

MASTER

Dialectic Torino

new urban-form and architecture on the fringe-belt of Turin

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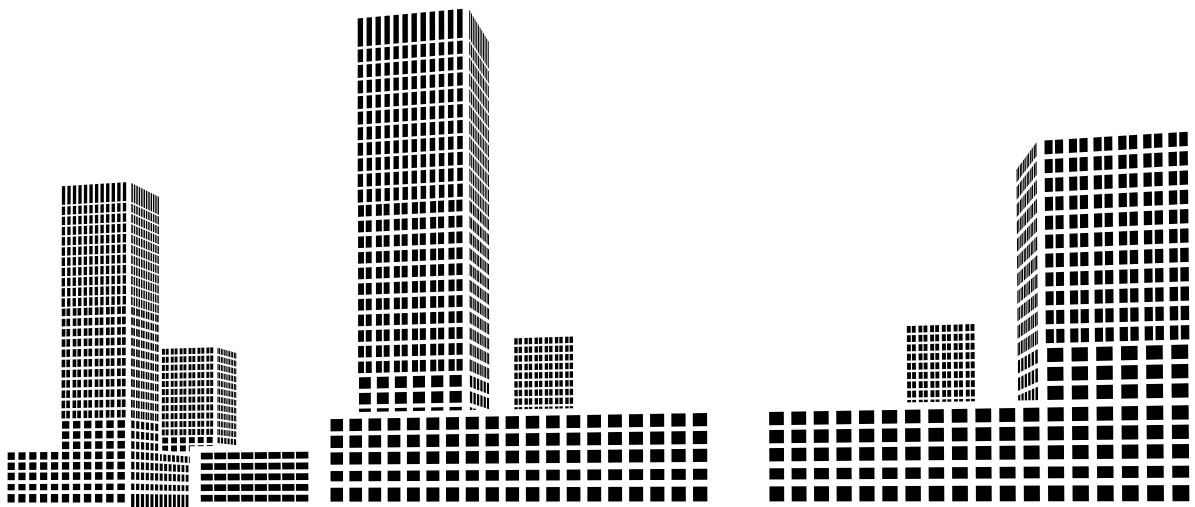
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DIALECTIC TORINO

New urban-form and architecture on the fringe-belt of Turin

Jos van der Linde | July 2015



DIALECTIC TORINO

Colophon

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This graduation project is part of the graduation studio 'Gran Torino'. The studio has been jointly initiated by the chair Rational Architecture at Eindhoven University of Technology chaired by Prof. Dipl.-Ing. Christian Rapp and Dipl.-Ing. Haike Apelt and the Politecnico di Torino chaired by Prof. Dr. Arch. Silvia Malcovati, Ricercatore in Composizioni Architettonica e Urbana, Dipartimento di Architettura e Design.

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DI TORINO**

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Abstract

The urban fringe-belt of Turin distinguishes itself by a minestrone of building typologies, functions and plot sizes without representing a strong defined or representational place as happens in the city center with the uniform built-up space divided by the grid structure following the rules of the roman castrum. The big parcels served for the big production of the industrial Turin and once the progress of the city. The big factories as temples for labor became empty shells or have given way to large voids in the urban fabric as result of the sanitation.

Turin is not anymore the industrial city and seeking for a new identity. The city wants to achieve their new identity by becoming an European capital. A city attractive for culture and high quality living in the city, this by making living in the city attractive again. This project seeks for an urban development of the fringe-belt zone of Turin. For this development the existing structure of the city and the specific location in the city cannot be ignored. therefore this project is based on geo- and morphological research followed by typological analysis to determine the characteristics and history of the area.

This research tries to identify the historical development of the so called 'fringe-belt', whereupon the project will focus on the large voids caused by the industrial dismissal around the 1980's. The large voids or 'junk spaces' would give the opportunity to re-establish the city ideas more appropriate to our own times. City ideas in which it should be necessary to re-establish the relationships between places of evocative of the urban condition and great spatial density, and spaces wide open and empty. A city idea which assumes the void as a positive value for the new intervention. This new order is not based on the principles that informed the construction of the city in the nineteenth and twentieth century, but superimpose the

urban characteristics within the natural surroundings. This brings a fresh optimism for the new identity of Turin.

