

Iris Mourouti

BUILDING COMPONENTS

Transformation in the Neighborhood of Bredfjäll, Hammarkullen

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Matter Space Structure

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Abstract

Public living and private life and their balanced coexistence is a precondition in the urban environment. However, built environment does not always support their simultaneous expression, forming a rigid whole. But what does this mean for the user?

In an environment like this, Hammarkullen in Göteborg, where the residents have created a strong sense of community through their social activity on a casual and formal level of participation, this thesis addresses the issue of the transformation of the million homes programme areas, which for several years they have been part of a general discussion and academic evaluation and research as planning visions which generated socially challenged areas.

The thesis, through research by design tries to articulate a transformation strategy which could continuously be adapted to the needs of the user via the soft system of the scaffolding system. The goal is to propose a more holistic approach, regarding the urban and building scale, their evolution through time and the inclusion

of the residents in the construction process. The steps of this reformation, from demolition to the organization of the scaffolding system, are defined by expanding circulation in order to create the spatial preconditions to support the character of the community. Connections between activity nodes create a secondary circulation system based on the social dynamics of the community and the scaffolding system comes to accentuate this network, while being at the same time a building component of structural importance and the means of expansion of private, communal and public space.

This investigation highlights the important role of adaptable systems in the transformation process of rigid and environments and can possibly offer a universal transformation system with contextualized characteristics.



Background

The Million Home Programme

The period after the WWII was very prosperous for Sweden. The end of the war resulted in an extra boost of the Swedish economy, which had already been continuously increasing since 1930. The blossoming economy created an increasing demand for larger homes and higher housing standards. The young generation had the possibility to move out of the small, crowded apartments they had shared with parents and siblings to homes of their own. This combined with a growing urbanization resulted in housing shortages across the country, especially in the three biggest cities, Gothenburg, Stockholm and Malmö, that grew by an average of 40,000 people a year.¹

This issue had been on the agenda of the politics for already four decades when the Social Democratic Party decided that all Swedish citizens had to be provided with good housing at affordable rents according to the modernistic design ideals. For this reason, it was decided that 40% of the existing housing stocks in the largest cities would be demolished to clean up cities from buildings of low standards

and at the same time new suburban areas would be developed.

The Million Home Program, as this expedition was named, was executed between 1965-1975. During this ten year period one million units were built corresponding to over a third of the existing housing stock. But the increased building rate had started already a few years previously and this whole period is known as the Record Years. The apartments usually consist of 3 rooms and occupy around 80m² of floor space. Usually entire new neighborhoods required the construction of a service center, while the separation of traffic was a major design issue. Most of the structures were made of site-cast concrete, while bricks and cement were the most common materials for the facades.

Architectural juries of the program praised the idea of well-designed pedestrian paths and connection to the environment, either in a micro-scale, or by scattering houses over park areas.² Because of the time-pressure, tight budgets not all the ideas were executed as proposed on paper. This

resulted in repetitive buildings and often a lack of a particular level of details.³ On the other hand, housing standards were raised dramatically, although outdoor environment was not prioritized in general. Negative opinions especially about apartment blocks had already begun in the late '60s, speaking of their monotony, their alienation, their lack of transport, services and designed surroundings. As for the large-scale buildings, their individual architectural and planning qualities were often ignored and critique was often targeting at the location rather than architecture itself. In general, the buildings of the Million Home Era have lasted very well, but to fully live up to their modernistic architectural style, frequent maintenance is needed.⁴

Hammarkullen

Location

Bredfjäll is a part of Hammarkullen, a suburban area in northeast Gothenburg that belongs to the city district of Angered. Hammarkullen was conceived as a part of the then new Angered district, according to the principles of the Million Home Program in Sweden and the ABC-city model, A=work, B=housing, C=commercial center. The new district of Angered was expected to host about 300,000 people in the future, but after the decline of the city's economy in the 1970s, these plans proved to be over-ambitious and only a few areas were fully completed, though scattered across the woods and poorly connected with each other, and the planned industrial areas were never realized. Construction works in Hammarkullen, one of those areas and a previously farmer's land, started in 1968 and completed in 1973, with 2670 apartments built eventually and a plan area of 123,000m².

Apart from the demolition of one of the multi-storey buildings around the central square, Hammarkulletorget, and the recent transformation of Hammarparken as a playground, little has been changed since the 1970s.

Connections

Hammarkullen, despite the fact that it is served by three tram lines that connect it to Gothenburg center, is considered as a suburb far away from the city. This perception is caused mainly by the lack of continuity of the built environment between the city and Angered district, with woods and an extensive industrial area in between. It's also interesting to notice that other areas that have the same or greater distance from the city center, for example Marklandsgatan in Högsbo or Chapmanstorg in Majorna, are considered by the majority to be more centrally placed. Apart from the tram, there is also an 11km long bike path, separated from the car traffic. The transportation by car from the center of the city to Hammarkullen is taking place through the E45 road that extends along the river.

Population

Before the beginning of the construction of Hammarkullen, planners expected that the whole Angered district would host up to 300,000 people, while at that time, the entire population of Gothenburg was not surpassing 400,000. But this calculation was made based on the at that point very rapid growth of the shipyard industries in the city. Come the 1970's recession most of the newly expanded industries had to close down and the prospect of a growing employed working-class population changed and instead unemployment surged. Additionally, the 1970's waves of refugees from conflicts around the world have come to form a significant part of the population of Hammarkullen.

Ownership State

Bredfjäll, is consisting of nine buildings, eight of them are managed by Graflunds, one of the biggest private housing companies in Sweden, while one building is managed and owned by Bostadsbolaget, a municipal housing company. Recently, Bostadsbolaget has expressed the interest to buy and invest in Bredfjäll, however except from some published articles no further details or plans have been announced.

Green Spaces

Since the terrain of the area is extremely hilly and thus expensive to build on, the architects' decision was to exploit the maximum of the suitable areas, by building as many apartments as possible at a low cost, in multifamily buildings up to nine floors. Hammarkullen mostly consists of multi-storey residential buildings that are separated from traffic. It's notable that Hammarkullen is surrounded by woods that create a feeling of isolation from the neighboring areas. There are pedestrian paths through the woods that lead to other sub urban areas nearby, like Hjällbo.

Bredfjäll

Number of apartments: 810

Population: 1770p

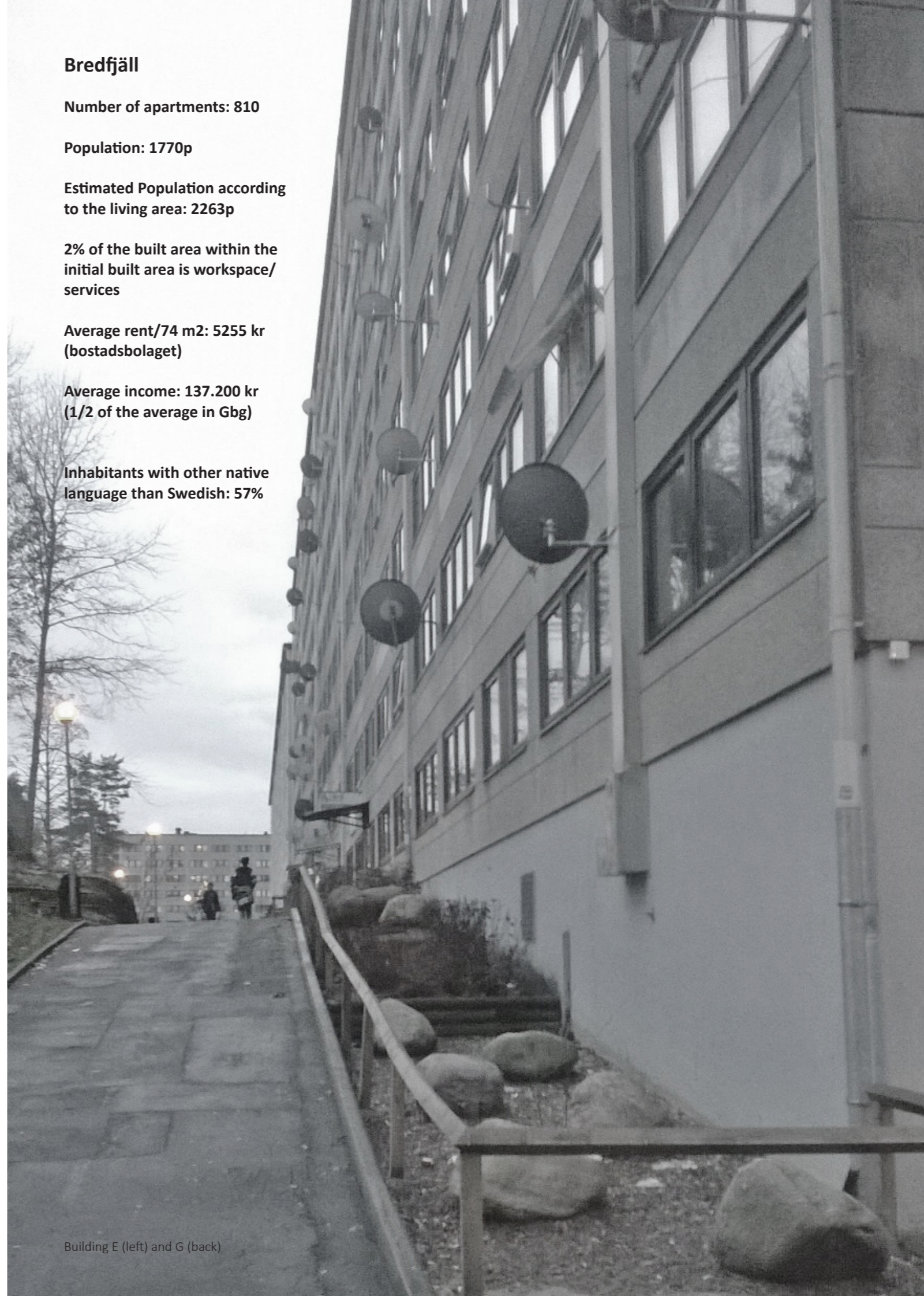
Estimated Population according to the living area: 2263p

2% of the built area within the initial built area is workspace/ services

Average rent/74 m²: 5255 kr (bostadsbolaget)

Average income: 137.200 kr (1/2 of the average in Gbg)

Inhabitants with other native language than Swedish: 57%



Building E (left) and G (back)



Site Analysis

The Larger Context

SOCIAL INFRASTRUCTURE&LANDUSE

The multi-cultural environment of the area, along with the need for support on a social level (integration issues etc.) has created a large number of social infrastructure, run and installed both from the municipality and locals. Even though residential use is dominating by almost 70% of the total area, social infrastructure in terms of organizations and associations that are related into offering support and any kind of cultural and recreational activity cover half of the rest of the landuse variety.

Some of these are the local ethnic associations, community based cultural organizations and formal infrastructure for recreational purposes. All these organizations, actions and associations have evolved to a network of social infrastructure and many cases they cooperate and offer their services as such.

This large amount of social resources has resulted in a network which however is not supported by the space in which is installed.

PHYSICAL FEATURES

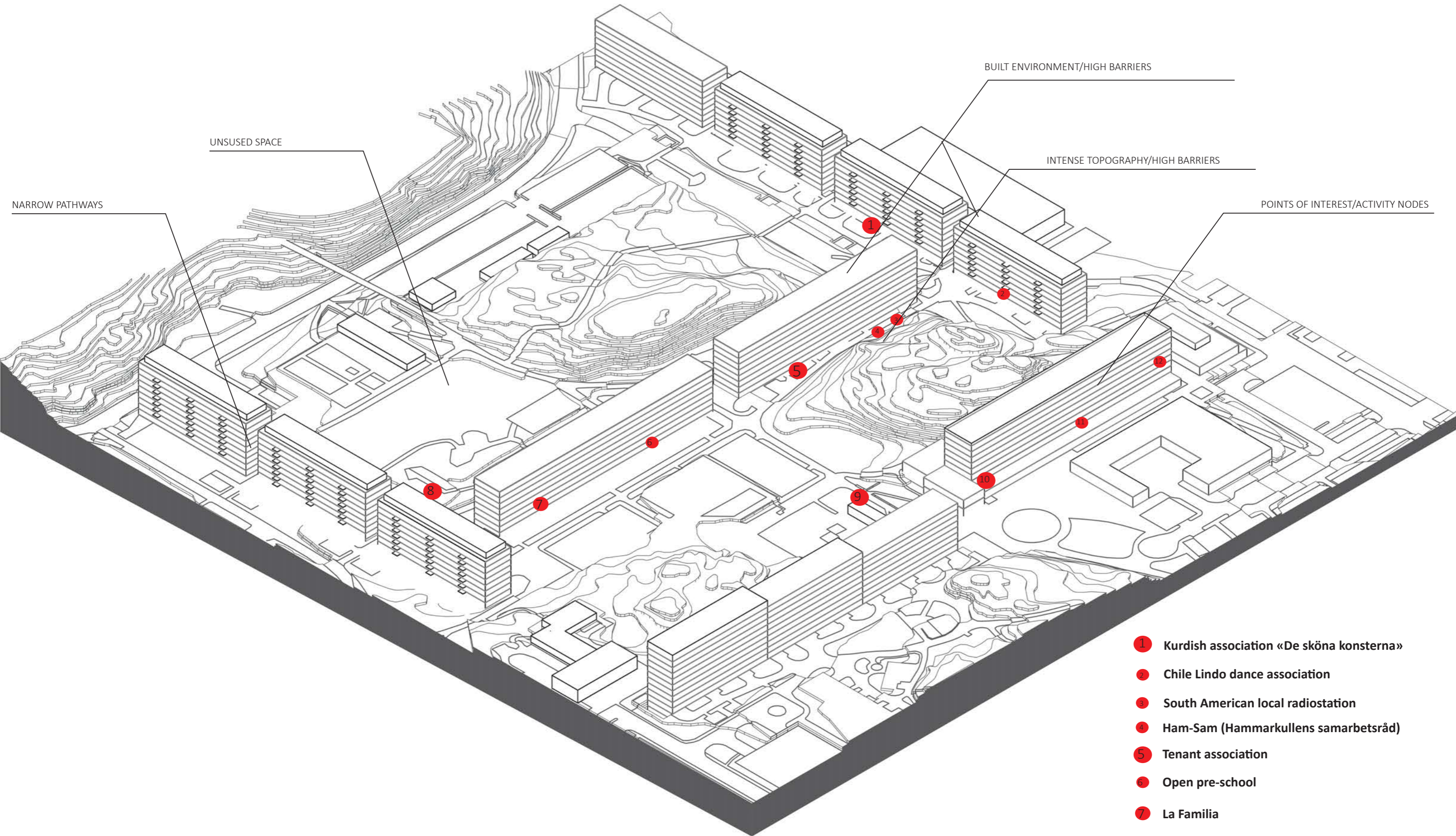
The context in its physical space is mainly characterized by the intense topography and the high and long volumes of the built environment. These two together consist the delimitation of the circulation network around the area, which is organized only in relation to access for the buildings, giving minimum opportunities for socialization. Overall, even though the area is sparsely built, the impression is this of a densely built area.

The lack of design in the urban environment accentuates the impression of a very delimited circulation network and does not offer enough common ground for the social life and the expression of it.

