Urban fabrics' change and city boundaries

Morphological study and typological analogies exploration in Turin

Urban Design case study

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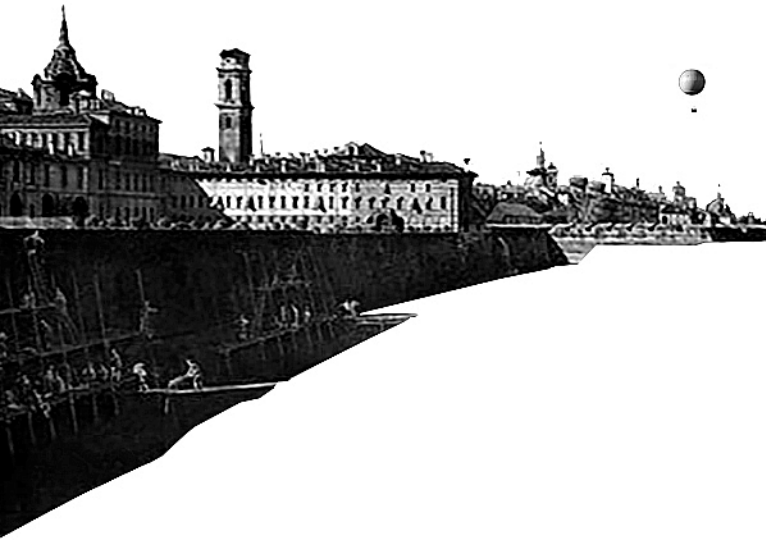

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"Cities materialize the multiple, disparate and changing lives of generations of inhabitants, as individuals and in groups; from whom they accept requirements, desires, acquaintances… dreams, fears, hopes and still more yet: everything."

- Fabio Reinhart, 2015

Abstact

The evolution of a city can be studied from different perspectives. For this study, the evolution of the city of Turin is examined from a morphological point of view. Three main interests are explored in different scales and related one to the other on a theoretical, graphical, descriptive and designing level. These interests refer and developed as an attempt to summarize a way of interpretation of cities and architecture that has changed and evolve during my academic formation years. The city of Turin in this work is being used as a laboratory of exploration and comprehension of urban morphology terms in a process of understanding the city's development and the search for a jump of scale that in more advanced stages of the work allows the exploration of more specific social, architectural and design interests.

The first interest explored with this work aims to make evident the link between urban morphology, urban fabrics and city boundaries. What happens to the morphology of the city when a boundary marked by its historic walls and rivers is overcome? How does this morphology change? Urban modeling processes define spatial structures within a city and therefore the boundaries of a city change according to the social, economic and evolutionary dynamics that it faces along the years. Changes of urban form within a city

are accentuated when these boundaries are exceeded or modified.

On a different scale, the second interest explored in this work refers to a social one. It seeks to find, explain and understand an enclave within the city of Turin, that has apparent complexity in its urban form and that allows the exploration of a current social phenomena, multi ethnicity. This phenomenon affects on many levels the development of the city. What effect do migratory flows have on the urban morphology of the city and what areas were affected by these flows? The research combines the physical dimension of the city, its form and materiality and the social dimension which recognizes the city as a mixture of communities, interactions, places and commons. If both dimensions are related intimately to each other and the evolution of one can not be separated from the evolution of the other, what type of projects contribute, fit and help the insertion of foreign newcomers into the city? what type of project fits the specific requirements that meet social or ethnic behavior? Is there a typology that gives an answer to these requirements?

The chosen area for an intervention with an "city - building" appears within the enclave analyzed and represents an informal void in the morphology of the area and in the social history of it. The area near Ponte Mosca has been

abandoned for more than 20 years and is closely linked to the natural limit of the city recognized by river Dora. The void chosen for the urban design study allows one last interest to be explored. This interest refers to typology, the very idea of architecture or the closest there is to its essence as Rossi puts it in "The Architecture of the City". The work aims to generate a project with a design strategy that allows an understanding of types. This exploration involves a recognition of how far functional types correspond to morphological types. The technique of collage and the use of a morphological code linked to typologies allows an exploration of form not as a fixed representation but as a field of possibilities where internal forces of morphological types and exterior constraints of the context meet.

The functions of the urban complex designed in the intervention area respond to the necessities and activities of the citizens who live there, recognized in the second phase of the study.

A building that makes a city change should be developed in phases. The "city - building" complex designed for the area could be developed in phases, not temporal ones but morphological ones. In this sense, the hierarchy of the most important parts of the complex give a solution to the morphological gap

or void from early stages of the project development. The result of the study materializes into a 9-buildings complex. Each of these buildings respond to a morphological and a functional or social necessity in the intervention site. The complex has the potential to develop with time into an including, safe space for citizens and new comers.

Introduction

Studying a city from the outside can only show its evolution from a formal point of view, studying it from the inside can make evident the way life develops in it. Linking both ways of studying it may show how citizens' behavior changes the way the city evolves. This type of study opens inquiries and hypothesis about future developments and most importantly gives tips and suggestions for the development of needed projects that could evolve into city-making and city-changing ones.

Urban fabric refers to the physical urban environment of a city. It includes streets, sidewalks, open and closed spaces. The physical dimension of the city is relatively easy to observe, analyze, predict and plan. The morphology of a city is linked to its history and in a city like Turin the urban form has evolved from a Roman settlement to an industrial, high productive city and into a 130.01 km^2 city split into 8 boroughs or circoscrizioni and 92 statistical zones.

On the other hand, the social dimension of a city refers to the way people behave, experience and live the city. This dimension is difficult to predict, it involves the study of the interactions between public life and space. What is more, current and crucial social phenomena like migration, represent a social changing force that cannot be ignored or taken for granted since it also brings new values and new habits to the city. The study of migration flows is an imperative aspect for understanding the transformations of the physical

dimension of our metropolis. With these flows, cities receive an increasing number of newcomers that bring with them different backgrounds and cultures, and that have urgent needs for housing, language training, schooling and jobs. In the case of Turin, the city has a strong migration history, it has always been a destination city for migratory flows. These flows and reasons for human movements have changed during time and the city has respond in different ways to these movements. From the generation of peripheral borghi and borgate to the building of huge industrial infrastructures and housing for its employers, to the now development of regeneration policies that involve urban requalification and development, migrant agreement policies, "case del quartiere" and cultural associations that help the city become a hybrid inclusive place.

The development of projects that give answers to today's cities necessities need to take into consideration both dimensions. Current views tend to define the built environment as the setting for the social interactions. It is true that the physical dimension conditions the development of certain activities but this dimension work just as a catalyst that depends on the social aspects of the city in order t work. (Rapoport, 1977) As a result, design and planning become activities that need to take into consideration human and social aspects of those who plan to use the created spaces.

CHAPTER I

THE PHYSICAL DIMENSION OF THE CITY

"The world around us, so much of it our own creation, shifts
continually and often
bewilders us."

- Kevin Lynch, 1972

The study of urban form is an imperative aspect for the comprehension of the vicissitudes of cities. The links between morphological features, open spaces, buildings and functions or human activities determine how a city develops during time. Urban morphology refers to the study of the form of human settlements and its transformation with the aim to understand the spatial, physical character of a city. The traces left by successive generations of building activities help to analyze the logics of a cities development. Morphological studies started as geographical studies but with time it has been proved to be and interdisciplinary field (Moudon, 1997) Urban morphology has been studied from various points of view and diverse contexts like geography, architecture, science and philosophy. (Yina Sima, 2009). The focus of urban morphologists is the tangible or physical results of social and economic forces in a city conformed by many individuals shaped by different cultural traditions. Buildings, open spaces, streets are the main elements of morphological analysis.

This chapter introduces the general terms of Urban Morphology and takes examples from the city of Turin in an attempt to understand the city´s main

elements and link them to its historical urban evolution. The concept of boundary in this chapter is explored from different points of view and a comparison between 3 enclaves within Turin is made as an attempt to understand how urban form changes once one or more of the recognized boundaries are overcome.

General Definitions
Urban morphology and its parts

An appropriate and current definition of what urban morphology is and its role in the study of contemporary cities marks the starting point to understand the physical dimension of a city.

Urban morphology has been defined in general terms as 'The study of the physical (or built) fabric of urban form, and the people and processes shaping it' (Urban Morphology Research Group, 1990) This definition seems appropriate and important for the thesis study since the social dimension of the city is taking into consideration too.

Cities are, from a morphological point of view, complex summaries of different elements that constitute a whole variable and constantly changing element. In order to simplify the complexity of cities, urban morphology uses hierarchical views structured according to the physical elements or parts that make the whole. (Oliveira, 2016) An overview of these elements and its definitions can help have a general understanding and view on how a city is described in a morphological way. To illustrate and exemplify the terms, the city of Turin is taken as exploratory field.

Image 1: maps of Turin with of two levels of resolution of urban tissue

Urban Tissue

The first general element that constituted urban morphology is urban tissue or urban fabrics that can be read in the city according to different levels of resolutions. (Kropf, 1996) On lower levels the urban tissue includes just streets and blocks and on a higher levels of resolution a morphological detailed description of a city piece can be made. Image 1 shows two levels of increasing resolution of urban tissue in the city of Turin, one on a basic level that includes just streets and plots and a second one on a higher level that incorporates the recognition of building systems too.

Urban tissue is particular to every city and is formed by main elements: streets, blocks, plots and buildings. The specific combination of these elements constitute the morphological image of a city. It is important to note that history and time play a crucial part in the development and influence on urban tissue changes. It is not rare that a city can have ruptures and differences in their urban tissue within itself as its influenced by. Image 2 exemplifies this phenomena in the city of Turin, the four extracts of the city show ruptures or abrupt changes in the cities urban fabric. The reason for the breaks in the uban tissue is not the same in all of four cases and this makes

Image 2: Four different enclaves of the city at the same scale that make evident the existing ruptures of urban fabrics within the city

evident the adaptability of cities as they develop.

With this taken into consideration, cities could be defined as the result of a long process of construction, demolitions, reconstructions, ruptures and mutations developed over time.

Context

This is a factor that plays an important role in the development of cities and in the creation of specific morphologies. Natural context represents one of the changing and defining forces in cities, the form of a human settlement responds in very different ways to the presence of a river or to the presence of a hill. Image 3 exemplifies the different responses urban form has to the contexts where it develops in the city of Turin. On one side of the River, lots have bigger proportions and buildings respond in different ways to the rivers presence. On the other side of the river, the geographical contexts conditions of the hills make the city tissue break and generates a more disperse placement of the buildings.

Ideally, built projects in a city need to reveal through the transformation of form, the essence of a context. (Gregotti, 1982)

Image 3: Different responces of urban tissue to the context where it develops.

Streets System

Streets system is another base element that generates urban morphologies. It is with this element that we distinguish what is public and what is private. Streets are in, broad terms, "the public and democratic space of the city, the place where we all met, with all our differences, and where we all interact in social terms." (Oliveira, 2016). British author Bill Hillier recognized in his studies the importance of streets for the readability of a city not only in physical but also on social levels. Hillier argues that streets "do not reflect the society" but can gather in space what societies insist in dividing, with his studies of Space Syntax, Hiller debates that streets work as indicators of the presence of strong civil societies and their social interactions. (Hillier, 2009) The characters of the streets are influenced by other urban elements: by the plots on both sides of them, by the height, placement in the lot and uses of the buildings, by the presence or absence of vegetation elements, by the space given to pedestrians and the space given to cars. image 4 show examples of different streets systems within the city of Turin.

As said before, the physical consolidation process of development in a city relies on temporal terms, which means it takes them time to develop and

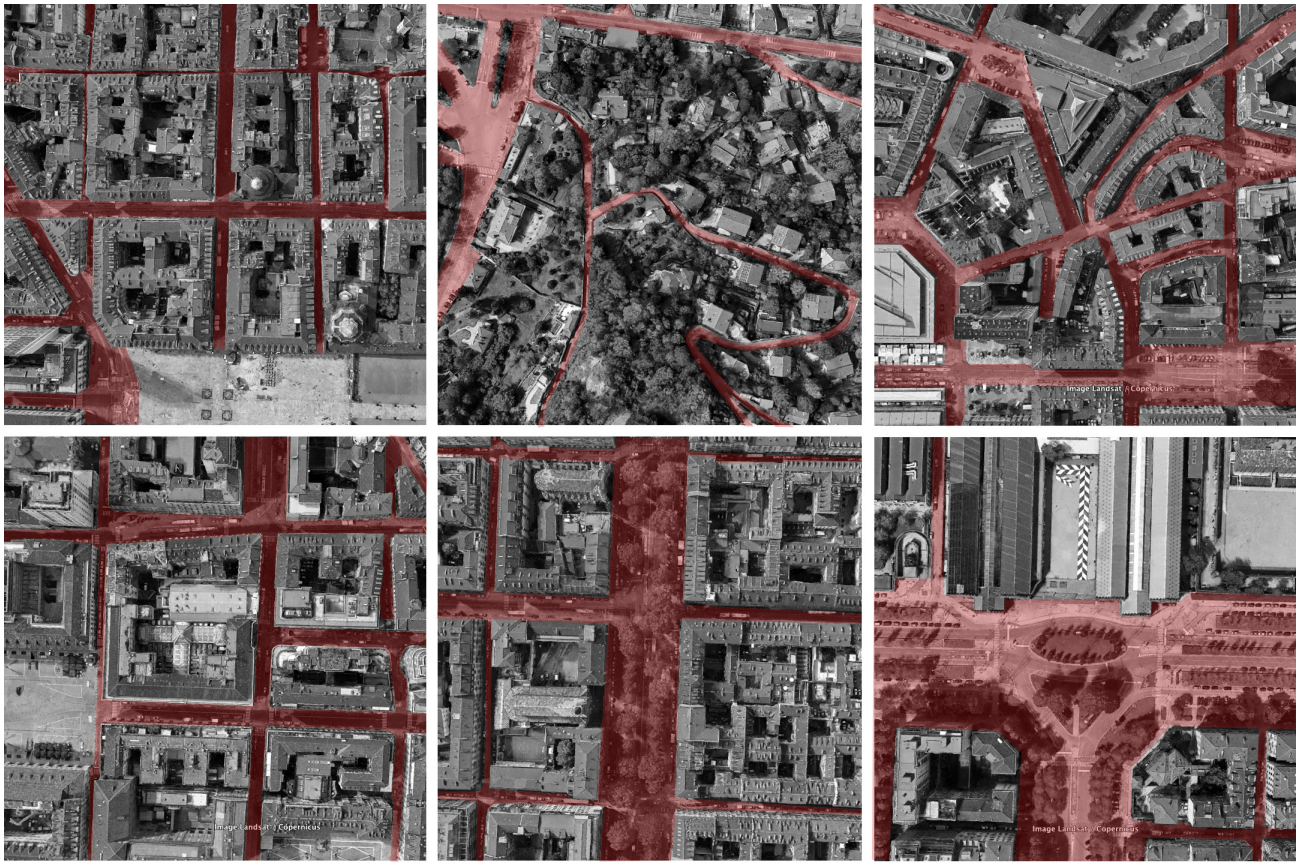


Image 4: Different street systems within the city of Turin.
Source: Google Earth. Retrieved in Dec 2017.
Edition by author.

Image 5: Demostrative plan of Turin, 1796
Source: Archivio Storico della Citta di Torino, Collezione Simeom, D 68

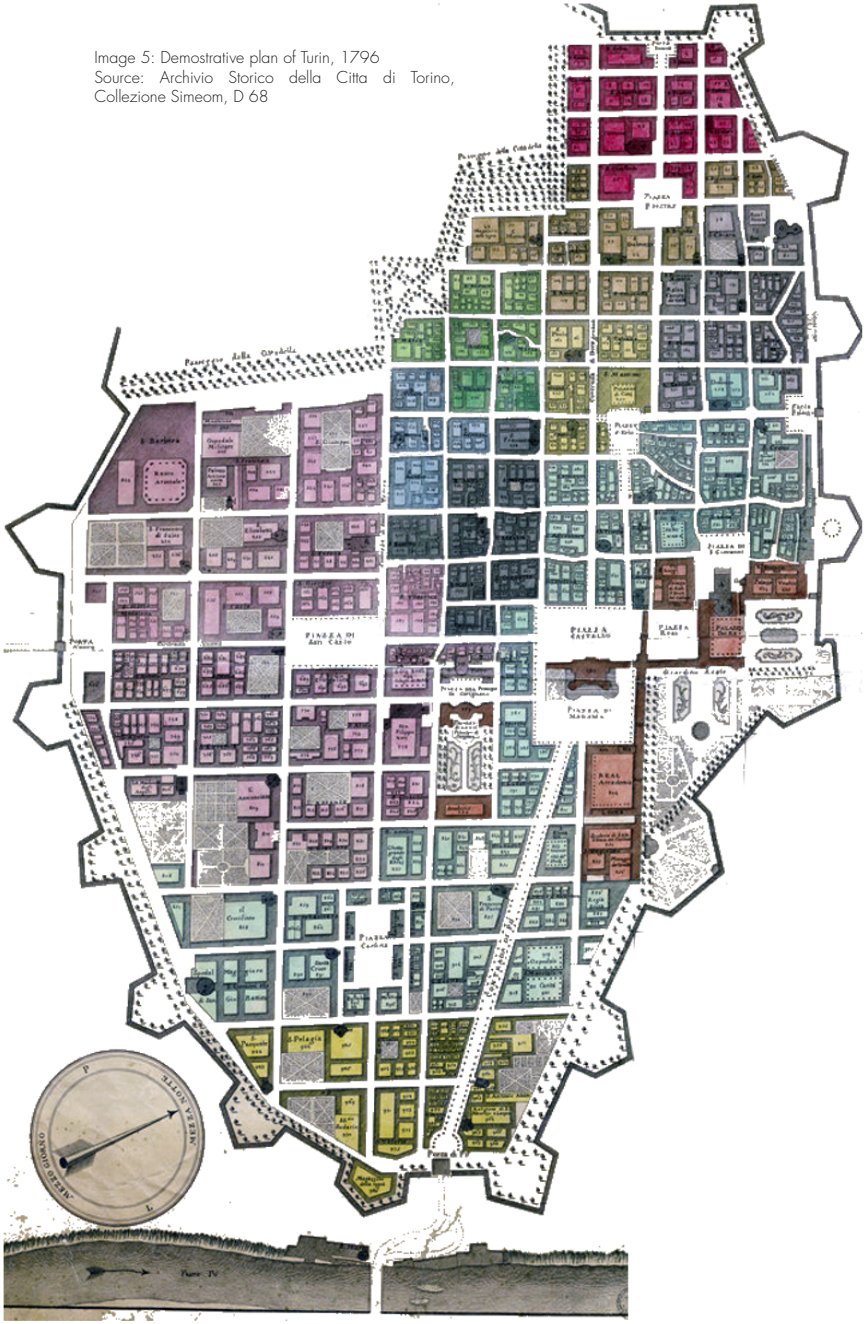


Image 5: Satellite image of Turin, 2018
Source: Google Earth, retrieved in Jan 2018

consolidate. However, streets represent the most stable element of urban fabrics since they show more resistance to urban transformation than plots or building systems. Image 5 and 6 make evident elements of the streets system in Turin that show the stability of this system. The first image constitutes a map developed in 1796 by architect Amedeo Grossi. This plan shows the main urban morphology. The second image is a satellite one of the current morphological situation in the same area.

Public spaces system

Public spaces system combines street systems with open spaces for permanence, elements recognized as plazas and parks appear in this system. Morphological diversity in these elements can be found and as with streets, its character is defined by the formal conditions of its surroundings and its internal composition. Image 6 show different piazzas in Turin at the same scale, the morphology and function of these three examples is different from one another and their presence in the urban tissue has a morphological and functional repercussion in the context.

Image 6: Different piazzas of the public spaces systems within the city of Turin.
Source: Google Earth. Retrieved in Dec 2017.
Edition by author.

Plot Systems

These systems in cities separate public realm and private domain and are defined by streets as its limits. In an urbanization process the definition of plots and large division of territory have tangible repercussions in the urban form because they condition the cities future developments in terms of building types, open spaces and urban landscapes. The process of subdivision and incorporation of plots in cities is almost never regular. Generally, the dimensions of street blocks and plots increases as the city grows from its confines of historical center. Image 7 shows the plot division in the city of Turin, though the general plot system seem homogeneous there are several differences in areas outside the city center or historical center.

MRG Conzen, a geographer, promoted with his researches the study of plots in a city as a way to explain the physical form of it. Conzen introduced a practical formulation of morphological theory with his analysis of a small town in England (Alnwick) in an attempted to explain the structure of a town by studying and focusing in its development. The morphological phenomenon of progressive occupation by buildings and reduction of open spaces defined as the burgage cycle recognized by Conzen in this town was a current one in many other contexts. (Conzen, 1960)

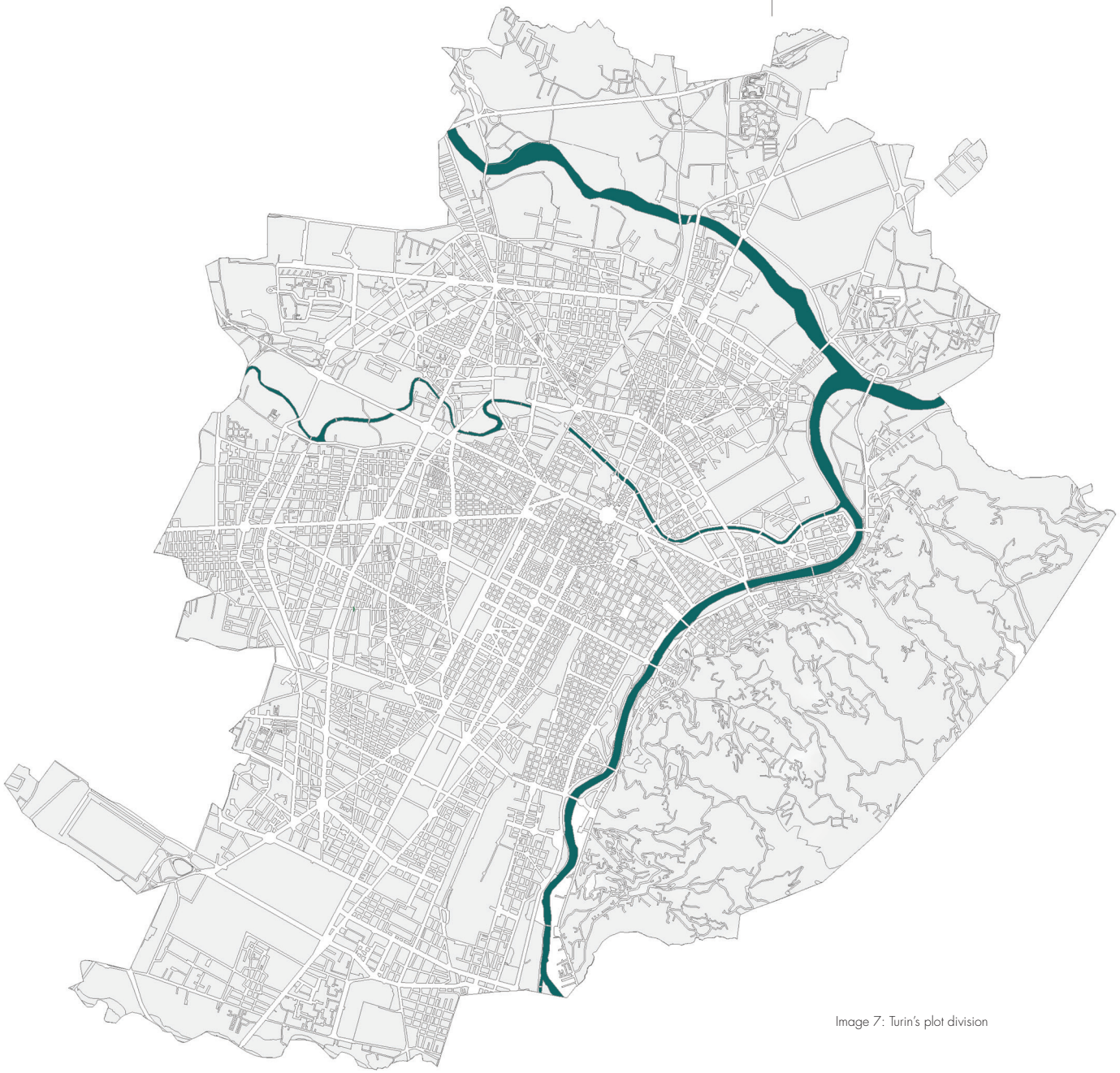


Image 7: Turin's plot division

Building systems

Building systems constitute the most visible and recognizable element of urban morphology. A city is made of different types of buildings that could be classified depending on the variables taken into consideration. Oliveira proposes the classification of buildings in two main types: ordinary ones and exceptional ones taking into consideration form and utilization as classificatory variables. (Oliveira, 2016) Image 8 shows three examples of typical builldings within the building system in Turin and six atypical ones that differ in .

The position of the buildings inside their plots define the conditions of the other elements of urban form. Continuous alignment was a common morphological composition that defined many historical centers, including Turin's one, but in the twentieth century an increasing number of questionings to these alignments generated infinite variations.

Image 8: Examples of typical and atypical building types in Turin.
Source: Google Earth,
Retrieved in Dec 2017. Edition by author.

Typology

The term typology refers to the comparative study of physical characteristics of the built environment into distinct types. This term will be explored and deepened in the third part of the study, where general concepts of types and typologies are used as design exploration and strategy. (See chapter IV)

One of the most distinctive aspect of the city of Turin that deals with typology are its circuit of arcades. This system do not only links streets, Corsi and important squares but also contributes to the city's character and unity. All arcades are 7 meters high and 5 meters deep. The use of this type of architectural element had a significant unifying effect in the urban image linking and blending together different architecture styles.

The later arcades show some variants to the typology as the arcade modules are broken and the use of flat ceilings became popular. The last attempts to replicate and follow this typology were unsuccessful, specially outside the city center since its use does not respond to the context. (Hinse T. , 2014)

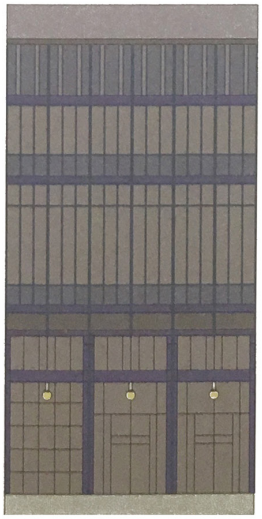
17th Century arcades
Via Po

Mid 18th Century arcades
Piazza di Citta

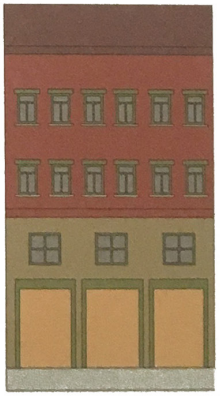
End of 19th Century arcades
Via Pietro Micca

Image 9: Arcade typologies blocks through time
Source: Hinse, the morphology of the Times

Mid 20th Century arcades
Via Roma



Third quarter 20 th Century arcades
Via Cernaia



Lasr quarter 20th Century arcades
Corso Giulio Cesare

The physical evolution of the city

The reconstruction of the urban changes in the city of Turin requires a comparative and descriptive analysis of the mapping documents available. Luckily the city of Turin, for its history as the first capital of Italy and for its importance as an economical and productive city, offers a measureless variety of documents that makes evident the changes and evolution of the city through almost four centuries.

The location of Turin has always been a node of communication as it was one of the few easy points for crossing over the Alps in the west area. The geographical and physical conditions of its contexts have defined the city and its political relevance.

The city is intersected by the river Po, it is surrounded by hills and mountains: The Alps to the west, the Ligurian Apennines to the south and the Monferrato hills to the east. The drop from the highest point of the urban territory to the lowest one within the city is around 65 meters. These geographical and physical conditions had an in-depth impact upon the industrial development of the city since a great amount of water power was available through the water channels along the river Dora, Stura and Po. This availability generated an industrial suburb north to the historic wall before the factory

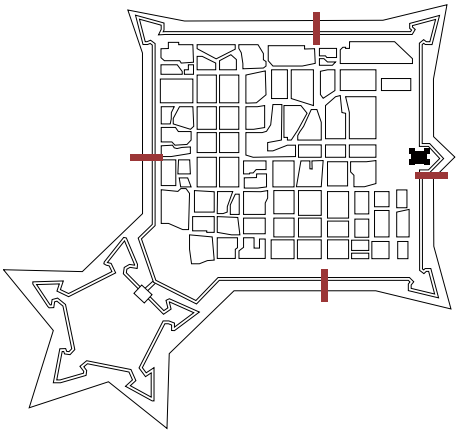


Image 10: Turin in 1577
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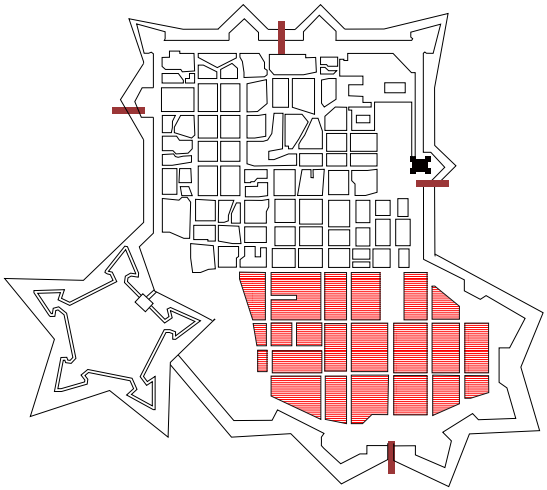

Image 11: Turin in 1620. First extension of the city.
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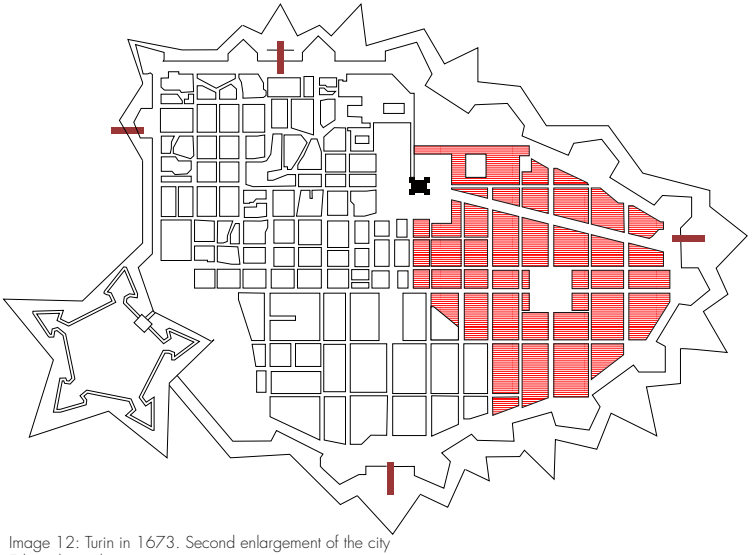

Image 12: Turin in 1673. Second enlargement of the city
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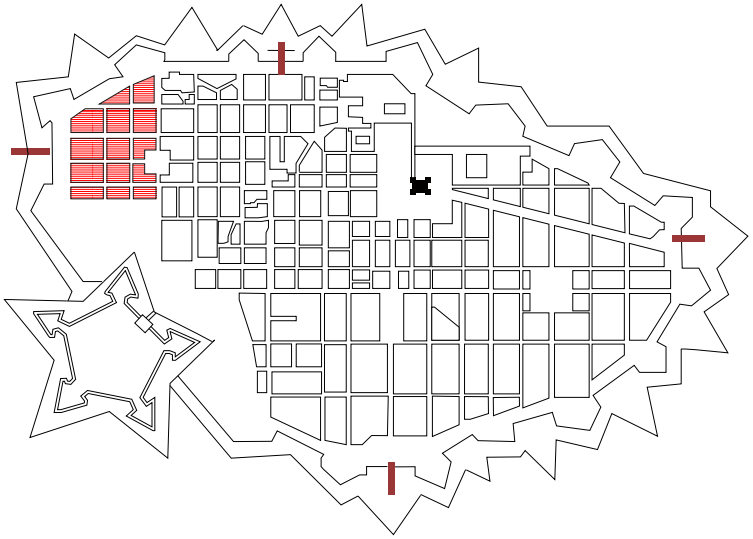


Image 13:Turin in 1719. Third enlargement
Edition by author.

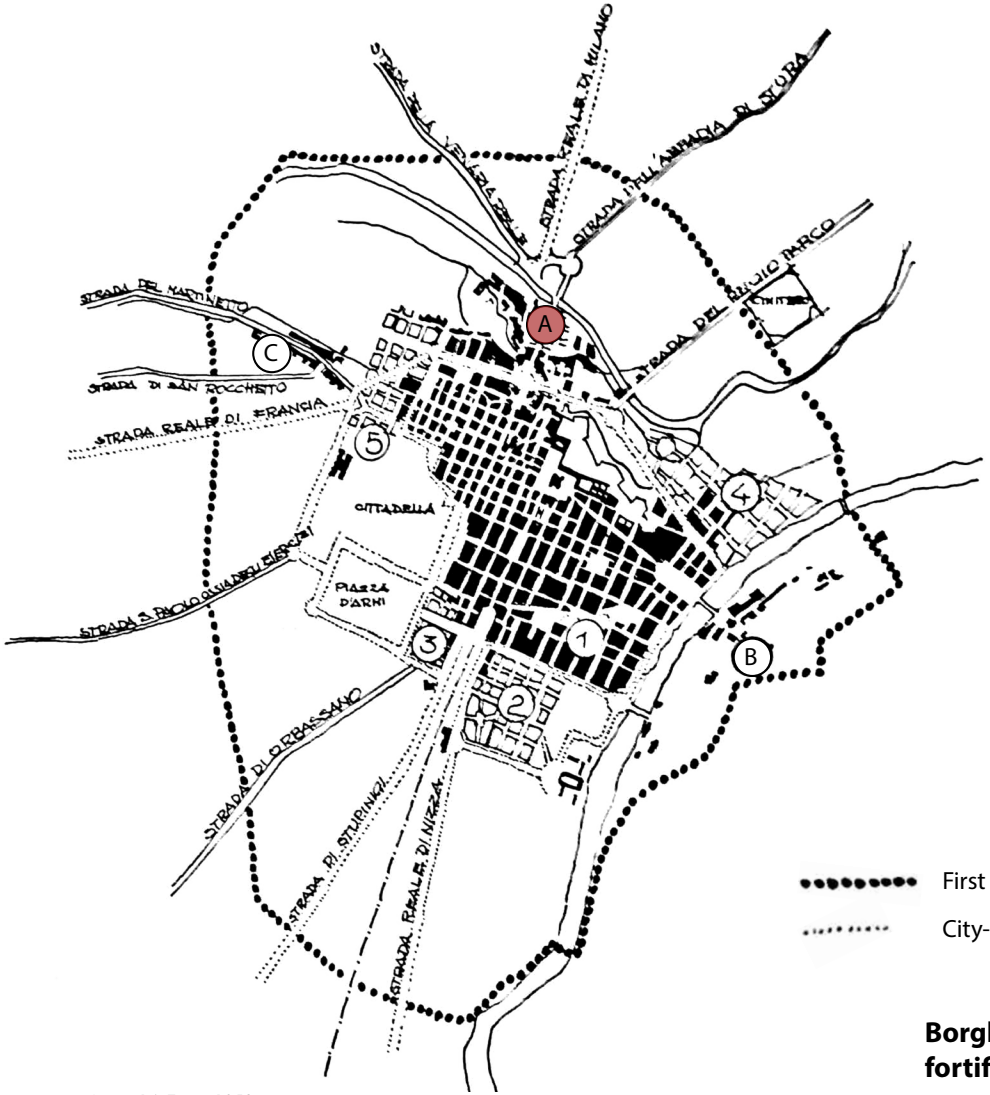
age. In the 20th century the establishment of the big industrial site for FIAT factory generated an enormous expansion of the city. (Hinse, 2014)

Two Ligurian tribes inhabited this area 400 years BC: The Taurini and the Insubres. The first town founded by the Romans in the area was called Augusta Taurinorum. The region passed under the Roman rule and was given roman citizenship in 49 BC. The Augusta Taurinorum was the military Roman settlement stablished around 25 BC, this settlement erased all traces of the original Taurini colony. The Roman military settlement camp created in the area was called Castra Taurinorum. The characteristically and distinctive grid of the Roman settlements can still be seen nowadays. The walled city hosted life for the 5000 inhabitants living in its inside. (Torino, 1968) For a long time the city did not outgrow its Roman walls but when the city started to grow significantly, the roman grid provided the template for new extensions. Even when the roads are wider, the rectilinear pattern was replicated as the city grew.

