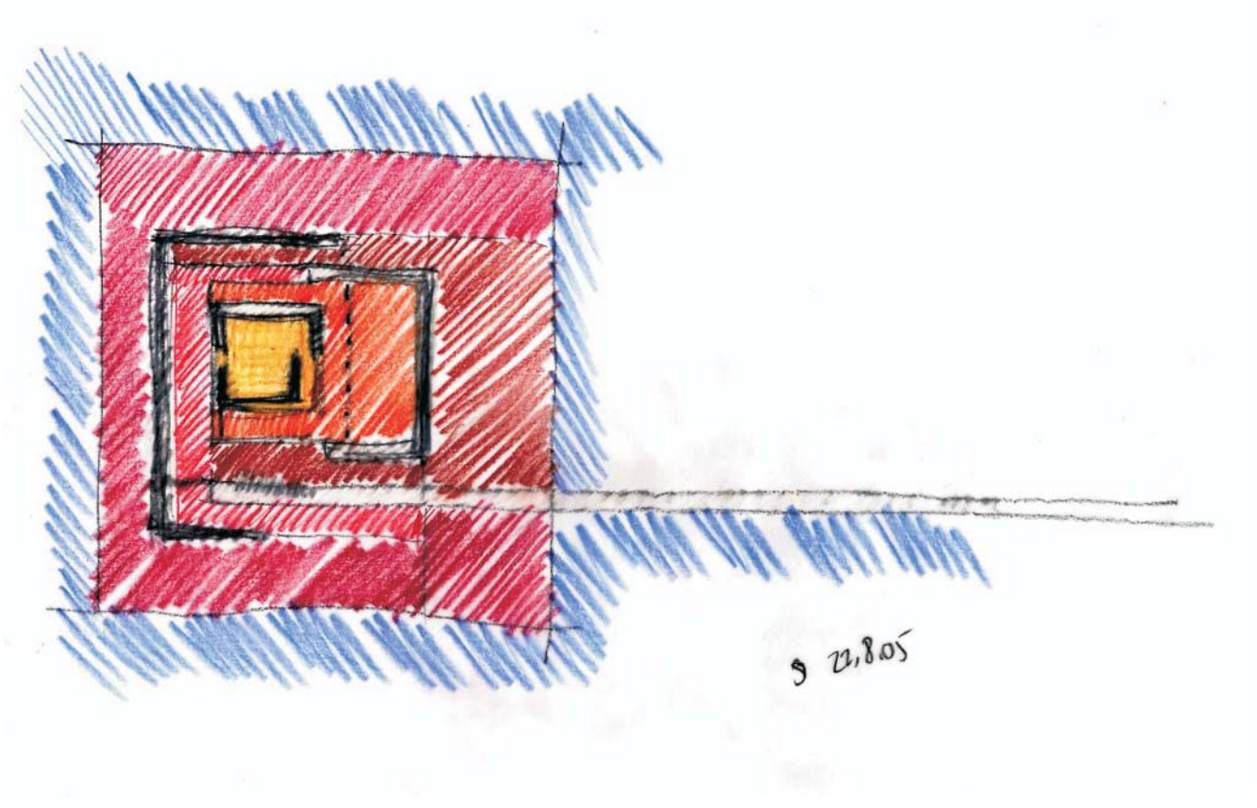
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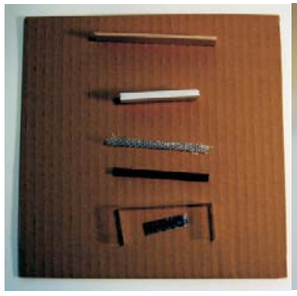
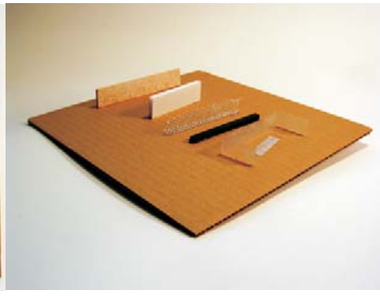
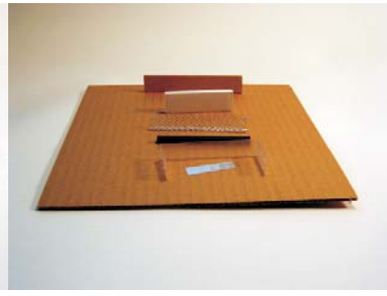
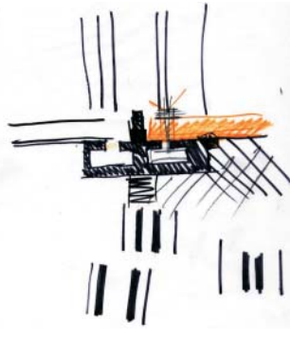






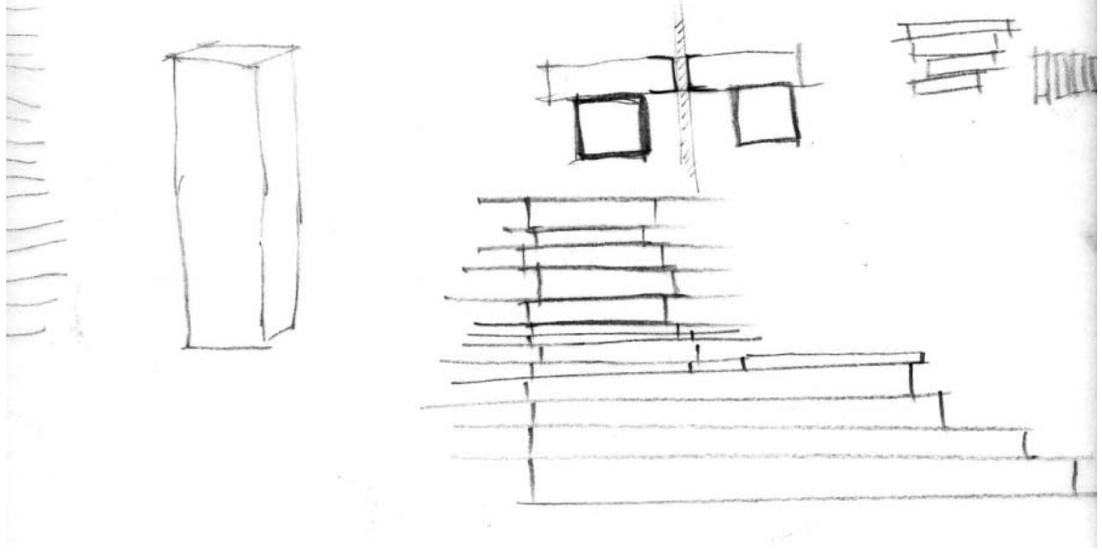


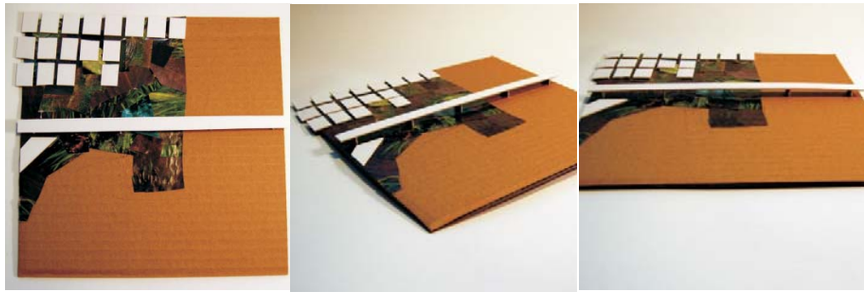
Water : glaciers colsest to earth center
only moon (!) does somethi

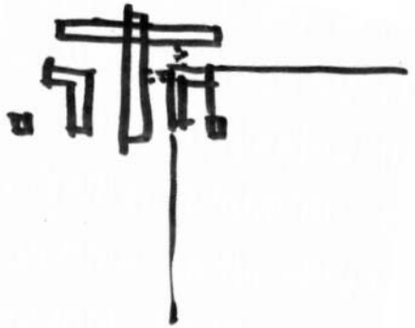
- Layers of Water
- how to catch things.

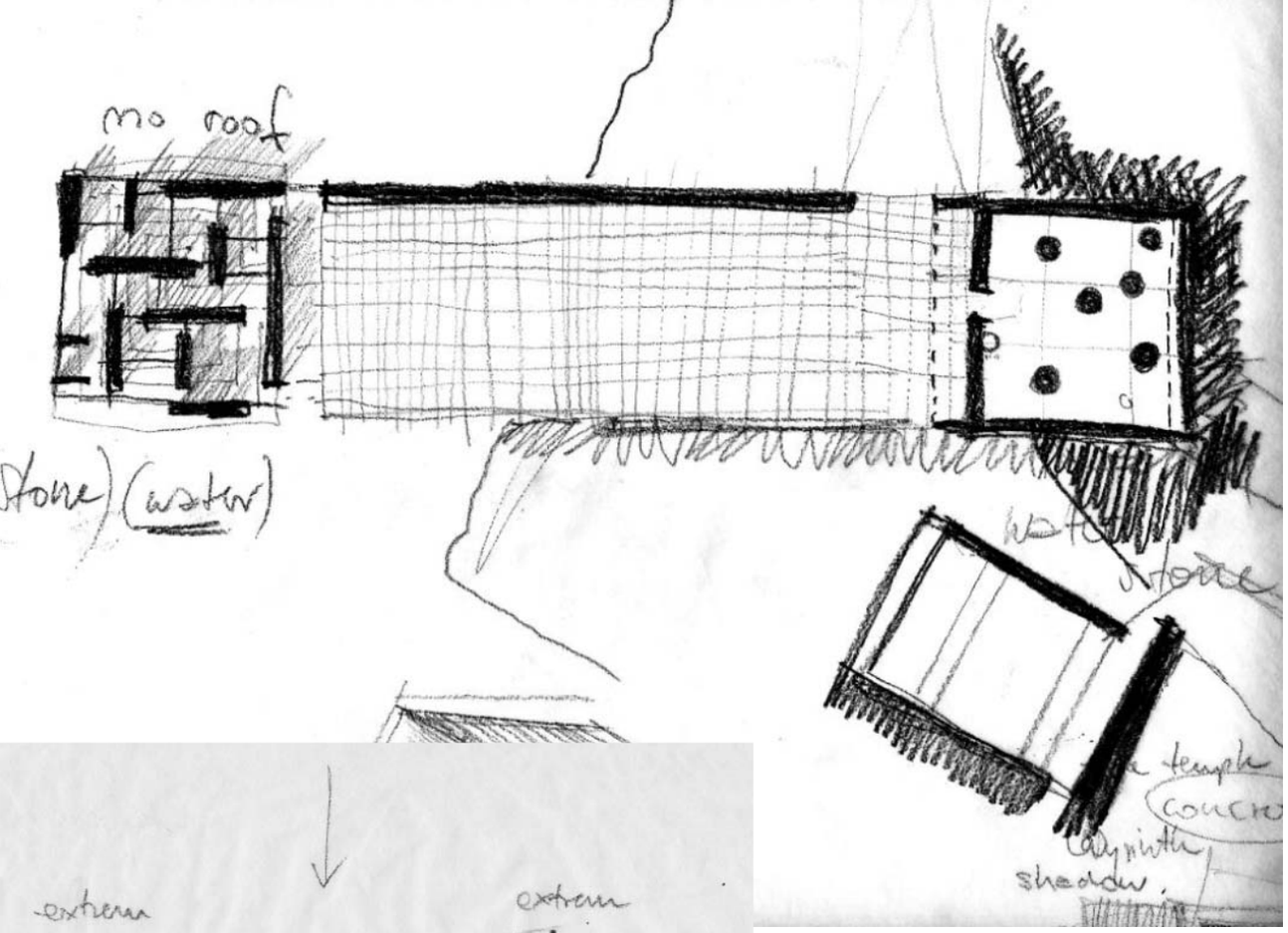
stacked.
Wet.

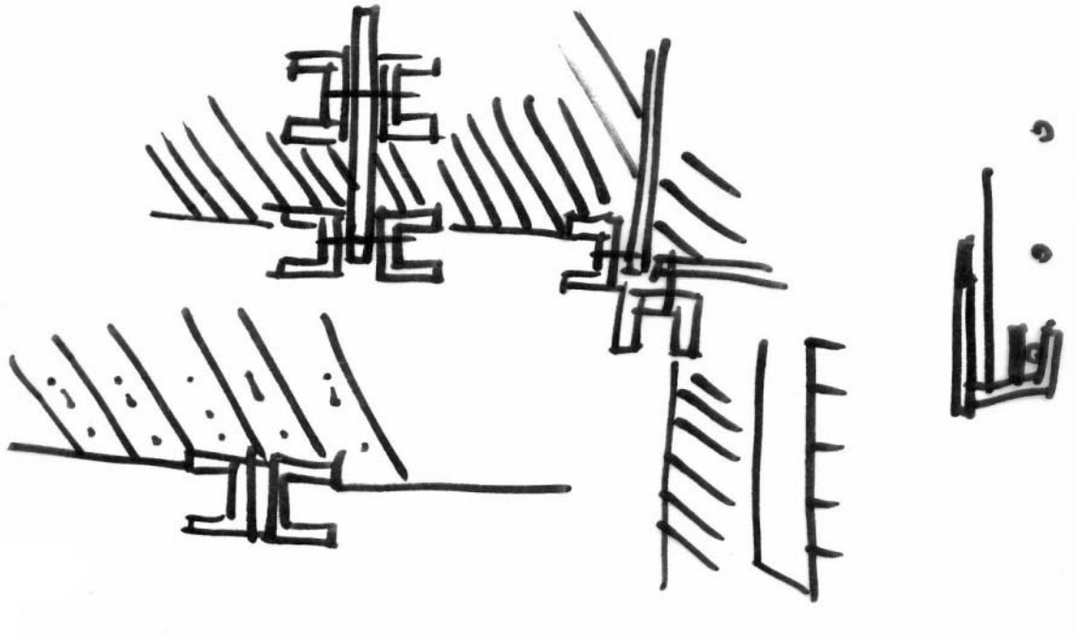
Stapeln → dinner rock stern.
Litter.

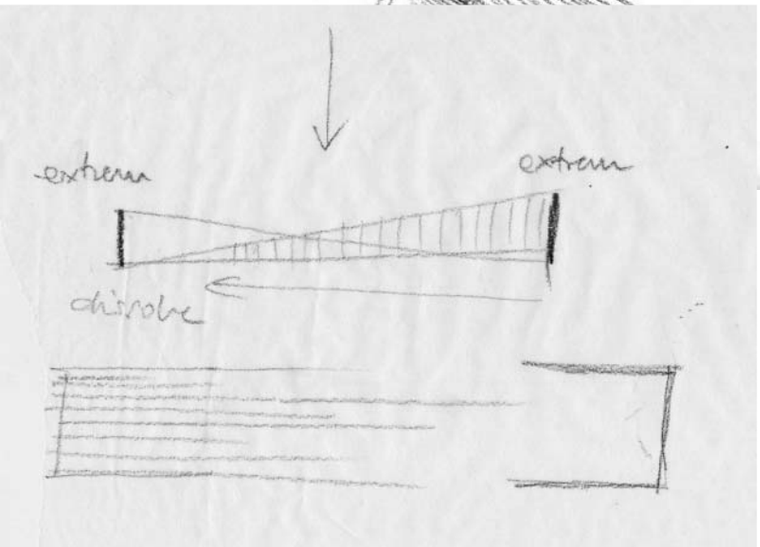


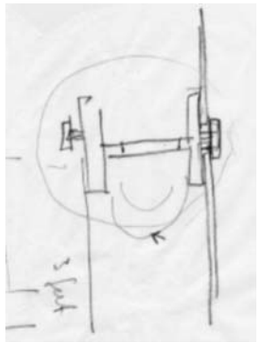


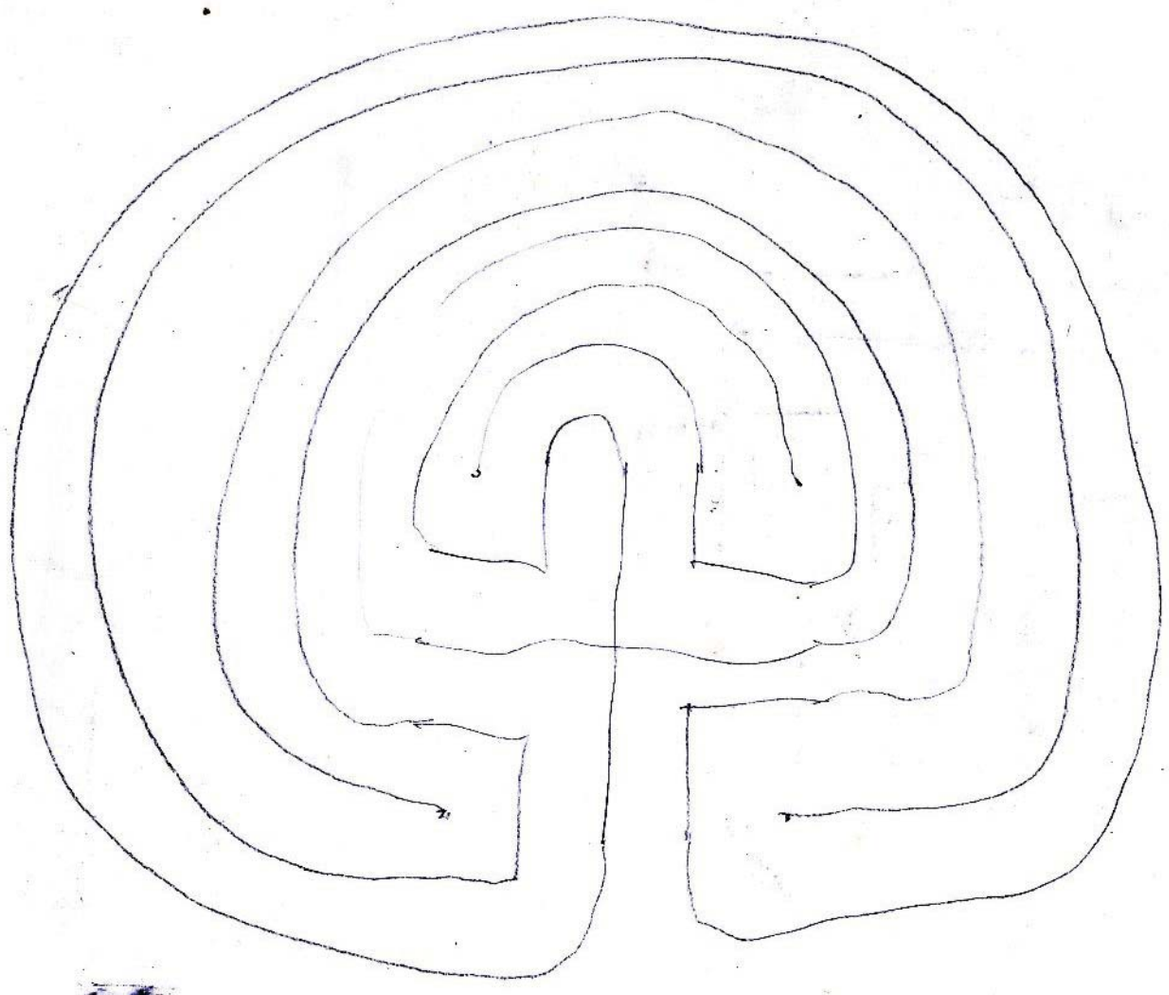


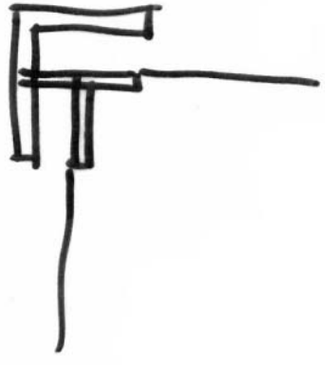

no roof
(stone) (water)
temple
labyrinth
shadow.

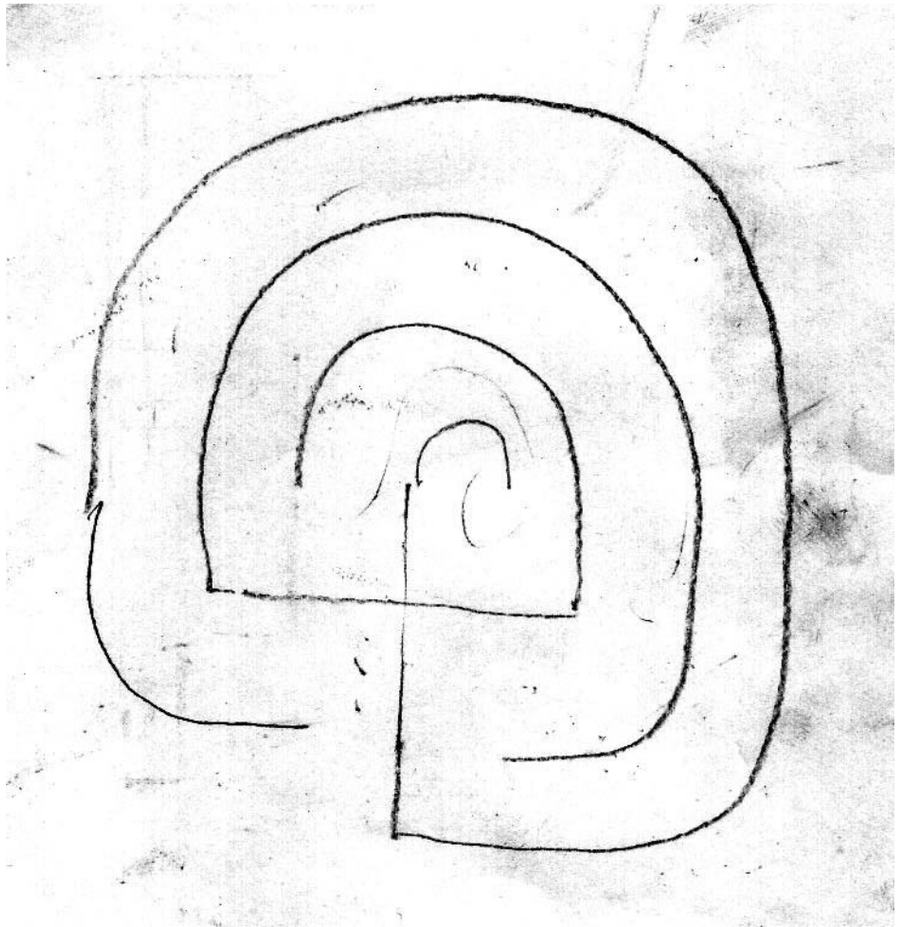


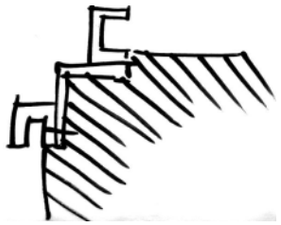

extrem
extrem
dissolve

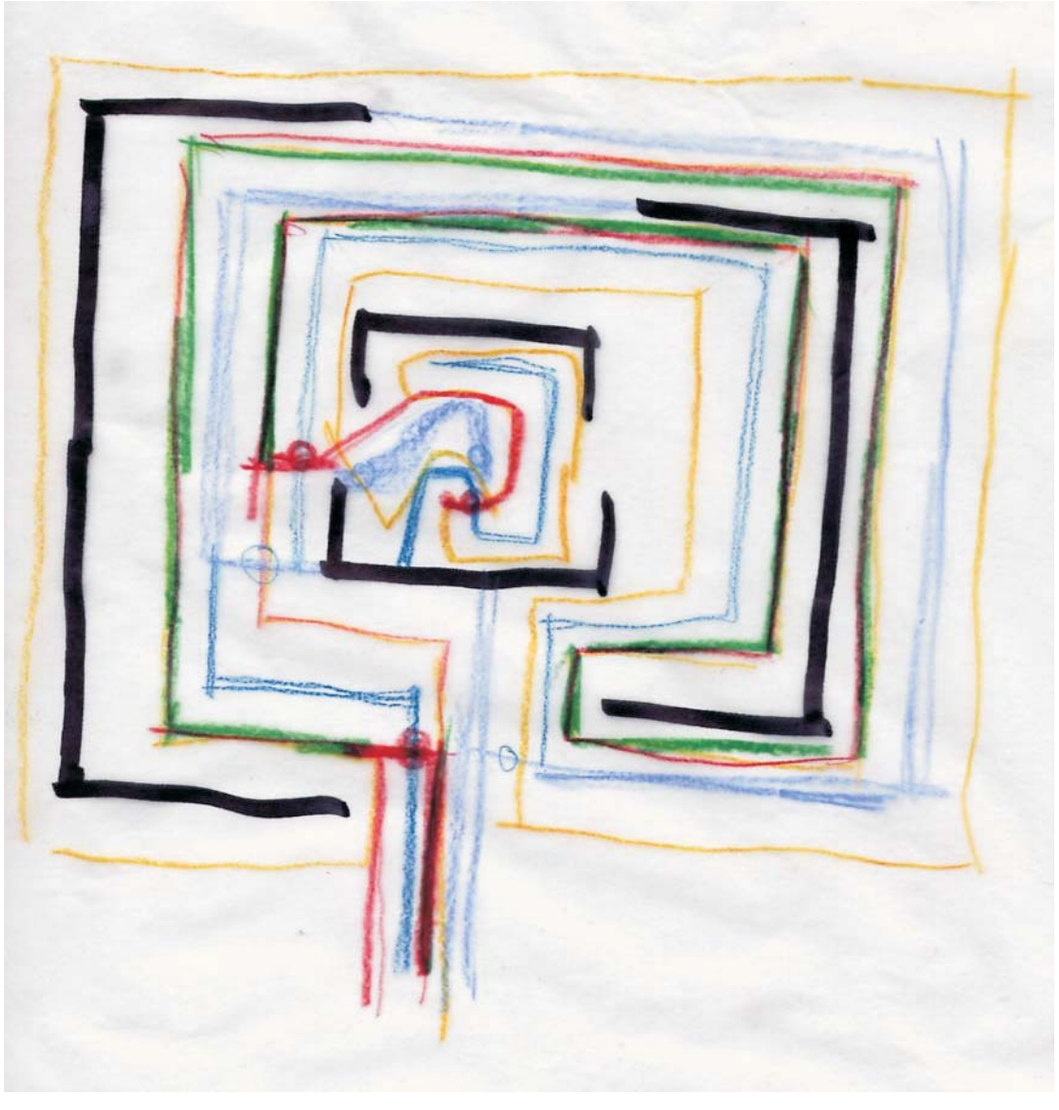


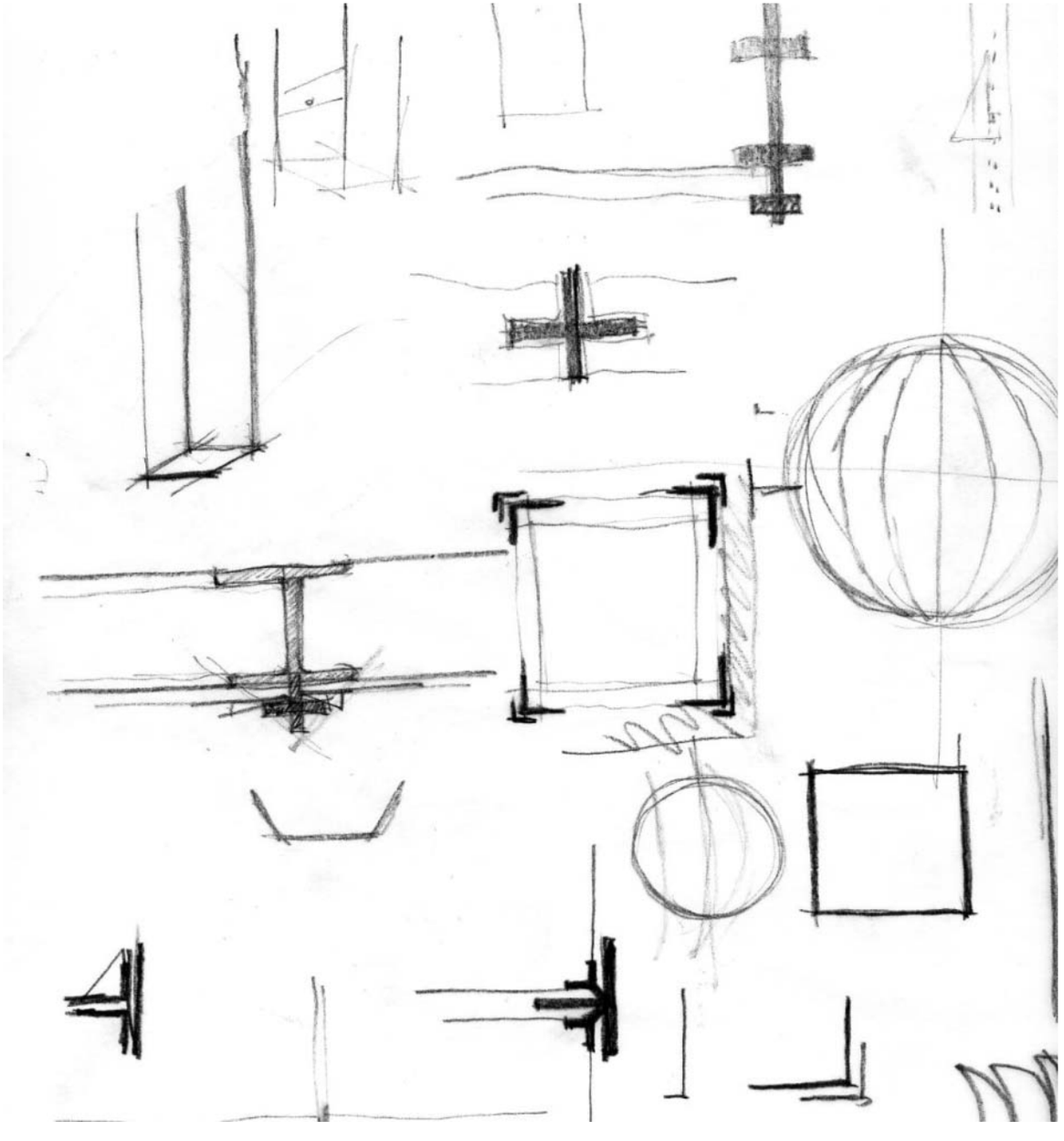


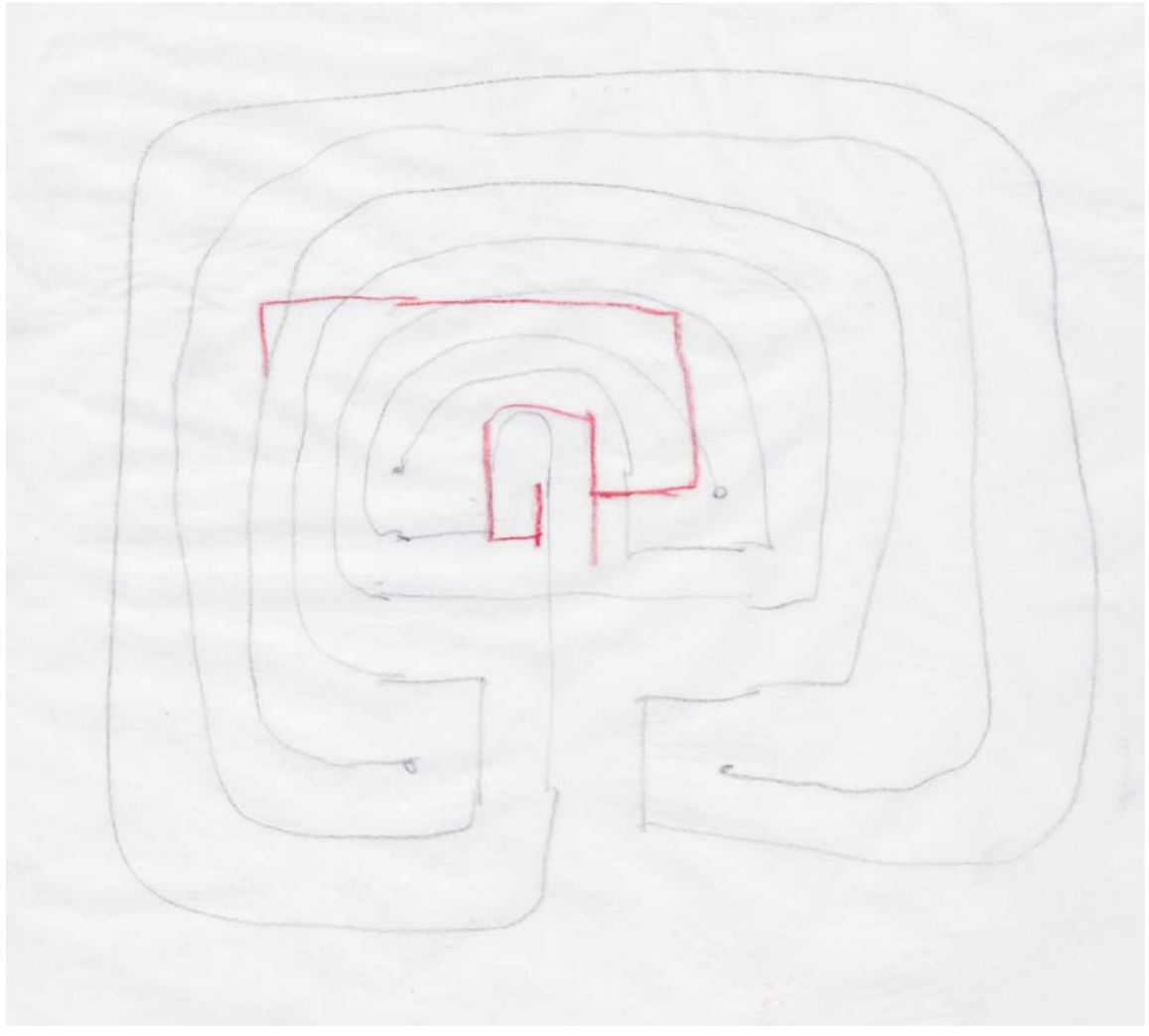


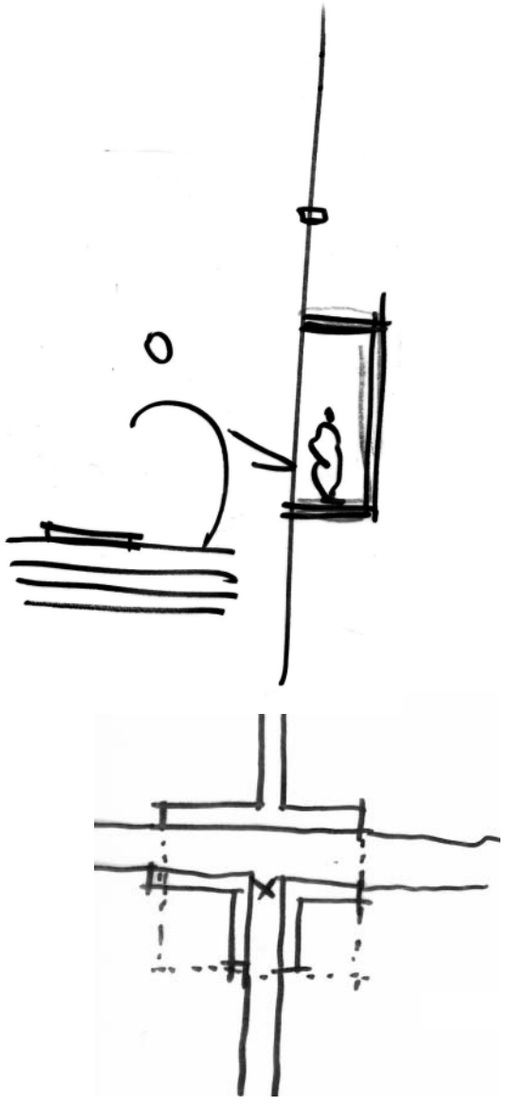










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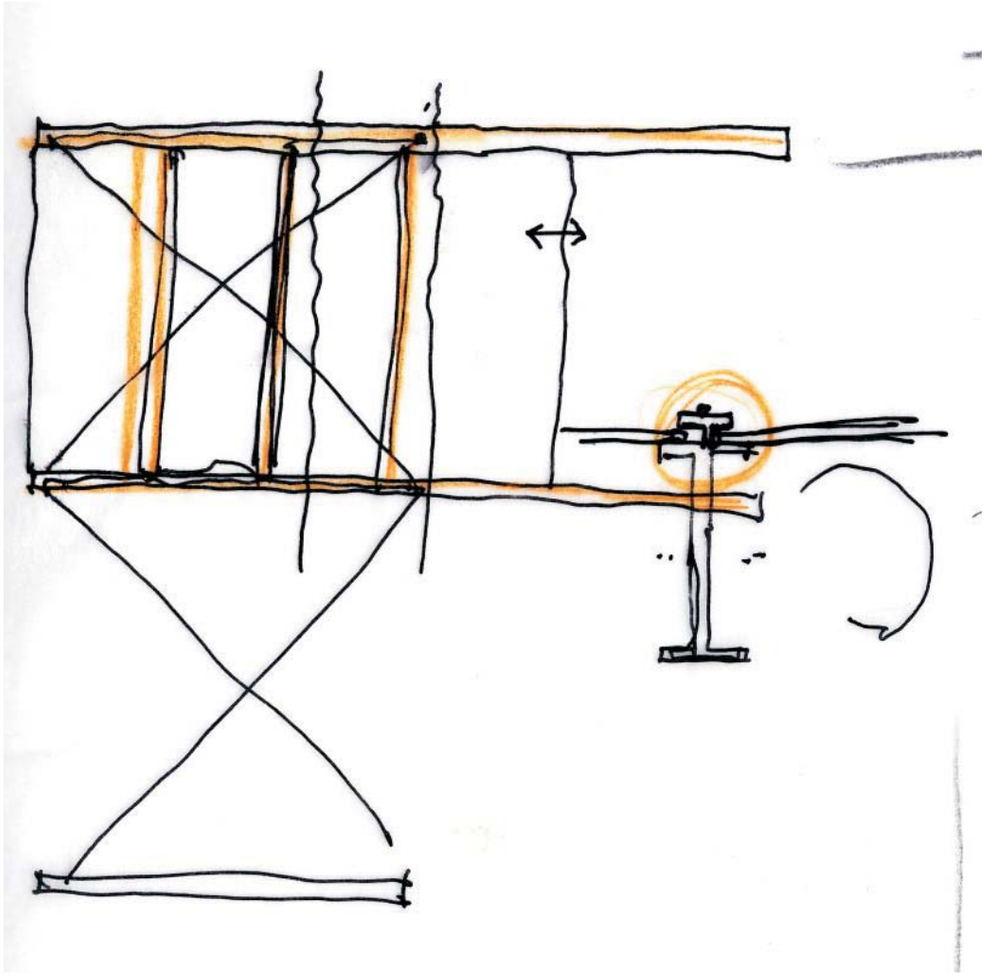