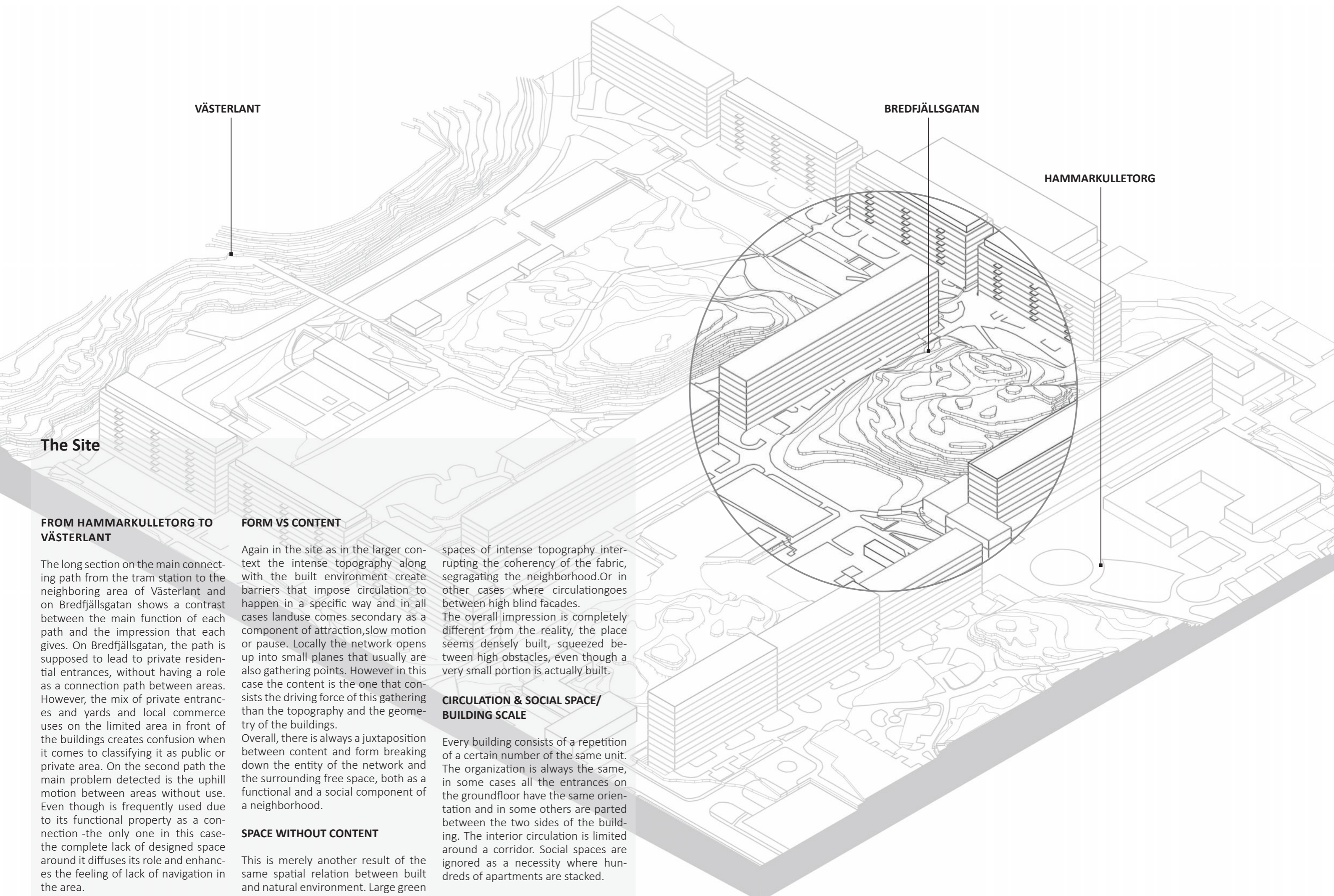
The only designed social space in the area is the park on Bredfjällsgatan which consists an important node of activity for the whole suburb.

This contrasts the nature of the community which through the years has developed a unique identity which is expressed in their social infrastructure and activities.





- ① Kurdish association «De sköna konsterna»
- ② Chile Lindo dance association
- ③ South American local radiostation
- ④ Ham-Sam (Hammarkullens samarbetsråd)
- ⑤ Tenant association
- ⑥ Open pre-school
- ⑦ La Familia
- ⑧ Local union of tenants
- ⑨ Mötesplatsen
- ⑩ Library/social services
- Ⓛ Folkhögskolan
- Ⓜ Mixgården



VÄSTERLANT

BREDFJÄLLSGATAN

HAMMARKULLETOG

The Site

FROM HAMMARKULLETOG TO VÄSTERLANT

The long section on the main connecting path from the tram station to the neighboring area of Västerlant and on Bredfjällsgatan shows a contrast between the main function of each path and the impression that each gives. On Bredfjällsgatan, the path is supposed to lead to private residential entrances, without having a role as a connection path between areas. However, the mix of private entrances and yards and local commerce uses on the limited area in front of the buildings creates confusion when it comes to classifying it as public or private area. On the second path the main problem detected is the uphill motion between areas without use. Even though it is frequently used due to its functional property as a connection -the only one in this case- the complete lack of designed space around it diffuses its role and enhances the feeling of lack of navigation in the area.

FORM VS CONTENT

Again in the site as in the larger context the intense topography along with the built environment create barriers that impose circulation to happen in a specific way and in all cases land use comes secondary as a component of attraction, slow motion or pause. Locally the network opens up into small planes that usually are also gathering points. However in this case the content is the one that consists the driving force of this gathering than the topography and the geometry of the buildings. Overall, there is always a juxtaposition between content and form breaking down the entity of the network and the surrounding free space, both as a functional and a social component of a neighborhood.

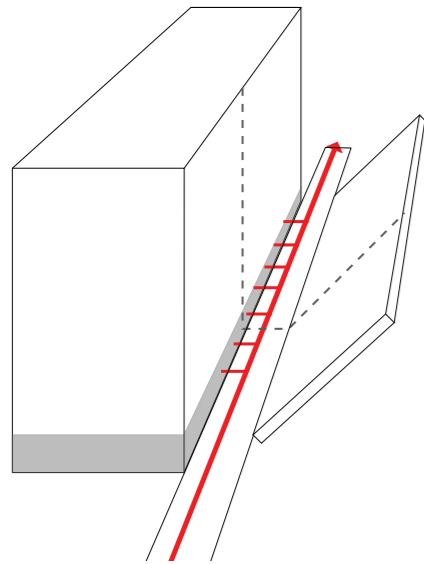
SPACE WITHOUT CONTENT

This is merely another result of the same spatial relation between built and natural environment. Large green

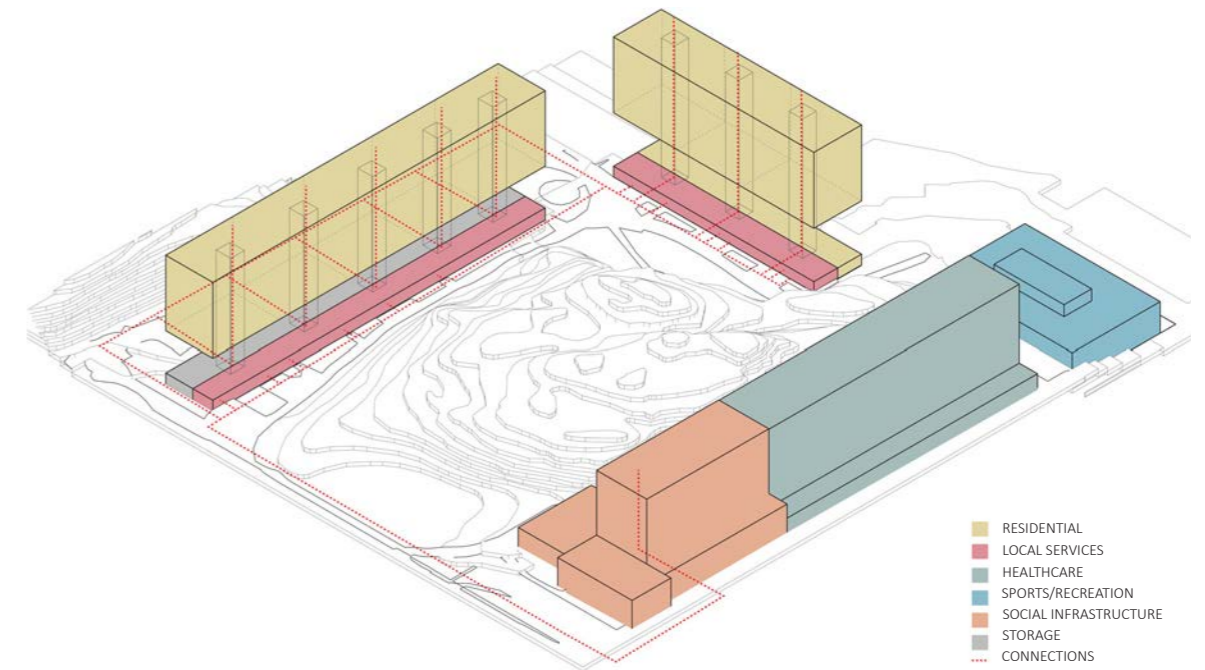
spaces of intense topography interrupting the coherency of the fabric, segregating the neighborhood. Or in other cases where circulation goes between high blind facades. The overall impression is completely different from the reality, the place seems densely built, squeezed between high obstacles, even though a very small portion is actually built.

CIRCULATION & SOCIAL SPACE/ BUILDING SCALE

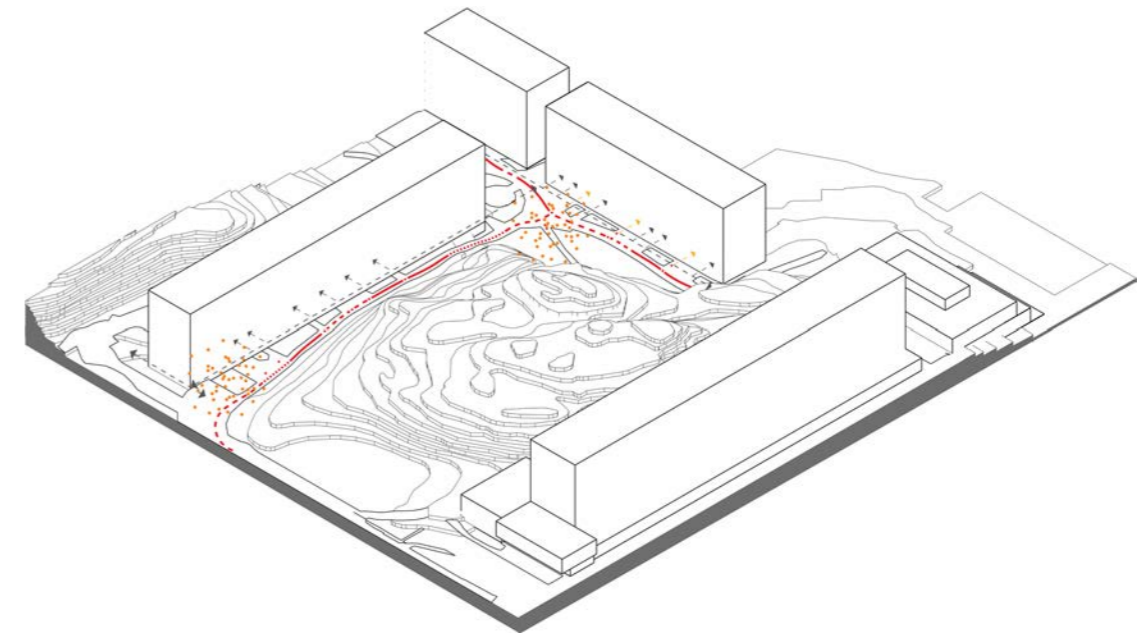
Every building consists of a repetition of a certain number of the same unit. The organization is always the same, in some cases all the entrances on the ground floor have the same orientation and in some others are parted between the two sides of the building. The interior circulation is limited around a corridor. Social spaces are ignored as a necessity where hundreds of apartments are stacked.



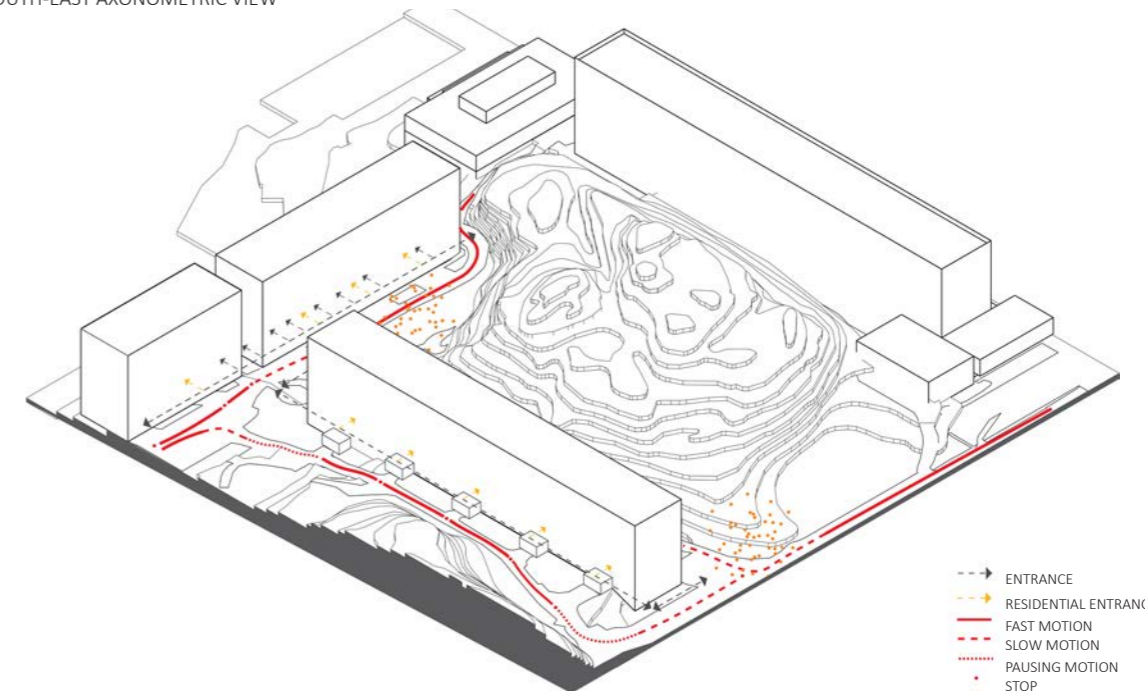
LANDUSE DISTRIBUTION



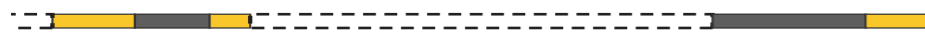
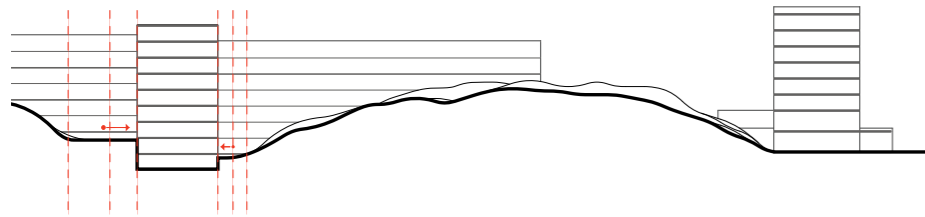
CIRCULATION/ACCESS



SOUTH-EAST AXONOMETRIC VIEW



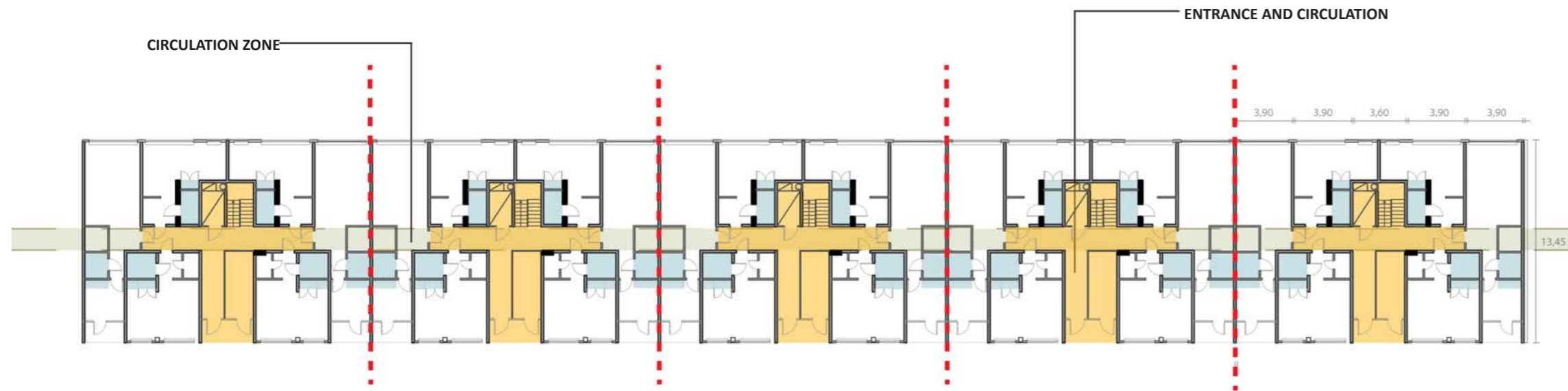
SOUTH-WEST AXONOMETRIC VIEW



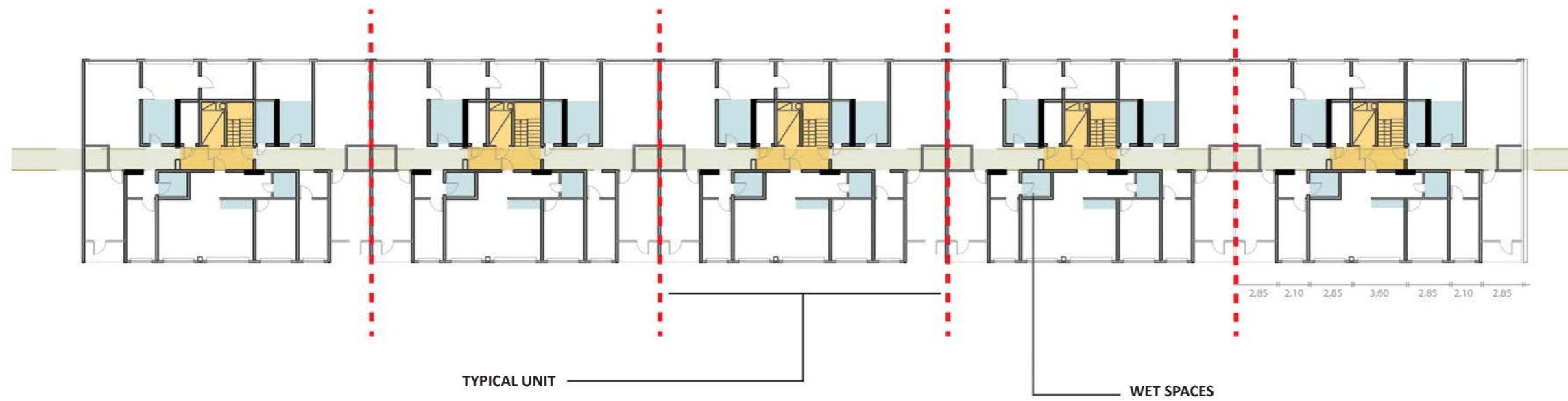
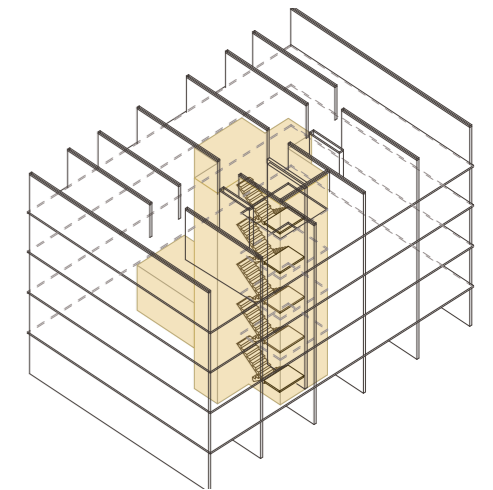
Legend