Hence it is necessary for the project to react on the scale of the Peri-urban location, which interacts on both, the inner city and the city's periphery. The scale in the territory and its elements have therefore been exploded. The program that accumulate in these areas are so generous that they call for an extremely specific architectural statement. The program of the new intervention is similar as a little city. It were the factories in the history of Turin which formed the collective structure in the fringe zone, whereas the new urban form is meant to serve as a focal point for other urban functions, and so allow the development of a new piece of city in which the collective structure would stand for the community.

The new master-plan designed for the project area in the north of Turin is placed alongside the agricultural and territorial traces. The large void, aside from its use as a park, enters into dialogue with the new urban form, consisting of courtyards and towers overlooking the park. Within the natural surroundings, the new built-up parts create a tension between them by planimetric and volumetric proportioning of the masses. The almost fortified appearance of the new urban plan on the beginning or end of the Spina Centrale functions as the new entrance of the city.

One building of great architectural importance within the master plan is worked out further on architectural level. The building reacts on both the park's exterior and the urban interior side and has the existing typology - which is found as a consistent typology - as a starting point for the urban block within the masterplan, which put forward a tradition and continuity on the city.

Acknowledgement

I wish to express my gratitude to Prof. Dipl.-Ing. Christian Rapp, Prof. Dr. Arch. Silvia Malcovati and Dipl.-Ing. Haike Apelt for the fundamental and fruitful discussions during the whole process.

To single out any other of the multitude of my family and friends who have contributed and supported to my understanding would be unjust, but I would like to make this collective acknowledgement of their valued influence on my project.

Introduction

The collective work

The content of the present booklet deal with the topic of interest and outcomes of the Graduation Studio bearing the name “Gran Torino”, carried out in collaboration with Politecnico di Torino.

Central topic of its research is the study of the ongoing transformation of city and to built further on it (continuity). The city as it is today is the result of numerous related and unrelated phases, each of which – with its own characteristic- implies some specific features in the city itself. The studio is a conducted work involving 16 students, which all explored the nature of these phases as they have occurred in the past. This is achieved by intensive typo- morphological research together with the research in the socio economical background. This combined work resulted in the ‘Gran Torino Atlas’.

My focus within the atlas was the urban development at the concentric part of the city, which occurred during the rise of the industrial period around 1850-1950. It was in this period that the identity of Turin turned into a single-industry and additionally became a centre of the labour movement. This period coincides with a rapid urban growth resulting in a urban form which changed the countryside at the edge of the city in an all encompassing urban form, which distinguishes itself by a absolute mixture of building typologies, functions and plot sizes without representing a strong defined or representational place as happens in the city centre with the uniform built-up space divided by the grid structure following the rules of the roman castrum. The periphery turned into a destination for many workers; especially from the south of Italy. And what once was a legend of Turin as great place to live turned against the city. Flourishing in the first decades of the twentieth century the industry and the city experienced a decline that

forever changed its identity. The search for a new identity lasts until today and the city officials undertake many initiatives to establish a new direction for Turin to continue its history in an equally fascinating manner.

Individual thesis

The representation of an object is an age-old discussion in the discipline of architecture and a challenging one to define. In the case of the historical centre of Turin, the meaning or identity is well defined by the set of rules it has been built with. The urban form is in this case very well defined and also expresses the period of civilization it has been built in. It is in the form of an object what expresses the meaning of it. Turin, like many other European cities, deals with the problem of pluriform parts of the city, which are unable to represent a strong place with meaning, of new growing centrifugal realities without identity. These areas used to be characterized by the presence of big parcels, useful to accomplish those needs for the big production of the industrial Turin, this way allowing the progress of the city. However, also Turin, as many other industrial cities, witnessed a phenomena of crisis of its factories, and it was especially during the 1980s that the city lost its main source of income together with its identity. Here growth the interest towards the possibility of a recovery for these areas “in between” the city and the reality beyond its borders, as well as the will to concentrate in here for the individual research.