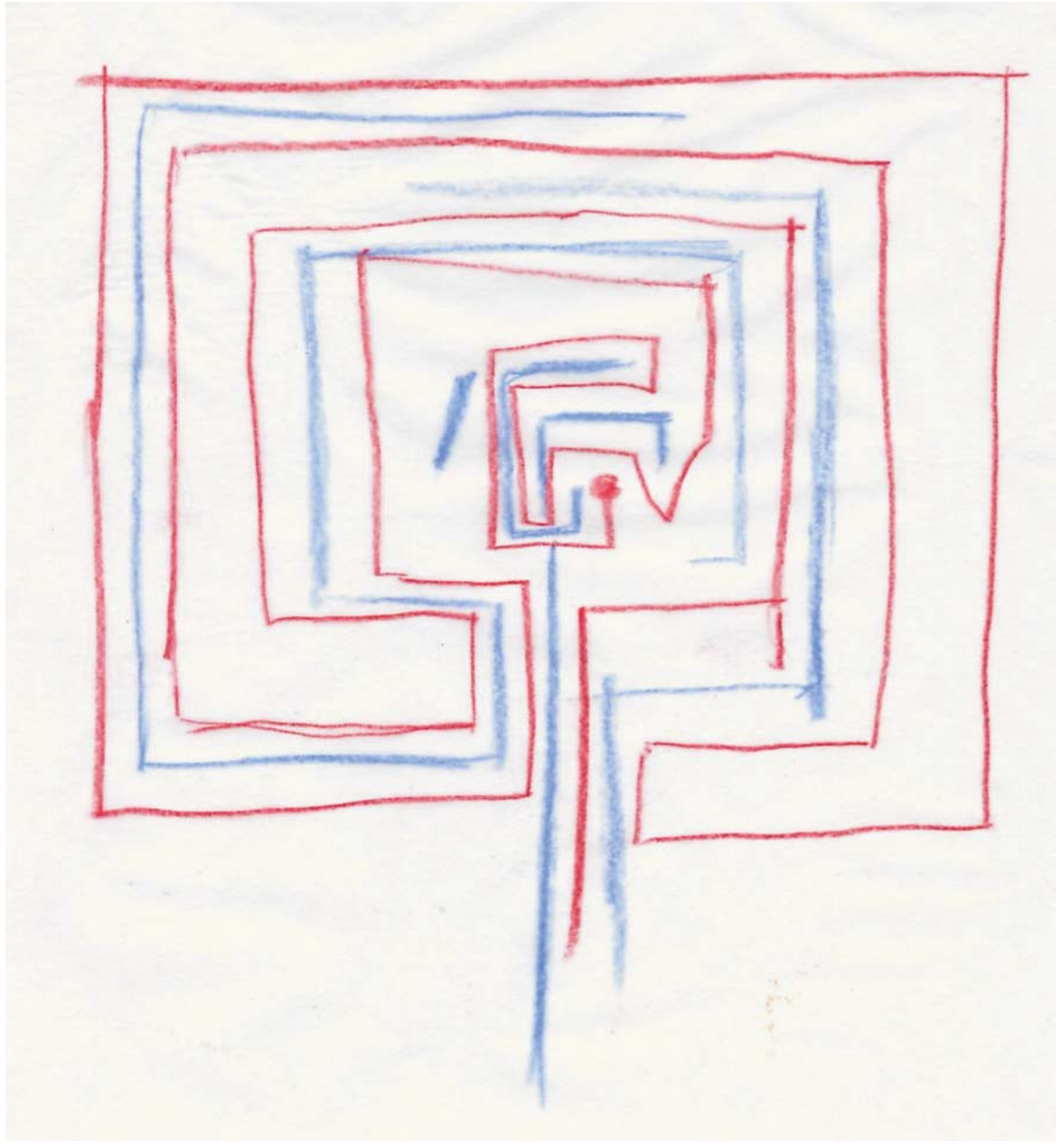

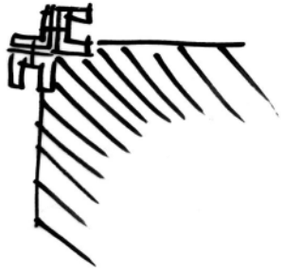

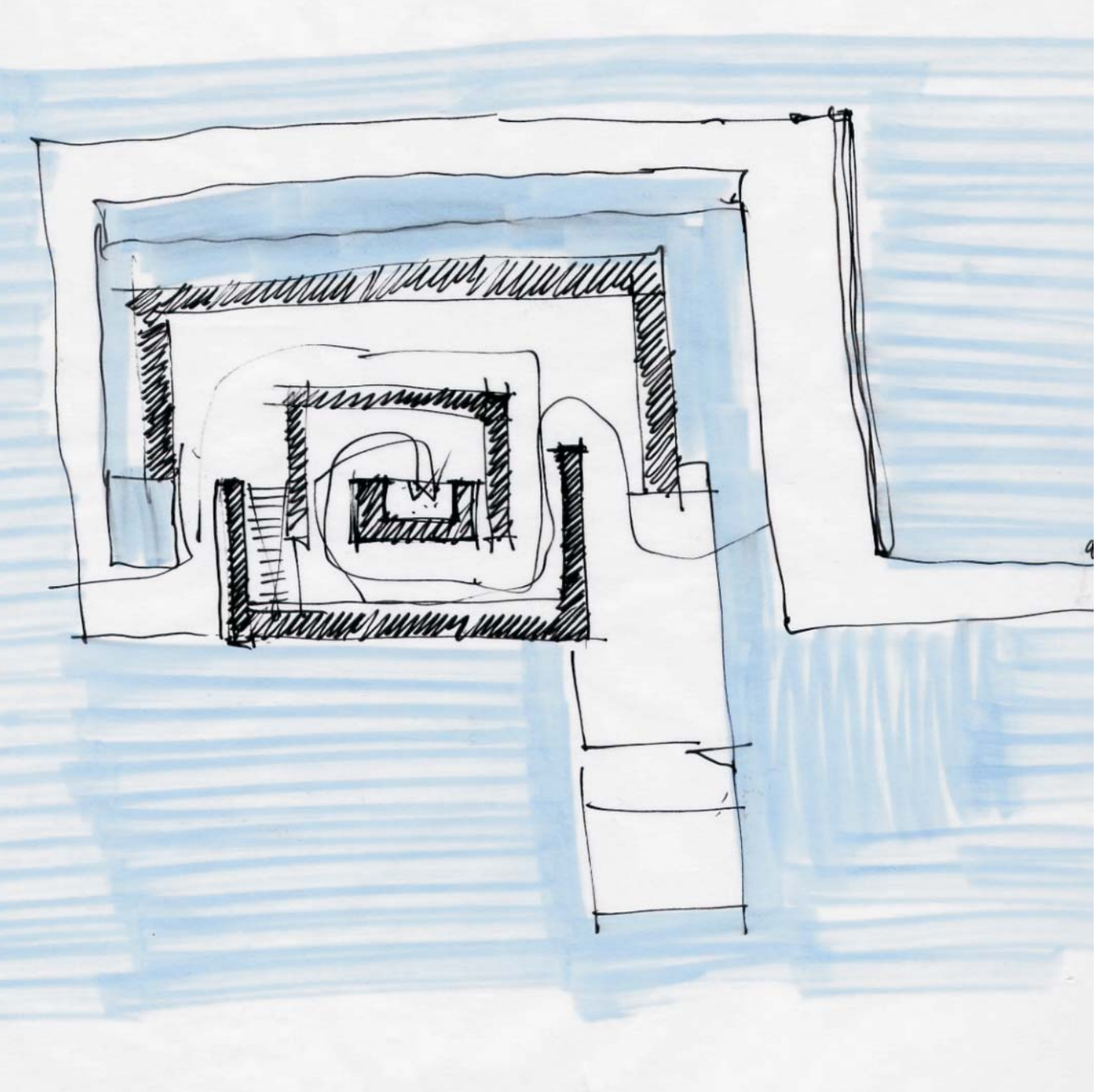

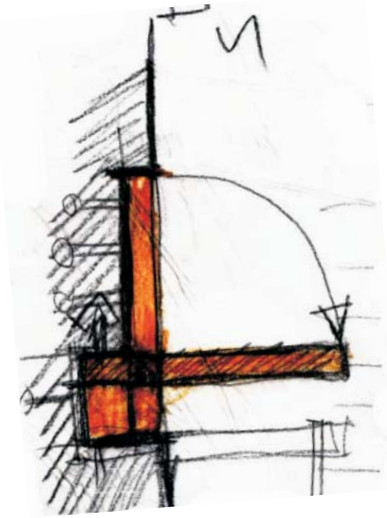

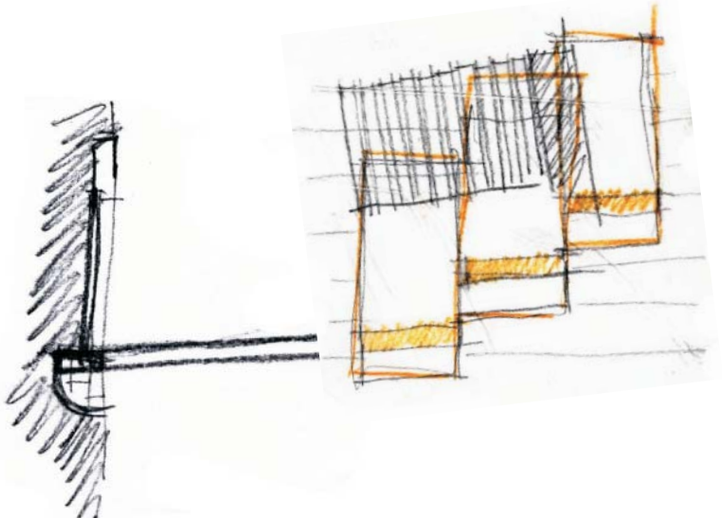

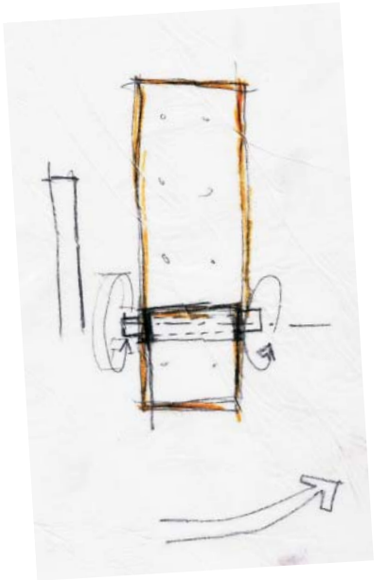

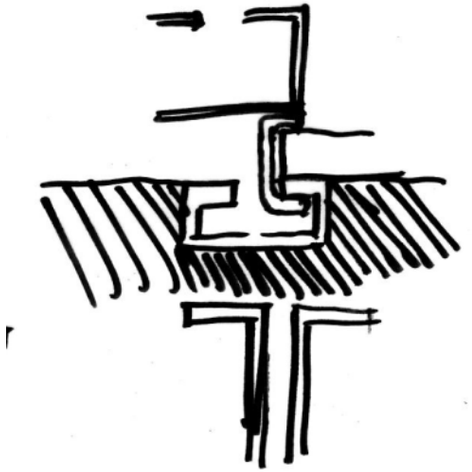

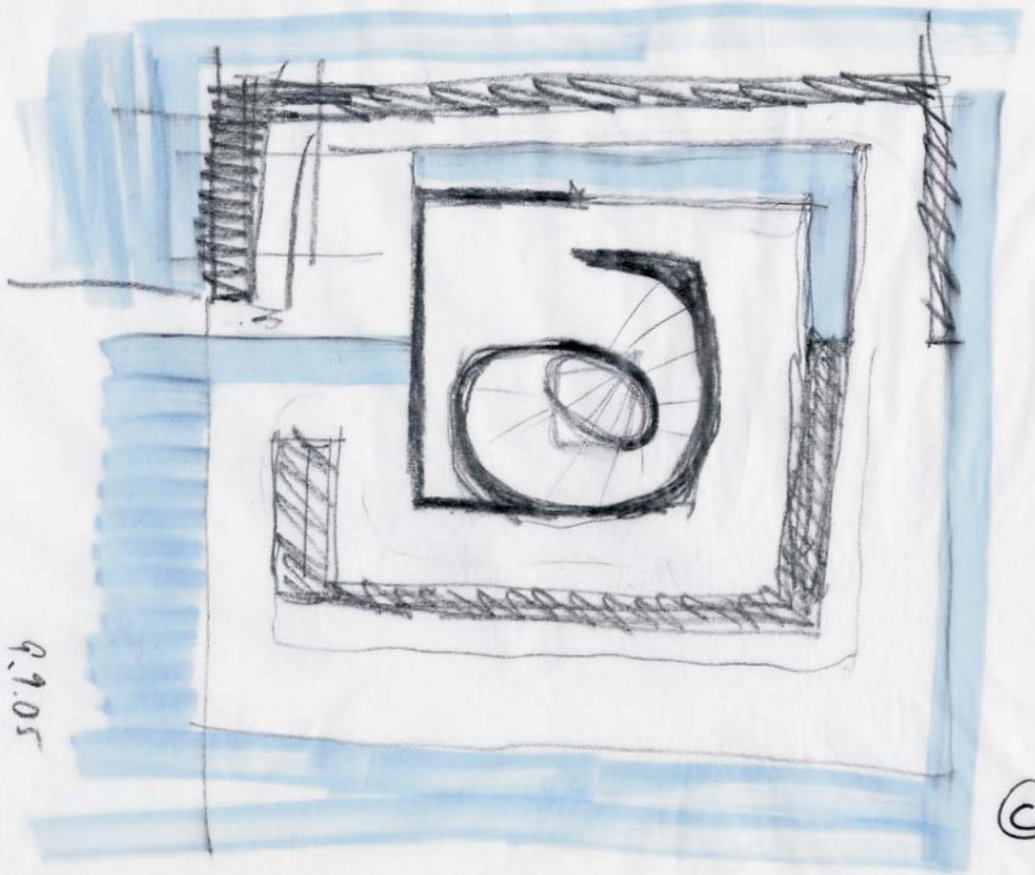
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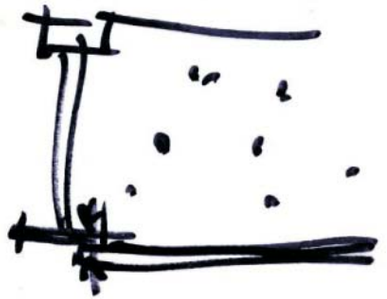