- ▶ PRIVATE ENTRANCES
- INTERSECTION & ENTRY POINT
- INTERSECTION
- FAST MOTION
- - - SLOWER MOTION (USE)
- - - SLOWER MOTION (TOPOGRAPHY)
- HIGH DENSITY TRAFFIC/PUBLIC PATH
- MEDIUM DENSITY TRAFFIC/SEMI-PUBLIC PATH
- LOW DENSITY TRAFFIC/SEMI-PUBLIC PATH
- - - NO CONTENT/FUNCTION
- CONTENT/FUNCTION
- BUILDING
- PARKING

BUILDING SCALE/ CIRCULATION



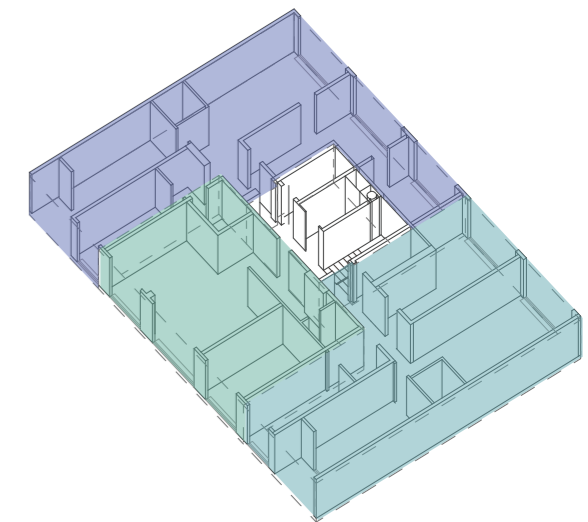
TYPICAL GROUND FLOOR ORGANIZATION



TYPICAL UNIT

WET SPACES

TYPICAL FLOOR ORGANIZATION



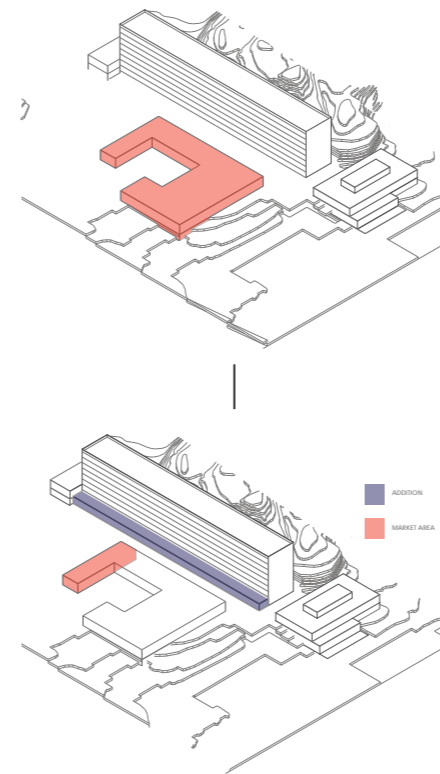
- The 3:a. double orientation
- The 2:a. double orientation
- The 1:a

Timeline 1970-2015

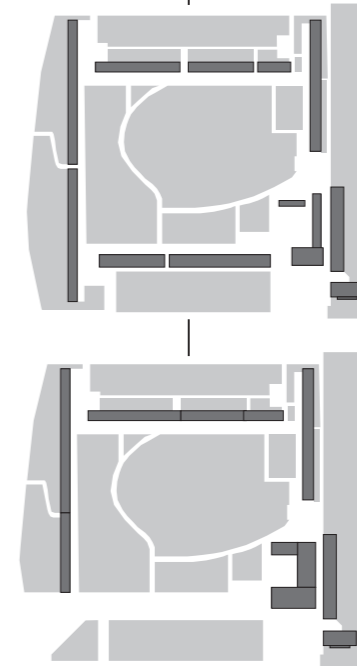


1968-1973
Hammarkullen in the northeastern part of Gothenburg is built. In total 123.00 m2 2670 apartments are built. It is consisted of two neighborhoods in the beginning, Hammarkullestorg and Bredfjällsgatan. A service center is also built for the needs of the residents.

The breaking point for Hammarkullen came really early with the economical crisis of Sweden during the 80s. Increased influx of unemployed refugees moved to these areas since there, were the cheapest rents and it was then when these areas started being perceived as socially challenged areas, something that drove away the locals and created these "ghettos".



The 10s
New ownership state of the buildings in Hammarkullestorg changes and the new owner Bostadsbolaget, decides to refurbish the buildings of the neighbourhood and goes forward with the demolition of one and part of another. This intervention is the most significant one in the area since its completion.

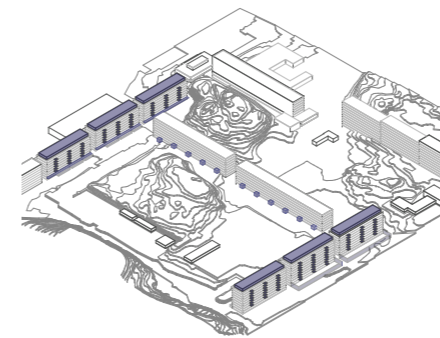
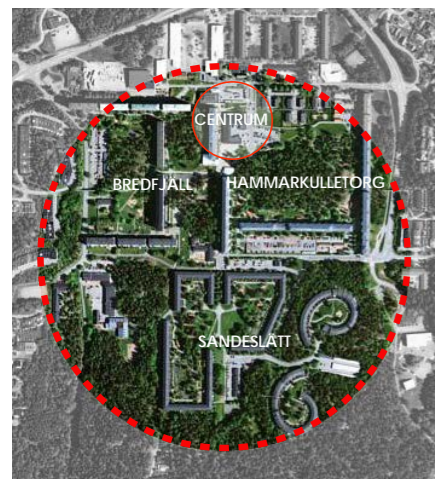


2015
Bredfjäll changes ownership. Bostadsbolaget, the housing company that owns the buildings in Hammarkullestorg decided to buy the properties in Bredfjäll and they have already announced their intention to invest in the area by refurbishment.

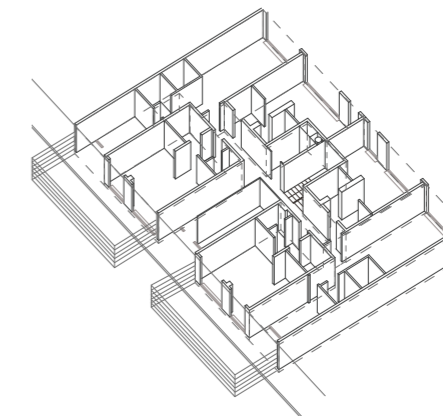
1980-83
New neighbourhoods are added on the western hill of the area, Västerlant and on the east and north side of hammarkullestorg. The new areas are consisted of one or double housing units, with one or two floors.

The 90s
For the most part of the evolution of the suburb no significant changes or renovations were done. The urban surroundings were underdesigned and landscape treatment was left undermaintained and left to decay. The decaying local economy lead to the deminish of the service center and left the center from being the heart of the suburb to being a pedestrian traffic node.

Increasing number of breakins in the groundfloor apartments where usually local commerce and services functions lead to the addition of fencing in front of the apartments, eliminating completely their communication with the surroundings and worsening light conditions. Additionally, the common phenomenon of residents desposing their garbage out of their windows lead to the addition of sheds on the ground-floor level in order to prevent garbage gathering in front of entrances.



Balconies and one additional floor are added by the housing company, Graflunds, in buildings A-B-C-G-H-J.



Concept_Strategy & Precedents

The Concept

The concept was formed by combining the character of the community and its expression in space (landuse variety) with a design proposal that could deal with the main spatial issues of the site aiming to reveal and support this character.

The reasoning followed was based on firstly breaking down the site into its componets (people and space) and redefining their relationship through an intervention proposal that connects both.

These components are:

THE RESIDENTIAL AREA

The base of the community. Consisted of several ethnicities , but mainly children and teenagers who affect the variety of uses in the area towards recreational activities.

LANDUSE AND SOCIAL INFRASTRUCTURE

Landuse in the site is mainly consisted from local commerce and social

infrastructure. Cultural and ethnic associations with social support services run from the residents. This has created a network of collaborations which finally is the expression of the community. However, in the physical network this is not apparent and the lack of space fit for collaboration and co-existence limits the actions and aspirations of expanding this network.

REDISTRIBUTION OF SOCIAL INFRASTRUCTURE (PROPOSAL)

Accordingly the concept was formed and it is based on the redistribution of the social infrastructure within the site in proximity with the areas of "gathering". The main goal is to form appropriate and flexible space that meets the needs of the community both in their social contribution actions and their general social activity in the everyday life. In spatial terms this translates to the expansion of the existing network to a network of common spaces, open or enclosed, within and around the residential buildings.

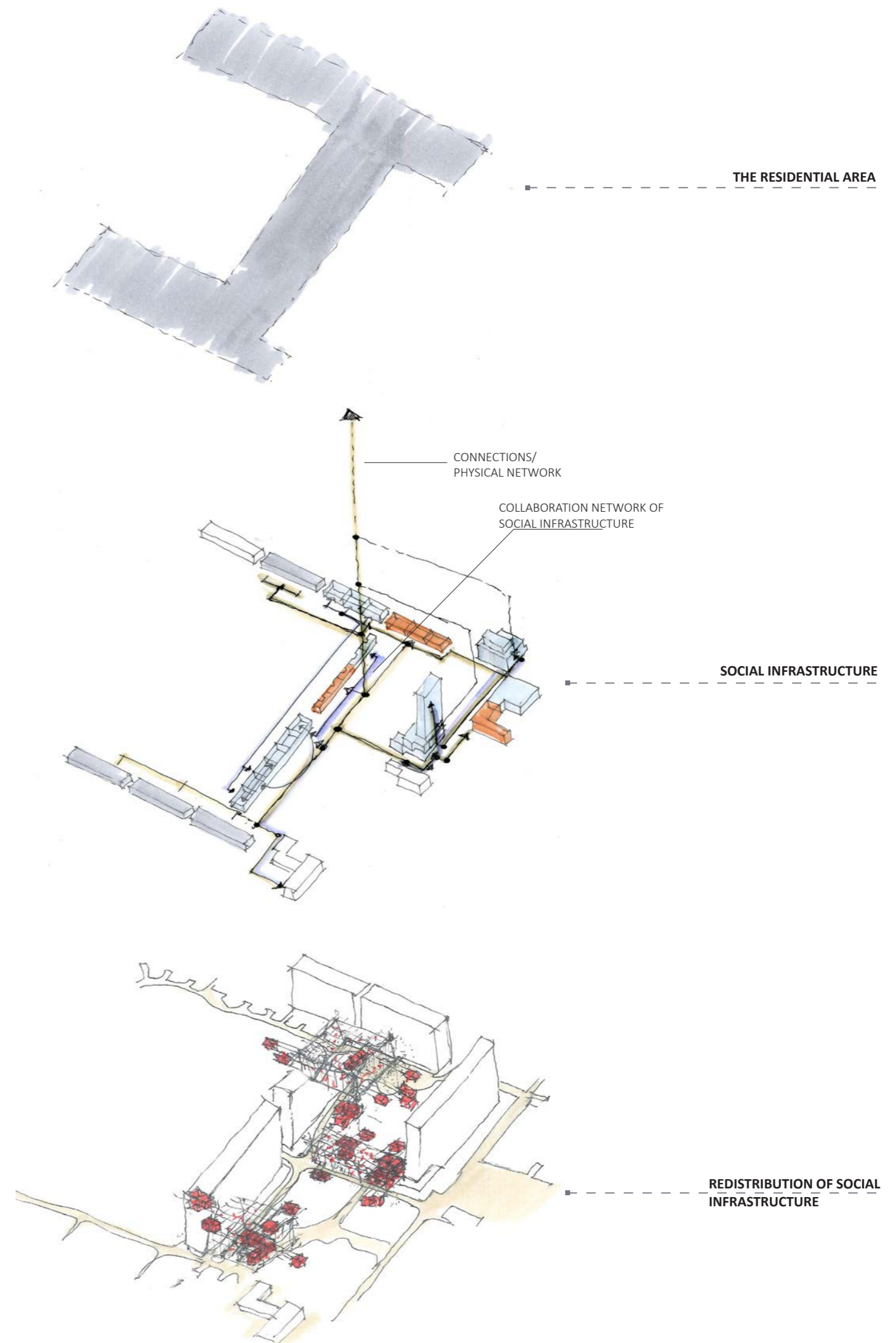
Strategy

Social housing transformation projects are in general a difficult subject to approach in terms of concept and strategy. The focus varies by case, from aesthetic improvement to re-branding the areas or focusing into environmental sustainability⁵ both as a means of rebranding and lowering energy costs of the really old and usually very poorly maintained infrastructure.⁶

In retrospect most of these projects are not effective in terms of social and/or financial gain on the long term. Gentrification, due to the unavoidable increase of rents after completion and maintenace costs for the housing company are the most dominating ones.⁷

Thus, it became apparent that focusing on the long term results was an appropriate strategy and by looking into different cases and their transformation consequences the whole strategy was formed.

The case study that provided the directions of the strategy was the transformation case of Gårdsten in northe-



astern Gothenburg.

Gårdsten faced the possibility of demolition in 1990, when the housing company responsible had to come up with a transformation proposal. The suburb had a low occupancy and high criminal rates in old and undermaintained premises isolated not only from the city but from neighboring suburbs as well.

The plan that the housing company came up with focused on four parameters. The one was rebranding the area, the second was inclusion of the residents in decision making and building process and the third a long term, step by step transformation process and the fourth focusing on the urban-public areas. In other words they invested in the local manpower, environmental sustainability as a rebranding strategy, time to test and adapt each proposal within this process and designing the surroundings.⁸

Following the lead of this process the strategy for this project was articulated. The only parameter that was changed was rebranding, since from the analysis of the context it became apparent that the area has a strong identity already, hence the need for inventing a new one was unnecessary.

Accordingly the plan was to adapt the proposal to support and reveal this identity within a strategic framework that can also ensure inclusion and an adaptable, evolving and continuous construction process.

For such a strategy the use of a soft system is vital and the precedent of the scaffolding vision offered it. An architectural solution of speed, lightness and flexibility articulated by avant-garde thinkers in the mid 1950's and '60's in Europe and America such as Cedric Price, Buckminster Fuller, Peter Cook and particularly Yona Friedman.

The scaffolding city and the expanding environment it proposes, along with the precedent of the "unfinished" as a transformation choice which is based on the logic of leaving space for change are the two main architectural references that composed the strategy of the project and provided the background for its development.