The buildings of the Augusta Taurinirum were never completely destroyed, but were superseded in the following millennium. In the forth century DC the area as invaded and the extinguishment of the Roman empire left the peninsula

in hands of the barbarians, this brought radical alterations to the economy and the society of the country. The roman city of Turin was adjusted by the Lombard dukes in the seventh century. At the end of the century Cherlemamgne superseded the Lombards. Stability to the area was finally reached by the German Ottonian emperors in the tenth century. In the eleventh century the Catholic church aroused its influence and by the next century the citizens of Turin developed institutional departments that transformed the city into a self governing commune and by the beginning of the 13th century Turin was a small city-state. In 1280, the city was subjugated to the house of Savoia and remained its possession until the twentieth century. (Tom, 2014)

The Savoias initiated a new phase in the history of and urban planning of the city. The strategic location of the city helped the growth of economic and demographic resources. In 1563 the city was named as capital. This event radically changed its urban development of the city and pushed it into a comprehensive baroque configuration. The big open spaces in the city were planned as ways in wich the monarchs could show their power. The urban structure of the city became homogeneous and systematic. The works od expansion of baroque Turin were carried in three stages. The first extension



First cinta Daziaria

City-s wall

Borghi outside the fortified city

(A) Borgo Dora

(B) Borgo Po

(C) Borgo S. Donato

Image 14: Turin in1850
Source: Magnaghi,Tosoni "La città smentita."

to the south, the second to east and the third to west. The north side of the wall was left untouched in these expansion period because it left the view of the country site from Palazzo Reale. (image 10)

The First baroque extension happened in the 16th century with the development of a uniform continuous façade complex around piazza Castello and the continuous of the regular grid. In this period, the piazza Reale, today Piazza San Carlo, and Via Nuova, today via Roma, were built. (Image 11)

The second baroque extension refers to the extension toward river Po, as before, the orthogonal grid system was continued and the only diagonal street in the city is projected. (Image 12)

The Third expansion happened at the beginning of the eighteen century and included many works by architect Juvarra. The most important urban elements appeared in this period around Porta Susa and Porta Palazzo. The layout of the expansion again respected the orthogonal roman grid. (Image 13)

During the Napoleonic times, Piedmont was absorbed into the French empire. Important physical changes to the city came as a consequence. The demolition of all the walls and urban fortification was one of the most important changes. The areas affected by the demolitions were intervened

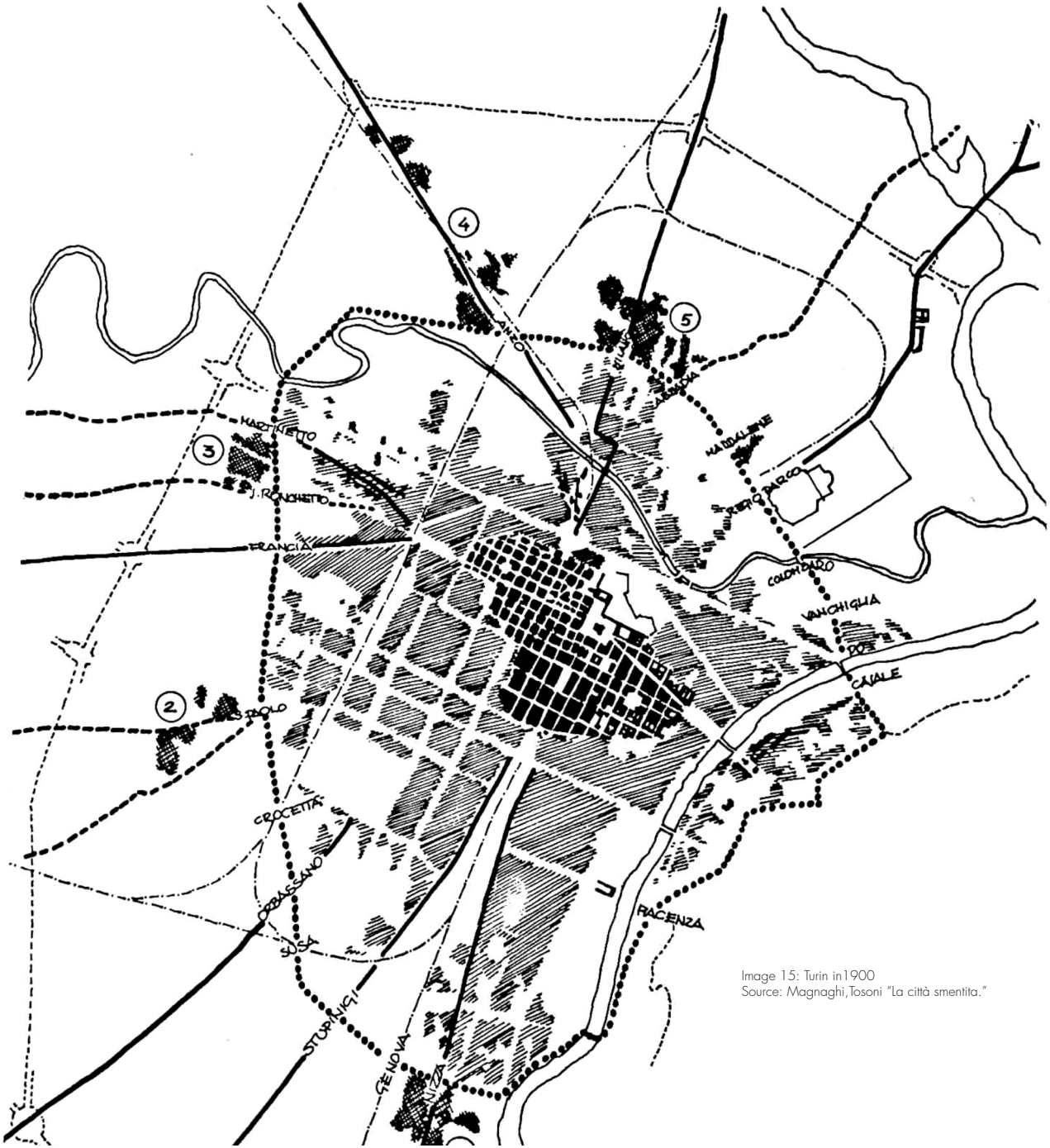


Image 15: Turin in1900
Source: Magnaghi,Tosoni "La città smentita."

with the construction of new bridges, roads and public squares that improved the communication of the city as industry started to grow.
The growth of the city was then accelerated in 1820 after the restoration of the Savoia monarchical system in 1814. The first big project that was developed in this period was the development of Borgo Nuovo to the south of the city beyond the former walls. The construction of the railway system in the city was another important and changing improvement. (image 14)
By 1861Turin became the capital of Italy, this decision lasted for just 4 years and important urban projects linked to the decision were cancelled by 1865. However, a growing interest in the development and promotion of industrial projects appeared. (Image 15)

At the end of the nineteenth century, the industrial revolution started what might be recognized as the third and last phase of major urban development. The city was part of the northern Italy's industrial triangle. Around the city's urban nucleus, a wide belt of industrial suburbs and factories appeared.

City Limits and Boundaries

In general terms, a boundary produces differences, it considers the duality of the inside and the outside. Boundaries also set a double discourse of inclusion and exclusion. Limits or boundaries in a city in urban space work the same way. The ambivalent role of diving and connecting at the same time make limits or boundaries interesting to study. Limits transmit and control exchange between territories and have the potential to mark the transition between different modes of existence. (Longley, 1994) The dynamics of urban evolution make the limits of city boundaries change according to its social, economic and morphological evolution. The limits in the city of Turin recognized for this study can be classified into three types: Historical ones, natural ones and administative ones. Each one of these boundaries influence in diverse ways the morphology of the city. The first set of boundaries refers to the historical roman wall and the two toll walls (1856 and 1912). The Natural boundaries recognized refer mainly to the Rivers that cross the city: Po, Dora and Stura. Within this classification it should be noted that hills in the city represent another type of natural boundary. The last type of boundary refers to the administative one, that divides an area of 130.01 km^2 into 8 boroughs or circoscrizioni and 92 statistical zones. For the purposes of the

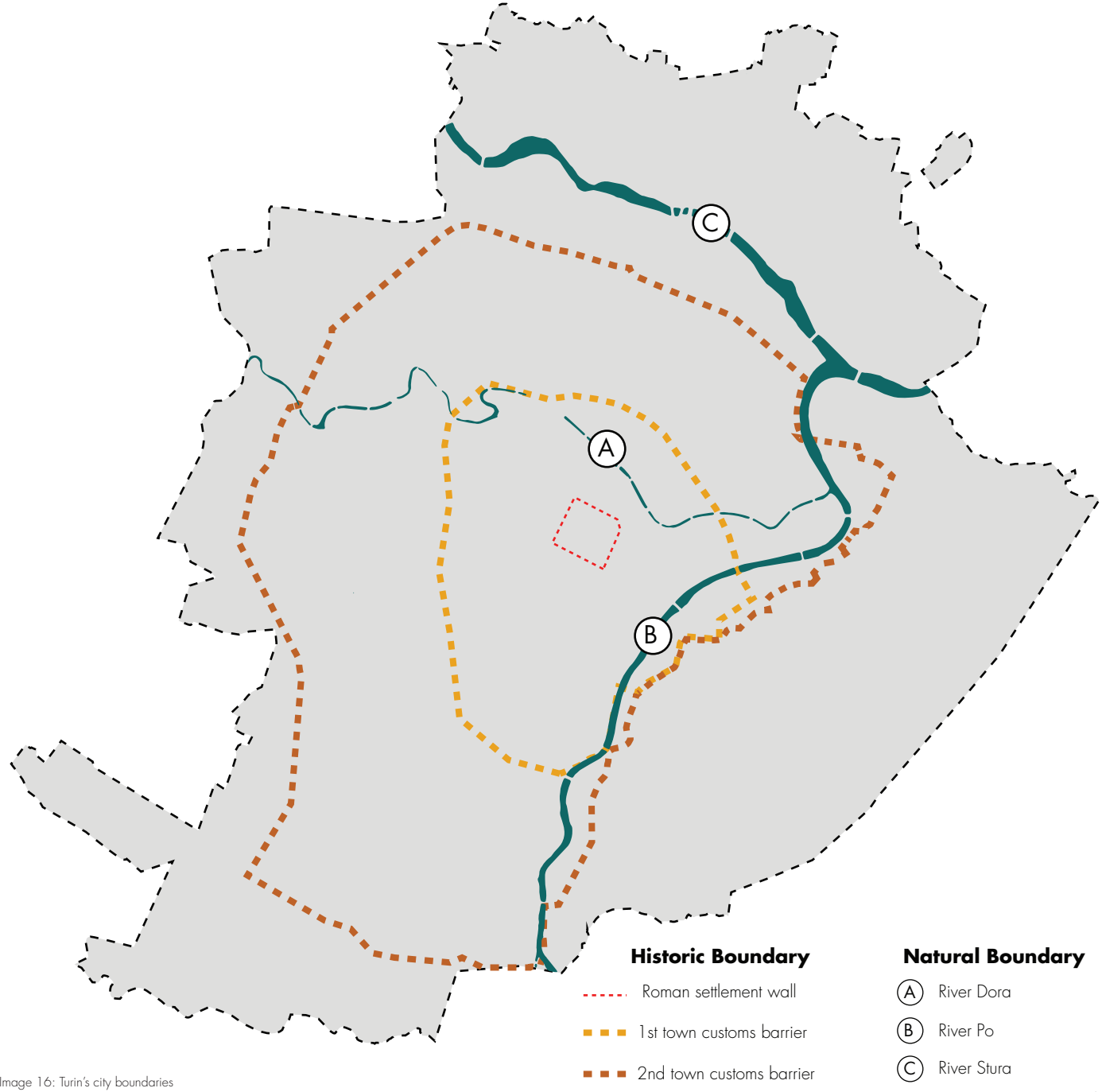


Image 16: Turin's city boundaries

work the administative boundaries of the city were used only to gain and valuate statistical demographic information. (image 16)

Historical boundaries

Turin's roman wall: The construction of the first city walls is part of the planned urban arrangement of the Roman military settlement stablished in the area. This plan also foresaw the internal layout of the city with regular blocks. The realization of the urban plan was long and complex. The first part of the wall constructed between 15 and 30 AD and was located in the north side of the settlement. In the following decades the eastern sections of the wall were built, there is not much information about the construction of the other two sides but the erection of the wall was completed by the end of the first century AD. The roman walls in the city of Turin enclose a quadrangular space of about 700 x 750m divided into relatively similar blocks. On each side of the wall a door was placed where the two main road axes: Cardo maximus and Decumanus ended. The thickness of the wall was about two and a half meters in the base and it reduced its dimensions progressively as it went up. The wall was characterized by the presence of octagonal towers and it influenced the development of the city.

First Toll wall: The first belt was designed by Edoardo Pecco as part of the plan of Enlargement of the Capital in 1853 for defensive reorganizational urban purposes. The Daziarian wall was more than 3 meters high and contained toll booths or barriers. The wall closed to the east side of the Po river and did not enclosed the entire municipal area. The Toll wall created a tax regime that favored the development of external areas regarding to construction costs and land prices. The productive, industrial and commercial development of the city during the years that followed the implementation of the wall taxes was located outside the wall. Beyond the Po river, the barrier continued for about 4.5 kilometers not was a wall but as an iron gate over a masonry base. The wall was dismantled completely in 1912 and replaced with a new one that englobed almost all the massive urban development of the previous decades.
Second Toll wall: This boundary was created as part of the General Regulatory Plan of 1906. The wall was proposed as a response to a need of control of duties. The territory it enclosed doubled the first one. In this case the boundary created in not only material but also administrative since its construction was approved by the law in 1912. The wall is built in brick or in reinforced concrete.

Overcoming the boundaries

The historical urban development review proves that changes of urban form within a city are accentuated when boundaries are exceeded or modified. Interesting guidelines of a place history can be expected when these areas are studied. The terms Borough or "Borgo" and township or "Borgata" refer to settlements external to the oldest center of a city. In Turin, the "borghi" refer to ancient settlements formed in rural contests while the "Borgate" have their origins in the 19th century as a response to the first toll wall. (Pia Davico, 2014)

Borgo Dora serves to exemplify how urban form is strictly linked to city's old boundaries and urban history. This Borgo belongs to the type of Borgos settled outside the historic wall and inside the first toll wall, in the north side of the city. This side of the wall developed later than the south, east and western sides due to royal orders. The urban form of the settlement was affected by three specific structures found in the area: the Cottolengo complex, the Arsenale Militare and the Railway station. What is more, the proximity of the river Dora facilitated the placement of production activities and channels for many agricultural and industrial uses. (image 17) These conditions had a repercussion in the urban form that came as a result. Image 20 shows a map

of the area in 1852 where it is evident that the channels left a mark in the morphology of the Borgo that can still be appreciated today.

If we agree with the fact that limits have the potential to mark the transition between different modes of existence in terms of time and in terms of space, the development of projects that respond, morphologically or socially, to the conditions of a limit is a great way of overcoming the spatial or segregative aspects that come with the definition of a boundary. The urban redevelopment projects developed in this Borgo made exactly this. Borgo Dora was subject of redevelopment projects in the first years of this century, the goal of this projects were to rebuild the urban fabric torn in the 60s and 70s and to potentiate the commercial activities in the area, creating successful social encounters. Nowadays the character of the Borgo is still popular and its morphology is easy to read and recognize.

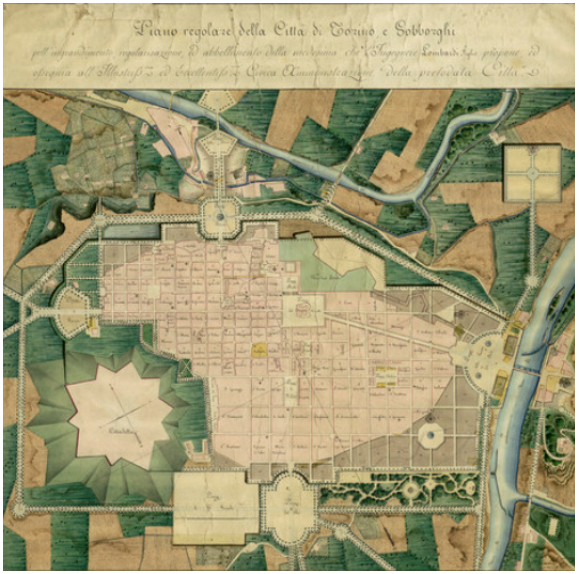


Image 17/18: Gaetano Lombardi, Piano regolatore della citta di Torino, e sobborghi pell'ingtandimento, regolarisazione e ebbellimento della medesima... 1817
ASCT, Tipo e Disegni, rotolo 15 B.
Archivio Storico della Citta di Torino

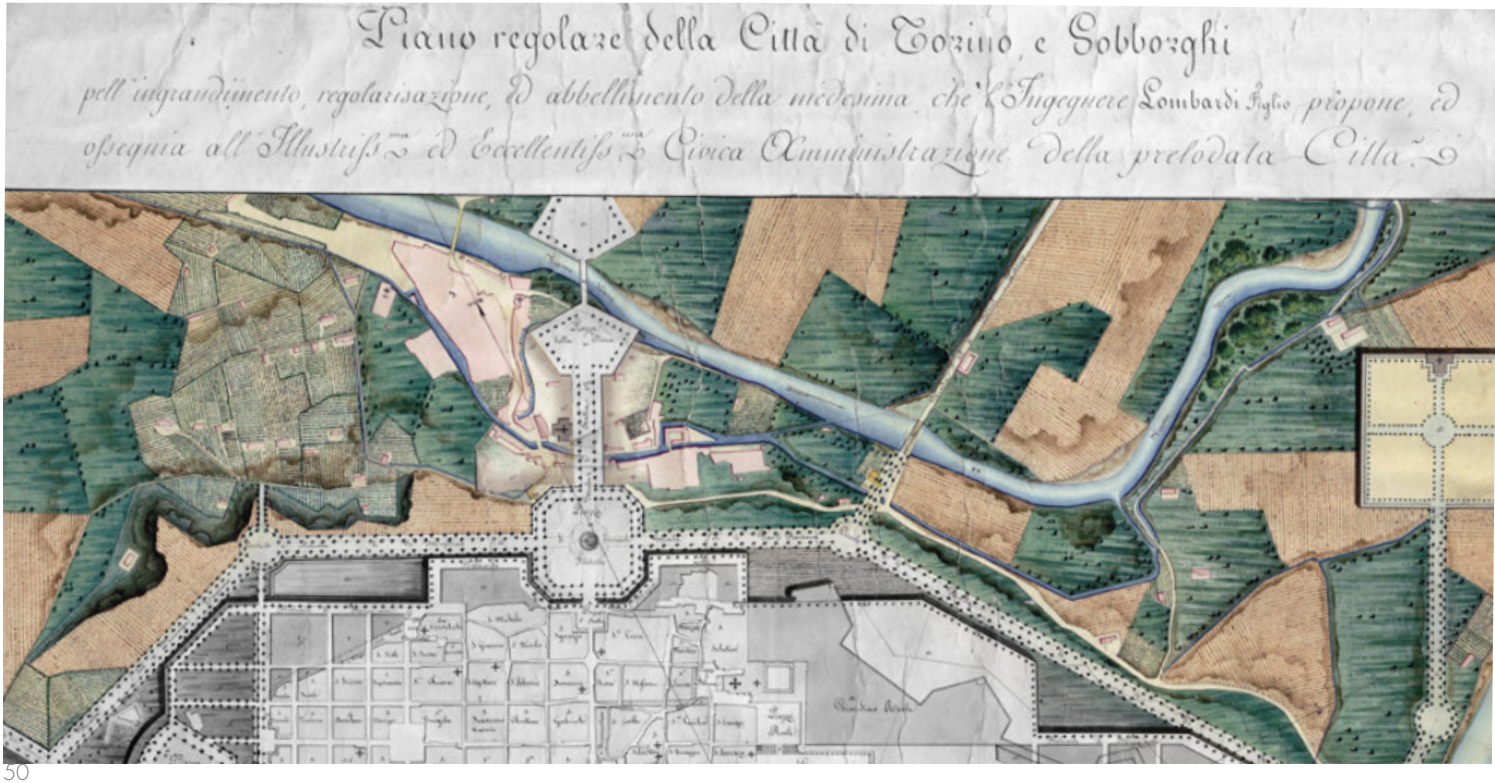
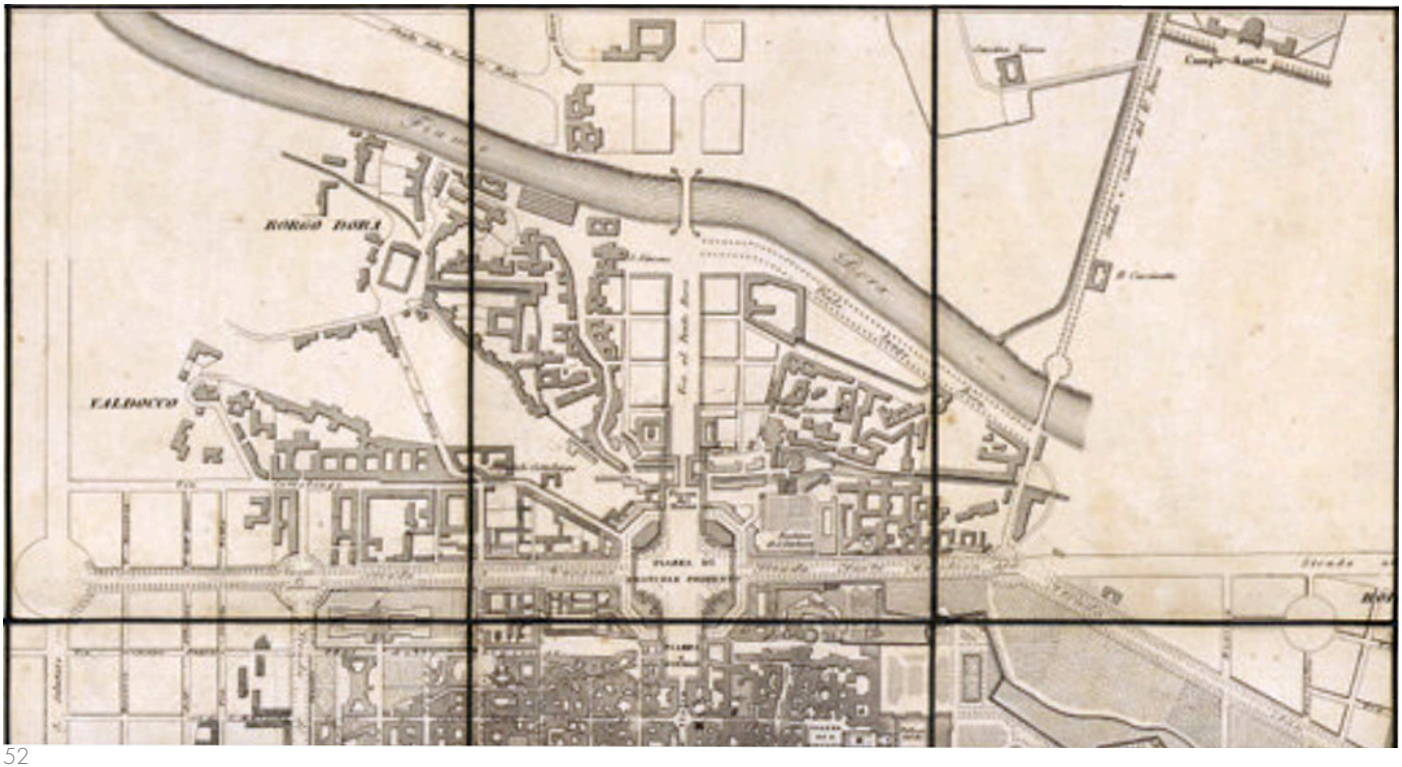
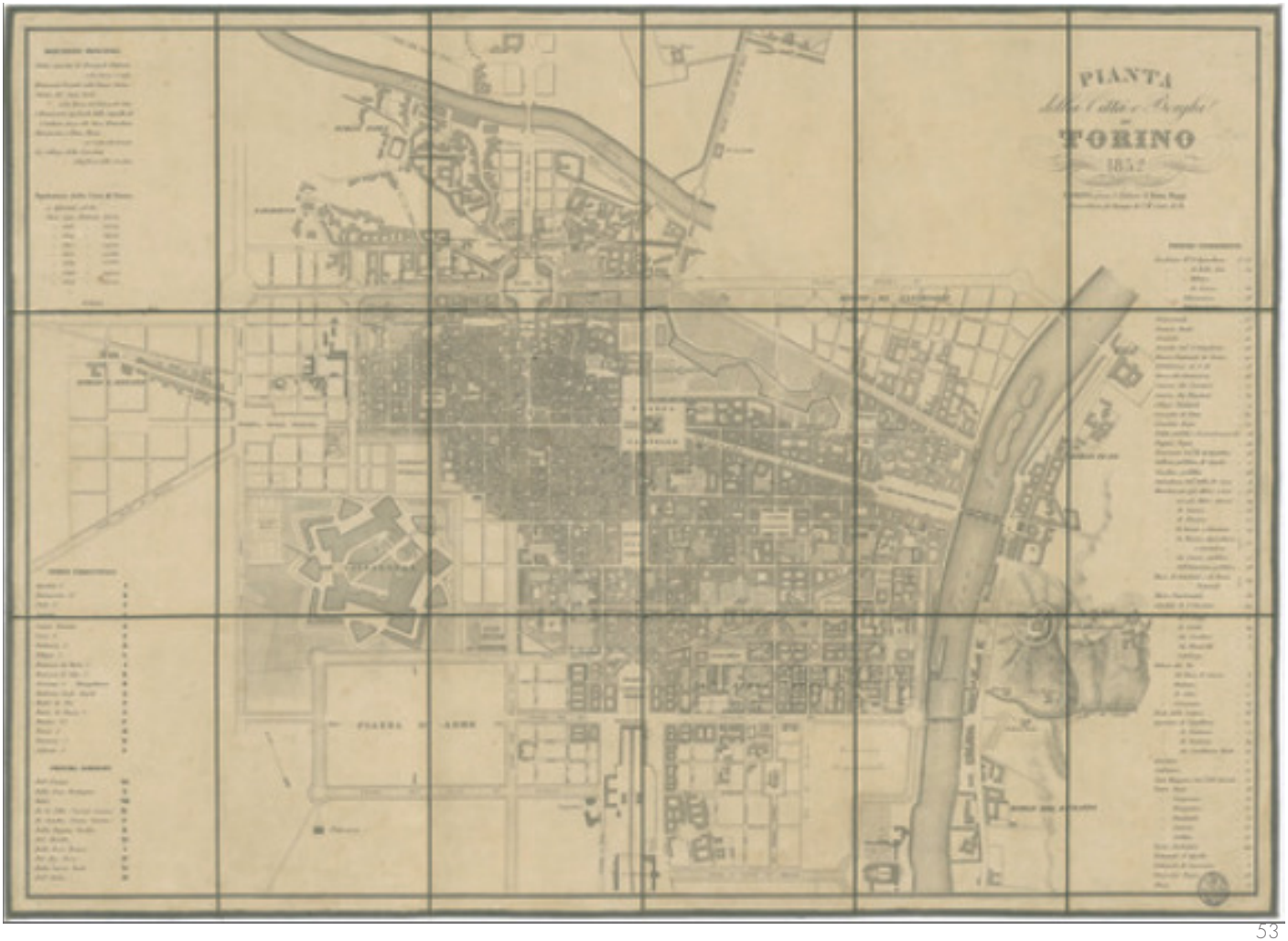


Image 19:
Bellotto. Torino, Il palazzo Reale da Ovest
cm 127 x 164, Galleria Sabauda, Torino

Image 20/21: Pianta della Citta e Borghi di Torino, 1852
ASCT, Collezione Simeom,
D104. Archivio Storico della Citta di Torino




PIANTA
TORINO

Comparing urban form

A simple comparison of three pieces of 500m x 500m taken from different sides of the found boundaries bring to light how accentuated urban fabrics changes increase as the city grows and how the morphology of the city changes depending on the context constrains. All three enclaves are taken from the north side of the city, an area where natural and historical boundaries convene.

The first extract refers to an enclave located within the historic consolidated city center. In this map, the regular street grid is evident and the high number of possible intersections and connections within the different blocks facilitate social interactions. The amount of open spaces in this enclave is mainly constrained within the inside courtyards of the building system inside the plots. The second enclave comes from the area developed after the historic roman wall. In this area, the grid in the street system begins to mutate into a less rigid system. As a consequence, the hierarchy of some streets changes and a marked axis becomes evident. The presence of organically shaped streets in the enclave is a response to the use the area had in the past, a historic water channel located in the area generates amorphous plots. The presence of atypical buildings that start to take distance from the historic

typologies is more evident in this area. The open areas in this enclave are not limited to the courtyards in the buildings but appear as open public spaces used for market purposes and parking spaces. The last enclave analyzed is a piece of the city overcoming the natural boundary marked by the river Dora in this area, the lots are remarkably bigger than in the other enclaves analyzed. The street system presents one hierarchical axis and the open spaces come appear as big empty voids.

As seen with the examples above, Turin's morphology works as an interesting exploratory field. Many scholars have showed their interest in the city and the possible themes of analysis is infinite. For the purpose of the exploration goals for this thesis, the physical dimension of the city has been explained, this allows a change of scale and a linkage to the next chapter where a current social phenomenon is studied.

