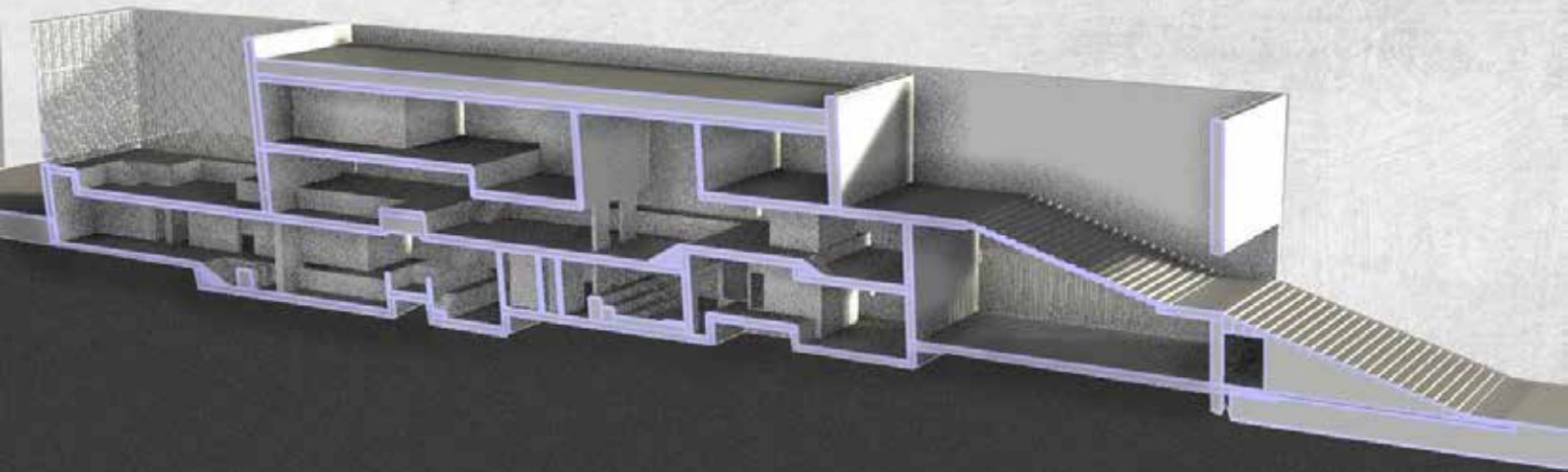


# PUBLIC BATHS OF CHICAGO SOUTH WORKS

Daisy Koppendraaier | P4 presentation

10|11|2014

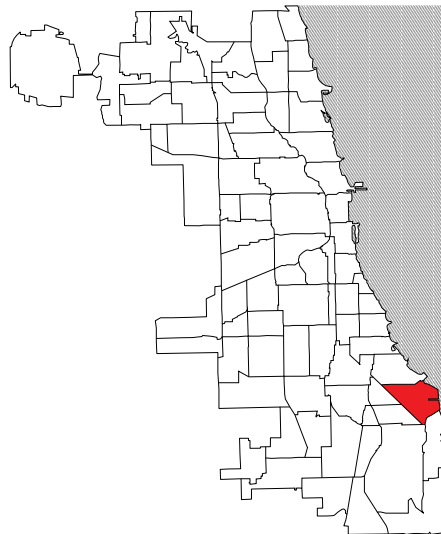
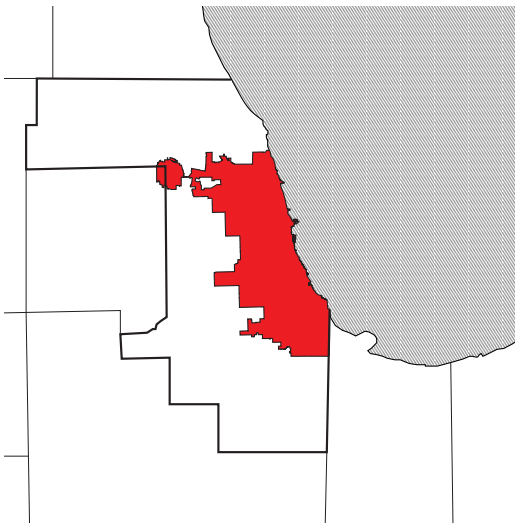
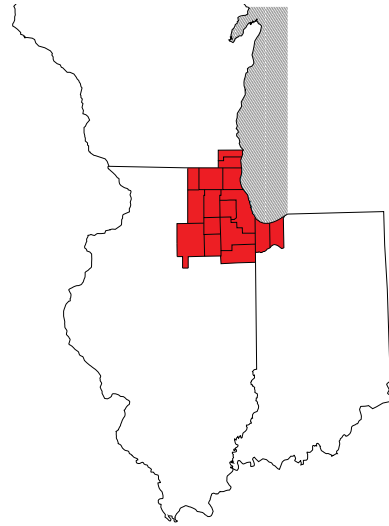


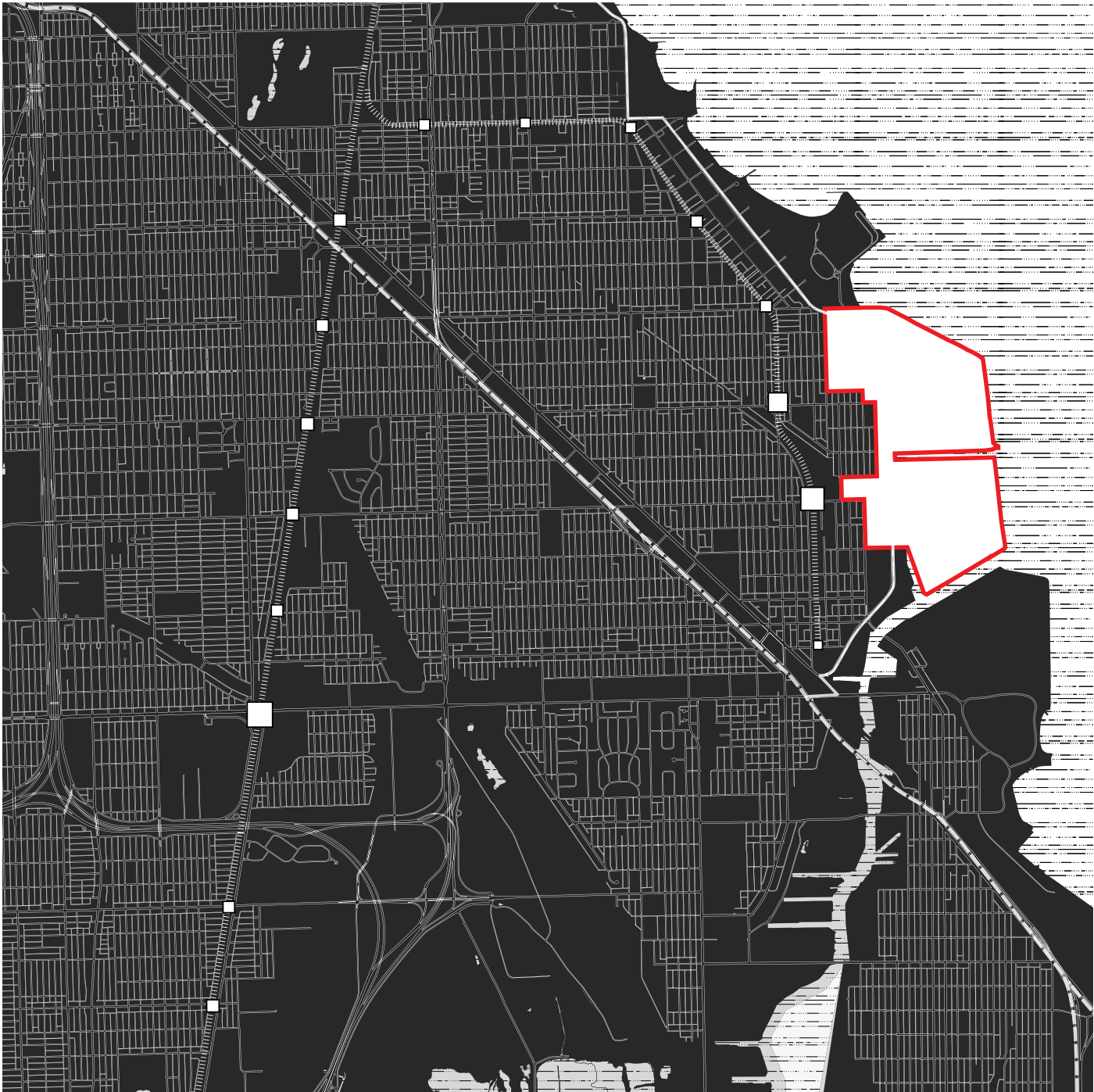


## CONTENT

- 1 | Introduction, theoretical framework
- 2 | Manifesto
- 3 | Masterplan
- 4 | Fragment
- 5 | Theoretical research and position
- 6 | Building concept and methodology
- 7 | Program and facts
- 8 | Structure and climate concept
- 9 | Climate design
- 10 | Structure and materials

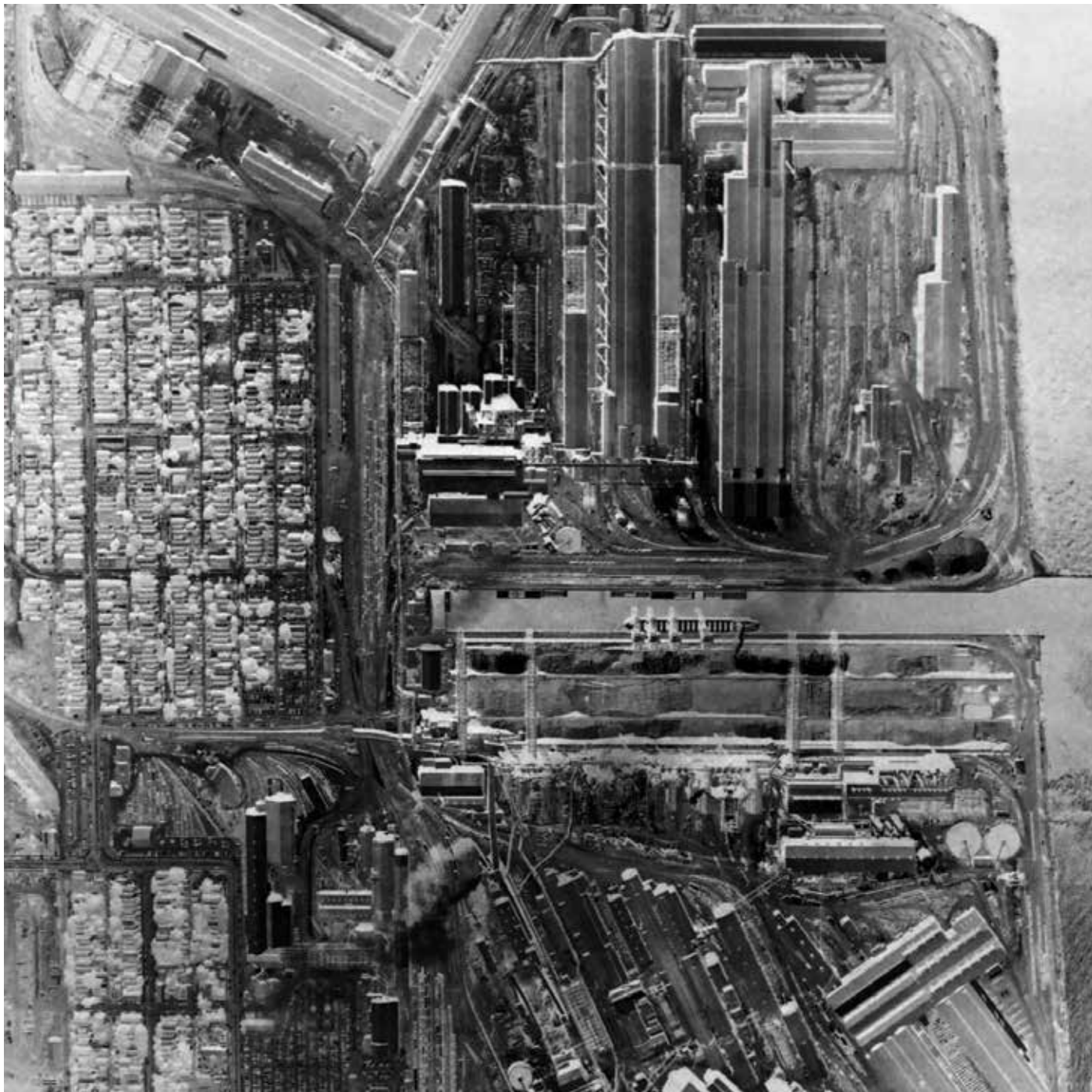
UNITED STATES | CHICAGO | SOUTH WORKS





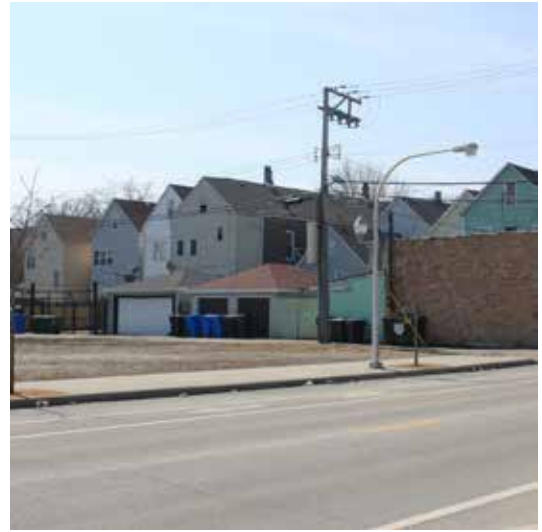
**INTRODUCTION**

**PROBLEM STATEMENT**



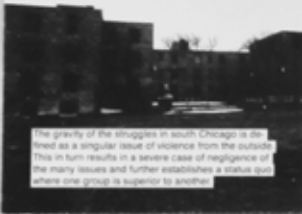








Negligence, awareness



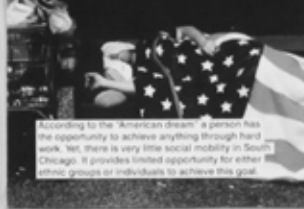
The gravity of the struggles in south Chicago is defined as a singular issue of violence from the outside. This in turn results in a severe case of negligence of the many issues and further establishes a status quo where one group is superior to another.

distances



Long distances between different functions of the city causes stress on infrastructure and causes a big car dependency.

backside of the American dream



According to the 'American dream' a person has the opportunity to achieve anything through hard work. Yet, there is very little social mobility in South Chicago. It provides limited opportunity for either those groups or individuals to achieve this goal.

decay



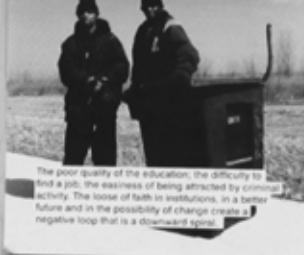
Money, materials, jobs, and the economy is in a state of decay. The structure of south Chicago was not sustainable, and what can be seen now is a state where nature and time governs.

loop is introverted



The loop is a machine that generates great prosperity for itself and the areas close by, and conversely has the opposite effect on peripheral areas in the city.

negative loop



The poor quality of the education, the difficulty to find a job, the easeiness of being attracted by criminal activity, the loose of faith in institutions, in a better future and in the possibility of change create a negative loop that is a disadvantage equal.

## Issues COMPLEX PROJECTS :: CHICAGO SOUTH WORKS

David Gonzalez  
Gangster Lender  
Dany Hopperchase  
John Taylor

The problems presented are a condensed sum analysis on Chicago and especially on South. Some problems have causes that reach way borders of the neighborhood and the city.

With our Project we will try to develop strategies with these issues, without the assumption them. Rather they are important subjects to be considered in order to challenge the status

hard typologies



The prevailing typology in South Chicago is the bungalow. This typology is not easily adaptable to other function than residential.

alienation and fragility

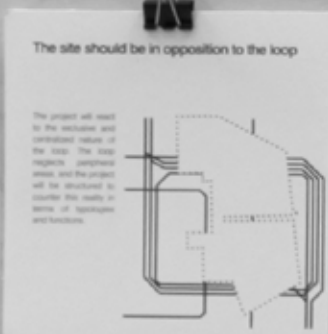
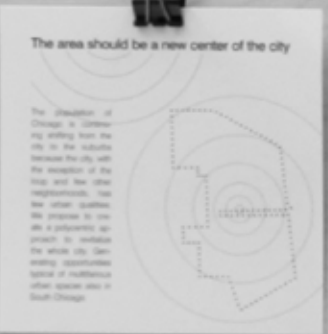
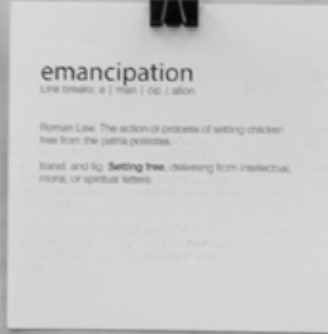
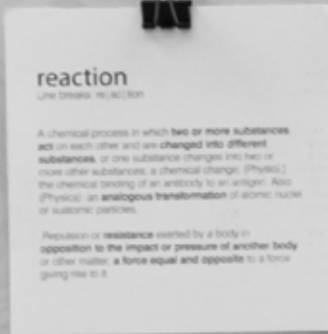


Due to the economic and social uncertainty in south Chicago, investors and external forces have the power to greatly inform and dictate the future conditions and lives of the inhabitants.

vitality and structure



The density is low outside the Loop. These areas are mainly residential and characterized by homogeneity and lack of vitality.





**emancipation**  
 Line breaks: e | man | ip | ation

Roman Law. The action or process of setting children free from the patria potestas.

land, and by **Setting free**, delivering from intellectual, moral, or spiritual fetters.



**The site should generate more urban density**

There is a great deal of vacancy along with a lack of density in the area. The project will aim to density not only the site, but more importantly the neighborhood.

Higher density will stimulate new activities and functions in the neighborhood and thus allow the area to flourish.




**segregation**  
 Line breaks: seg | reg | ation

The separation or **isolation** of a portion of a **community** or a body of persons from the rest.

**Dispersion**, break up (of a collective unity).

The separation of a portion or portions of a collective or **complex unity** from the rest; the isolation of particular constituents of a compound or **mixture**.

The enforced separation of different **racial** groups in a country, community, or institution.