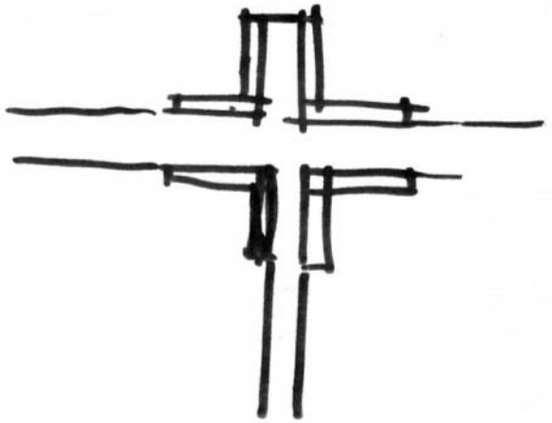

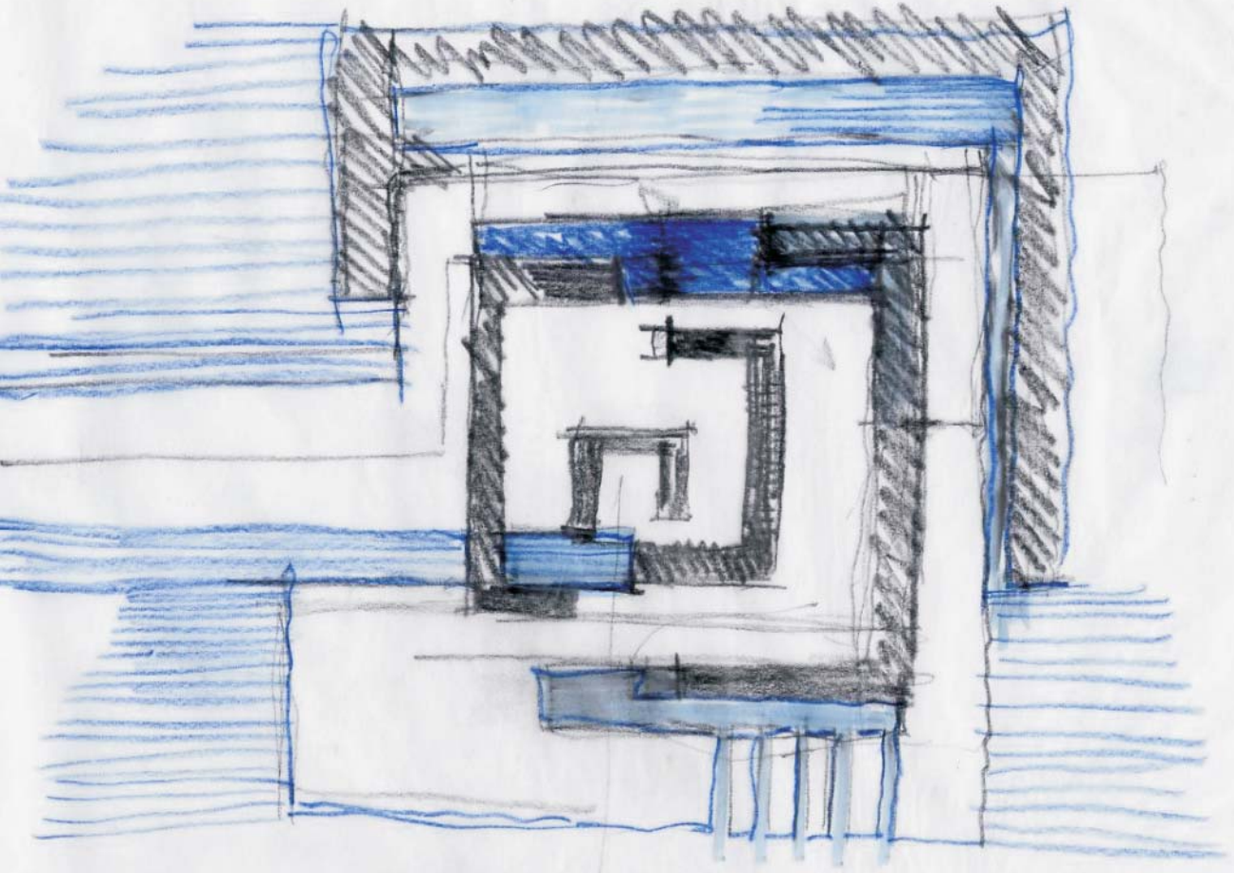

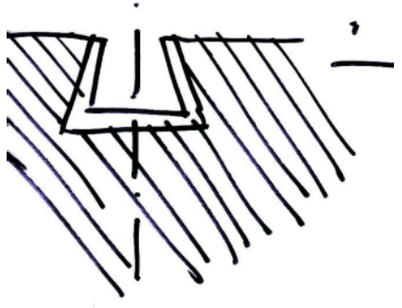

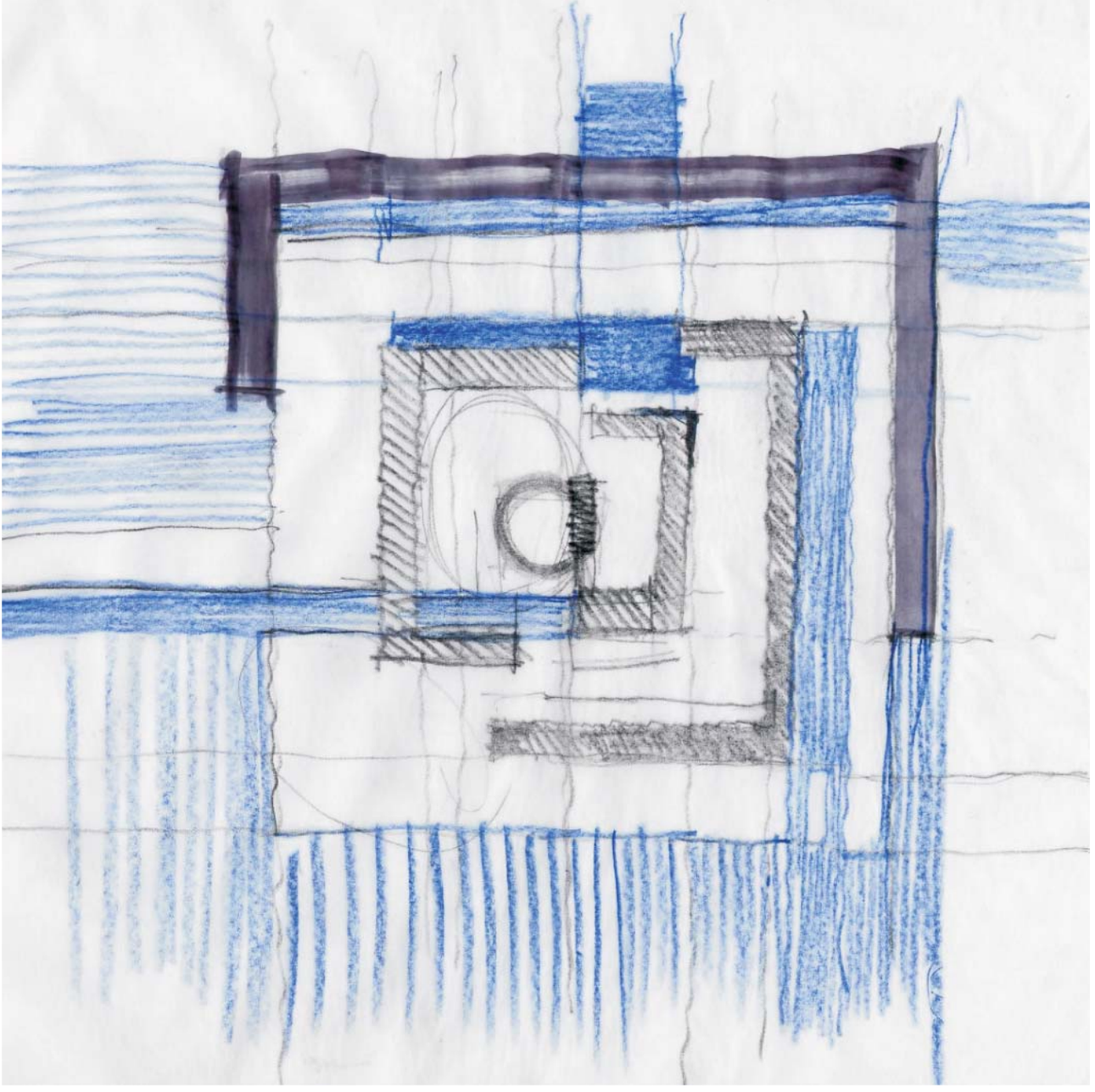

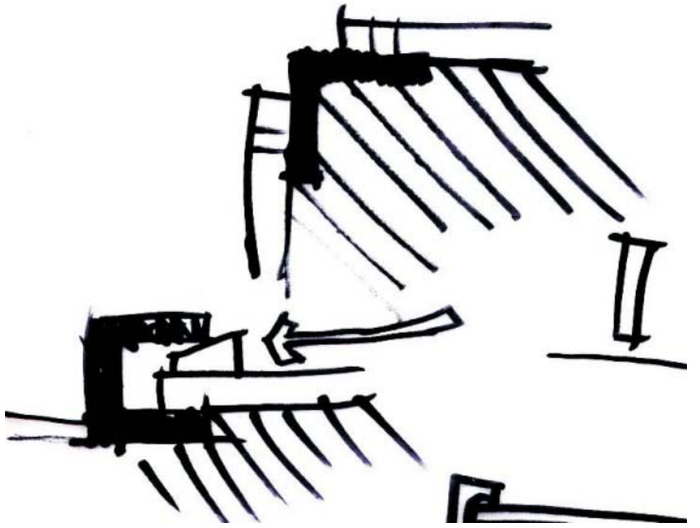

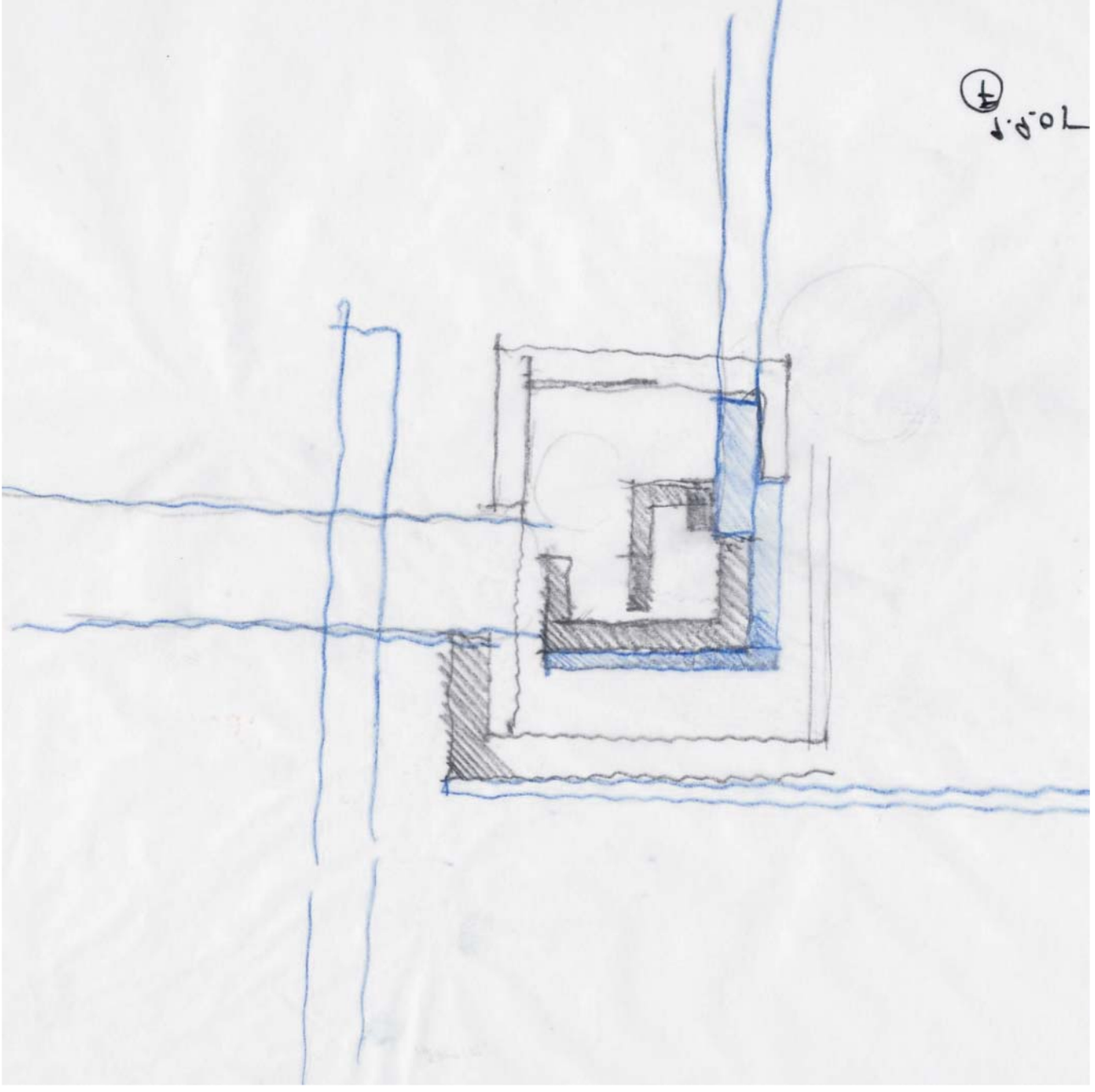

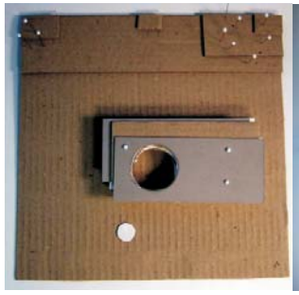

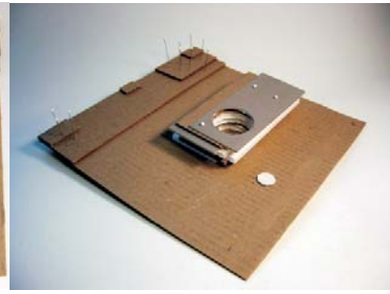

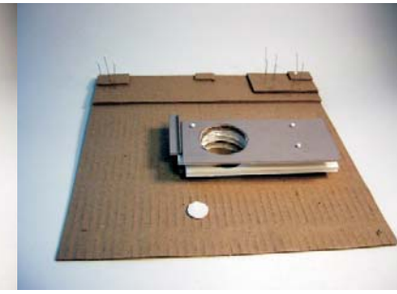

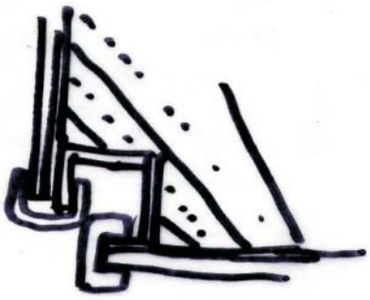

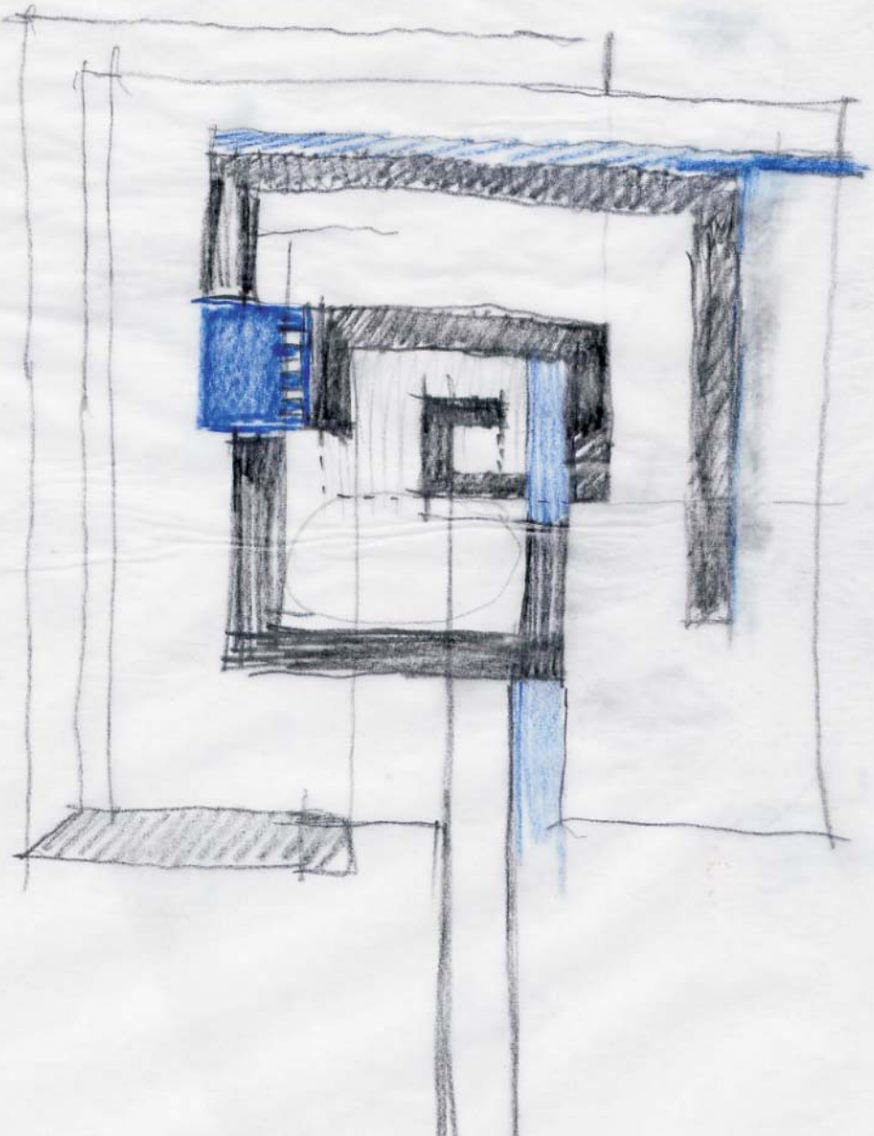

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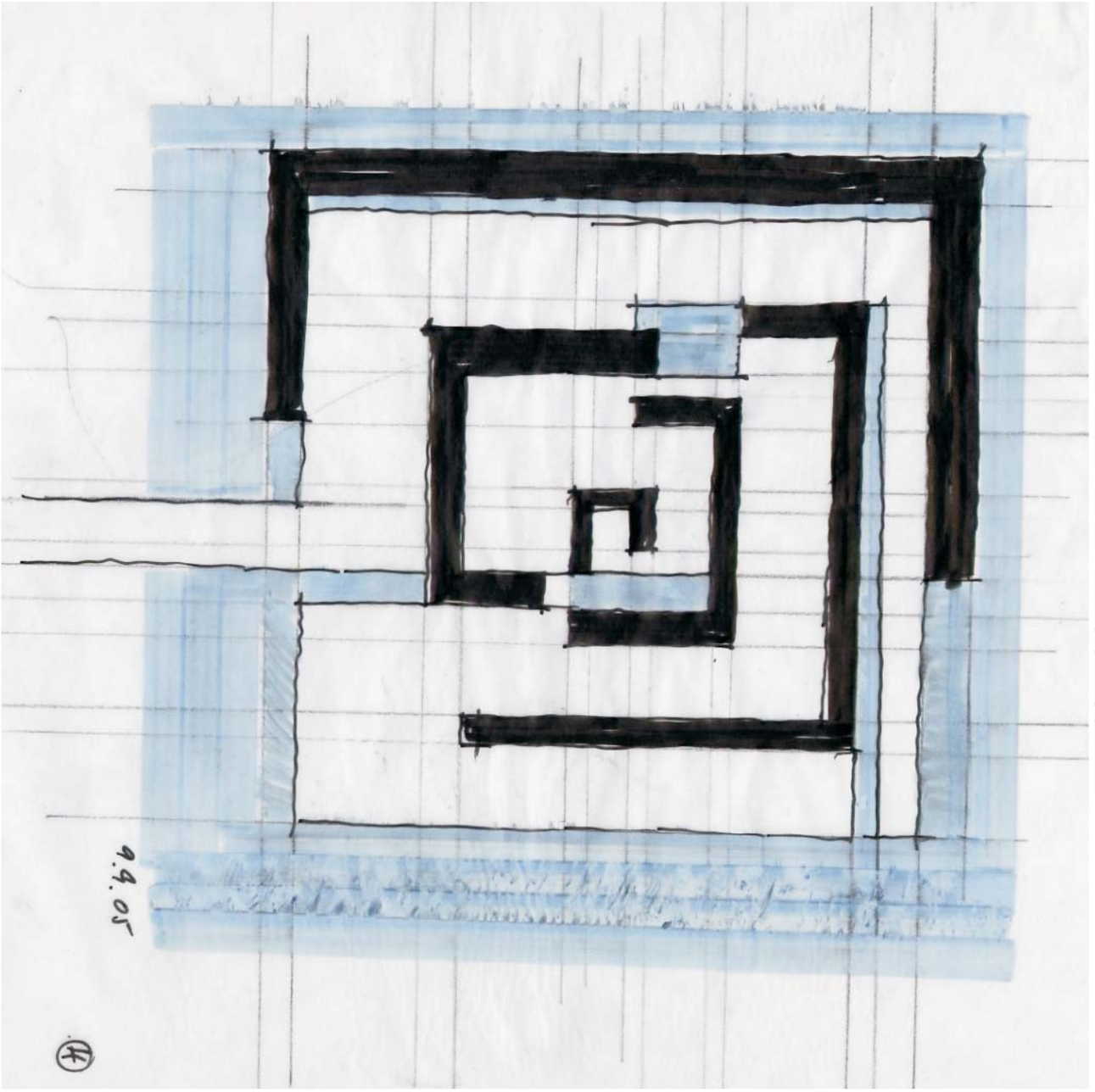
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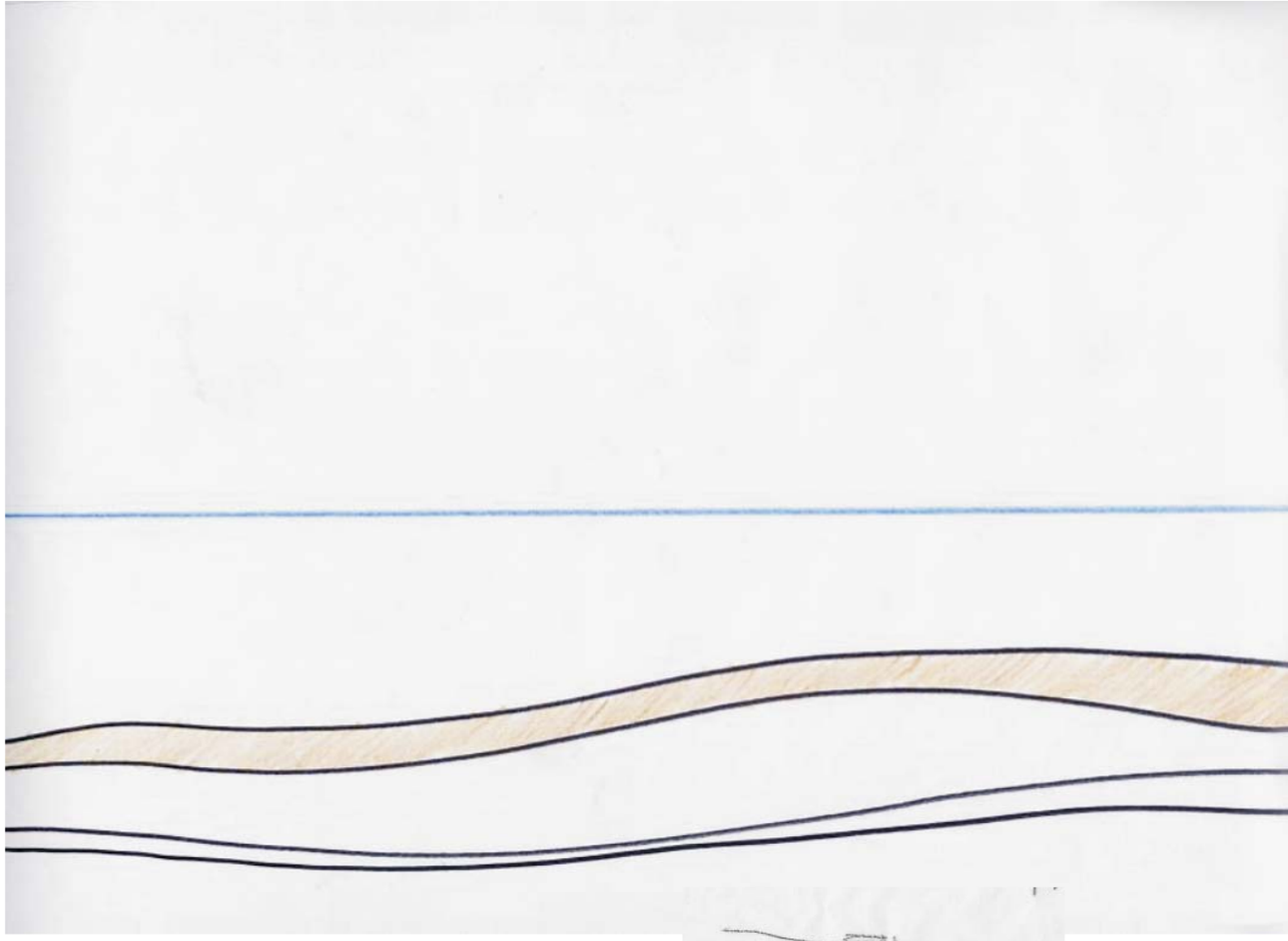

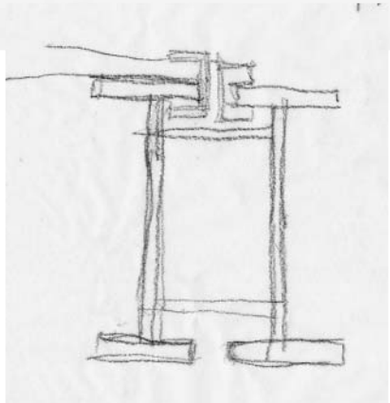

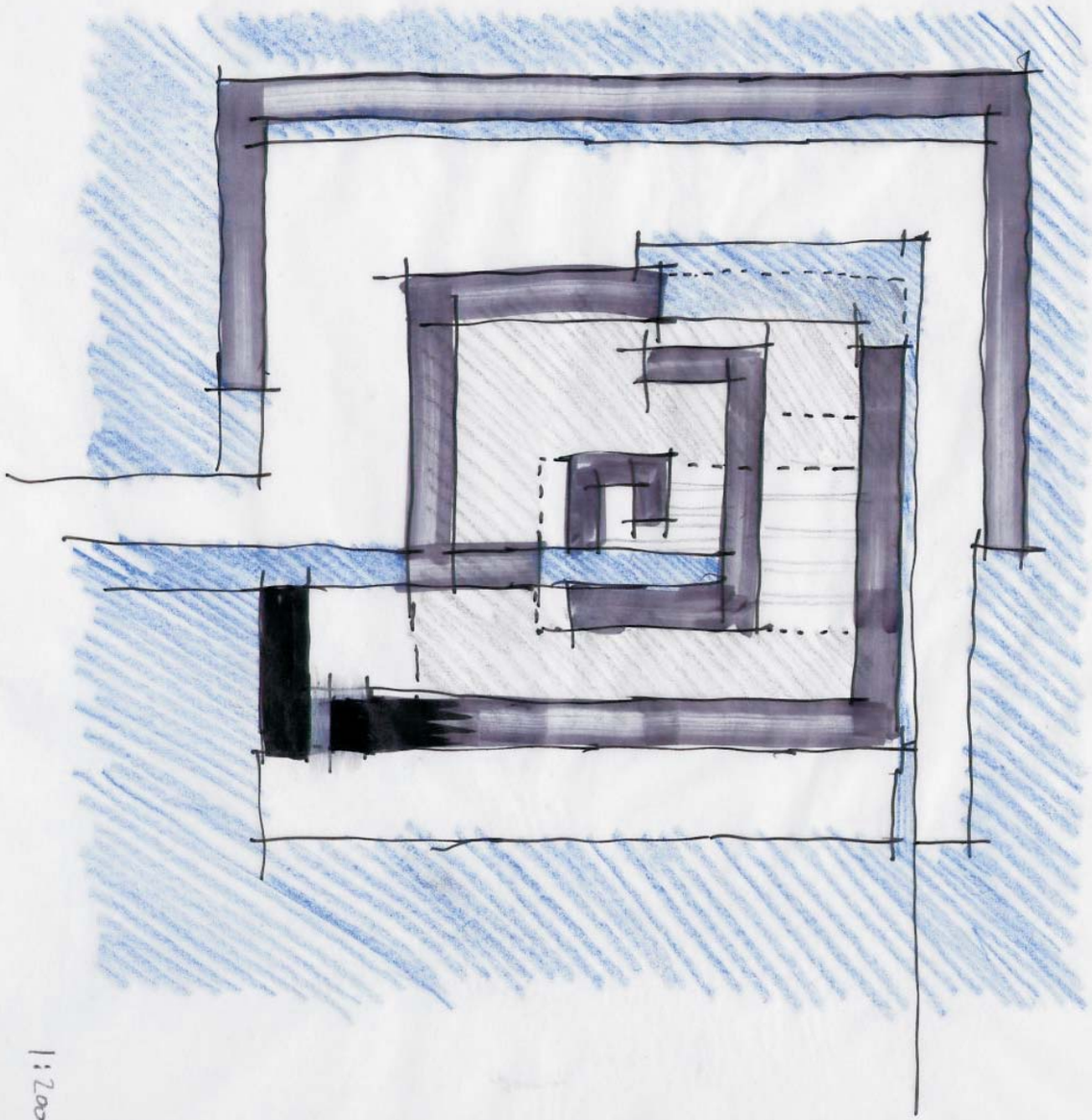

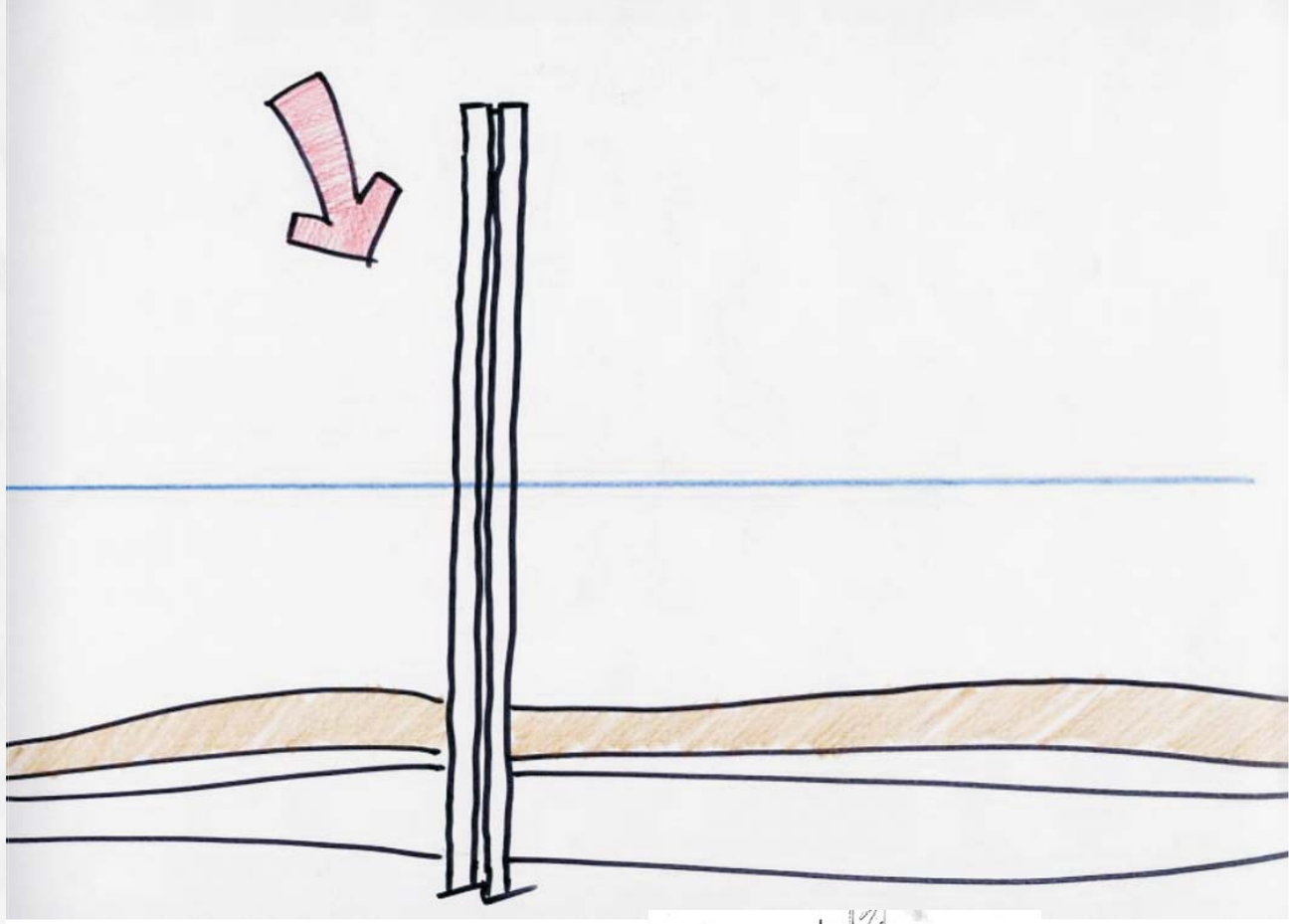

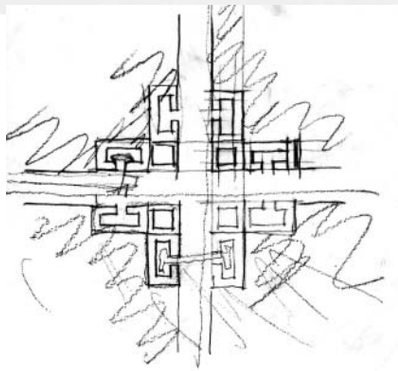

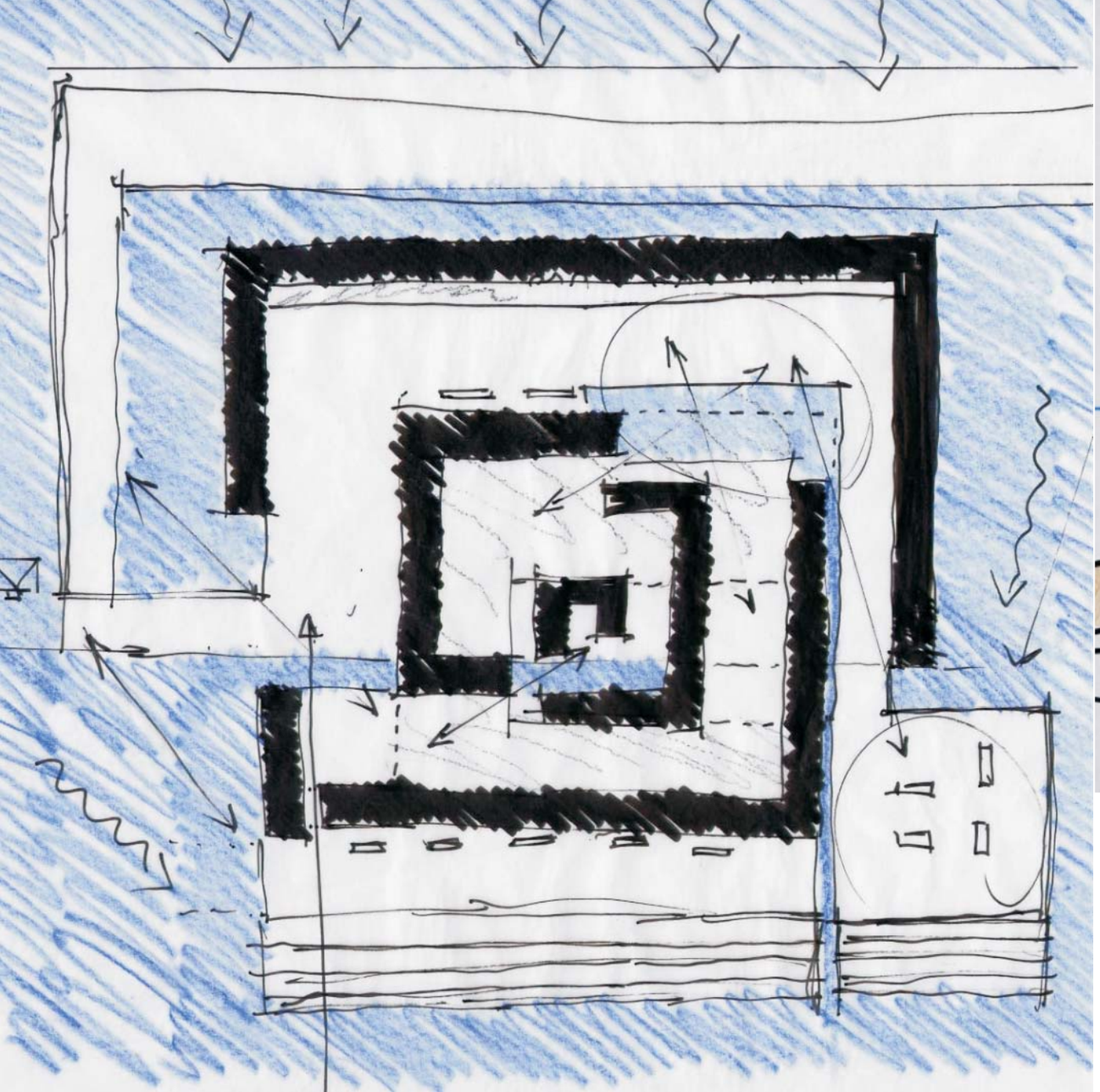

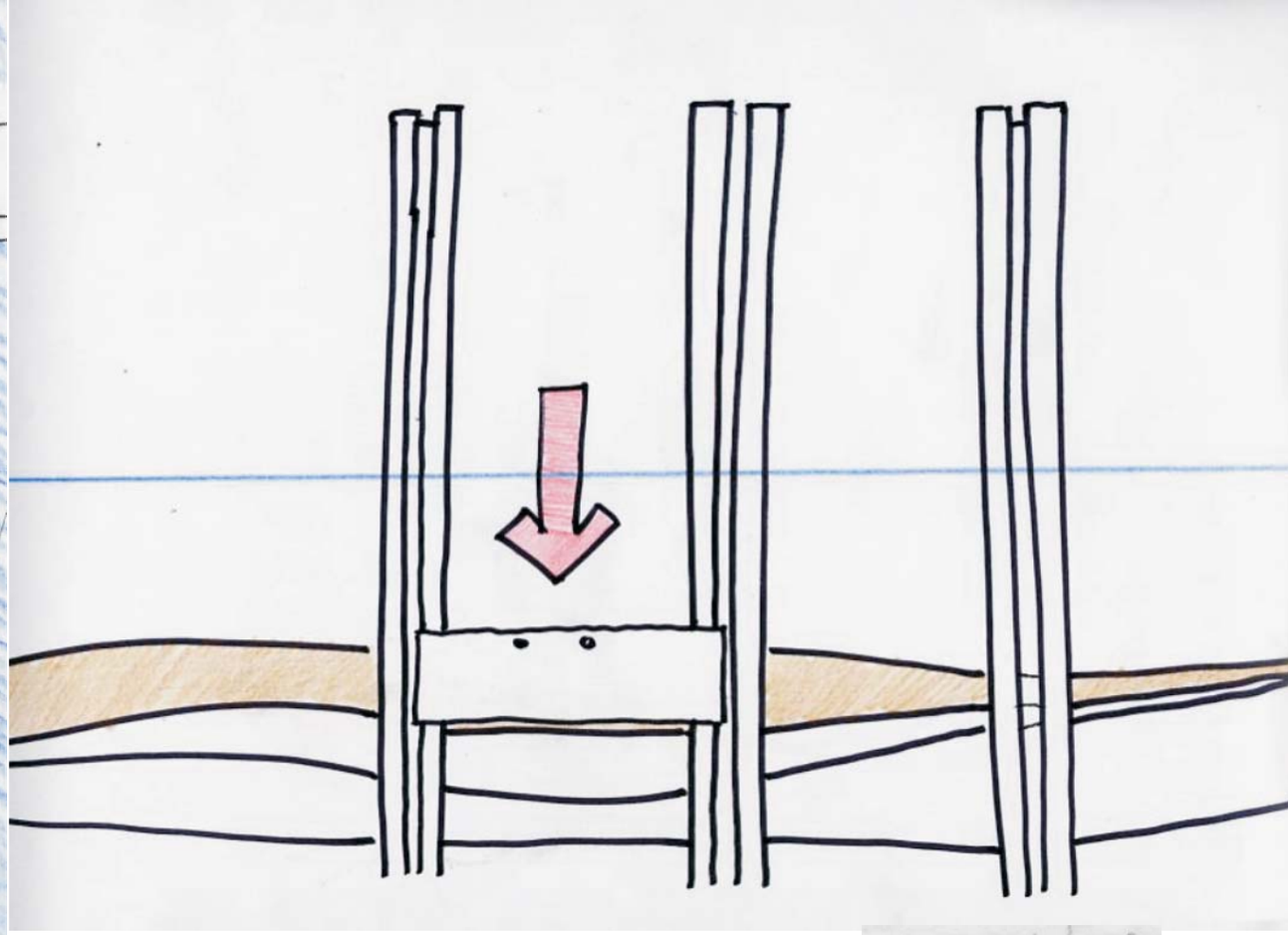

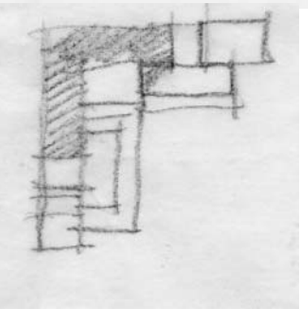

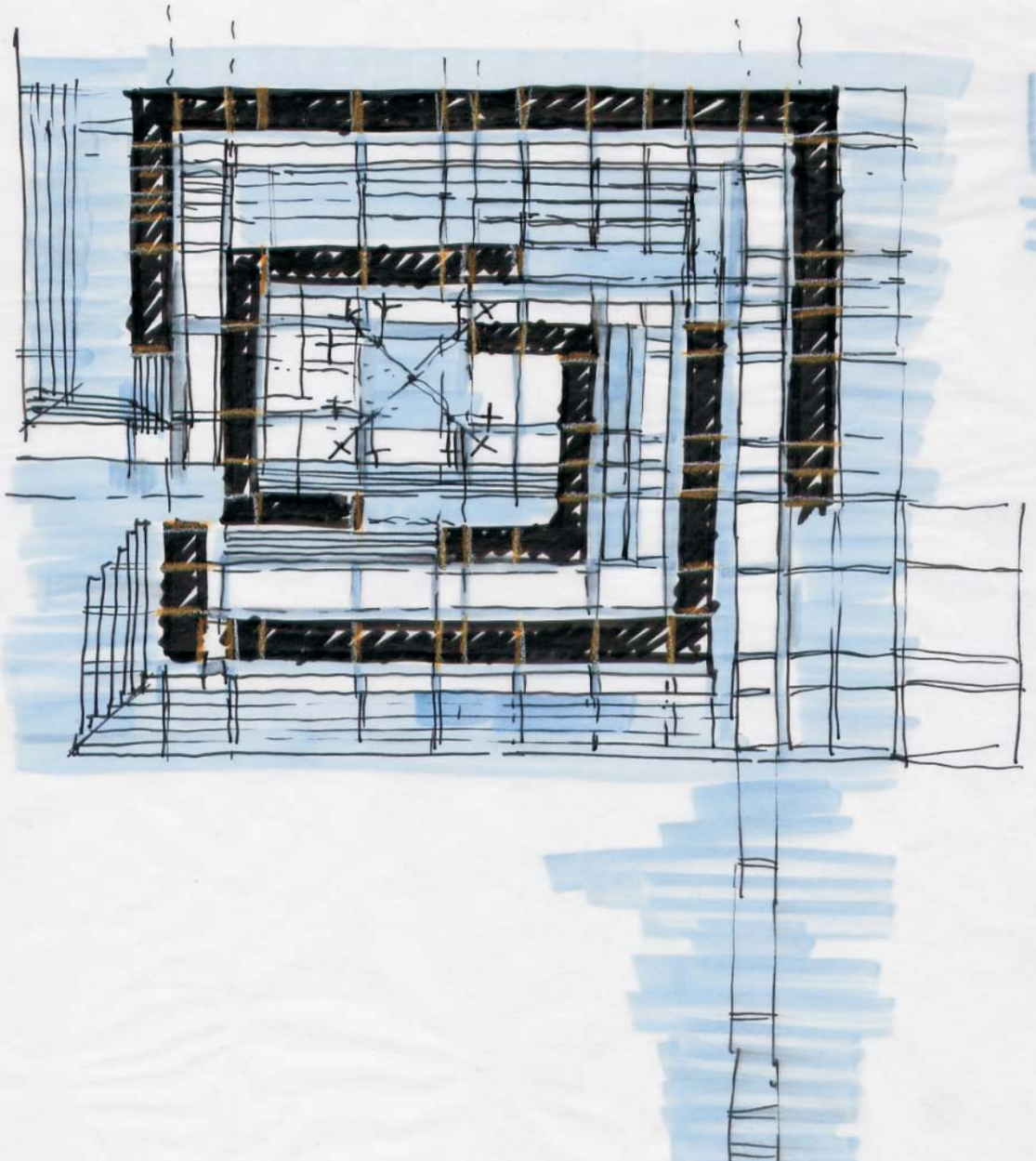

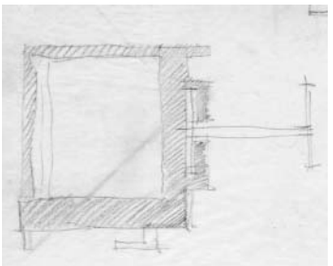

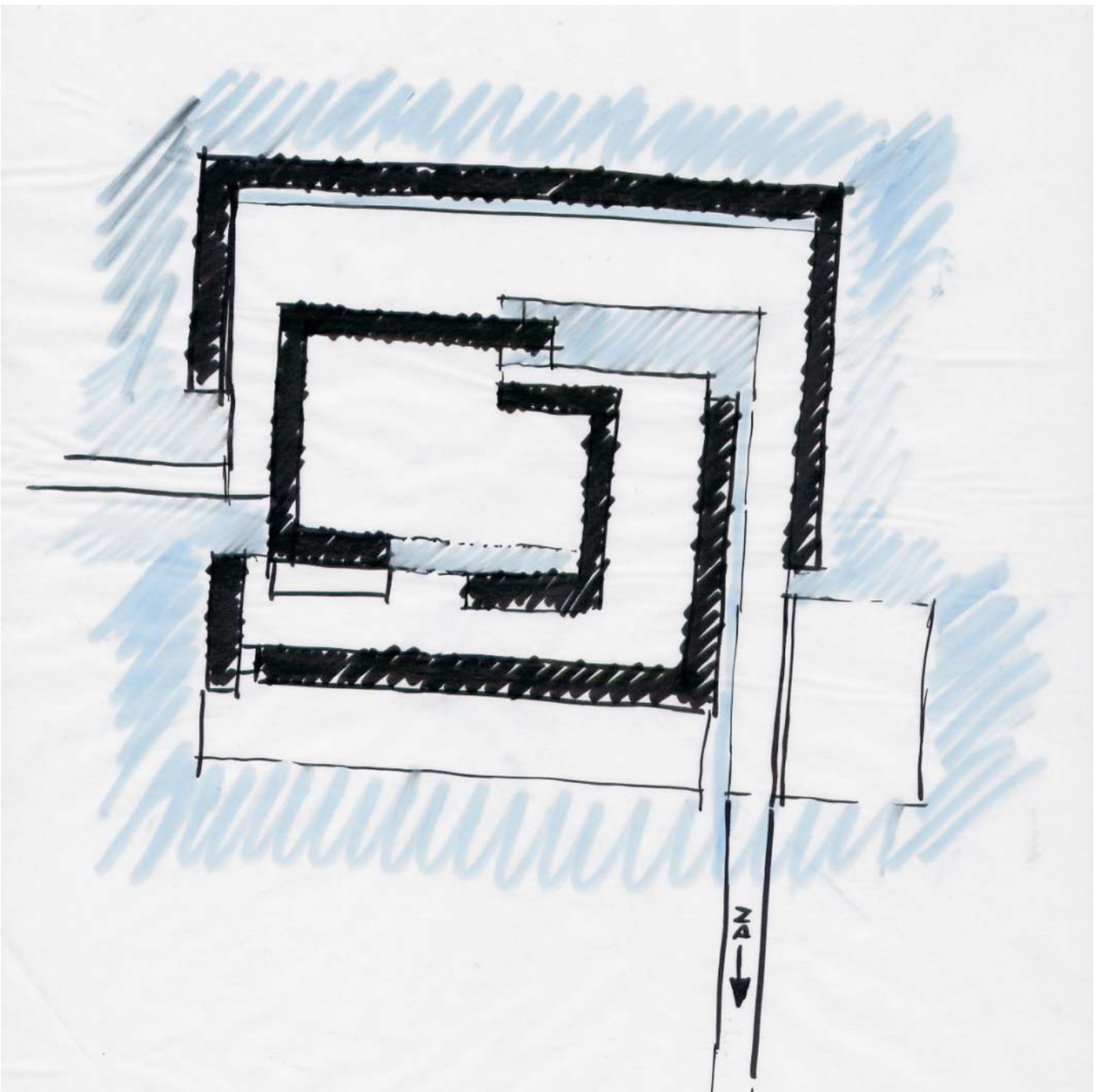
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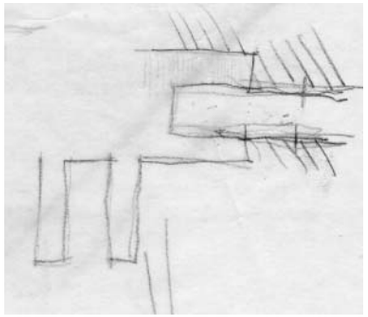