The given of the city seeking for a new identity together with the major possibilities to test new forms on the empty spaces gave rise to the opportunity to test a new form which manifest the reason of the form as is happening in the historical city.

With the simple comparison between the concentric zone of Turin outside the center and the center it self we can recognize that the role of architecture is clearly an important one in the sense to define an identity to a place. The focus of this inquiry is that of defining a new idea of the city with its own rules in the fringe-belt, that peculiar and usually underestimated zone between the center and the periphery, which can not be grasped anymore as

an unified system. That being so, a basic question arises: if the form of the city represent the state of civilization of the time, how would it be possible to create noble cities in our own day, representing our time? The main theory contributing it is well defined by Antonio Monestiroli and Carlo Moccia. Their theories assume the new urban form can not be based anymore on the principle whereupon the 19th an 20th century city is built, but we should define new principles.

The new set of rules will be tested on one of the great voids in the fringe-belt of Turin. Rules, that are based on the outcome of the analytical and theoretical research of the first part in this inquiry. This resulted in a new strategy and is tested in a junk space of a part in the north of Turin and is presented in chapter 5. The followed chapter on behalf concludes with the architectural design of one building within this masterplan.

The following research questions are formulated in this research;

Main question:

How can the void in the fringe-belt of Turin be used to re-establish an urban form more appropriate to our time?

Sub-question 1:

What are the urban characteristics of the area which occurred during the development?

Sub question 2:

What can be defined as an urban form appropriate to our time?

Sub question 3:

What are the typological characteristics of the project area?