**The site should be divided in different parts**

We are against the rising homogeneity of South Chicago and envision the South Works as an area very diverse that will host different functions, landscapes and activities.




**evolution**  
 Line breaks: e | vo | lution


The process by which different kinds of living organisms are believed to have developed from earlier forms during the history of the earth.

**The gradual development of something**



**Empower people through education and jobs creation**

South Chicago is a vast residential area. Jobs and good schools are lacking. By facilitating the creation of residences and reintroducing manufacturing in the area we believe that the character of this area will become more competitive, more vibrant and more independent.




**Framework**  
 COMPLEX PROJECTS  
 CHICAGO SOUTH WORKS

David Costelloe  
 George Lerner  
 Daley Koppelman  
 John Tomp

**This Framework speaks about our vision and inspirations.**  
 The Framework is the result of our own and our feelings.  
 It is not monodirectional, rather it is a process.  
 It doesn't have one direction, it has many.

The Framework is composed of three main elements: **Focuses**, **Manifestations** and **Visions**.  
 The **Focuses** are the concepts that guide our design.  
 The **Manifestations** are physical forms that will be built on the site and at the same time, they will be built on the site.  
 The **Visions** are statements that define the objectives of our future.

The triple division expresses our way in which we would like to approach members, interests and results and are investigated with other research, drawing, discussion and the articulation of statements that define the objectives of our future.

**Focuses, Manifestations and Visions** are the representation of the manifest and independent.

## Nature

My use wants to be intimate. I want to be together and shared for stories. I have been frustrated about being confused, disoriented and unengaged. This is not a strange way to be and it is not a bad thing to be. Maybe this time around people will be happier than last or my team will be more engaged by recognizing the location. We have made our location and history a central message with the text and photos. There will be history and the people that lived there. I will not be together with the land. I will be together with the people. The landscape will be in a way that will be together with the people. It will be a way that will be together with the people.

10/20/12  
10/21/12  
10/22/12  
10/23/12  
10/24/12  
10/25/12  
10/26/12  
10/27/12  
10/28/12  
10/29/12  
10/30/12  
10/31/12  
11/01/12  
11/02/12  
11/03/12  
11/04/12  
11/05/12  
11/06/12  
11/07/12  
11/08/12  
11/09/12  
11/10/12  
11/11/12  
11/12/12  
11/13/12  
11/14/12  
11/15/12  
11/16/12  
11/17/12  
11/18/12  
11/19/12  
11/20/12  
11/21/12  
11/22/12  
11/23/12  
11/24/12  
11/25/12  
11/26/12  
11/27/12  
11/28/12  
11/29/12  
11/30/12  
12/01/12  
12/02/12  
12/03/12  
12/04/12  
12/05/12  
12/06/12  
12/07/12  
12/08/12  
12/09/12  
12/10/12  
12/11/12  
12/12/12  
12/13/12  
12/14/12  
12/15/12  
12/16/12  
12/17/12  
12/18/12  
12/19/12  
12/20/12  
12/21/12  
12/22/12  
12/23/12  
12/24/12  
12/25/12  
12/26/12  
12/27/12  
12/28/12  
12/29/12  
12/30/12  
12/31/12

10/20/12  
10/21/12  
10/22/12  
10/23/12  
10/24/12  
10/25/12  
10/26/12  
10/27/12  
10/28/12  
10/29/12  
10/30/12  
10/31/12  
11/01/12  
11/02/12  
11/03/12  
11/04/12  
11/05/12  
11/06/12  
11/07/12  
11/08/12  
11/09/12  
11/10/12  
11/11/12  
11/12/12  
11/13/12  
11/14/12  
11/15/12  
11/16/12  
11/17/12  
11/18/12  
11/19/12  
11/20/12  
11/21/12  
11/22/12  
11/23/12  
11/24/12  
11/25/12  
11/26/12  
11/27/12  
11/28/12  
11/29/12  
11/30/12  
12/01/12  
12/02/12  
12/03/12  
12/04/12  
12/05/12  
12/06/12  
12/07/12  
12/08/12  
12/09/12  
12/10/12  
12/11/12  
12/12/12  
12/13/12  
12/14/12  
12/15/12  
12/16/12  
12/17/12  
12/18/12  
12/19/12  
12/20/12  
12/21/12  
12/22/12  
12/23/12  
12/24/12  
12/25/12  
12/26/12  
12/27/12  
12/28/12  
12/29/12  
12/30/12  
12/31/12

## Empowerment

### Strong Future

10/20/12  
10/21/12  
10/22/12  
10/23/12  
10/24/12  
10/25/12  
10/26/12  
10/27/12  
10/28/12  
10/29/12  
10/30/12  
10/31/12  
11/01/12  
11/02/12  
11/03/12  
11/04/12  
11/05/12  
11/06/12  
11/07/12  
11/08/12  
11/09/12  
11/10/12  
11/11/12  
11/12/12  
11/13/12  
11/14/12  
11/15/12  
11/16/12  
11/17/12  
11/18/12  
11/19/12  
11/20/12  
11/21/12  
11/22/12  
11/23/12  
11/24/12  
11/25/12  
11/26/12  
11/27/12  
11/28/12  
11/29/12  
11/30/12  
12/01/12  
12/02/12  
12/03/12  
12/04/12  
12/05/12  
12/06/12  
12/07/12  
12/08/12  
12/09/12  
12/10/12  
12/11/12  
12/12/12  
12/13/12  
12/14/12  
12/15/12  
12/16/12  
12/17/12  
12/18/12  
12/19/12  
12/20/12  
12/21/12  
12/22/12  
12/23/12  
12/24/12  
12/25/12  
12/26/12  
12/27/12  
12/28/12  
12/29/12  
12/30/12  
12/31/12

10/20/12  
10/21/12  
10/22/12  
10/23/12  
10/24/12  
10/25/12  
10/26/12  
10/27/12  
10/28/12  
10/29/12  
10/30/12  
10/31/12  
11/01/12  
11/02/12  
11/03/12  
11/04/12  
11/05/12  
11/06/12  
11/07/12  
11/08/12  
11/09/12  
11/10/12  
11/11/12  
11/12/12  
11/13/12  
11/14/12  
11/15/12  
11/16/12  
11/17/12  
11/18/12  
11/19/12  
11/20/12  
11/21/12  
11/22/12  
11/23/12  
11/24/12  
11/25/12  
11/26/12  
11/27/12  
11/28/12  
11/29/12  
11/30/12  
12/01/12  
12/02/12  
12/03/12  
12/04/12  
12/05/12  
12/06/12  
12/07/12  
12/08/12  
12/09/12  
12/10/12  
12/11/12  
12/12/12  
12/13/12  
12/14/12  
12/15/12  
12/16/12  
12/17/12  
12/18/12  
12/19/12  
12/20/12  
12/21/12  
12/22/12  
12/23/12  
12/24/12  
12/25/12  
12/26/12  
12/27/12  
12/28/12  
12/29/12  
12/30/12  
12/31/12

## Density

### Intimacy and Openness

10/20/12  
10/21/12  
10/22/12  
10/23/12  
10/24/12  
10/25/12  
10/26/12  
10/27/12  
10/28/12  
10/29/12  
10/30/12  
10/31/12  
11/01/12  
11/02/12  
11/03/12  
11/04/12  
11/05/12  
11/06/12  
11/07/12  
11/08/12  
11/09/12  
11/10/12  
11/11/12  
11/12/12  
11/13/12  
11/14/12  
11/15/12  
11/16/12  
11/17/12  
11/18/12  
11/19/12  
11/20/12  
11/21/12  
11/22/12  
11/23/12  
11/24/12  
11/25/12  
11/26/12  
11/27/12  
11/28/12  
11/29/12  
11/30/12  
12/01/12  
12/02/12  
12/03/12  
12/04/12  
12/05/12  
12/06/12  
12/07/12  
12/08/12  
12/09/12  
12/10/12  
12/11/12  
12/12/12  
12/13/12  
12/14/12  
12/15/12  
12/16/12  
12/17/12  
12/18/12  
12/19/12  
12/20/12  
12/21/12  
12/22/12  
12/23/12  
12/24/12  
12/25/12  
12/26/12  
12/27/12  
12/28/12  
12/29/12  
12/30/12  
12/31/12

10/20/12  
10/21/12  
10/22/12  
10/23/12  
10/24/12  
10/25/12  
10/26/12  
10/27/12  
10/28/12  
10/29/12  
10/30/12  
10/31/12  
11/01/12  
11/02/12  
11/03/12  
11/04/12  
11/05/12  
11/06/12  
11/07/12  
11/08/12  
11/09/12  
11/10/12  
11/11/12  
11/12/12  
11/13/12  
11/14/12  
11/15/12  
11/16/12  
11/17/12  
11/18/12  
11/19/12  
11/20/12  
11/21/12  
11/22/12  
11/23/12  
11/24/12  
11/25/12  
11/26/12  
11/27/12  
11/28/12  
11/29/12  
11/30/12  
12/01/12  
12/02/12  
12/03/12  
12/04/12  
12/05/12  
12/06/12  
12/07/12  
12/08/12  
12/09/12  
12/10/12  
12/11/12  
12/12/12  
12/13/12  
12/14/12  
12/15/12  
12/16/12  
12/17/12  
12/18/12  
12/19/12  
12/20/12  
12/21/12  
12/22/12  
12/23/12  
12/24/12  
12/25/12  
12/26/12  
12/27/12  
12/28/12  
12/29/12  
12/30/12  
12/31/12

## Bike path

### Along the Lake

10/20/12  
10/21/12  
10/22/12  
10/23/12  
10/24/12  
10/25/12  
10/26/12  
10/27/12  
10/28/12  
10/29/12  
10/30/12  
10/31/12  
11/01/12  
11/02/12  
11/03/12  
11/04/12  
11/05/12  
11/06/12  
11/07/12  
11/08/12  
11/09/12  
11/10/12  
11/11/12  
11/12/12  
11/13/12  
11/14/12  
11/15/12  
11/16/12  
11/17/12  
11/18/12  
11/19/12  
11/20/12  
11/21/12  
11/22/12  
11/23/12  
11/24/12  
11/25/12  
11/26/12  
11/27/12  
11/28/12  
11/29/12  
11/30/12  
12/01/12  
12/02/12  
12/03/12  
12/04/12  
12/05/12  
12/06/12  
12/07/12  
12/08/12  
12/09/12  
12/10/12  
12/11/12  
12/12/12  
12/13/12  
12/14/12  
12/15/12  
12/16/12  
12/17/12  
12/18/12  
12/19/12  
12/20/12  
12/21/12  
12/22/12  
12/23/12  
12/24/12  
12/25/12  
12/26/12  
12/27/12  
12/28/12  
12/29/12  
12/30/12  
12/31/12

10/20/12  
10/21/12  
10/22/12  
10/23/12  
10/24/12  
10/25/12  
10/26/12  
10/27/12  
10/28/12  
10/29/12  
10/30/12  
10/31/12  
11/01/12  
11/02/12  
11/03/12  
11/04/12  
11/05/12  
11/06/12  
11/07/12  
11/08/12  
11/09/12  
11/10/12  
11/11/12  
11/12/12  
11/13/12  
11/14/12  
11/15/12  
11/16/12  
11/17/12  
11/18/12  
11/19/12  
11/20/12  
11/21/12  
11/22/12  
11/23/12  
11/24/12  
11/25/12  
11/26/12  
11/27/12  
11/28/12  
11/29/12  
11/30/12  
12/01/12  
12/02/12  
12/03/12  
12/04/12  
12/05/12  
12/06/12  
12/07/12  
12/08/12  
12/09/12  
12/10/12  
12/11/12  
12/12/12  
12/13/12  
12/14/12  
12/15/12  
12/16/12  
12/17/12  
12/18/12  
12/19/12  
12/20/12  
12/21/12  
12/22/12  
12/23/12  
12/24/12  
12/25/12  
12/26/12  
12/27/12  
12/28/12  
12/29/12  
12/30/12  
12/31/12

## Narratives

### COMPLEX PROJECTS CHICAGO SOUTH WORKS

David Guzman  
Dana Kaufman  
Chris Torrey

These four Narratives are essences that we trigger our imagination. To pull us to think how it could be in the future, and to find certain things within the framework.

The point of departure of our stories are the compass the lines of the **Stories** and of the **Plans**. Each story considers only some cards, carefully so.

The act of mixing, choosing and connecting the cards on the board allow us to create links between the legs and lines. This methodology has helped us better understand strong relations between dreams, and to envision scenarios.

These ideas are not only equipped with act of work along with the act of drawing. The drawing compels not only illustrating the story but giving it a dimension, and a physical presence. We have a right vision, but after thought-making experience.

## Density

### Along the Lake



## Nature

### Intimacy and Openness



## Empowerment

### Strong Future



## Bike path

### Along the Lake



# DENSITY

## Intimacy and Openness

I remember these lines of single houses along the streets of doors and windows that possessed no big differences or rarities. Often the windows were blocked by wooden panels and signs of foreclosure. There was not much activity on the streets, the only thing I can remember is children yelling and laughing while playing sports during school time. Police sirens were a common sound. Also, my favorite hotdog place – “Lake shore food” - got closed, as there was no place left to have a snack or drink.

But times are changing; the days of poverty are followed by more hopeful times. There are reoccurring signs of development and the South Side can start to be active again. From one to another, the streets seems to continue infinitely – multiplying its repertory of images - yet one side stops by the Lake Shore Drive, as a barrier with behind a big piece of land bewildered by flora with an unique view on the Lake.

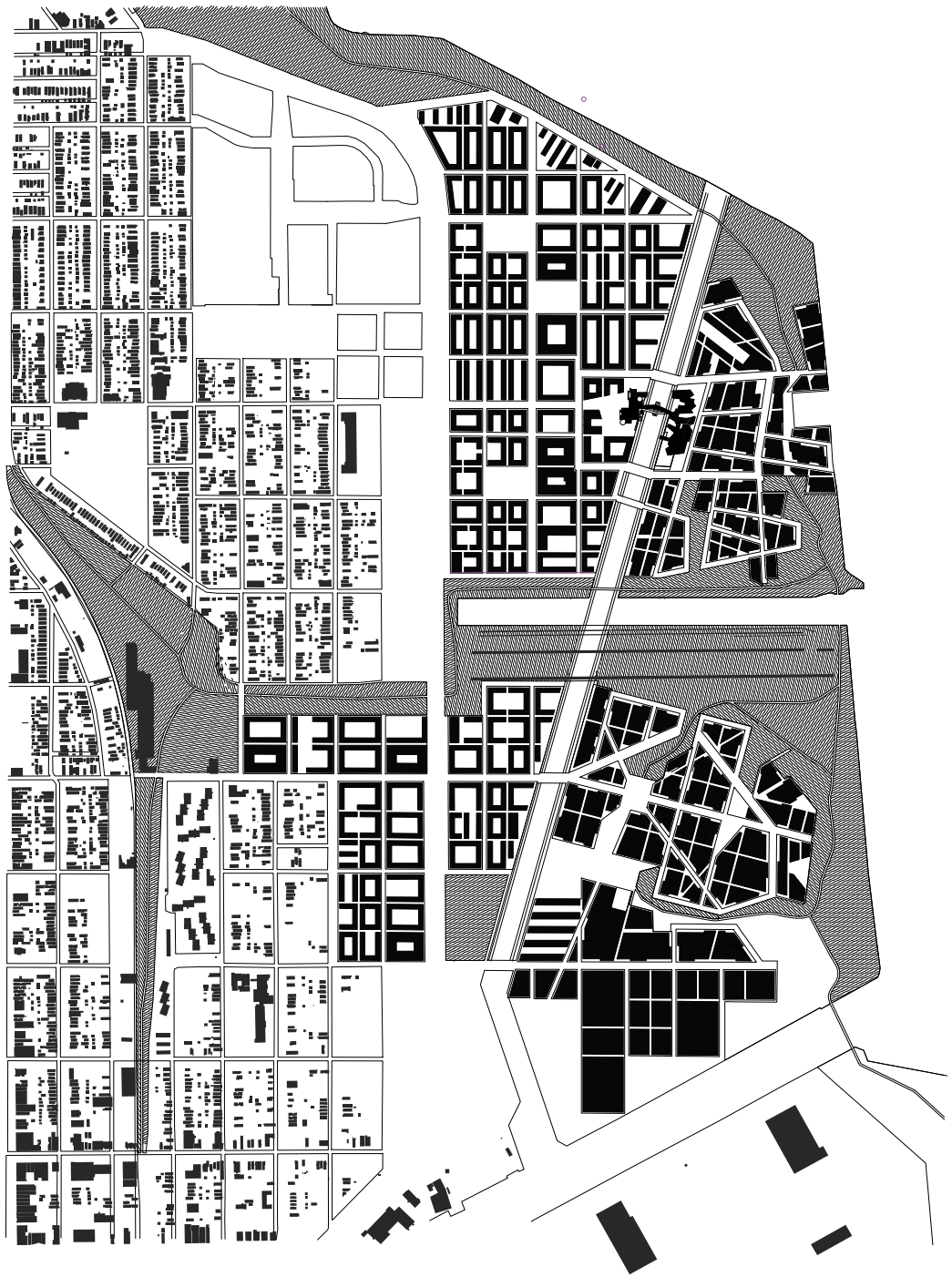
These days the streets are continuing towards the lake shore and the only barriers are fences. Buildings arise from the ground and create **intimate space** by four to five story high buildings -interspersed with buildings of almost similar heights - and **narrower streets** within smaller and irregular blocks. Continuing down these new streets I get the feeling of **entering a new area**. Especially when crossing the Lake Shore Drive. The built groups of buildings create spatial **openness's in** between with views of a landscape with views that even sometimes reaches the skyline of the Loop. The site is continuously evolving. One of the first built manufactories is already inhabited by a coffee shop and a grocery store on the first floor and affordable apartments on the upper floors. As I continue the street I encounter an alley that seems to lead to the canal near the Iron walls. These walls are possibly a memorial of the South Works history. When reaching the water I feel satisfied with the fact that the shores with its views are not distorted by buildings.