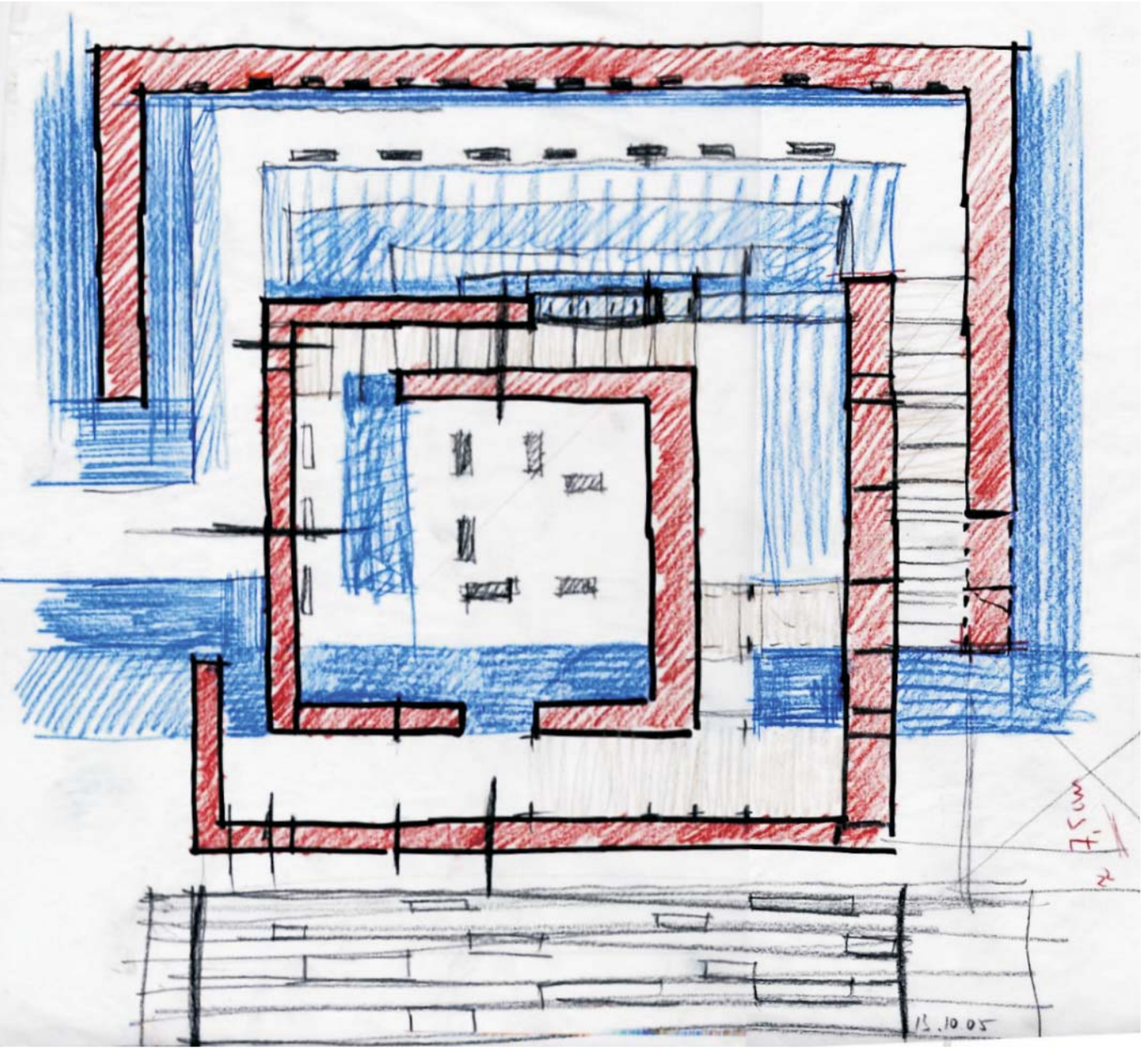

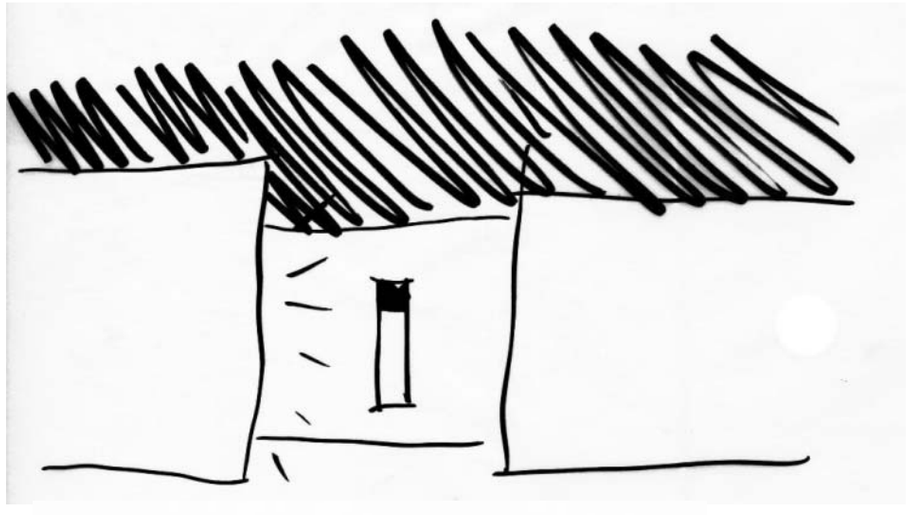

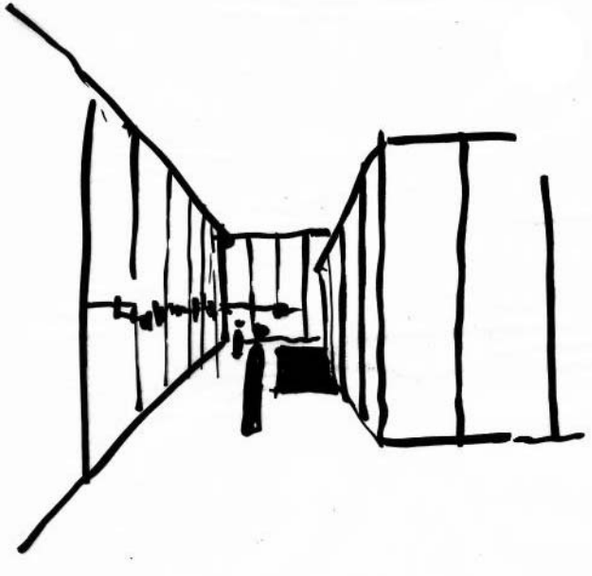

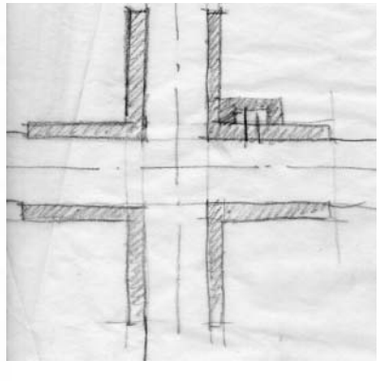

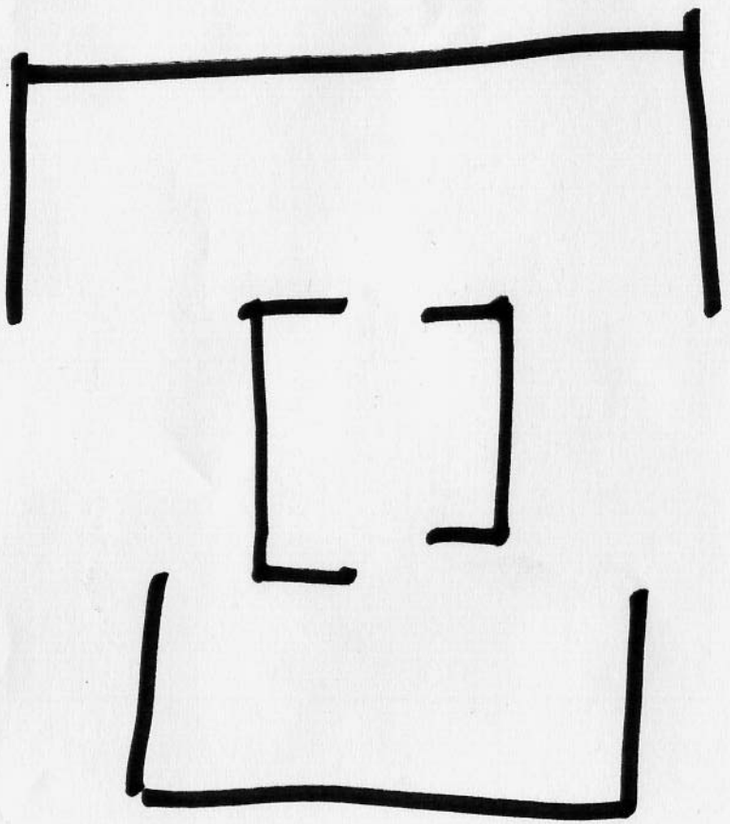

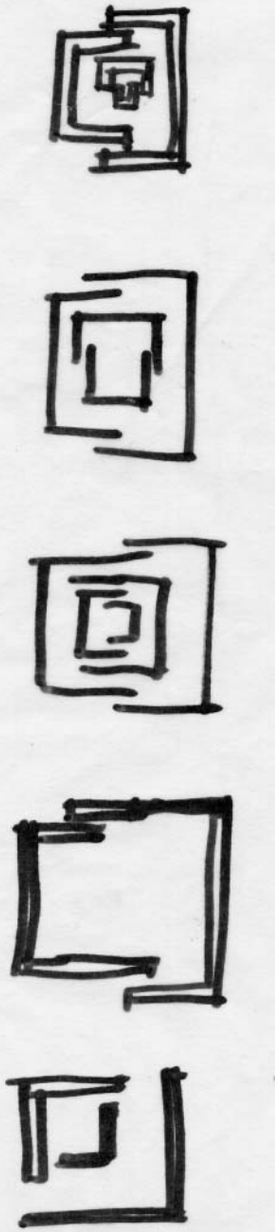

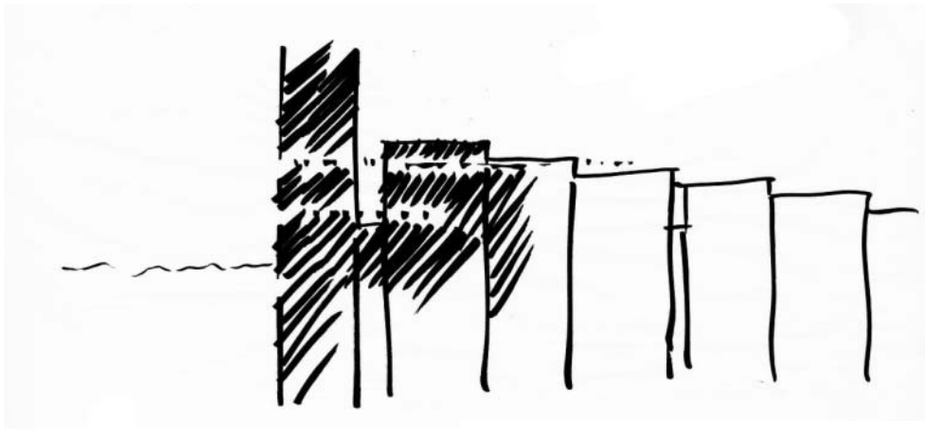

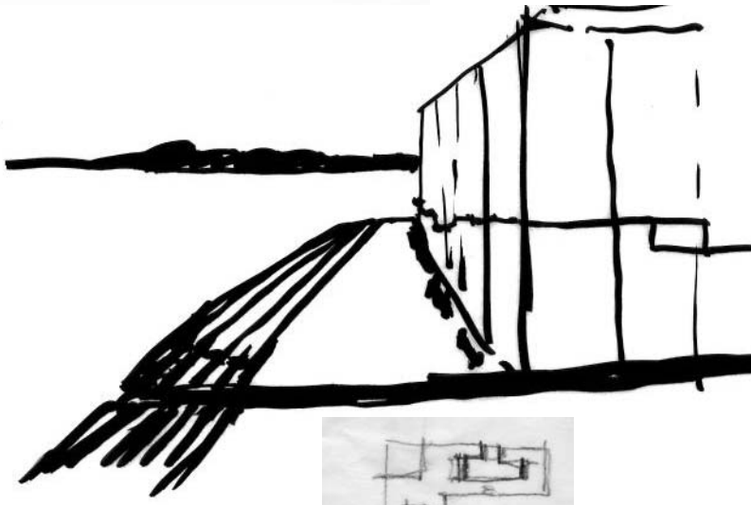

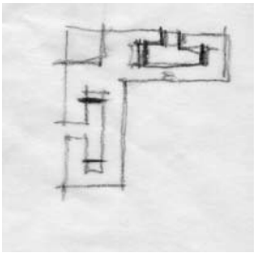

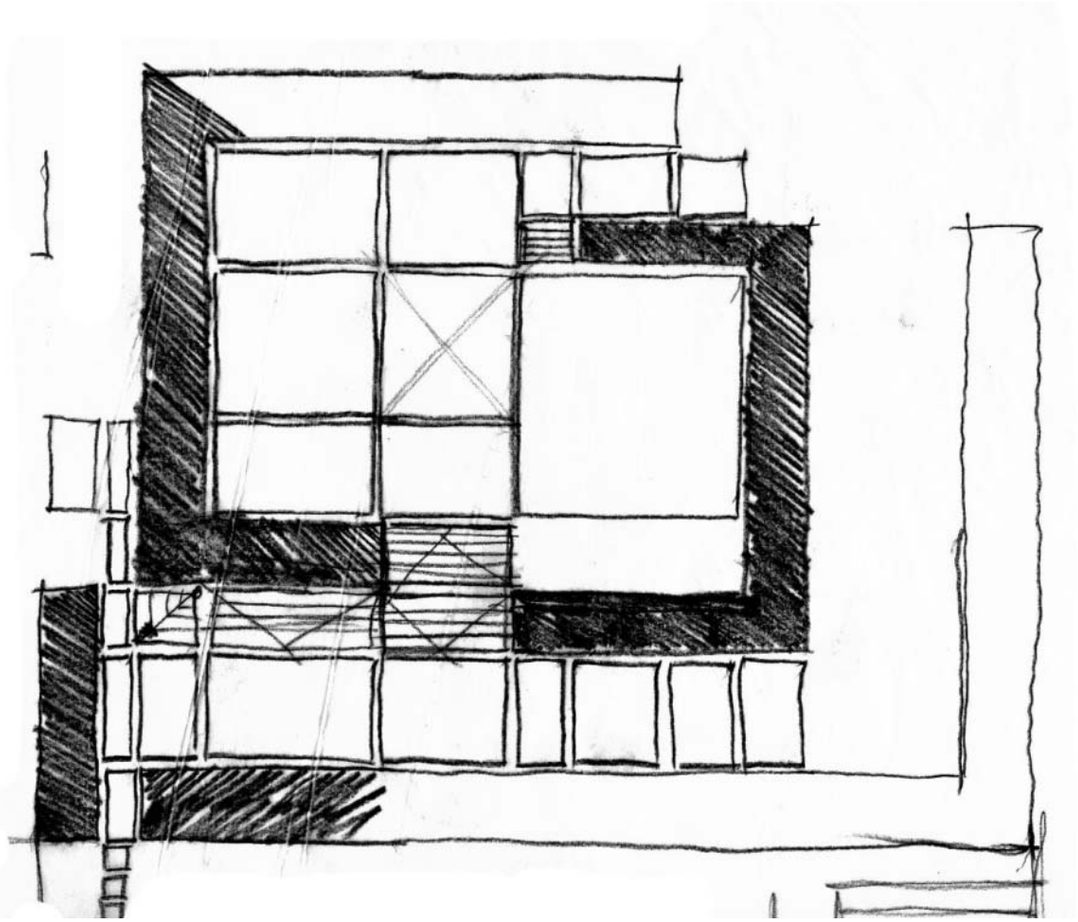

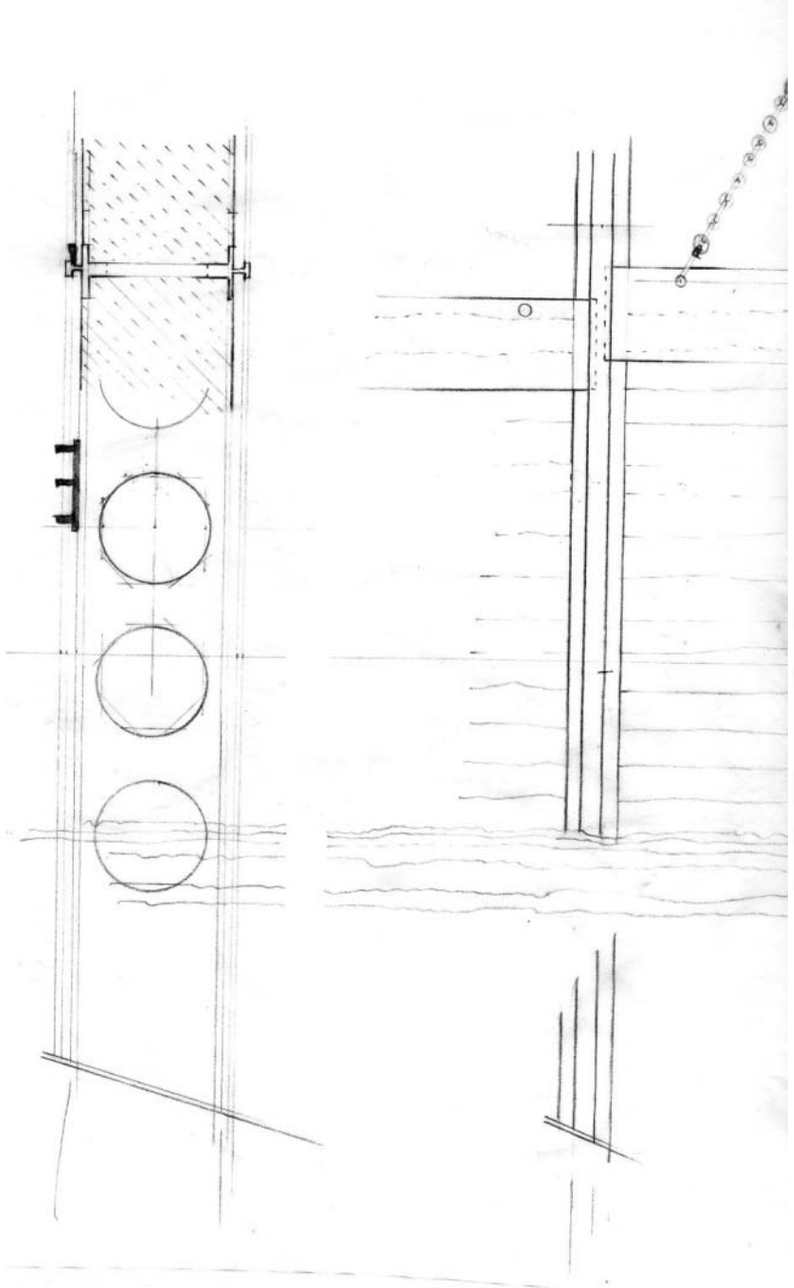

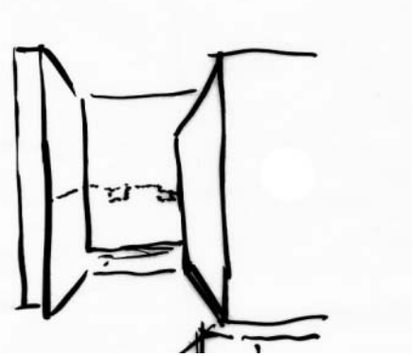

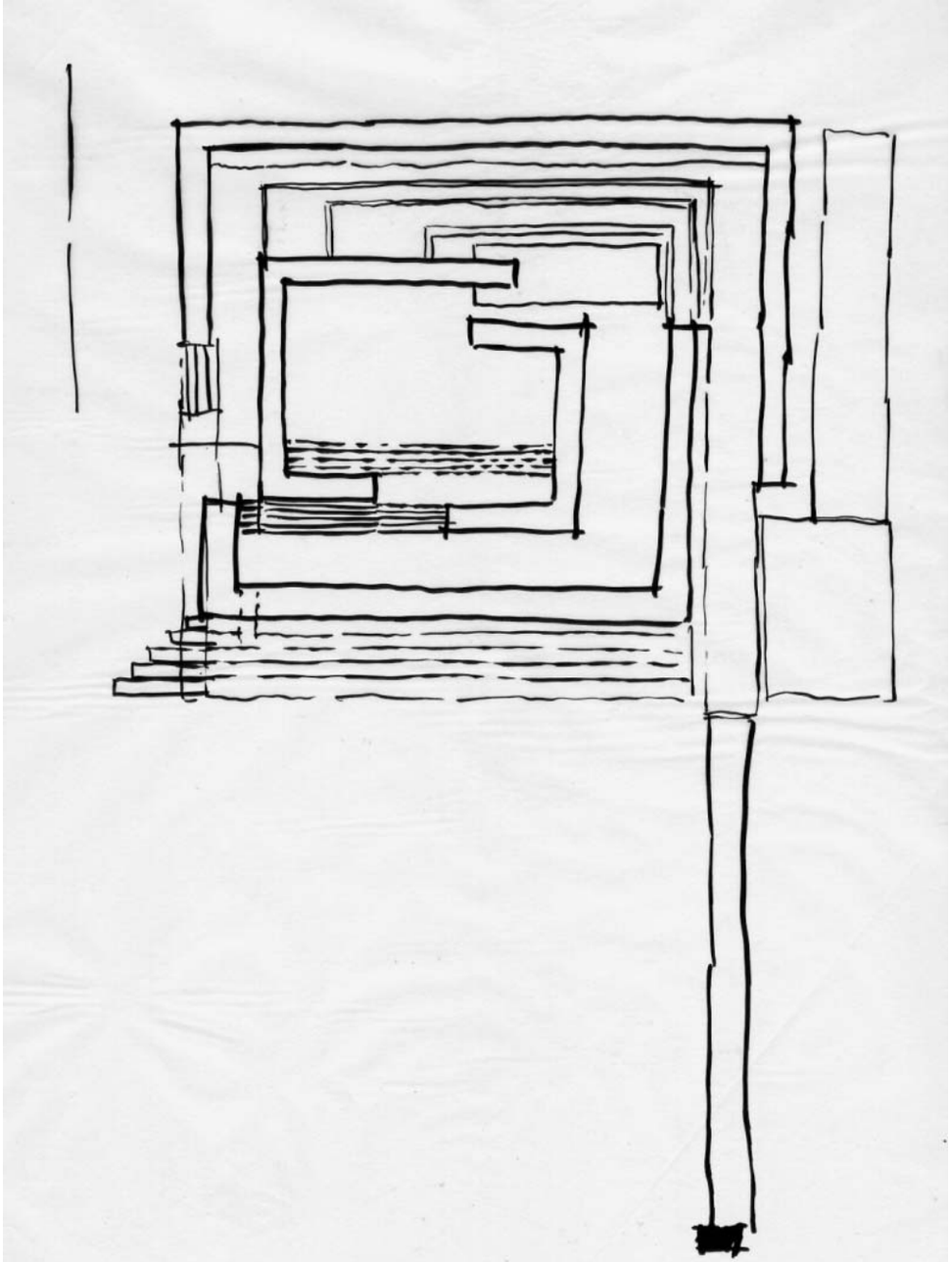

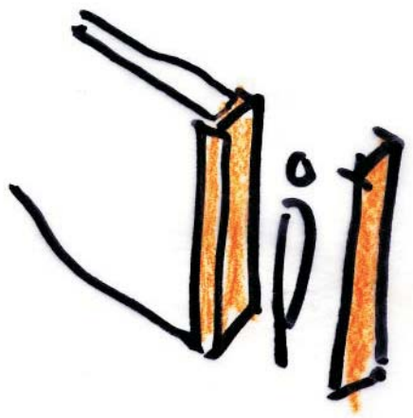

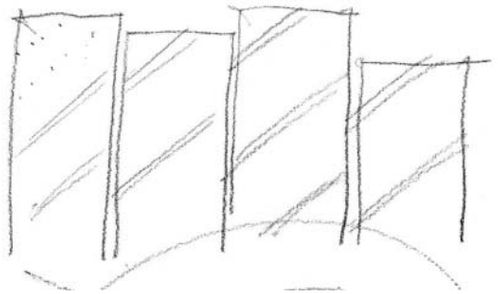

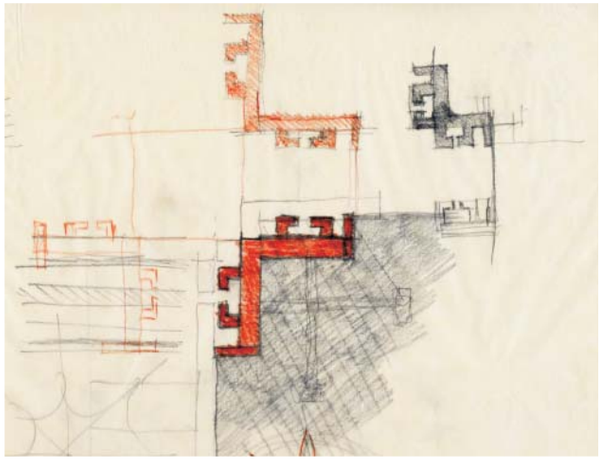

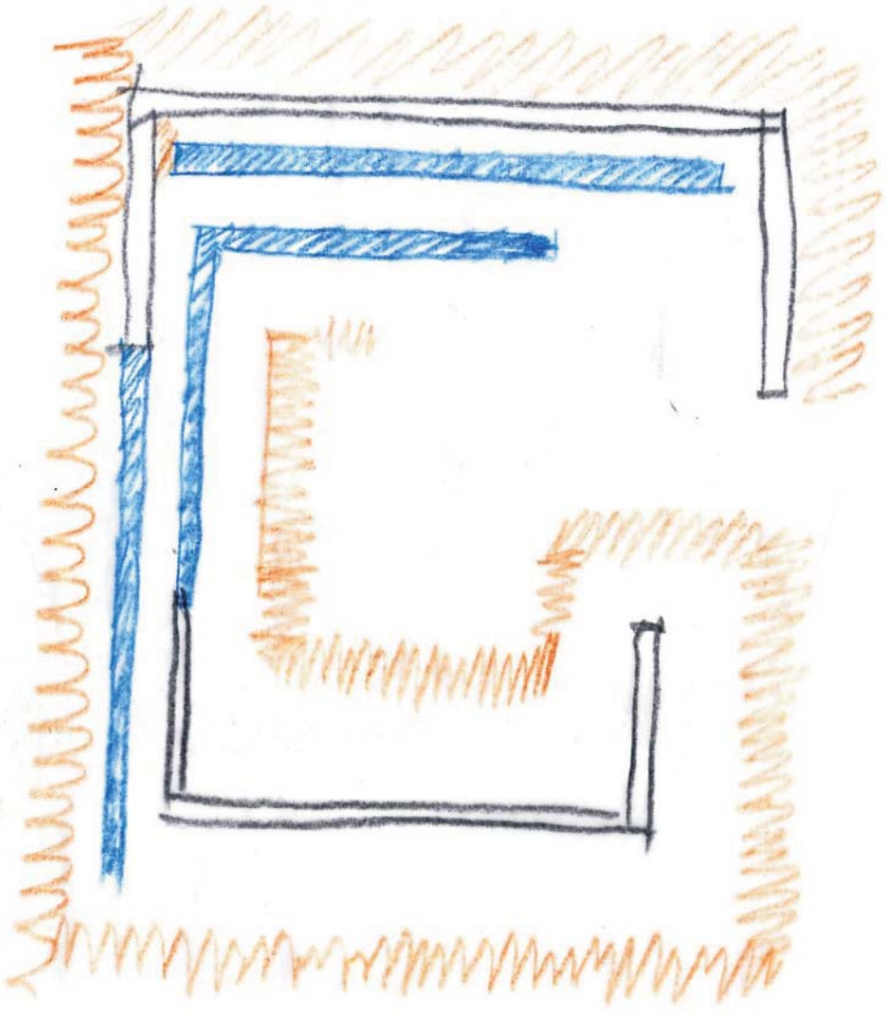

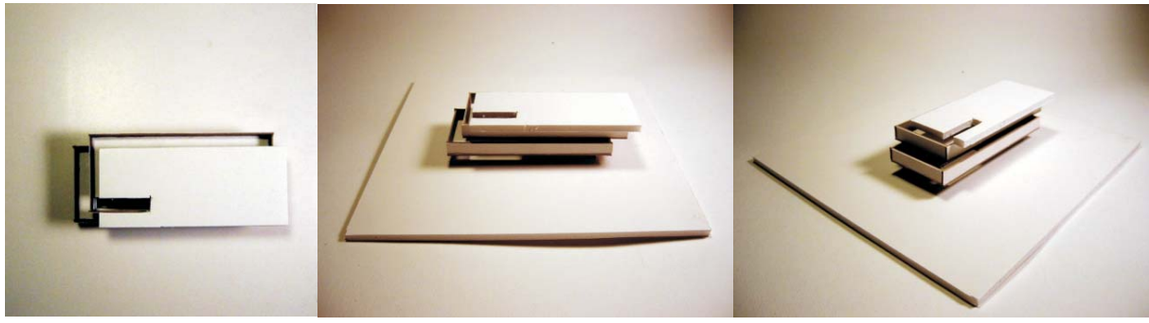

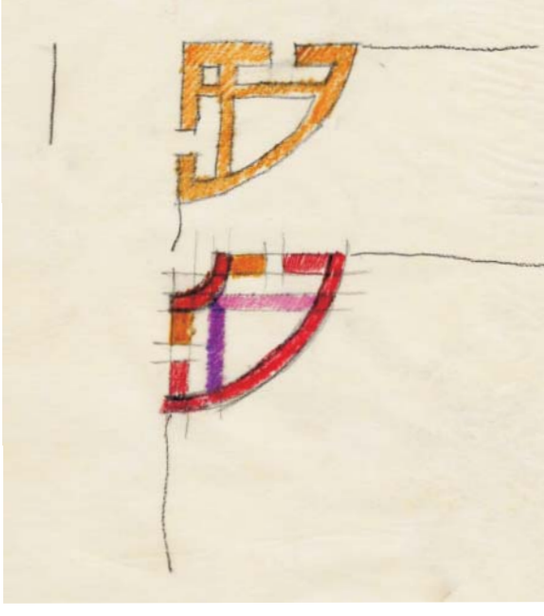

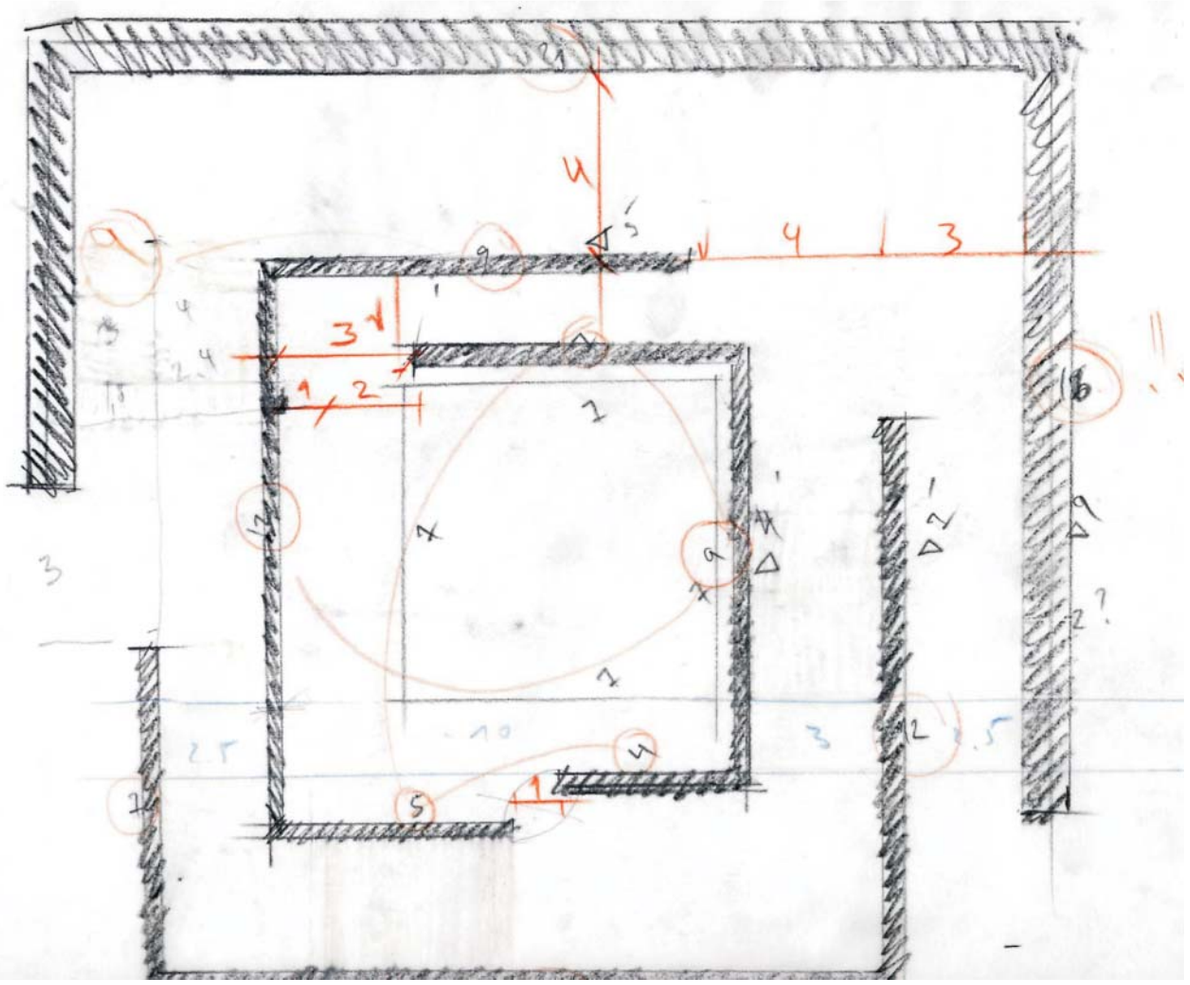

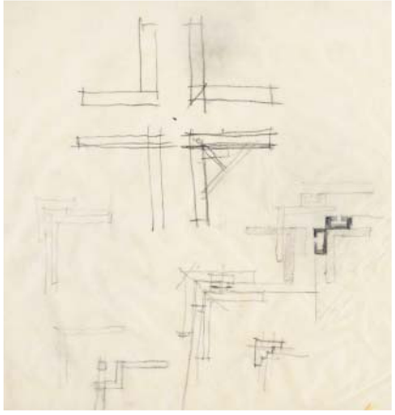

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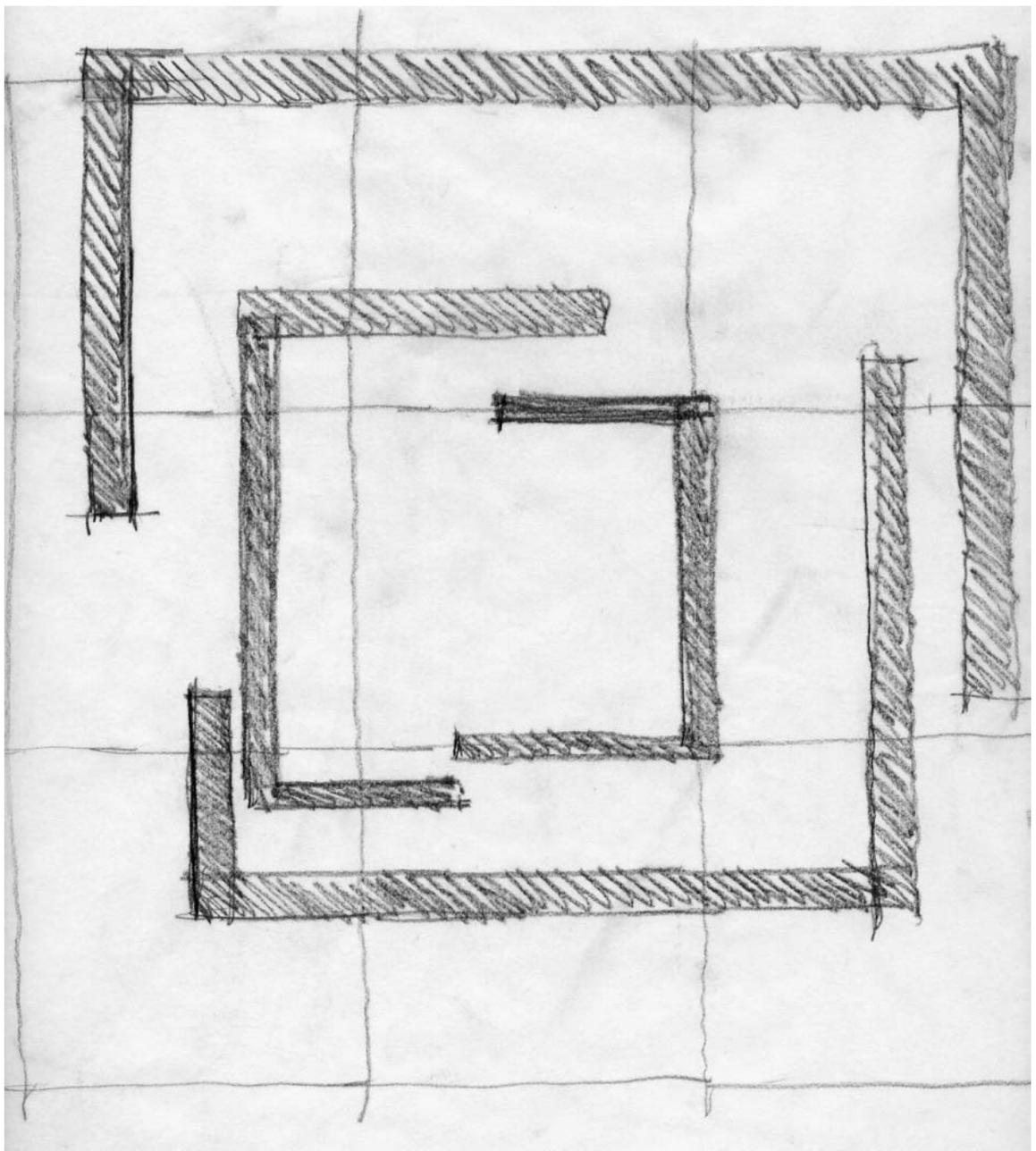

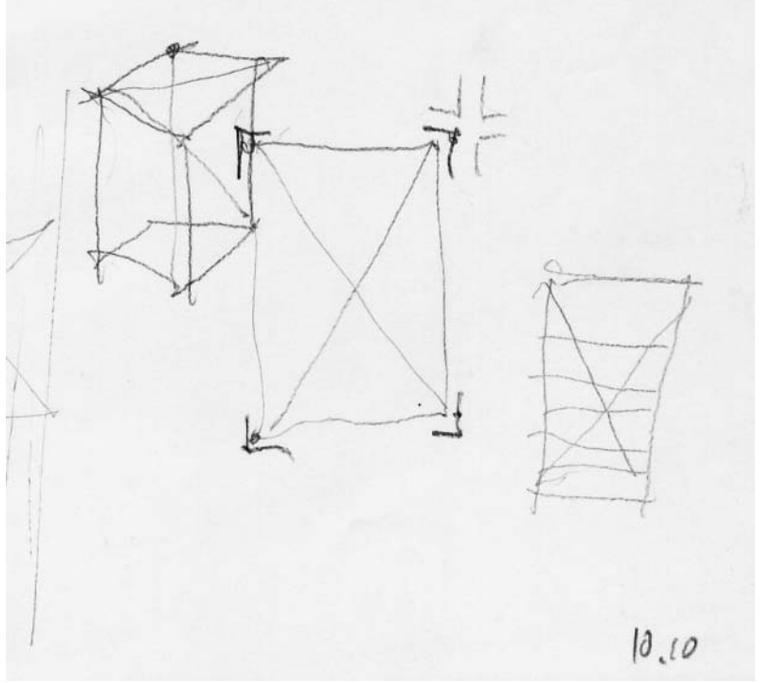
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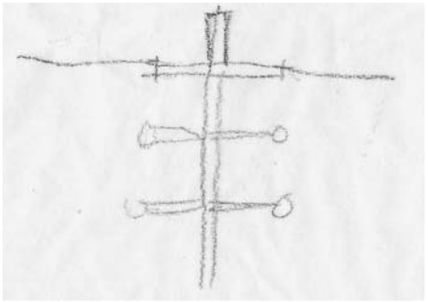