Image 22: Morphology Enclave within the historic walls

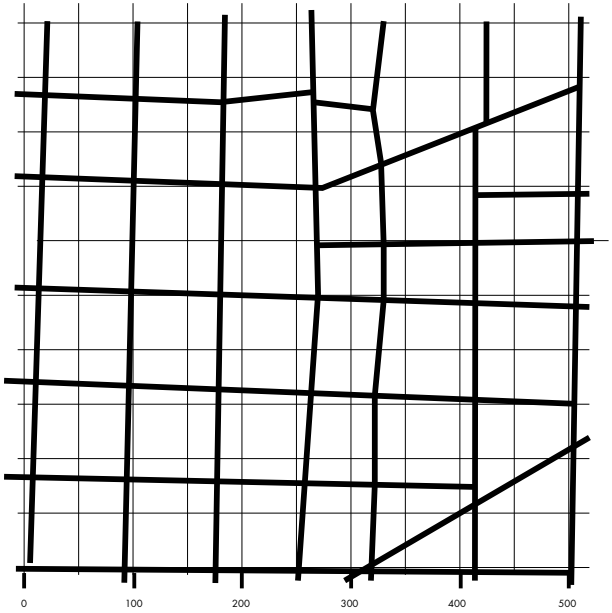


Image 23: Street system grid Enclave within the historic walls

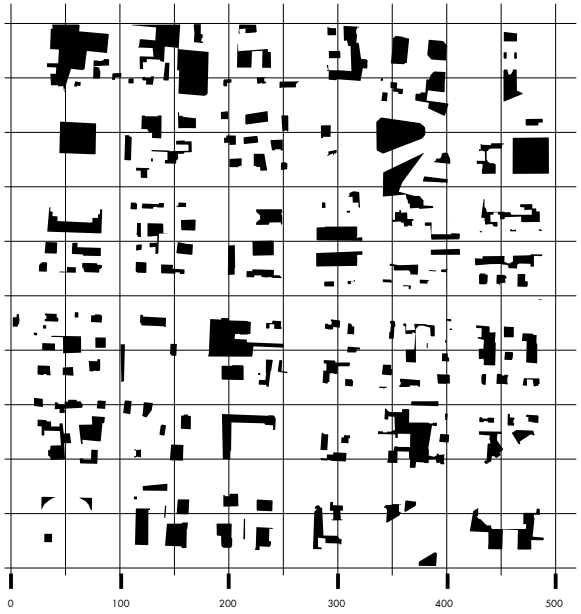


Image 24: Voids in Enclave within the historic walls

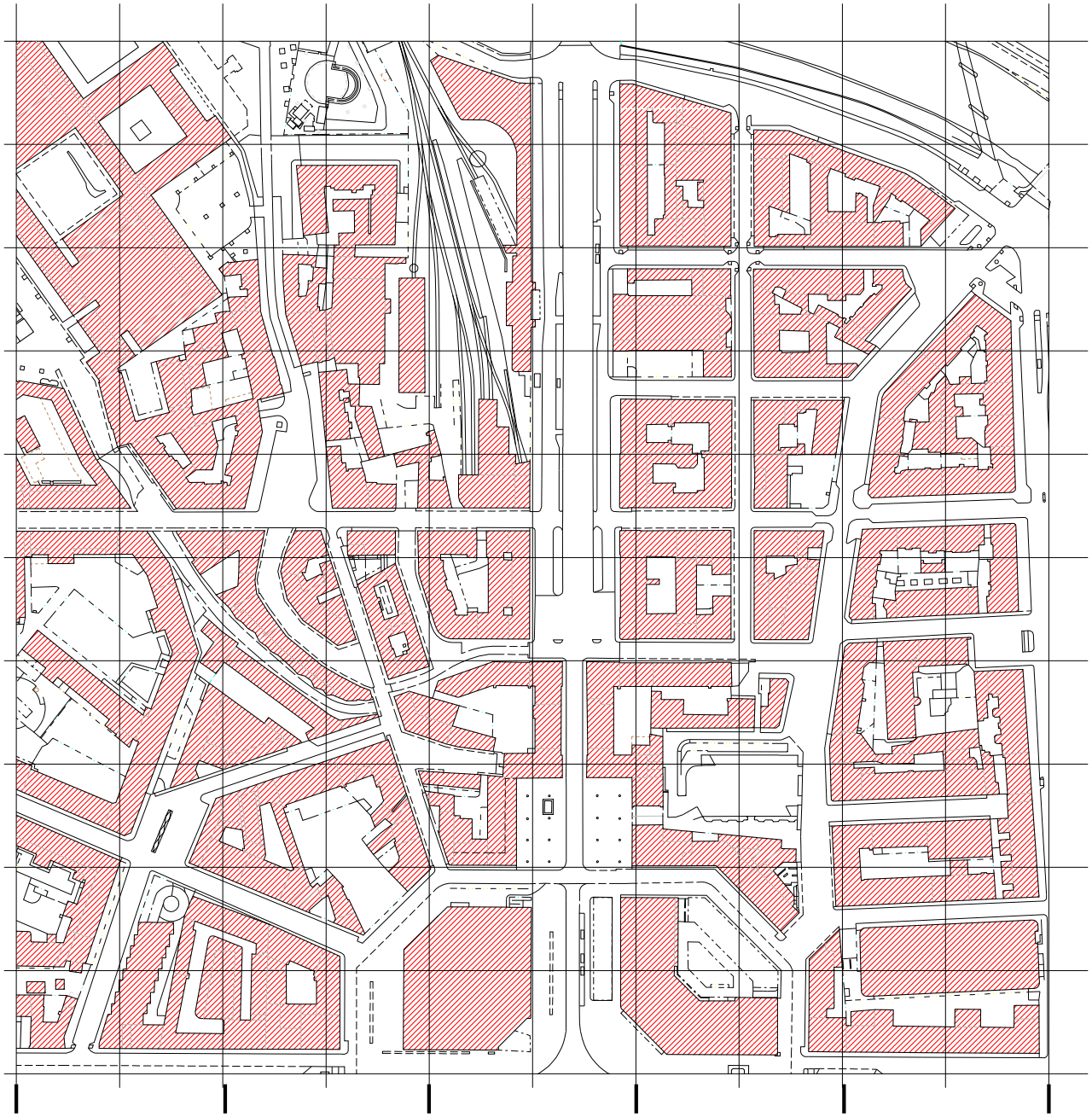


Image 25: Morphology Enclave overcoming the historic boundary

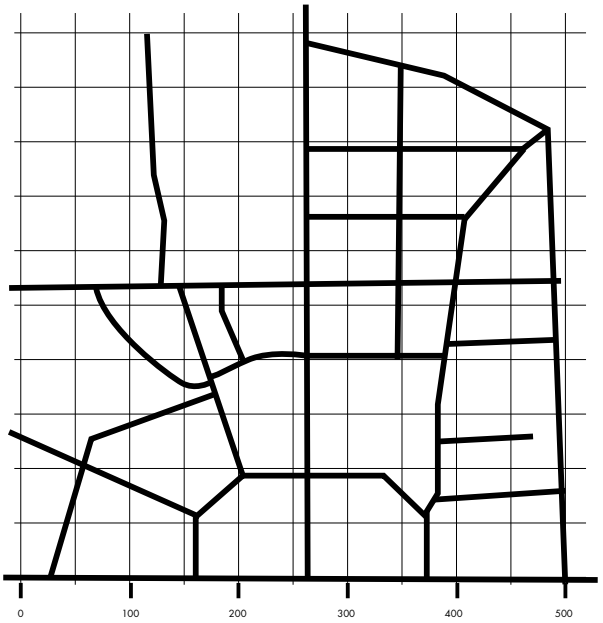


Image 26: Street system grid Enclave overcoming the historic walls

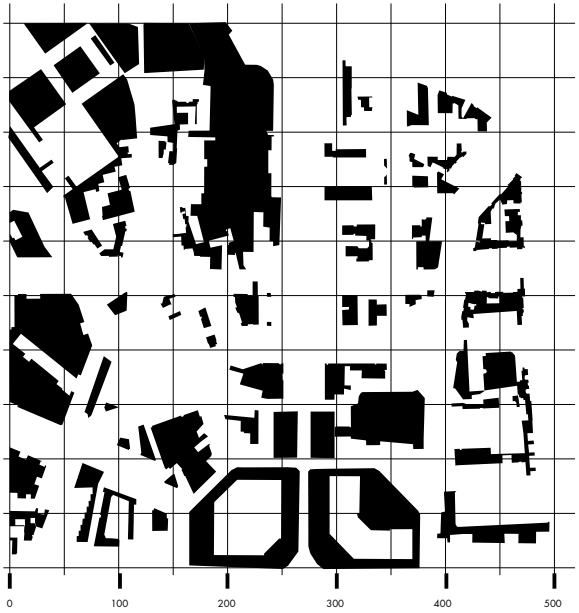


Image 27: Voids in Enclave overcoming the historic walls

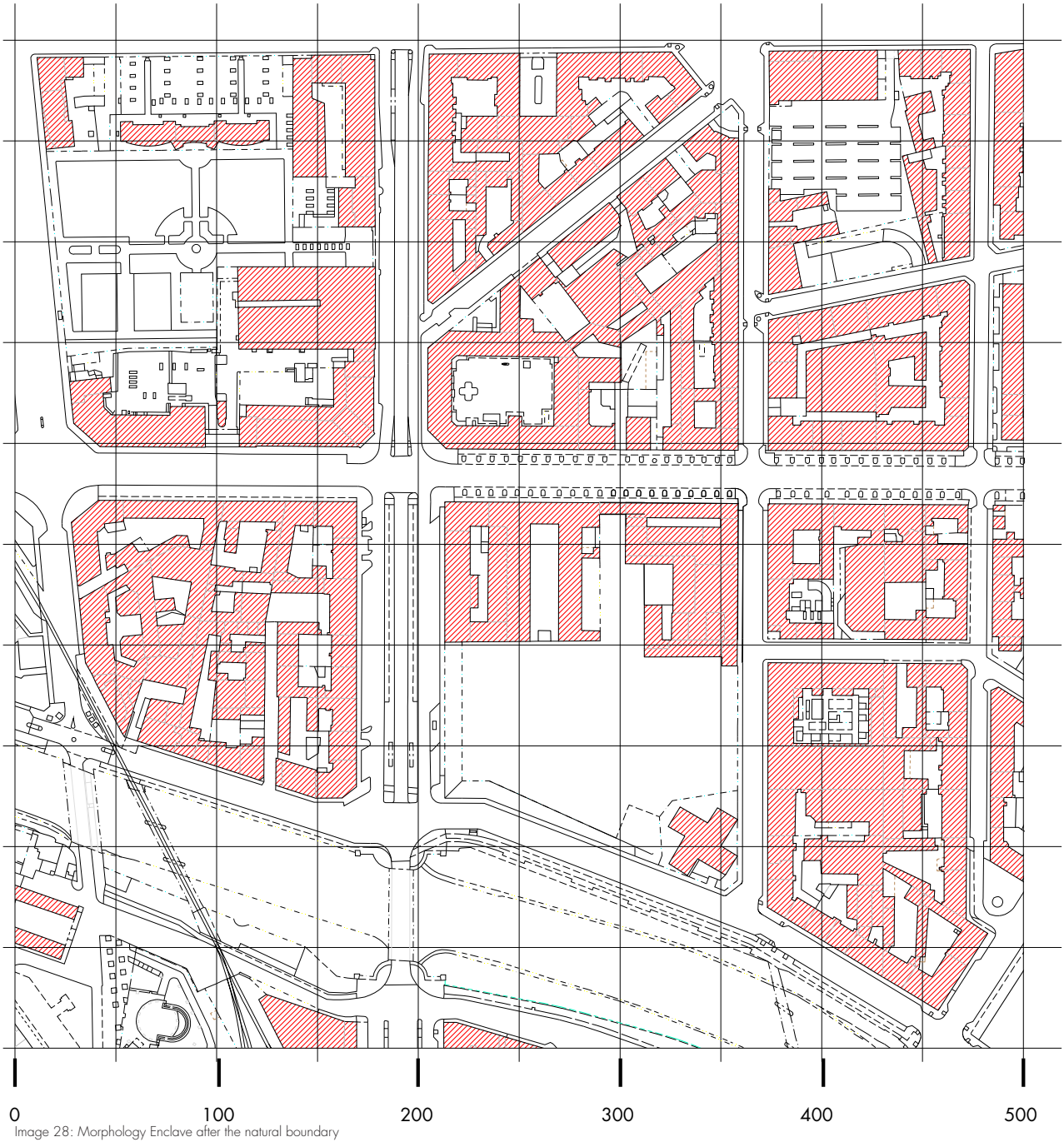


Image 28: Morphology Enclave after the natural boundary

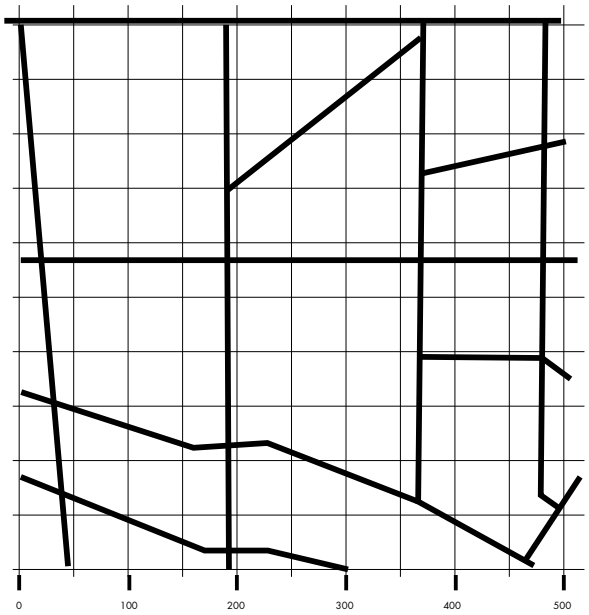


Image 29: Street system grid Enclave after the natural boundary

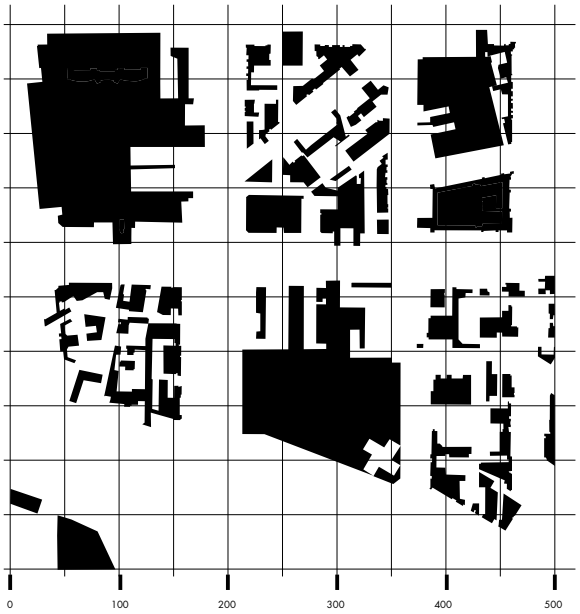


Image 30: Voids in Enclave after the natural boundary

CHAPTER II

THE SOCIAL DIMENSION OF THE CITY

"Between past and present, reality and imagination,
the analogous city is perhaps simply
the city to be designed day by day, tackling
problems and overcoming them, with a
reasonable certainty that things will ultimately
be better. "

- A. Rossi, 1976

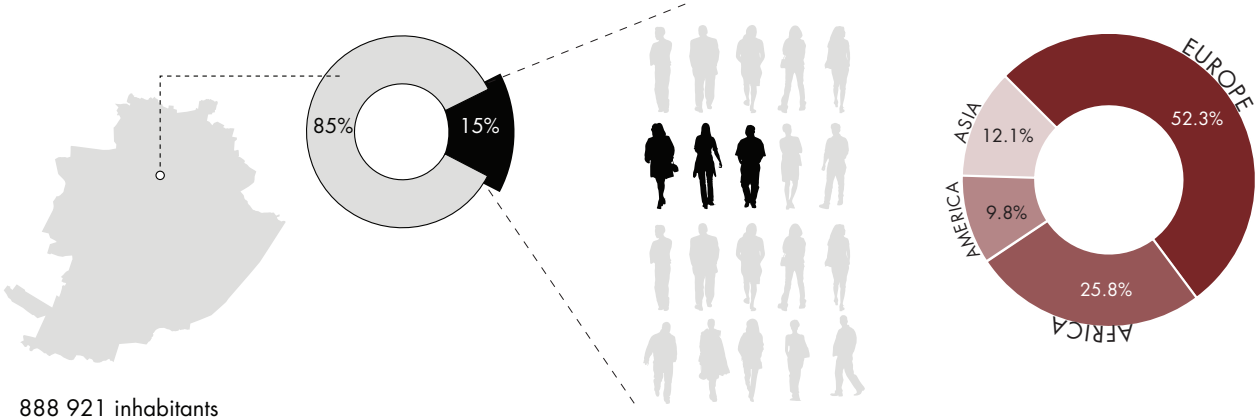
As stated before, the elements that make part of a city in this study have been divided into two general types, physical and social or functional ones. The importance of studying cities resides in the fact that more than 50% of todays world population lives in an urban environment. Cities impose a variety of problems to its inhabitants but once these problems are controlled or solved the environment these places offer should at least offer rich human experiences. Whether we like it or not, we share spaces in cities with others who in many ways are not like us, and we need to find ways of co-existing in these spaces. (Sandercock, 2000)

The social dimension of a city refers to the way people behave, experience and live the city. This dimension is difficult to predict, it involves the study of interactions between public life and space. What is more, current and crucial social phenomena like migration, represent a social changing force that cannot be ignored or taken for granted since it also brings new values and new habits to the city. With migration flows, cities receive an increasing number of newcomers that bring with them different backgrounds and cultures, and that have urgent needs for housing, language training, schooling and jobs. In the case of Turin, the city has a strong migration history, it has always been a destination city for migratory flows. These flows and reasons for human movements have changed during time and the city has responded in

different ways to these movements. From the generation of peripheral borghi and borgate to the building of huge industrial infrastructures and housing for its employers, to the now development of regeneration policies that involve urban requalification and development, migrant agreement policies, "case del quartiere" and cultural associations that help the city become a hybrid inclusive place.

This second chapter aims to analyze an enclave defined by 3 statistical or administrative zones developed outside the historical boundary of the roman wall. This analysis had the goal to understand a piece of city that has an apparent complex morphology and that deals with a current social phenomenon, multi ethnicity.

The decomposition of this piece of city takes into account the the fact that every form (of the territory, of the city, of buildings is the result of a process, of the progressive association of parts, and that it makes sense to break it down and investigate its components only if we keep account of their substantial unity and indivisibility (Conzen M. , 1988). In this sense, it aims to decompose with maps the general physical characteristics of the area and link them to the activities that serve as ways of insertion of the newcomers to the city.



888 921 inhabitants
133 522 foreigners

Image 31: Foreigners in Turin

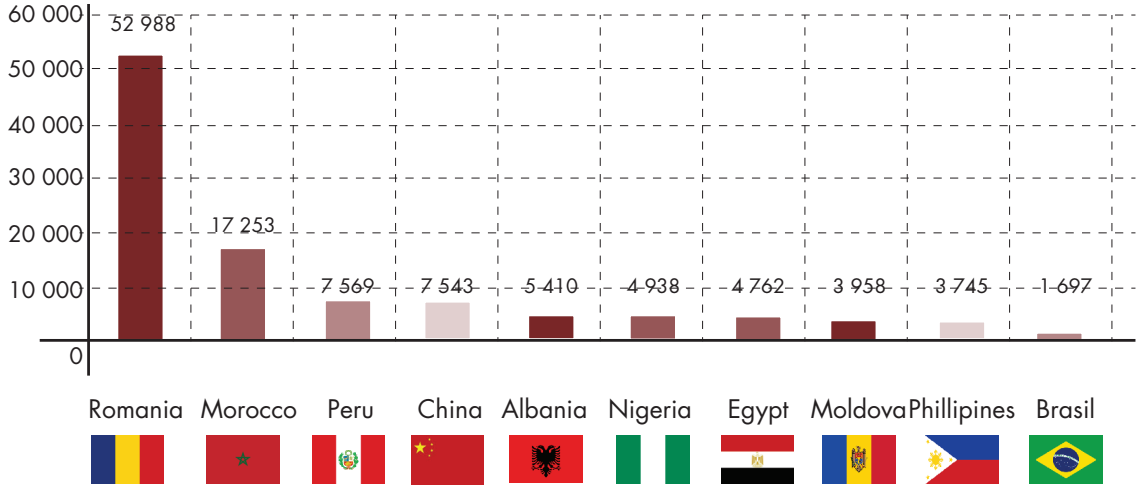


Image 32: Origins of foreigners in Turin

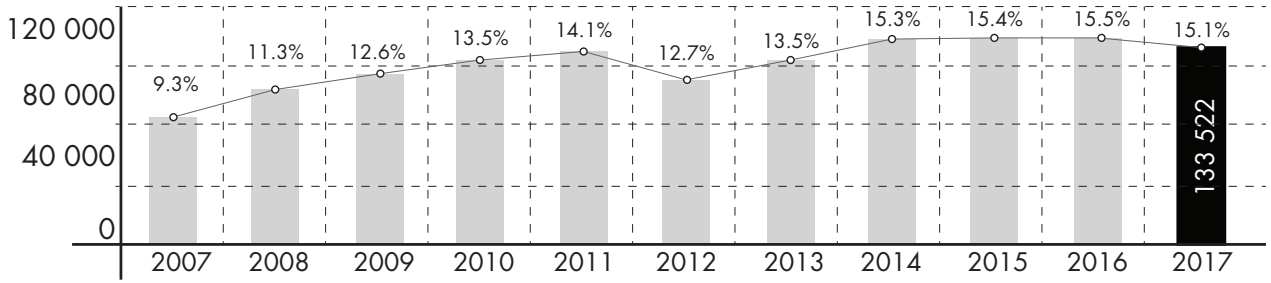


Image 33: Number of foreigners living in Turin in the last 10 years

1997

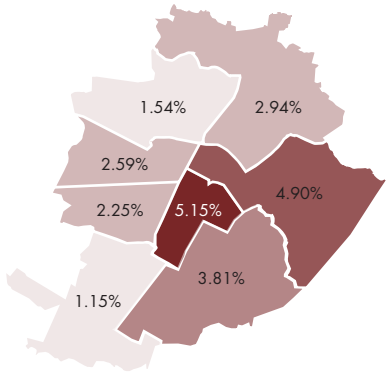
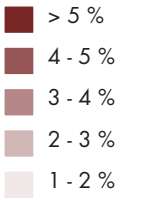


Image 34: Residence location of foreigners in the city, year 1997



1997				
Circoscrizione	**Foreigners**	**Population**	**Non foreigners**	**% over population area**
1	4253	82540	78287	5.15%
2	1730	149968	148238	1.15%
3	2896	128775	125879	2.25%
4	2513	97064	94551	2.59%
5	1917	124626	122709	1.54%
6	3102	105416	102314	2.94%
7	4347	88719	84372	4.90%
8	5245	137673	132428	3.81%
TOTAL	**26003**	**914781**	**888778**	**2.84%**

2007

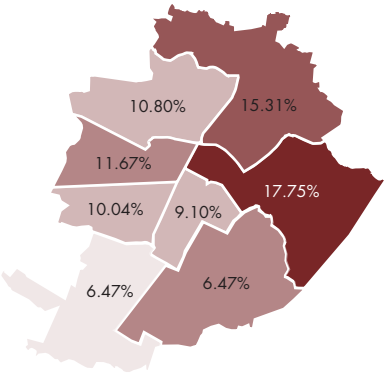
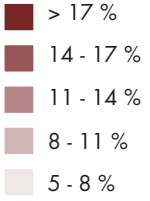


Image 35: Residence location of foreigners in the city, year 2007



2007				
Circoscrizione	**Foreigners**	**Population**	**Non foreigners**	**% over population area**
1	7284	80060	72776	9.10%
2	9281	143508	134227	6.47%
3	13182	131281	118099	10.04%
4	11389	97606	86217	11.67%
5	13554	125465	111911	10.80%
6	16275	106291	90016	15.31%
7	15736	88658	72922	17.75%
8	16749	135260	118511	12.38%
TOTAL	**103450**	**908129**	**804679**	**11.39%**

2016

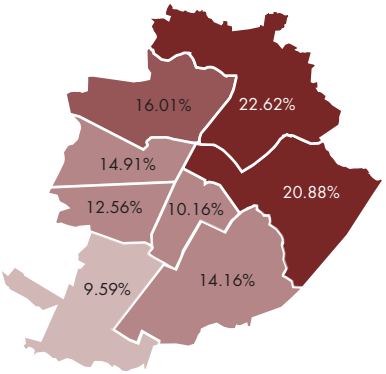
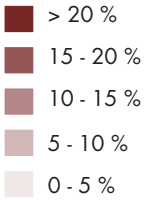


Image 36: Residence location of foreigners in the city, year 2016



2016				
Circoscrizione	**Foreigners**	**Population**	**Non foreigners**	**% over population area**
1	8030	79053	71023	10.16%
2	13204	137671	124467	9.59%
3	15860	126298	110438	12.56%
4	14536	97519	82983	14.91%
5	19913	124341	104428	16.01%
6	24146	106756	82610	22.62%
7	18234	87322	69088	20.88%
8	18399	129961	111562	14.16%
TOTAL	**132322**	**888921**	**756599**	**14.89%**

Turin's migration flows

The history of a place can be reconstructed and studied through documents, urban layout, buildings. But it can also be done by analyzing the demographic stratifications of its population.

The city of Turin has always been a destination for migratory flows due to its history, geographical position and economic situation. One of the most important migration flows the city experienced happened after the capital of Italy was moved to Rome. A few decades after the change, Turin became the leading city in terms of progressive financial and manufacturing systems. This new resources required a huge amount of workforce. Inhabitants of the valleys started to move into the city's suburbs gradually changing the appearance and fabric of the urban environment.

A second flow of newcomers came after the First World War as the industry recovered after the war and workers from Veneto and other regions in the north-east of the country started to fill the city. The Second World War was followed by another period of economic recovery that brought hundreds of thousands of immigrants, specially from the south of Italy.

As for the last 25 years, the globalization of population flows has become very common. Big numbers of people are living their countries due to war, political unrest or in seek of brighter futures. Turin has been characterized by a profound change in its demographic structure. The first immigrants to arrive to the city were mainly from Africa, China, Philippines and South America. A

second flow brought people from Albania, East European and countries and former Soviet Empire. (Osservatorio Socioeconomico Torinese)

Newcomers face many challenges when they move into a new place. They bring with them new histories, new cultures, different social practices and religions. What is more, they also bring urgent needs for: housing, language training, schooling, jobs and recreational spaces.

Nowadays, the number of foreigners living in Turin configures the 15% of its population with a number of 133 522 foreigners. (Italian National Institute of Statistics) Even though the number of foreigners decreased in the last year, the flow dynamics have shown a progressive increment in the past 10 years. As demographic data show, the areas where immigrants tend to stablish in the city have also changed with time. The "circoszioni" with the highest number of foreign residents in the last years are the number 6 and 7. Within the 92 statistical zones that are part of the city, the areas with the highest number of foreign inhabitants are Borgo Dora, Borgata Aurora and Monterosa, with more than 5000 inhabitants per area. (Comune di Torino)

The dynamics of insertion to life in the city vary depending on the specific cases but theres a common tendency for the creation of spaces for ethnic practices like cult and commerce. This type of insertion has a repercussion in the city, a physical one and a social one as well.

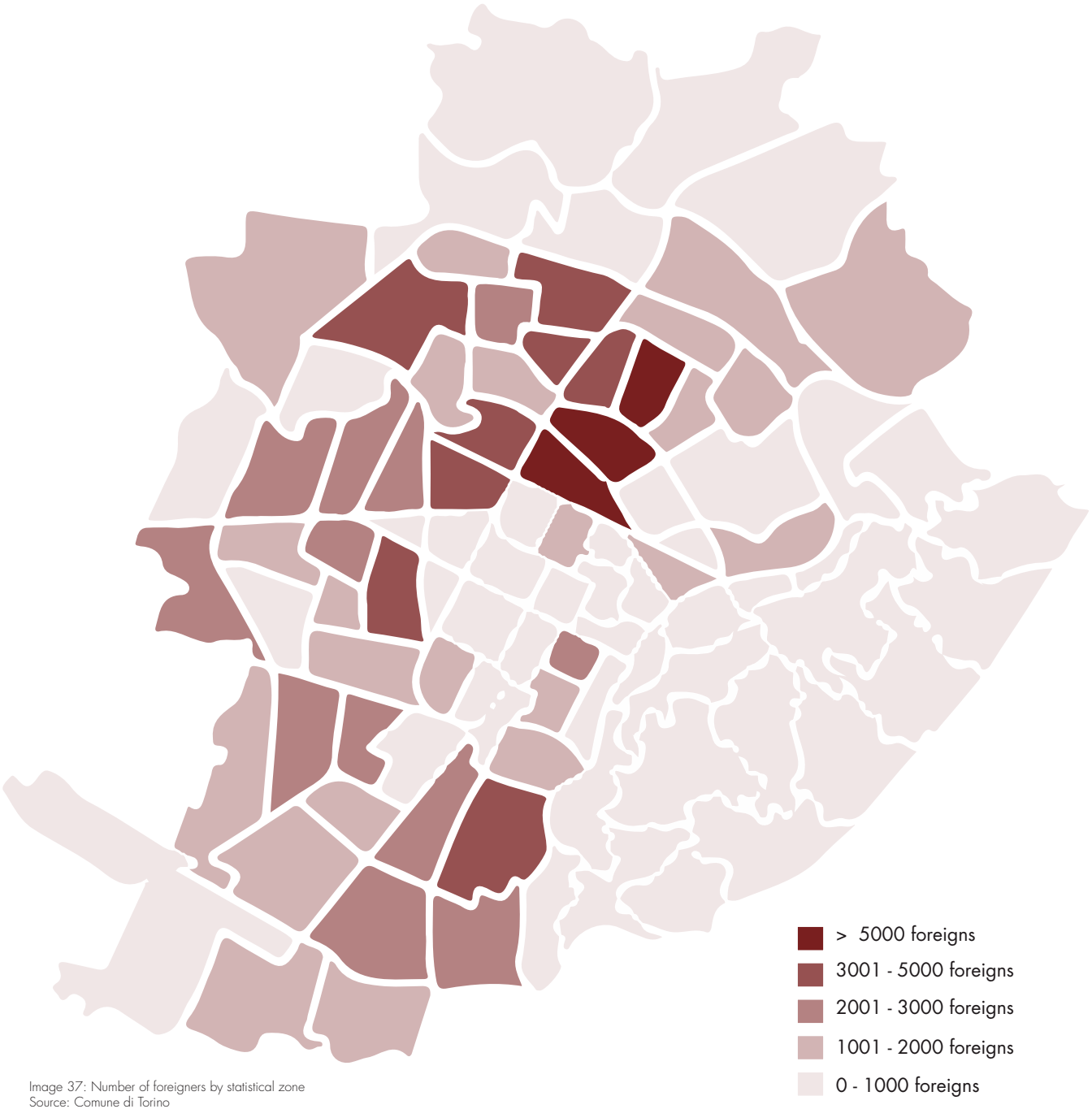


Image 37: Number of foreigners by statistical zone
Source: Comune di Torino

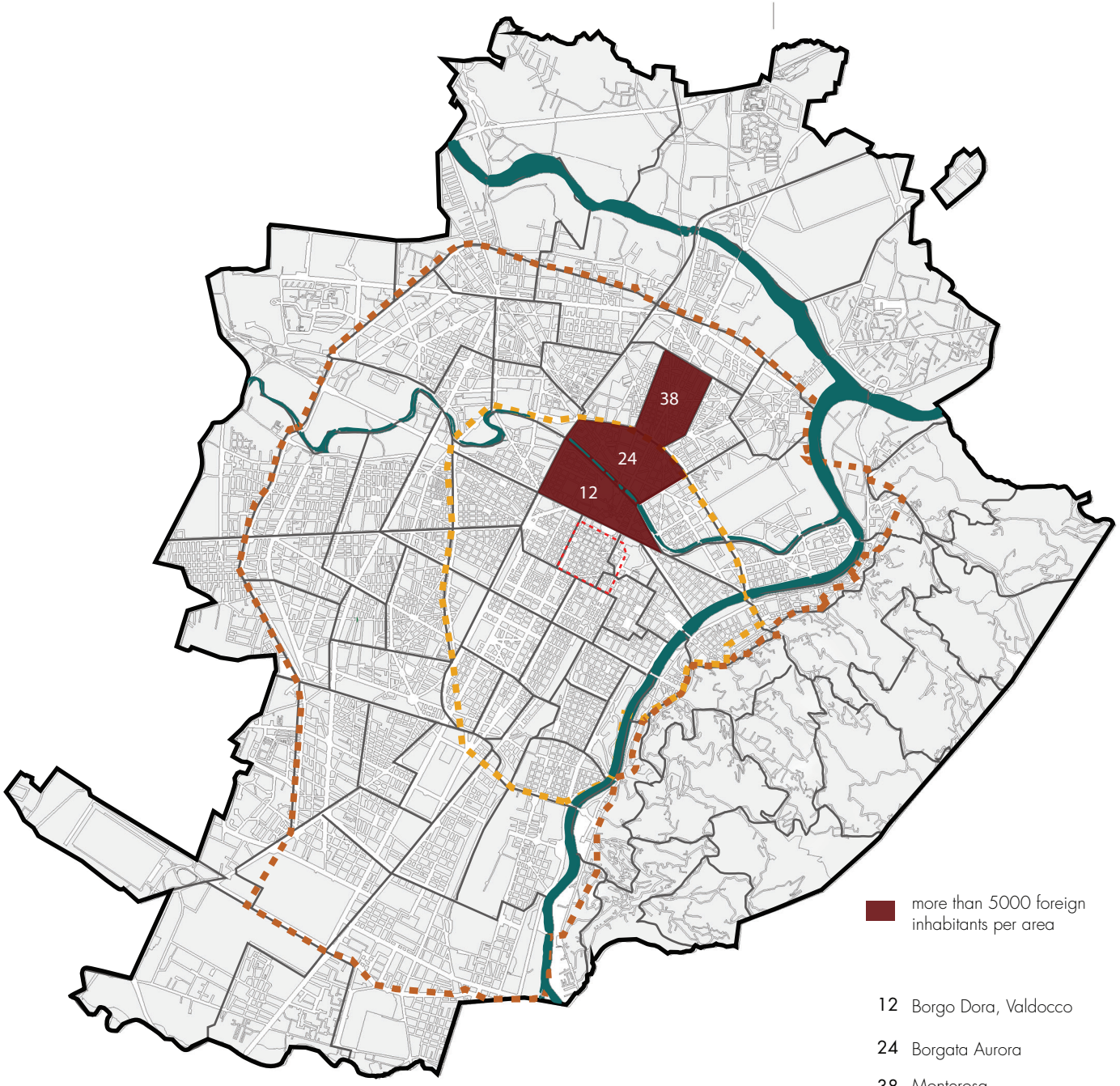


Image 38: Statistical zones with higher number of foreign inhabitants
Source: Comune di Torino

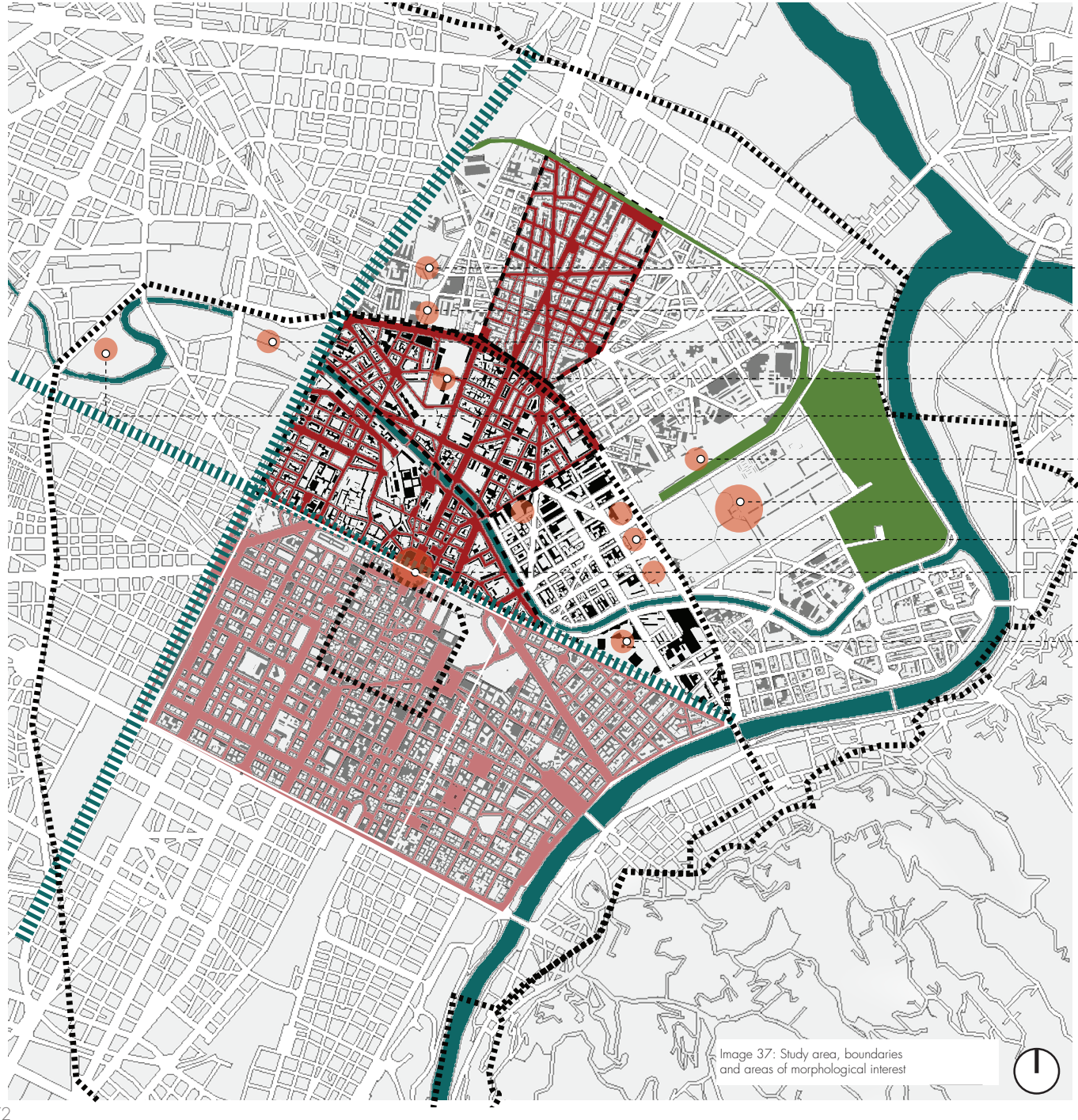


Image 37: Study area, boundaries and areas of morphological interest

Area of interest
Morphology

Historic Center Area
Morphology

Elements of interest for
distinctive typology

Industrial Site

Industrial Site

Environmental Park

Industrial Site

Parco Dora

Future Metro Line 2/ Industrial Site

Monumental Cementery

Industrial Site

Porta Palazzo

Campus Einaudi

Characterizing bordering elements

Natural boundary: River

Natural boundary: Greenery

Artificial boundary: Road

Historical boundary

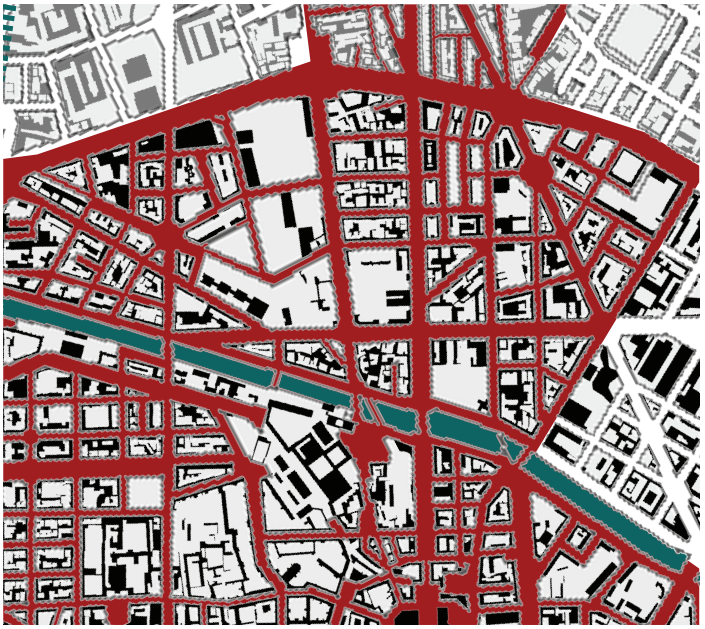


Image 38: Zoom A, Area Borgo Dora/Borgata Aurora

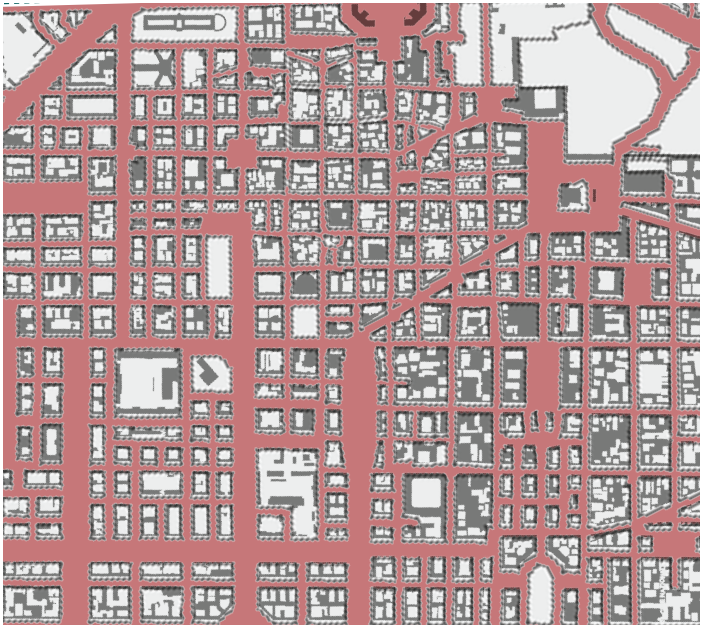


Image 39: Zoom b, Area Centro

Multiethnicity in Turin

Ethnic diversity is considered one important component of urban studies. This element proves that a city is made up of different groups of people defined in terms of social class and ethnic background. Each of these groups find a role in the city in which to work, live and spend leisure time. (Freek, 2003)

It is interesting to note how the 3 statistical areas are inserted within two historic boundaries and a natural one defined by the river Dora. In this regard, the area is composed by a Borgo, a Borgata and a piece of the neighborhood Barriera di Milano. The number of foreigners in this area represent the 40% of the population, this makes their presence very recognizable.