## **MASTERPLAN**

Interdependent places





## **AMBITIONS**

Fight depression in South Side Chicago through creating a center with increased opportunities

Ensuring a prosperous urban area with a strong identity by emphasizing the existing qualities of the site

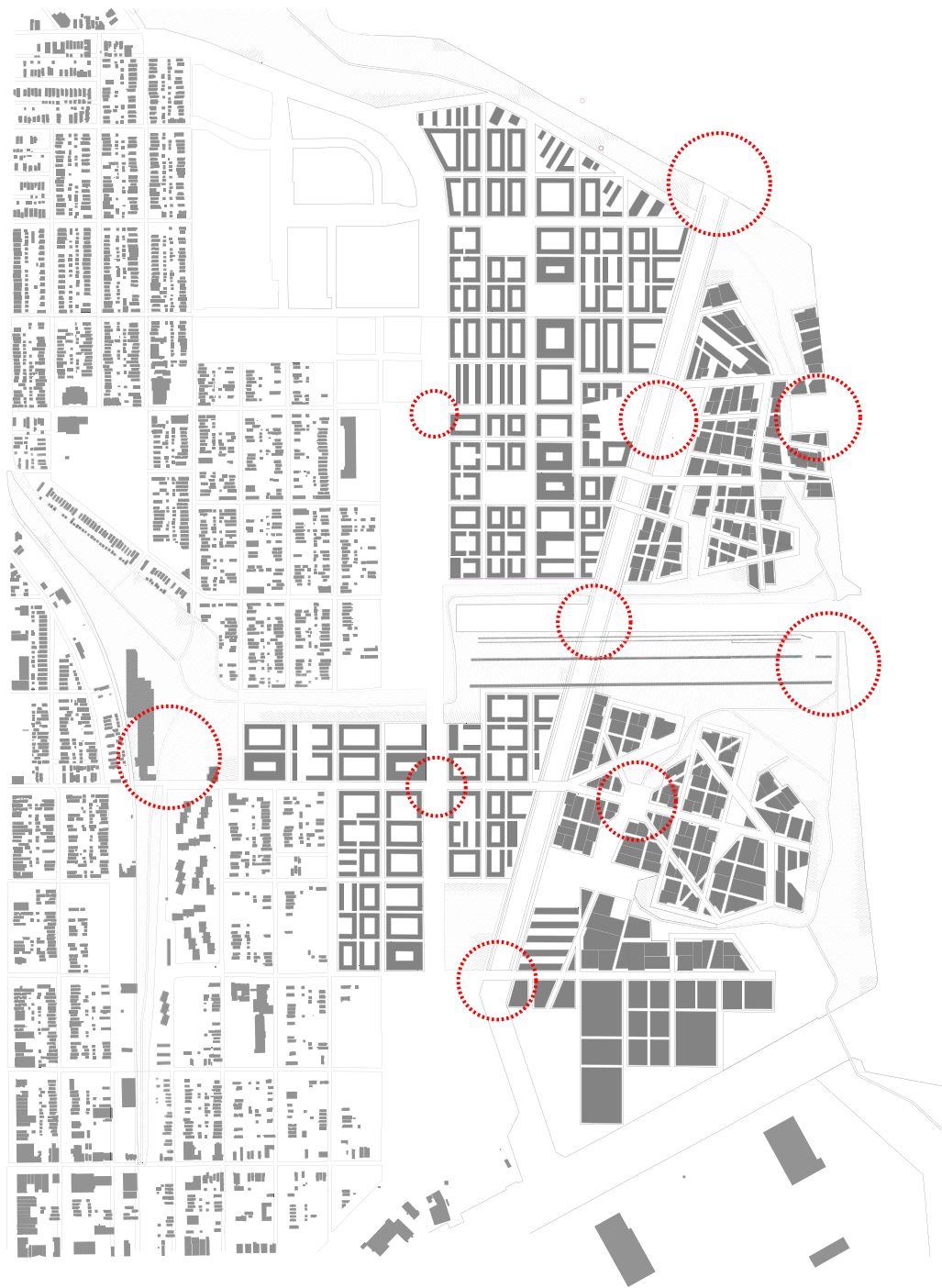
Attacking the monotonous structure in South Chicago through multi-functionality, diversity and prosperity

Avoid negligence of the existing adjacent neighborhood by creating accessibility to the water

Allow growth and expansion into the neighborhood







## **QUALITIES OF THE SITE**

Fascinations and physical manifestations of the existing  
qualities of the site.

water | skyline | scenery | ore walls | borders







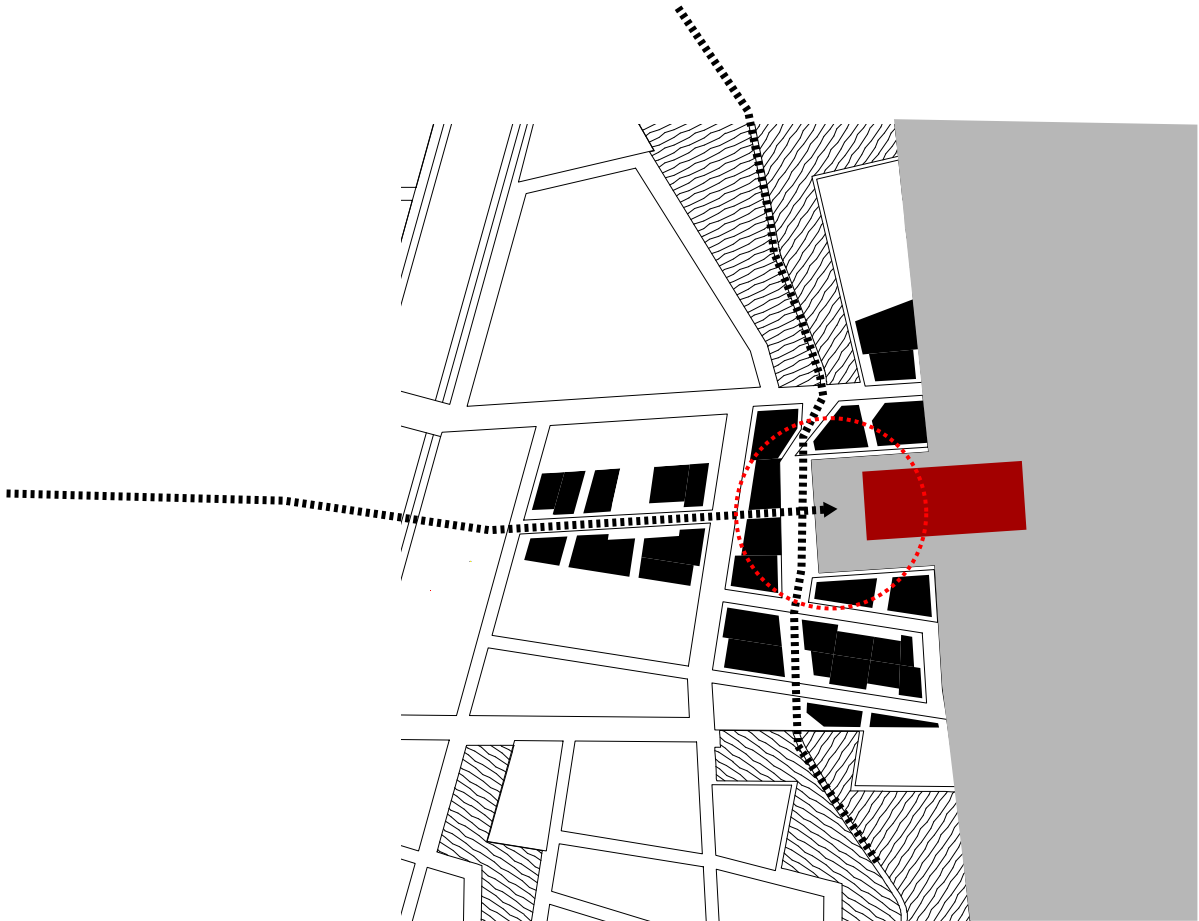


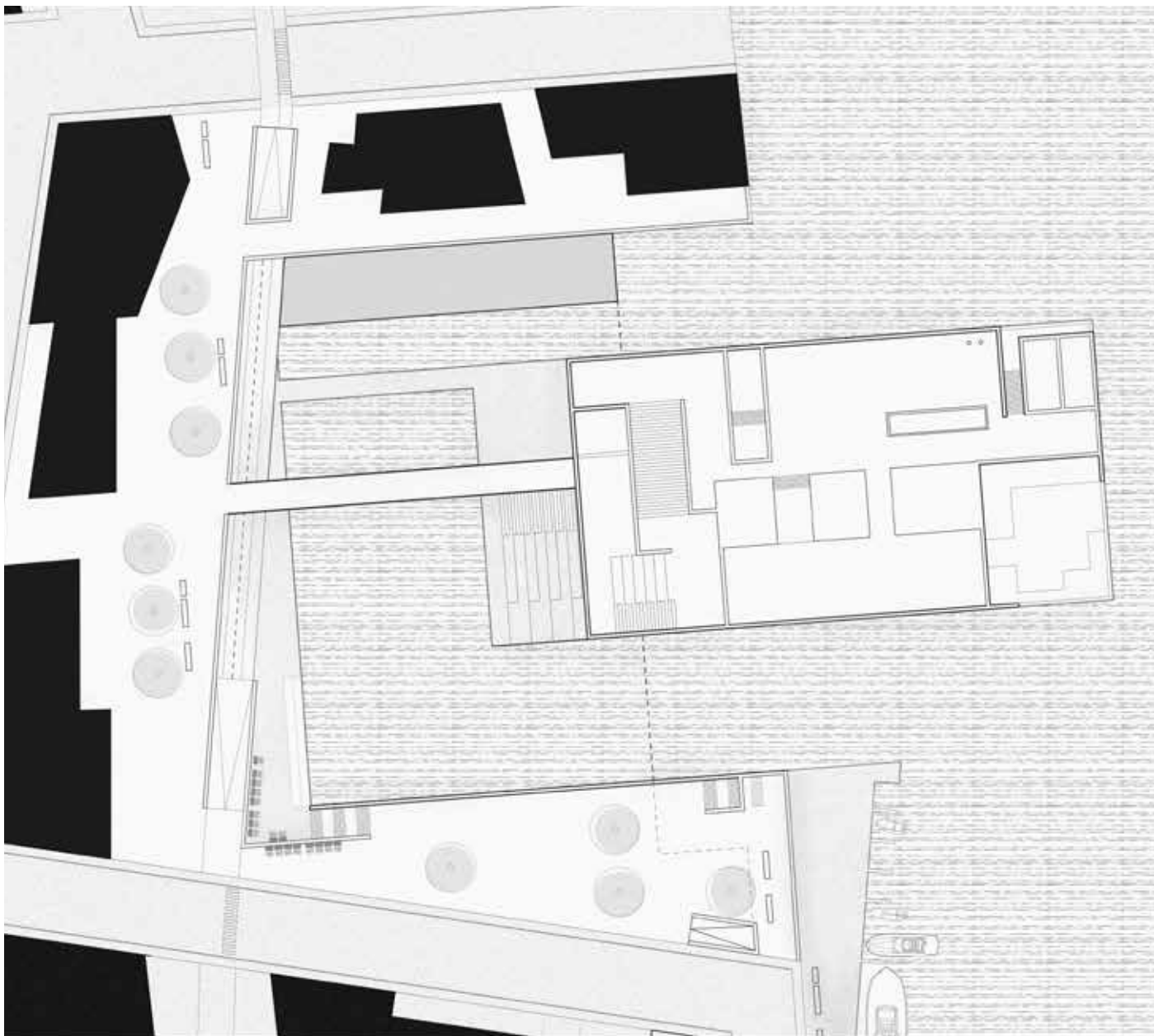


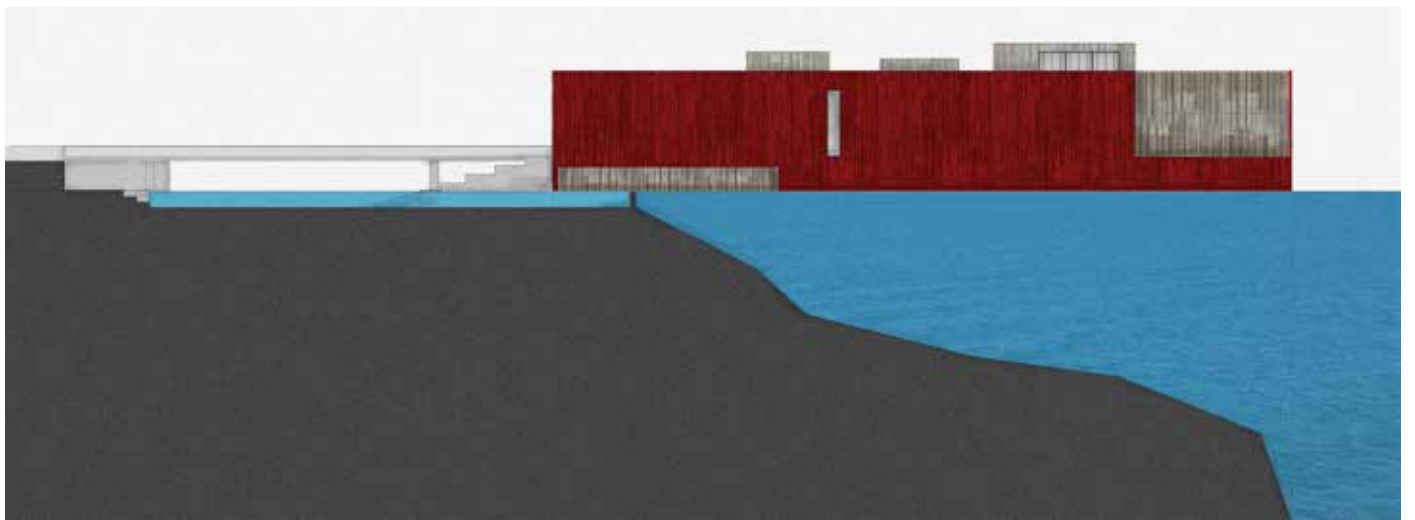
## FRAGMENT

*“Buildings should be thought of from the beginning as fragments, containing within themselves a capacity to act with other buildings and be themselves links.”*

*Peter and Alison Smithson (2005)*







## **AMBITIONS**

The building and area should be an activator for the neighborhood. A certain degree of publicness is essential.

It should enhance the quality of the site (especially the water)

Leisure activities as swimming, iceskating and bathing suit the specific location and the ambitions.

## **RESEARCH AND CASE STUDIES**

Contemporary places of activity with water  
Ancient Roman Empire and public baths  
Case studies of contemporary architecture

**Therme Vals**  
**Les Bains des Docks**  
**Termas de Tiberio**

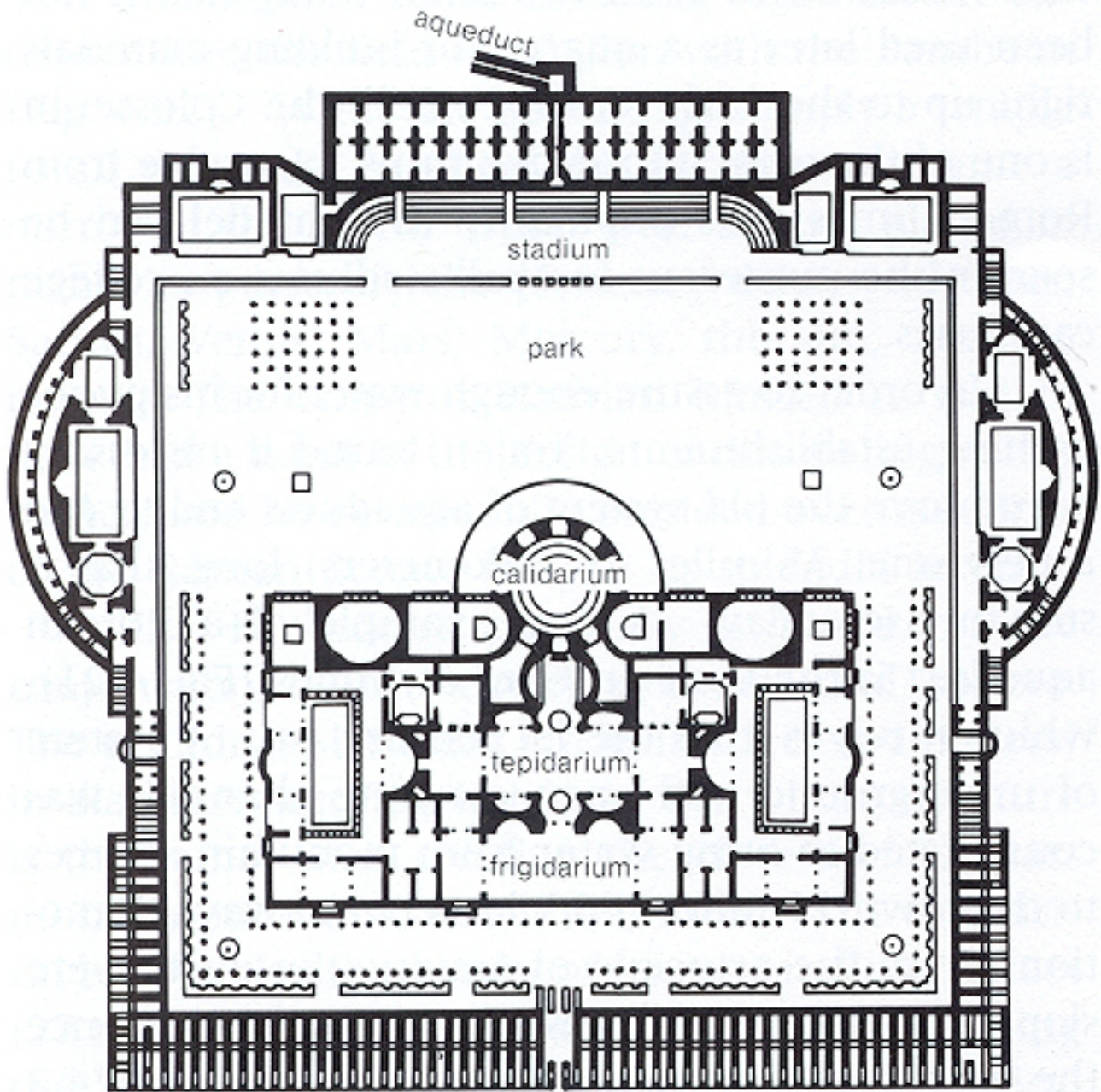




Astoria pool New York | An public event in an American city



Rockefeller Center | Iceskaters being watched in downtown NY



Baths of Caracalla | Bathing complex with park, stadium, library and other functions