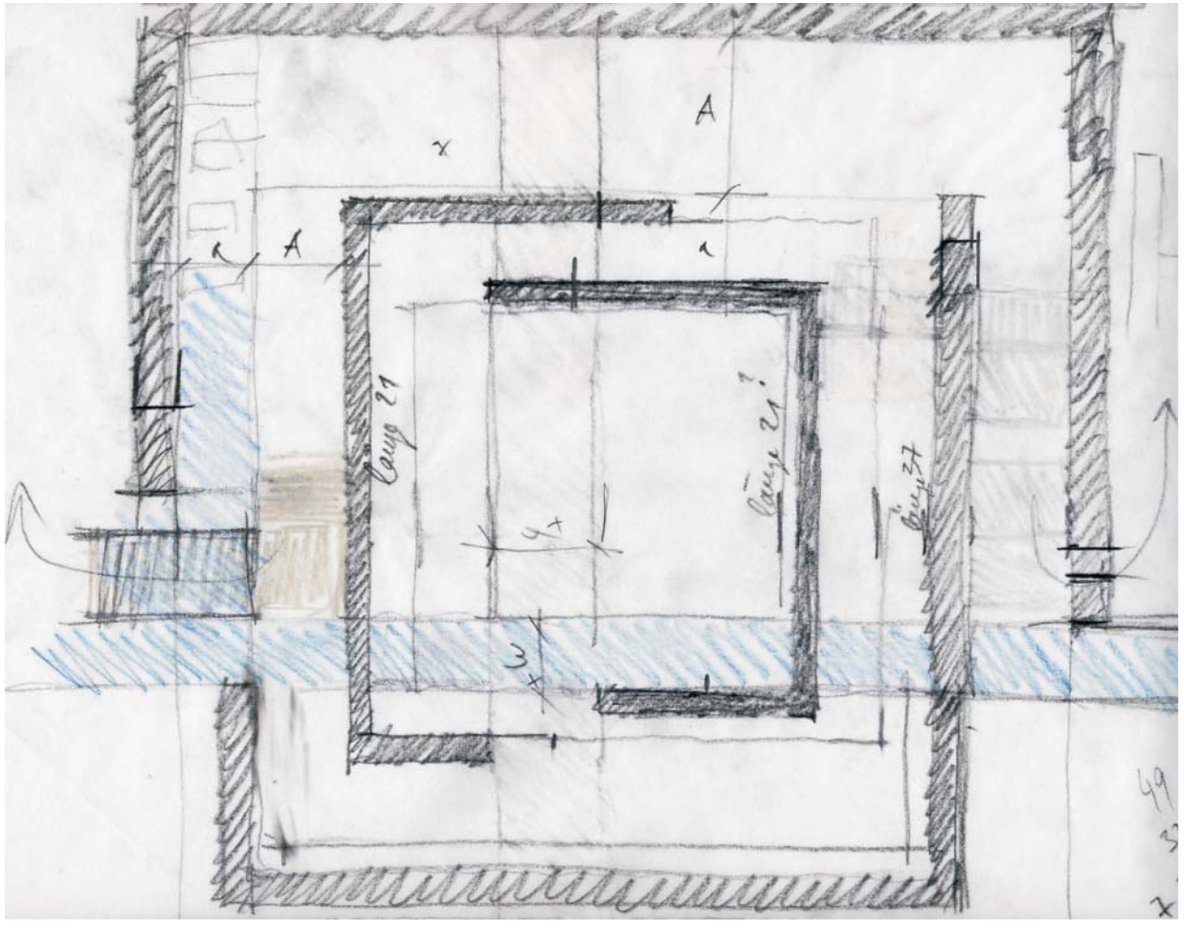
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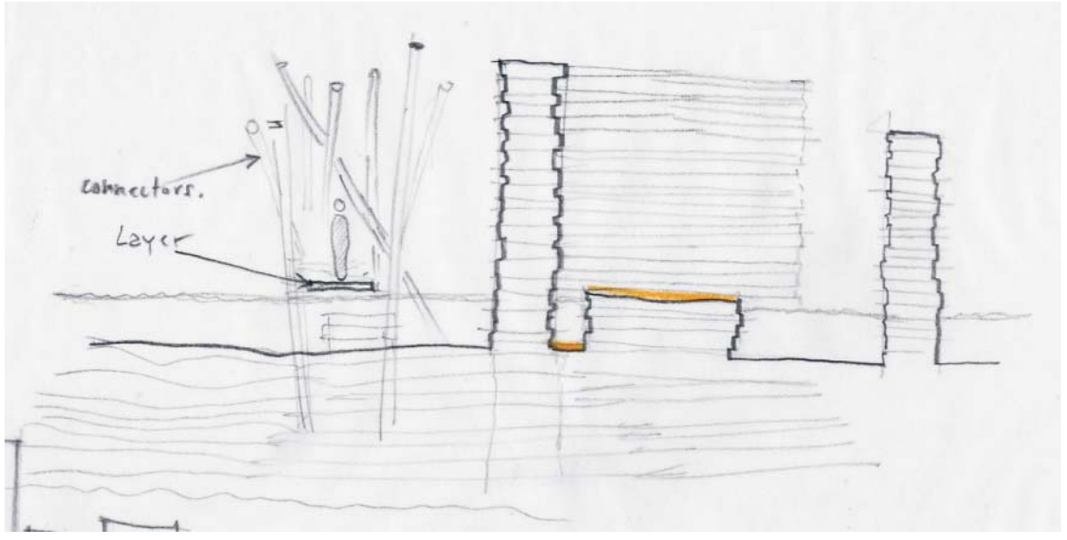
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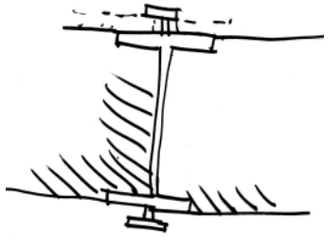

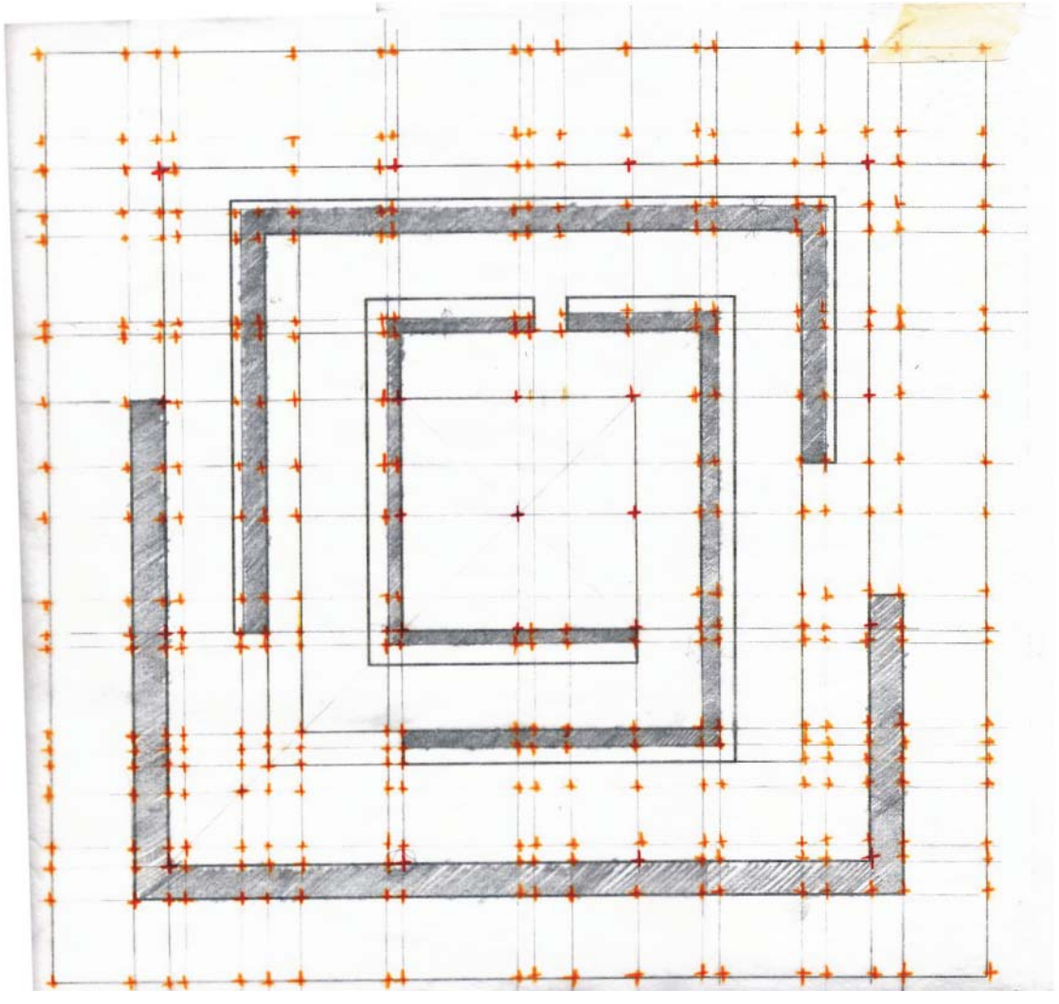

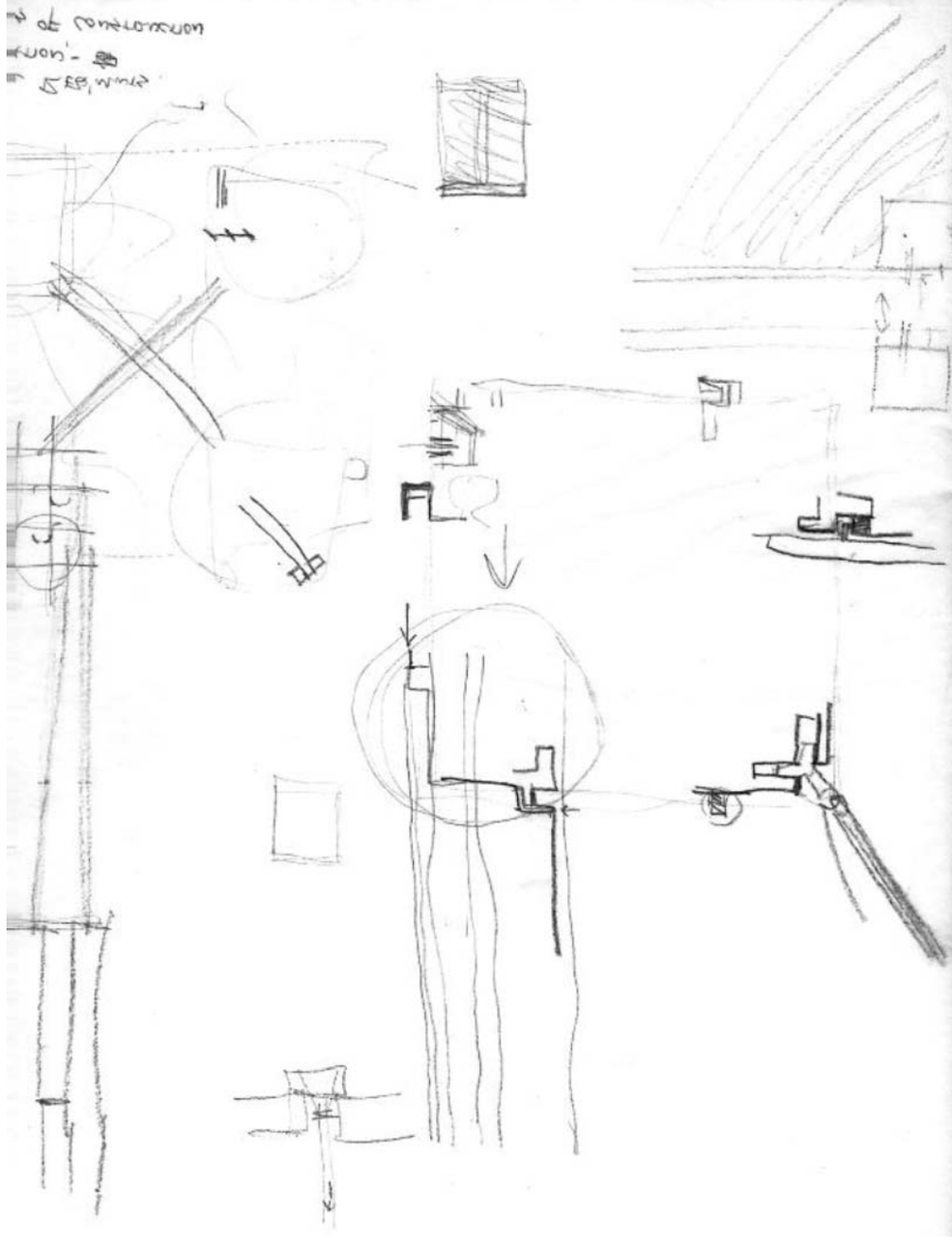

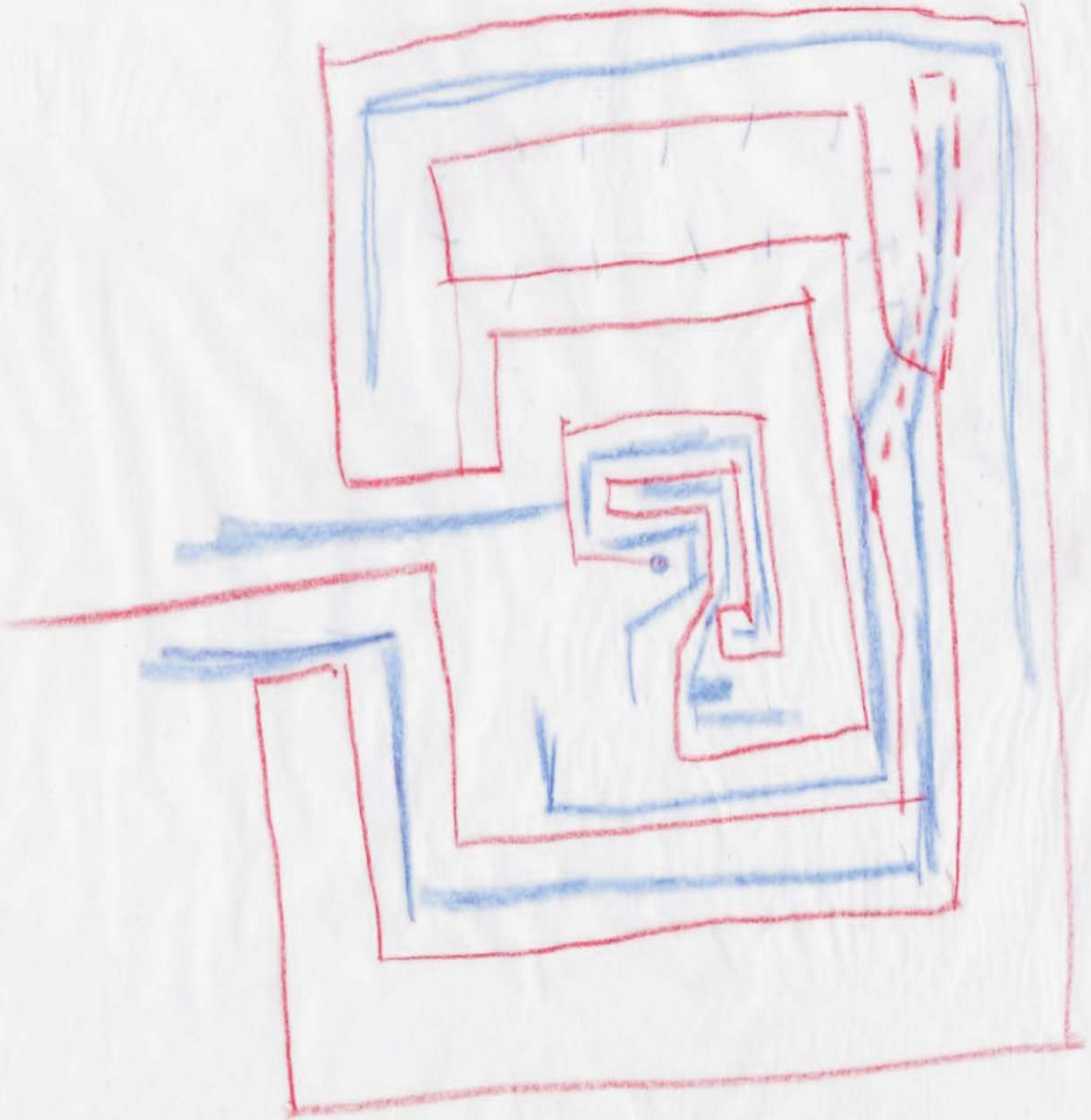

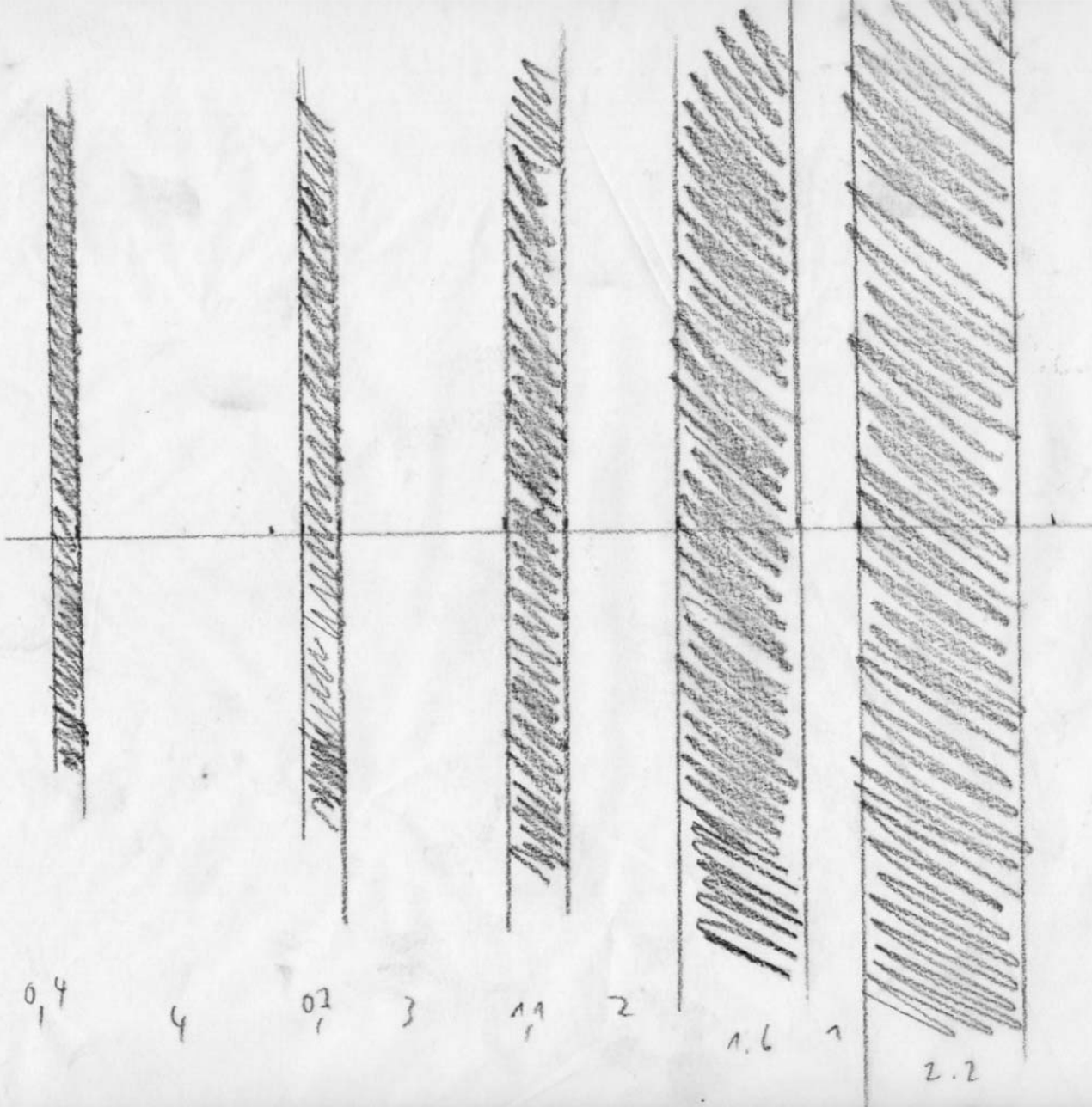
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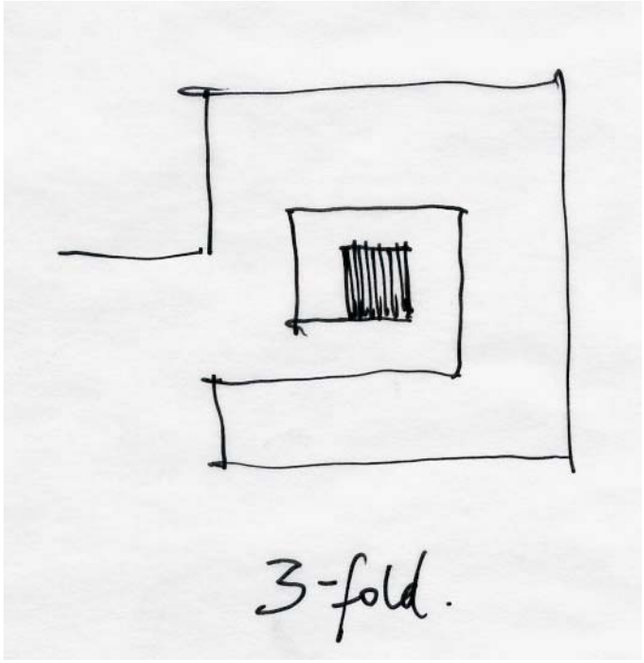
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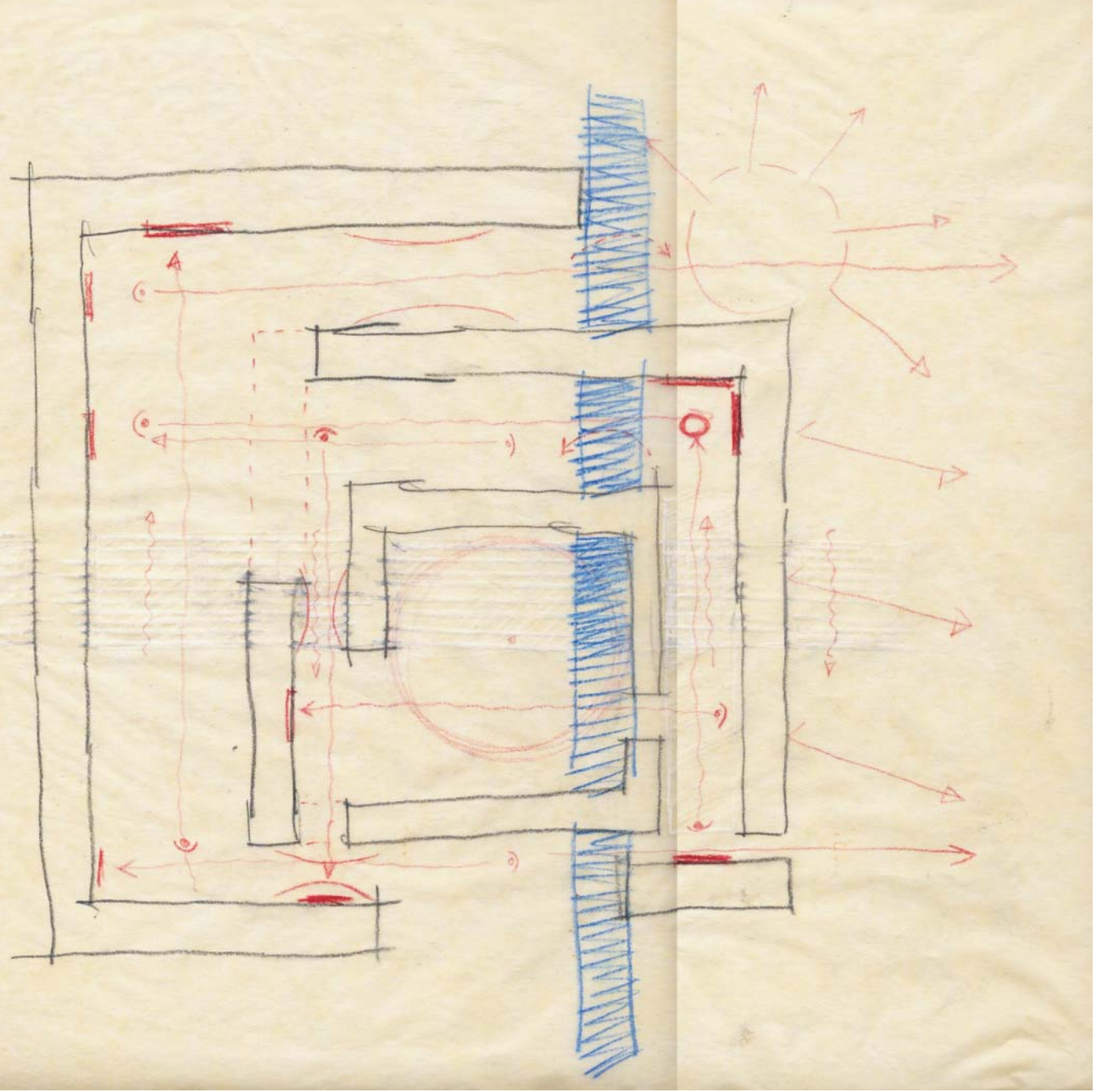