Precedents

THE SCAFFOLDING CITY

Main Principles:

- The Need for Speed
- Redundancy
- Network the System
- Open to Economy
- Incentivize use
- Democratize the Construction

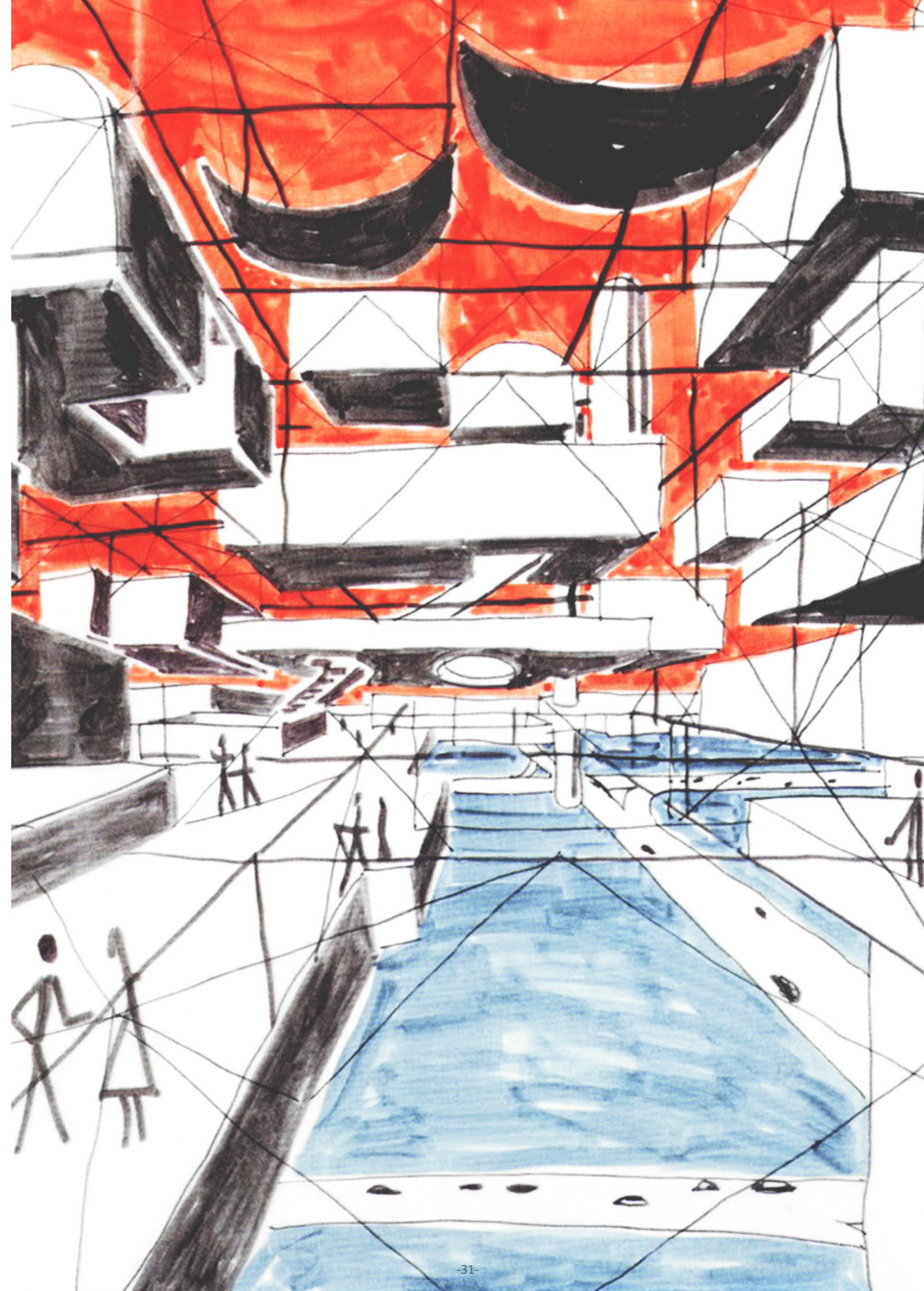
Process

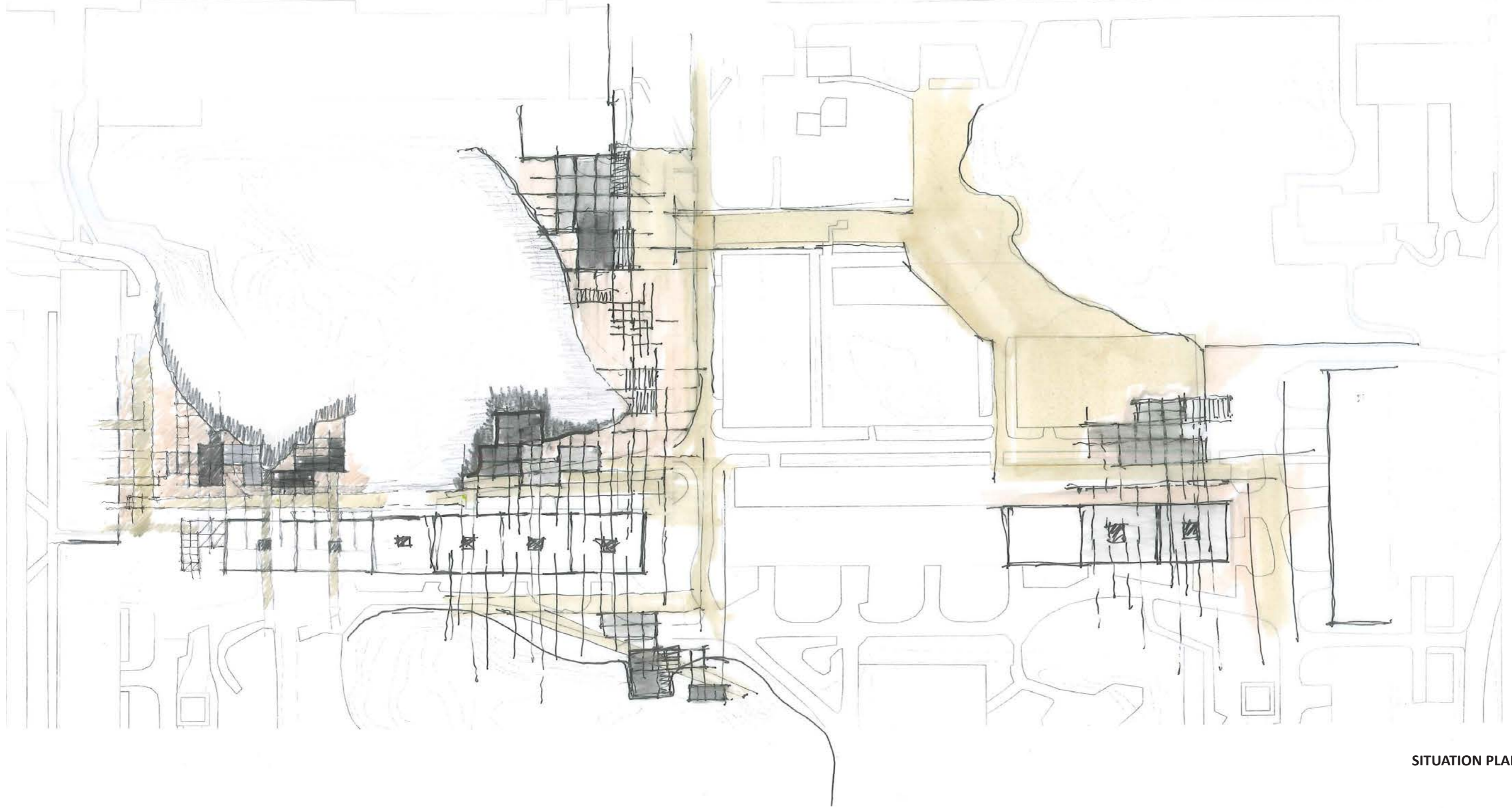
- Open to Ecology

THE UNFINISHED

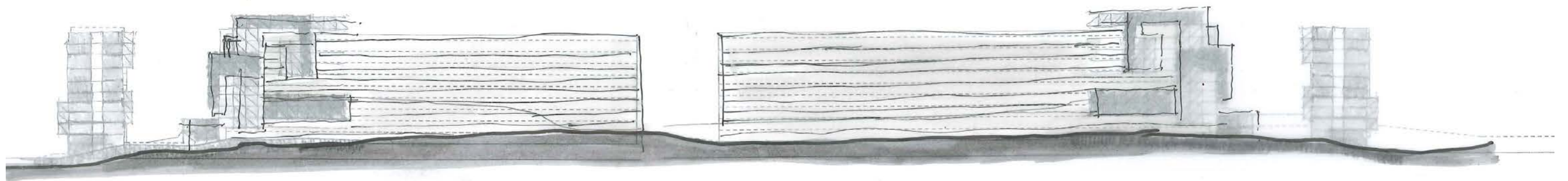
"Incompletion is the clear aim of alteration for two main purposes: it is only by such means that the allusion to the ideal, or paradigm, can be made; and it allows the building to become the element of continuity."

On Altering Architecture
Scott Fred

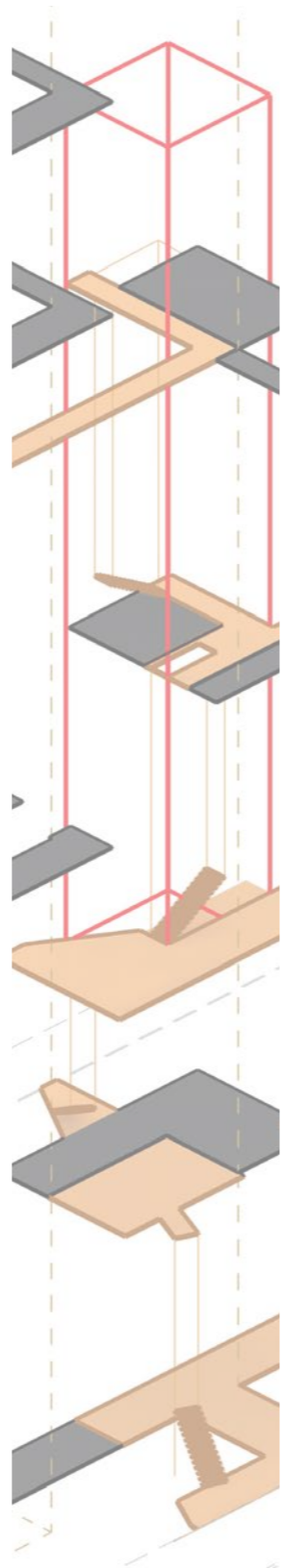
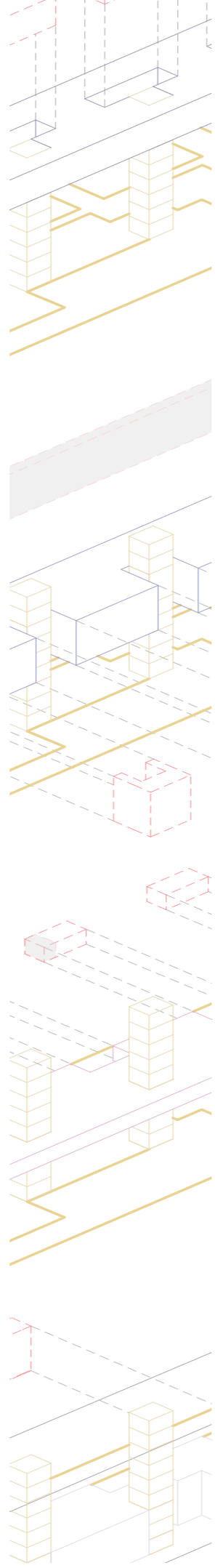
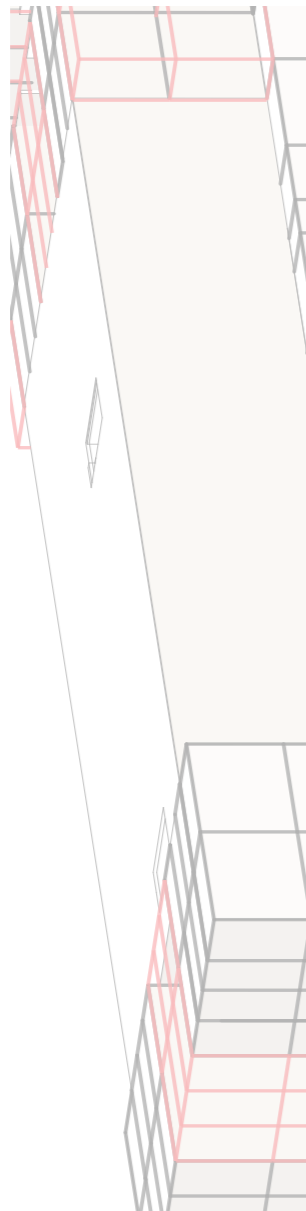
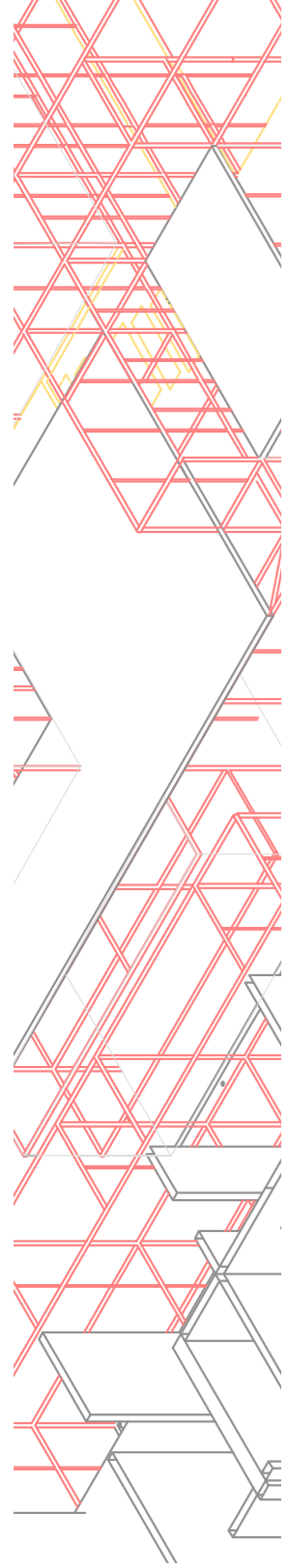




SITUATION PLAN 1:500



ELEVATION 1:500



Systems & Studies

This chapter portrays all the series of studies that systematically defined and organized the components of this project. From the organization and structure of the new additions in the urban surroundings, the steps of the transformation process and the role of the scaffolding system in the existing built environment to the component of circulation that binds the two. In every study the spatial issues of the site are being addressed by ensuring the creation of transitional gradients between the public and the private and focusing on the collective following the logic of the concept.

The New Built Organization

All the studies are defined by spatial parameter(s) which can organize and define the result in a typical way, generating either a spatial prototype or a process.

In this study the new built organization is defined generating a prototype. The goal is to introduce a different scale in the site and open a dialogue with the existing building.

/PARAMETER/GRID ORGANIZATION

The organization grid of the new built is based on the structural grid of the existing building. The variation in width provides the possibility of main and secondary corridors, connections between closed and open spaces, transitions from the urban to the built environment and opportunities to directly connect the existing with the addition.

THE COMPONENTS

The scaffolding system

The scaffolding in the new built volu-

mes is the main structural system. It is consisted of modular frames, the main ones (SHS 6) and the secondary (SHS 3).