Therme Vals | Peter Zumthor



Les Bains des Docks | Jean Nouvel



Termas de Tiberio | Moneo Brock  
Studio

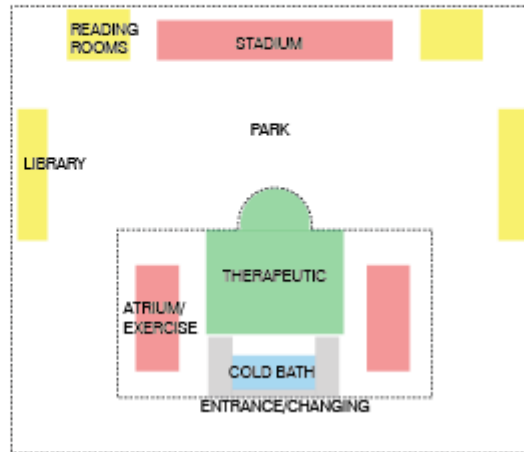




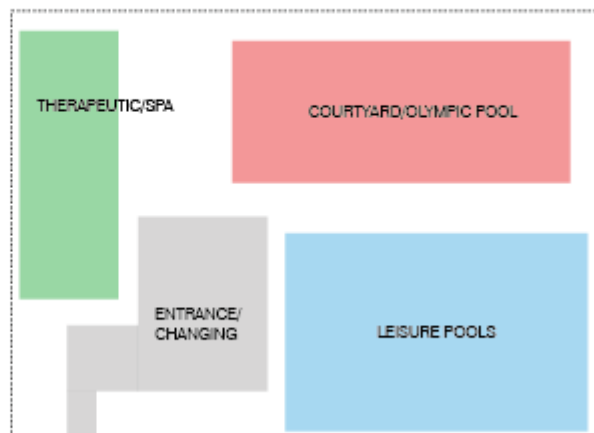
POMPEII ANCIENT BATH | 38X45M



BATHS OF CARACALLA | 200x120M



LES BAINS DES DOCKS | 86X63M

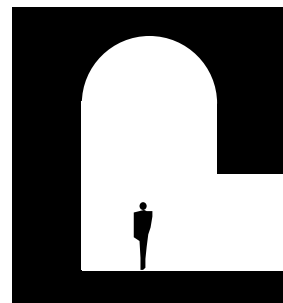
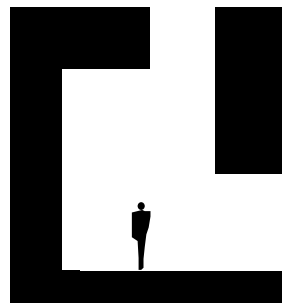
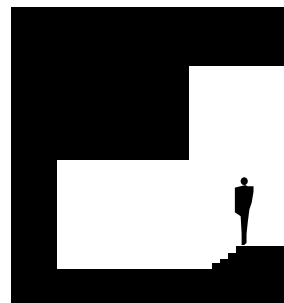
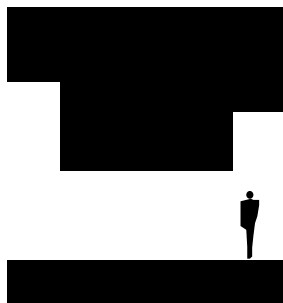
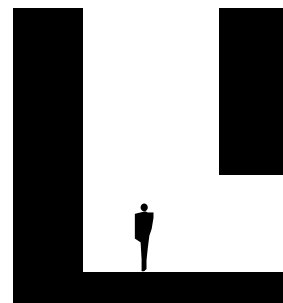
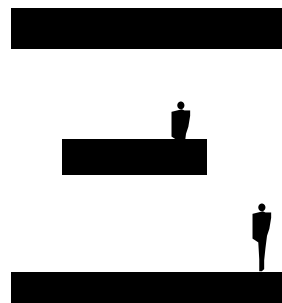
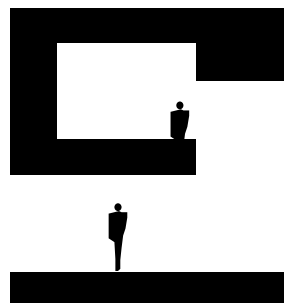
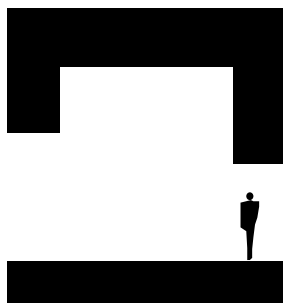
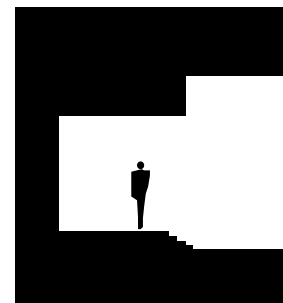
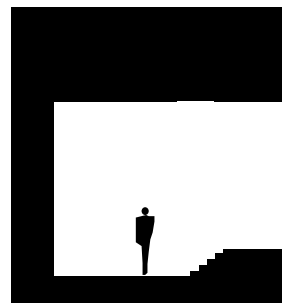
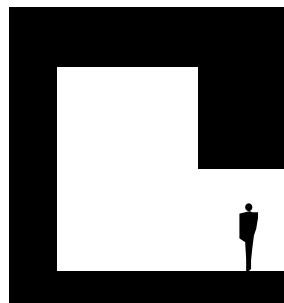
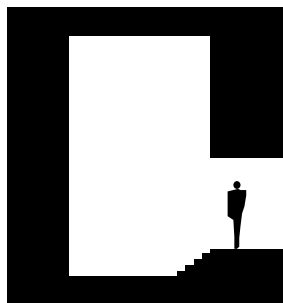


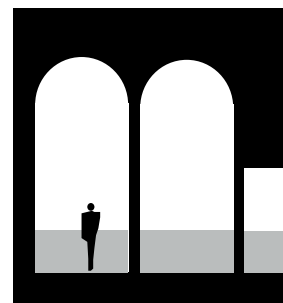
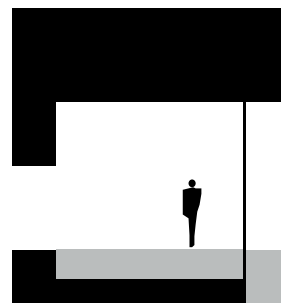
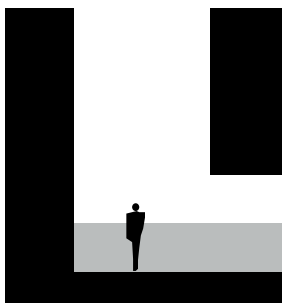
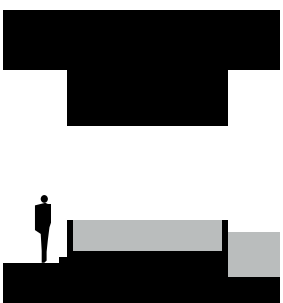
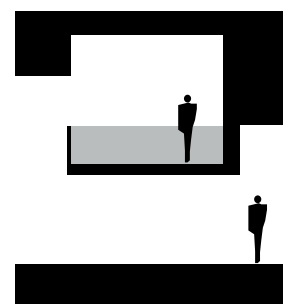
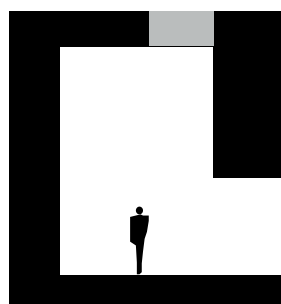
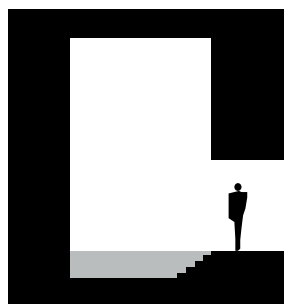
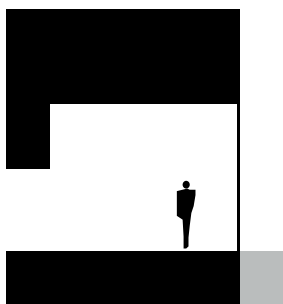
## **METHODOLOGY**

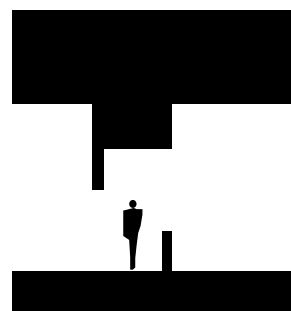
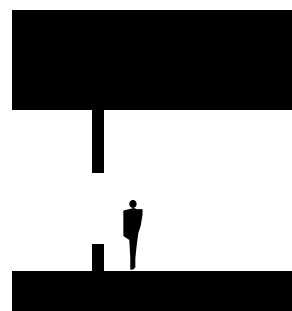
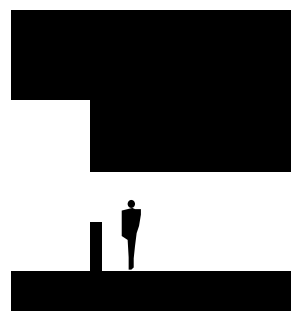
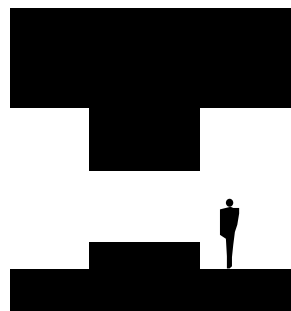
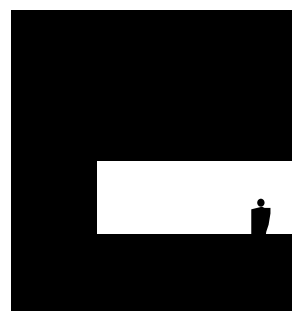
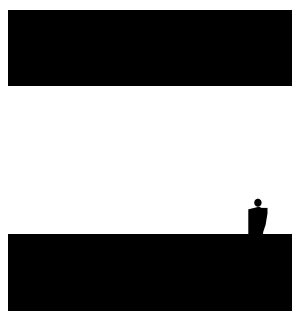
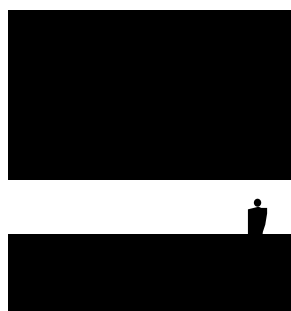
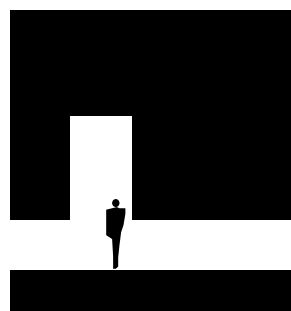
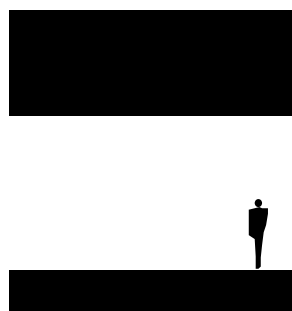
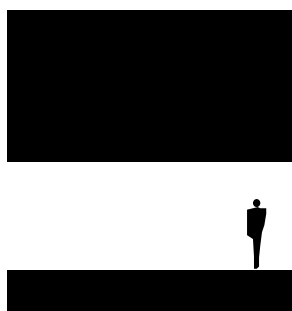
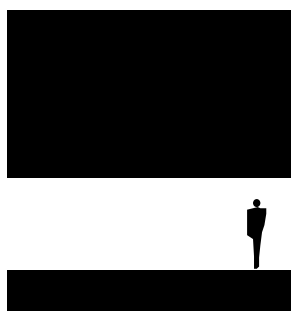
Approach of phenomenology - academic field of research in contemporary architecture about sensory experiences and places - by study of spaces.

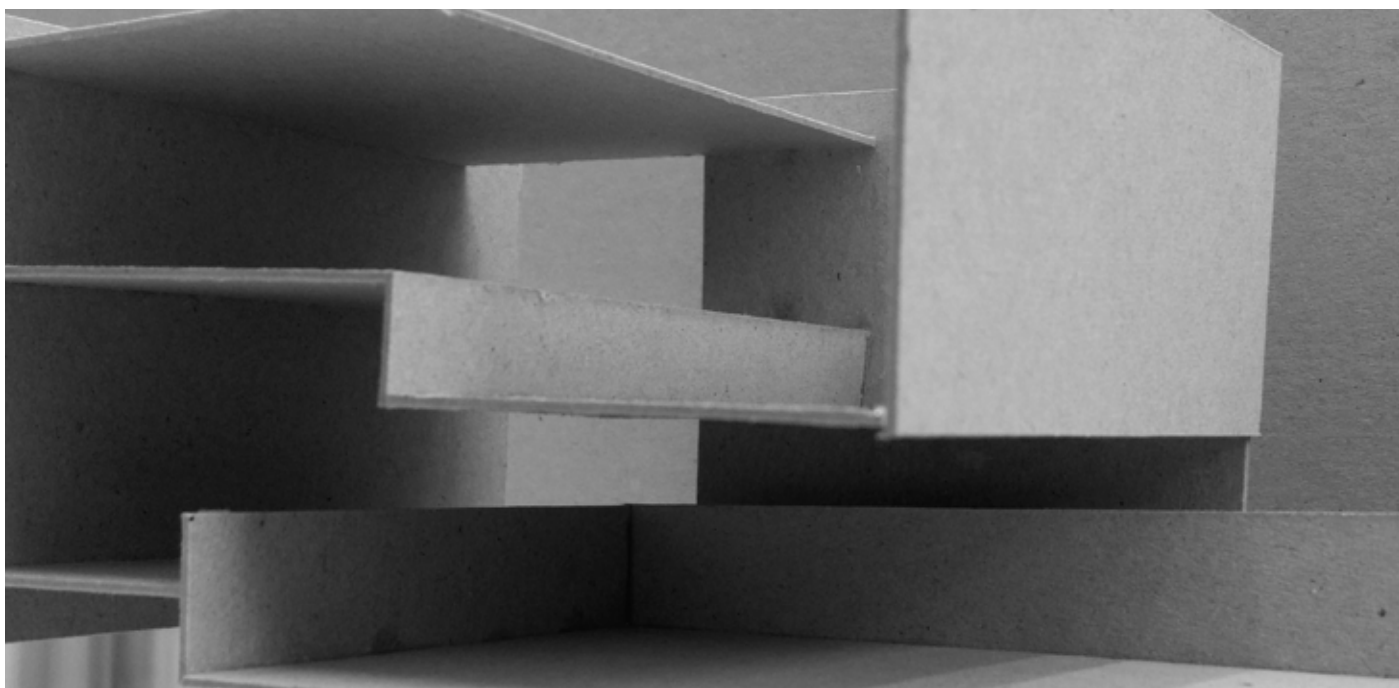
By a catalogue of stamp-size spaces, modelling of these spaces and a serie of different experiences.

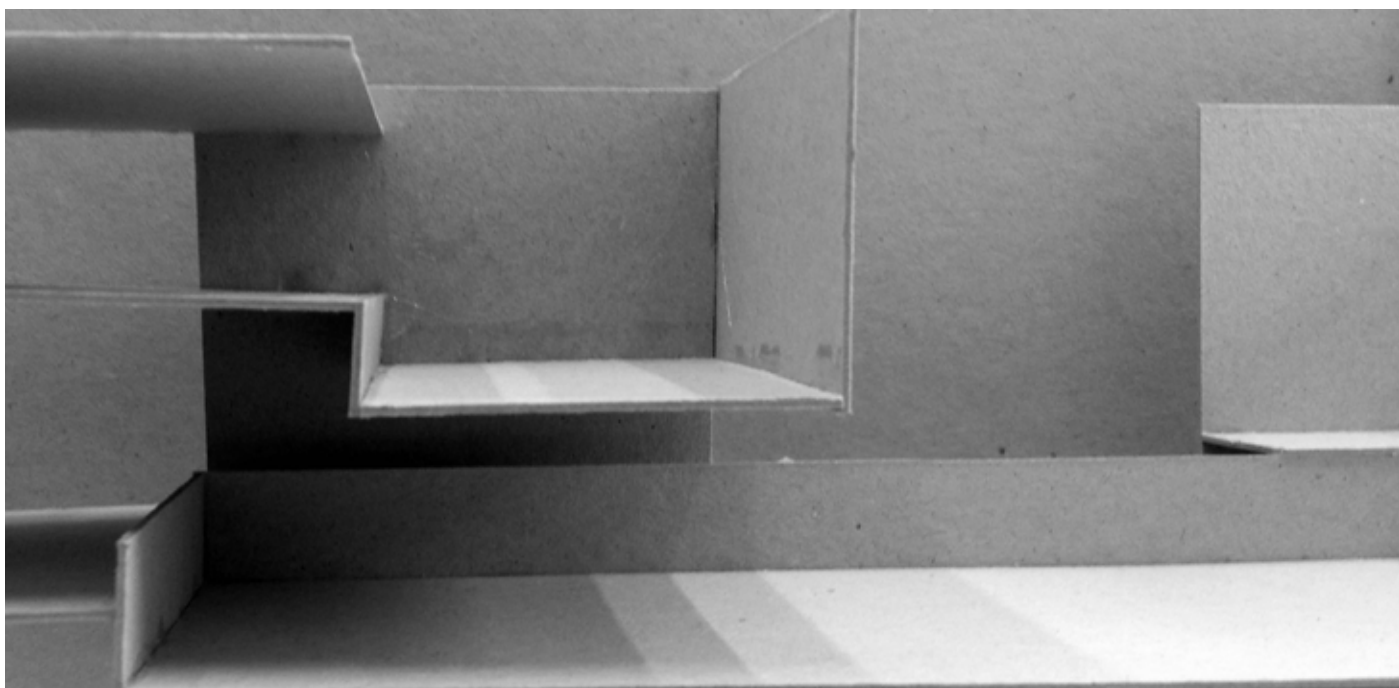
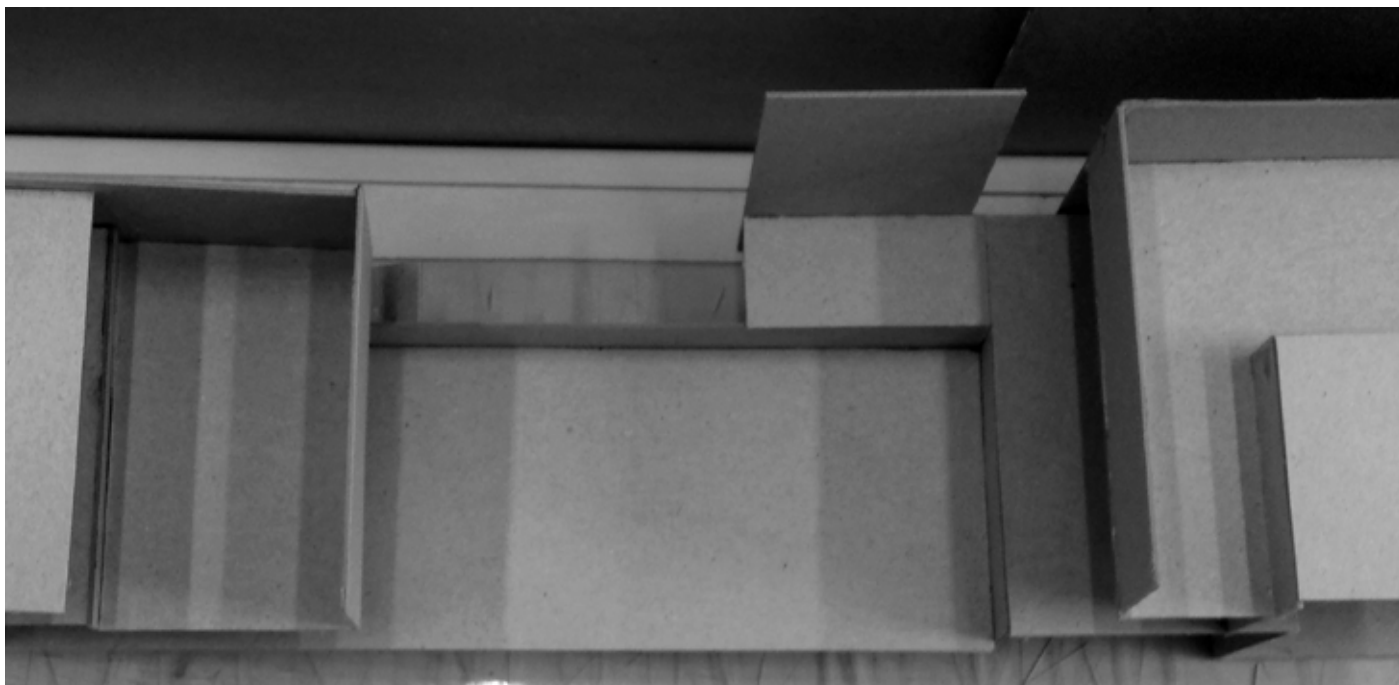
CATALOGUE STUDY OF SPACES