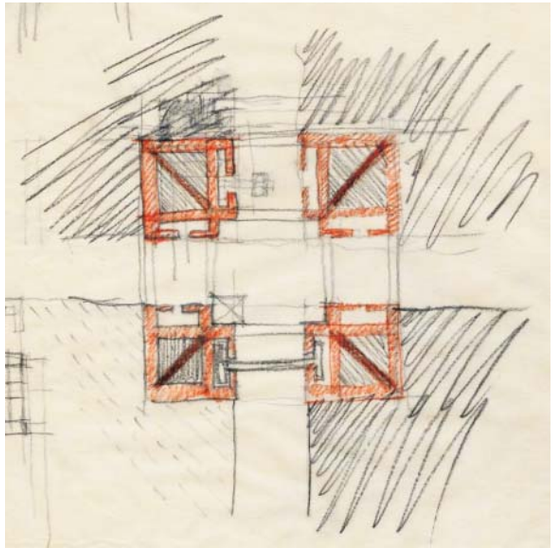

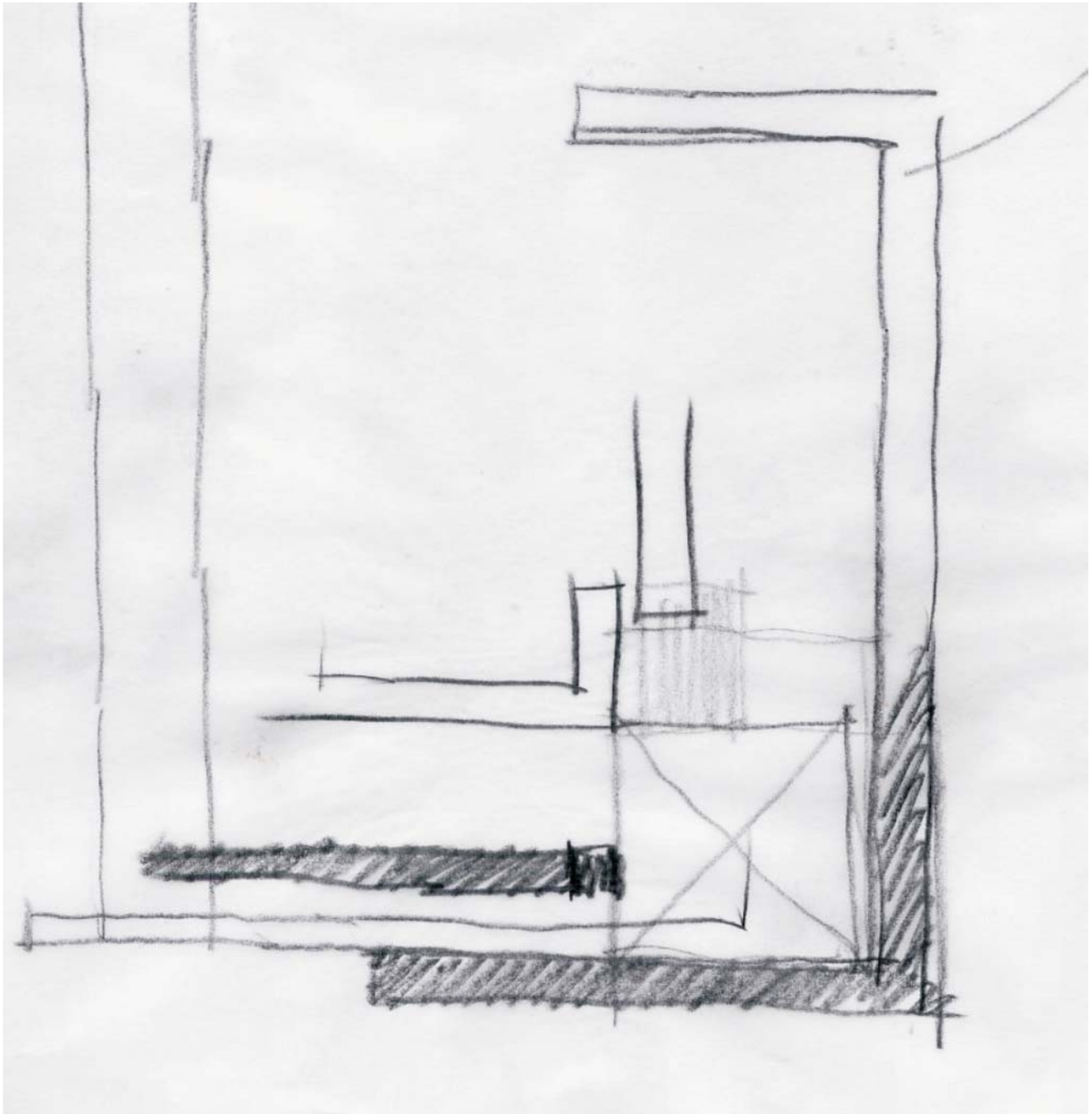

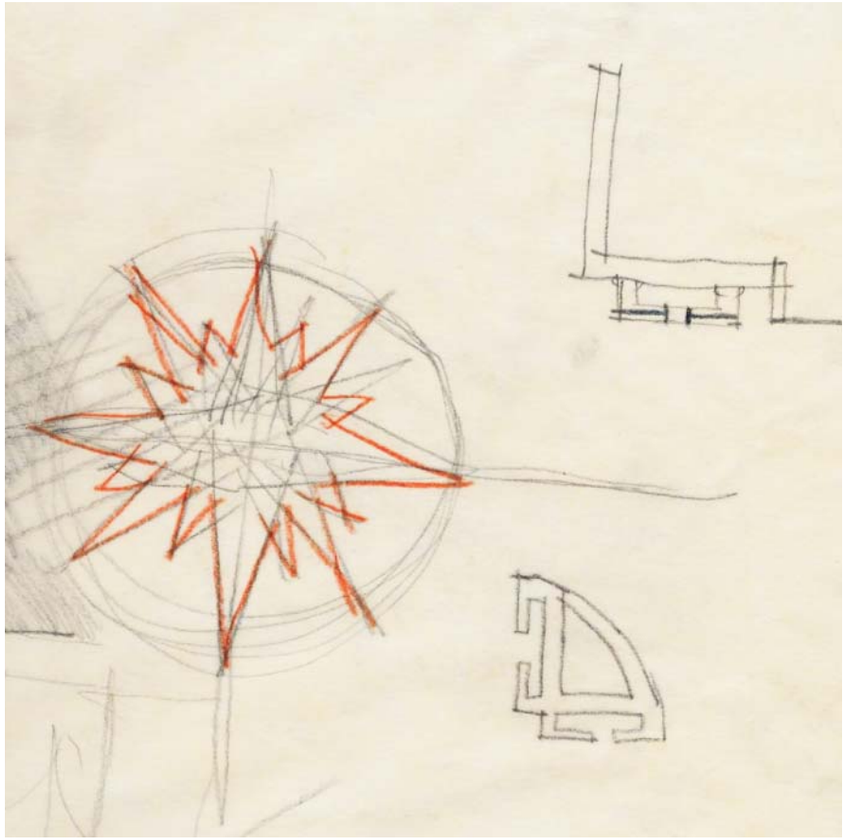

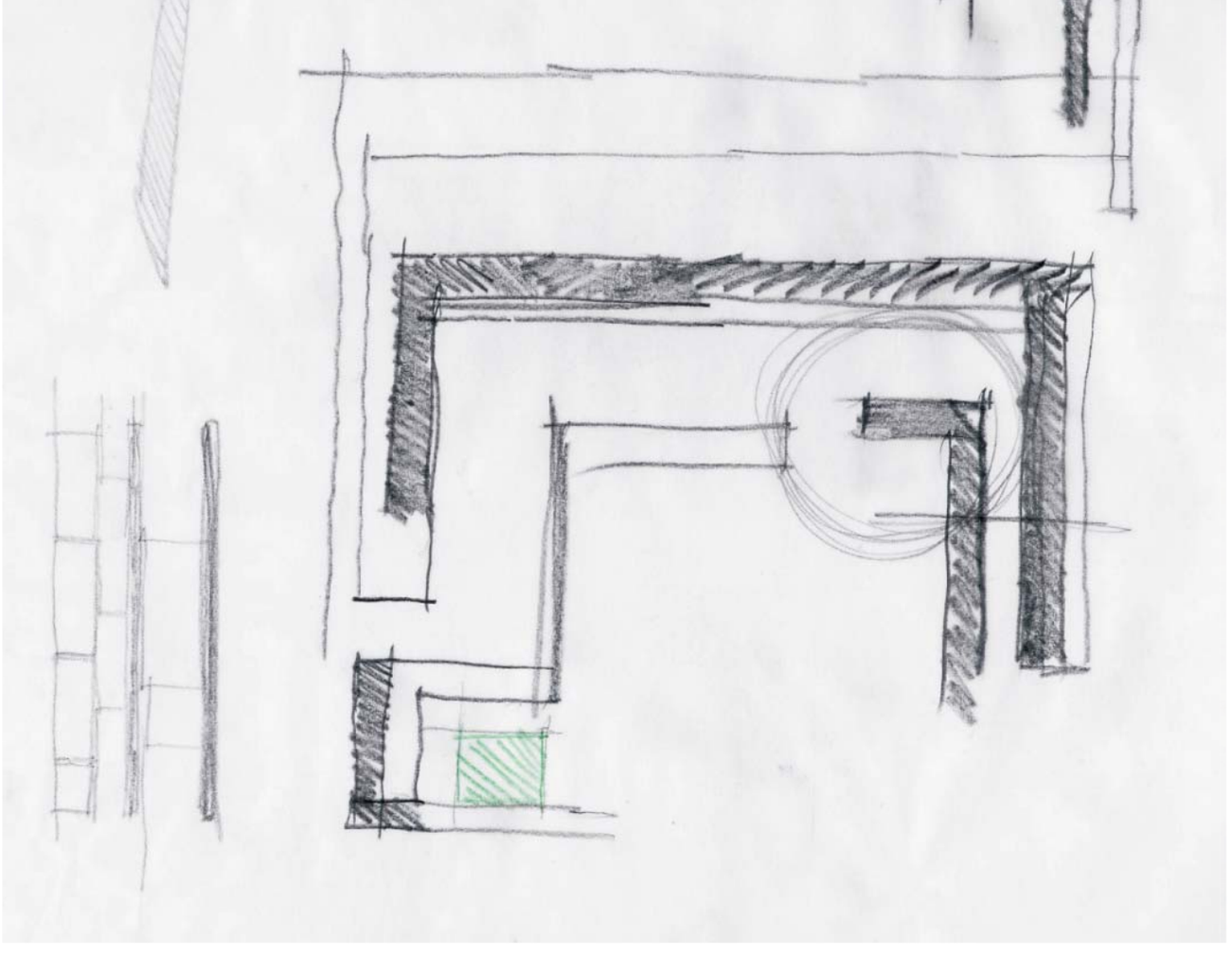

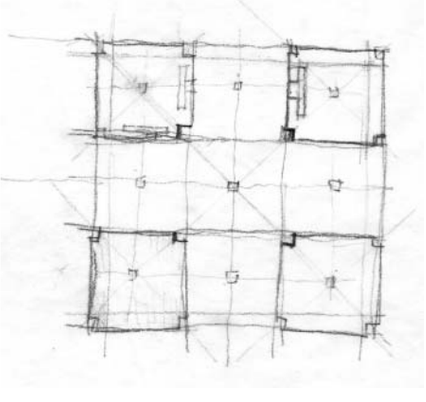

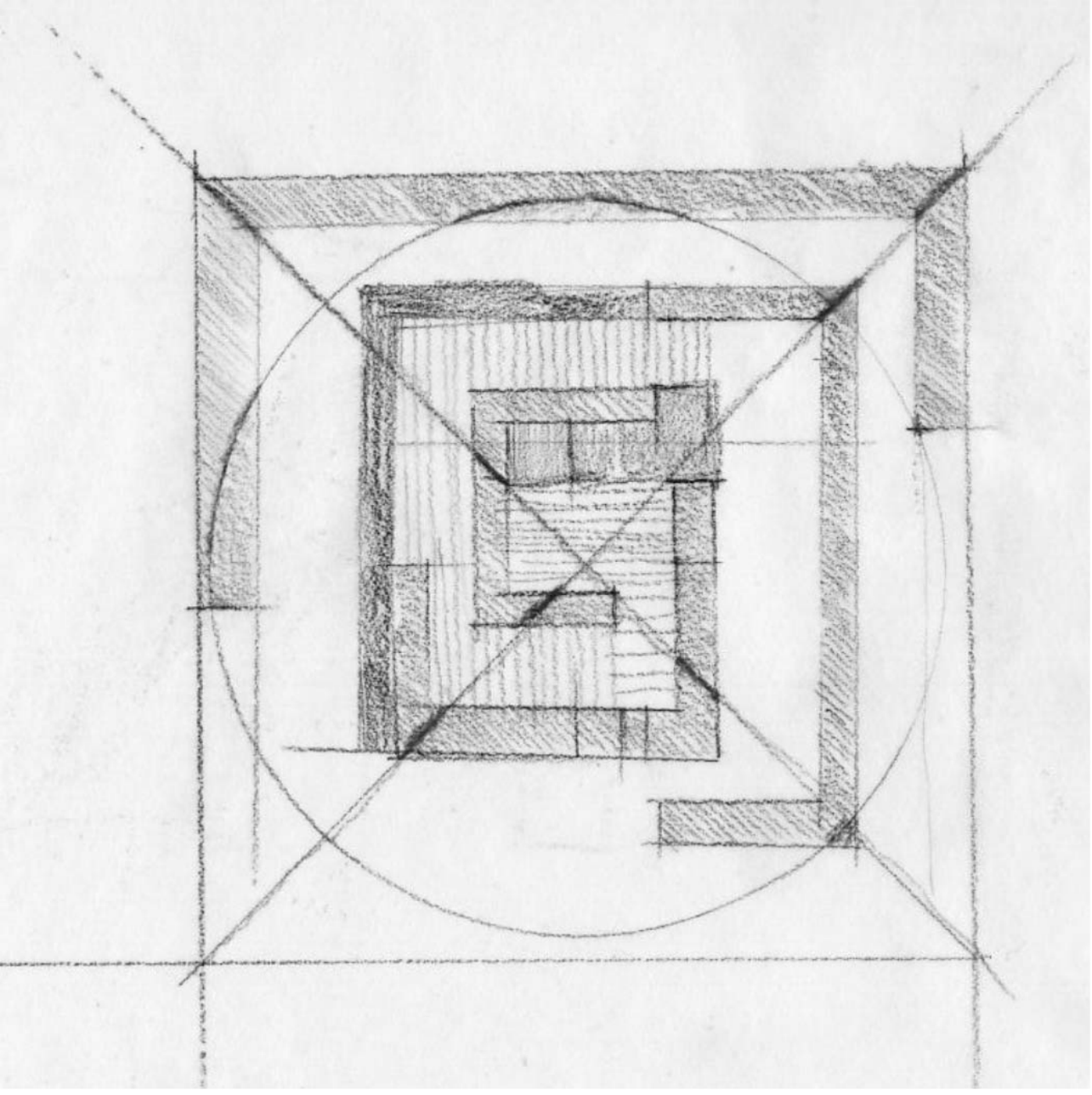

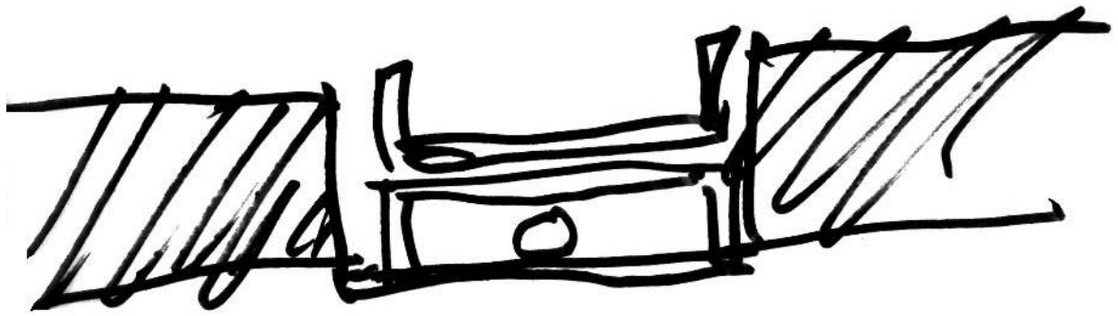

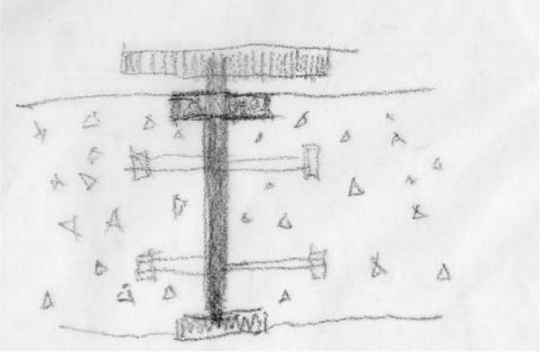

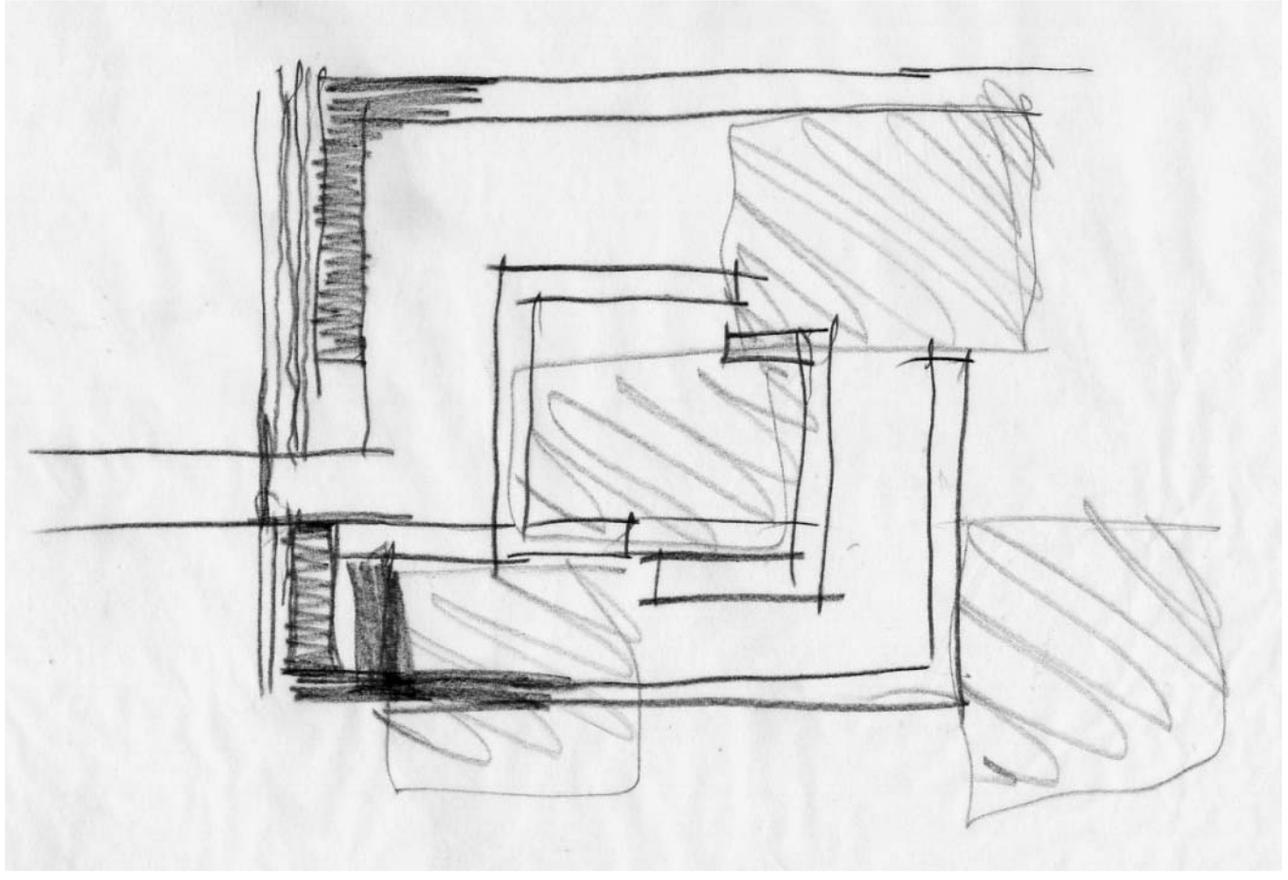

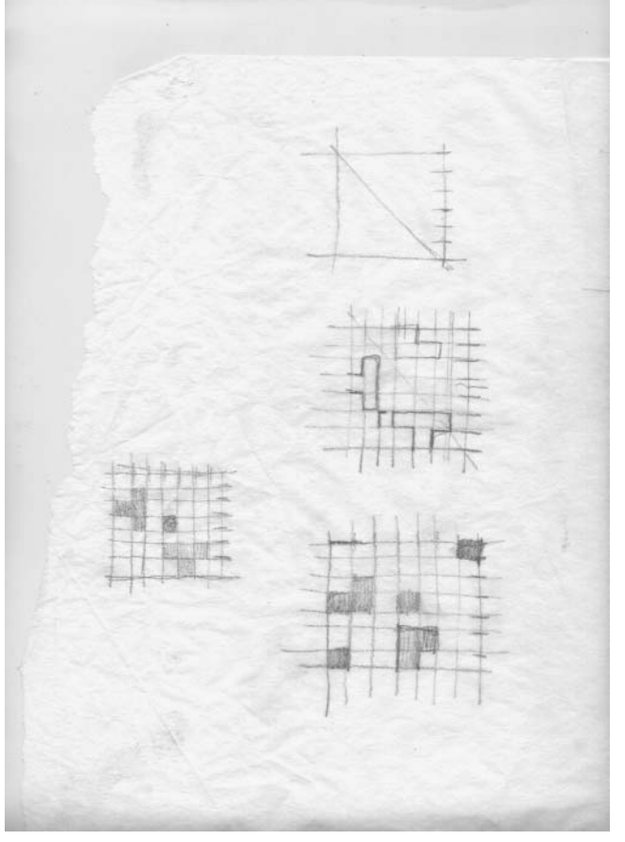

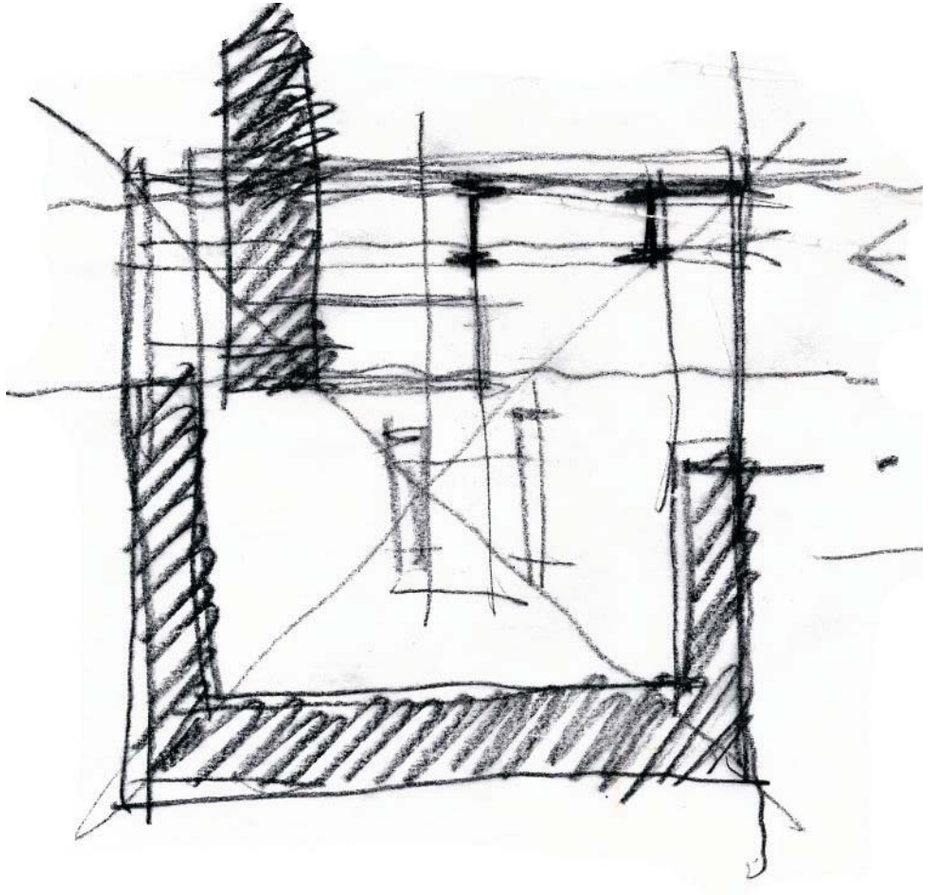

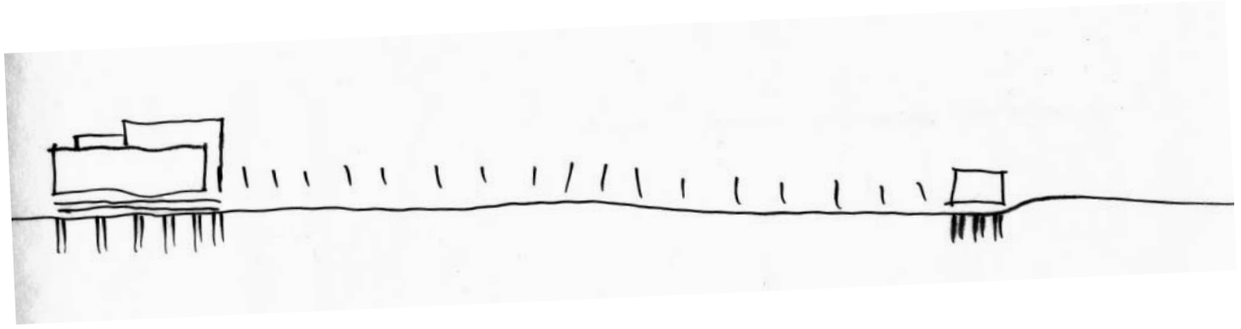

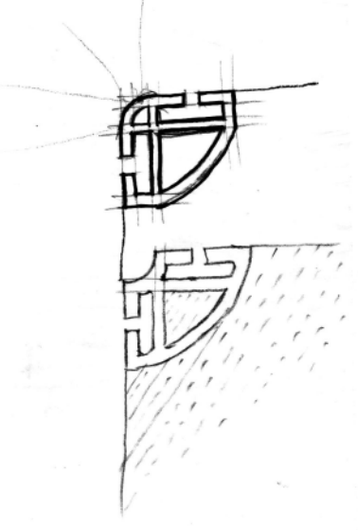

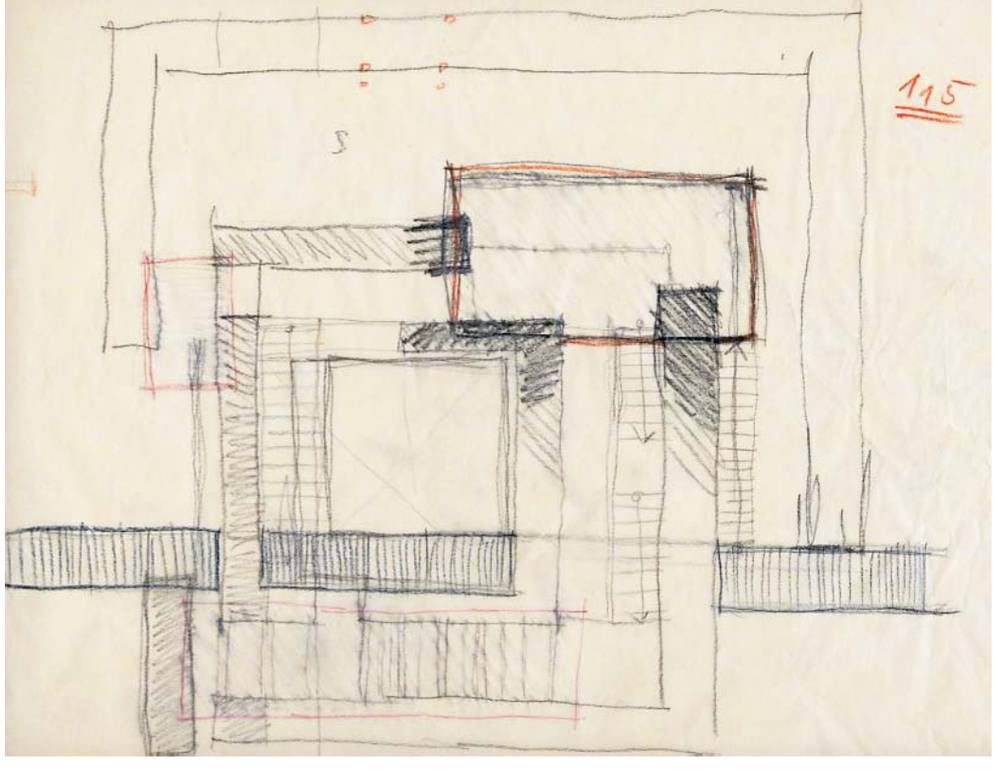
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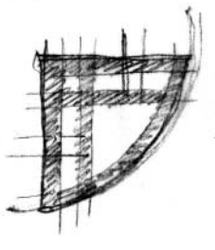

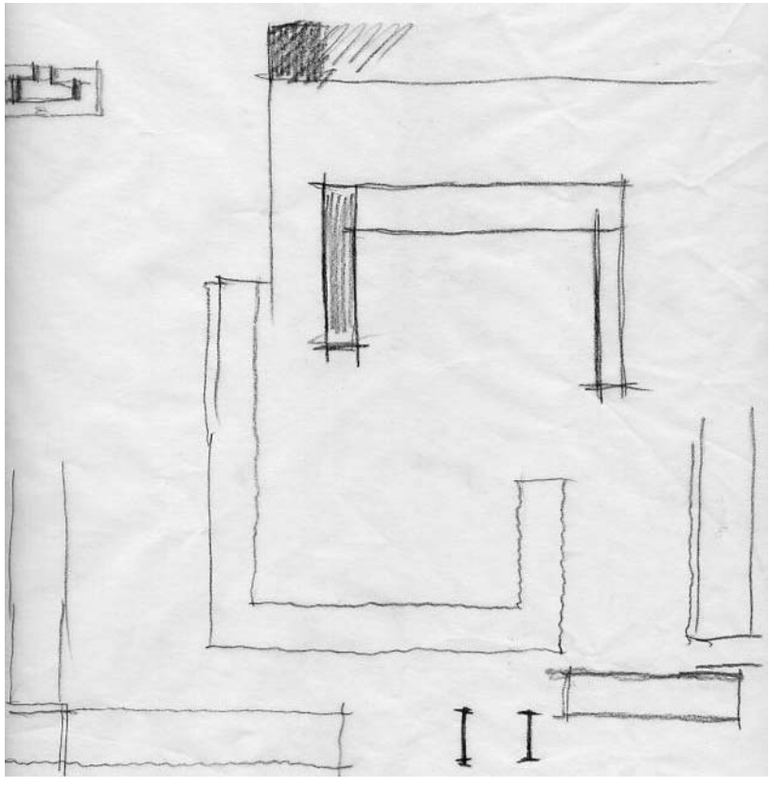

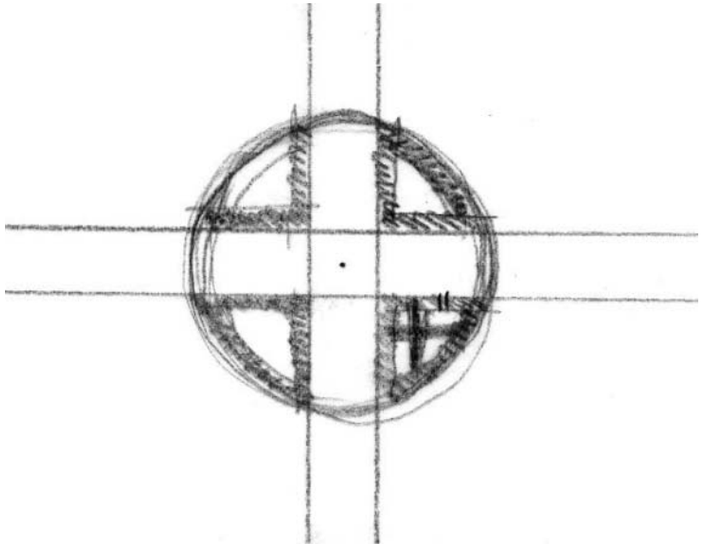

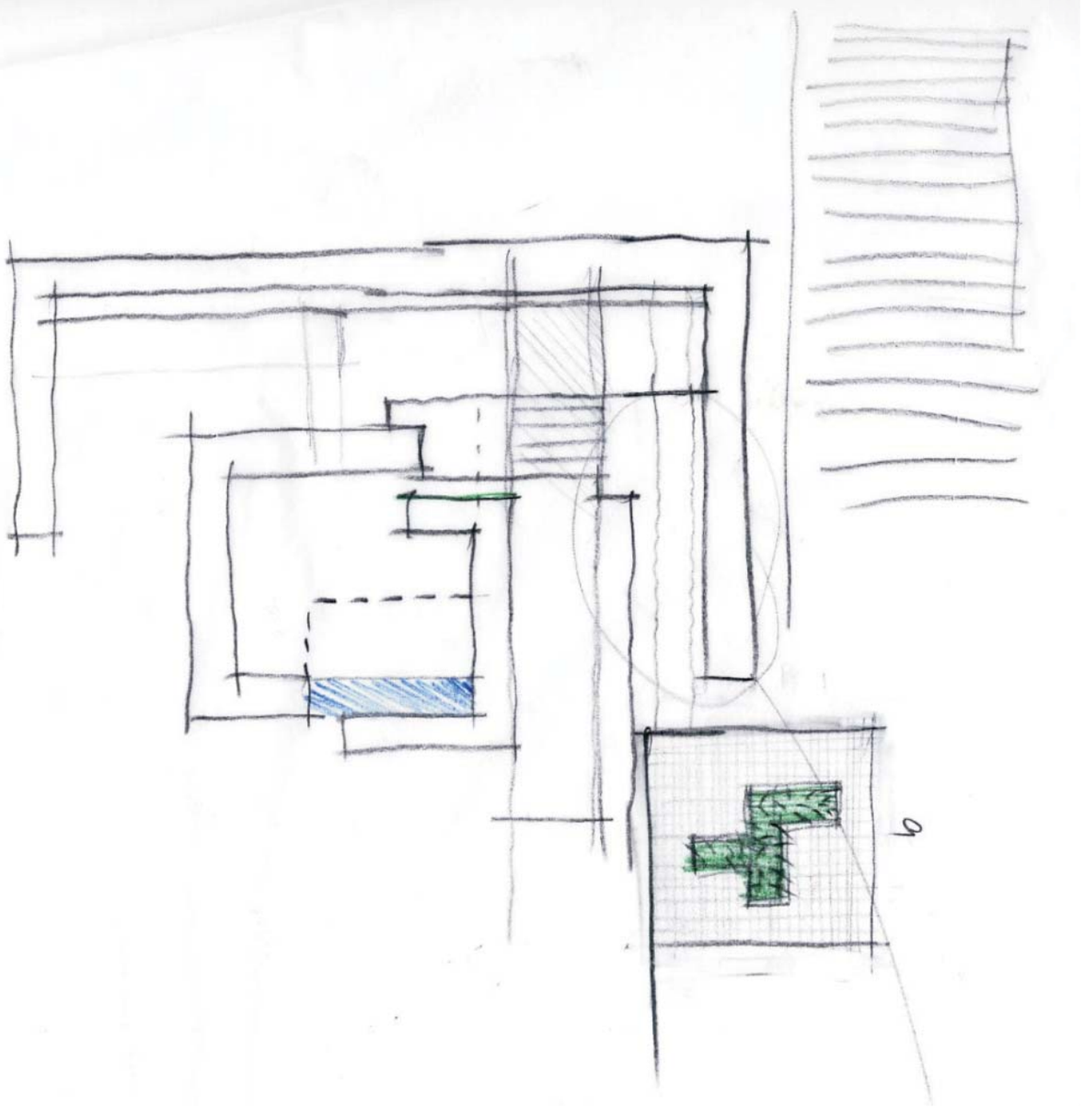

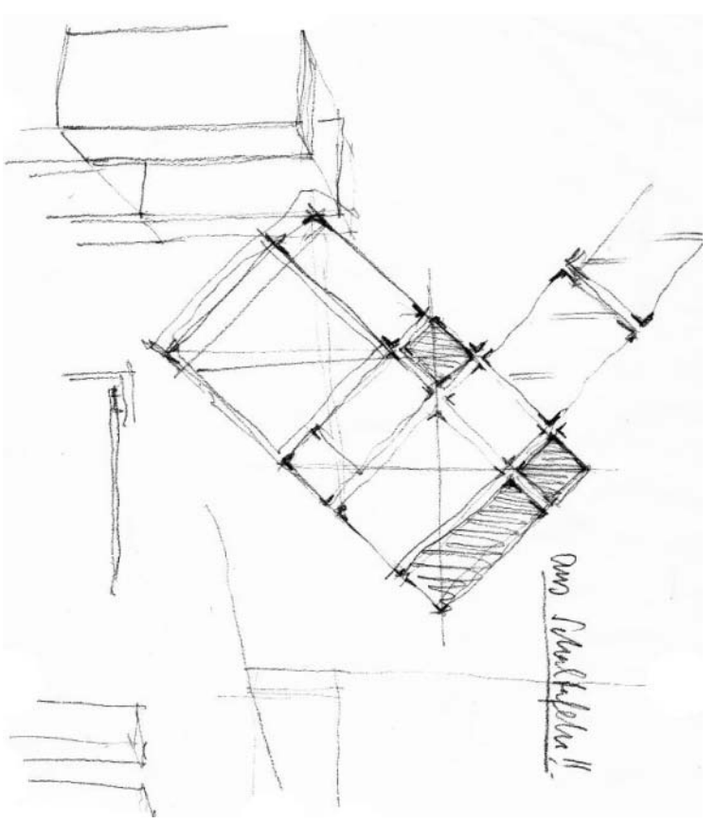

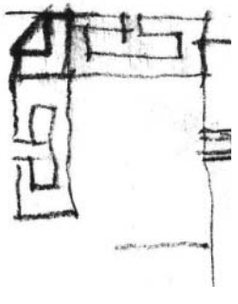

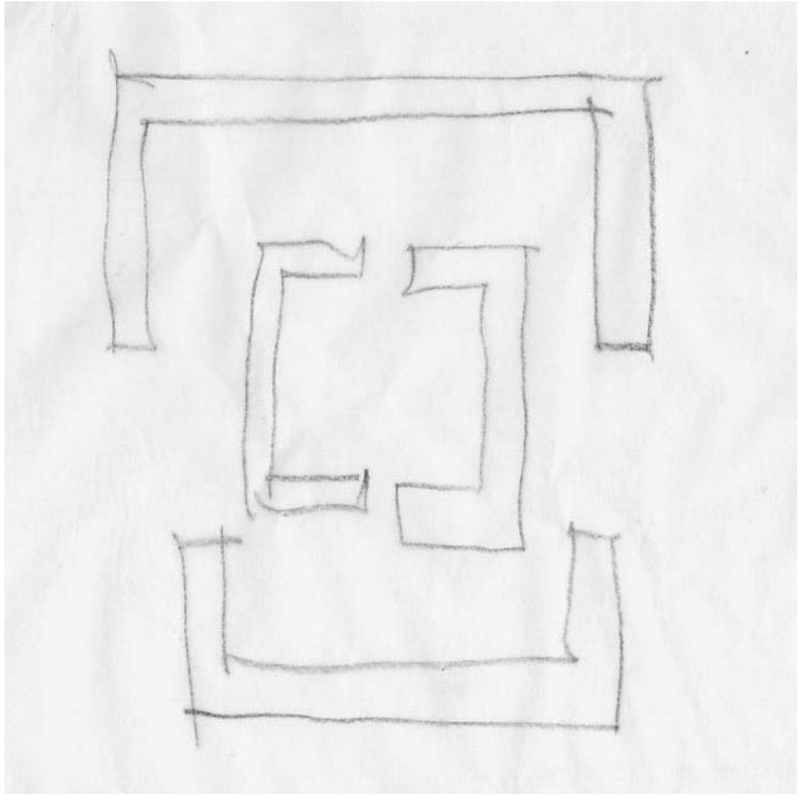

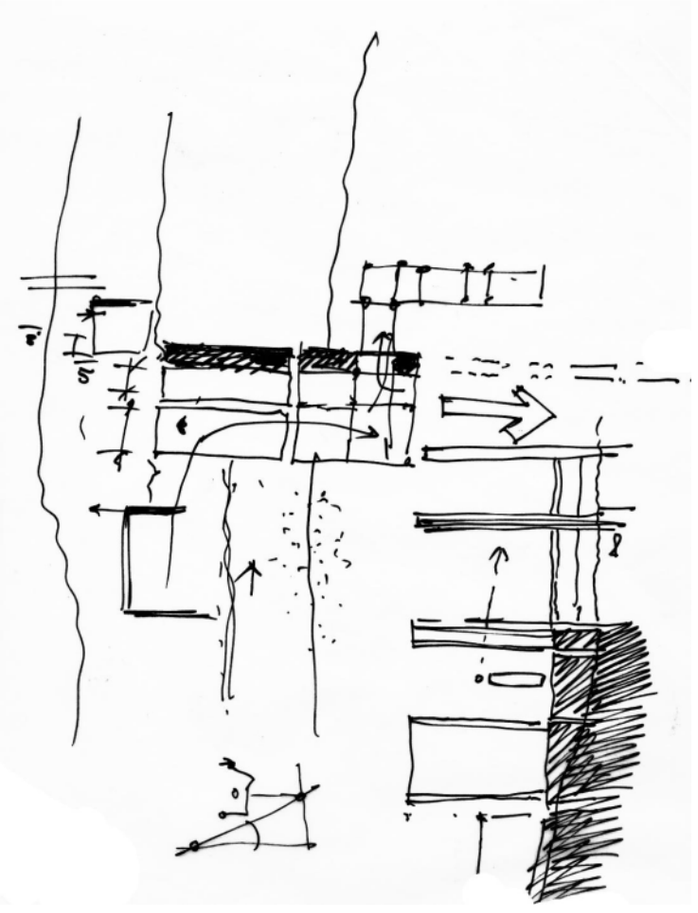

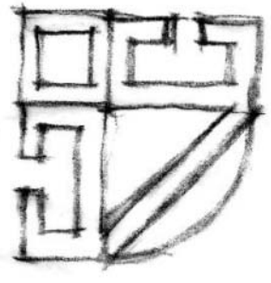

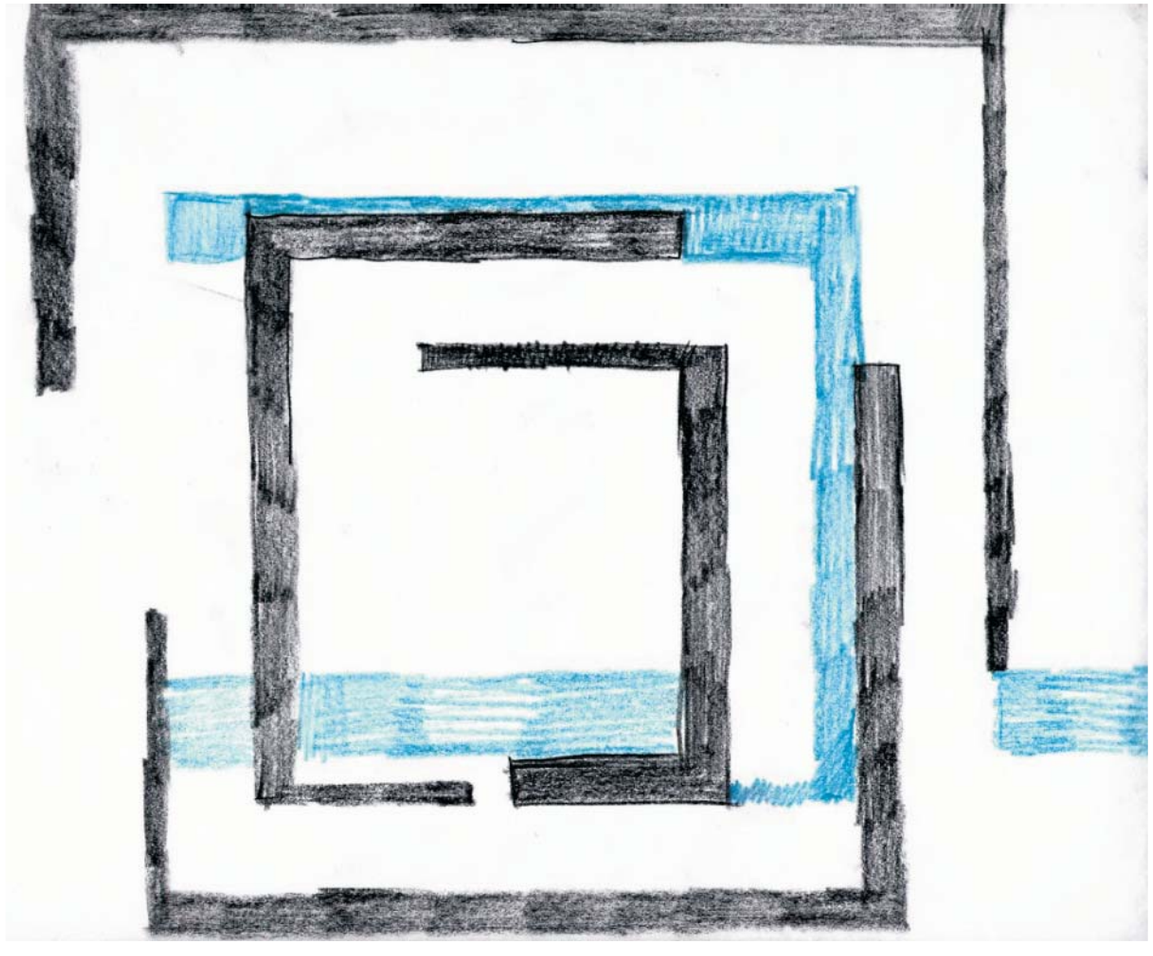

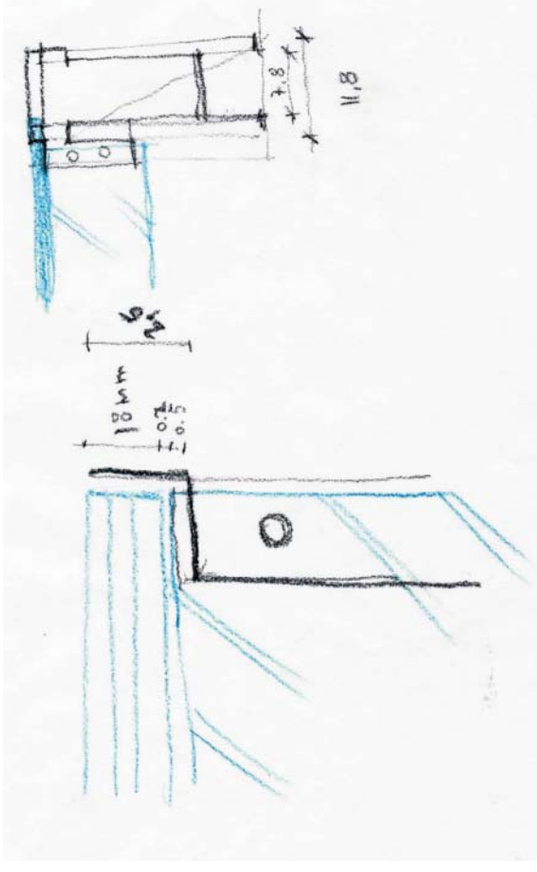
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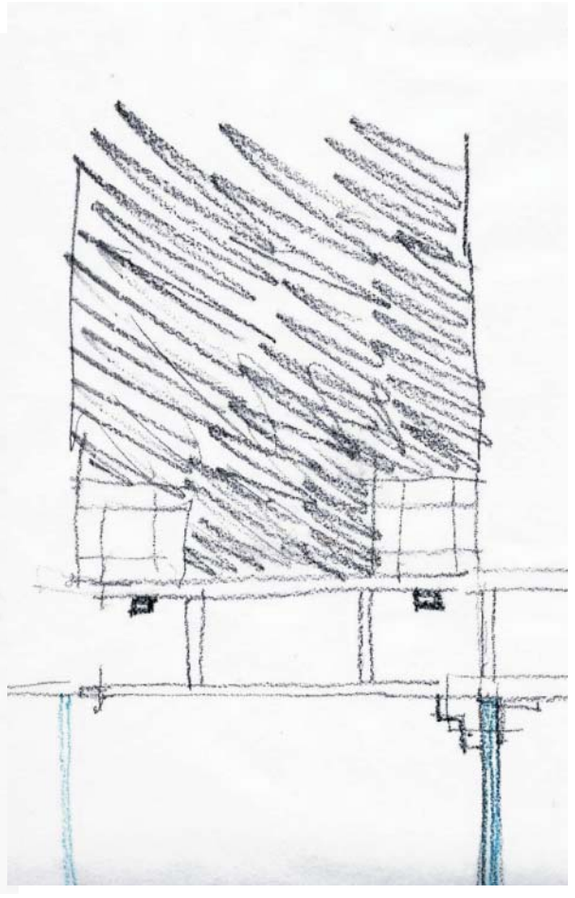