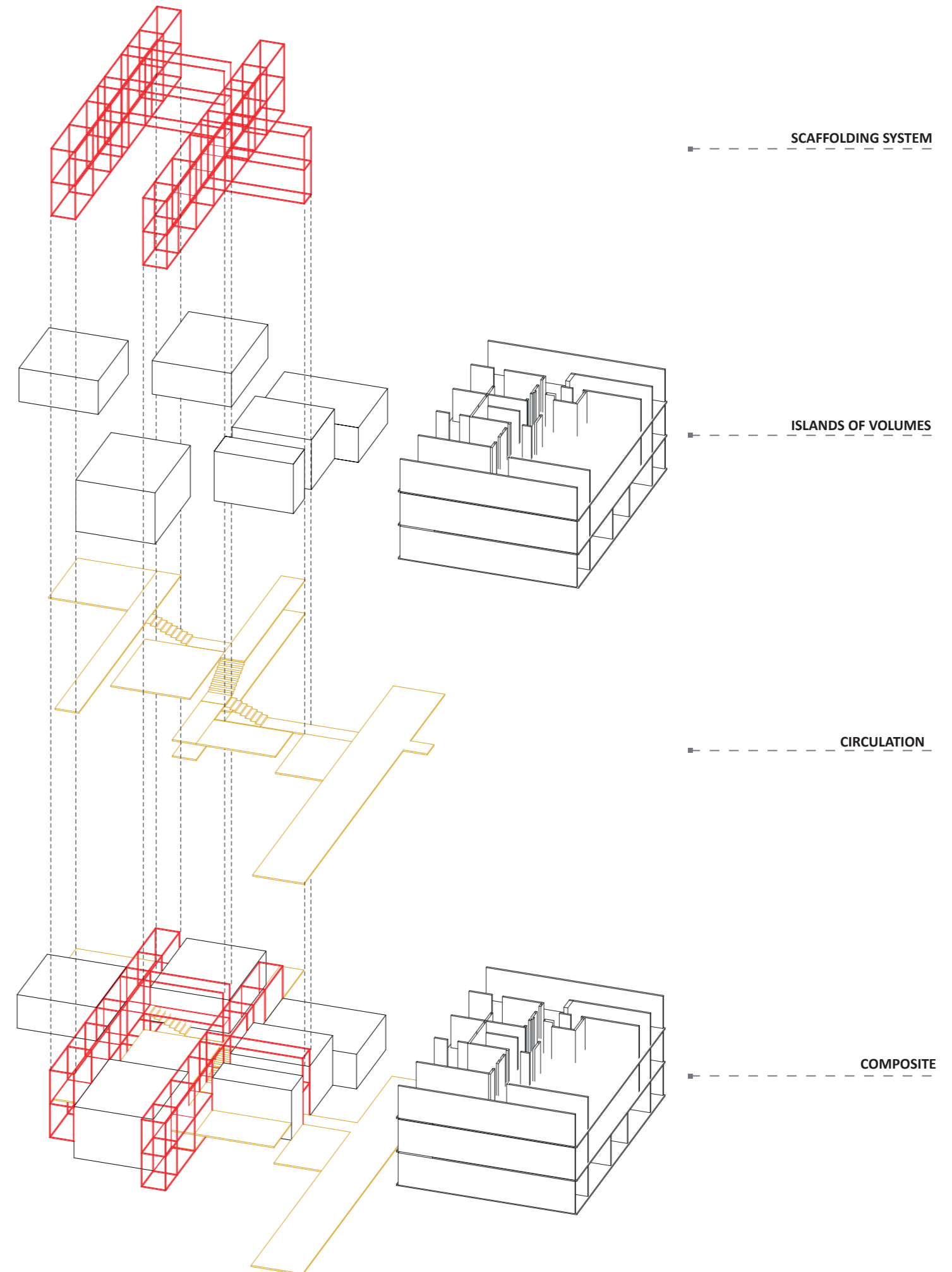
They are organized to cover the open spaces (network and planes) and to support structurally the closed spaces in order to avoid the dense grid of the structure inside the buildings.

Islands of spaces

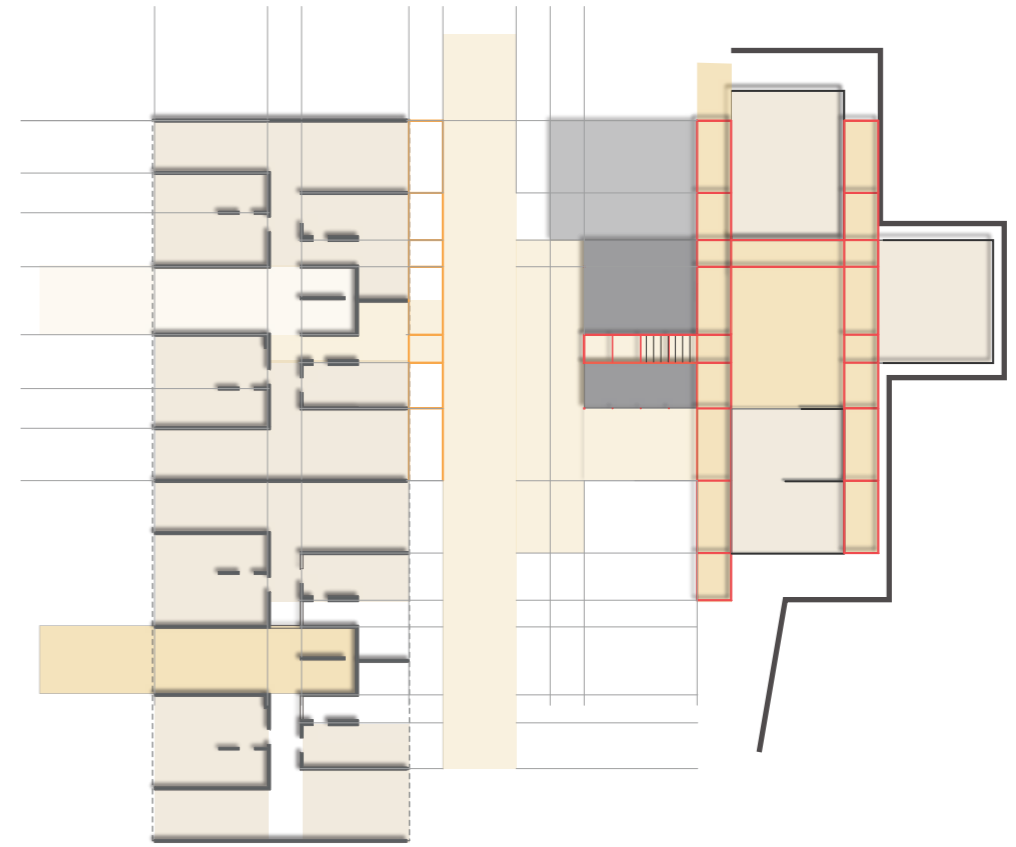
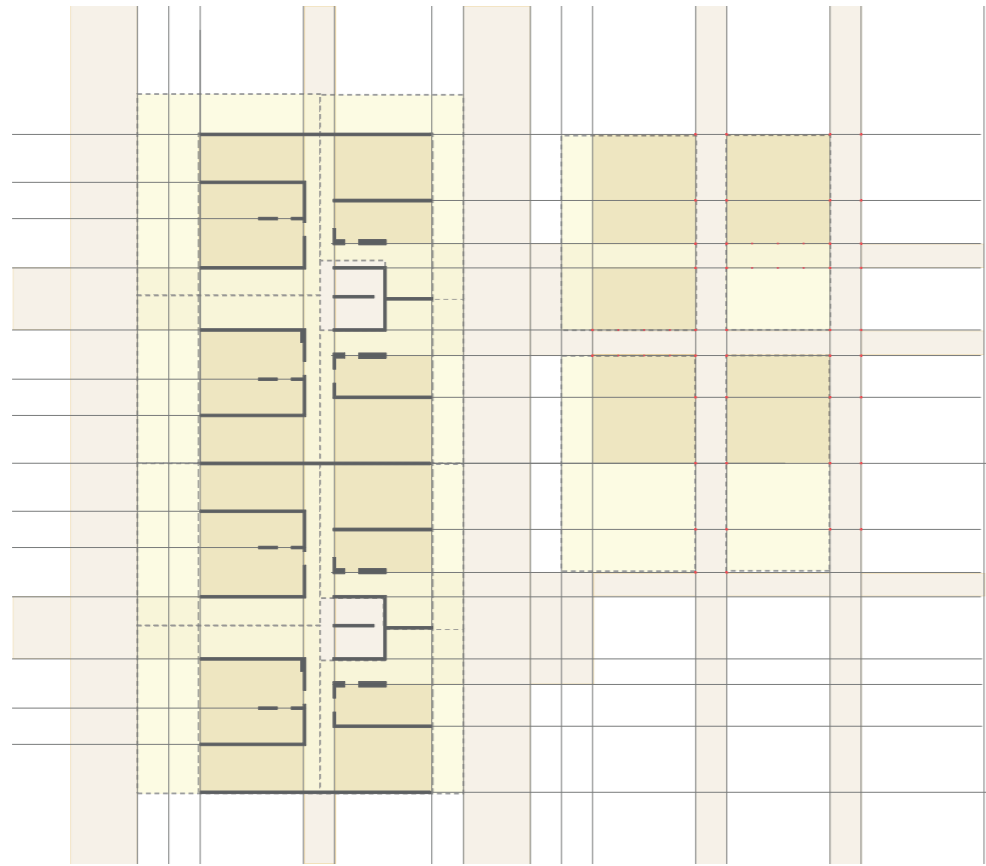
Closed spaces are determined from the expansion of the circulation in the site and are supported by the scaffolding system.

Circulation

The circulation is based on the expansion of the network in the site mainly by exploiting the topography in the area. It is organized as a cluster of paths and planes, taking advantage of the topography.

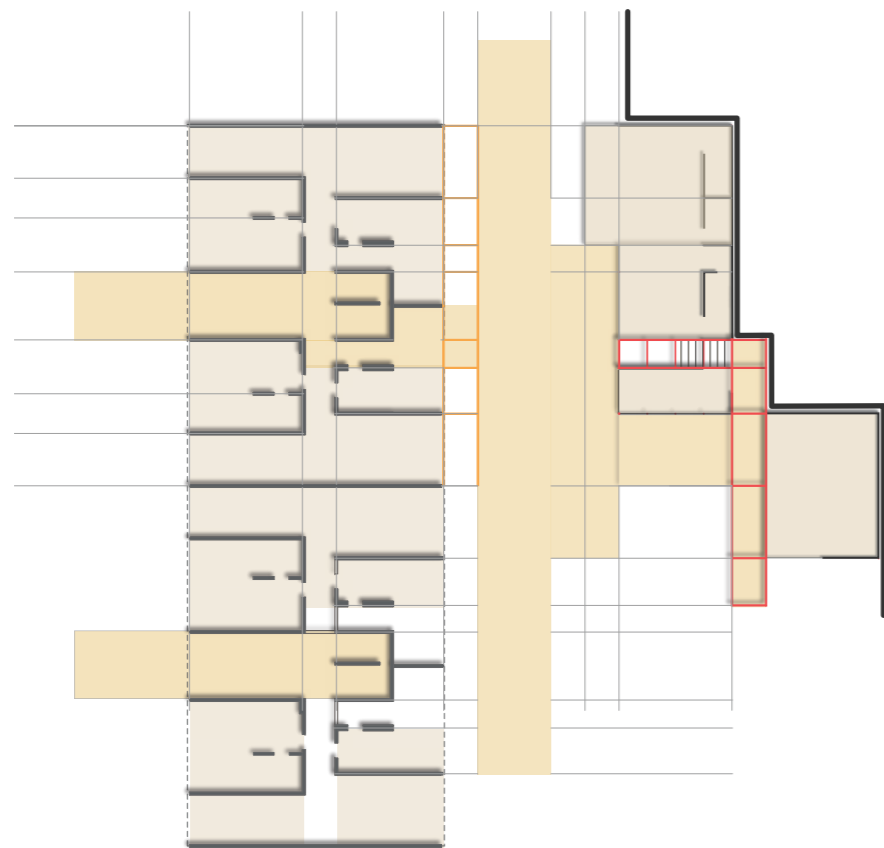


/PARAMETER/GRID ORGANIZATION

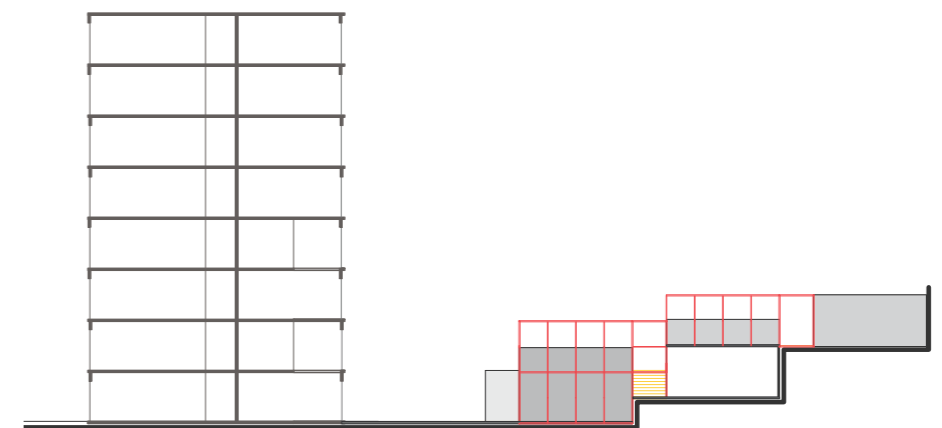


PLAN +105.0

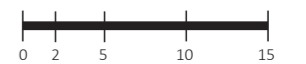
/RESULT/SPATIAL PROTOTYPE



PLAN +101.0



CROSS SECTION



Building Transformation Study

In this study the goal was to define the transformation process and the role of the scaffolding system on the existing building. This study defined the most important features of this transformation while trying to maintain the area of living space through this process.

/PARAMETERS/

Groundfloor Circulation

The process of subtraction is based on the logic of expanding the circulation on the groundfloor mainly affecting the floors of the base. At the rest of the floors an attempt to create casual communal space was made, however the goal of keeping at least the same living area as the existing restrains the expansion of internal circulation.

Tripartition

The intervention on the facade is based on the tripartition on the horizontal and vertical direction. The hor-

izontal keeps the core heavy and releases the base and top of volume. The vertical accentuates the passages underneath the building and mainly appears by the addition of the scaffolding system.

/RESULT/ TRANSFORMATION PROCESS SYSTEM

Substraction

The subtraction follows the logic of the horizontal tripartition. The building is separated in three zones, base, core and top. The base in order to expand the circulation on the groundfloor and highlight the flow within the surroundings is the one that is subtracted the most. The core is treated in order to find communal spaces locally. The top is treated to accept the scaffolding as a new system of living area, with new typologies of apartments and exploit the top floor as an extra social place, with communal outdoors spaces (roof gardens), both between apartments and for the whole building.

Completion

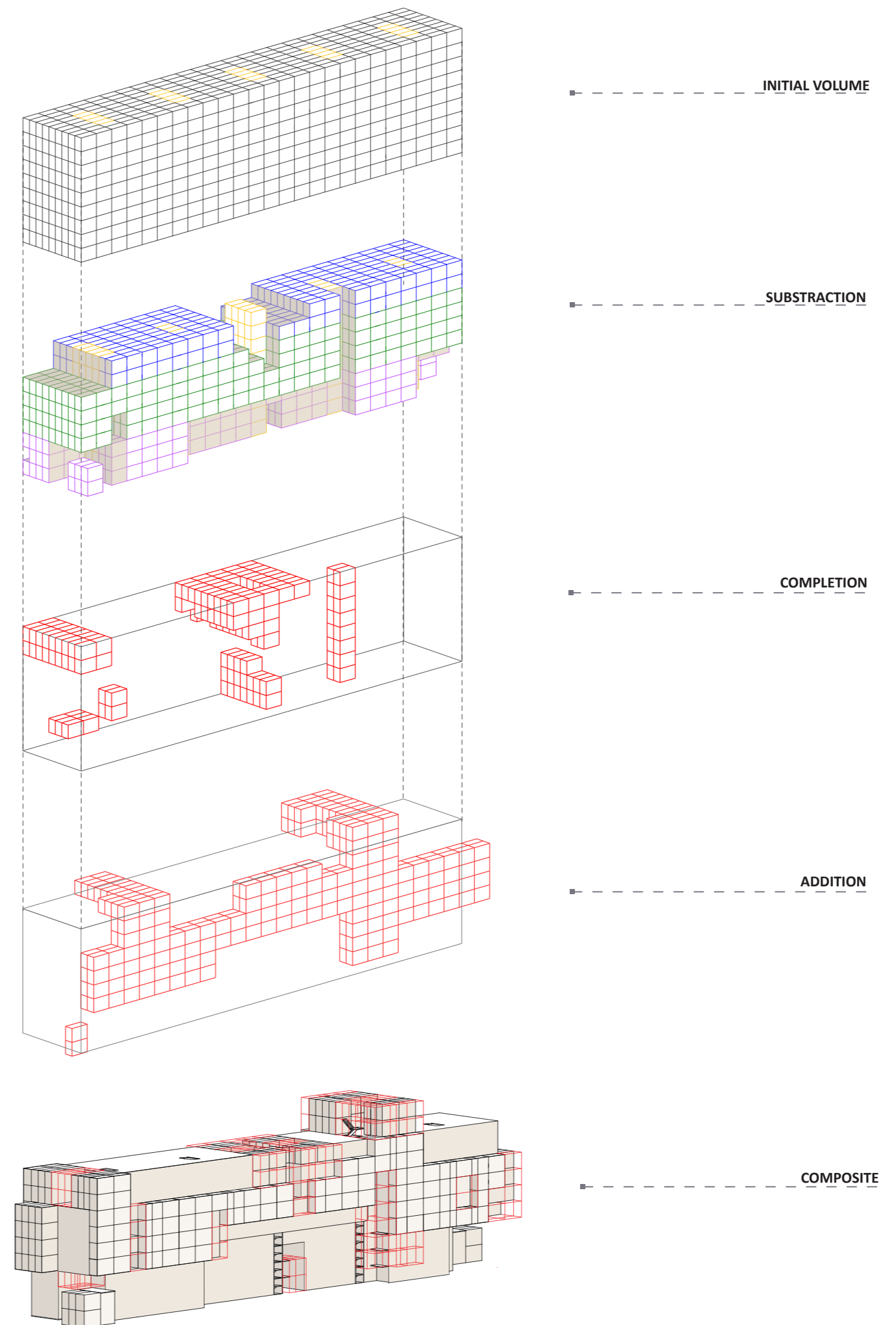
In order to minimize area loss from the subtraction process the scaffolding system completes the closed spaces where is needed. In many cases the completion is not for living area but for open communal space.