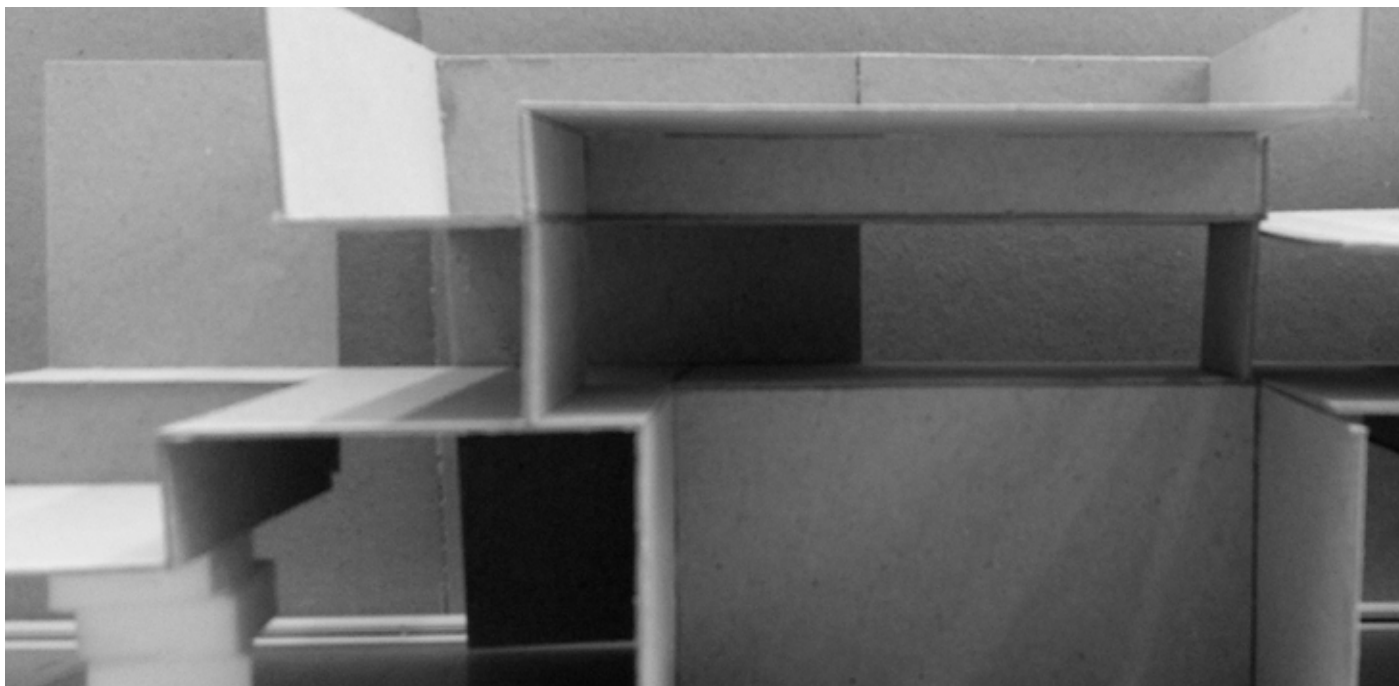
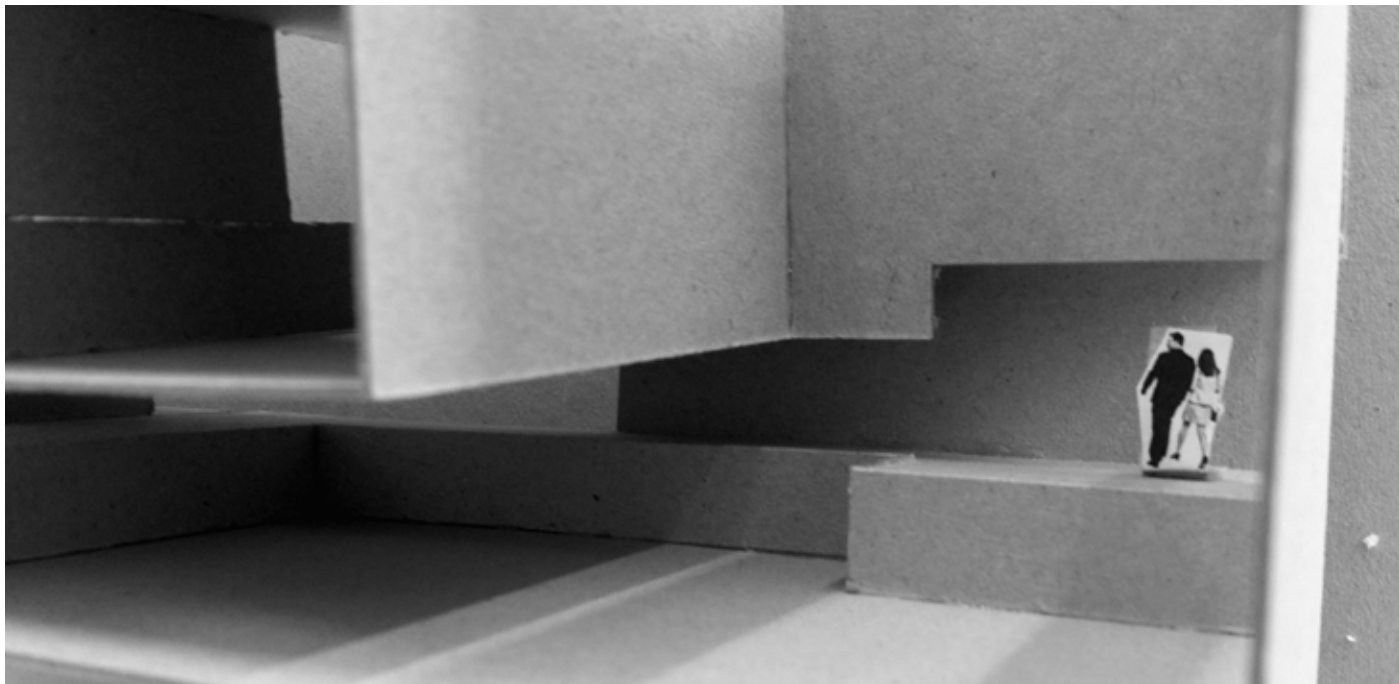


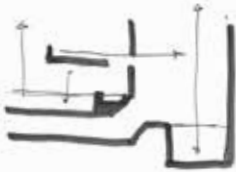
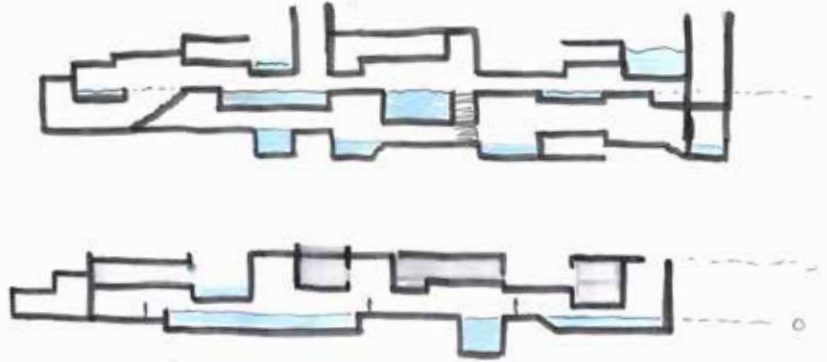
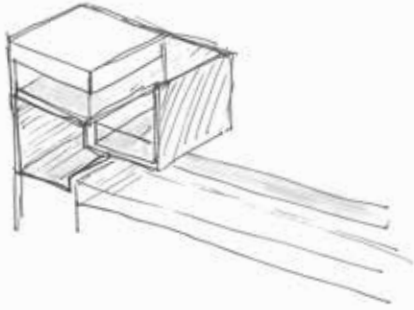


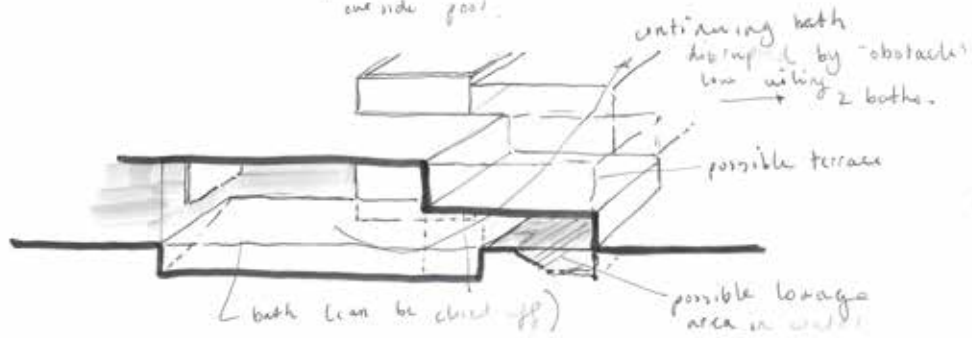
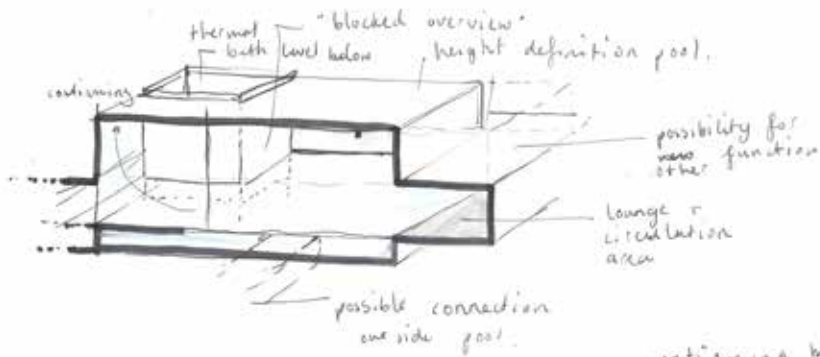
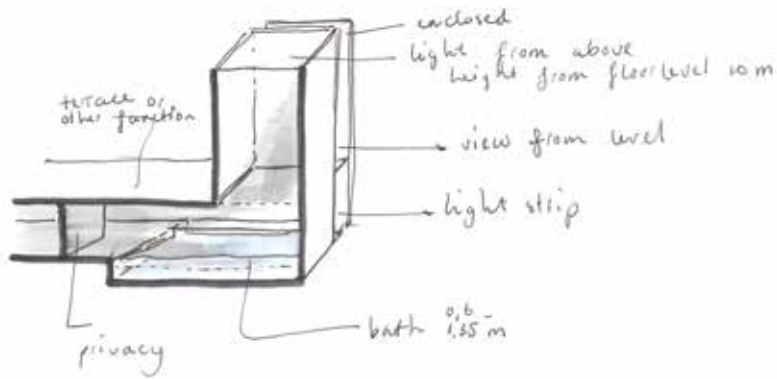






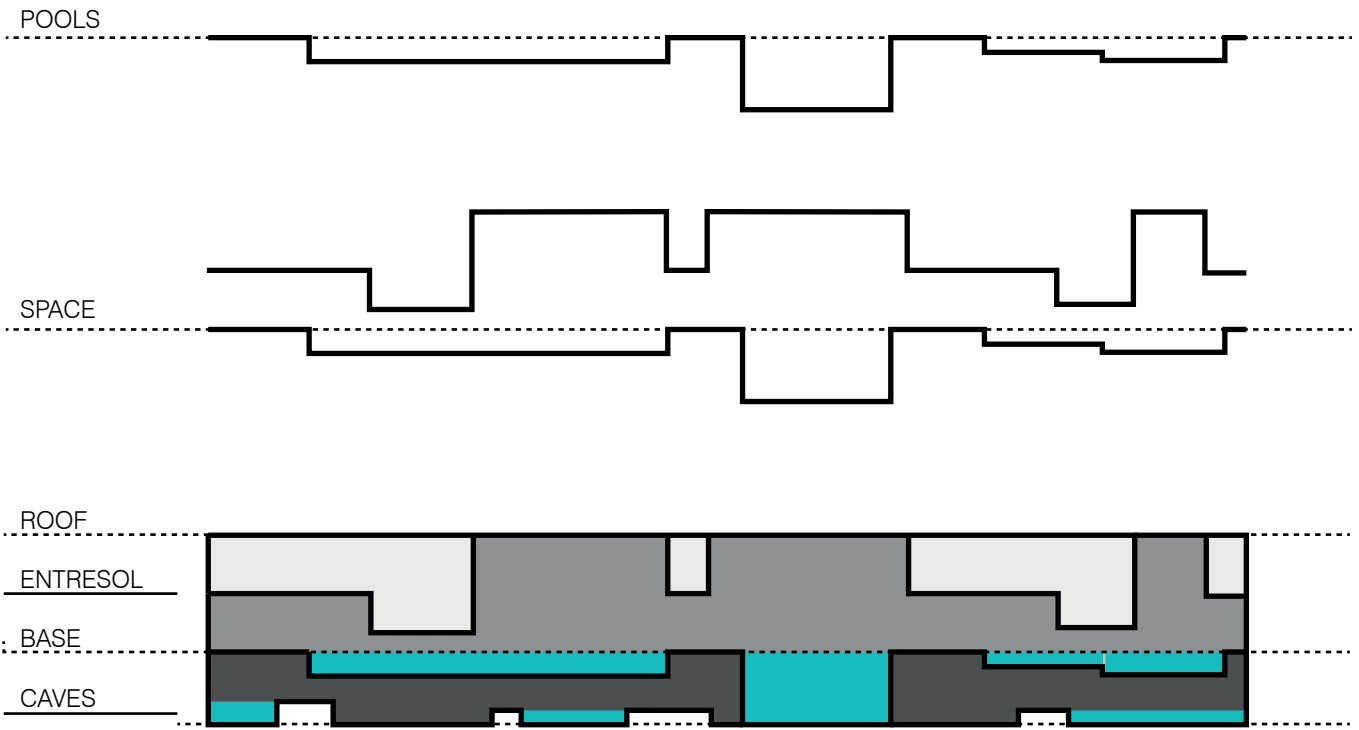


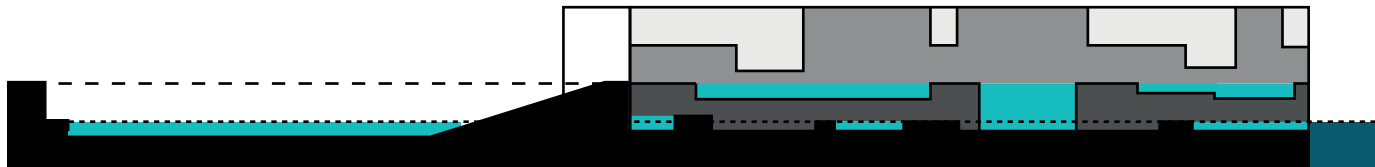
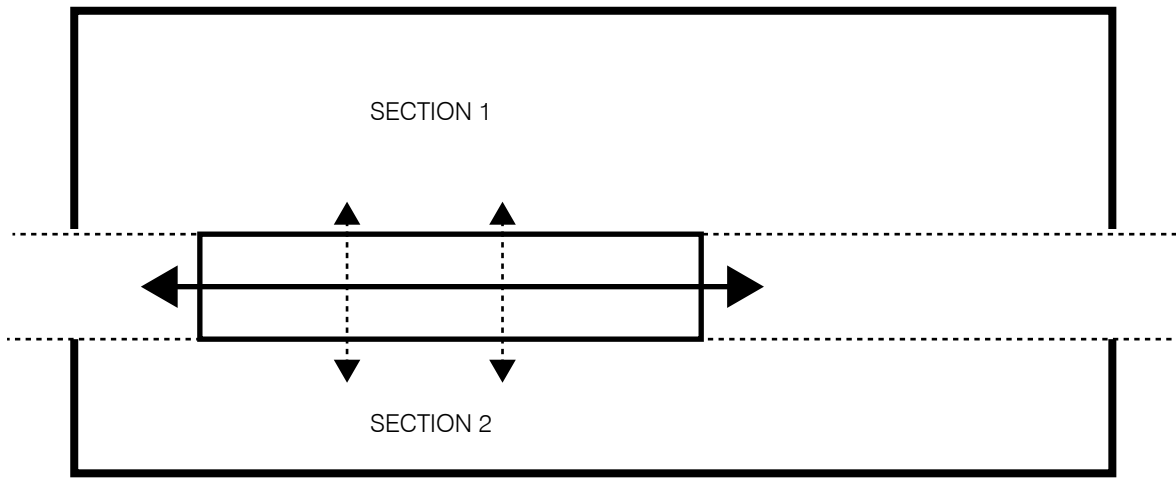




## **BUILDING CONCEPT**

The study of spaces are integrated with the program, both work well together. The experience of these spaces are the base for the design.