Content

Abstract

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Bibliography



1

The study area

Development during the toll gates

1 The study area

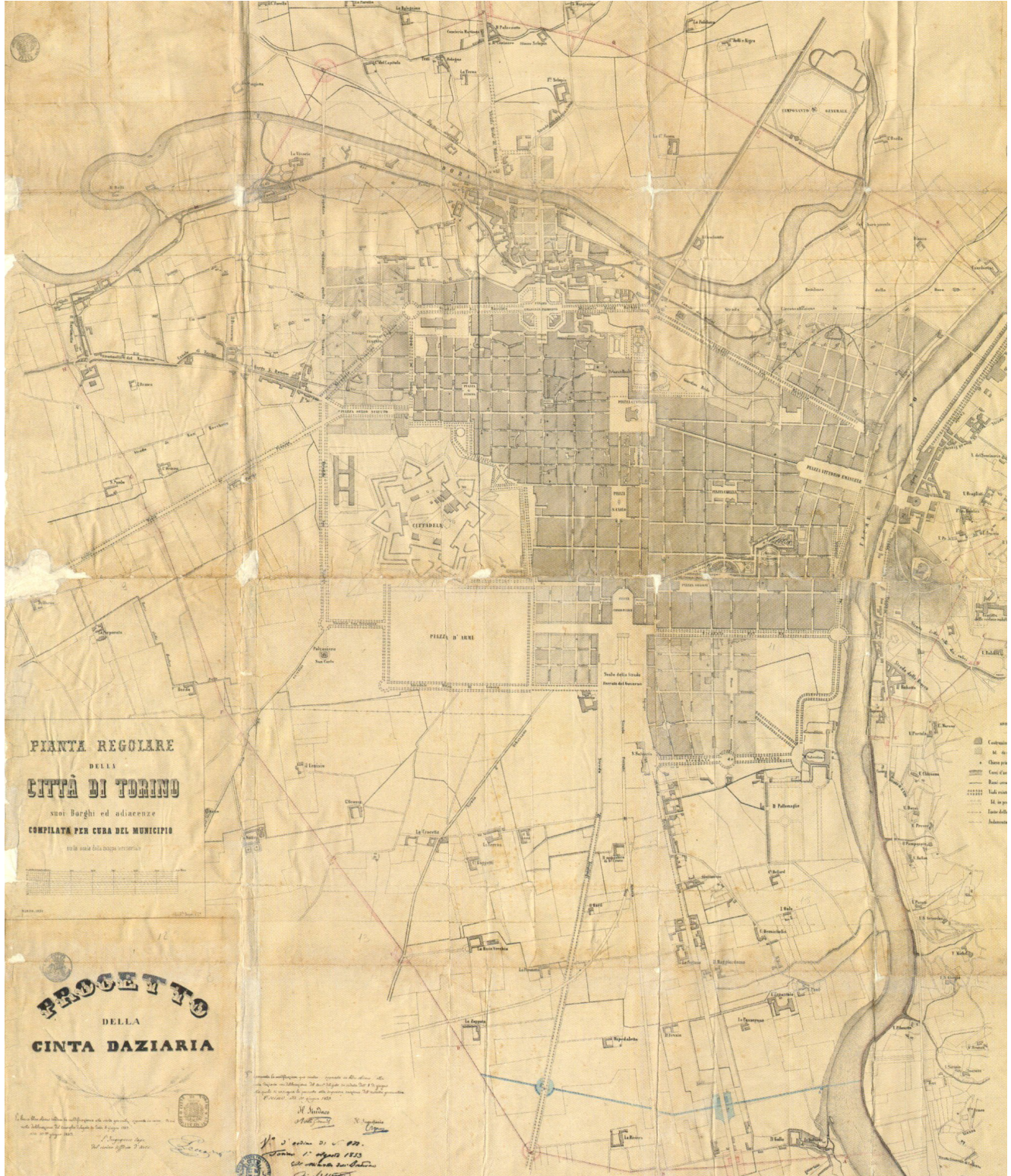
Development during the toll gates

1.1 Introduction

The area studied for this research is located in the urban area that arose around 1850 till 1950. It was in this period that the toll gates of Turin were introduced. It is for this reason this chapter focuses on the influence on the urban development during the toll gates era.

The first generation of gates was present from 1853 till the city grew out of its own boundaries in 1912 and offset the gates to a new ring outside the city till 1930, the year when the gates lost its function and were mainly demolished. On one hand, this fiscal system is a mayor event in a series of important economical and political changes in the nineteenth century for Turin, on the other hand the physical appearance of the gates influenced the morphological growth of the city and also allowed new types of housing typologies.

During this period, the city was subjected to a strong and slow process of growth and therefore it resulted in a complex composition of different parts.



PIANTA REGOLARE
DELLA
CITTÀ DI TORINO
suii Barchi ed adiacenze
COMPILATA PER CURA DEL MUNICIPIO
nel 1844

PROGETTO
DELLA
CINTA DAZIARIA

Il presente Catastro per essere compilato nelle forme, che
sono prescritte dall'art. 10 della legge del 1844, si è
adottato il sistema di unire alle diverse parti del
territorio, che si vogliono catastare, un solo foglio
catastrale, che si chiama foglio unico.

M. Sestini
Architetto

1844

Comune
M. di
Città per
Cattedrale
Basilica
Veduta
M. di
Torre
Cattedrale
Cattedrale
Cattedrale
Cattedrale

1.2 The introduction of the Barriers of Turin

As result of the revolution of 1848 the city of Turin went through major political and economical changes in the nineteenth century. “The years after the revolutions of 1848 ushered in a new wave of reform initiatives in Turin that would have enduring consequences not only for the city and the Kingdom of Sardinia, but also for the political future of the Italian nation after 1861”^{1.01}

The period of the toll gates, starting in the mid nineteenth century, was introduced in 1853 to strengthen Turin’s economy as national capital.

The abandoned fortifications in the first half of the nineteenth century left diffuse traces on the perimeter of the city, for example, the boulevard which is formed by the demolished walls or the squares located at the former city gates.