A general analysis of the area brings to light the interesting morphological potentialities of the area. The orthogonal regular grid of the city center is broken when a boundary is overcome and the grid becomes less readable towards the northern side if the analyzed area. As for the buildings system the urban tissue is less compact and the typological building system gets harder to recognize. The industrial history of the area conditions its form and the empty spaces found are greater than the ones in the historic area.

The area presents a strong commercial axis, Corso Giulio Cesare. Along this axis many ethnic commercial establishments can be found.

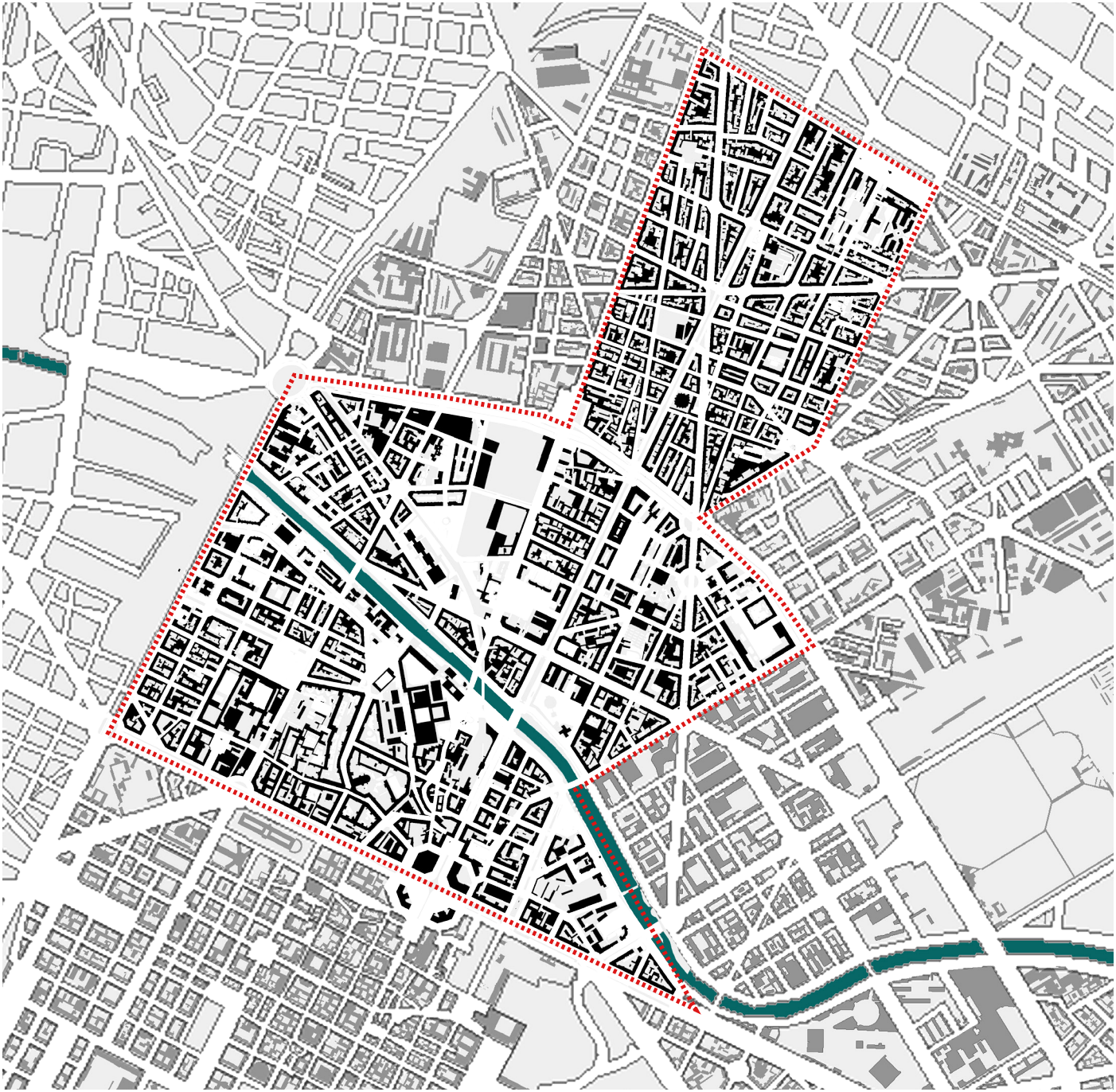
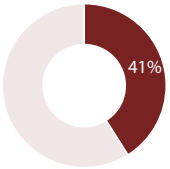


Image 40: Definition of study's enclave based on demography

Image 41: Multiethnicity in Turin
Source: Giovanni Tagini, Italia Multietnica. Corriere della Sera

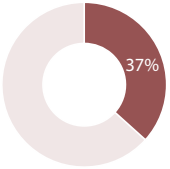
Image 42: Multiethnicity in Turin
Source: Mole24. Rapporto Rota: Torino, sempre più multietnica, è la 31° città della Romania

Monterosa
Neighborhood: Barriera di Milano



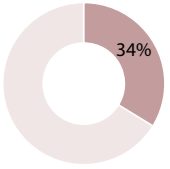
27059 inhabitants
11105 foreigners

Borgata Aurora
Neighborhood: Aurora



20976 inhabitants
7691 foreigners

Borgo Dora
Neighborhood: Aurora



14707 inhabitants
4963 foreigners

Image 43: Study area and multiethnicity

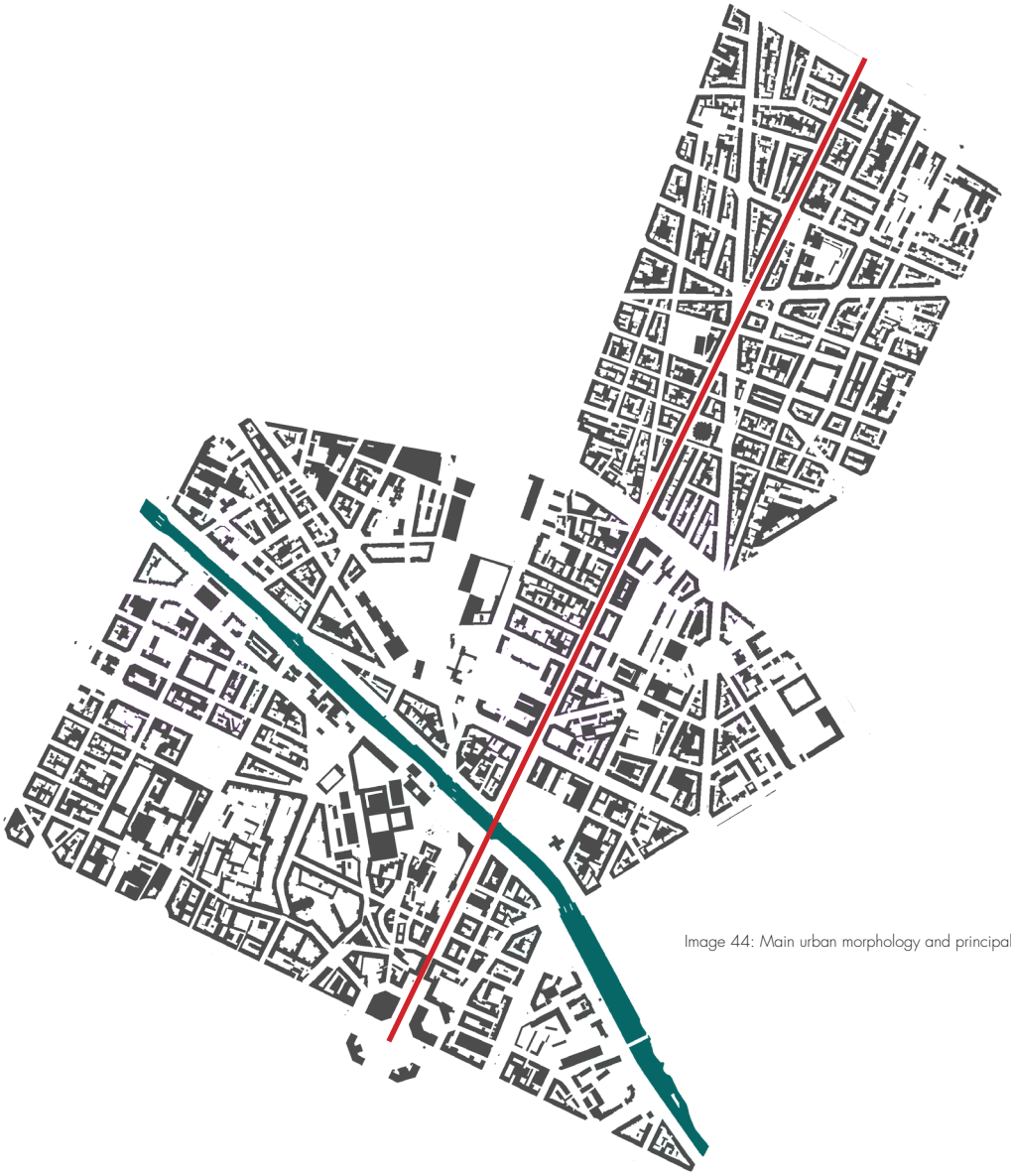


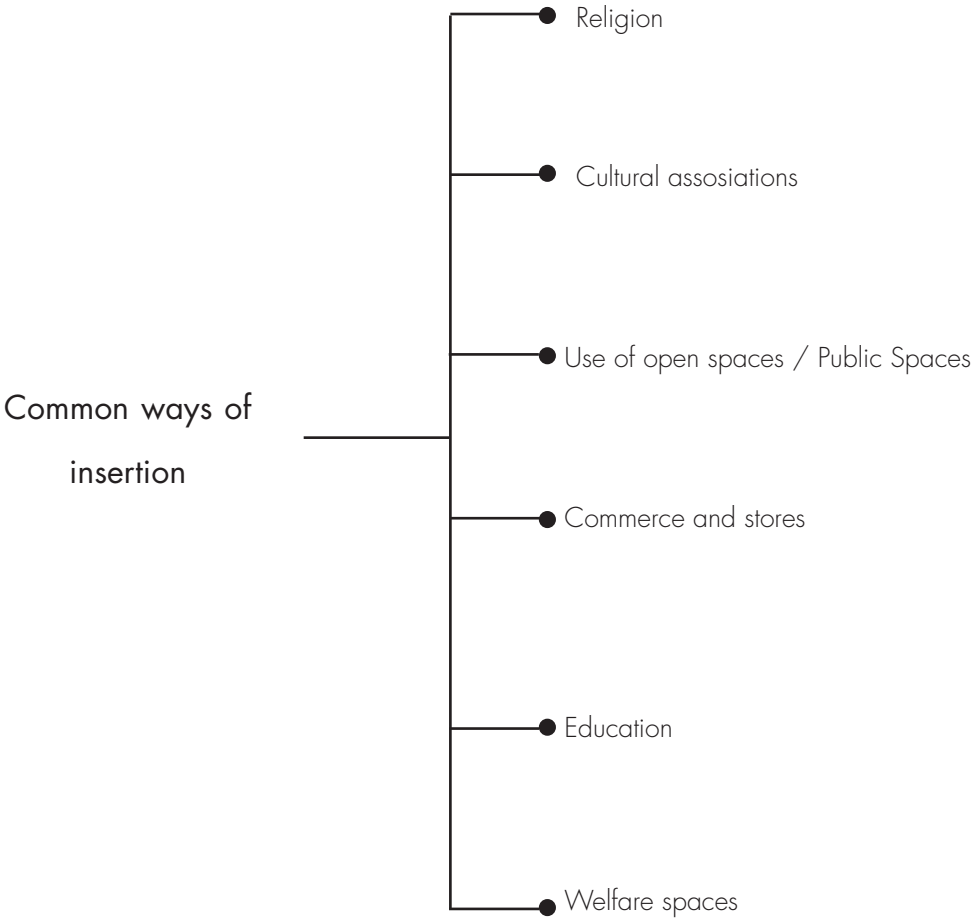
Image 44: Main urban morphology and principal commercial axis

Image 45: Main urban morphology

Insertion to the city

There are many ways of insertion to the city, the most recognizable ones are the use of open spaces, participation in cultural and religious events, involvement and enrolment in educative institutions and the use of welfare spaces.

Many cities present ethnic segregations and have become deeply divided by ethnic borders. On the other hand, other cities do not show ethnic segregation and are identified by spatial-ethnic mosaics. (Freek, 2003) Even though the city of Turin presents areas with higher number of foreign residents, many efforts have been done in order to avoid ethnic segregation and to generate an inclusive environment for foreigners and newcomers. The following maps give a general vision of how and what types of spaces are being used by the residents of the studied area. The mapping of the places where the activities take place and their relation with other spaces help generate a general understanding of the area.


Common ways of insertion
Religion
Cultural assosiations
Use of open spaces / Public Spaces
Commerce and stores
Education
Welfare spaces

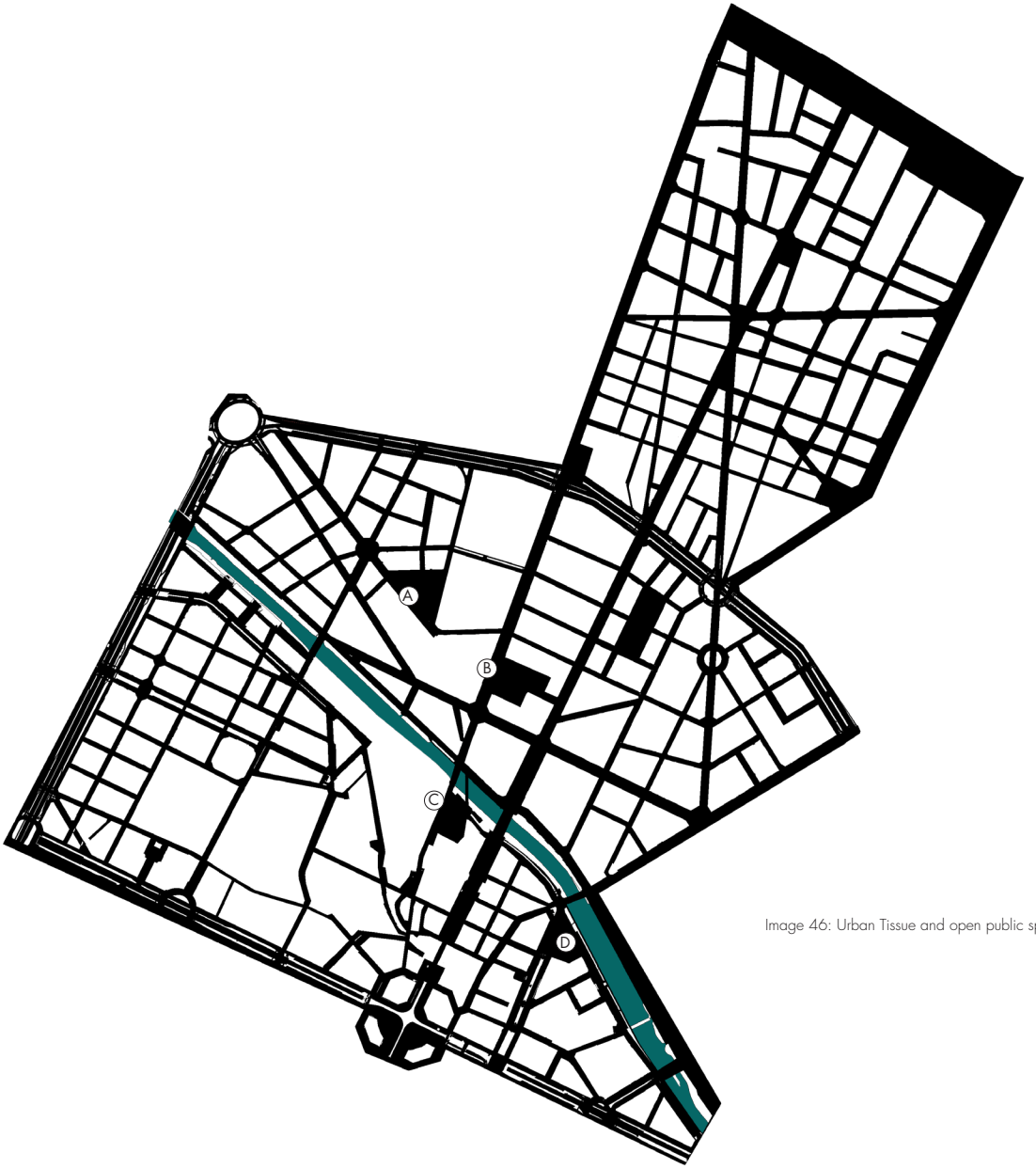


Image 46: Urban Tissue and open public spaces





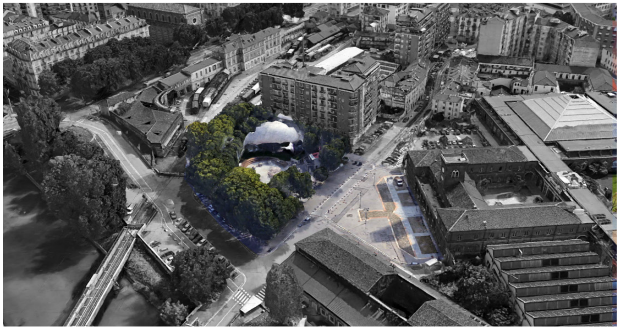



Image 47: Open Spaces in study area
Source: Google Earth,
Retrieved in Dec 2017

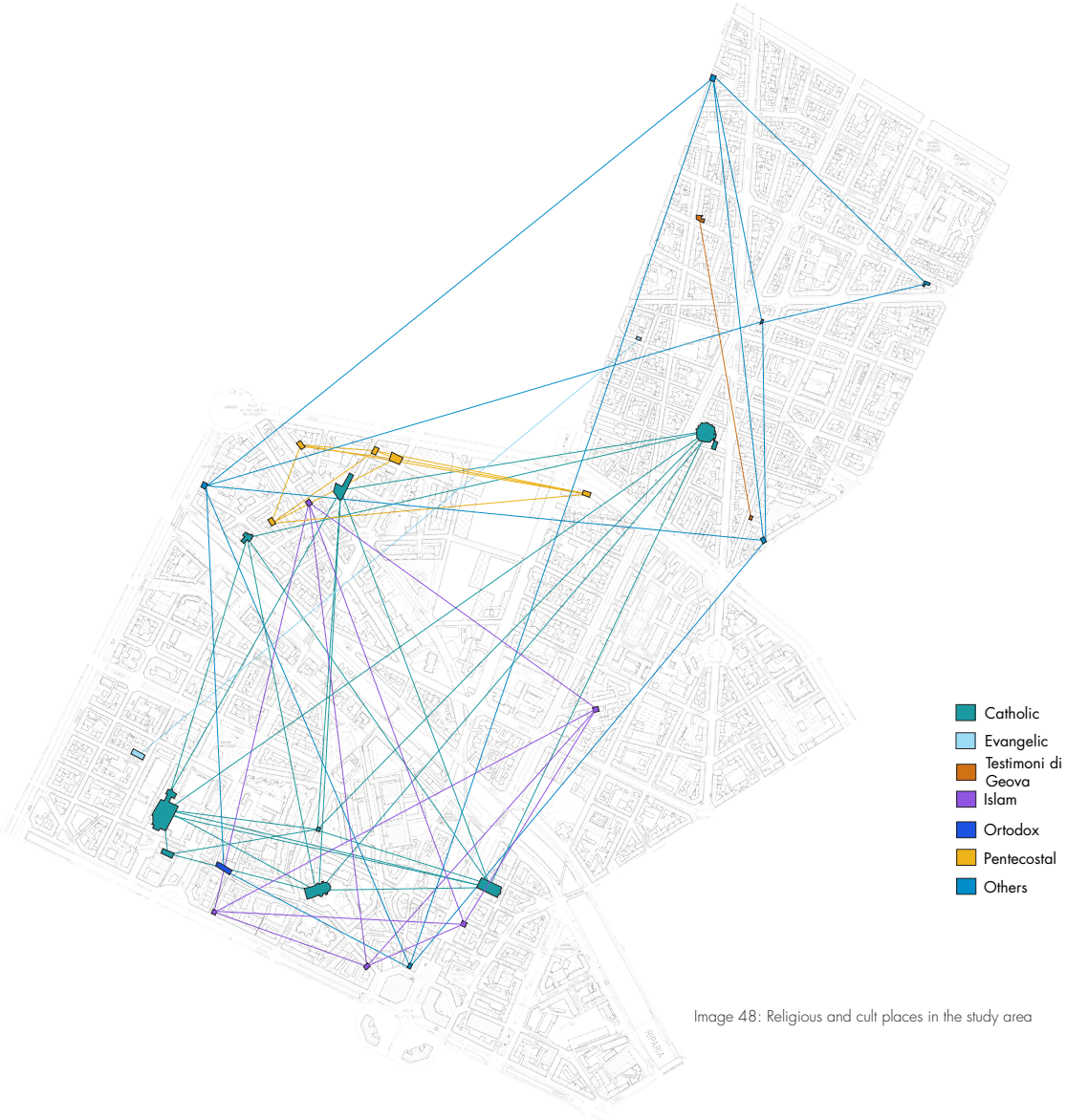


Image 48: Religious and cult places in the study area

Image 49: Cult and Religious spaces
Source: Google Earth,
Retrieved in Dec 2017

Image 50: Cultural Assosiations in the study area

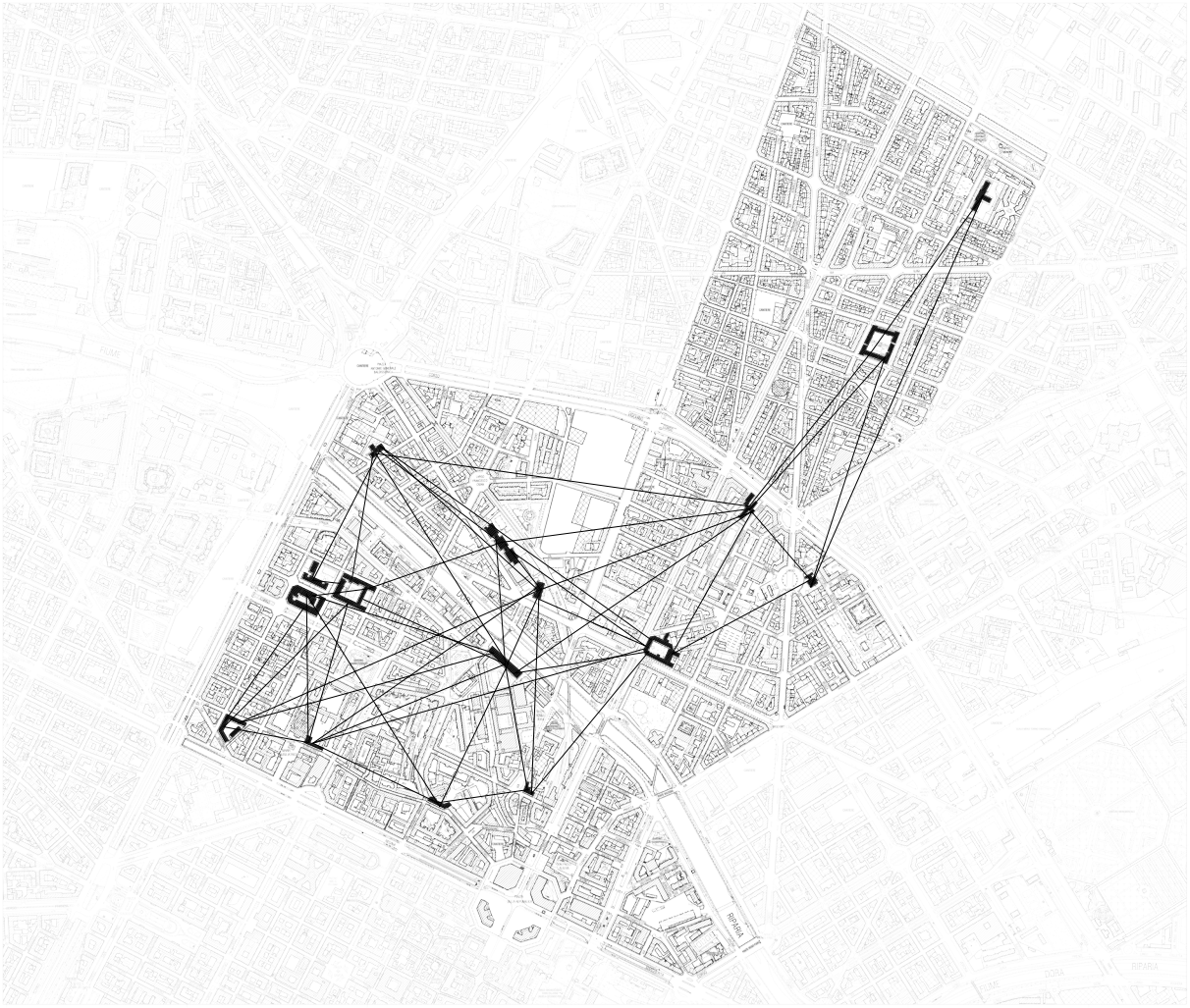


Image 51: Educative Facilities in the area

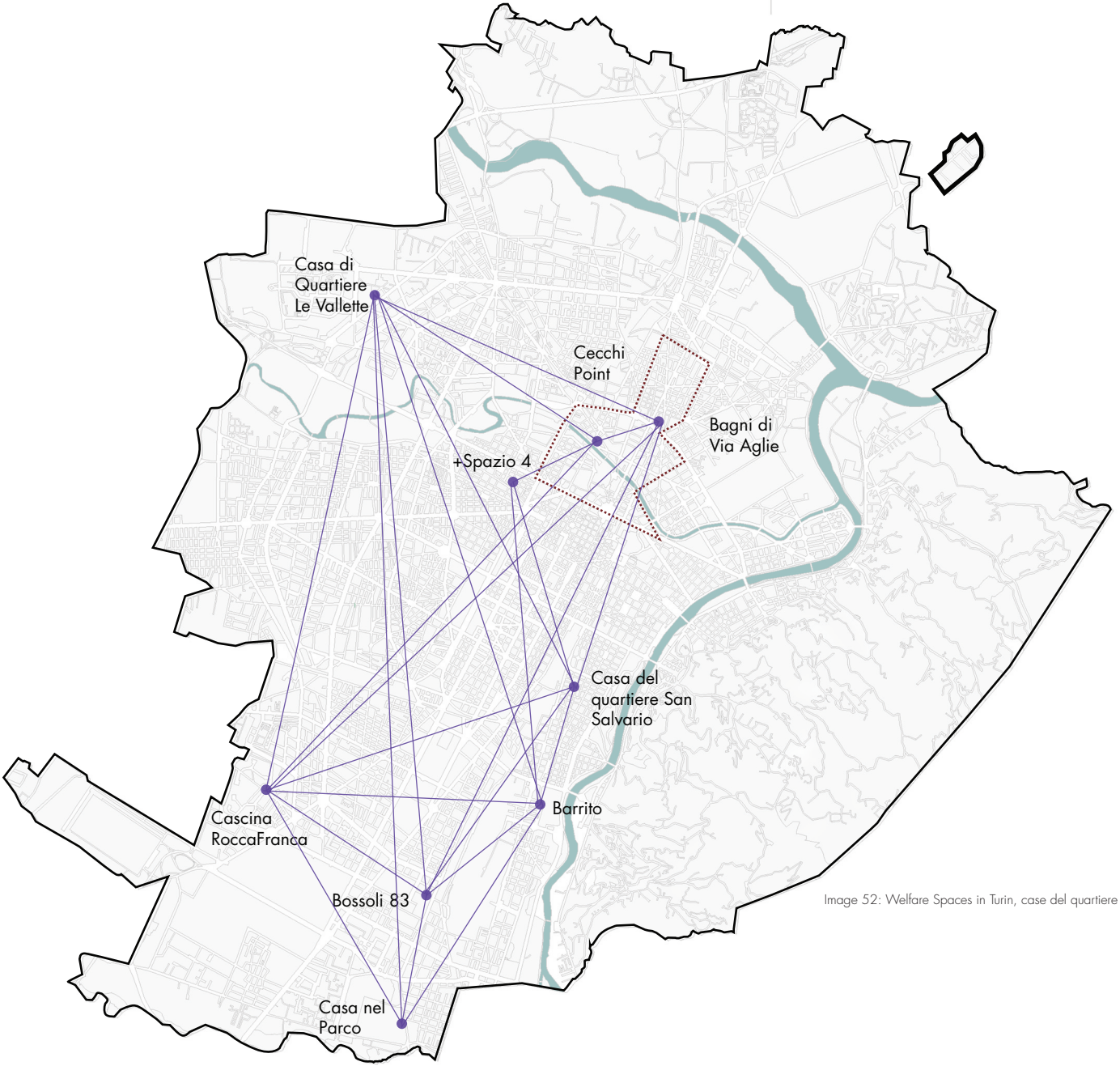


Image 52: Welfare Spaces in Turin, case del quartiere

Welfare Spaces

In the last 50 years the city of Turin has invest in the generation of projects and policies that could make the city an inclusive environment. The "case del quartiere" are an example of this urban regeneration efforts. They were born as social and cultural laboratories that provide citizens of welfare spaces. They are present around the city and have particular success in the peripheral areas. Each one of these projects develop in diverse social and special contexts and offer services destined for specific citizens that live in the surroundings. (Devoti, 2015)

Other spaces that offer services of integration to the community are also present in Arsenale della Pace, Sermig, Scuola Holden, etc. The services offered include language classes, nursery, recreational activities for kids and young adults, health consultancies.

Even though, these spaces are available and well used in the study area, the demand for welfare spaces is higher than ever. Spaces that propitiate encounters and exchanges help make the multiethnictiy of the city evident and may bring opportunities to ease the process of insertion of newcomers to the city.

Image 53: Main market areas in the study enclave

Image 54: Main market areas in the study enclave
Source: Google Earth,
Retrieved in Dec 2017

Image 55: Main commercial typologies in commercial axis
Image 56 (next page): examples of ethnic commercial stores in the study area.