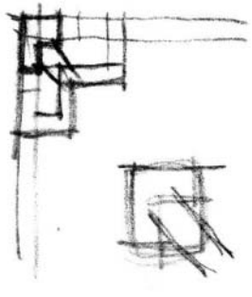

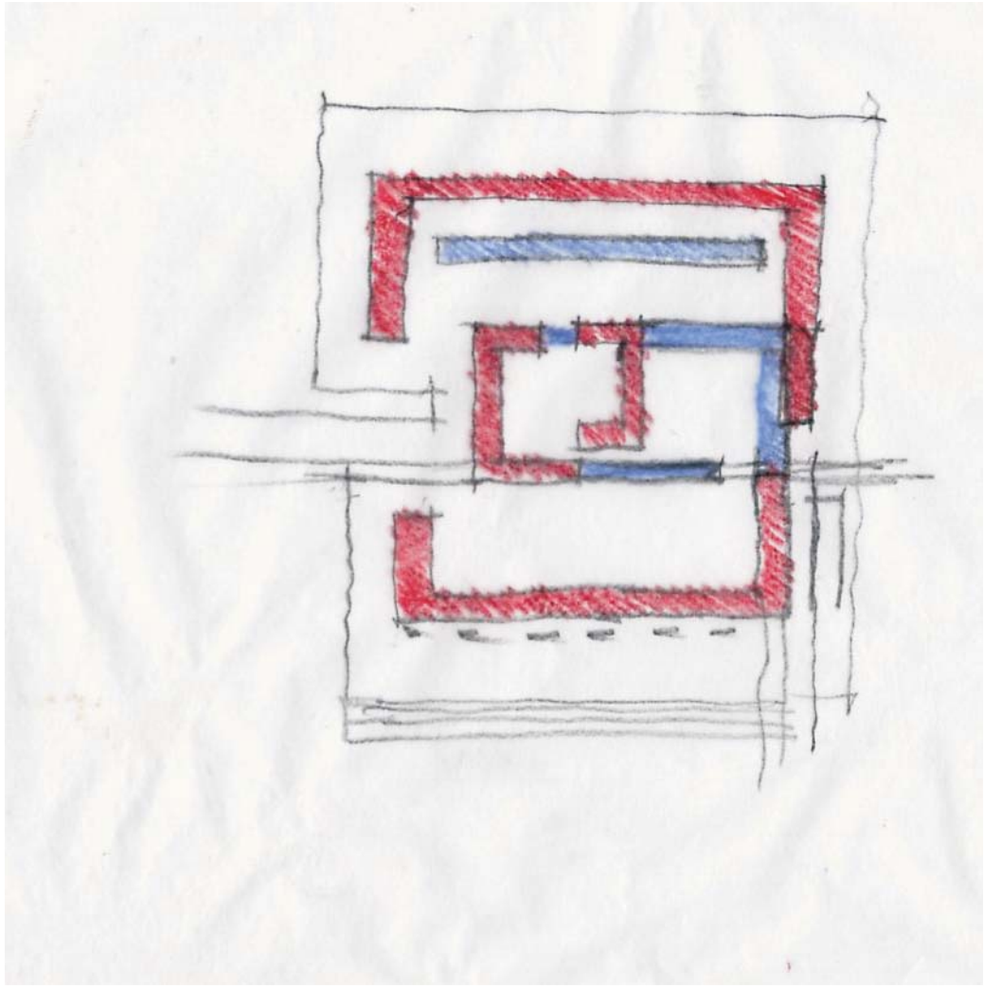

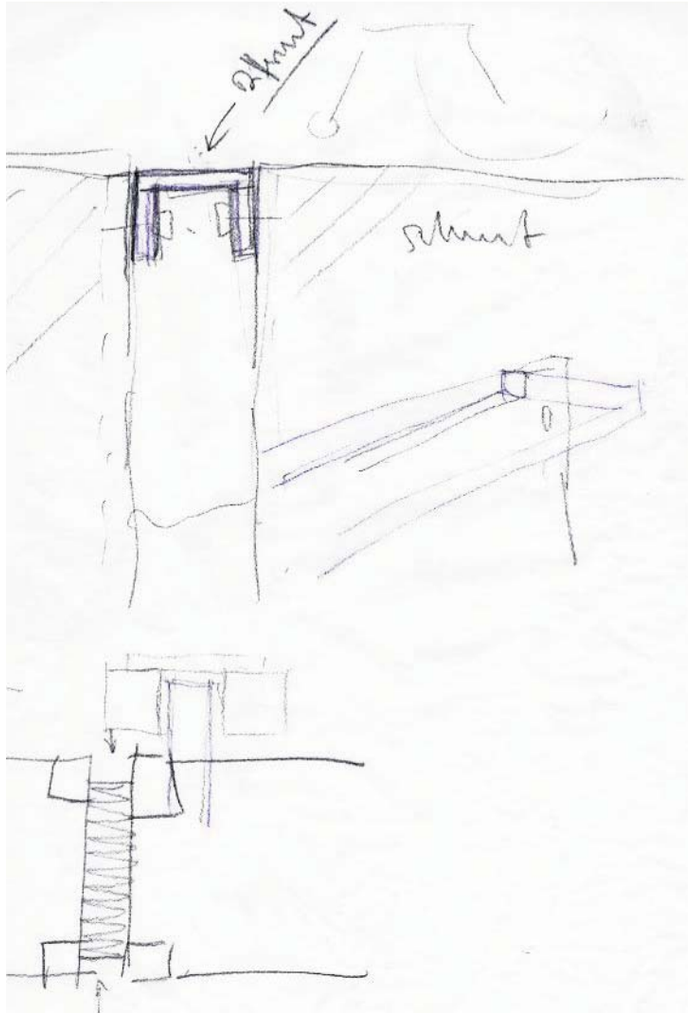
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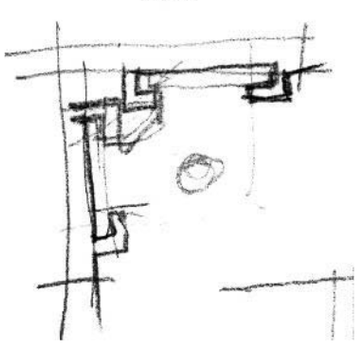

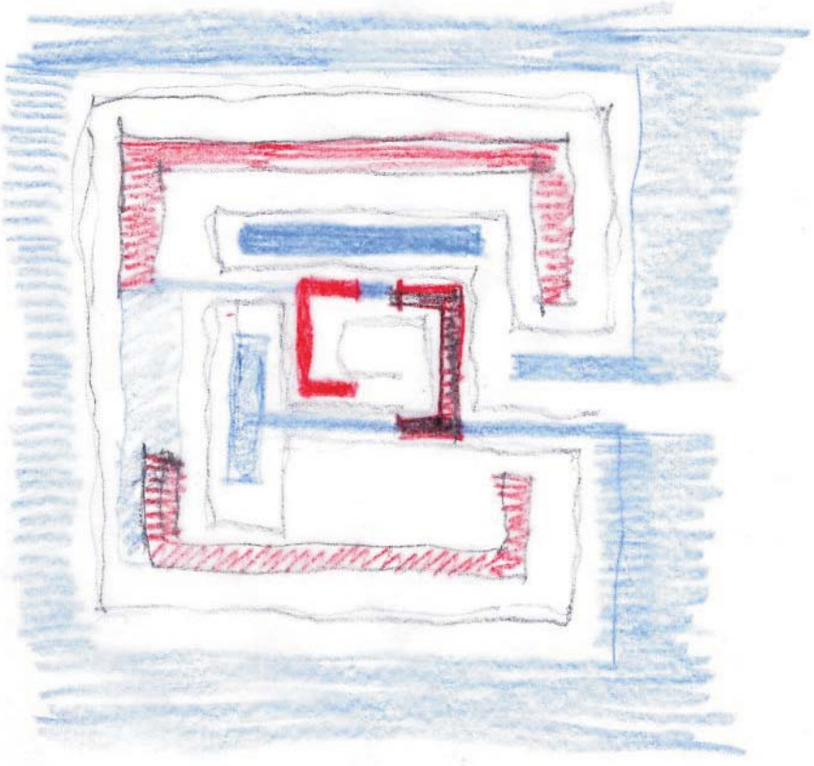

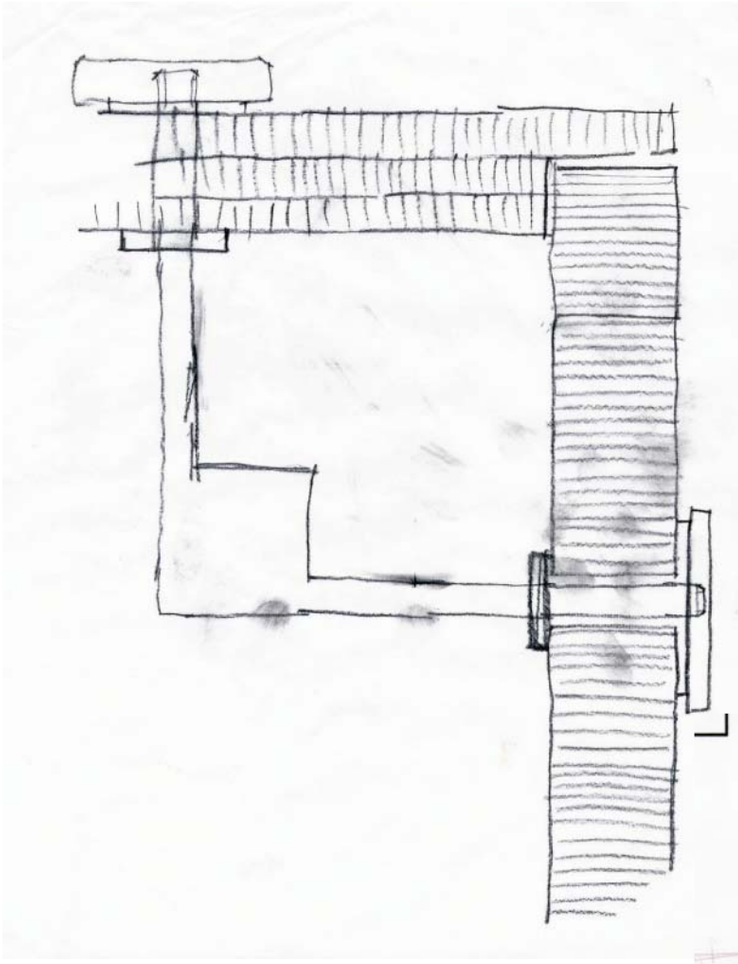

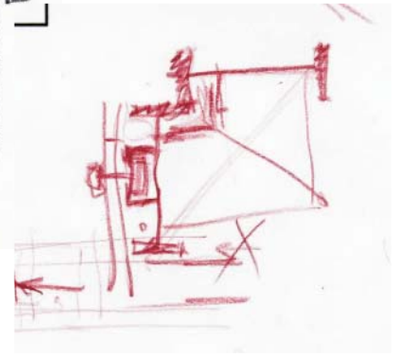

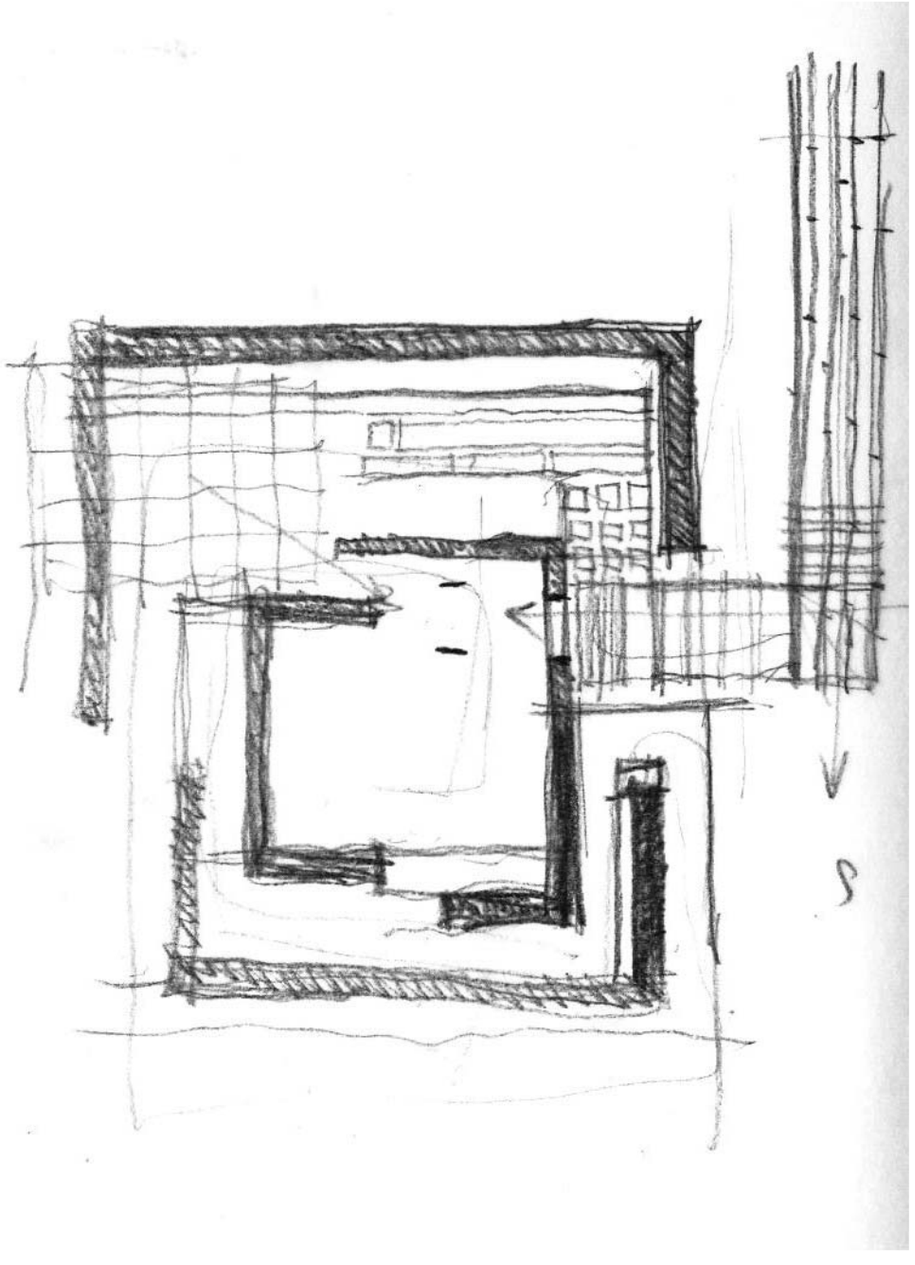

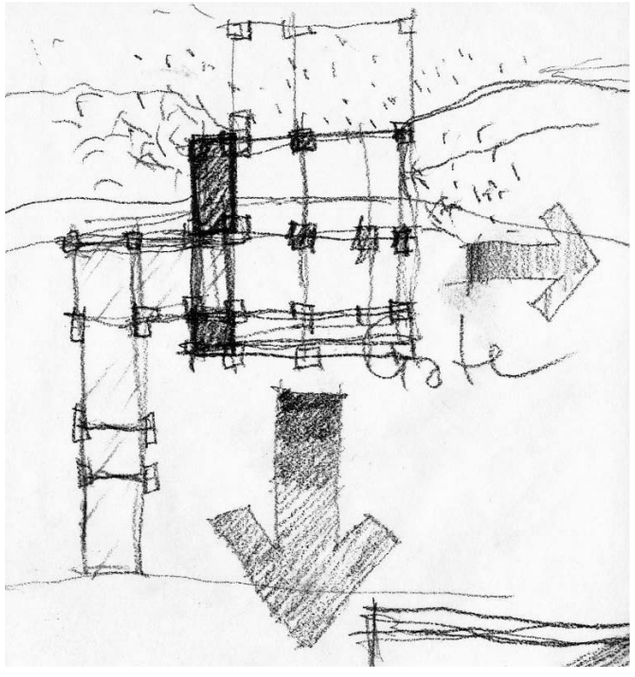

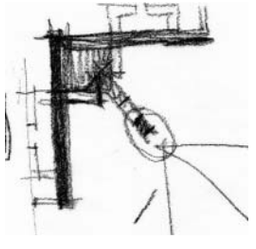

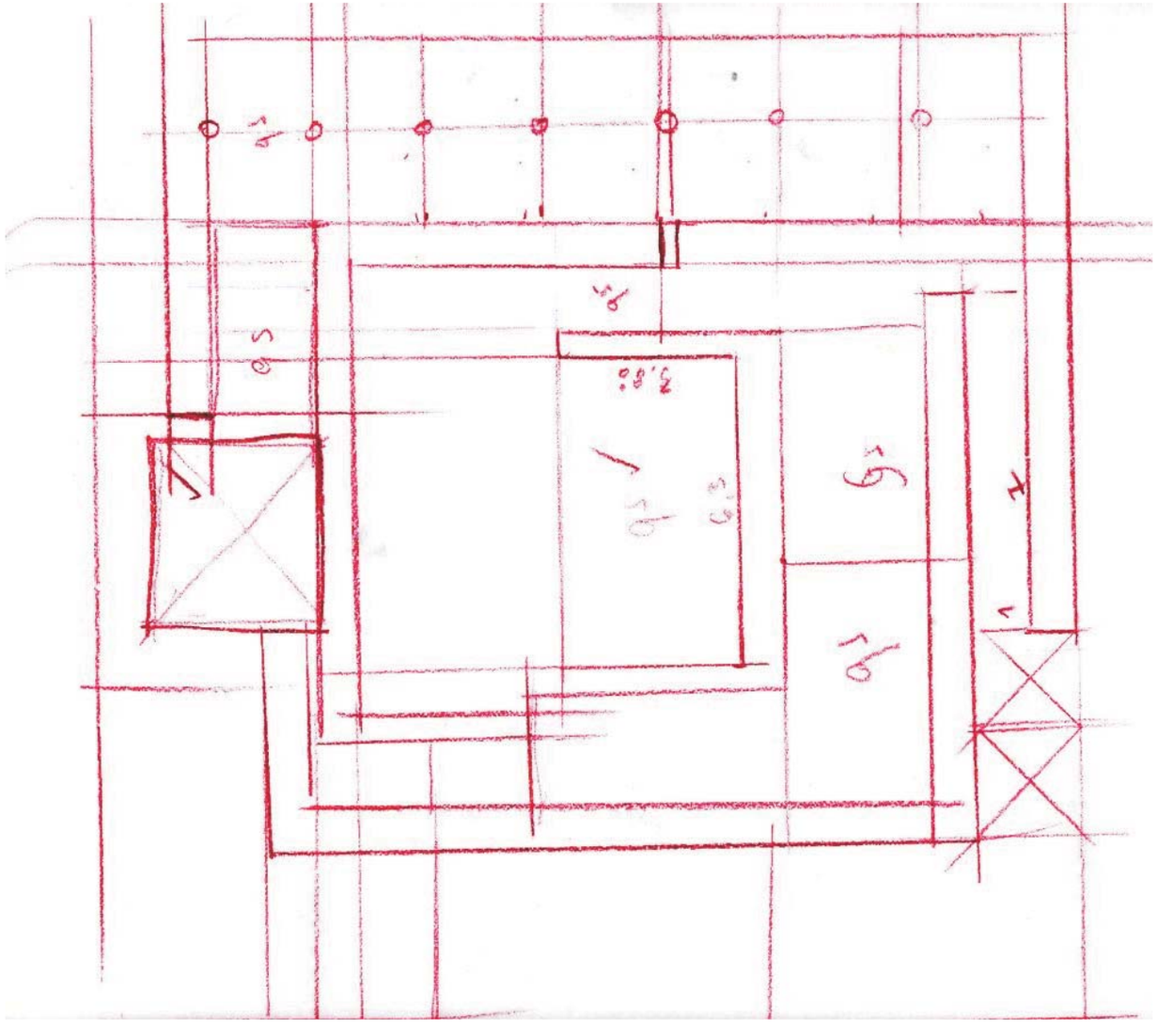

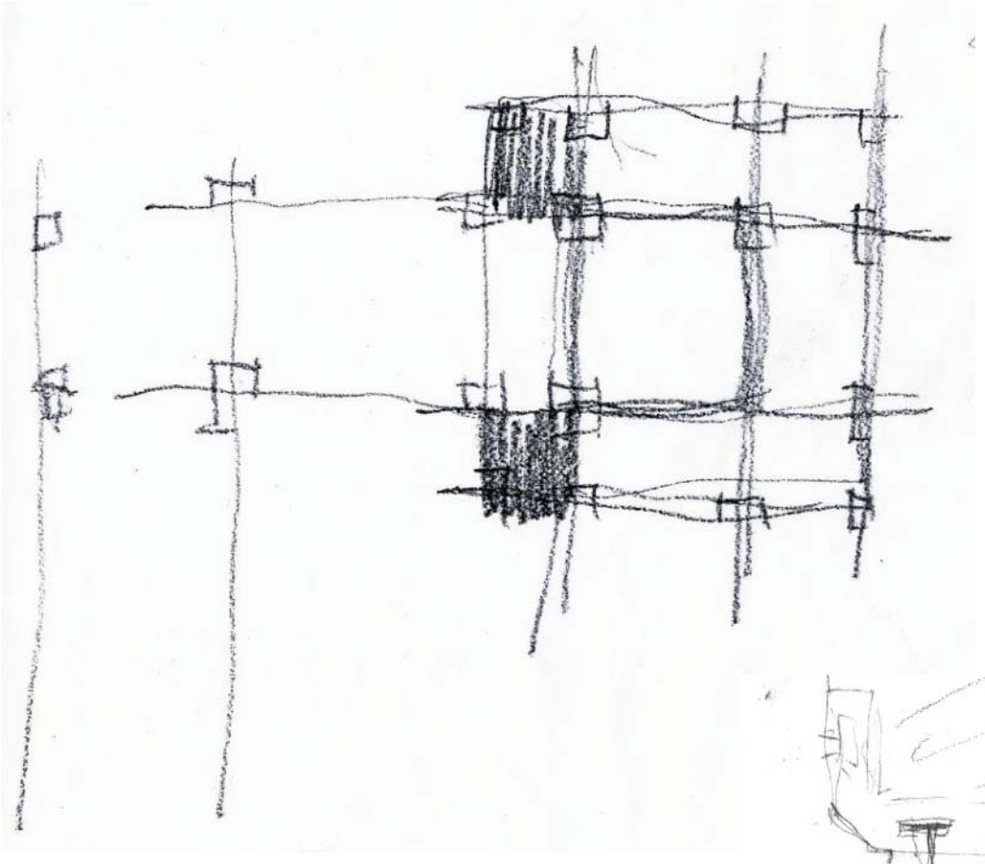

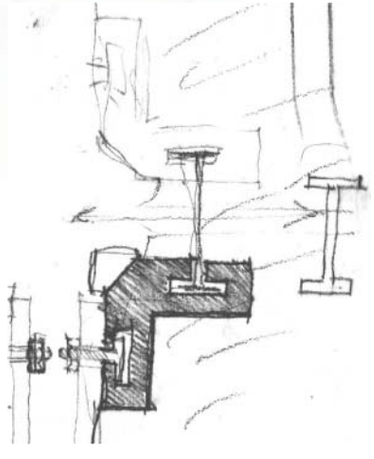

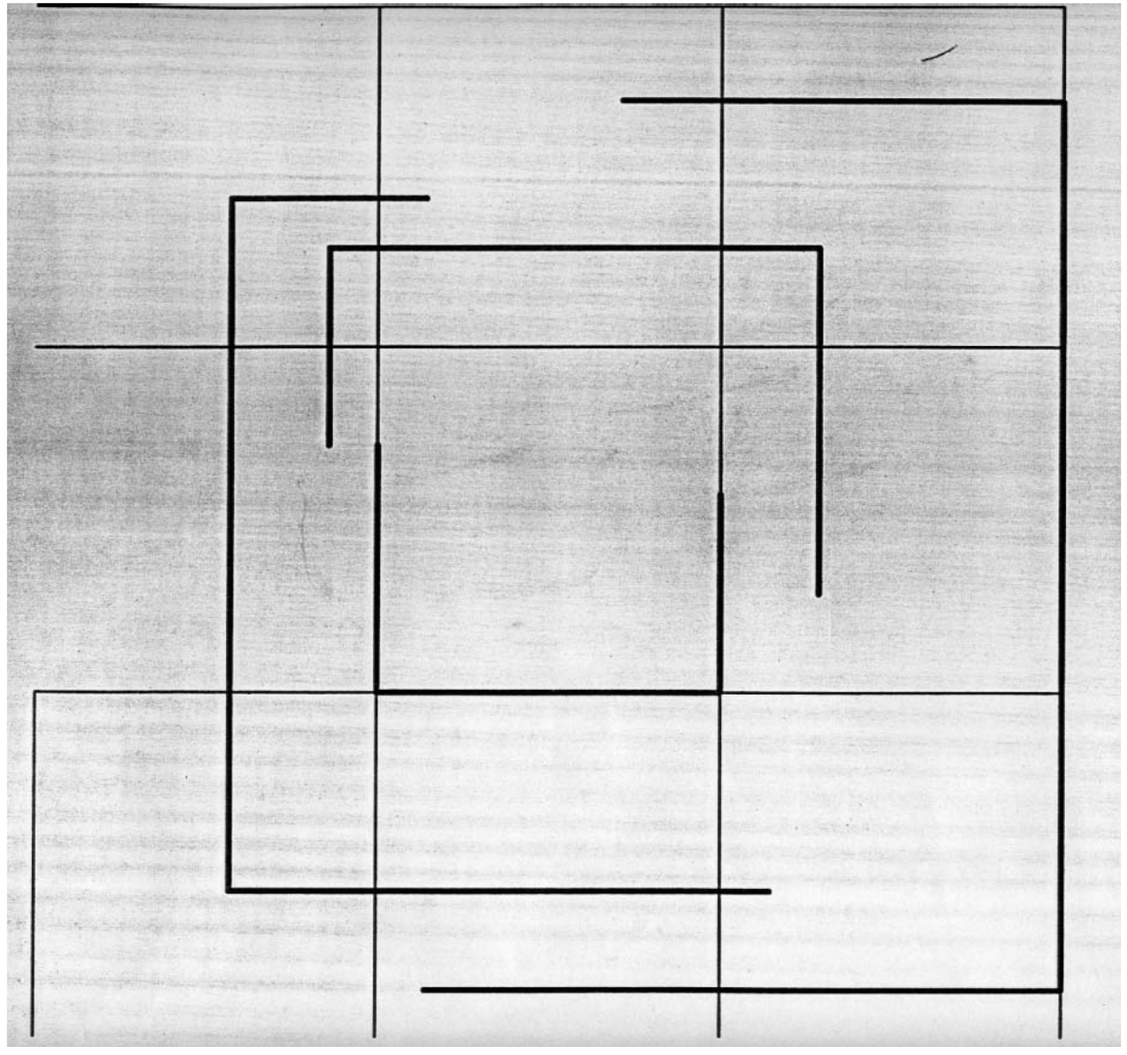

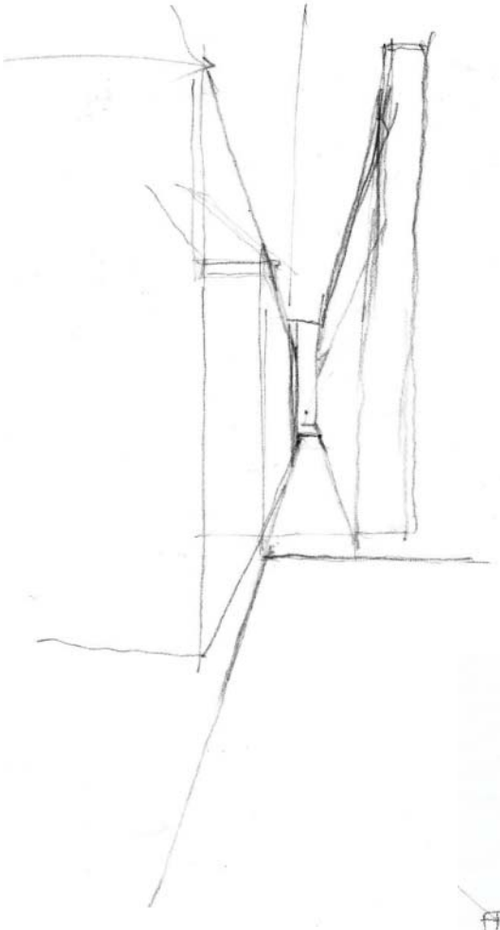

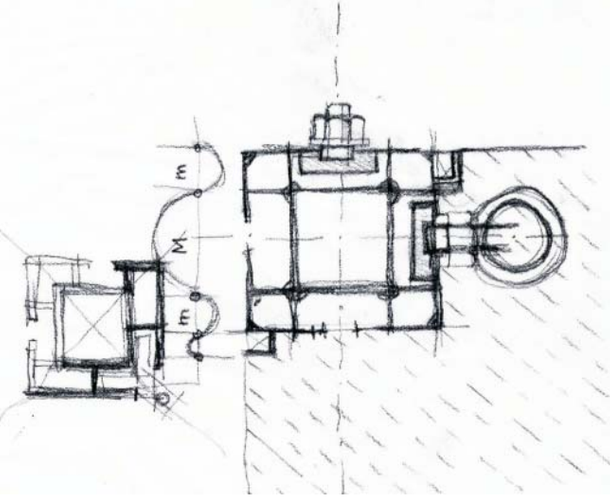

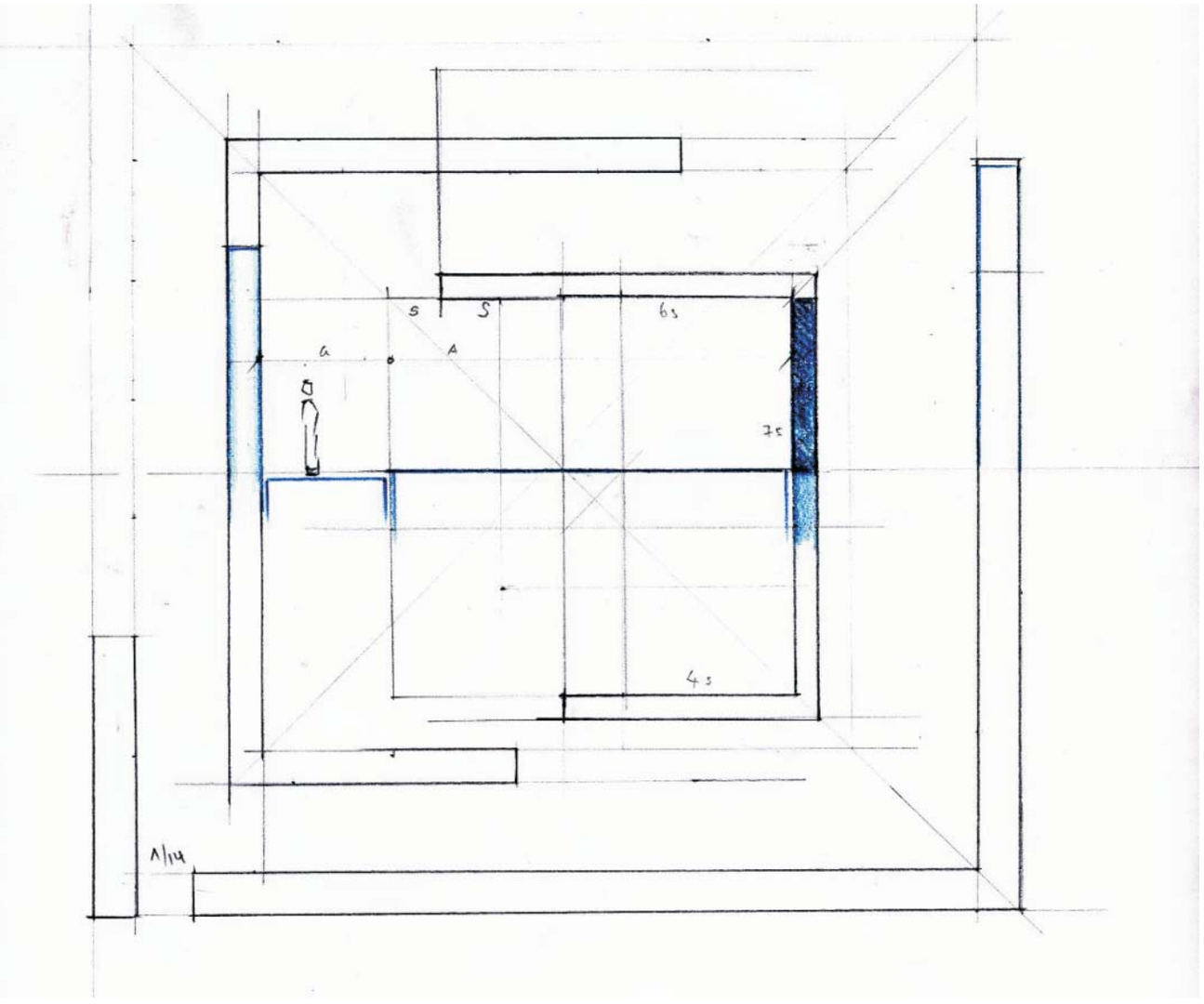
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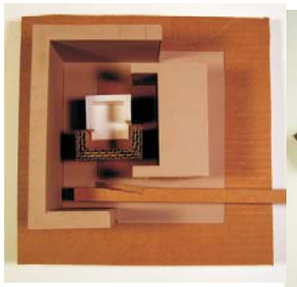