However, the resulted footprint had no effect on the enlargement of the city, which continued to grown according to the leitmotiv - settled in tradition - the expansion is built in order to establish some sort of continuity in the city of the seventeenth and eighteenth century.

The exceptions of the grid structure in the expansion are to be attributed to the presence of some existing villages, which manifested an intrinsic structural type, in terms of morphology, they did not bow to the regular enlargement of the city.^{1.02}

A mayor event in the city development, which left physical traces in the city, is defined by the in 1853 introduced toll gates.

The first toll gates were introduced in a manifest, published on April 27th, 1853 by the Mayor of Turin. The manifest contained the route of the toll gates and a plan for the rearrangement of the crafts industries within this route. The route of the toll gates(fig. 5.3) was approved by the Royal decree at 13 October 1854, and was similar to the plan of 1853. The toll gates of the city of Turin were completed in 1860.

The toll gate formed the new border to the city, This border is circumscribed by the shape of a large irregular polygon formed by a wall with an outer moat. The total length of the perimeter is about 12 kilometers.^{1.03} The toll gates

1.01 A.L. Cardoza, G.W. Symcox, *History of Turin*, Einaudi, Torino, 2006, p. 183.

1.02 A. Frizzi, La cinta dazaria della citta di Torino, in *L’Ingegneria civile e la arti industriali*, Torino XI (1885), n 10, p. 148, Image. 18-22.

1.03 G.M. Lupo, P. Paschetto, 1853-1912, 1912-1930, *Le due cinte daziarie di Torino*, Torino, Archivio storico della Città, 2005, p.12.

were called 'Barriers' and were mainly named after the villages or townships that were located around the barriers and were regarded as entrances of the city. The important big barriers were constructed in the form of an open area, which contained the buildings that were used to house the officers, which controlled the entry of goods into the city.

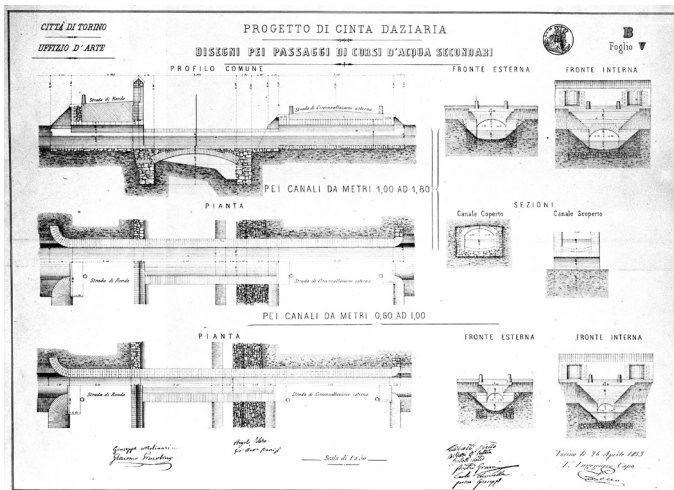


fig.. 1.3 Drawings of the city wall as part of the toll gates



fig.. 1.4 Barriera di Piacenza

The development between 1861-1881

The growth in the nineteenth century is marked by a gradual process of urban composition of compact design, drawn on orthogonal plots of an unitary vision, based on the plans of reorganization the tissue in the Baroque period.

The nineteenth century city consisted of new road infrastructure, and new government duties. The political-administrative was founded mainly on the interests of private land, which provides the basis for the abandonment of the gold standard guidelines of the urbanism of Turin.

Within the customs border of 1853, there are still large areas of undeveloped land, particularly in the areas between the inner radial roads that connect the city with the territory. Some peripheral fringes of the city were built, like Borgo San Donato and Borgo Dora, but the result of the oldest formation remained for many years at the edge of town/fortress.

The projects for a new expansion of Turin, still resting on the principle of structural integration with the old, was completed during the years 1860-1870 with the expectation of further additions.^{1.04}

The plan for the expansion of the south west, covers the area of Corso Vittorio Emanuele II in Crocetta, is related with the similar plan for the current Borgo San Salvario.