SHUN XIN
PARRUCCHIERE
uomo donna bambino
مجزرة العربيه
MACELLERIA AL ARABIA
مجزرة العربية
MACELLERIA
Qualità Halal
مجزرة إسلامية
AGADIR
TESSUTI ORIENTALI
GRIGLIATA TUTTI I TIPI DI CARNE
PIZZA KEBAB
GRIGLIATA DI PESCE E PATATINE
TURKISH MARKET
ALIMENTARI
CENTRO ASSISTENZA
TELEFONIA & COMPUTER
YOUNG
ABBIGLIAMENTO
Fen
ABBIGLIAMENTO
UOMO DONNA BAMBINI
ISTANBUL S
PIZZA - GRILL - KEBAP
ISTANBUL S
PIZZA - BAR - KEBAP
GIRARROSTO
TRANSFER DE BANI
ENVIO DE DINERO
MONEY TRANSFER
airarabia
حلاقة القدس
PARRUCCHIERE
FRIZERIE
PARRUCCHIERE
Macelleria Khouribga
MINIMARKET
مجزرة خريبكة
COIN DE MARRAKECH
Shun Fa
PARRUCCHIERI
UOMO DONNA
BAMBINO
KEBAB
alla PIASTRA
GRIGLIATA
di PESCE
tutti i tipi
di carne
alla piastra
HALAL
GRIGLIA BILADI
مجزرة ريان الإسلامية
MACELLERIA RAYAN
ISLAMICA
MINI MARKET

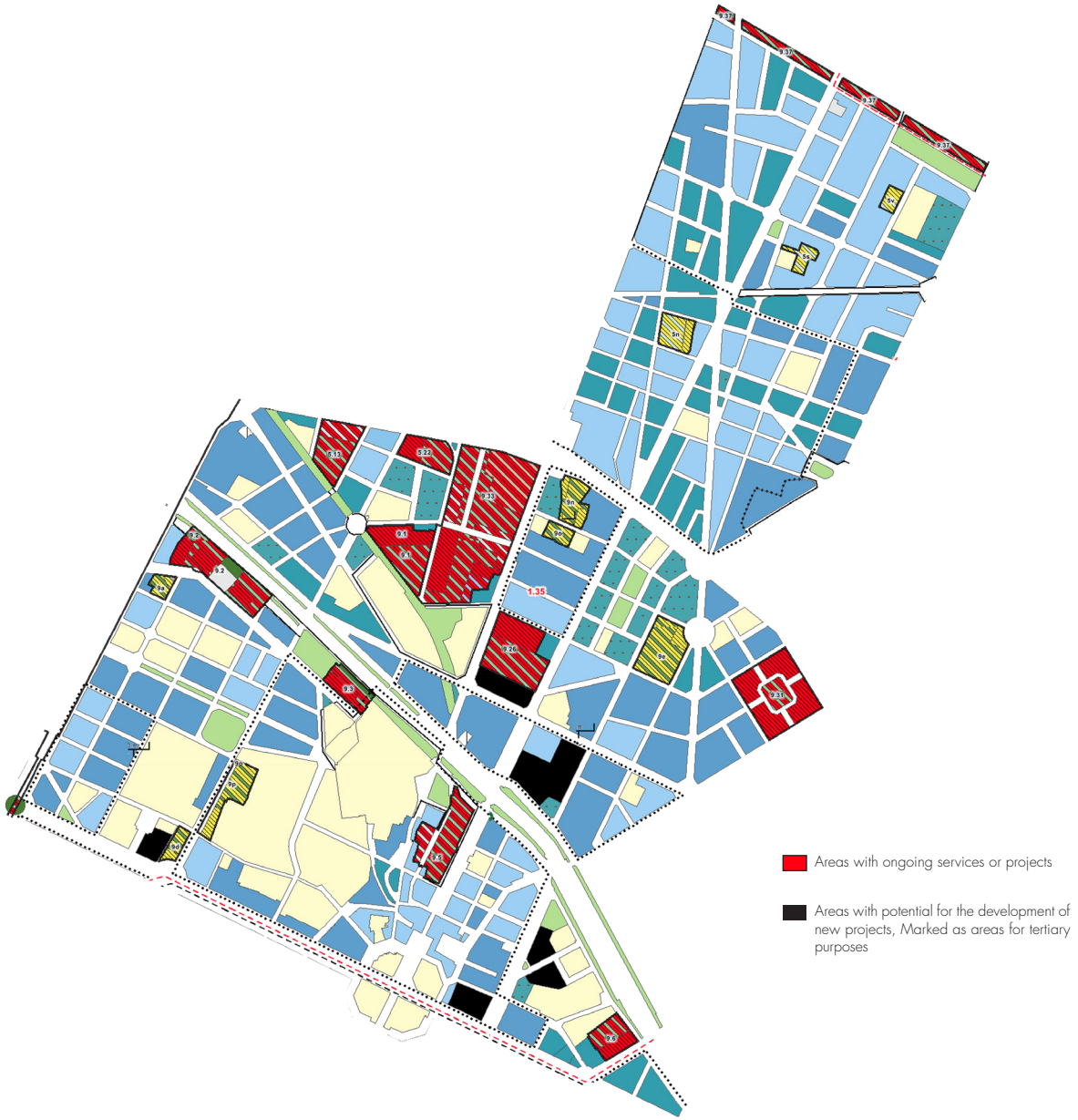


Image 57: Municipal Zonning
Source: Comune di Torino

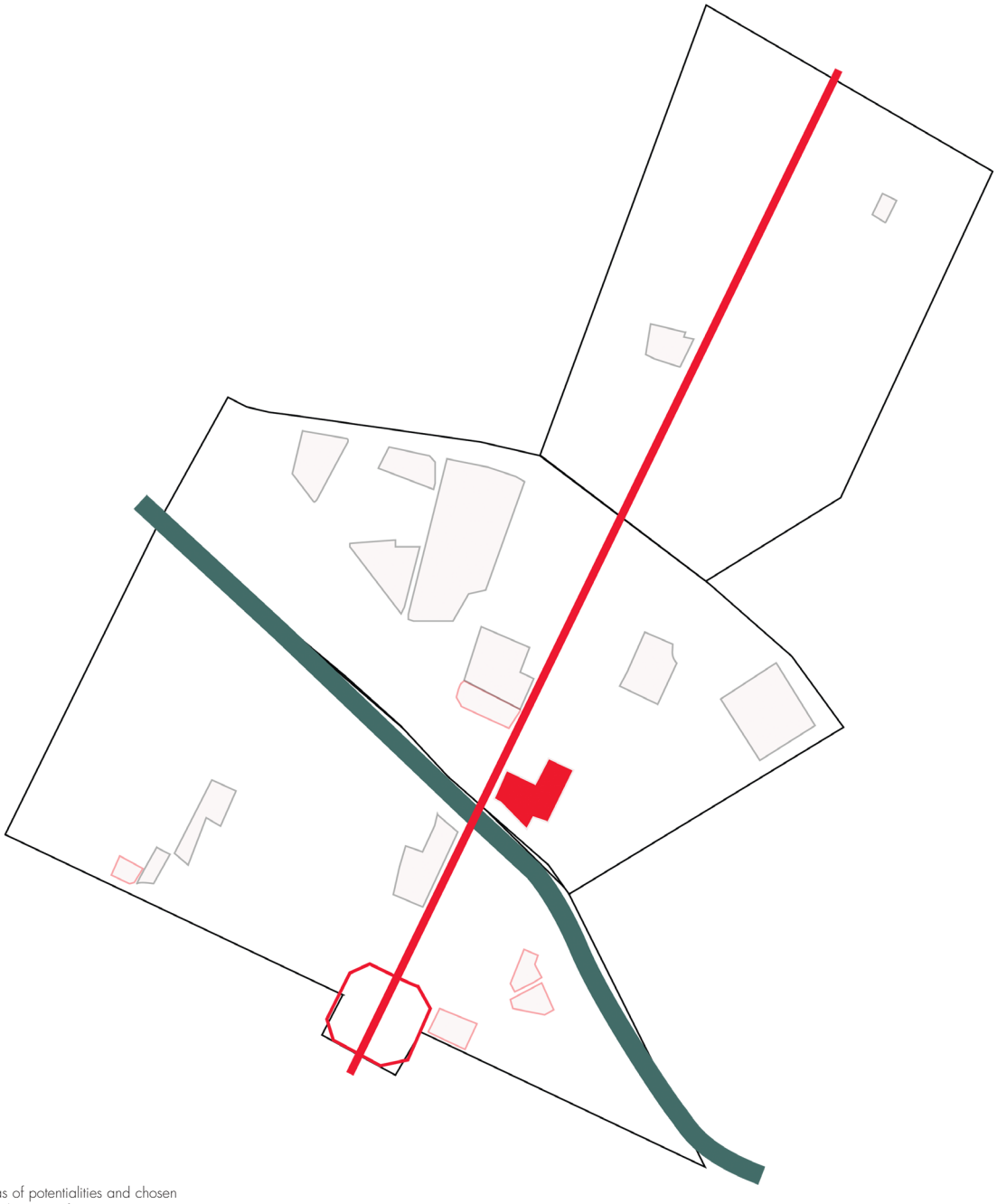


Image 58: Areas of potentialities and chosen area for the development of a project

Image 59: Aerial view of study area
Source: Google Earth

Development plans that follow the "Piano Regolatore Generale" for the area contemplate urban regeneration of areas formerly used for industries. The end of the 1970s brought radical changes to the city due to the dismantled of many industrial sites. The General plan in force foresees a urban regeneration projects for abandoned industrial spaces. There are other areas that do not contemplate specific future developments and are defined as areas for the tertiary sector. (image 57). Imagining the development of a project that meets the necessities of those living in the area and that meets the requirements of the municipality is not hard. The tertiary sector is made up of various areas that include services. Within these areas, activities and personal services that aim to improve the quality of life of citizens are not only allowed but encouraged. One specific area stands out for the exploration purposes of this work (image 58). This area is physically linked to more than one of the aforementioned city boundaries and appears as a morphological void in its context.

CHAPTER III

THE SITE AND ITS CHARACTERISTICS

"The task of the architectural project is to reveal,
through the transformation of form, the essence of
the surrounding context"

- Gregotti, 1982

The site chosen for the design exploration represents a void in the context and in the social history of the neighborhood. It is located within the enclave studied in the precedent chapter, between the natural boundary defined by the the River Dora. Morphologically the site presents various challenges: a level change that divides and unlinks the area with the main road (Corso Giulio Cesare), a cruciform building towards the southern edge of the intervention site, a consolidated residential and mixed use building complex in the northern side of the area and deteriorated – abandoned buildings in the northeast corner of the site. What is more, the site also presents many challenges related to its social history and use. It has been abandoned for more than 20 years. Even though it has been used informally as a common space, and in fact in some mapping resources the site is marked as a local park, the current spatial situation has made the place dispose to deal with many problematic situations: drug smuggling, insecurity, homeless occupation, delinquency and perception of insecurity.

For the development of the project the physical dimension of the site and the social dimension of it are analyzed first. The result of the study materializes in the next chapter into a 9-buildings complex.

Image 60: Site and its surrounding
Source: Google Earth

Physical Characteristics

The intervention area is located within the enclave studied in Chapter II and its closely related to the natural boundary marked by River Dora. Its limits are Corso Giulio Cesare to the West, Corso Brescia to the North, Via Aosta to the East and Lungo Dora Firenze to the South. The highest point of the area is found in the corner of Corso Giulio Cesare and the lowest one towards via Aosta. This level change is progressive within the terrain but has an abrupt rupture when it meets Corso Giulio Cesare. The area presents build elements with different morphological characteristics. Along the main Corso, the residential and mixed use building complex of Palazzo Grassi (built in 1912) has a strong presence with four rectangular buildings, three of them separated by two courtyards and a last one that follows the direction of Corso Brescia, each building composed by six floors. Along Corso Brescia a set of buildings characterize the northeast corner of the site, the majority of this buildings are underused or abandoned and in terrible conditions. The southern edge of the site is characterized by the presence of a cruciform residential building that defines the corner and stands out for its particular form. The area of the site is 17 308 m2. The big dimensions

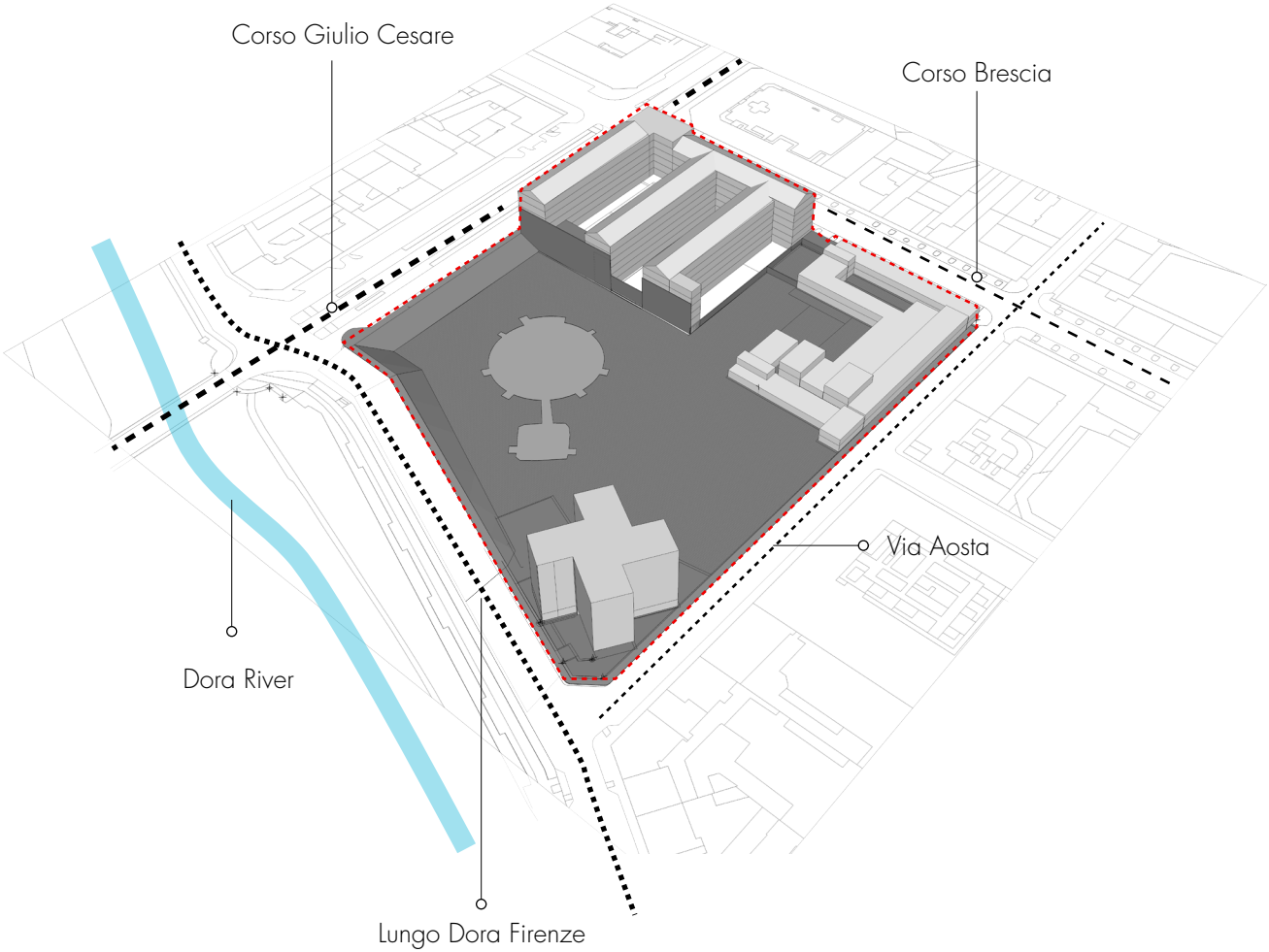


Image 61: Site and its surrounding

of the lot and the surrounding fences of it makes allows the presence of one entrance towards Lungo Dora Firenze and one towards via Aosta. Parking spaces in the street surround the area.

The level change in the terrain opens opportunities for the generation of links between the main street and the intervention area itself. This situation also allows to think about the possibility of generating volumes that relate to each other in visual ways. The enhancement of visuals towards the river is potentized also by the level change. The abandoned buildings that present a situation of deterioration need to be addressed. These volumes lack a define character and their state adds to the poor image the area has in the neighborhood.

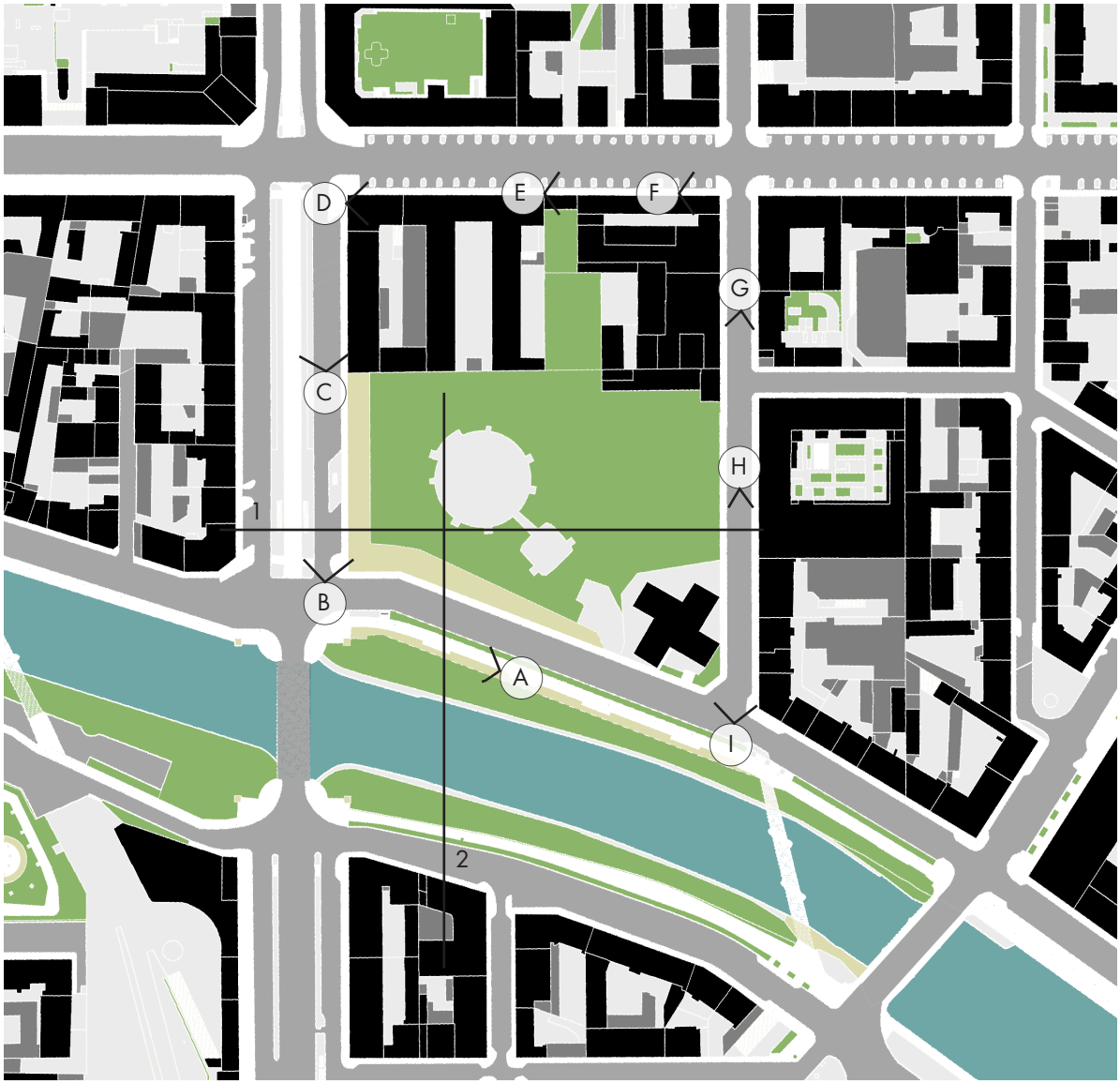


Image 62: Site and its surrounding

Image 63: Site and its surroundings
Source: Google Earth

Image 64: Site and its surroundings
Source: Google Earth

Image 65: Site and its surroundings
Source: Google Earth

Image 66: Site and its surroundings
Source: Google Earth

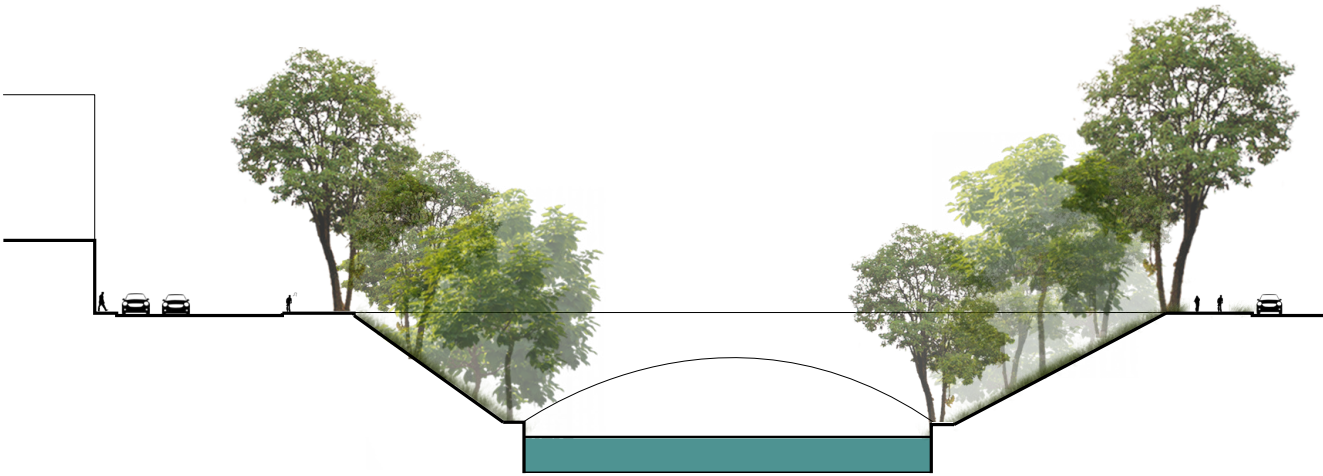


Image 67: General Site Section 1

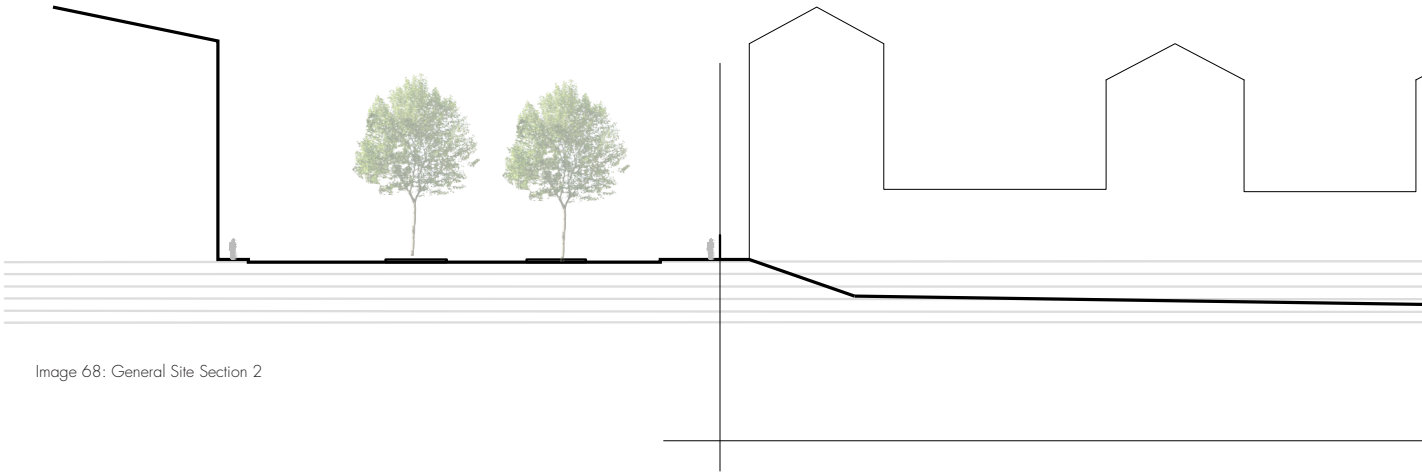
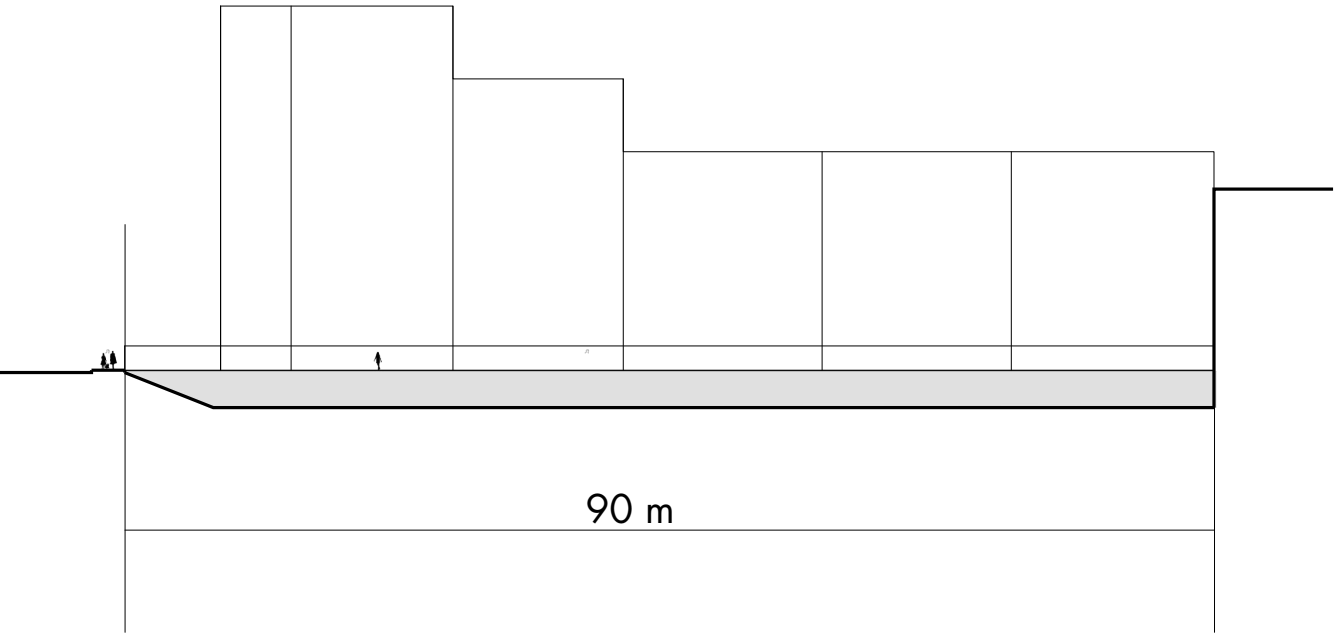
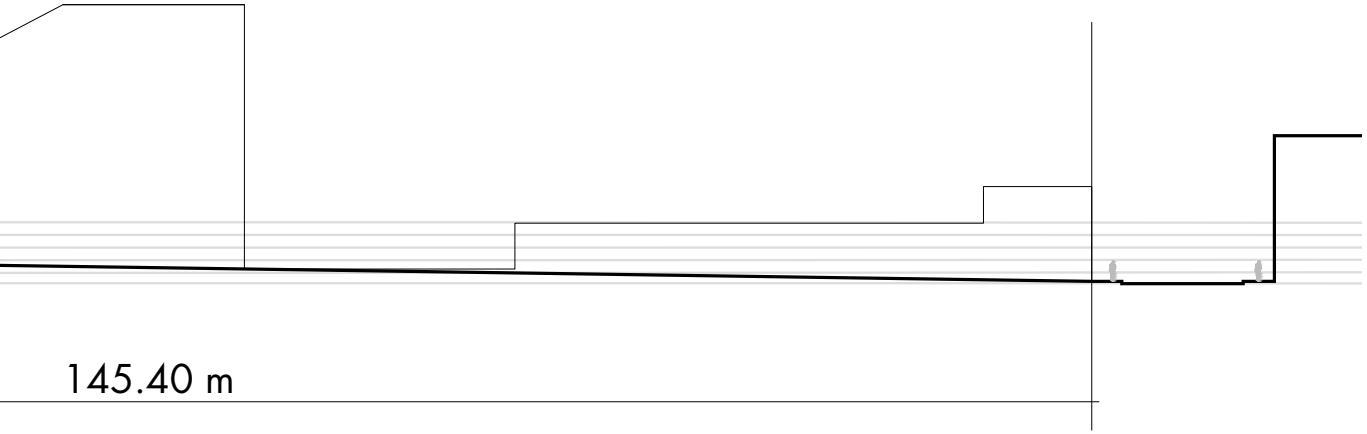


Image 68: General Site Section 2


90 m


145.40 m

A

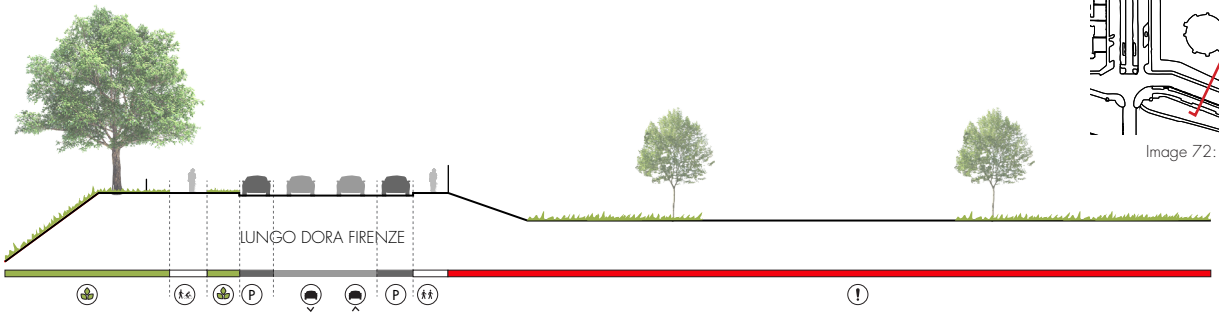
Image 69: Site and its surroundings
Source: Google Earth

B

Image 70: Site and its surroundings
Source: Google Earth

C

Image 71: Site surroundings
Source: Google Earth



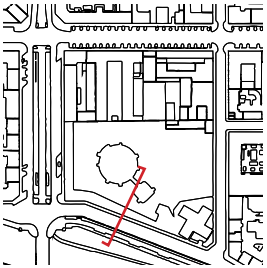
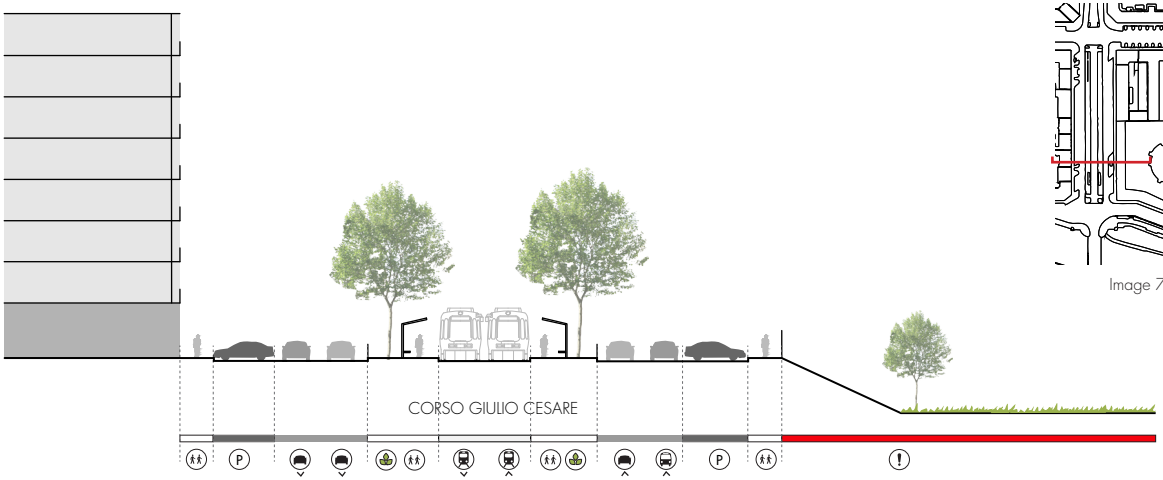


Image 72: Urban Section



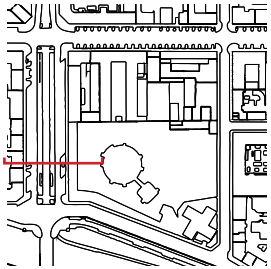
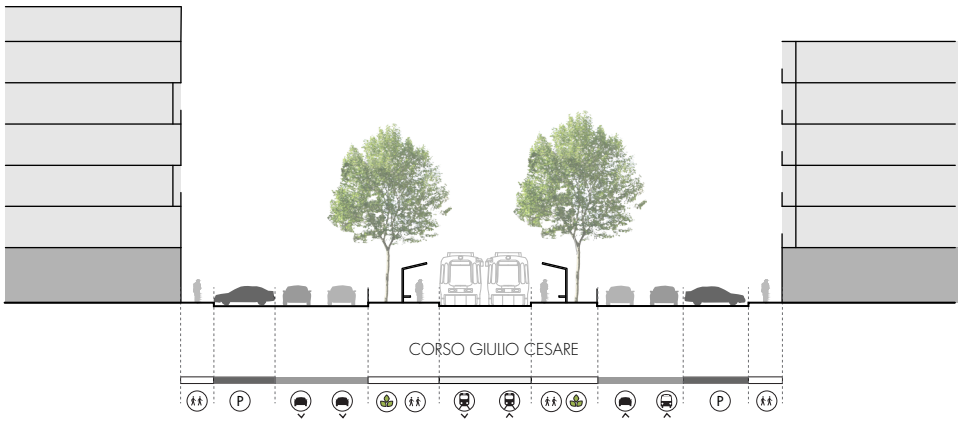


Image 73: Urban Section



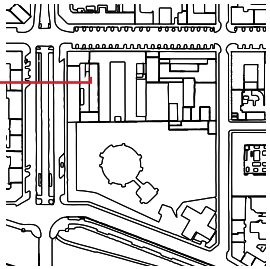


Image 74: Urban Section

D

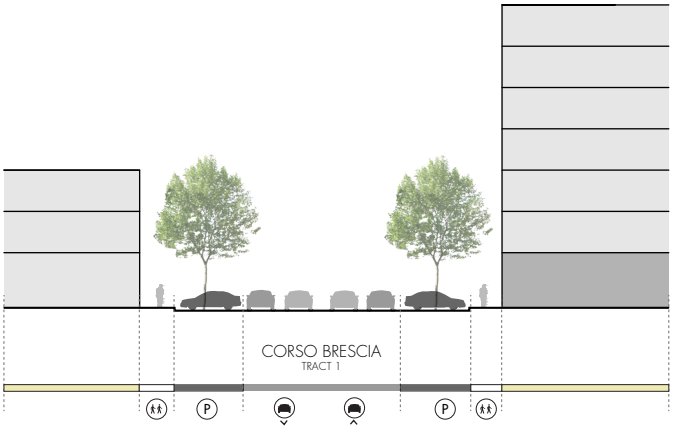
Image 75: Site surroundings
Source: Google Earth

E

Image 76: Site surroundings
Source: Google Earth

F

Image 77: Site surroundings
Source: Google Earth



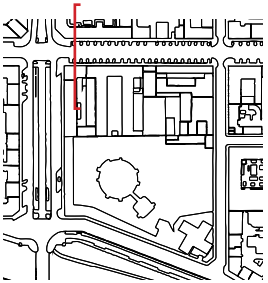
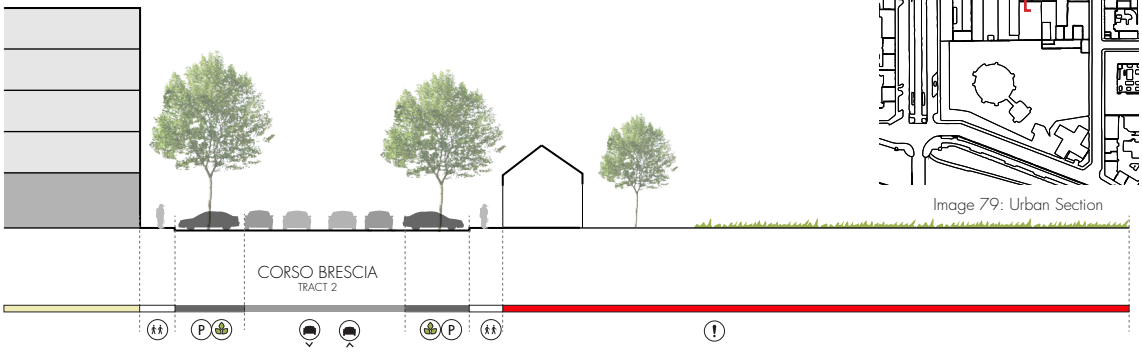


Image 78: Urban Section



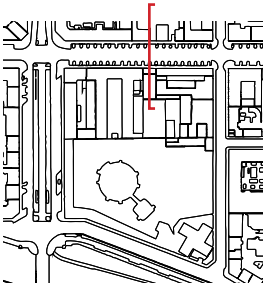
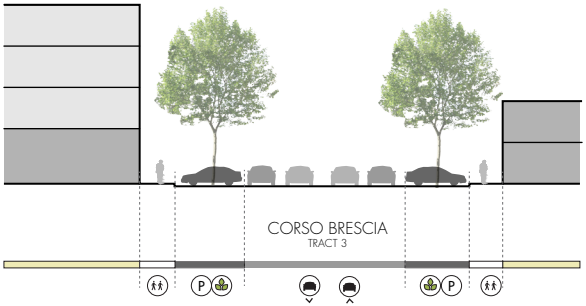


Image 79: Urban Section



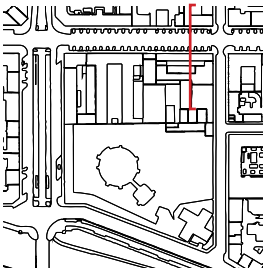


Image 80: Urban Section

G

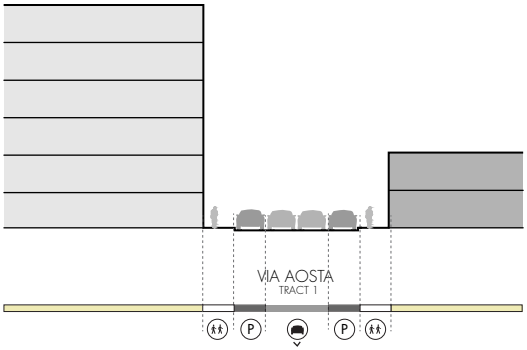
Image 81: Site surroundings
Source: Google Earth

H

Image 82: Site surroundings
Source: Google Earth

I

Image 83: Site surroundings
Source: Google Earth



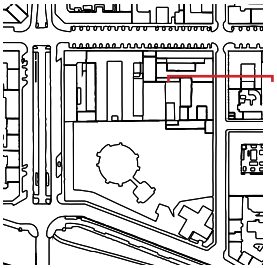
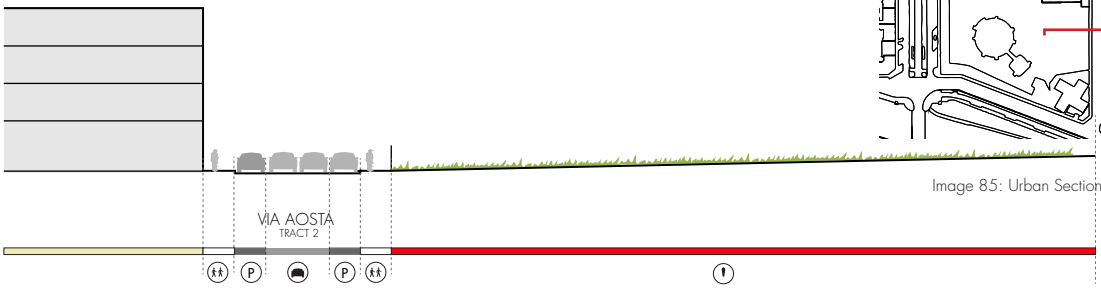


Image 84: Urban Section



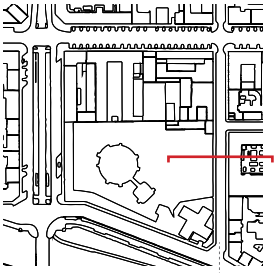
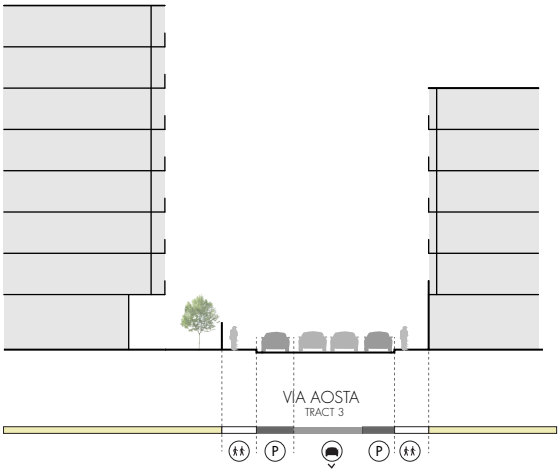


Image 85: Urban Section



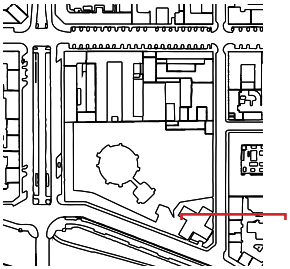


Image 86: Urban Section

The current physical conditions of the site are the result of various events that changed its morphology in time (Fabbian, 2015). The reconstruction of these changes are evident when historical maps are compared. The temporal scan of the development of the sites buildings (image 87) show how the numbers of buildings, their form, their uses and their responses to the context changed in the last 130 years.