## PROGRAM AND FACTS

# SPORTS & CAFE SWIMMING POOLS THERAPY AND SPA

## ground level

restaurant | kitchen | entrance | changing rooms | toilets and showers | sauna | massage rooms | restrooms | soundbath, flowerbath | waterfall pool | caldarium | fregidarium | tepidarium | natatio (pool) | hydrotherapy | hot tubs

## first level

foyer | administration | daycare | changingrooms | toilets and showers | childrens pool | leisure pools | oculus pool | swimming laps pool | diving pool | diving equipment | outdoor pool | solarium

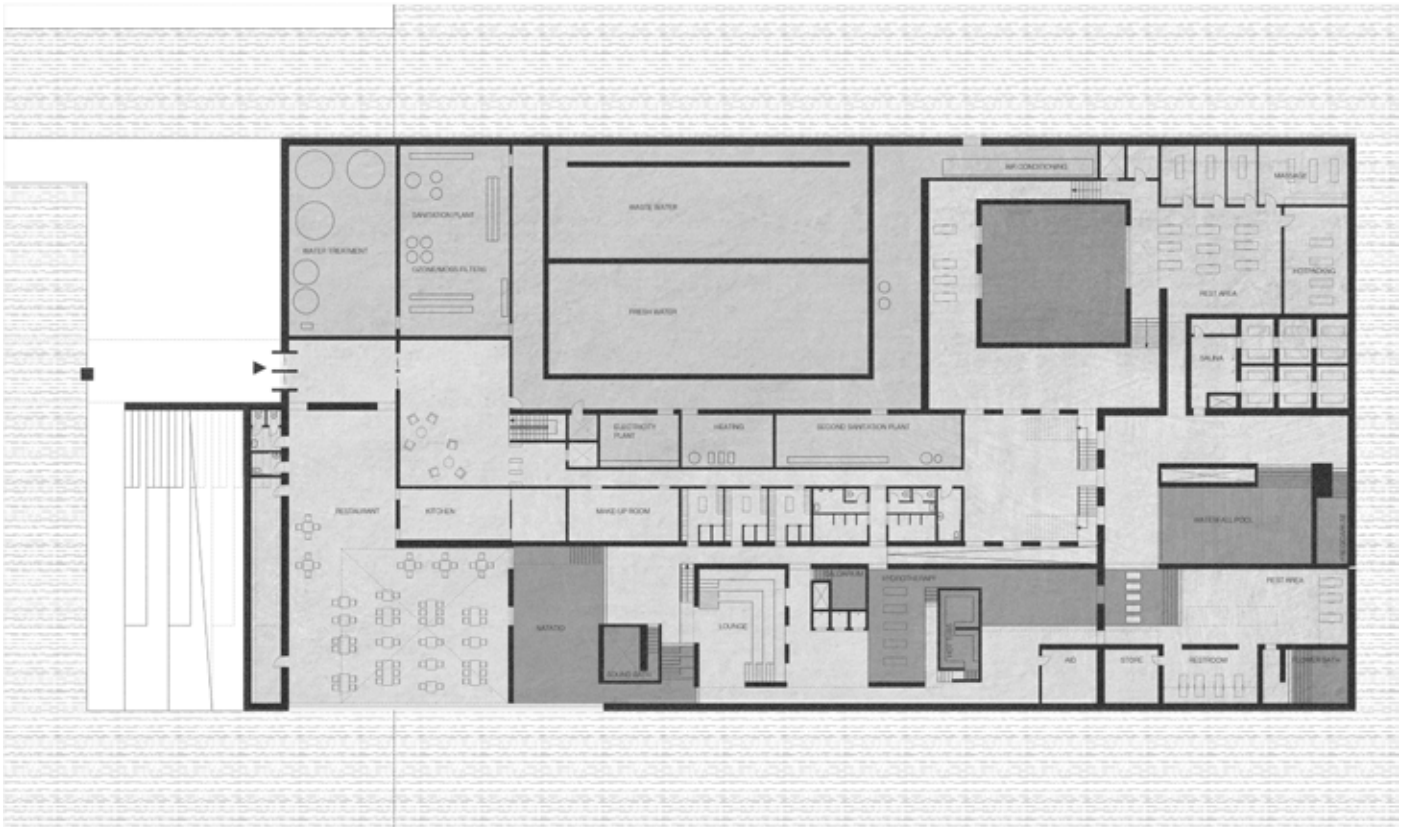
## second level

sport reception | dance/yoga | fitness | cardio | changing rooms | toilets and showers | reading room | patio | café | administration/staff | kitchen

## roof

installantions (airconditioning) | viewpoint | terrace

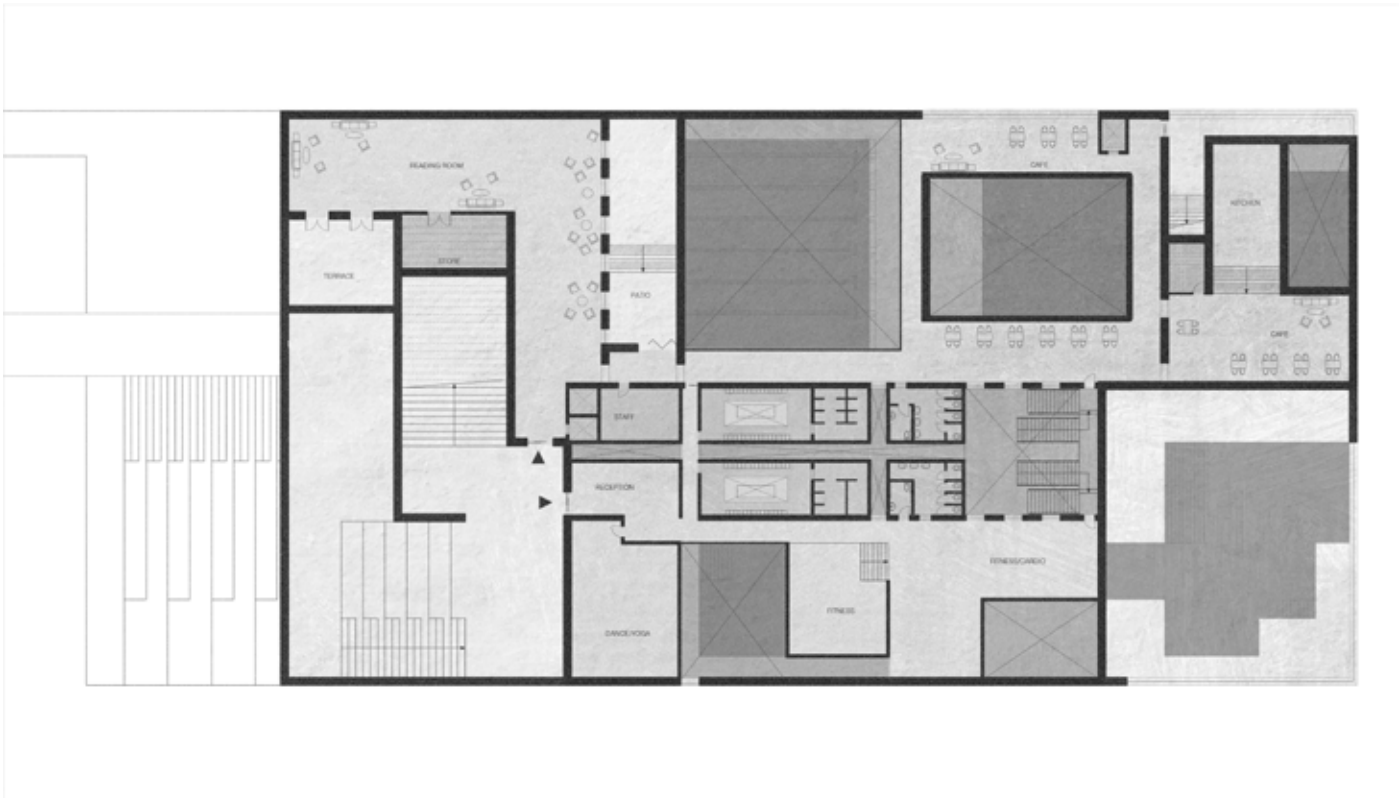




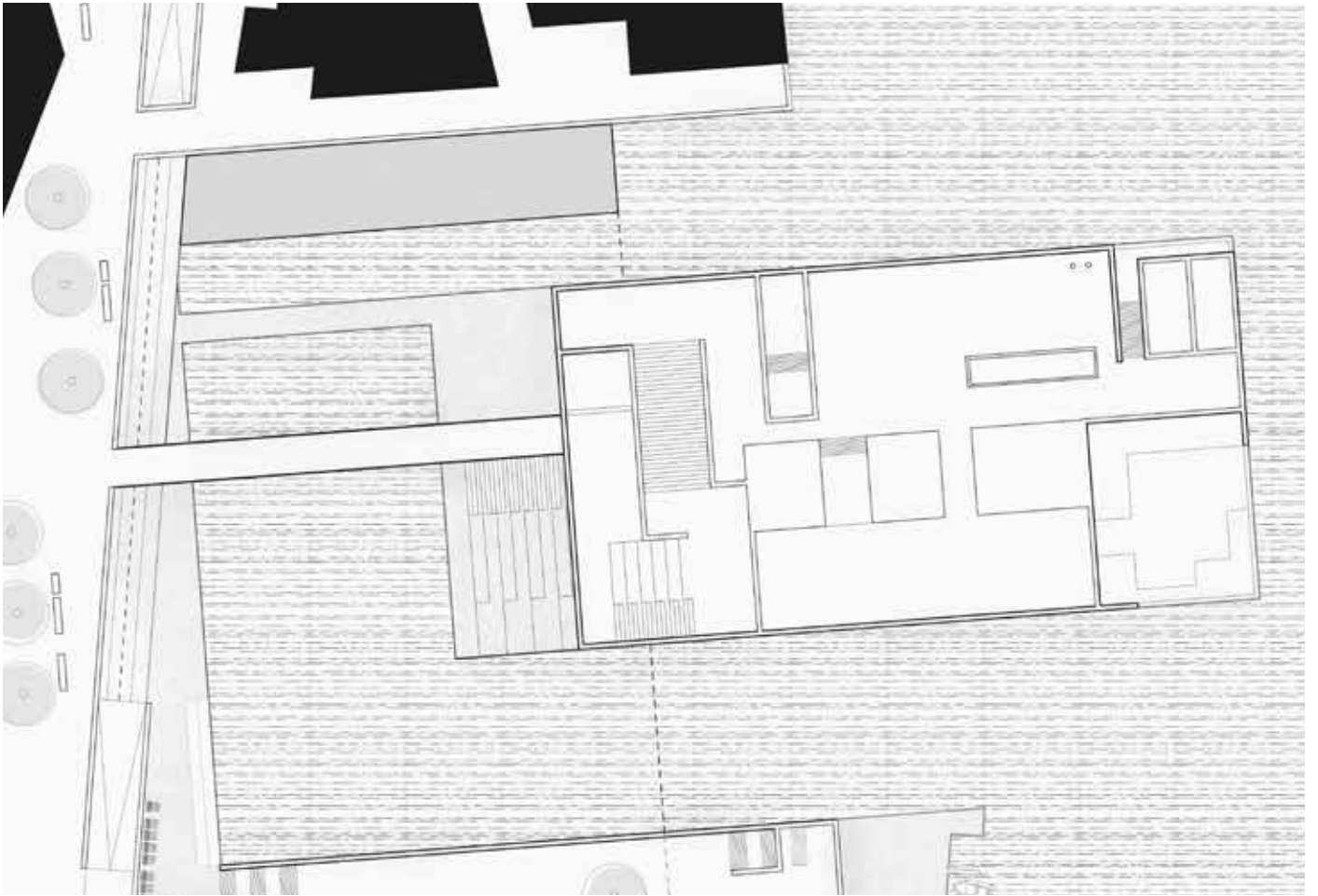
Ground floor - Therapy & spa, restaurant and mechanical rooms