Addition

The scaffolding comes to increase living space and create new. Again here the system is organized by closed and open spaces, mainly on the private level.

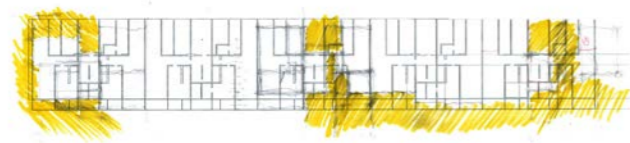
/CONSEQUENCES/

The consequences of this study are shown in diagrammatic typical plans and refer mainly to the change of the circulation inside the building and the new relations of closed or open space created by the scaffolding, either as balconies, extensions or communal entrances. In this study is also included a schematic design of new typologies of apartments.

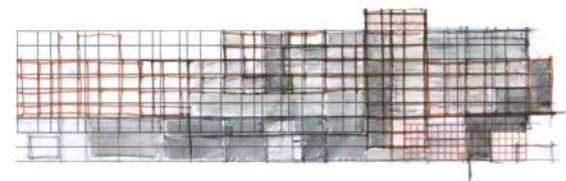
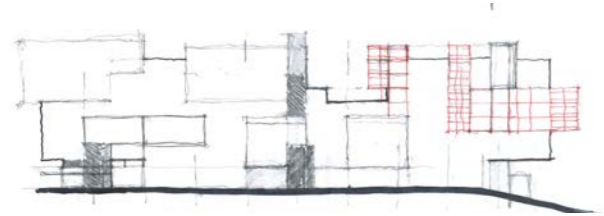


/PARAMETERS/

PRE-STUDY SCHEMES

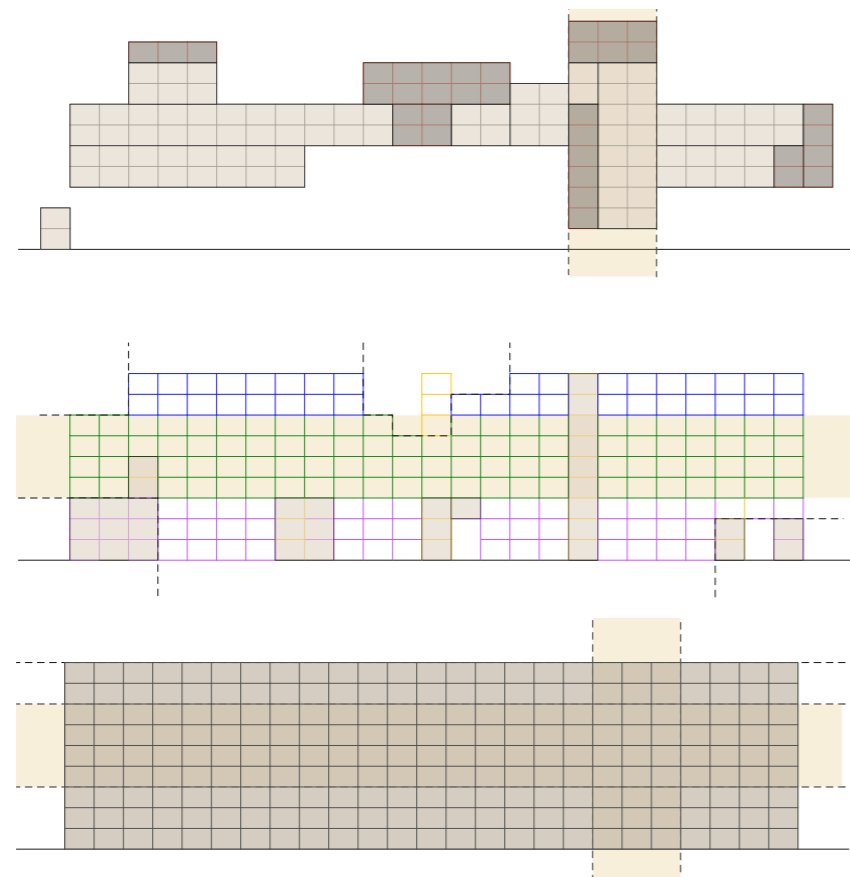


Retreat on the groundfloor level to expand circulation

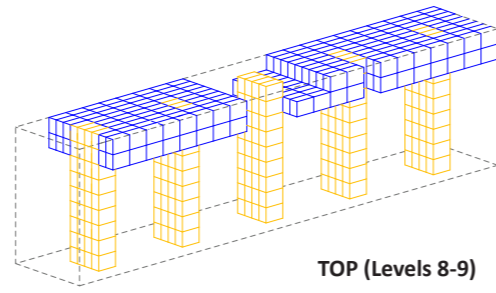


Substraction of building volume and addition of scaffolding volumes

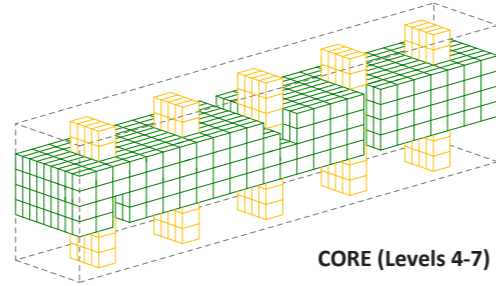
FACADE TRIPARTITION



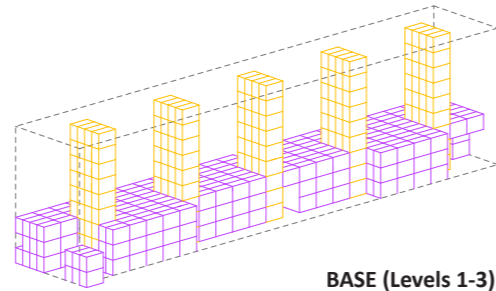
BUILDING TRIPARTITION



TOP (Levels 8-9)

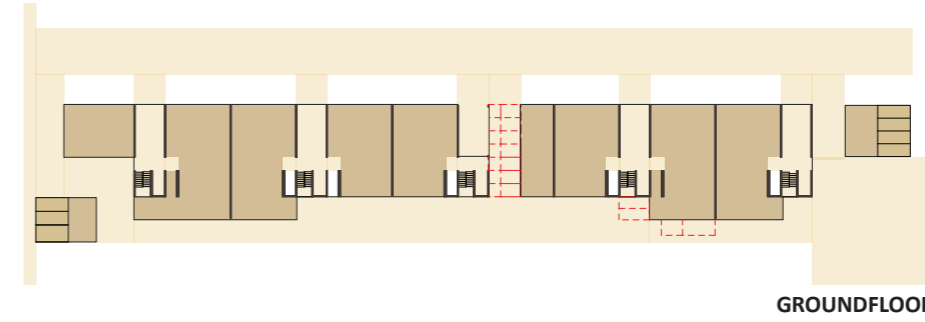


CORE (Levels 4-7)



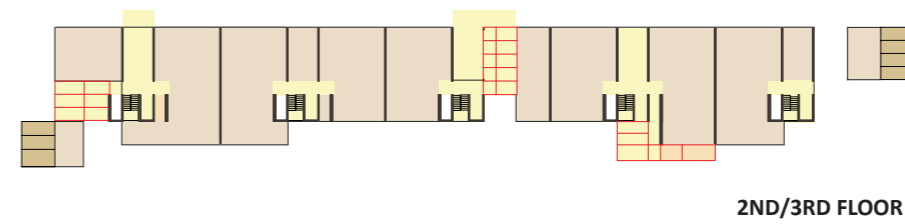
BASE (Levels 1-3)

CIRCULATION ON THE GROUND FLOOR LEVEL

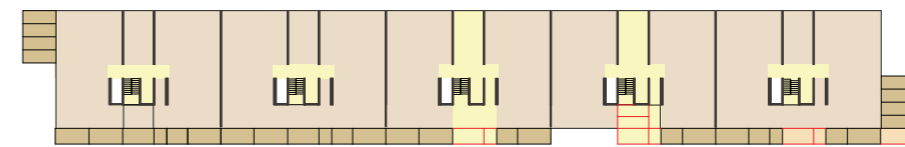


GROUND FLOOR

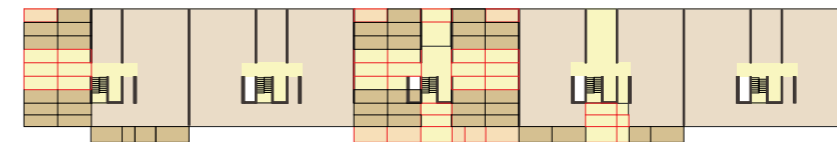
/CONSEQUENCES/



2ND/3RD FLOOR



5TH FLOOR

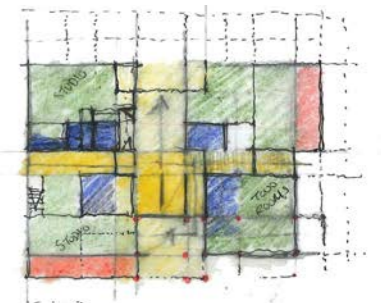


8TH FLOOR

Legend

- circulation/communal
- balconies
- living area expansion
- living area

SCHEMES OF THE UNITS



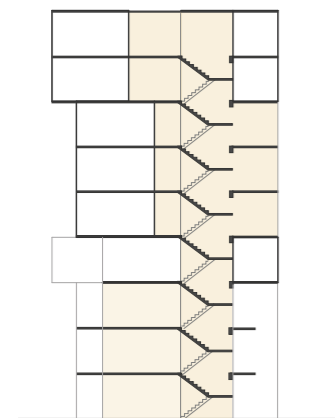
AREA ALTERATIONS

ORIGINAL AREA	13.912 m ²	
AREA AFTER DEMOLITION	10.855 m ²	-22%
AREA AFTER COMPLETION AND ADDITION	14.743 m ²	+35%
SCAFFOLDING LIVING SPACE	3.888 m ²	
SCAFFOLDING TOTAL	4.452 m ²	
OVERALL		+5%

Subtraction System and Circulation

This study is a closer look on the subtraction step in the transformation process. Demolition is an important step in transformation and the need to define its parameters was vital. So far the focus had been on the ground-floor level and the levels that affect it and with this study the rest of the floors were also taken into consideration as the project went deeper into the transformation of the existing volume.

/PARAMETER/



diagrammatic crosssection on the main circulation

Circulation on the Building Scale

Subtraction is defined strictly as a means towards improving the circulation in terms of providing natural light and space in the entrances' areas.

/RESULT/

Subtraction System

It is based on the tripartition with a transitional step between the ground levels and the rest to highlight the difference of public and private.

Ground levels

Subtraction to create shortcuts and new "corridors" through the building while highlighting the main entrances (both to the commercial uses and residences) by retreating their limit.

The transition level

Subtraction above the main entrances and to keep staircases and

entrances well lit, while an effort for social space in front of the entrances is done.

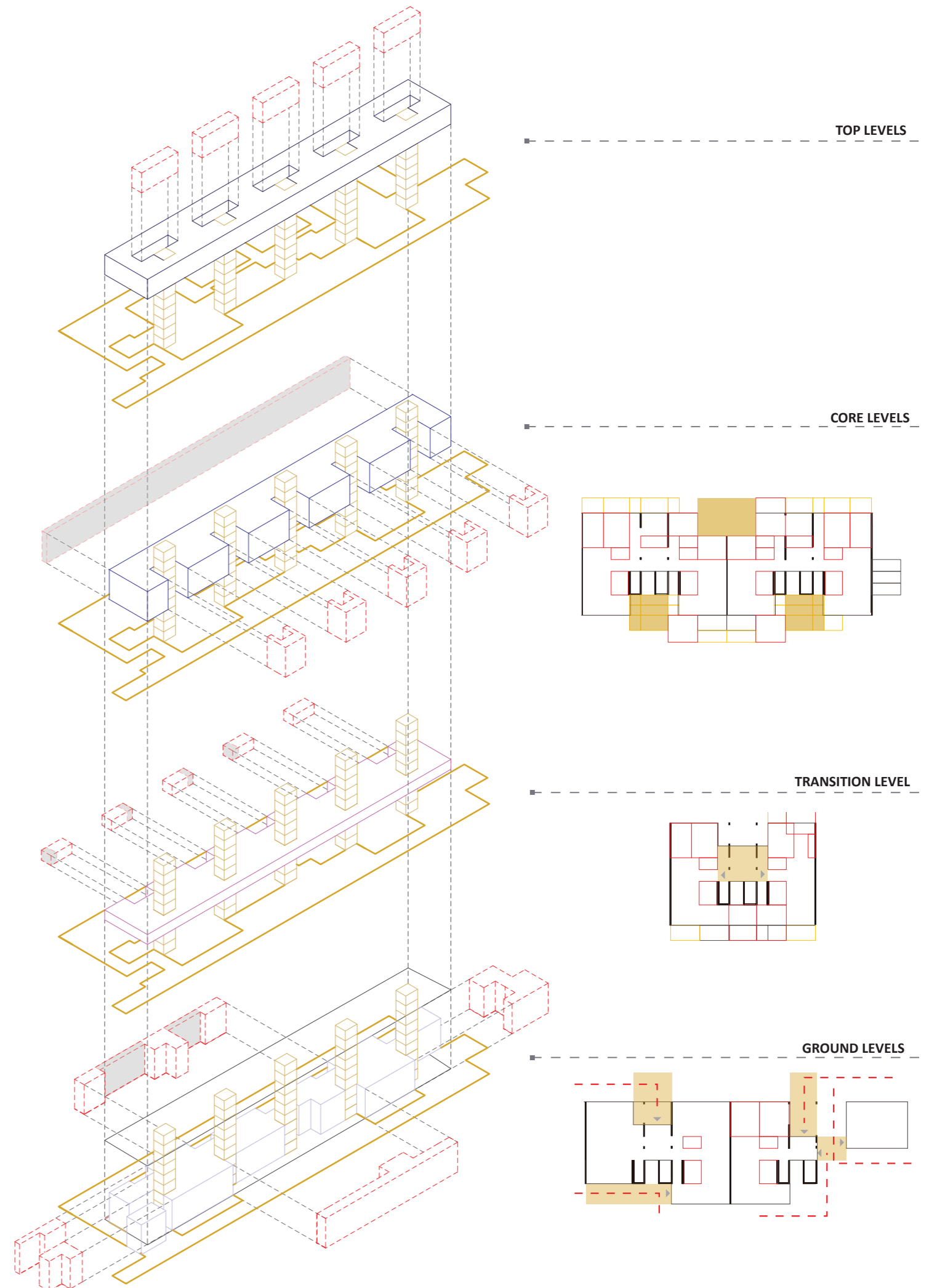
The core levels

Subtraction here happens only to open up and bring light to the staircase and entrances to the apartments. The space can be used as a communal balcony from two apartments.

The top levels

Organization around an atrium. The goal is to organize apartments with double orientation. It can work only on the two top floors, where also double floor apartments are found.

After the completion of this study the first defined set of plans with different apartment typologies was produced. This step was the last to define the main transformation components leading to a first result on the building's transformation.



TYPICAL FLOORPLANS & NEW TYPOLOGIES



LEVELS 8 & 9



LEVELS 4-7



LEVELS 1-3

FIRST RESULT

At this stage of the project a review of the whole was completed. It is an additional study on the consequences of the subtraction system and the completion and addition step of the transformation process. It focuses on the re-organization of the apartments according to the steps taken so far in an effort to define the scaffolding system as a necessary component. By basing all alterations on the existing organization and the results of the studies the scaffolding came to compensate for the lost area given to circulation and subtraction. Like that several new typologies were created and the scaffolding system from an extension was turned into vital space.

TYPICAL FLOOR PLANS

Floors 1-3

No significant change in the organization of the apartments, except from the groundfloor where the 4 studios are replaced with one to two room apartments.
- 16 apartments / No scaffolding

Floors 4-7

Change in the organization of the apartments while keeping both the number of apartments and rooms. Not in all buildings the change is happening, only strategically in points where pockets of social space are gradually organized.

Floor 4

- 3 apartments
Scaffolding: not necessary, 1 layer strictly

Floors 5-7

Scaffolding: 1-2 layers, necessary

Floors 8-9

Change in the organization of the apartments around an atrium to find double floor apartments. Independent rooms are found and the count of apartments remains the same, while the rooms are in all cases bigger, offering the possibility of two residents in each.
Even apartment count.