The diagrammatic superposition of the compared morphologies (image 87a) help understand what morphological elements are constant along the years and what elements suffer greater changes. In general, the constant elements that appear are: the composition of the site's border and the consolidation of the northern corner of the site with volumes that respond to the city's typological development. What is more, with the superposition two elements stand out for its different forms. The circular concrete area in the western side of the lot and the cruciform building in the South. Both elements appear in the latest development periods and are a current and preexisting condition to take into consideration for the development of the project in the next stages of the study.

The reading of a site taking into consideration the vicissitudes of it in

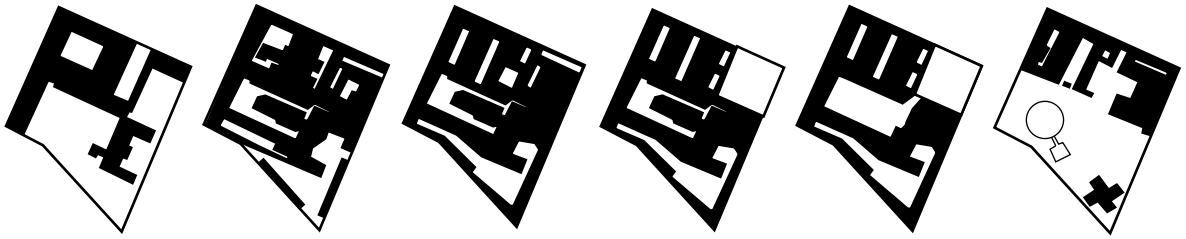


Image 87: Site's morphological transformation

time brings to light a sort of palimpsest. The term palimpsest comes defined by Oxfords dictionary in two ways: 1. A manuscript or piece of writing material on which later writing has been superimposed on effaced earlier writing. And 2. Something reused or altered but still bearing visible traces of its earlier form. The site after this analisis could be defined as the result of a long process of construction, demolitions, reconstructions, ruptures and mutations developed over time.

Many architects have already applied these definitions to architecture. Eissenman presents this type of reading in his project for Cannareggio in Venice where the project becomes a text open to multiple readings that deals with metaphors, history and memory. (Corbo, 2014)

The dissection of this piece of city and the understanding of its immediate context, in formal terms help the development of ideas that unify the elements of the site with diverse features while respecting the identity of what was generated in time. This formal exploration was useful to understand the site's architecture as a sequence of events. In this sense, it is possible to imagine that the response for the site's conditions need to be a sensible one. Sensible to the local differences while maintaining an overall stability. (Allen, 2009)

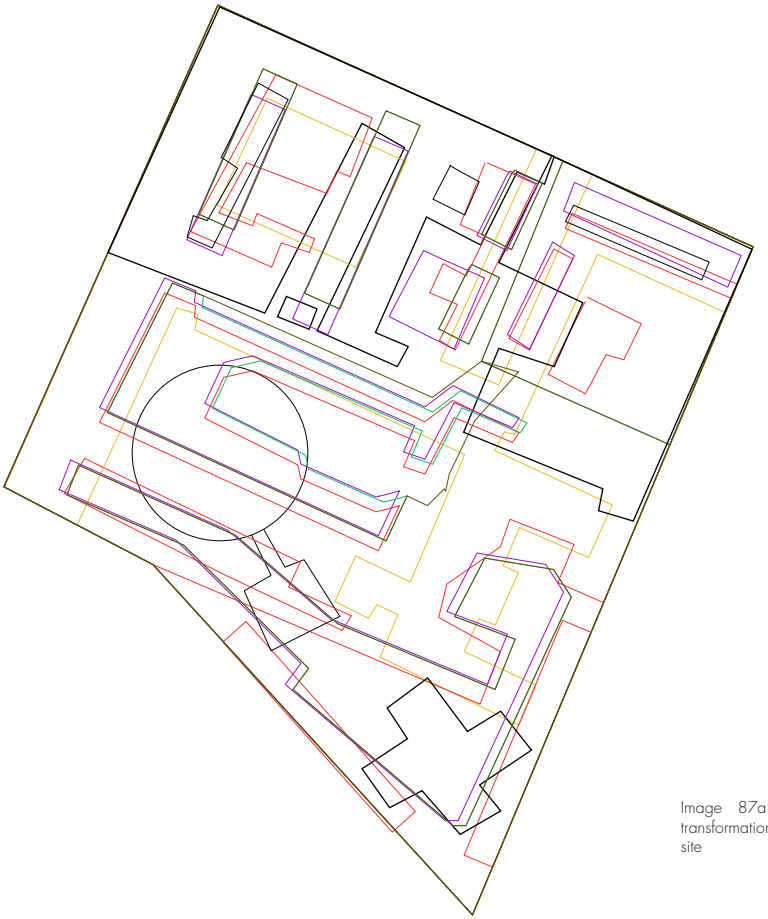


Image 87a: Superposition of formal transformation. Palimpsest reading of the site

Social and Functional Characteristics

As argued in the second chapter of this work, the social dimension of the city refers to the way people behave, experience and live the city. This definition can also be applied to smaller scales and so will be done in the following section. The study of the social characteristics of a place involves understanding the character of urbanism as a way of life or as urban sociology. (Mele, 2013) As for the current social situation of the intervention site, its special conditions made the place disposed to deal with many problematic social situations like drug smuggling, insecurity, homeless occupation, delinquency and a high perception of insecurity in the area.

Jane Jacobs defines with simple terms what a successful and an unsuccessful neighborhood is. She argues that a successful neighborhood is a "place that keeps sufficiently abreast of its problems so it is not destroyed by them." On the other hand, an unsuccessful one is "a place that is overwhelmed by its defects and problems and progressively becomes more helpless." (Jane Jacobs, 1961) In the site the tendency goes towards the second definition and this is a problematic that needs to be addressed.

The intervention site lacks a defined use. The space can be defined as

Image 88: Existing social interactions in the intervention site

an informal space. Spaces that are seen as empty and meaningless by authoritarian figures as a result of their 'temporary absence of attributed function,' (Tonnelat, 2008) These comes as a consequence of the social and historical events summarized in the following timeline.

The site hosted the Gilardini factory from 1876 and for almost 70 years. In 1943 the factory was hit by a Bomb that damaged a great deal of its infrastructure. Even though restructure works were done to the building, it remained unstable. By 1955 the site became property of the Provincia di Torino (Citta Metropolitana) and its functional use change from industrial to Educative. For other 40 years, the School Aldo Moro and Leonardo DaVinci function in the site. In 1991 due to structural instabilities the schools are demolished and the site becomes a void in the area. In 1997 some project proposals for new headquarters and administrative offices are generated but failed. Another attempt to give the site a use came in 2009 but failed again due to a lack of financial resources. After 20 years of abandonment, the citizens of Circozcrizione 7 requested a portion of the site to be destined to the generation of ludic spaces for minority groups. In an attempt to generate

financial resources for the transformation of the site, the Provincia di Torino puts up for sale the site in 9 million euros. Also this attempt fails and the the site doesn't find private investors. In 2013 the Municipality proposes the placement of the "Mercado di libero Scambio" in the site. This proposal brought a wave of protest from the inhabitants of the area that hold the plan for the market. In 2016 the organization SERMIG was conceived a year of use of the site. The association organized a series of cultural and sportive events that included minority and ethnic groups in the site. Just a year ago, after many protests the resolution for the placement of the market project was revoked and the future of the site turned, once again, into un uncertain one.

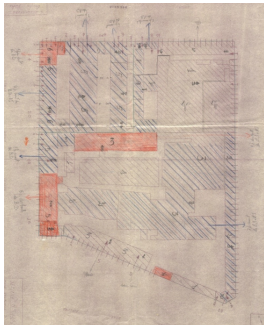
1876 The Gilardini factory is stablished in the site with 80 rooms

1943 The Gilardini factory was hit by a bomb on July 13, 1943. Of the 80 premises that made up the establishment 6 were found out, 54 were discharged. The rooftops were broken, the murals collapsed, the soles and lacquers were removed, an interior pavilion and a tectonics drifted to the then Corso Firenze (today's Lungo Dora Firenze). In September 1944, restoration operations were under way.

1955 The site becames property of the Provincia di Torino (Citta Metropolitana) and its destined to have educative use.
Scuola Aldo Moro and Leonardo DaVinci

1991 The schools are demolished due to structural innestabilities.
Scuola Aldo Moro and Leonardo DaVinci

1997 Proposal per new headquarters of "provireditorato agli Studio di Torino and new offices for the public administration. Failed.



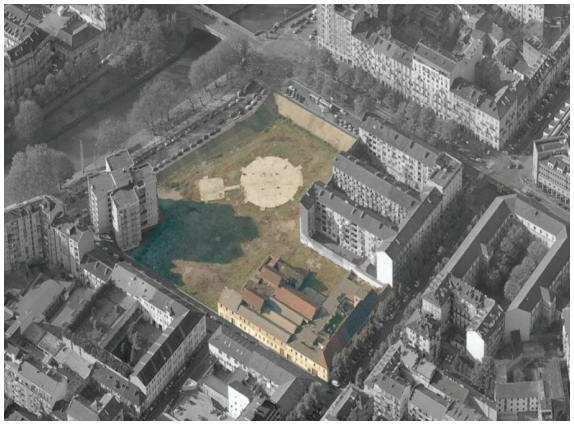


Image 89: Sites Social Timeline
Sources: Local Newspapers, Museo Torino.it

2009 — Project for a new educational center: Nuova sede della scuola Europea. Failed due to lack of money.

2010
2011 — Project for a new Administrative center. Request by Circozcrizione 7 for the destination of a part of the area for ludic activities for minority groups.

2012 — The area is put up for sale as opportunities for private investors.

2013 — Municipality project for placement of "mercato di libero scambio" in the site.

2014
2015 — Protests from inhabitants of the area hold the plan for the market.

2016 — Concession of site use for one year to cultural organization SERMIG. Organization of cultural and sportive events by the association in the site.

2017 — Revocation of the resolution for the placement of the market project.

Unknown future for the site.

IL CASO L'indicazione del vicesindaco Montanari che ha valutato le idee di sessanta studenti

Una nuova scuola sull'area Ponte Mosca

Concorso di idee per il rilancio del Ponte Mosca

AURORA - CIRCOSCRIZIONE 7

Ponte Mosca: il suk verso un nuovo rinvio

A quattro giorni dal trasloco del suk a Ponte Mosca si stanno affacciando molti dubbi sull'opportunità di uno spostamento che potrebbe creare diversi problemi di sicurezza e che è apertamente avversato dalla Circoscrizione 7

Circoscrizione 7/ Aurora

Il suk al Ponte Mosca, ma solo per quattro mesi

La protesta non ferma il trasloco. La sindaca: soluzione temporanea, entro fine maggio si cambia

Il ponte Mosca va al Sermig. «Ospiterà l'Estate Ragazzi»

Publicado em 31 março 2016 Visualizações: 3950

Un anno di concessione, per riqualificarla e rivalorizzarla. E magari utilizzarla per alcune attività ludiche e sociali, tra cui l'Estate Ragazzi. Dopo vent'anni di abbandono e di progetti falliti il Comune di Torino ha dato in concessione la tartassata area ponte Mosca al Sermig, aspettando nel mentre che qualcuno partecipi al bando di vendita dell'isolato compreso tra corso Brescia, via lungo Dora Firenze e corso Giulio Cesare. Un bando che in pass andato deserto più volte, tra attese e sogni infranti.

Nell'attesa di un progetto vero e proprio ci hanno pensato piazza Borgo Dora a cancellare il degrado dal cortile dei vecchi pieni di sporcizia. Giovedì venerdì e sabato scorso una cinquan ragazzi, arrivati da tutta Italia per vivere la Pasqua a Torino all' della Pace, hanno ripulito l'area che da tempo era in condizioni Con i marciapiedi invasi dai rami e dalle piante. E alcune zone ridotte a discarica. I volontari hanno anche rimosso le baracche denunciate settimane fa su queste colonne, dove avevano trov alcuni senzatetto.

cronacaqui.it

Città Metropolitana contro Comune «Non vi lasceremo il Ponte Mosca»

Images 90-93: Existing social interactions in the intervention site

From Necessities to Opportunities

It is clear that the site is in urgent need of an intervention. The quality of social lives in the city should be evaluated in part by the quality of its lived spaces. In this sense, the higher the number of enriching public encounter opportunities, the better the public life in a city is. In order for a city to evolve, differences in its demography need to be incorporated, accepted and enhanced. (Shaw & Hudson , 2009)

Morphologically the site needs a re composition of its borders, specially towards the two most transited roads that limit it, Lungo Dora Firenze and Corso Giulio Cesare. The level change in the site needs to be address, this can become an opportunity to generate open public spaces that solve the level variations. The site also needs an intervention in the abandoned buildings in its east side and the existing building in the corner of Lungo Dora Firenze and via Aosta should be intervened in an attempted to make it part of its surroundings. The nesting by importance of the necessities, both physically and socially, suggest that the project to be implemented in the area should develop in phases

The site offers, with its physical and social necessities, the opportunity to generate spaces that allow changing experiences and interactions between

the different groups living within its context. A project in the site does not only gives a solution to the existing problematic situations but works as a way of generating a sense of belonging. Multi ethnicity should be addressed and the generation of a project that dialogs with the necessities of new comers and those already living in the area serve as a platform of insertion to the city. The resilience of the site has been in pause in the last 25 years, but the social elements of the area continue to use it in an informal way, as a playground, a picnic spot, a sports court and unluckily also as a drug exchange site. (images 90-93) Interventions in these type of spaces come as a two - way process in which spaces are created and modified as they are lived.

Image 94 summarizes the conditions and potentials of the site that could be addressed with the implementation of a project that includes the functions noted in image 95.

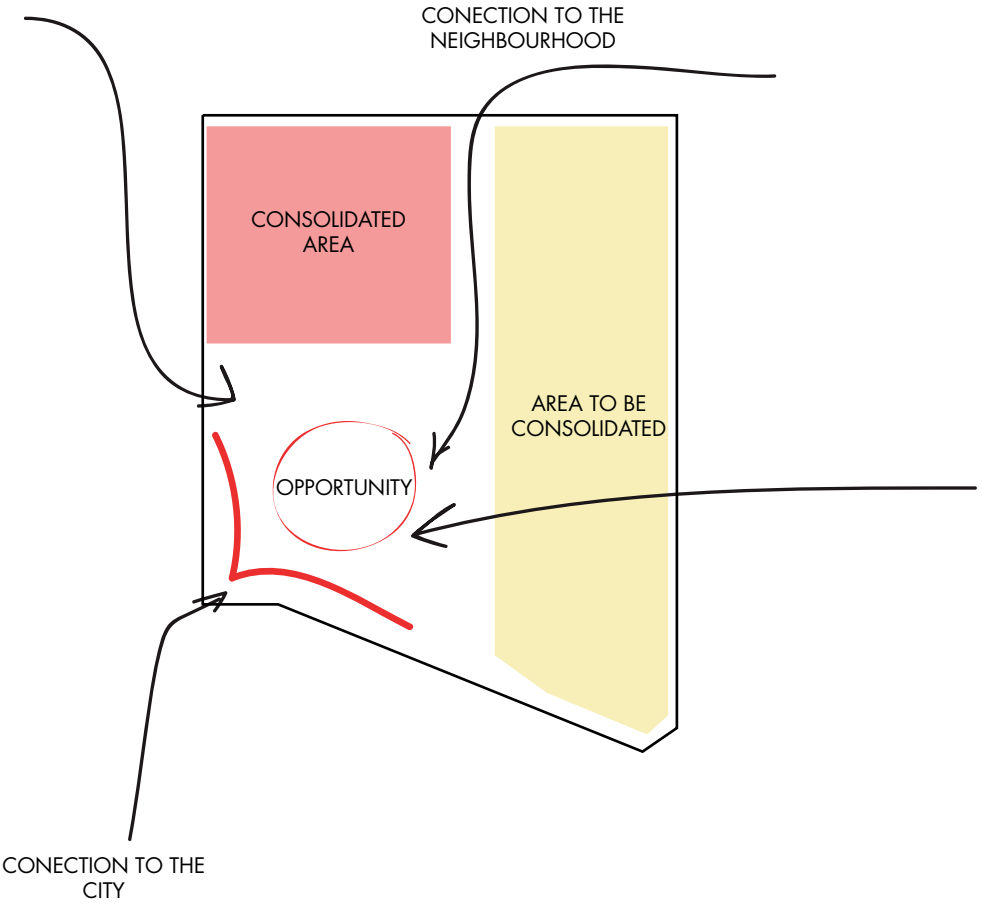


Image 94: General Schematic Approach

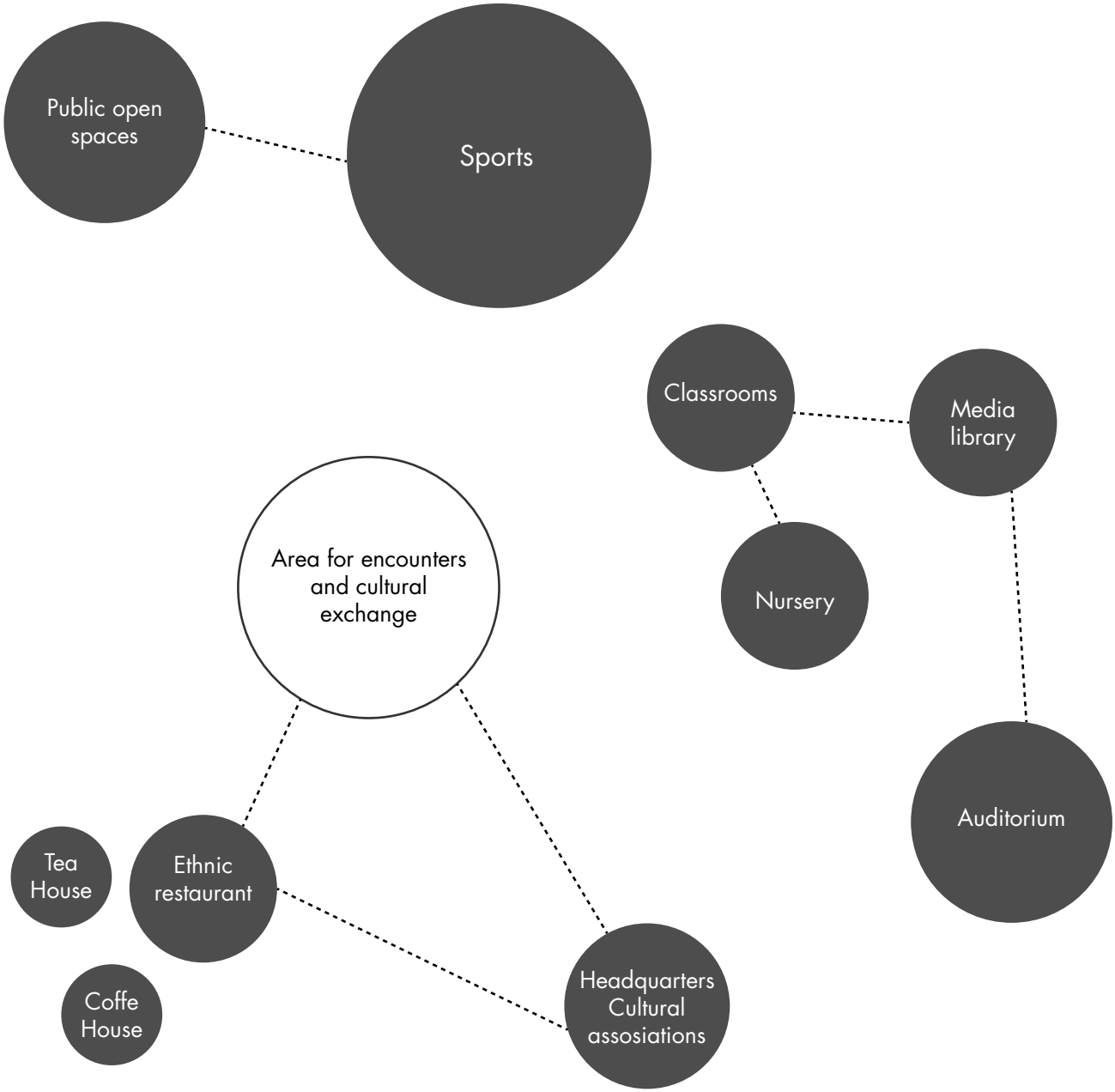


Image 95: Functional Spaces to be implemented

CHAPTER IV

TYPOLOGICAL DESIGN EXPLORATION

Type and typology become "…almost magical words which by their mere utterance yield hidden meanings."

- Bandini, 1984

The ways of approaching an architectural design assignment are infinite. For this study and taking into consideration the contextual analysis and interests shown in chapters I and II and the site's conditions analyzed in chapter III, the design strategy to be developed deals with types and the technique of collage. The strategy developed and presented in this chapter involves the recognition of how far functional types correspond to morphological types. This exploration is an attempt to use form not as a fixed representation but as a field of possibilities where internal forces of chosen morphological types and exteriors constraints of the context meet. The expanded limit of the contemporary city calls for new spatial compositions. It is in the places where a limit is found where the displaced fragments that have no relation with the existing organization appears. The chosen intervention site sharply meets this description. And the explored designing approach to be shown responds to these conditions with a building complex that addresses morphological and functional or social necessities in the intervention site. The complex has the potential to develop with time into an including, safe space for citizens and new comers.

Typology and its design potentials

The term typology refers to the comparative study of physical characteristics of the built environment into distinct types. "This concept has changed during time, based on methodological and historical interpretations and the importance of the study of types and typologies resides in its potential to enhance our understanding of architecture within its historical and socio-cultural environment." (Guney, 2007)

In typological reasoning, the classification of phenomena enables multiplicity to turn into unity.

These definitions have been applied to architecture and to the study of cities as a way of understanding the basic language or essence of these fields. (Guney, 2007)

Within architecture, two main common schemes used for the typological classification of elements has been used: morphological and functional ones. Typologies and the debate around them has been concern with how far functional types correspond to morphological types. (Forty, 2000)

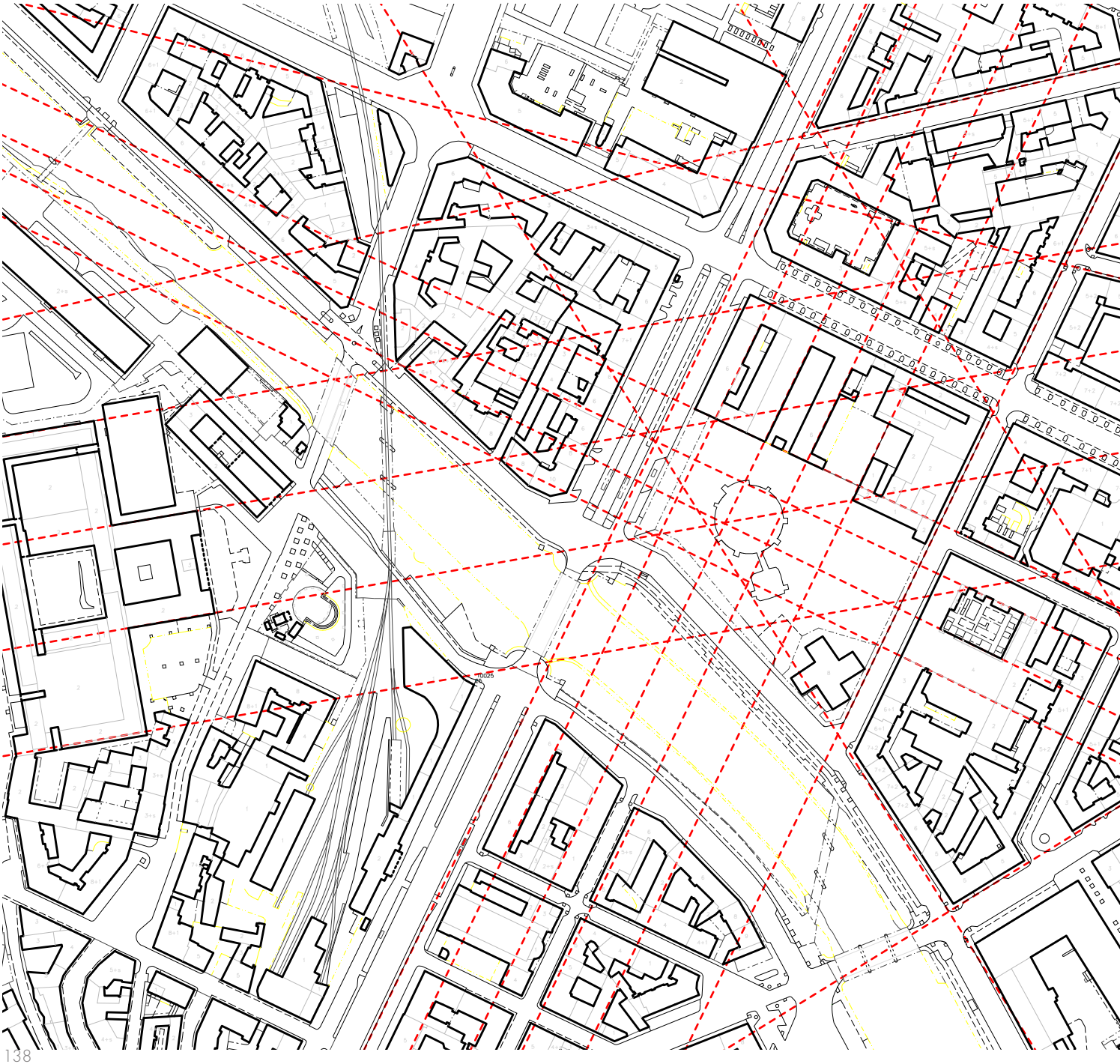
One interesting way of defining type comes from recent studies made by Petruccioli in Italy where he defines type as more than "… a manipulation of form or a banal classification of functions, but a universal concept manifested

in built forms that are rooted in a historical process and social behaviors." (Petruccioli, 2007)

Many different variations of building types can be found within a city making evident the typological process of evolution of it. Specific urban developments reflect historical processes in cities. In many cases social dynamics has shaped the variations of cities development and its effects had become formal with time. (Hinse T. , 2014)

In architecture typologies come with limitations. What is interesting about this definition is the duality it has in becoming at the same time an object of liberation and an object of constrain. In this sense, site and programmatic aspects of a building provide constrains that make a design process easier. (Douglas, 2002) This is exactly what the design exploration aims to.

In the 1970s and 1980s a shift in the way architecture was conceived made typologist argue that almost every spatial problem has been solved in the past and that with the study of types one can achieve the solution to new architectural difficulties. (Krier, 1992) Here however, the reference is made just to functional types. The potential of using typologies as a strategy for design resides in the believe that for some aspects types are indifferent



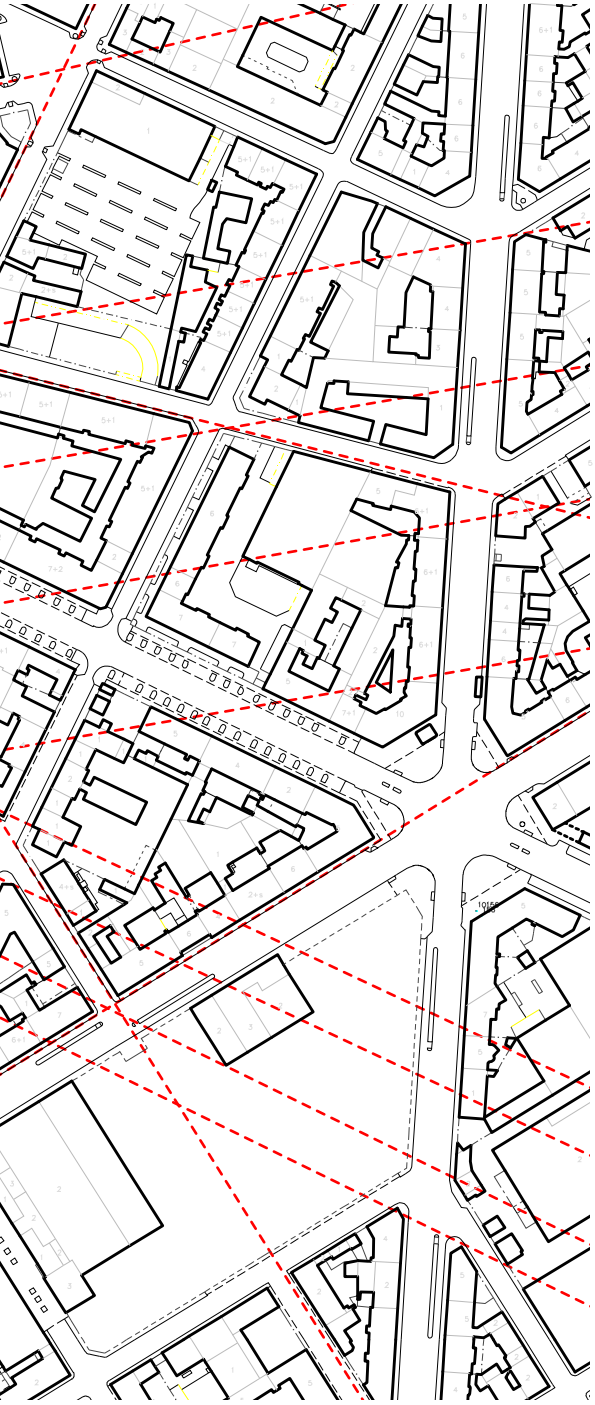


Image 96: Main context constraints

to their functions. In a continuously changing context the interpretations of how to intervene with a design project are innumerable and the success of a project resides in how perceptive the result is towards the necessities of those who will use and live in the spaces created.