First floor - entrance and swimming pools level

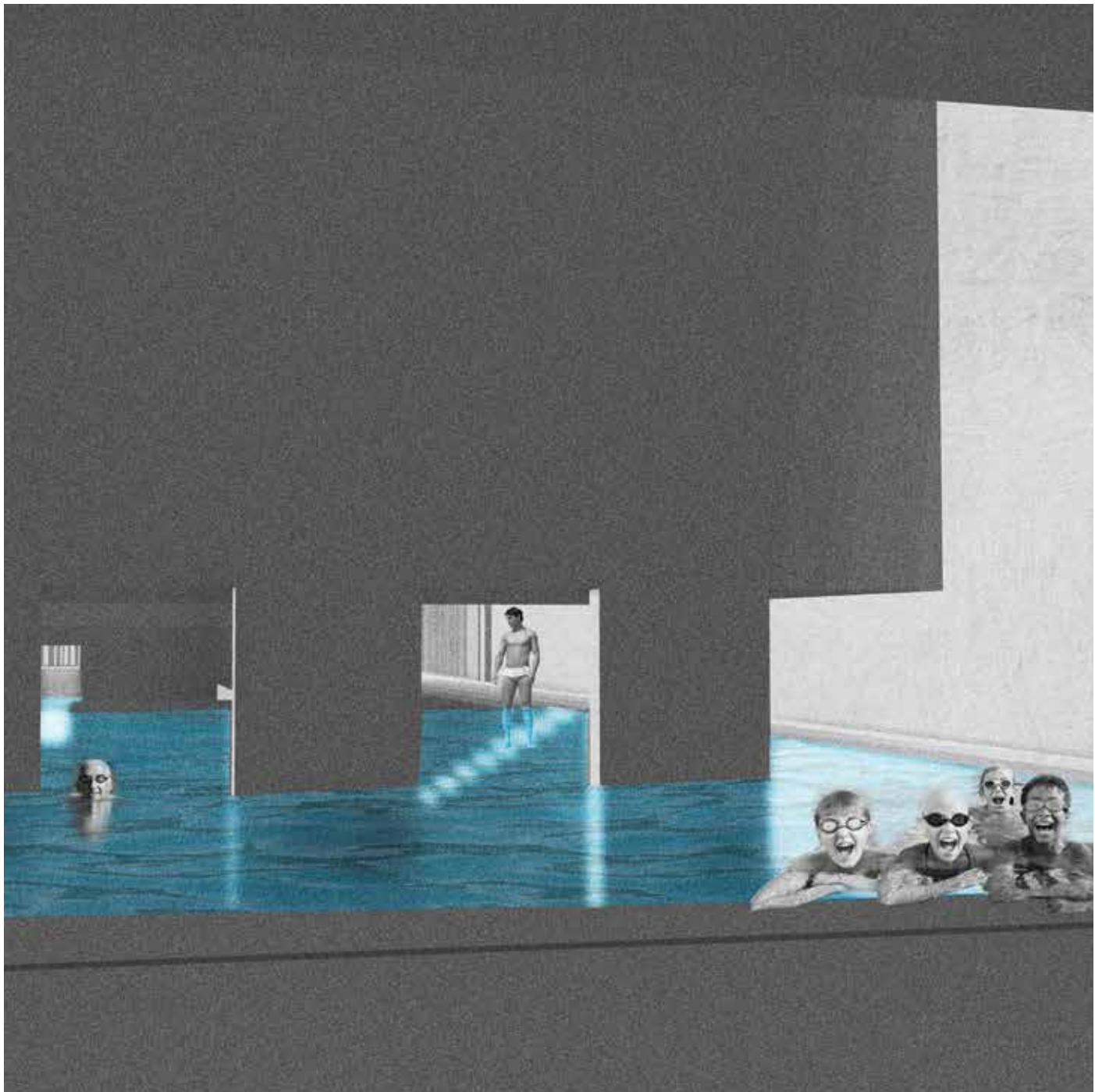


Second floor - Sports, patio, café and reading rooms

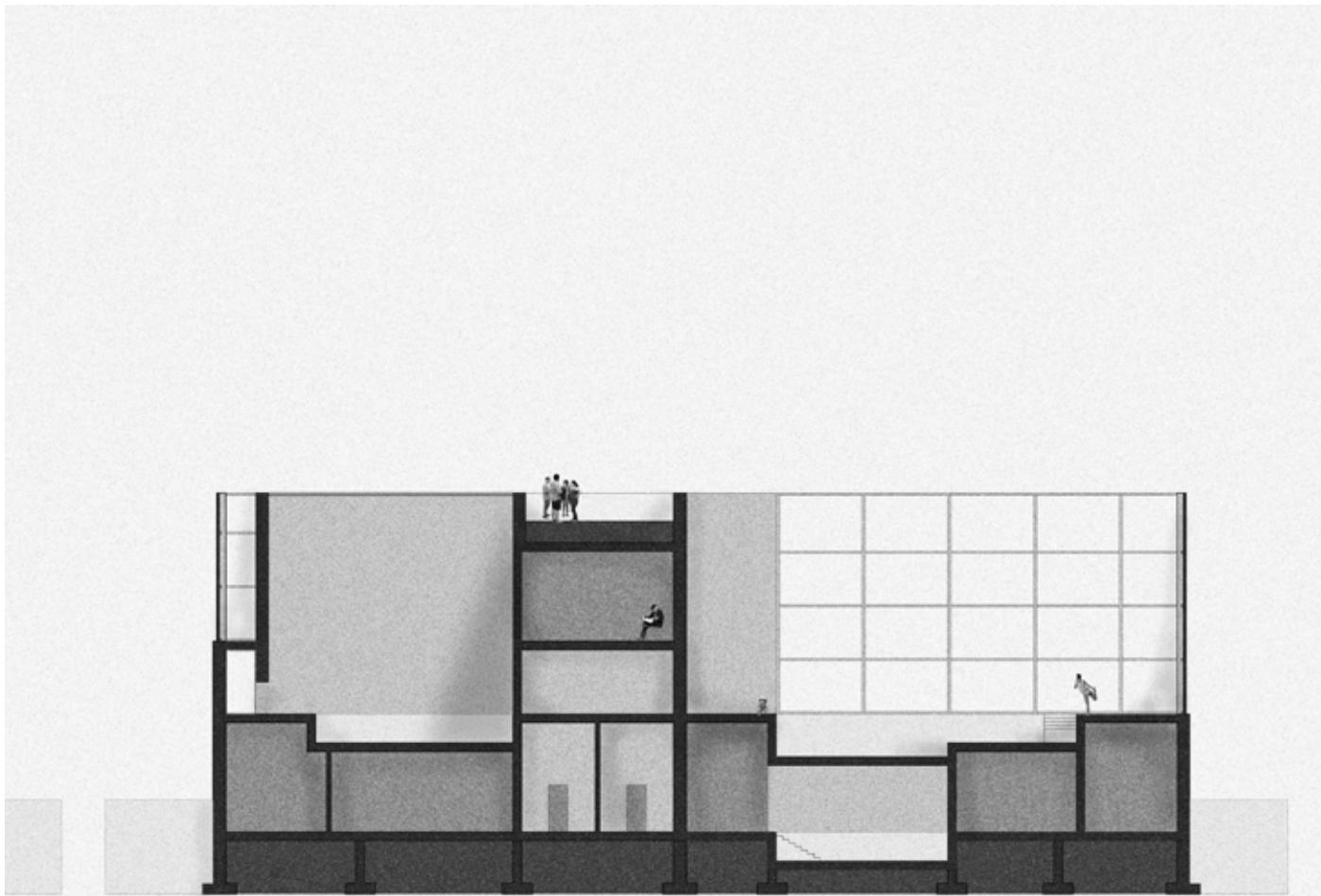


Roof - Terrace, installations and view

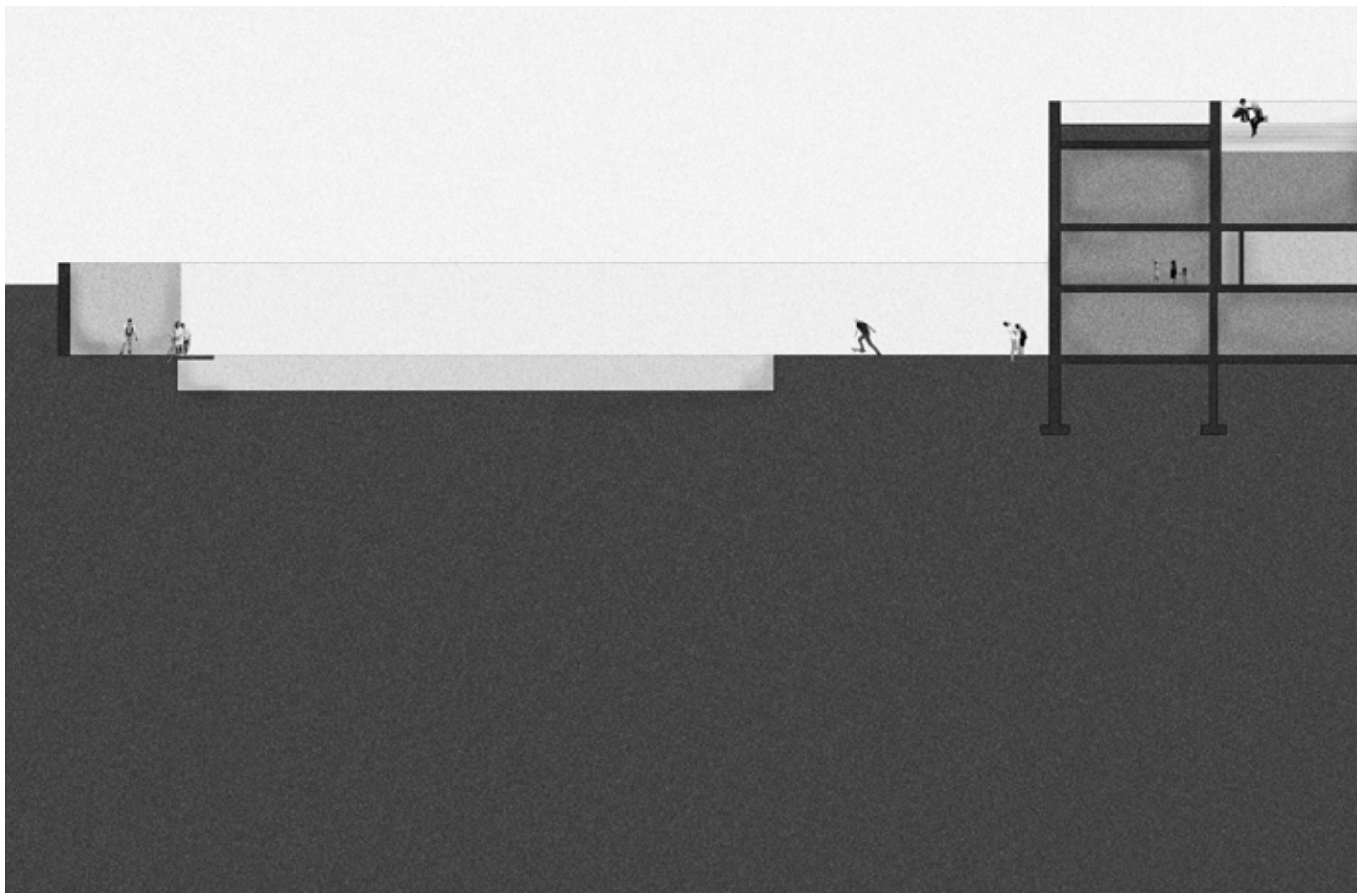


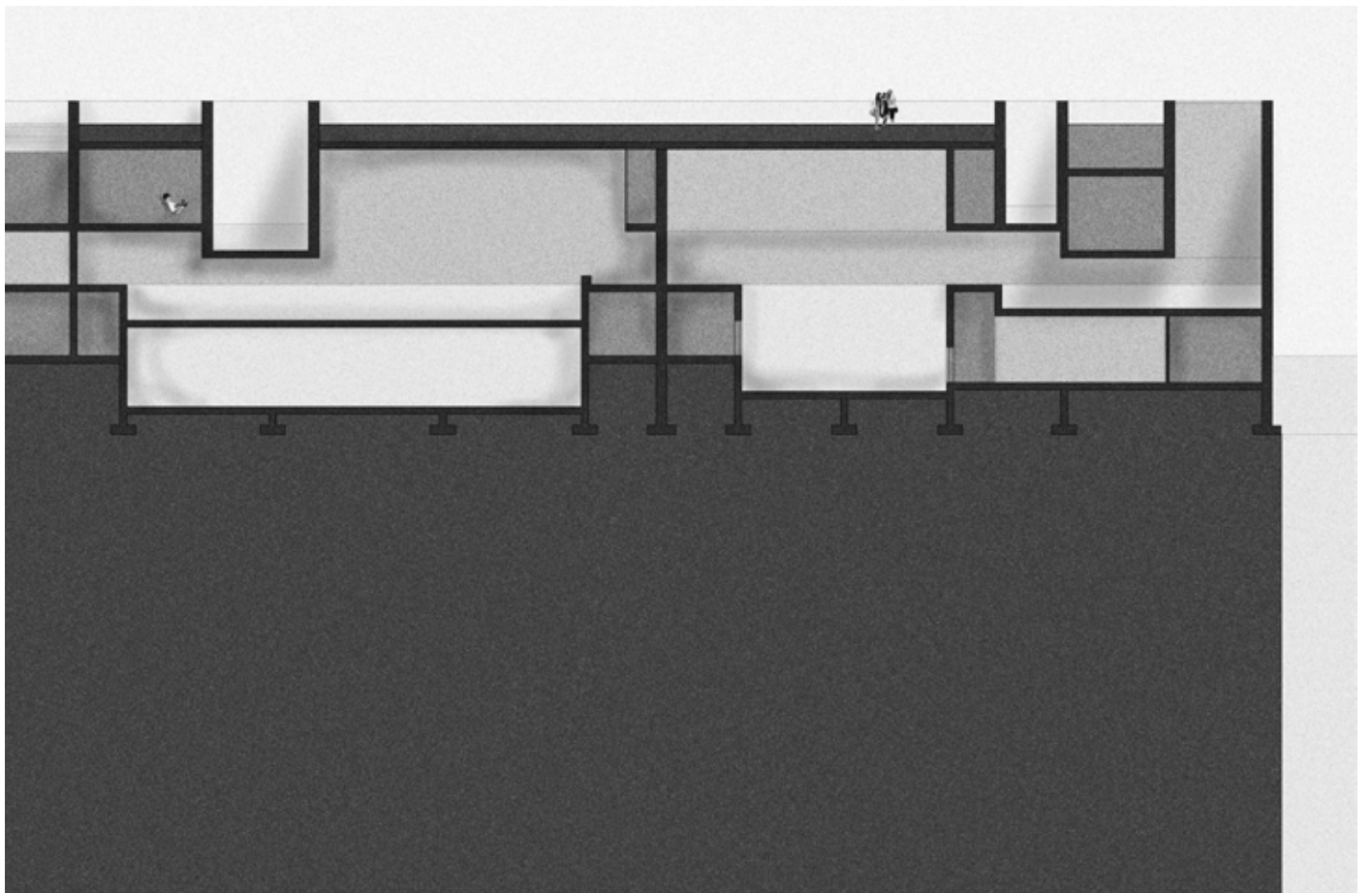






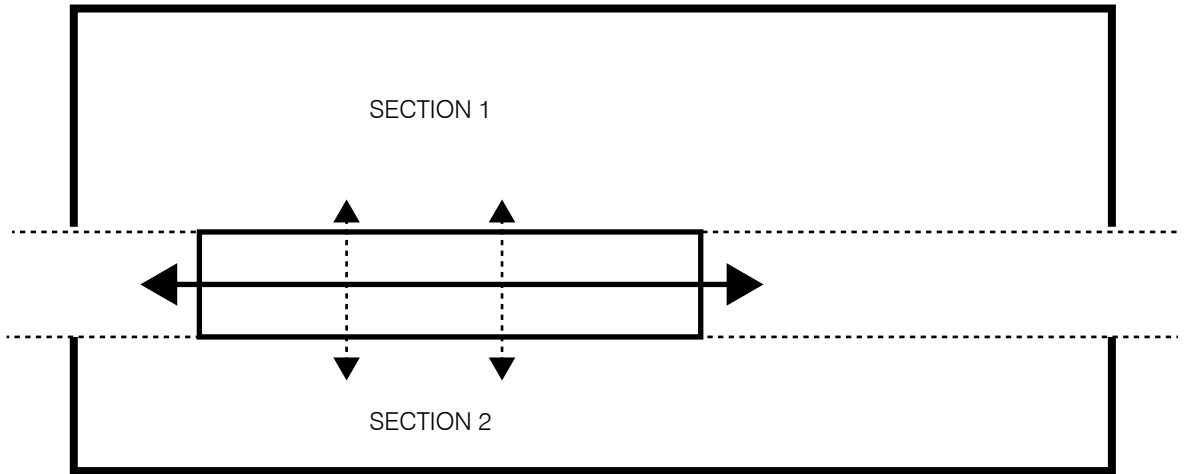


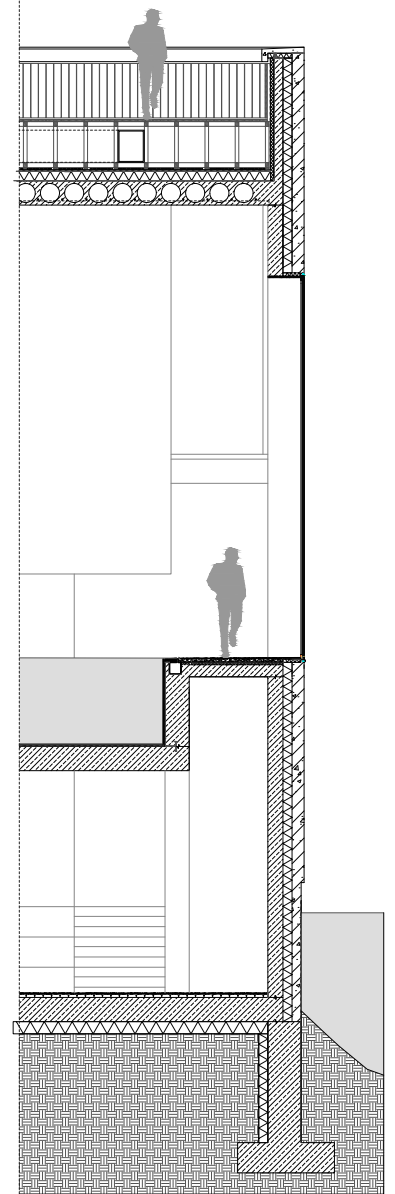
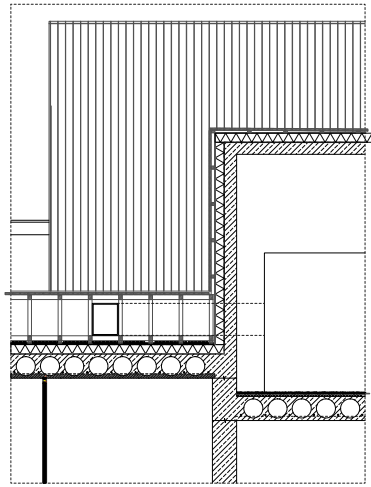
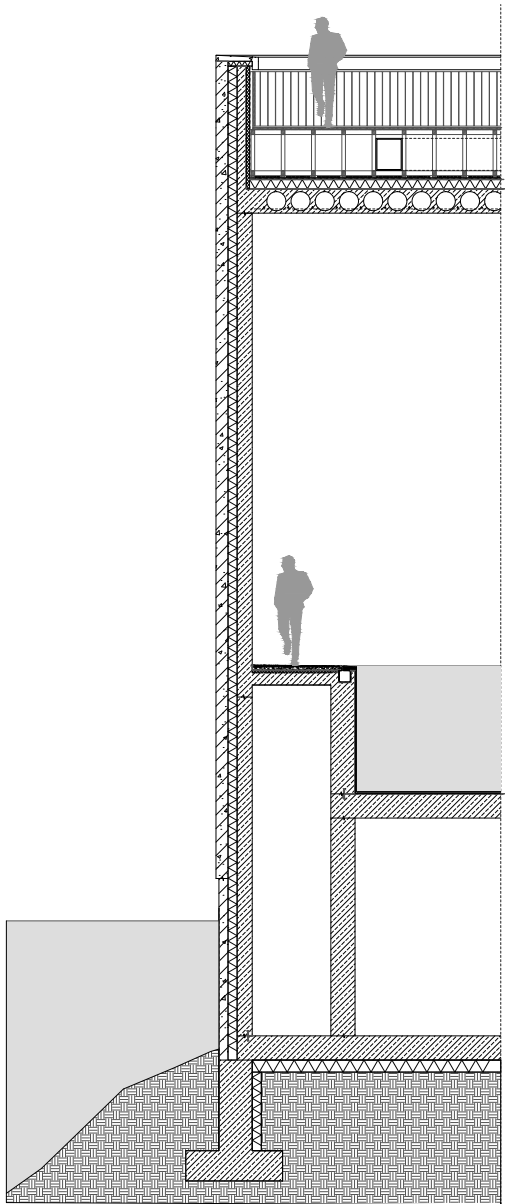




## **CONSTRUCTION AND CLIMATE DESIGN**

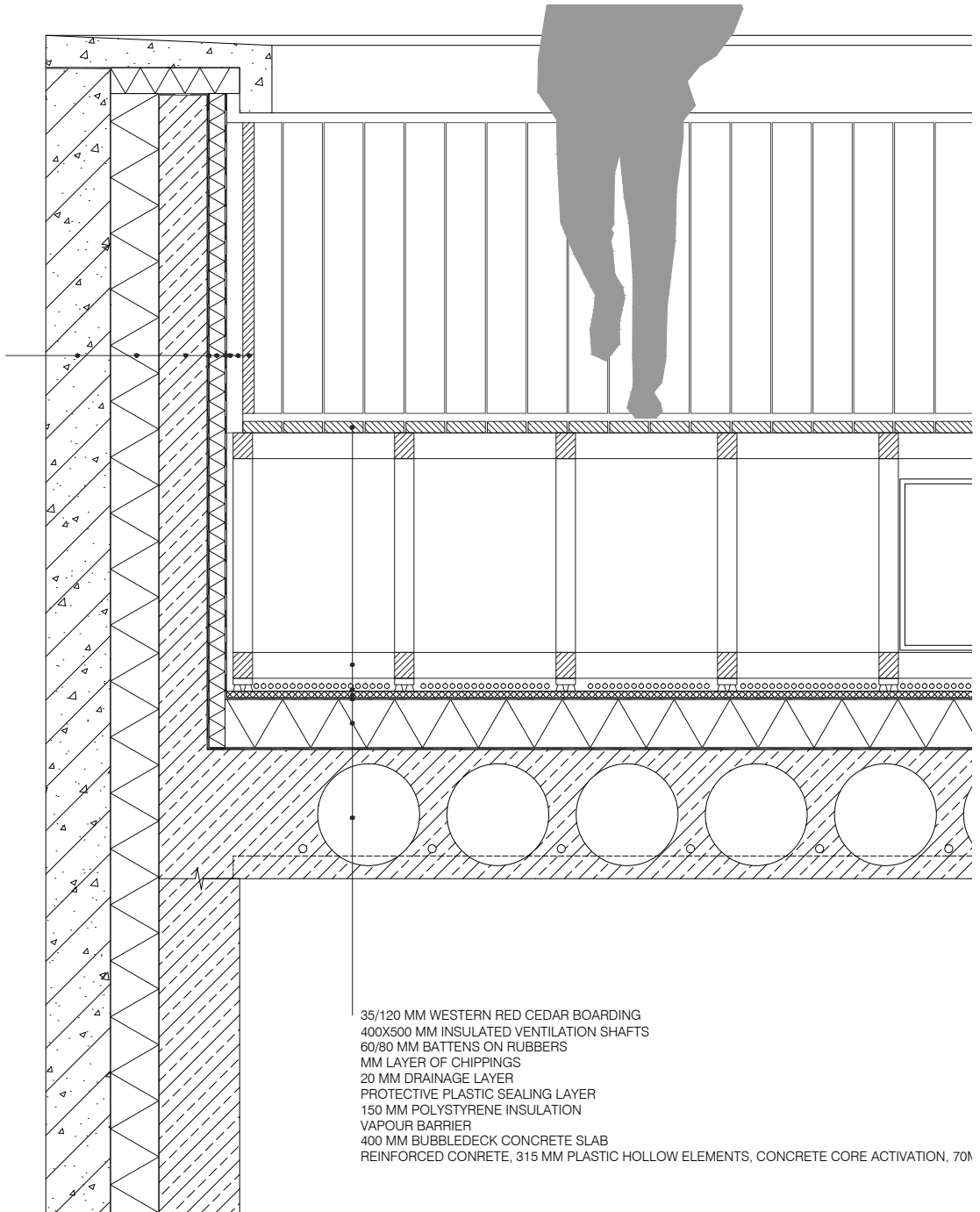
How can construction and climate design rules enforce the building concept of creating a series of sensory spaces and enhance the cultivated nature (grotto experience) of the pools.