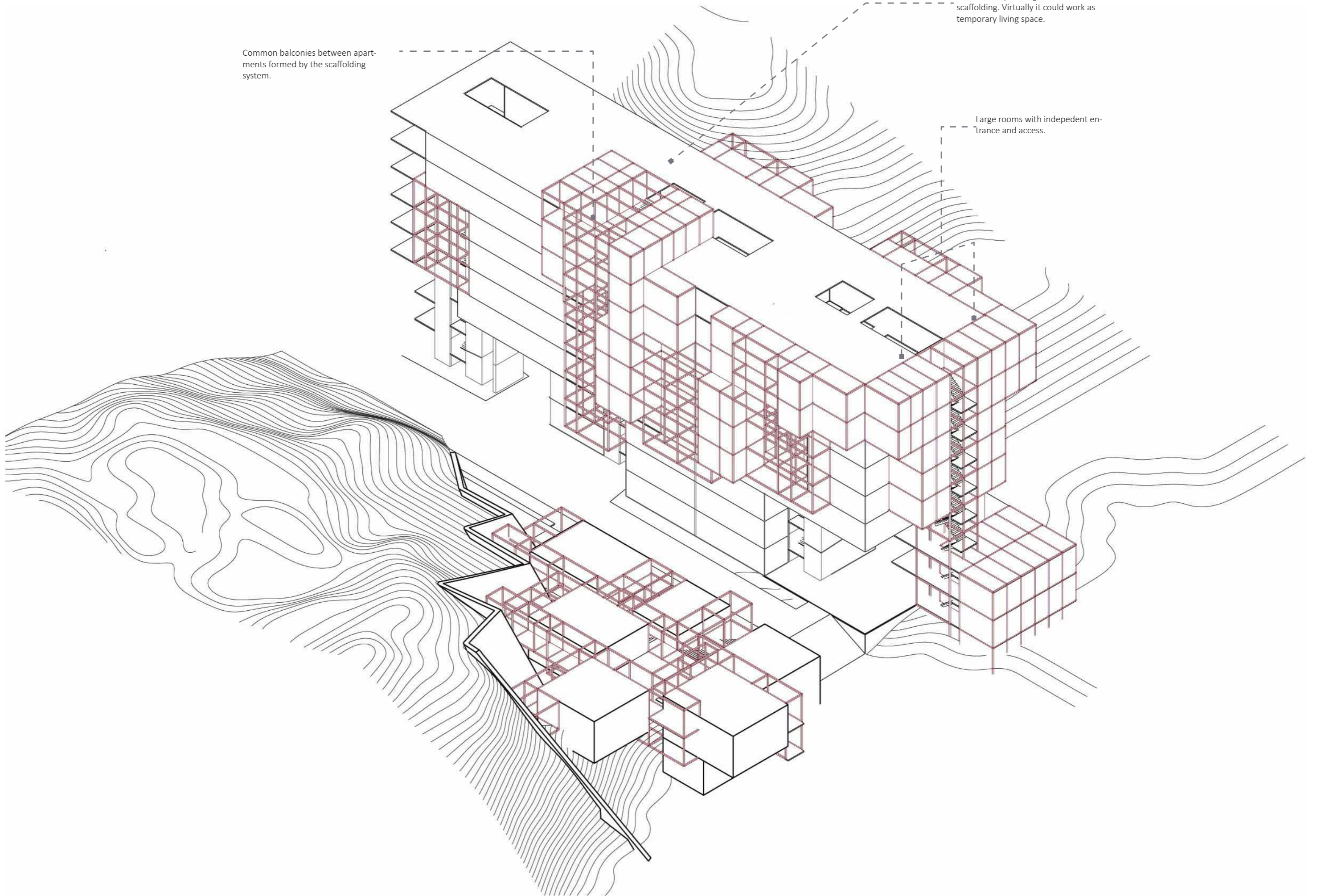


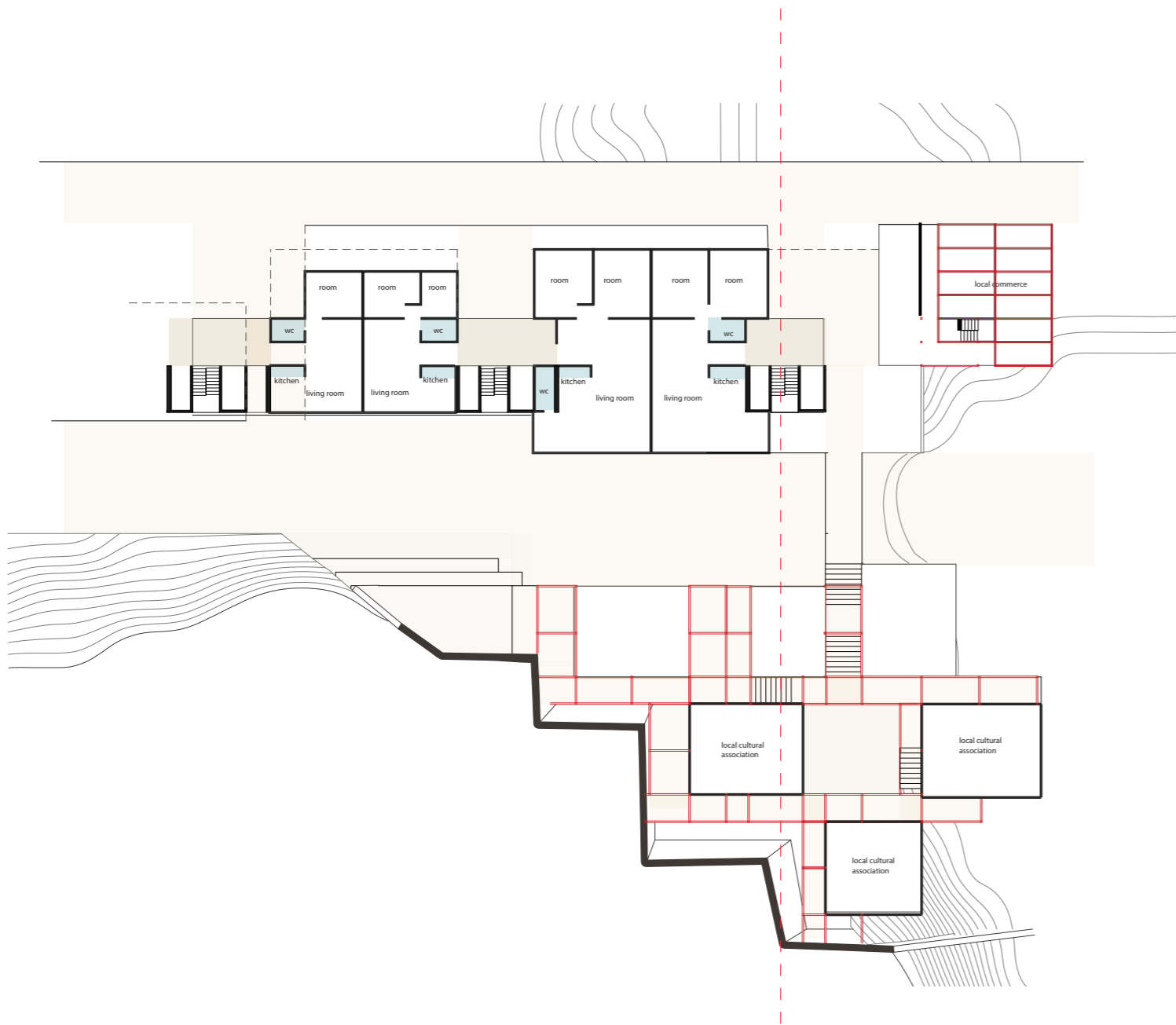
NORTH-EASTERN AXONOMETRIC VIEW

Common balconies between apartments formed by the scaffolding system.

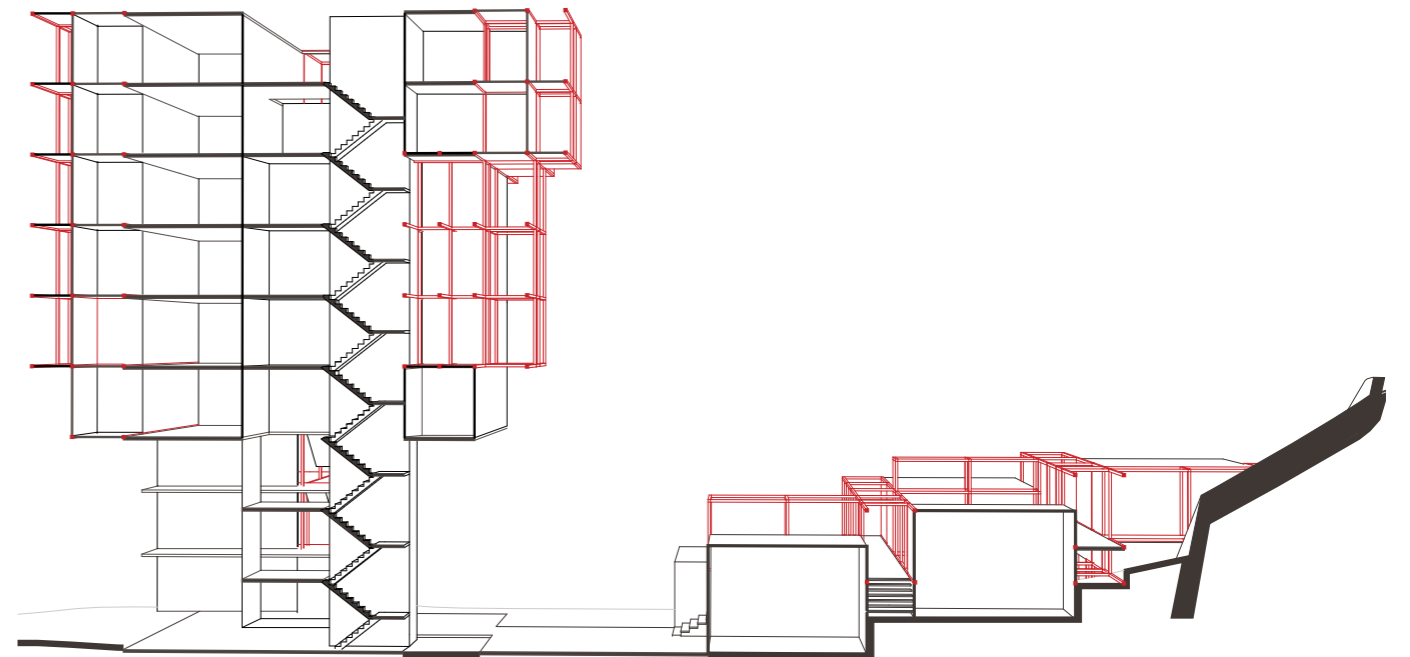
Communal space organized from the scaffolding. Virtually it could work as temporary living space.

Large rooms with independent entrance and access.





2ND FLOOR PLAN



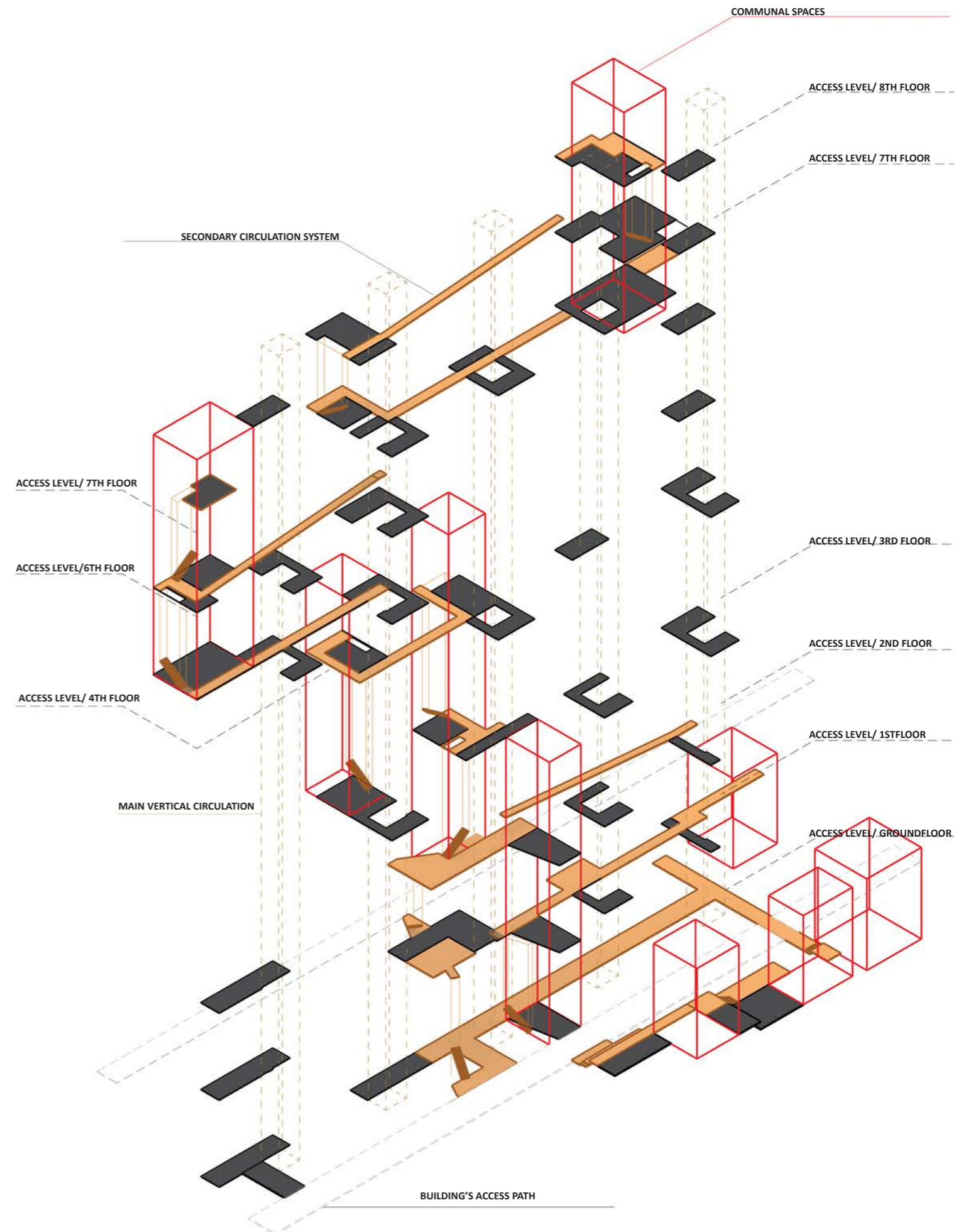
CROSECTION



Secondary Circulation System & Social Space

This study is the final one and consists the component that binds the new built and the existing in terms of concept. So far the proposal for the existing building was focusing in improving spatial qualities in circulation in an effort to create small casual social space, either open or closed, organized around entrances. However these studies kept intact the strictly residential character of the building, delimitin its publicness on the exterior circulation on the ground level. The secondary circulation system came to change that and expand the logic of the new built into the existing. The main goal here is to turn the existing building into a consistent component of the initial concept. This circulation system is the expansion of the new built organization in the existing building bringing a level of publicness to the private residential. Consequently is the expansion of the network of social infrastructure space added on the intense topography (the new built structure) and is irrelevant to the access to the building and apartments. Its function is to connect the new bui-

It with the existing, by installing communal social space with loose programme in it and inter-connecting them. It is semi-dependent on the main circulation system of the building (main entrances and vertical communications) and it occupies half of the expanded circulation zone. It is realized through ramps, corridors that overlap momentarily with the main zone and stairs inside the closed spaces. These spaces occupy one apartment area each and they expand in height or via the scaffolding. Their purpose is to offer opportunities for social activities and functions within the building which are accesible from all residents both of the building and the area in general. Finally, the secondary circulation system is also the parameter that defines the alterations in the typologies of the apartments leaving parts of it to their initial typology, hence enhancing the concept of the "unfinished", partial and adaptable transformation process.