Aldo Rossi is well known for his attempts to illustrate his concept of the ever- changing nature of the city, "where the form of the city is determined by the historical imagination—collective memories, places, and buildings." (Szacka, 2015) Rossi's theory about the city discussed in his book "The architecture of the city" can be summarized with the statement: "l'architettura sono le architetture", with this he sustains that all architectures are made of the sum of other architectures which are located in a historical lineage. Rossi also argues that typology serves as the technical base or the structuring element of the ever – changing city. (Rossi, 1984)

The next section of the design exploration lands the definitions and concepts of typologies as elements that generate city, in the intervention site taking into consideration its context with constrains that follow street system axis, important buildings axis and existing morphological elements of the site. (image 96)

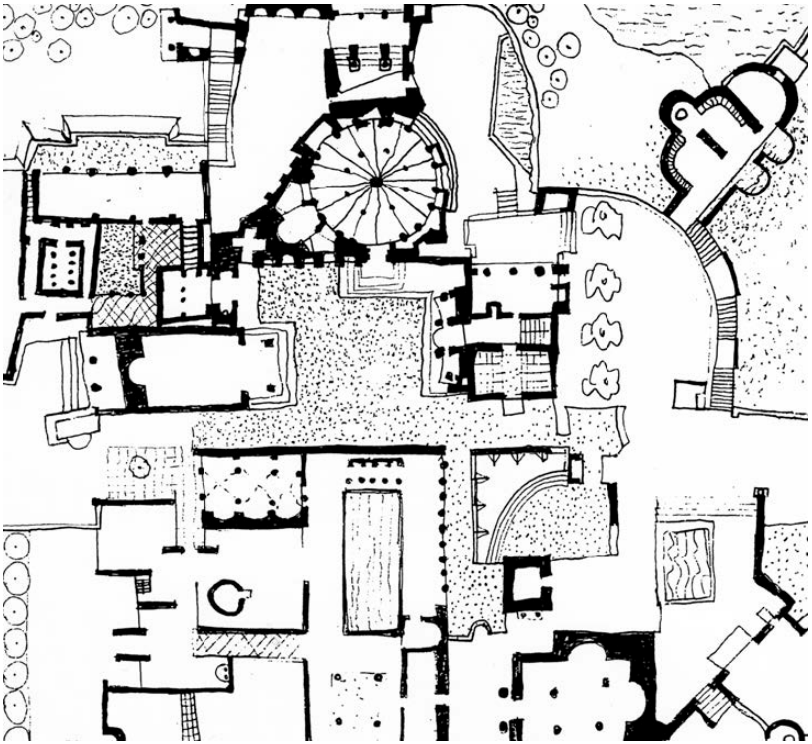


Image 97: PLan Game. Colin Rowe, John Hejduk, Robert Slutzky, Werner Seligmann, Lee Hirsche, Bernard Hoesli, Lee Hodgden and John Shaw, Plan game.
From Bernardo Secchi, Collage City (Secchi 2010).

Collage as design approach

The technique of collage has been used as an approach to design that combines pictorial motifs and fragments from disconnected origins. The mix of these elements give origin to a new synthetic entity which also brings new roles and meanings to the parts involved. The interesting results of the technique come with its suggestions of new analogies, temporal durations and narratives. With these technique, the elements lead double-lives. The used elements are "suspended between their original essences and the new roles assigned to them in their new ensemble" (Pallasma, 2014)

Collages tend to have the capacity to stimulate imagination since they incite the creations of non-linear narratives even when the pieces come from recognizably different origins. These definitions work very well in architectural contexts. Various scholars had also played with collages as a mean to reflect about architectural and urban theories.

Collage city by Rowe and Koetter highlights the definition of collage in urban terms and as a critic to theoretical positions. On one side they argue there is an excess of fantasy and imagination and on the other one, an abuse of 'reality' and 'materialism'. (Rowe & Koetter,

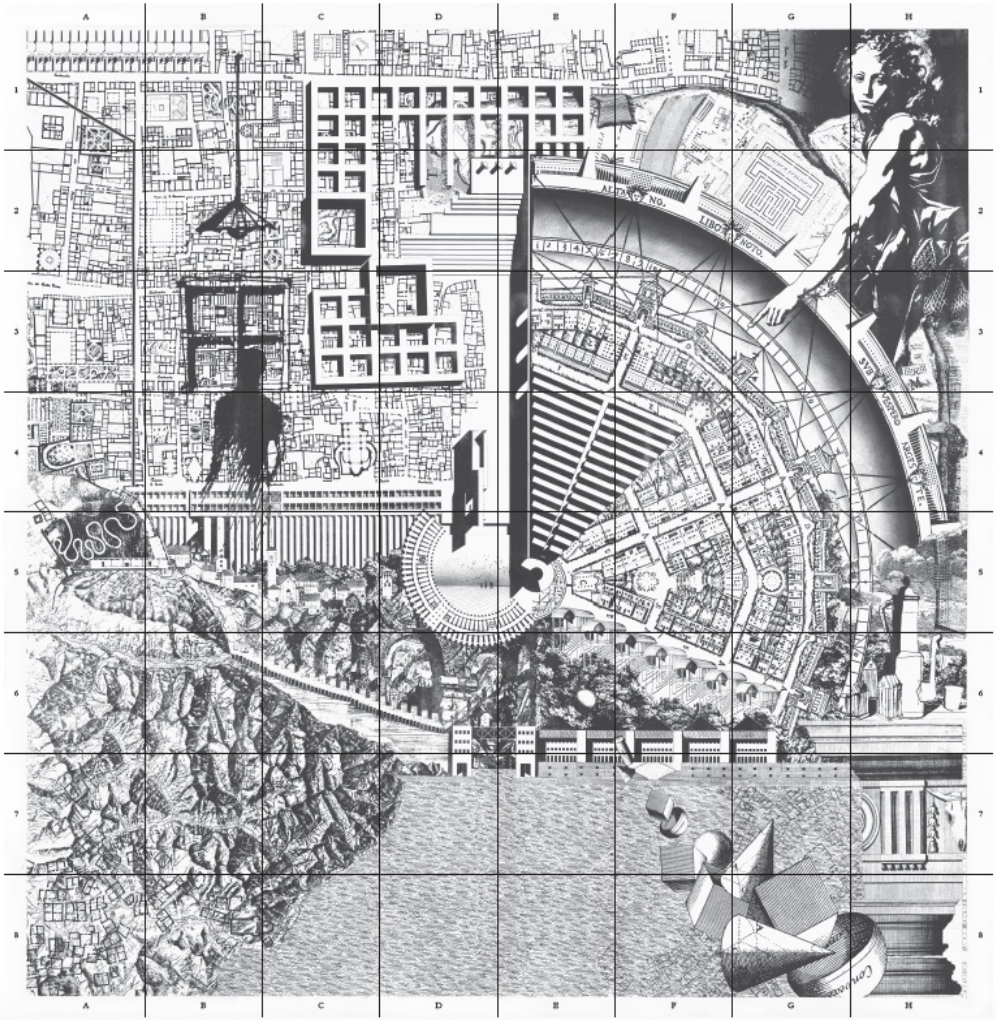


Image 98: Citta Analoga, Aldo Rossi
Source: The analogous city map MAP by Dario Rodighiero

1978) The concept of collage city comes from these reflections as one poetic image of a city that guarantees a strong relationship between project and historical tradition by using and assembling new realities with pre-existing forms. (Mozzato, 2016). Aldo Rossi also worked with the concept of collage for his work "la Citta Analoga". For this project there is not structured theory since Rossi claimed that explanations for it were not necessary. The collage result I this case (image 98) consist of prefixed figures that express either geographical or historical dimensions of collective memory. In this sense the citations of other projects become a figurative instrument and an analogy that links memory and historical reality to imagination and fantasy. (Mozzato, 2016)

The design exploration

The theoretical part of the study gives a base for the the proposal done in the design exploration. So at this point, the design exploration becomes an excuse to prove that of the concepts studied until now were understood.

The design process started with the definition of a typological figurative code linked to specific typological elements. These items are used for the generation of a collage that allowed the imagination of spaces in the site. The collage exploration involved the recognition that morphological types do not necessarily correspond to functional types. In this sense, the experiment pushed to unlink the preconceived idea one has about specific architectural objects that are linked to history and see this elements as mere figurative codes that solve specific necessities when used in the particular context of the site.

The collage serves as a base that defines general morphological pieces that explore form not as a fixed representation but as a field of possibilities that respond to internal forces found in the form of the chosen types and the constrains of the context identified in previous chapters.

The result of these composition represents the base for the development of a 9 building complex that satisfied the morphological and social necessities

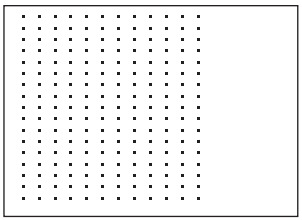
found in the area.

The border re composition of the site is addressed in different ways depending on the surrounding: towards Corso Giulio Cesare with a 6 floor building that follows the fabric line of the buildings along the road and creates spaces for commerce in the ground floor and residences in the top floors. Towards Lungo Dora Firenze, platforms and stairs recompose and solve the problems generated by the level change. These open public spaces generate social encounters and increase the internal connections in the big lot. Along this open spaces a rectangular element aligned to the building located in the Southern part of the site appears as a response to the river. Spaces for cultural and ludic activities are design inside these building. Along via Aosta a 6 floor high residential tower responds to the existing building placed in the corner. A two floor height volume is placed along the same border and its functions correspond to the media library. The old deteriorated buildings in the eastern corner of the site are replaced with a new building that creates spaces destined for gym purposes and a sports courtyard. One last volume is placed along the border towards Corso Brescia. This element explores terms of flexibility in the sense that the services areas are design and fixed elements

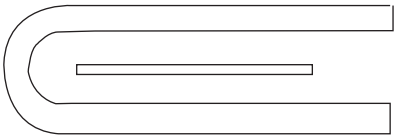
and the rest of the space is left to be defined by the uses to be given with time. This element could be used as an event center, multiethnic restaurant or cafeteria, etc.

The core of the site contains functional elements that provide spaces for cultural exchange, multi ethnic and inclusive activities. A community garden is generated as the predominant landscape element of the project. A cultural association headquarters building for offices and an auditorium are developed to the west side of the garden and classrooms are developed towards the southern side of the garden.

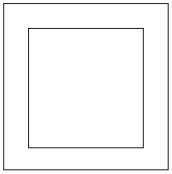
The next pages show the design exploration process and allows to understand the intervention proposed



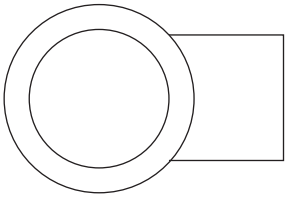
Big rectangle with internal modular pillar system
Used for cult purposes



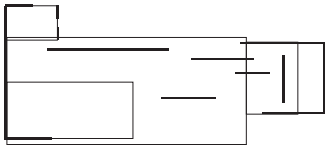
Vast open space used for spectacles



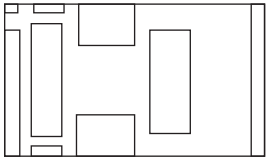
Cubic inclosed space with modular apertures
and peripheral circulation



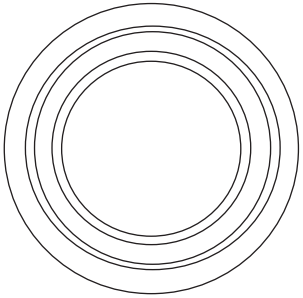
Cicular temple with one entrance facing north and zenital light



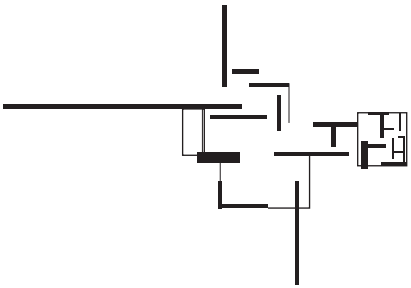
Wall system that creates modular spaces
Used for expositive purposes



Traditional Housing cell with internal courtyards



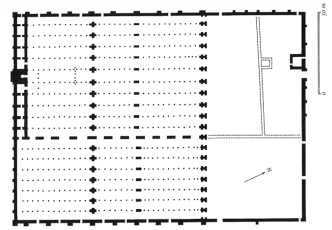
Big circular building with modular division of internal spaces
and one main axis
Used for military purposes



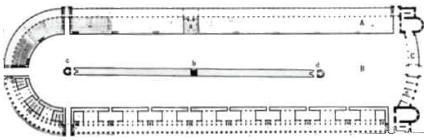
Wall system that creates external spaces
Used for residential purposes

Deconstruction of types exercise

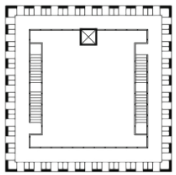
Image 99: Typological figurative code



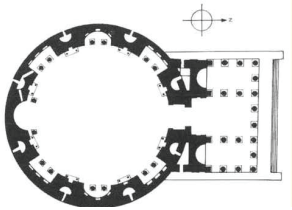
The Great Mosque as it appeared in 987 (A.H. 377), Plan
Spain, Cordoba.
image source: Columbia University, Media center for Art History



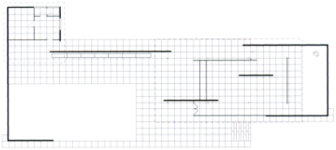
Circus Maximus, Rome



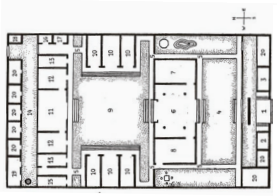
Cimitero di Modena, Aldo Rossi, 1978
Image source: ARCHITECTURE#myBook



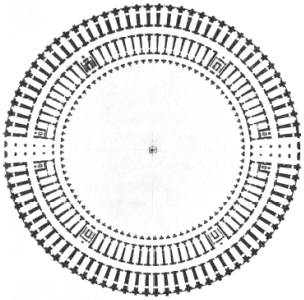
Plan of the Pantheon.
Reprinted from Frank Sear: Roman Architecture.
Copyright 1982 by Frank Sear. Cornell University Press.



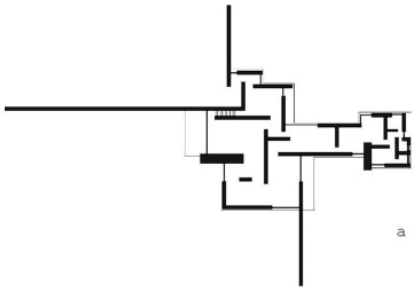
Barcelona Pavilion, Mies van der Rohe , 1929
Image source: Plans, Sections and Elevations: Key Buildings of the Twentieth Century
By Richard Weston



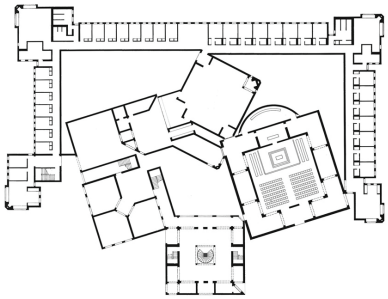
Traditional Chinese courtyard house,



Giuseppe Pistocchi, Project for a monument-barrack
on Mont Cenis, 1813
Image source: THE ANALOGOUS CITY
THE MAP by Dario Rodighiero

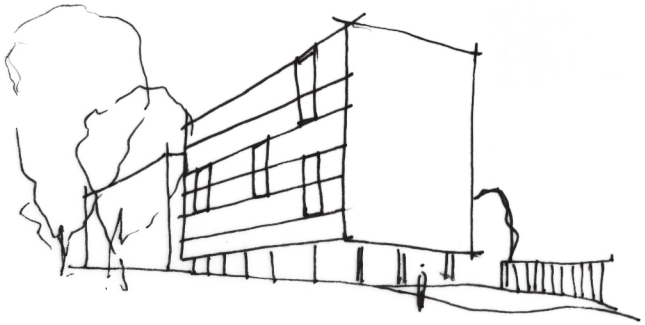


Brick Country House, Mies van der Rohe, 1924.
Image source: MoMA NY

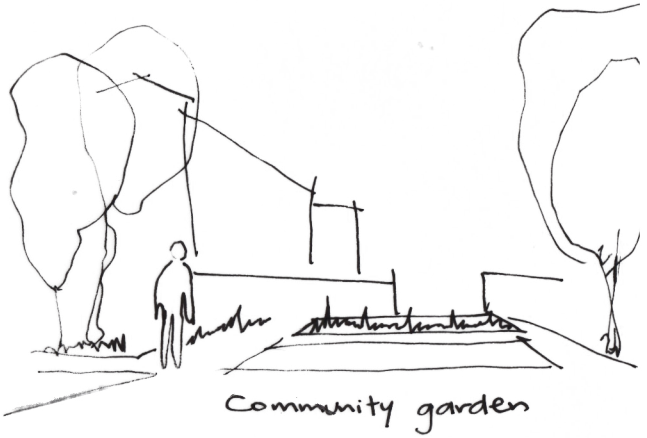


Louis Kahn - Dominican Motherhouse, 1968

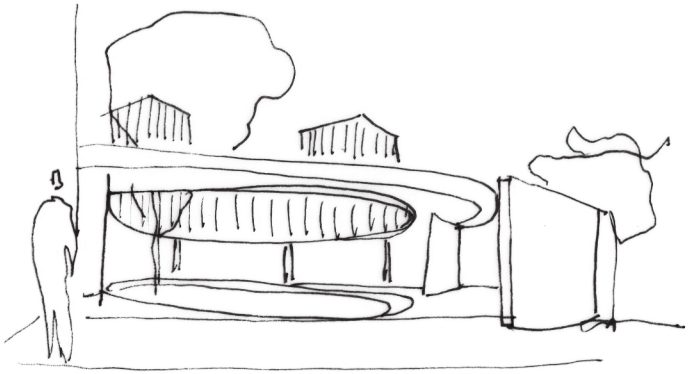
Image 100: Typologies explored in collage development



CORSO G. CESARE
Mixed-use building

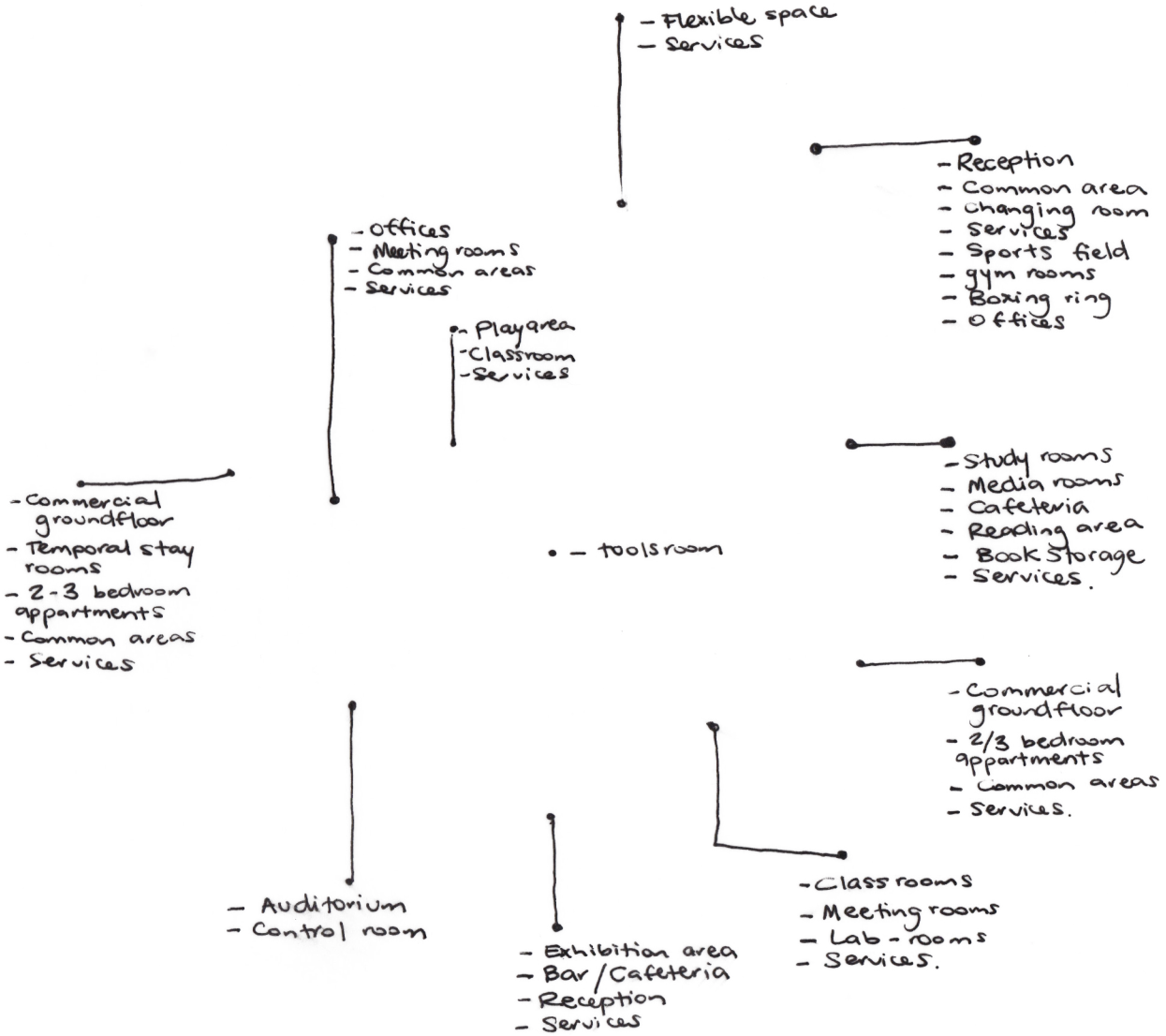


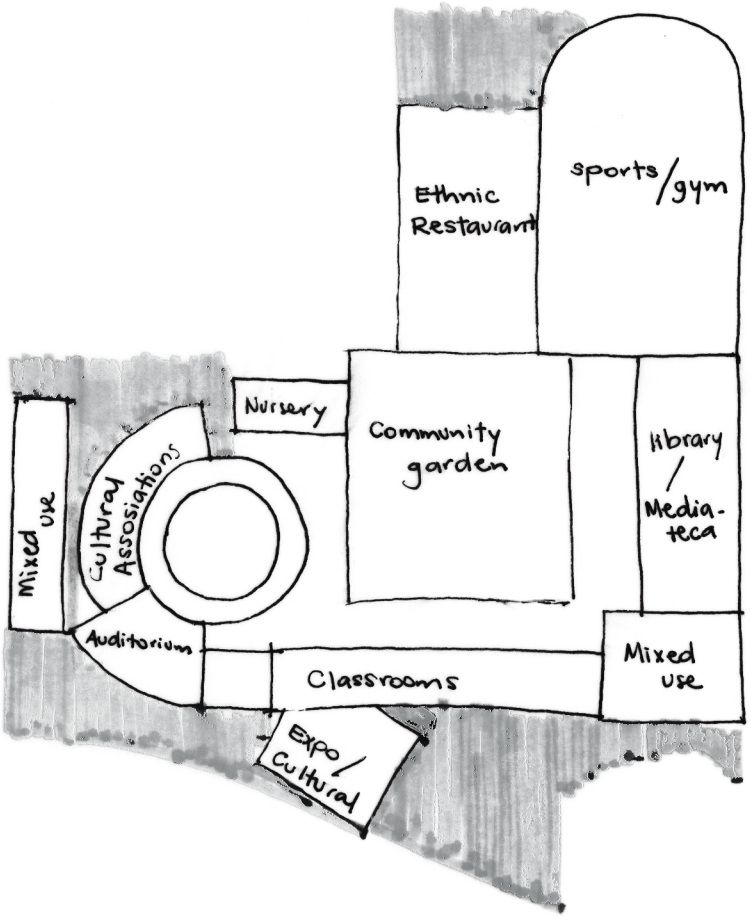
Community garden

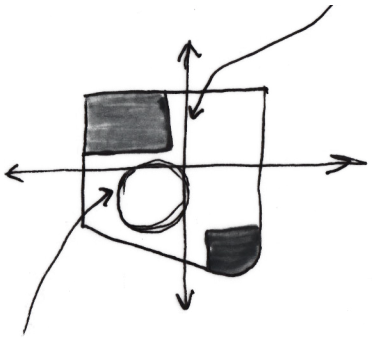


Cultural assosiations headquarters

Classrooms


- Flexible space
- Services
- Reception
- Common area
- Changing room
- Services
- Sports field
- gym rooms
- Boxing ring
- Offices
- offices
- Meeting rooms
- Common areas
- Services
- Playarea
- Classroom
- Services
- Study rooms
- Media rooms
- Cafeteria
- Reading area
- Book Storage
- Services.
- Commercial groundfloor
- Temporal stay rooms
- 2-3 bedroom appartments
- Common areas
- Services
- tools room
- Commercial groundfloor
- 2/3 bedroom appartments
- Common areas
- Services.
- Auditorium
- Control room
- Exhibition area
- Bar/Cafeteria
- Reception
- Services
- Class rooms
- Meeting rooms
- Lab-rooms
- Services.


Ethnic Restaurant
sports/gym
Nursery
Community garden
library / Media-teca
Mixed use
Cultural Assosiations
Auditorium
Classrooms
Mixed use
Expo / Cultural



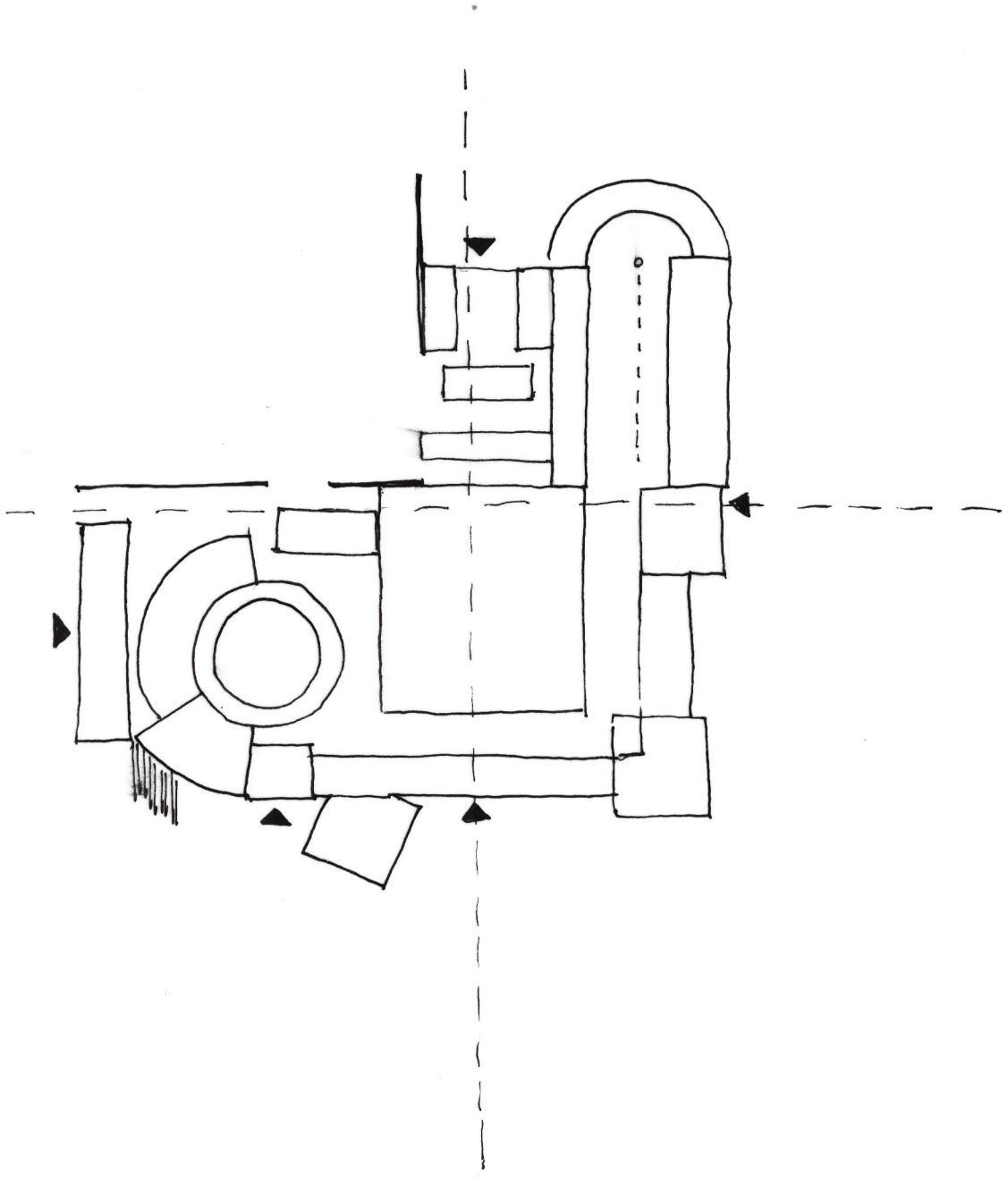


Image 101: Collage

Projects of great dimensions take time to consolidate. A project that makes a substantial difference in a neighborhood needs to be addressed and developed in phases. The “city - building” complex designed for the area and shown in this wok represents the final phase thought for it. However, the poject was reasoned in phases, not temporal ones but morphological ones. In this sense, the hierarchy of the most important parts of the complex addresses the problematic aspects generated by the morphological gap or void from early stages of the project development. With the phases strategy, the complex has the potential to develop with time into an including, safe space for citizens and new comers. Image 103 in the next page, shows the different phases of development with the intended interventions to be done in each one of them.

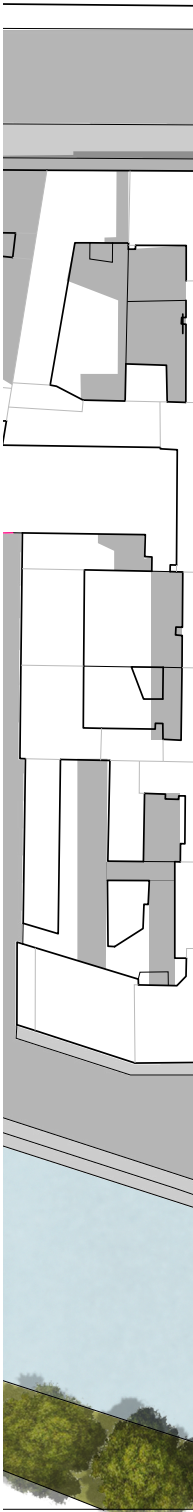
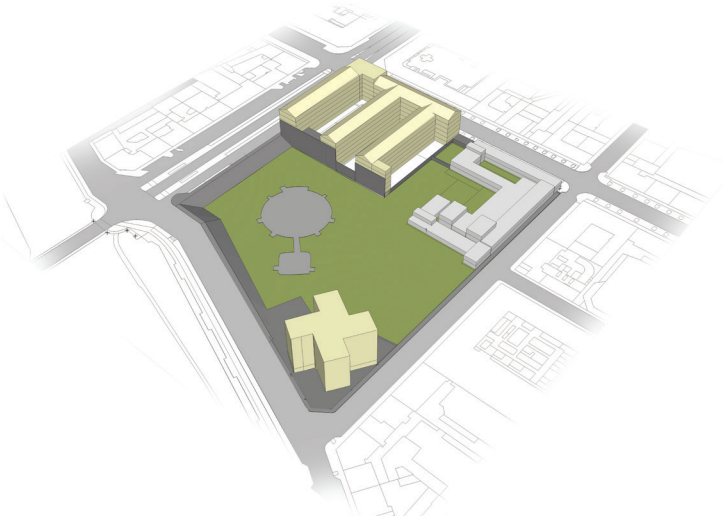
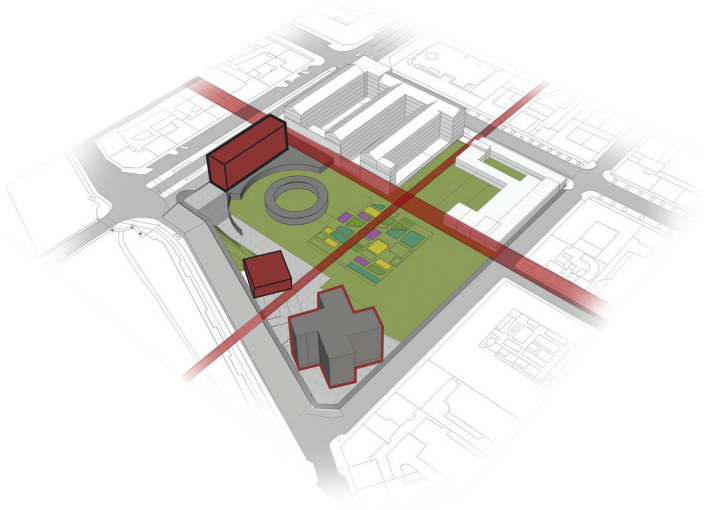
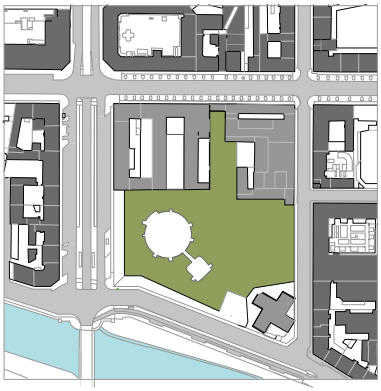


Image 102: Intervention based on collage exploration



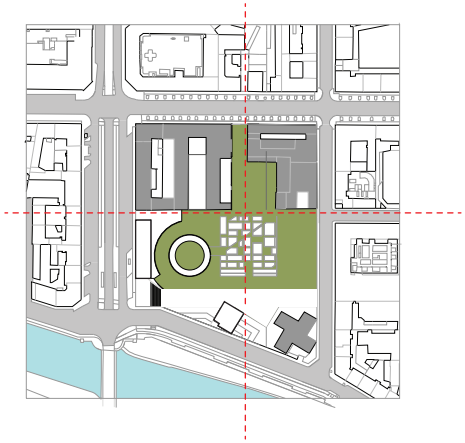


Phase 1: Current existing situation

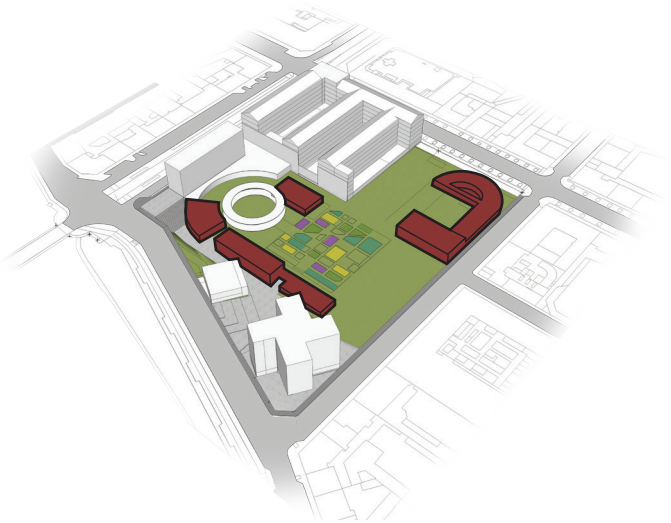


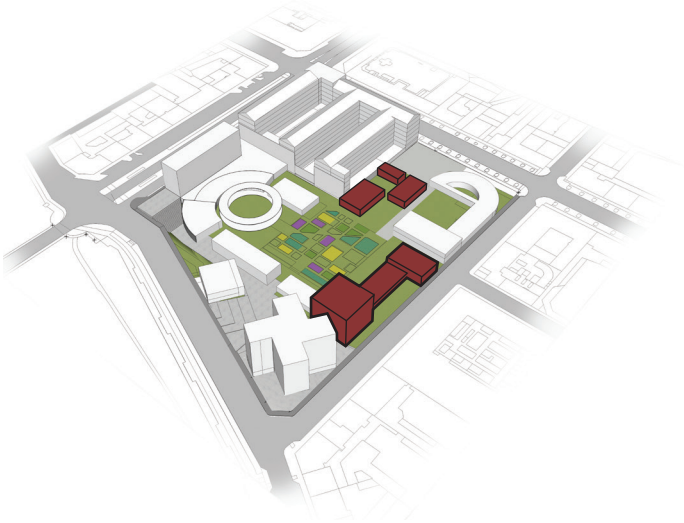
The place appears as a morphological and social void in a consolidaded multiethnical context.