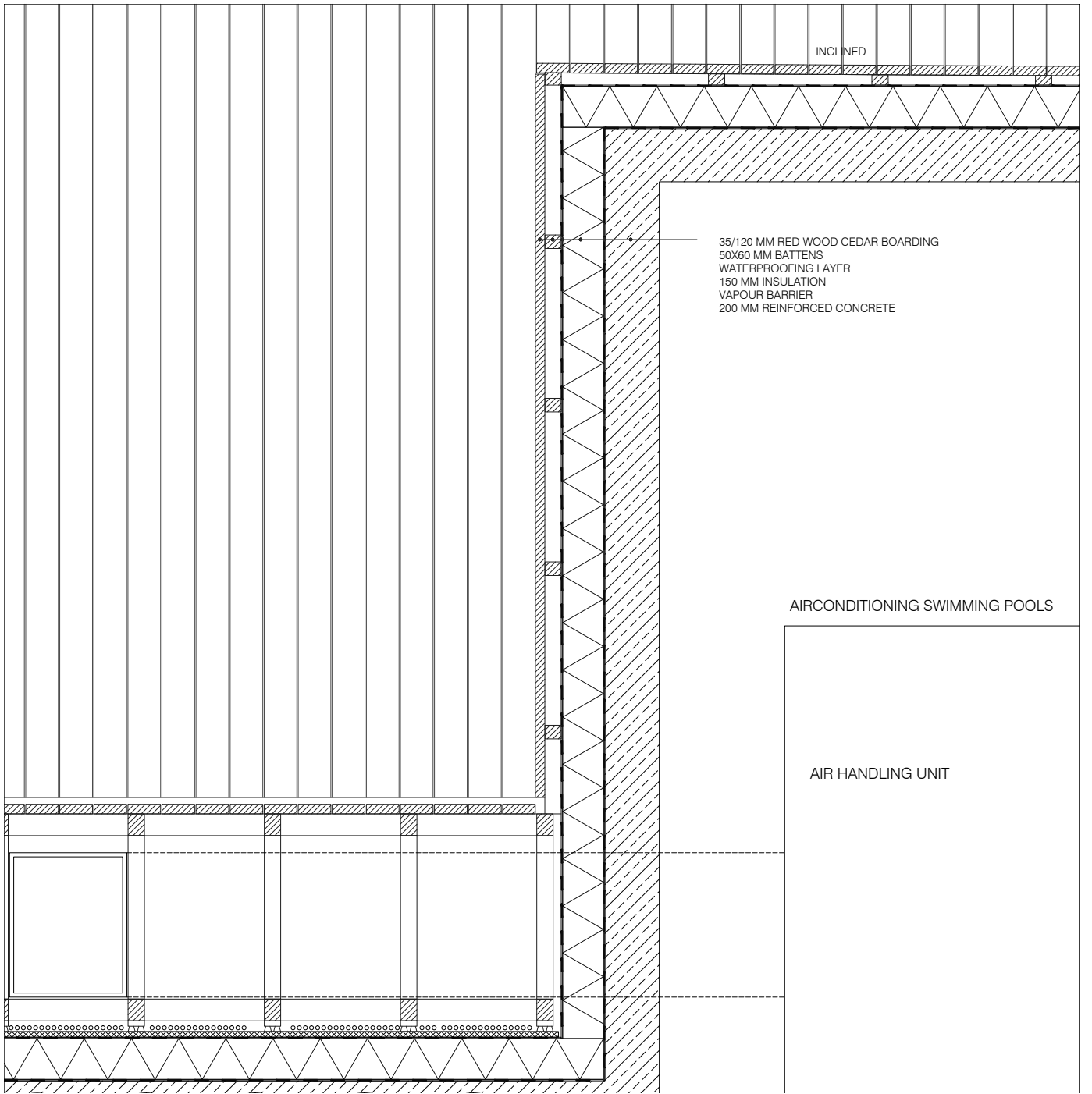




INCLINED CONCRETE ELEMENT

MM WESTERN RED CEDAR BOARDING  
50X50 MM BATTENS  
PLASTIC SEALING LAYER  
INSULATION WITH LAMINATED LAYER  
VAPOUR BARRIER  
150/250 MM REINFORCED CONCRETE  
150 MM INSULATION  
MM REINFORCED CONCRETE EXTERIOR



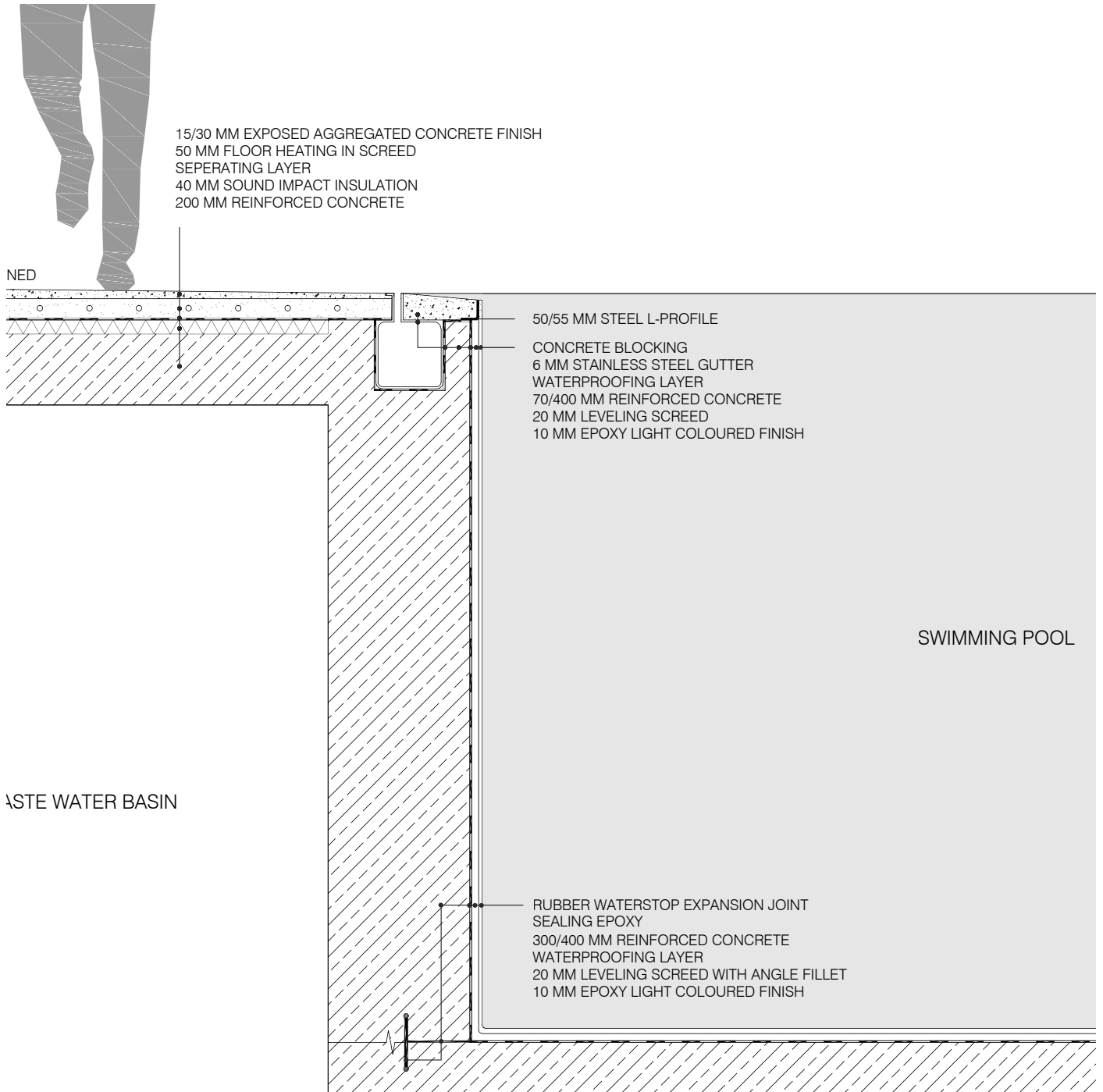


INCLINED

35/120 MM RED WOOD CEDAR BOARDING  
50X60 MM BATTENS  
WATERPROOFING LAYER  
150 MM INSULATION  
VAPOUR BARRIER  
200 MM REINFORCED CONCRETE

AIRCONDITIONING SWIMMING POOLS

AIR HANDLING UNIT



15/30 MM EXPOSED AGGREGATED CONCRETE FINISH  
50 MM FLOOR HEATING IN SCREED  
SEPERATING LAYER  
40 MM SOUND IMPACT INSULATION  
200 MM REINFORCED CONCRETE

NED

50/55 MM STEEL L-PROFILE

CONCRETE BLOCKING  
6 MM STAINLESS STEEL GUTTER  
WATERPROOFING LAYER  
70/400 MM REINFORCED CONCRETE  
20 MM LEVELING SCREED  
10 MM EPOXY LIGHT COLOURED FINISH

SWIMMING POOL

ASTE WATER BASIN

RUBBER WATERSTOP EXPANSION JOINT  
SEALING EPOXY  
300/400 MM REINFORCED CONCRETE  
WATERPROOFING LAYER  
20 MM LEVELING SCREED WITH ANGLE FILLET  
10 MM EPOXY LIGHT COLOURED FINISH

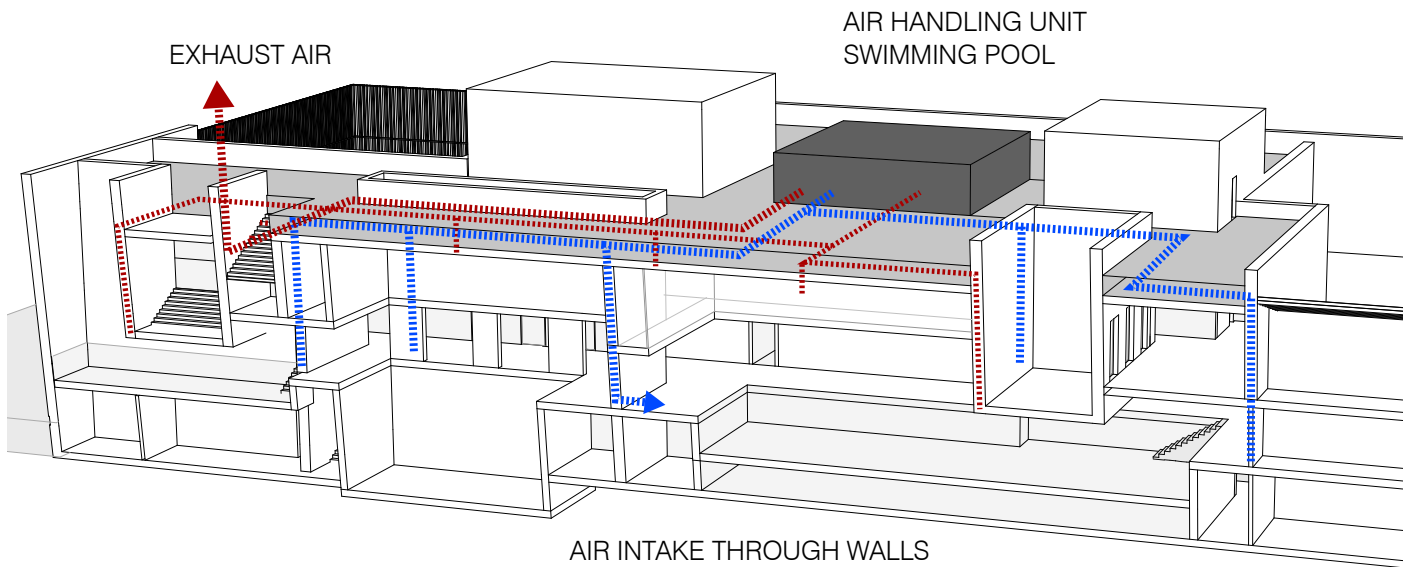


## CLIMATE DESIGN

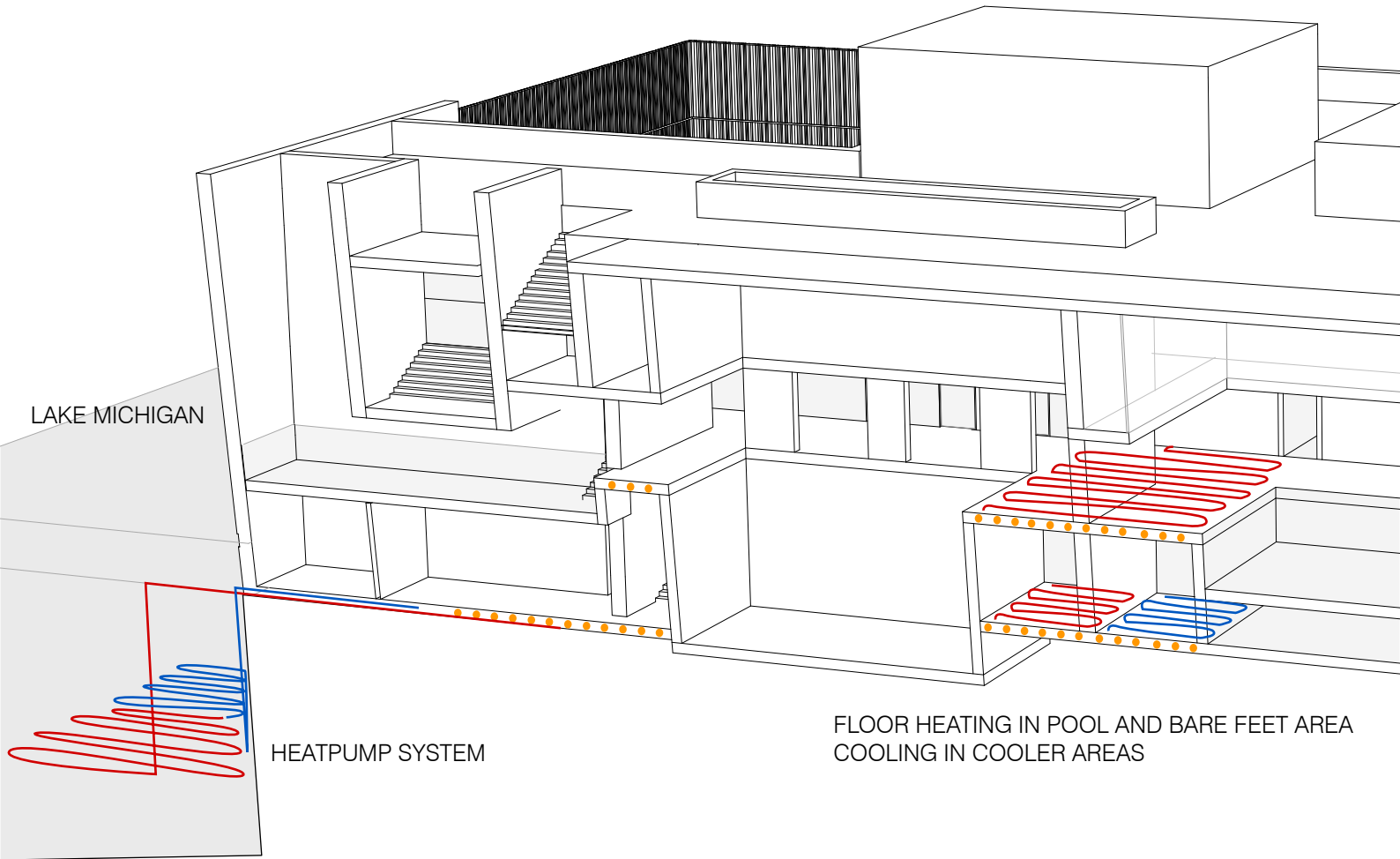
Airconditioning handling units on roof one for swimming pools and one for other functions as foyer cafe and sports.  
One in the basement in mechanical installation area.

Waste water reuse by filtering. Waste water and fresh water basins available for preconditioning the water before used in swimming pools and other uses.

Sustainable design of fragment with natural pond and filtering (and recycling) the Lake Michigan water by constructed wetlands



Ventilation distribution is through the raised flooring roof to the airconditioning rooms. The air intake goes through the walls to prevent suspended ceilings or mechanical installations in sight.



Concrete core activation in the cast concrete floors provide for constant temperature in the building. The floor heating is for extra heating and warm floors in bare feet areas. Cooling can be necessary in cooler areas. The Lake Michigan water temperature is used by a heatpump system.



To come as close to a natural environment, the specific odor of chlorine and skin/eye irritation is not wanted. The watertreatment system is sustainable and without acids or chemicals. Sphagnum moss and a ozone filter are used to treat the water. Waste water will be reused.



WATER INFLOW LAKE



OUTFLOW TO POND

POLISHED BED

TREATMENT BED

FILTRATION BED

MECHANICAL  
PRETREATMENT

The Lake Michigan water is polluted. To be able to swim in the pond, the water needs to be filtered. The clean water can be flowed back in the Lake.

## MATERIAL AND ELEVATION