The final approval of these plans (1868) will lay down the foundations of administrative and legal support to the construction of the city, essentially for the first decades of the late nineteenth century. The rapid growth during the 1880's resulted in an organically growth outside the regulation-area, because the rules were not applied on these areas at that specific time.

The diversification among the urban quality of the two areas therefore arises as a reflection in the typological building and different antithetical planning.^{1.05}

1.04; V. Comoli Mandracci, *Dalla città preunitaria alla prima industrializzazione*, in M. Abrate [a cura di], *Torino città viva, da capitale a metropoli, 1880-1980. Cento anni di vita cittadina*, volume I, Torino, Centro Studi Piemontesi, 1980, p. 225-226.

1.05 *Ibid.* p.227



fig.. 1.5 Situation 1861



fig.. 1.6 Situation 1881

The development between 1881-1911

The master plan of 1906 designed by Giuseppe La Costa was approved in 1908 and requires to incorporate and coordinate all plans concerning the enlargement of the urban context. Its characteristics are related to the declaration of public utility, as sanctioned by the law of 25 June 1865.^{1.06}

For the perimeter of the city, the plan for the expansion, in the form of a crown, proposes a scheme for the major roads to minimize the demolition of buildings, and to allocate new blocks to industrial use. The block has to be carved up, where this strategy does not work, but it produces a loss of control over the road network, which results in a gradual and progressive fall of quality of the new urban image.

The new plan proposes coordinated sectoral plans with conserving the past. The city within the first toll gates continues to be expanded according to the leitmotif of the orthogonal grid structure. This is in contrast to the first neighborhoods outside Turin's toll gates, which determines an alternative to the historical city. The first settlements outside the gates continue on the agricultural plot structure.

As affected by traffic problems the plan of 1906-1908 integrates a large amount of roads, which gives rise to two different cities: a central and cohesive within the first wall, and the other non-central and inconsistent outside this wall.^{1.07}

After the transfer of the capital to Florence, the development of the city was mainly devoted to industry. The design of the “barriers” and the new road and railway infrastructures in the expansion plan out focuses on the urban collective, in terms of services, urban structure, public spaces and social housing. The new area in the North of Turin is drawn for the new industrial city: urban structure with large blocks established itself as a mixed fabric of industries and residence. The 1910's became the predominant period of textile mills, mechanical and military band in the south-east of the route Bologna. The area along Via Bologna however, is marked as the first city built of “public housing” along the Via Bologna.^{1.08}

1.06; G.M. Lupo, P. Paschetto, 1853-1912, 1912-1930, *Le due cinte daziarie di Torino*, Torino, Archivio storico della Città, 2005, p. 303=304

1.07; *Ibid*, p. 304.

1.08; R. Maspoli, A. Spaziantè [a cura di], *Op. cit.*, p.74.



fig.. 1.7 Situation 1901



fig.. 1.8 Situation 1911

Urban development 1912-1931

Turin centrifuged out of its own city wall, defined by the toll gate of 1853, therefore a new plan was made in 1912 with a new route for the Toll gates, which allows the city to grow further under the authority of the municipality. “The second generation of the toll gates, built in 1912, has radically change the revenues coming from the imported goods, which was increasing rapidly. The city was completed in 1853, and is remained unchanged until 1912 “^{1.09} The toll gates of 1912 were much larger, and underlined the process of differentiation of the city in a “center” and a “periphery”. The toll gates in 1912 will determine the elements on which to base the construction of the city until the General Municipal Plan 1959. The plan of 1908(fig. 1.9) was the first plan known which shows the expansion of the orthogonal grid structure throughout the whole city within the scope of the toll gate^{1.10}



fig. 1.9 The Masterplan of 1908 showing the neighborhood of Barrier of Milano and Regio Parco.

1.09; A. Ravina, *Le cinte daziarie di Torino*, volume 1, Politecnico di Torino, rel. G. M. Lupo, 2004-2005, p. 347.