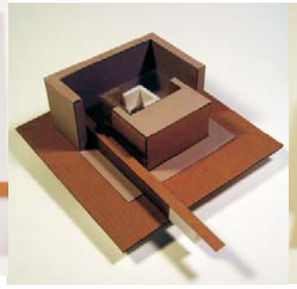

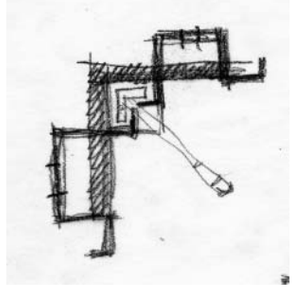

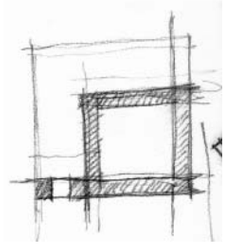

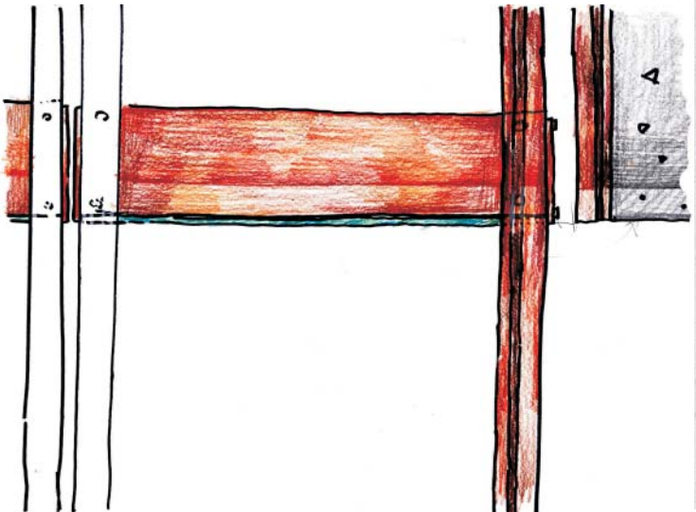

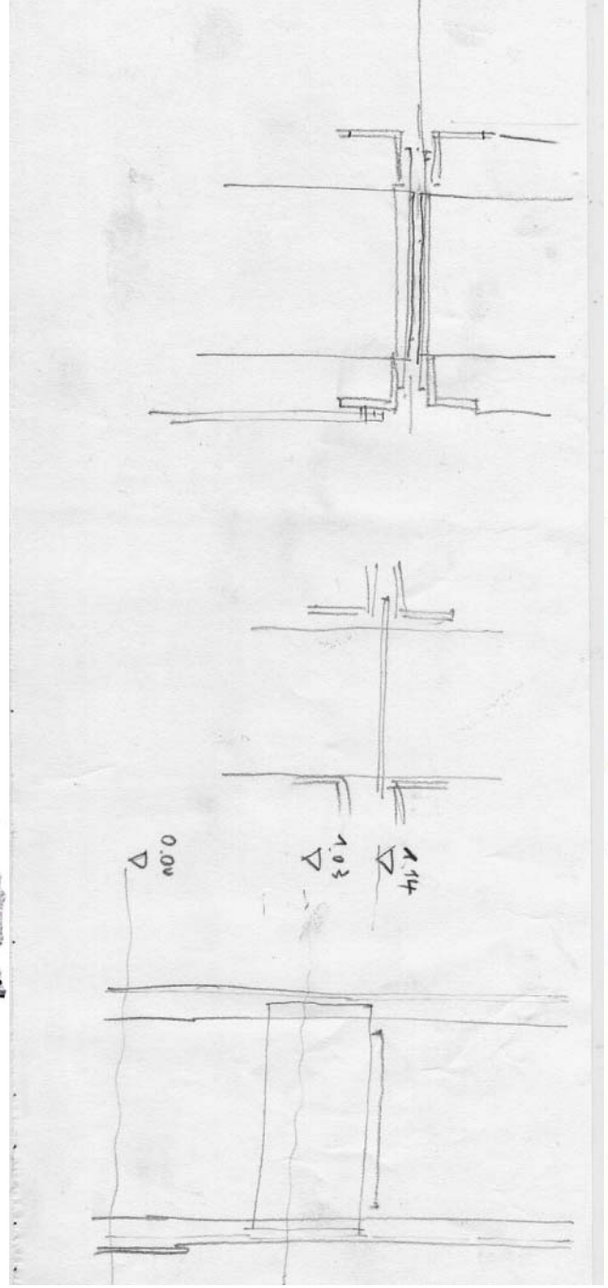
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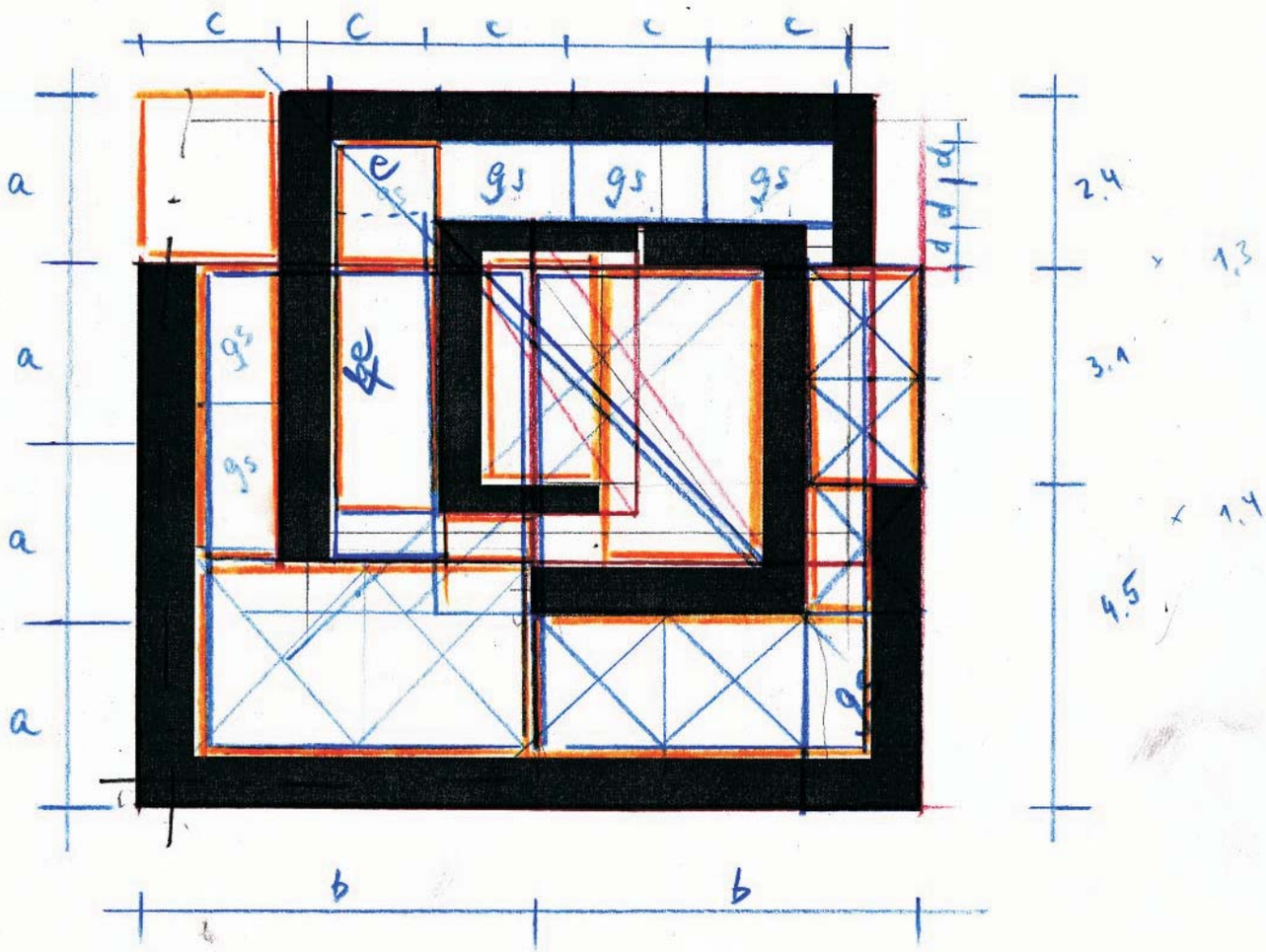
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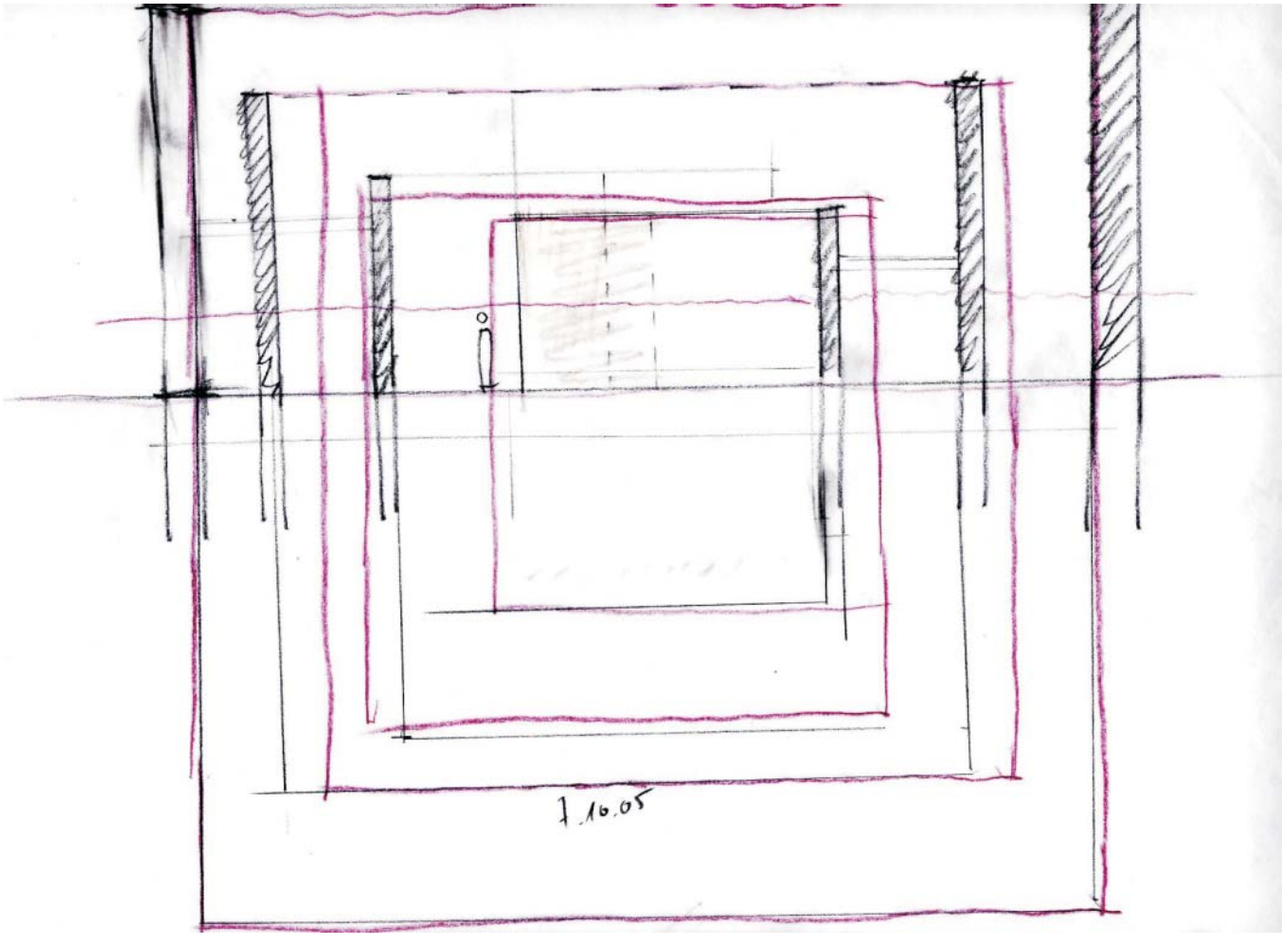
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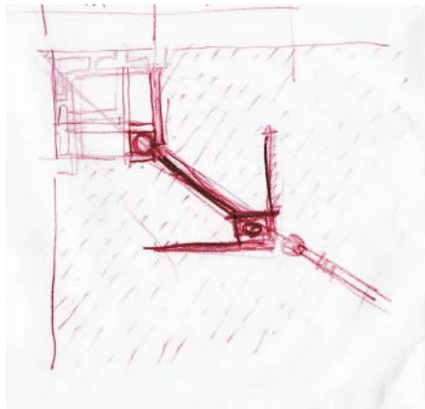

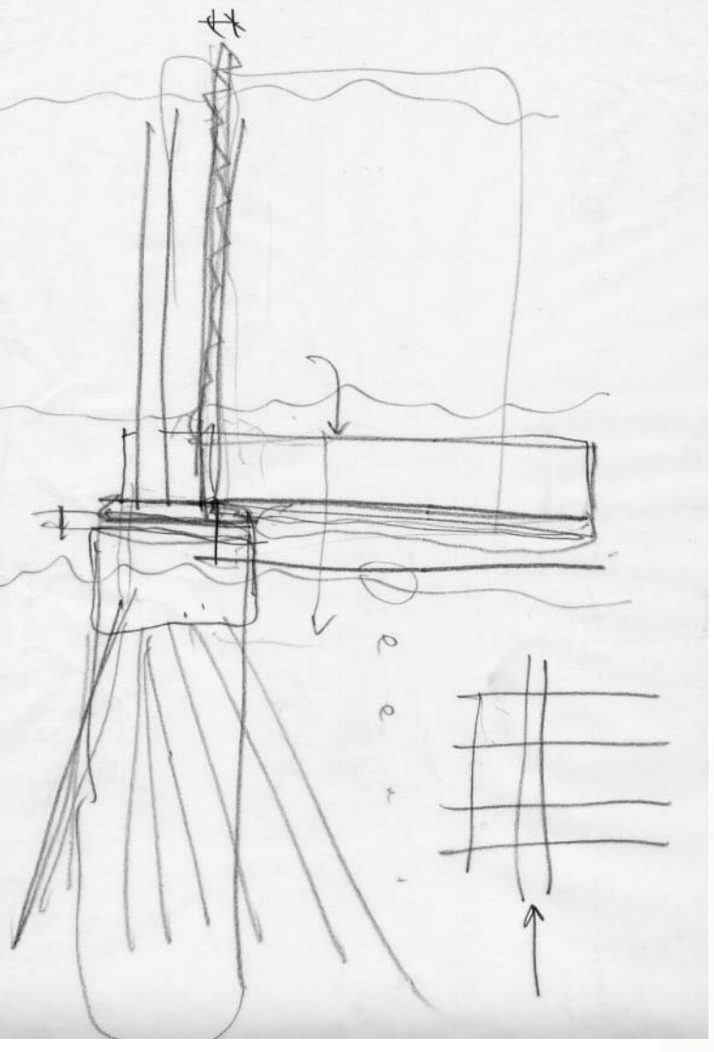

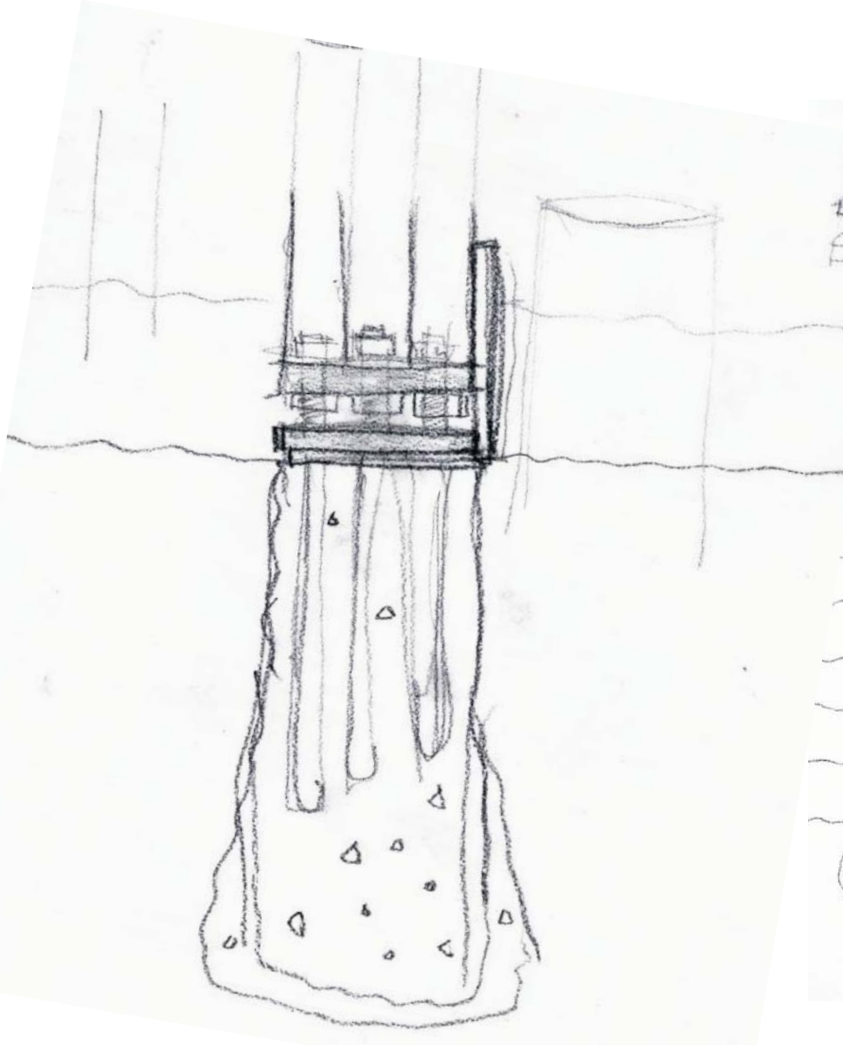

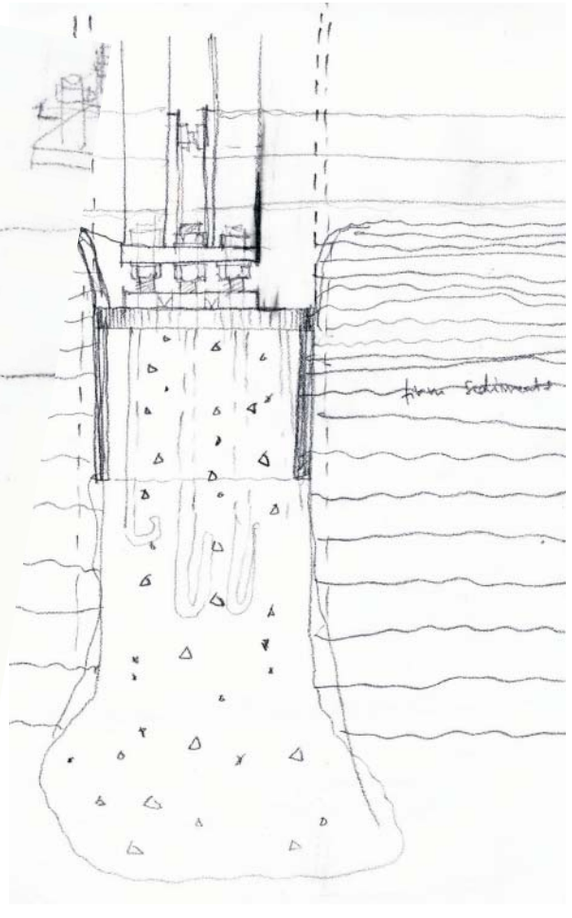
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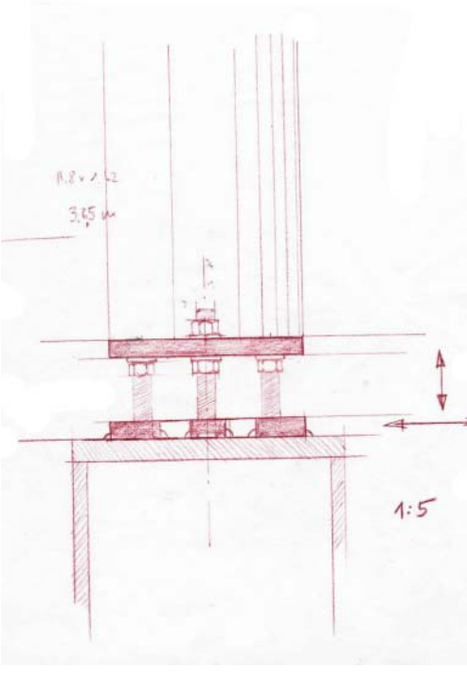
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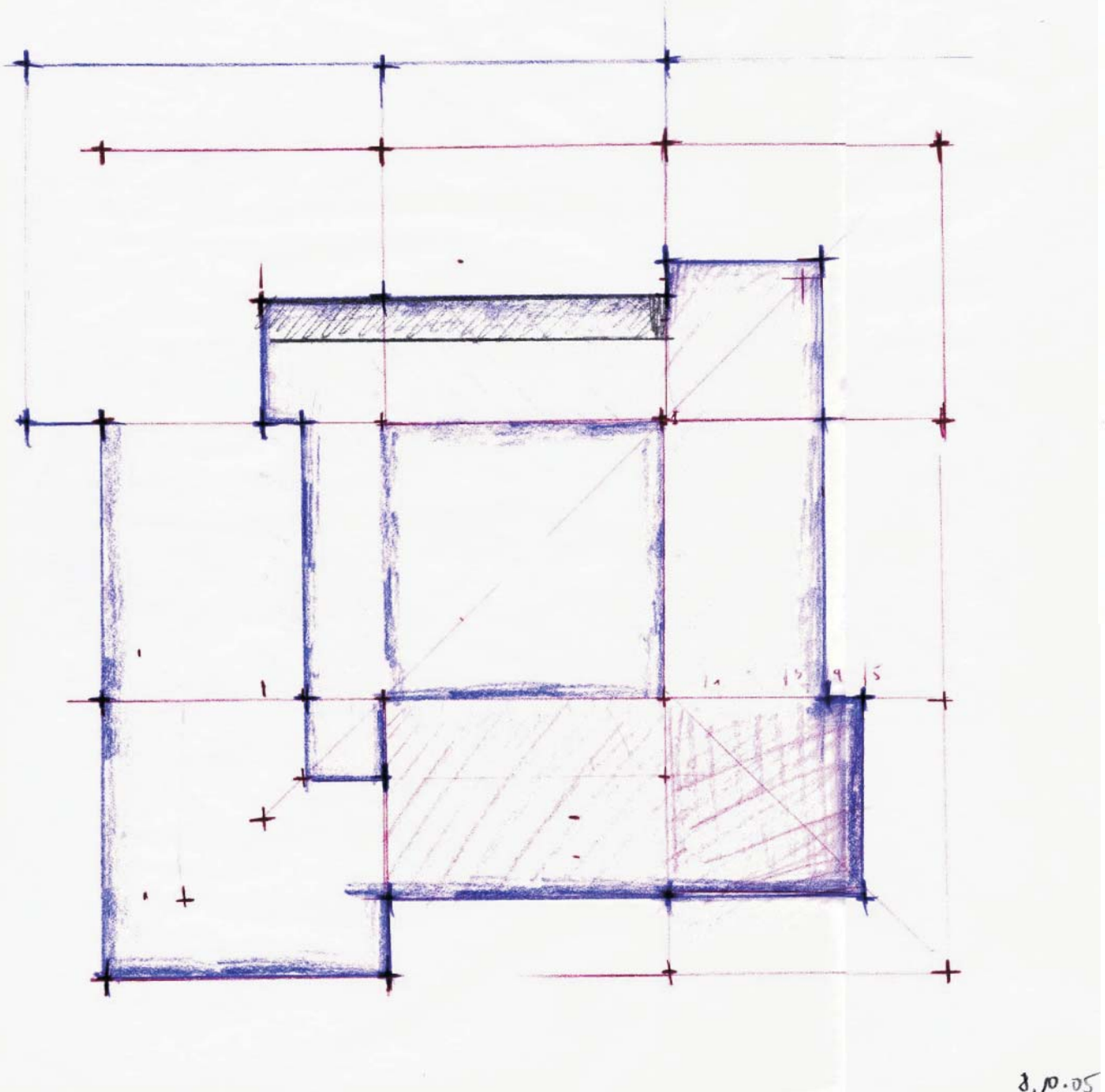

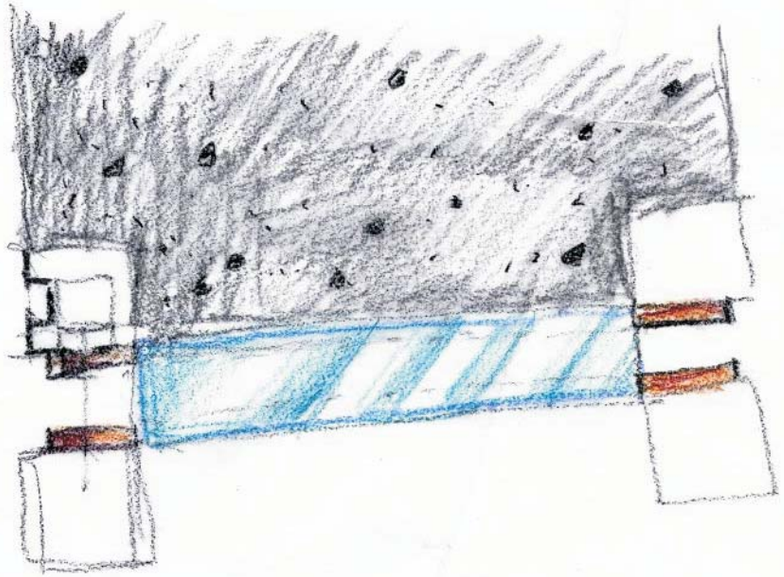

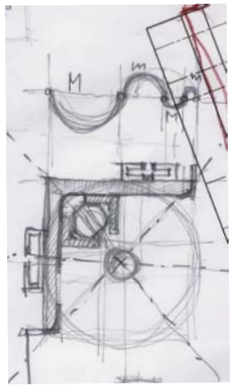

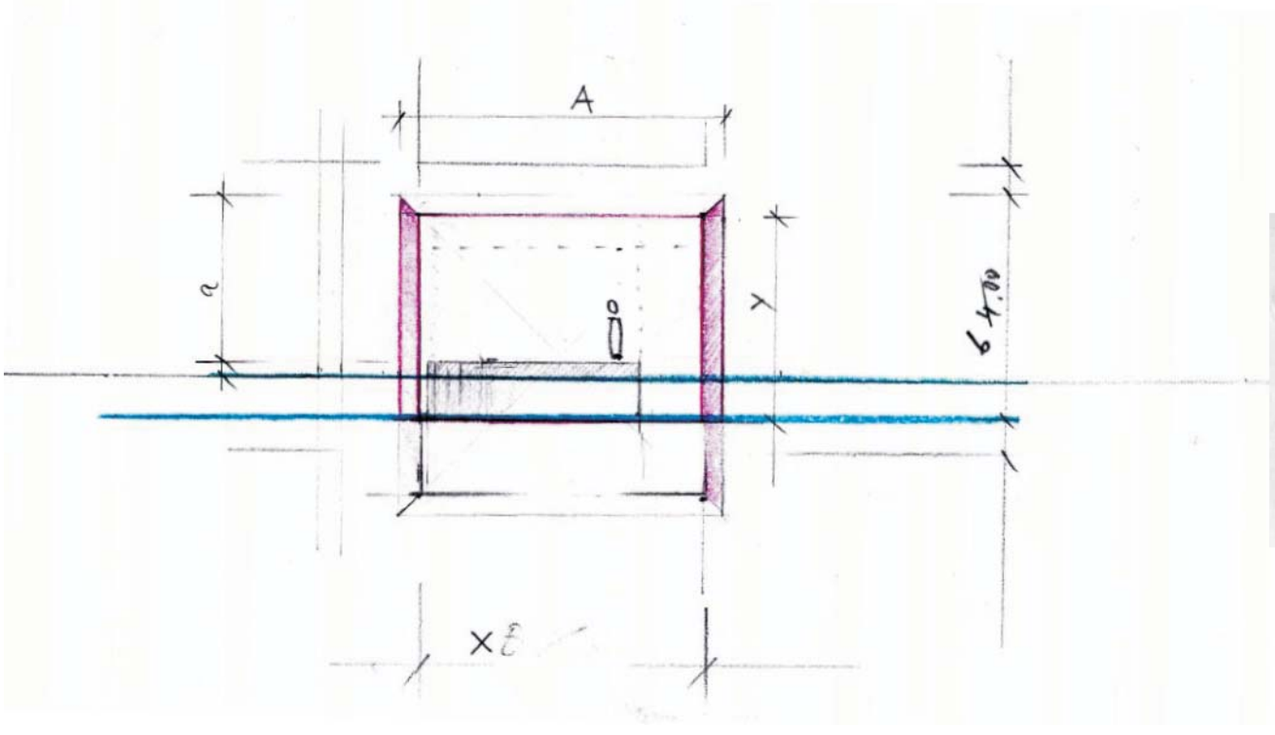
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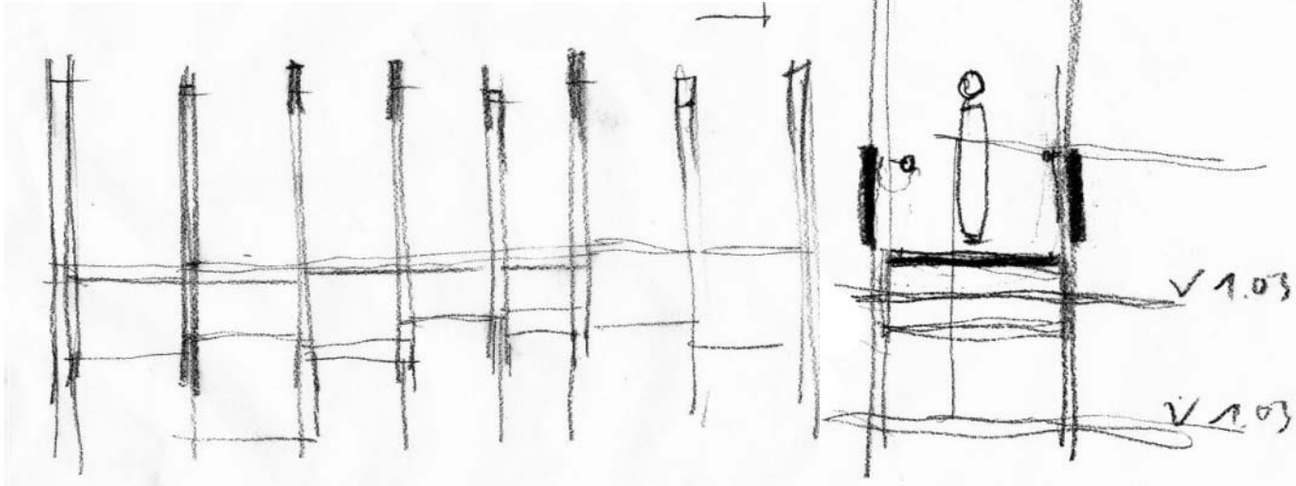
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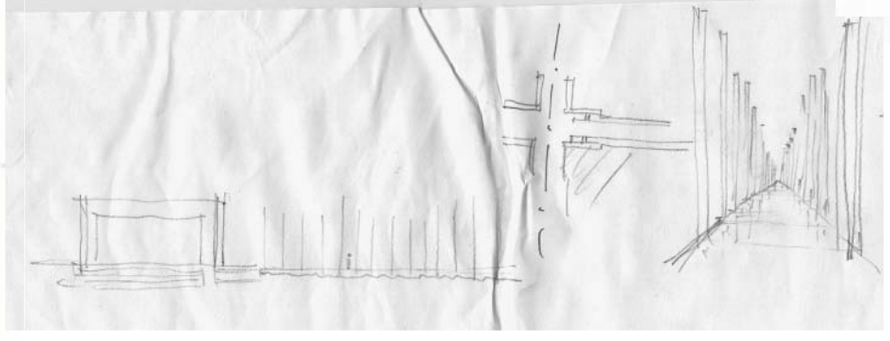

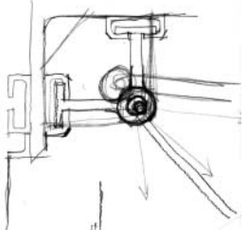

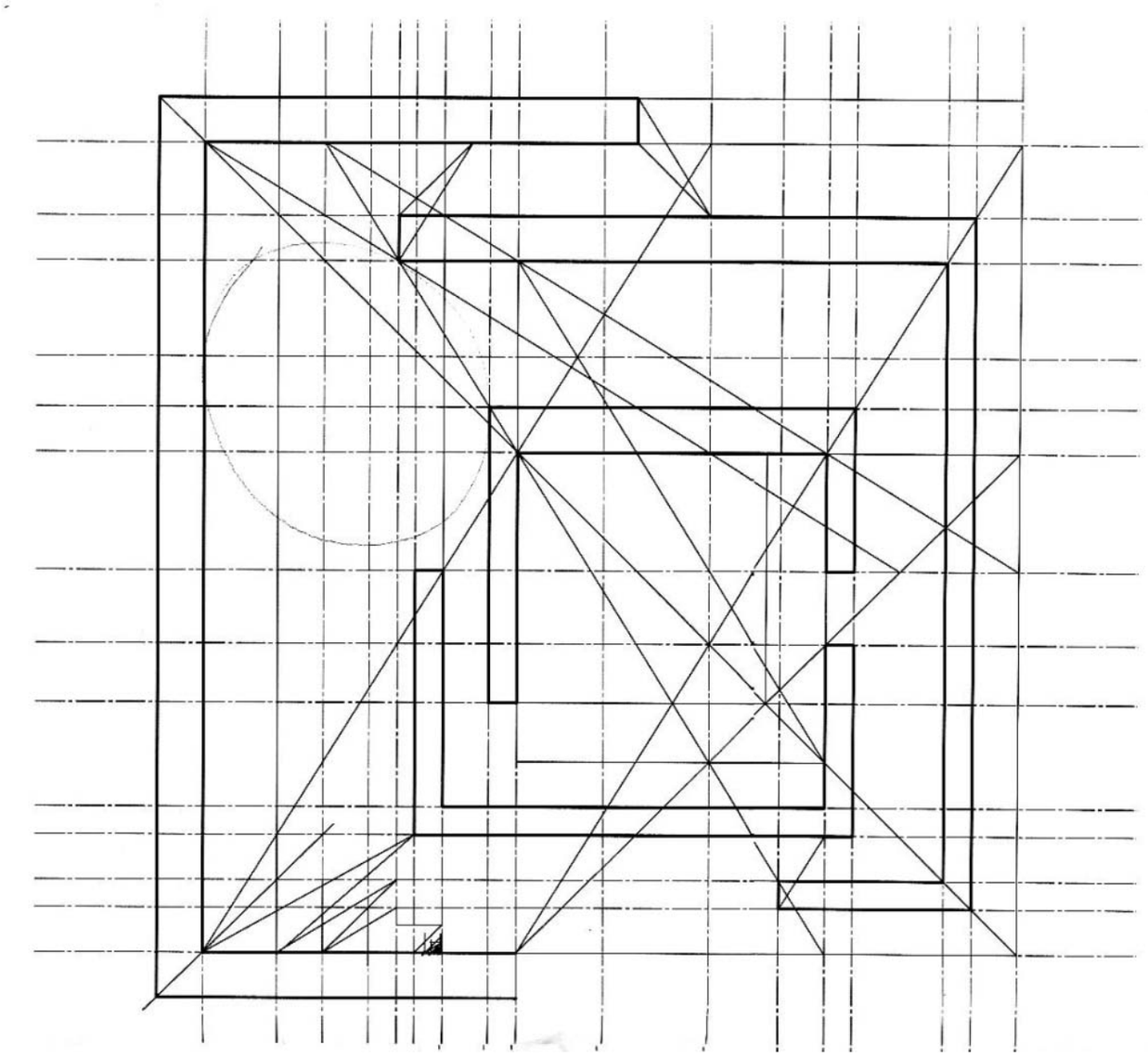

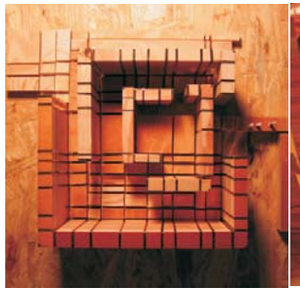

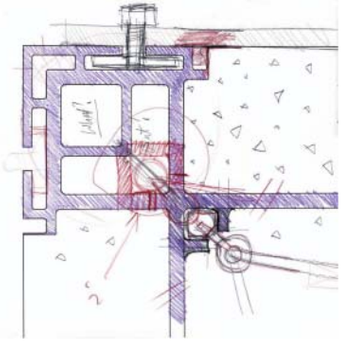

[chaos]