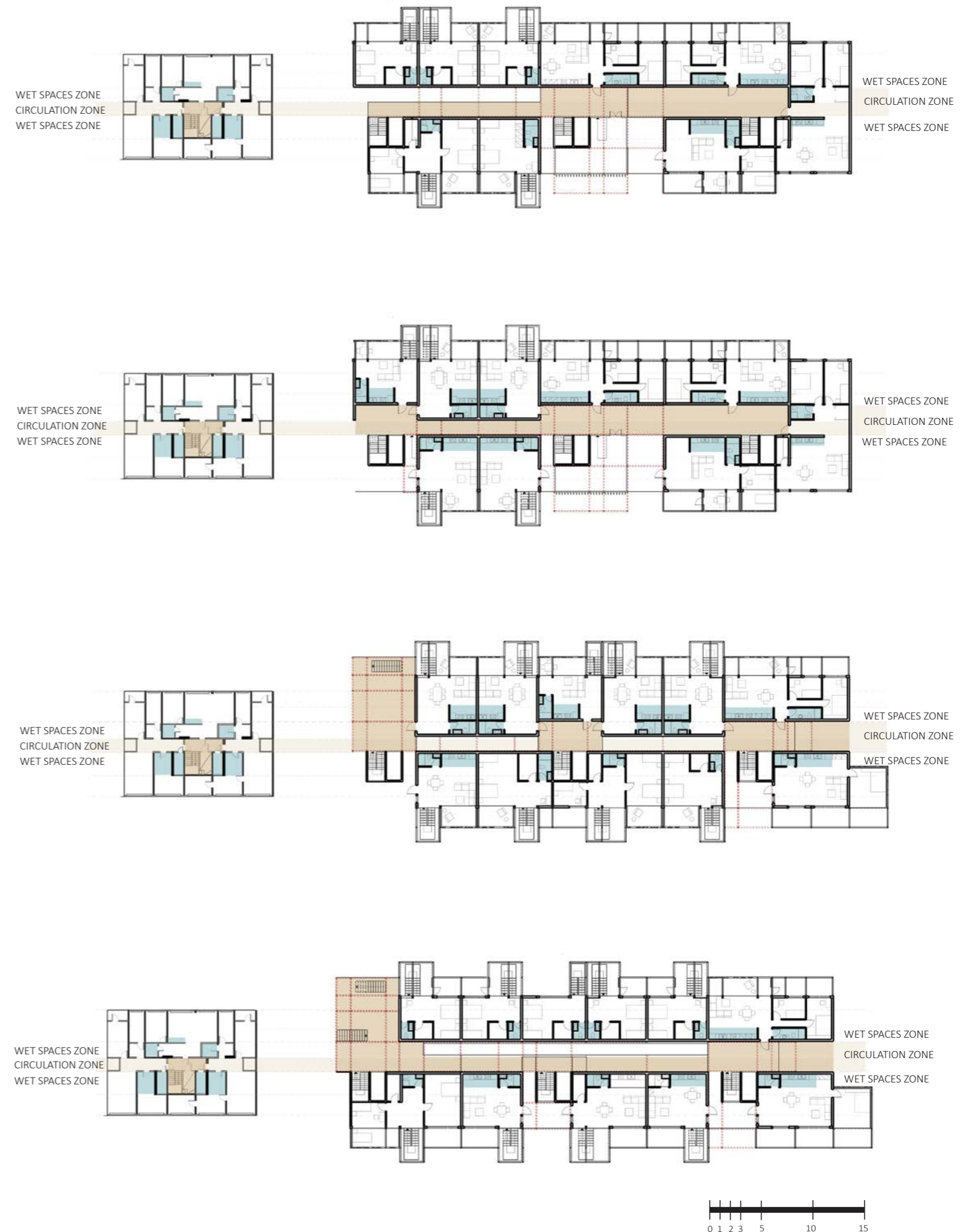




LONG SECTION ON THE CIRCULATON ZONE



APARTMENTS' TYPOLOGIES AND BUILDING ORGANIZATION

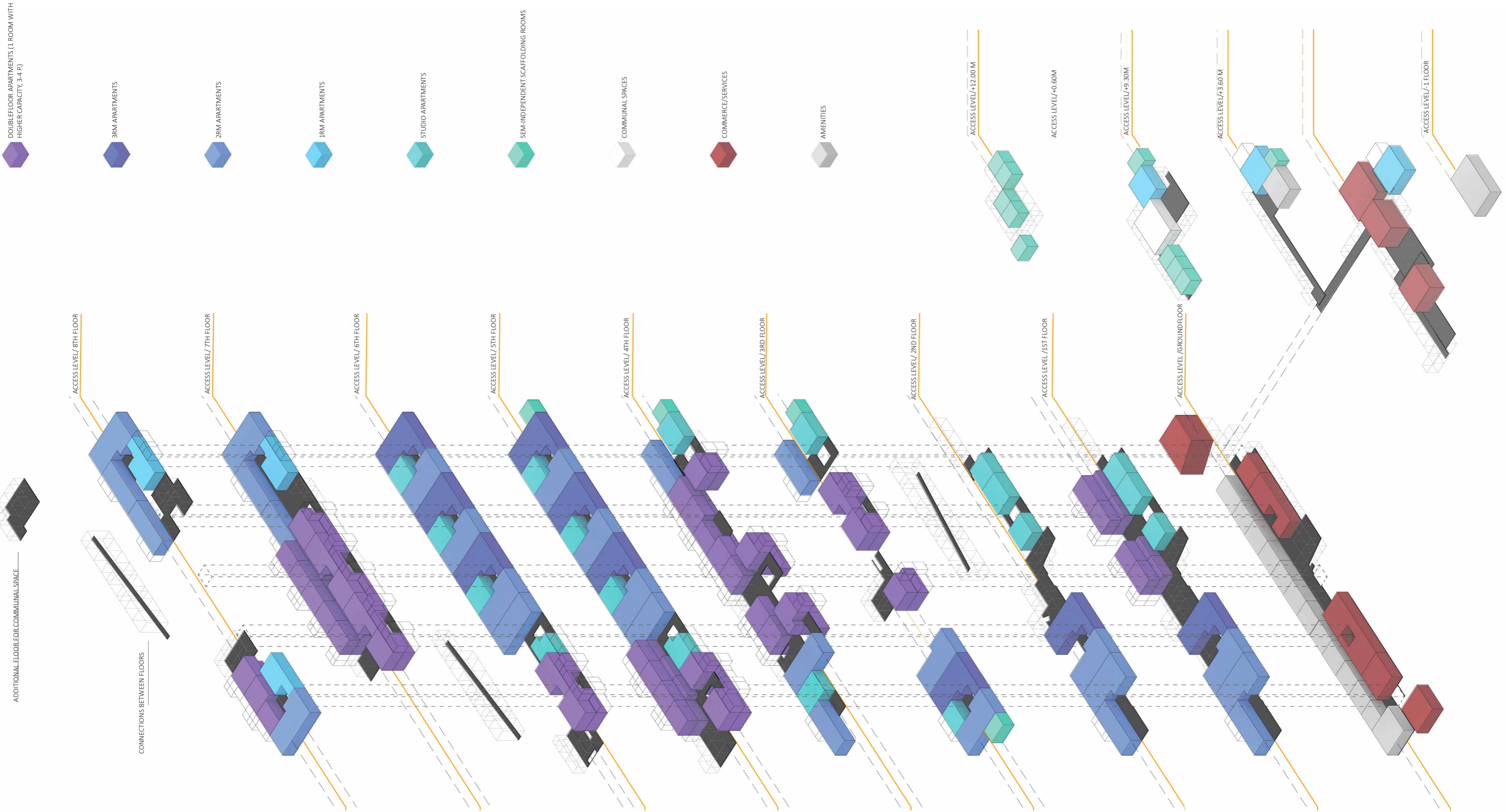


FINAL BUILDING ORGANIZATION

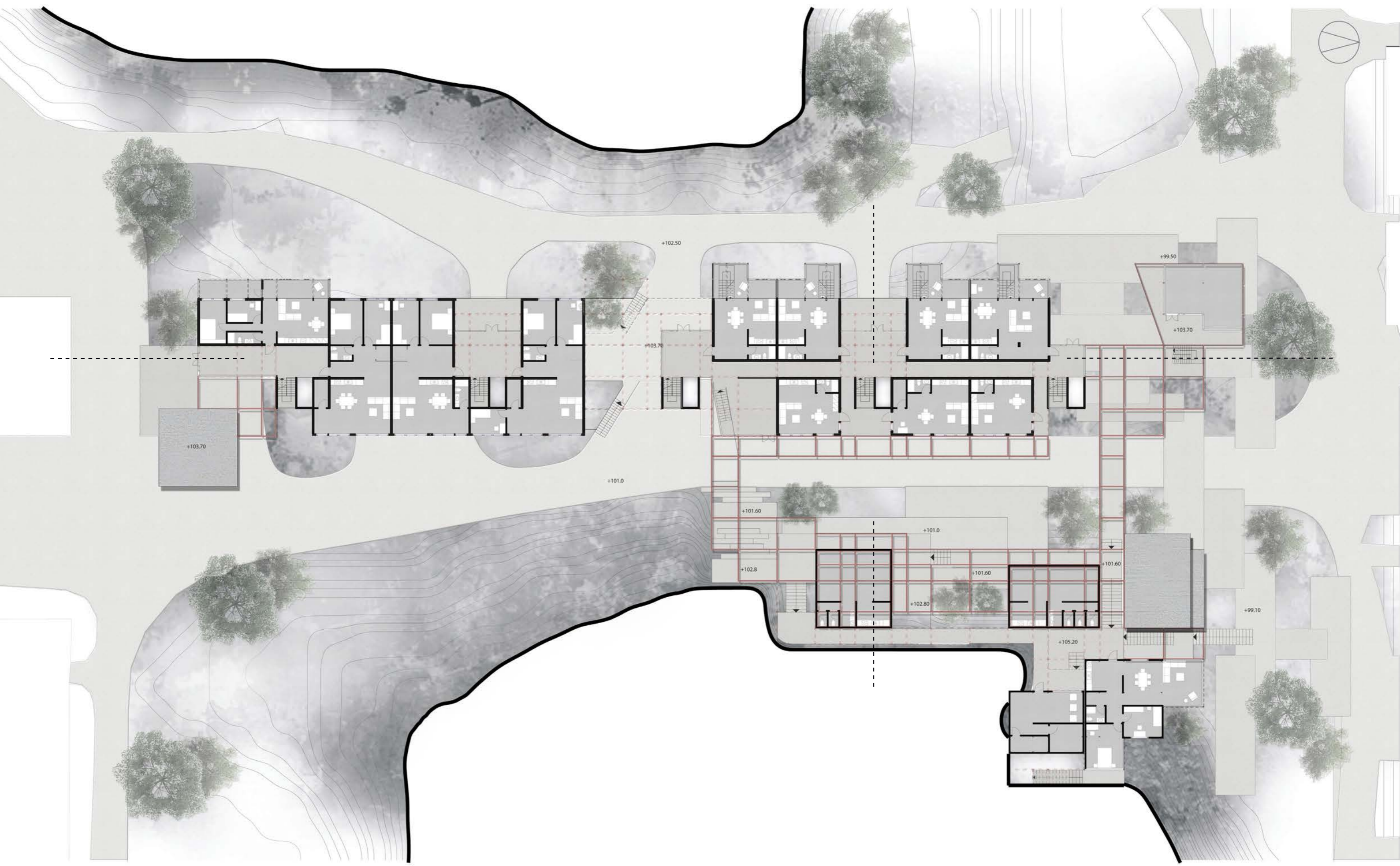
The final result was largely defined by the secondary circulation system, which came as the parameter that defined and combined all the previous studies under the initial concept. Accordingly the alterations in the organization of the apartments were affected. The realization of the connections between social spaces in the building generated the need to minimize accesses to apartments in each floor and the double floor apartments investigated in previous studies offered the solution to that. Overall, the building consists of four typologies of apartments from which the two are the existing ones. The other two are introduced only where the secondary circulation system is installed. The organization of the new apartments is based on the existing and the wet spaces zones and main circulation zones remain to a big extent the same. Only towards the west side of the building where the wet spaces zone is replaced by circulation, bathrooms and kitchens of the new typologies are offset by one grid. In order to control losses in living are-

a the parameter used was the count of rooms (sleeping areas) per floor in the original plans. Hence, where the apartments are less than in the original, the remaining ones have either more rooms or bigger rooms which a higher capacity. In this sense living arrangements change -higher number of people per room- into a more collective way of living. In the corner apartments are opportunities of additional semi-independent rooms in the scaffolding system and finally, the loss in living area in the existing building is found in the new built on the upper levels. In total the count of rooms remains the same and with the change in living arrangements emerges also the possibility for temporary housing, student housing or co-habitation.

EXPLODED SOUTH EAST AXONOMETRIC VIEW

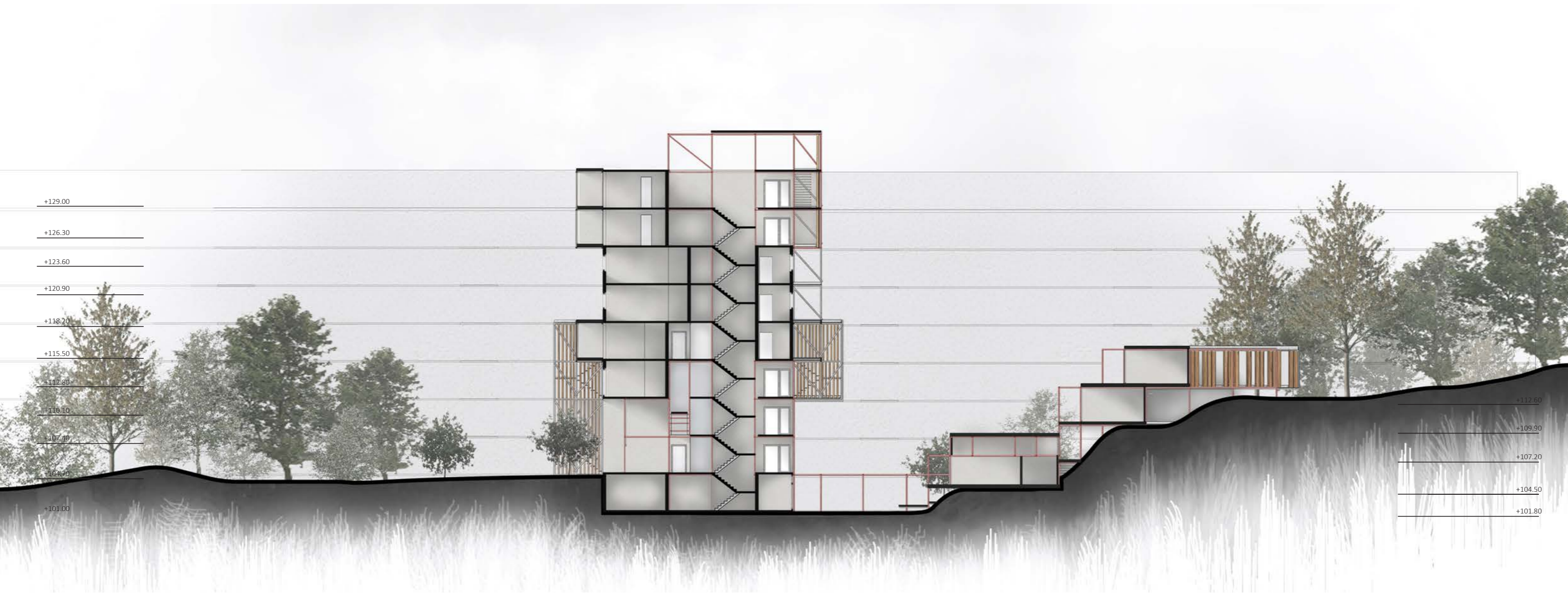






1ST FLOOR PLAN - GROUND FLOOR CIRCULATION





+129.00
+126.30
+123.60
+120.90
+118.20
+115.50
+112.80
+110.10
+107.40
+104.70
+101.00

+112.60
+109.90
+107.20
+104.50
+101.80

CROSS SECTION - ON THE MAIN PATH



REFLECTIONS

This project is highly context-driven, the purpose was to capitalize the social resources of the area as a driving force for a design and strategy proposal. However, the trigger for this project were the spatial issues detected in the area. More specifically, the lack of different qualities and the gradients of public to private, the repetitiveness of the environment, the very delimited circulation, the segregation of uses and accesses, the lack of exploiting the natural features to favor spatial varieties and the lack of human scale. In other words an incompressive environment which in its repetitiveness all different components are buried and what is communicated in the end is a character that does not really involve people in it.

The main body of the studies dealt with defining the features of this transformation while following a general concept. However, embedded in those were design proposals that dealt with those spatial issues of the site. For the most part they were the parameters on which the result was based.

So the focus was on the ground levels and its surroundings in order to deal with those issues, through the new built and the relation of the scaffolding system to it.

The aim was to expand circulation around the building and to create connections and pathways related to accesses, in an effort to gather public and private entrances on the same path, to blur the lines between public and private and involve gradients of those that expand and include all the different spaces created, from the new built to the path and the existing building.

The scaffolding volumes come to offer opportunities of semi-living and semi-public/private space or living/private space, material variety and most importantly drop the scale closer to the human. The secondary circulation system offers sub-spaces within the whole, minimizing the exclusive private character of the building, revealing the collectiveness of the locals lifestyle.

In the bigger context of the social housing transformation and rennova-

tion projects, the thesis tries to highlight the importance of flexibility, participation and continuity in strategic planning and highlights the importance of utilizing soft architectural systems in permanent living and heavy programmes.



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