1.10 Ibid, p. 396.

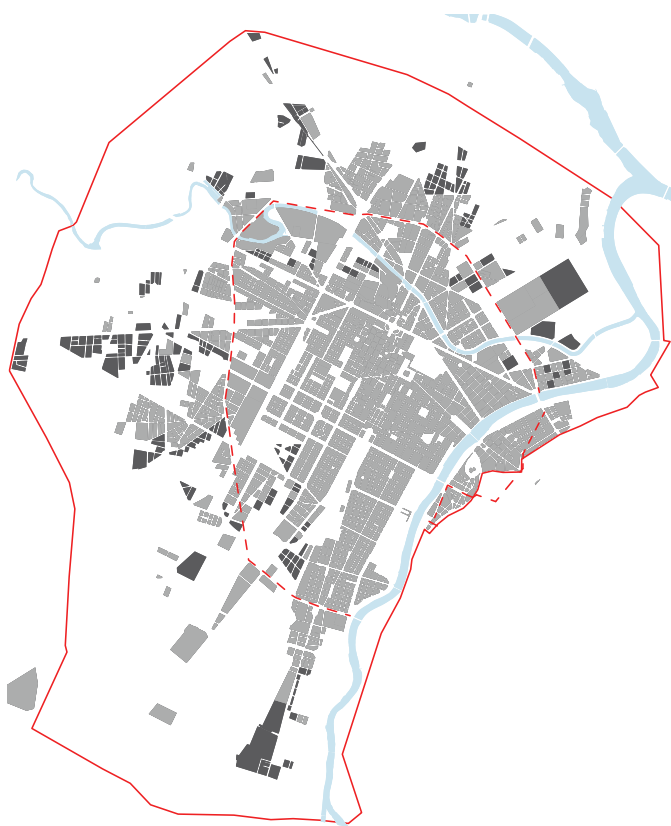




fig.. 1.10 Situation 1921



Fig.. 1.11 Situation 1931

-  Toll gate 1853-1912
-  Toll gate 1912-1930

Historical neighborhoods

The cities expansion in the beginning of the twentieth century is characterized by new neighborhoods on the outer periphery of the tollgates. Early neighborhoods arose near important intersections of the barriers and the countryside or around existing little villages with clusters of houses next to a large church.

The first four neighborhoods are Monte Bianco(1), Borgo Vittoria(2), Campidoglio(3) and Borgo San Paolo(4). The built environment in the transition-zone from the inner city to the periphery is still today clearly recognizable, even after the urban expansion had incorporated these neighborhoods. The firstly built neighborhoods outside the city were either built linear with the existing agricultural plot division or arranged on a new grid neglecting the existing plot division.

The dynamic phenomenon of the city in the periphery is signed by the tissue which followed the contour of the physical barriers (streams, rivers, railway lines) that in some way contribute to define a margin often visible, not only in physical sense, but also in terms of use, of forms of practicability, accessibility to services and everything that goes in terms less accurate under the name of 'environmental culture' of the neighborhood^{1,11}

1.11 A. Magnaghi, P. Tosoni,
La città smentita: Torino: ricerca tipologica in ambiti urbani di interesse storico, Designer Riunit, Torino, 1988, p 55.