Phase 2: Border re - definition

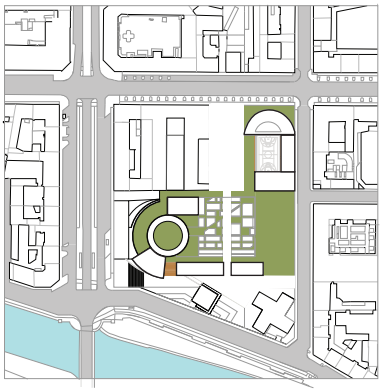


- Levels solution and platforms
- Two main elements re compose the border towards the main road and river
- Two main axis determine the position of the first elements
- Generation of main public open spaces
- Intervention in cruciformal building



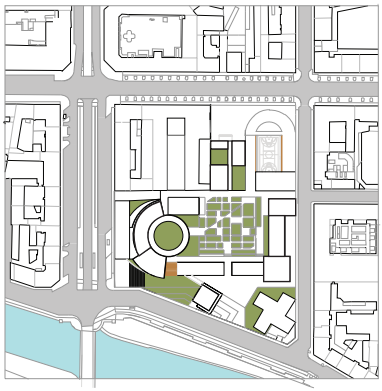


Phase 3: Main functions addition



- Addition of buildings for cultural and sport or leisure activities
. Consolidation of community garden

Phase 4: Reconfiguration of other borders



- Addition of buildings for cultural and sport or leisure activities
. Consolidation of open spaces and internal green areas

Image 103: Intervention phases

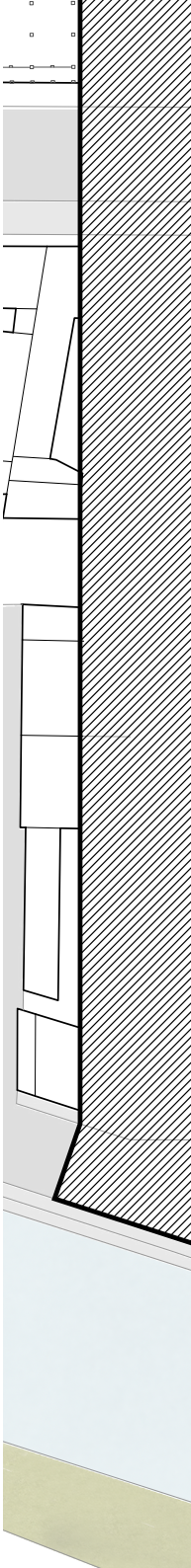
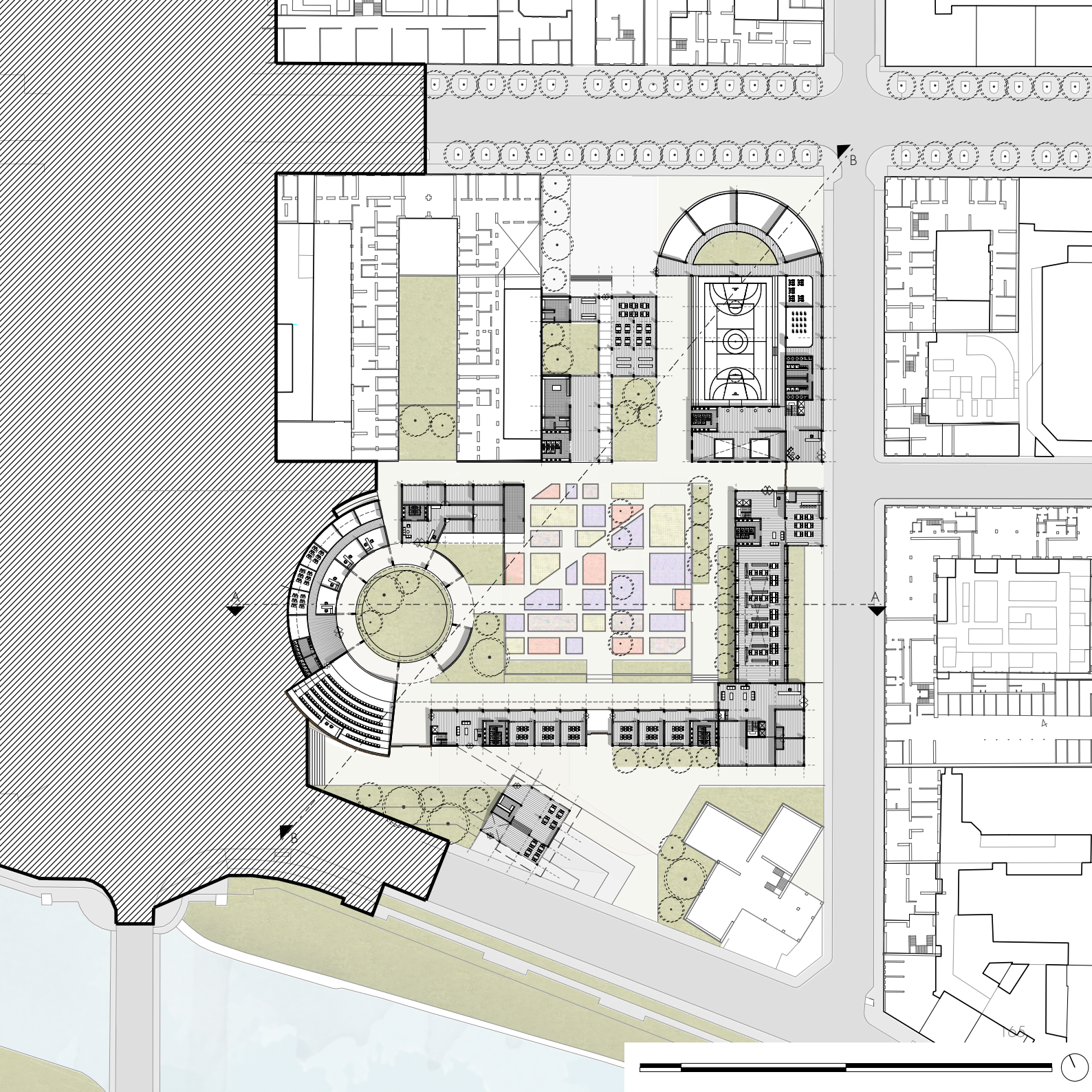


Image 104: Ground Floor


A
A
B
B

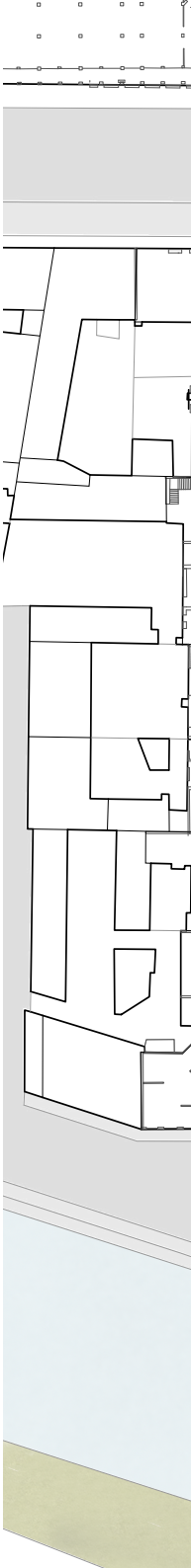


Image 105: Plan level 3.60m

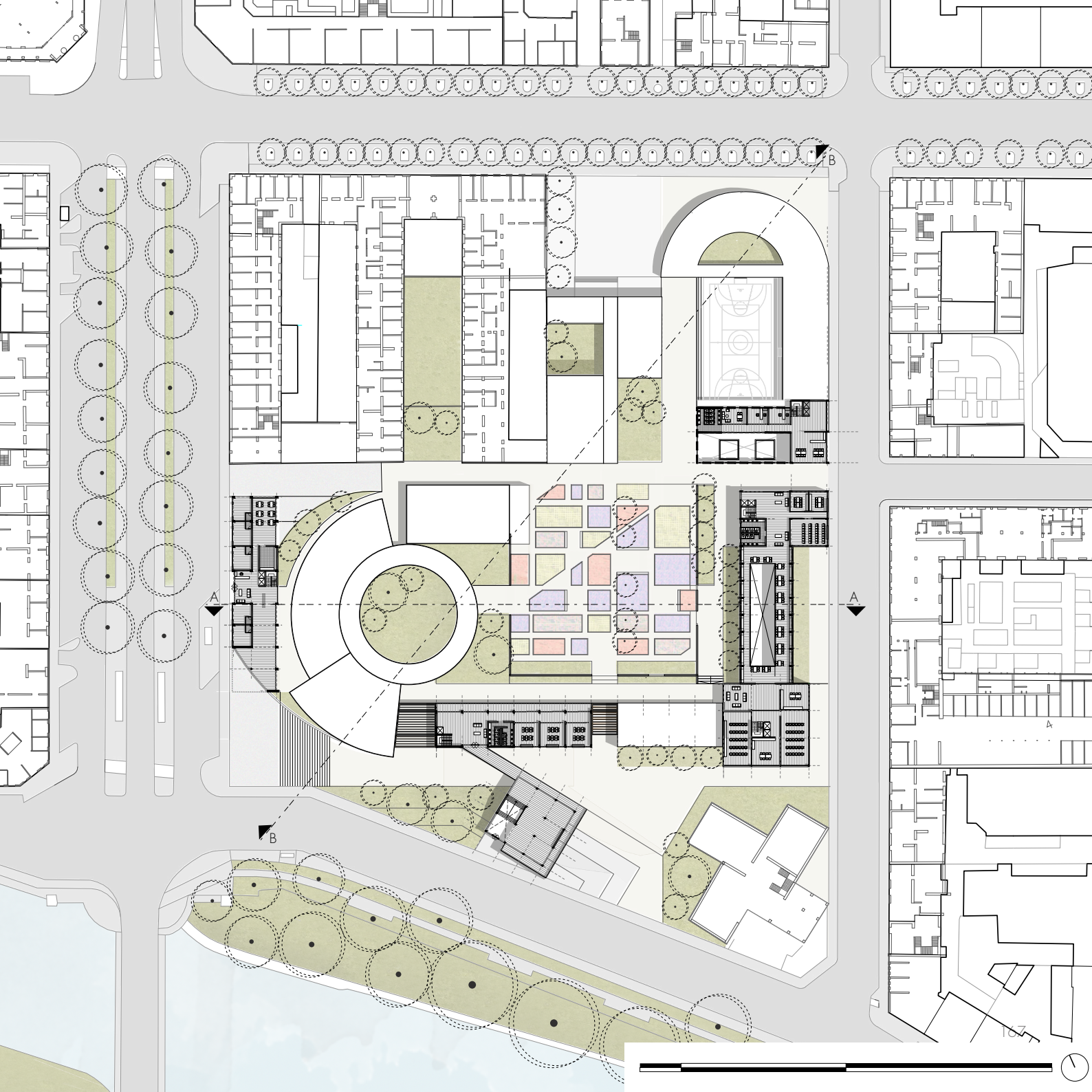

A
A
B
B

Image 106: General Intervention

Image 107: Facade Towards Lungo Dora Firenze

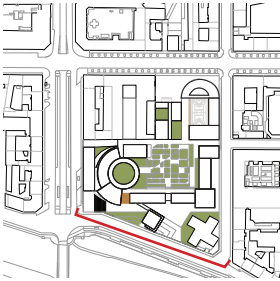


Image 108: Facade Towards Corso Giulio Cesare

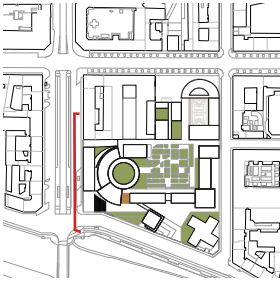
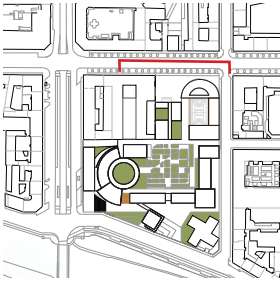


Image 109: Facade Towards Corso Brescia



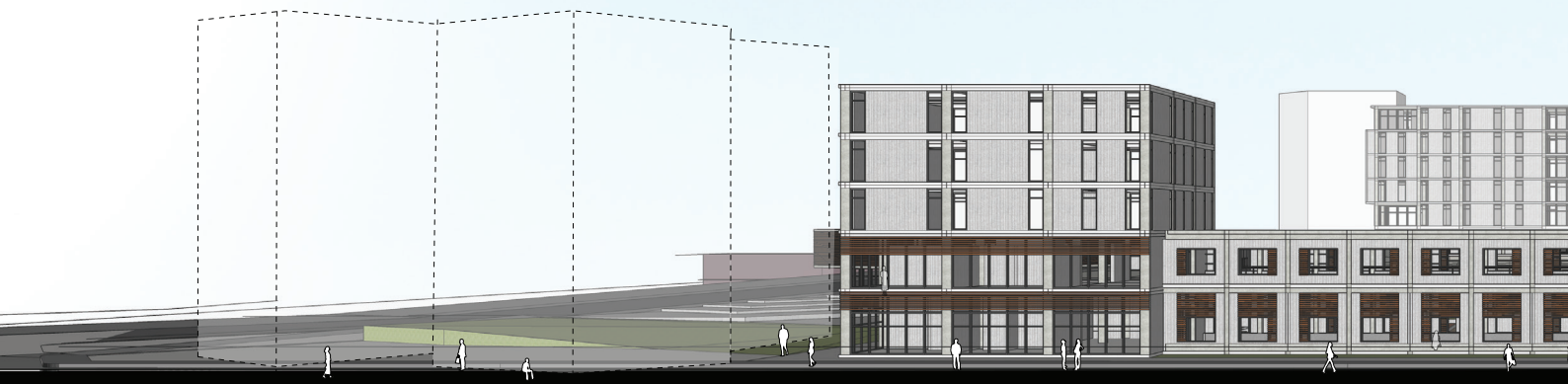
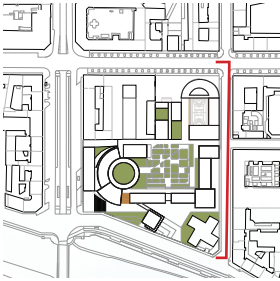
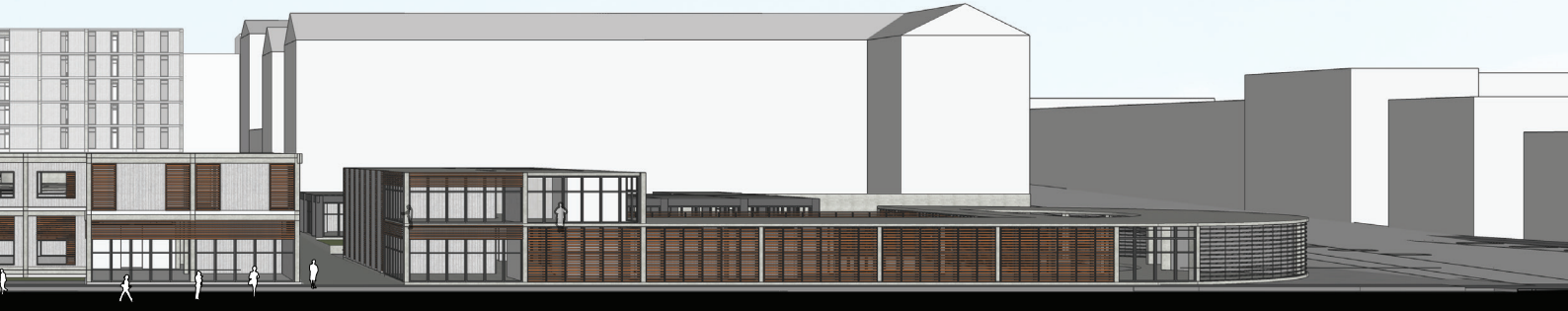


Image 110: Facade Towards Via Aosta

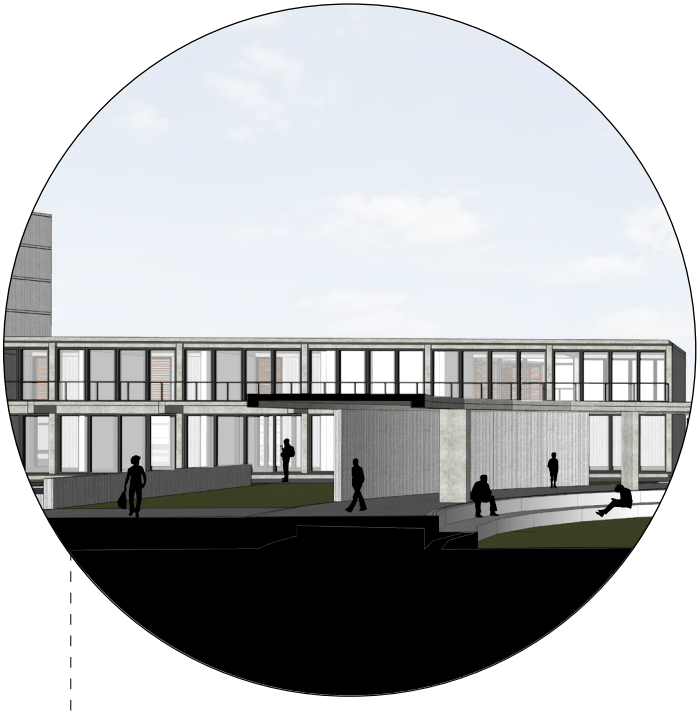




Library and Medialibrary building

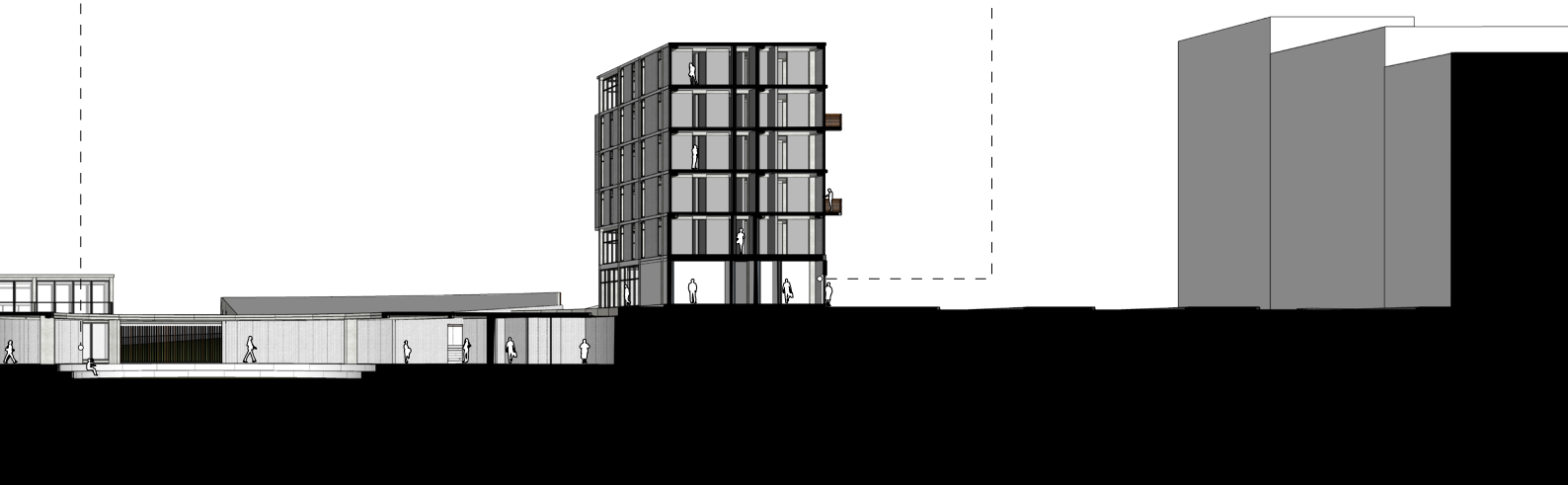
Community Garden

Image 111: Section A - A



Open Pubic Space / Cultural
Assosiations headquarters

Mixed use building Towards
Corso Giulio Cesare

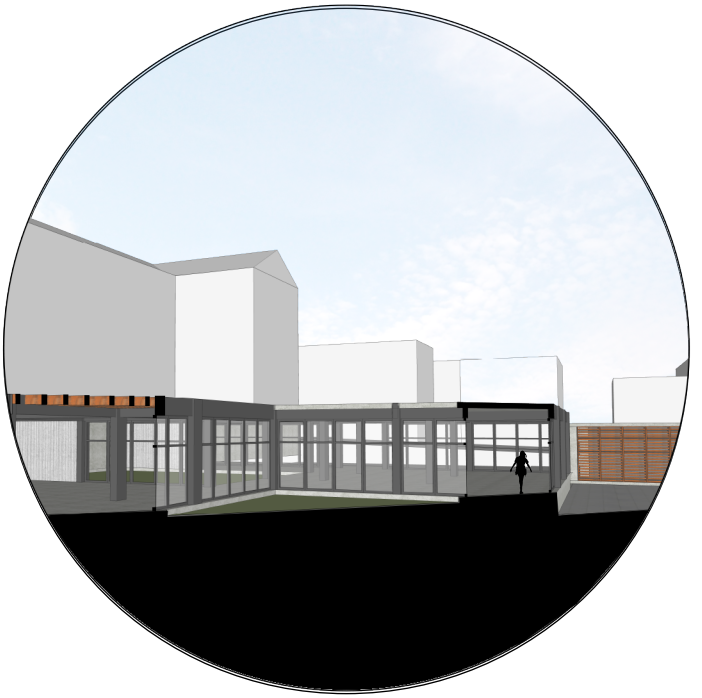


Auditorium

Open Pubic Space / Cultural Assosiations headquarters

Image 111: Section B - B

Flexible Spaces Building for multiple uses



Gym and Sports Building

Image 112: View From Lungo Dora Firenze

Image 113: View 2 Open Public Spaces and Levels intervention

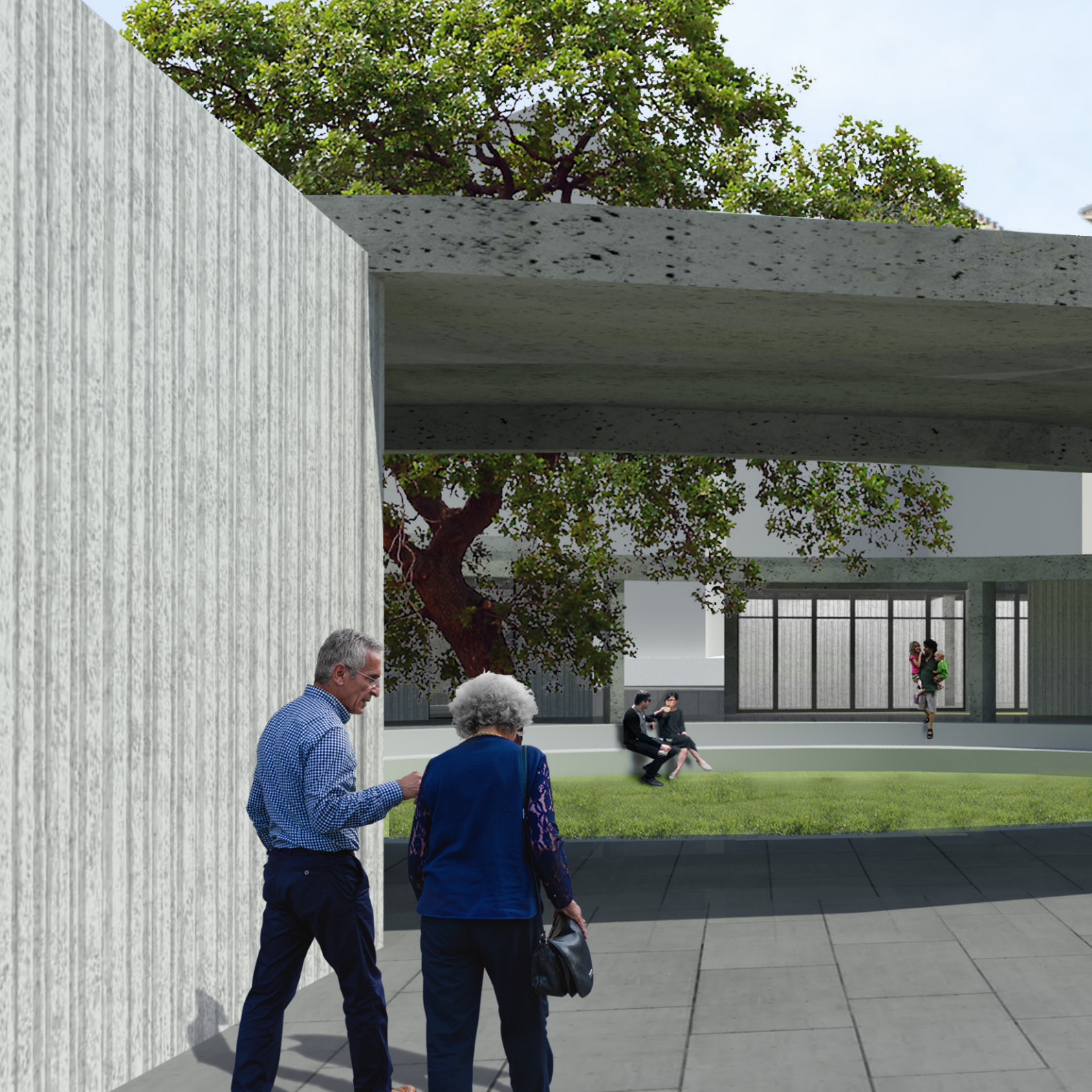


Image 114: View 3 Cultural Associations headquarters

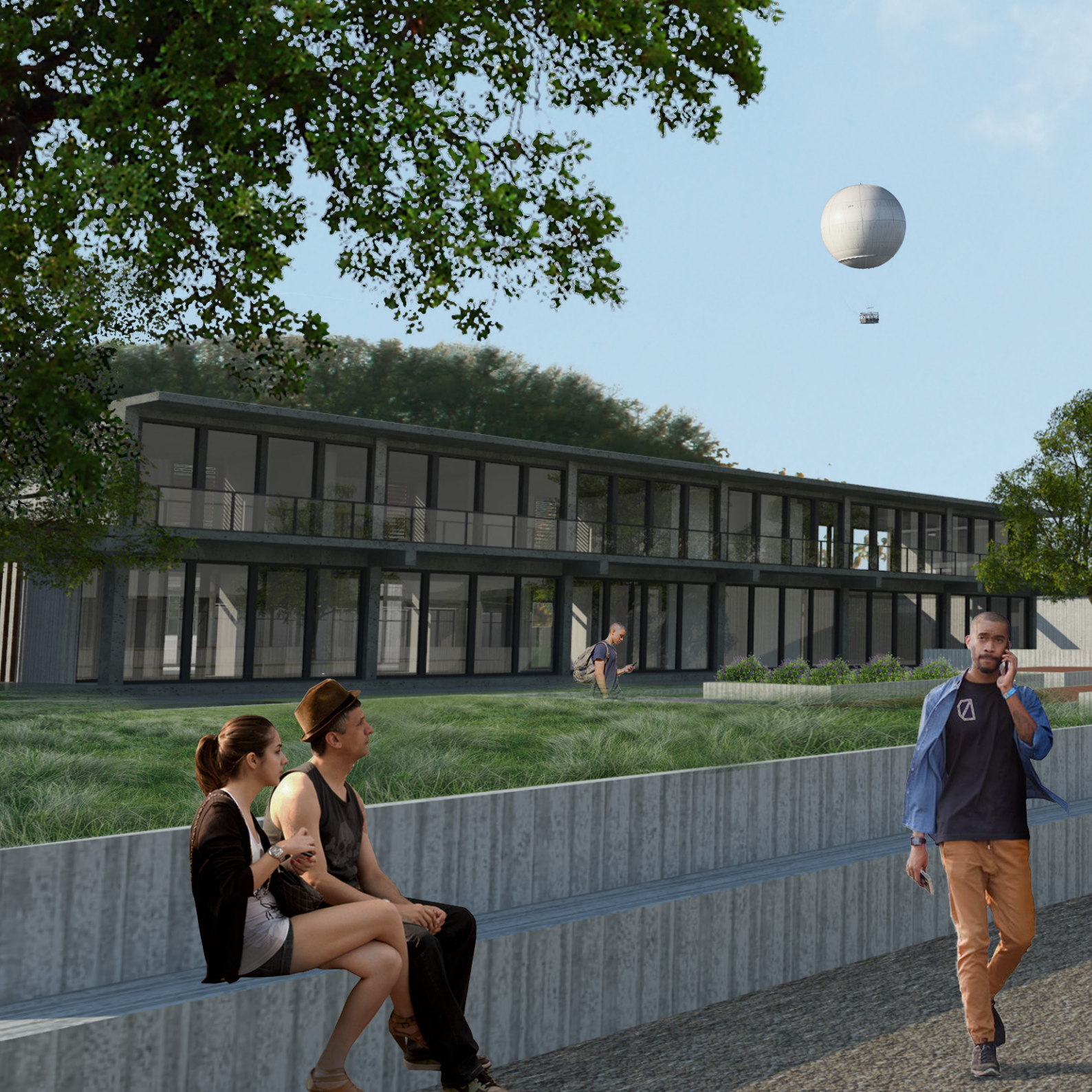


Image 115: View 4 - Community Garden

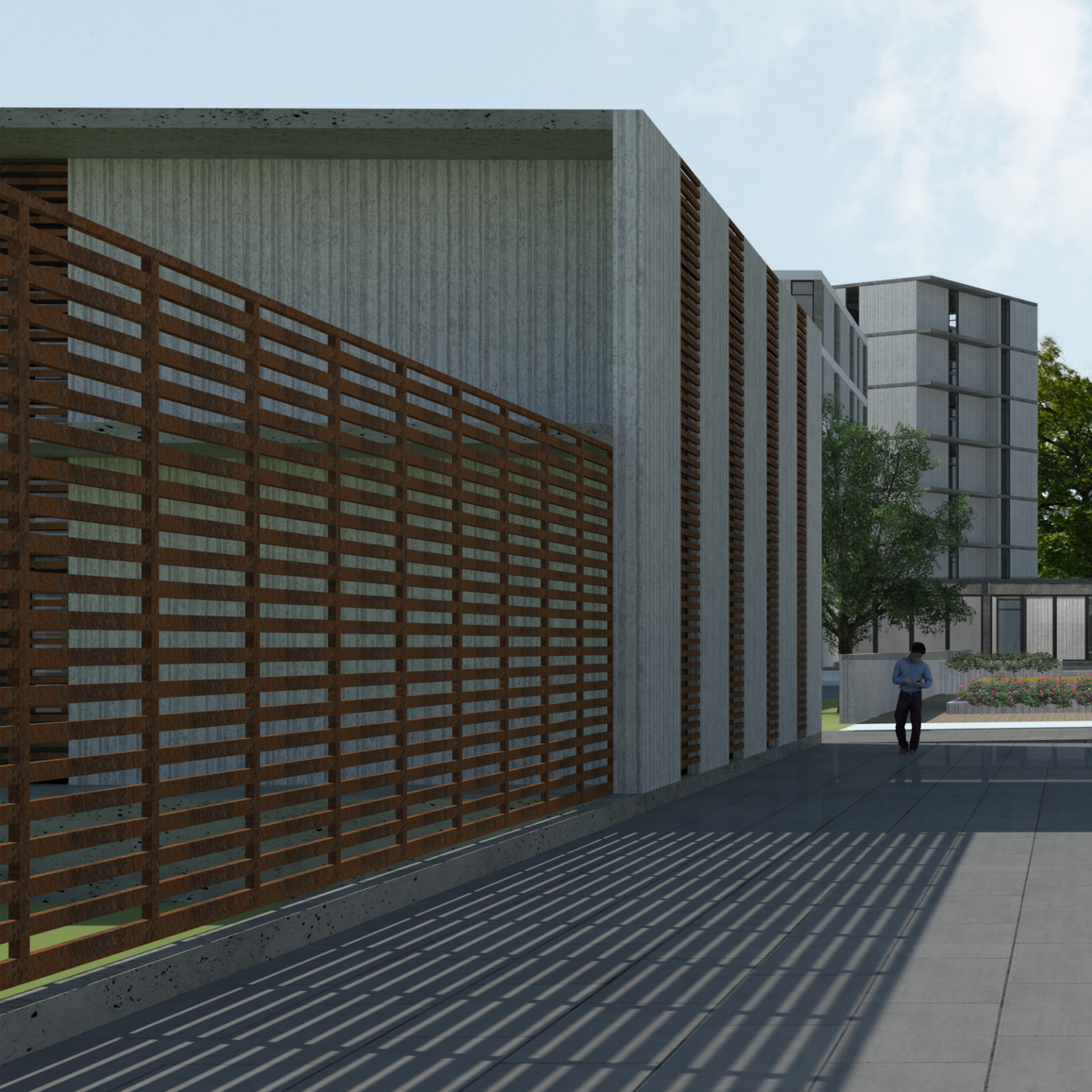


Image 116: View 5 Gym and Open Public Spaces


LIBERTÀ
GLI HARBAG
MIIO

Image 117: View 6 Residential and Mixed use building Towards Corso Giulio Cesare

Conclusions

The thesis questions stated when this work started involved many different subjects that aimed to generate a more profound knowledge of the city where I chose to live in for the past year and a half. These questions were answered in a theoretical and practical way. The conclusions cited here summarize the development of the study and complete this thesis work.

1. The city of Turin presents a morphology that works as an interesting exploratory field. The definition of the physical elements of the city make evident its link with the city's history.
2. The limits of a city change with time and with these changes, also the morphologies of the city change. It is in the spaces where a limit is found that the most interesting potentialities of urban form studies appear.
3. Imagining the development of a project that meets the necessities of those living in the area chosen for the design exploration is not hard. The tertiary sector is made up of various areas that include services. Within these areas, activities and personal services that aim to improve the quality of life of

citizens are not only allowed but encouraged.

4.The current physical conditions of the site are the result of various events that changed its morphology in time. The reconstruction of these changes are evident when historical maps are compared and this formal exploration was useful to understand the site's architecture as a sequence of events. In this sense, it is possible to imagine that the response for the site's conditions needed to be a sensible one. Sensible to the local differences while maintaining an overall stability. The project materialized after the design exploration met this description and has the potential to consolidate the area with the generation of new and needed spaces for cultural and social exchange.

5. The intervention site lacks a defined use. The space now found in the chosen area can be defined as an informal space. These types of spaces are seen as empty and meaningless by authoritarian figures as a result of their 'temporary absence of attributed function,'

6. In order for a city to evolve, differences in its demography need to be incorporated, accepted and enhanced. Multi ethnicity should be addressed

and the generation of projects that dialogs with the necessities of new comers and those already living in the area serve as a platform of insertion to the city.

7. The site offers, with its physical and social necessities, the opportunity to generate spaces that allow changing experiences and interactions between the different groups living within its context. A project in the site does not only gives a solution to the existing problematic situations but works as a way of generating a sense of belonging.

8. In architecture typologies come with limitations. What is interesting about this definition is the duality it has in becoming at the same time an object of liberation and an object of constrain. In this sense, site and programmatic aspects of a building provide constrains that make a design process easier.

9. The technique of collage has been used as an approach to design that combines pictorial motifs and fragments from disconnected origins. The mix of these elements give new roles and meanings to the parts involved. The interesting results of the technique come with its suggestions of new

analogies, temporal durations and narratives.

10. The collage exploration involved the recognition that morphological types do not necessarily correspond to functional types. In this sense, the experiment pushed to unlink the preconceived idea one has about specific architectural objects that are linked to history and see this elements as mere figurative codes that solve specific necessities when used in a particular context of the site.

11. Projects of great dimensions take time to consolidate. A project that makes a substantial difference in a neighborhood needs to be addressed and developed in phases.

Image 1.18: Changing concepts of Boundaries and city limits

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FEB 2018