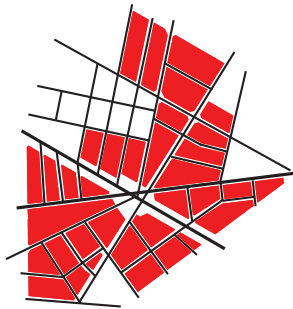


Fig.. 1.12 Street pattern San Paolo



Fig.. 1.13 Street pattern Monte Bianco

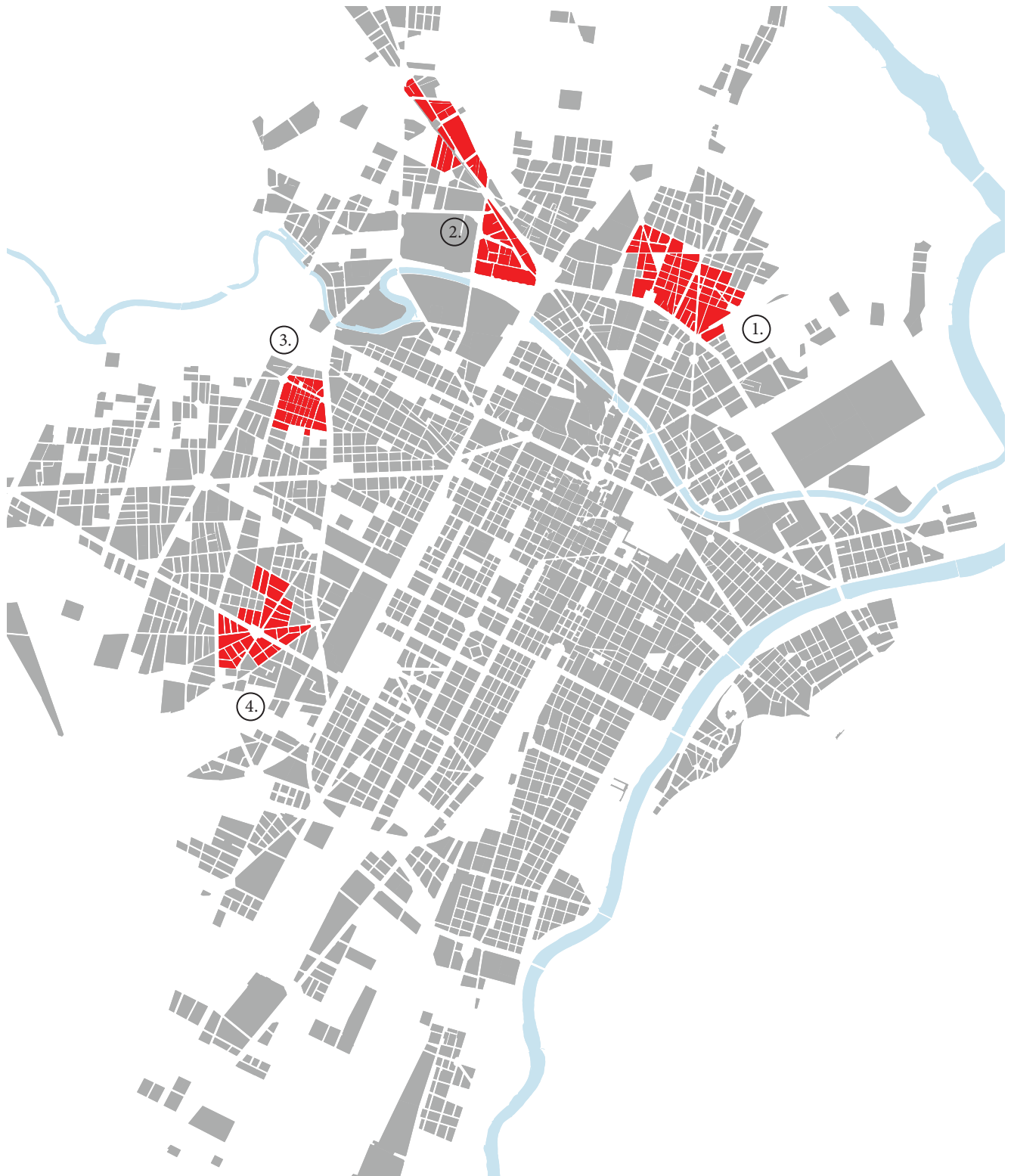


Fig.. 1.14 Historical neighborhoods

1.3 Conclusion

The period of 1850-1950 in Turin is characterized by a big expansion in a relatively short period, new urban and new architectural typologies were assessed into the city during this period. The introduction of the toll gates in 1853 and the building-regulations in 1863 caused big changes for the urban and architectural development, an historical development which is still visible in the city today.

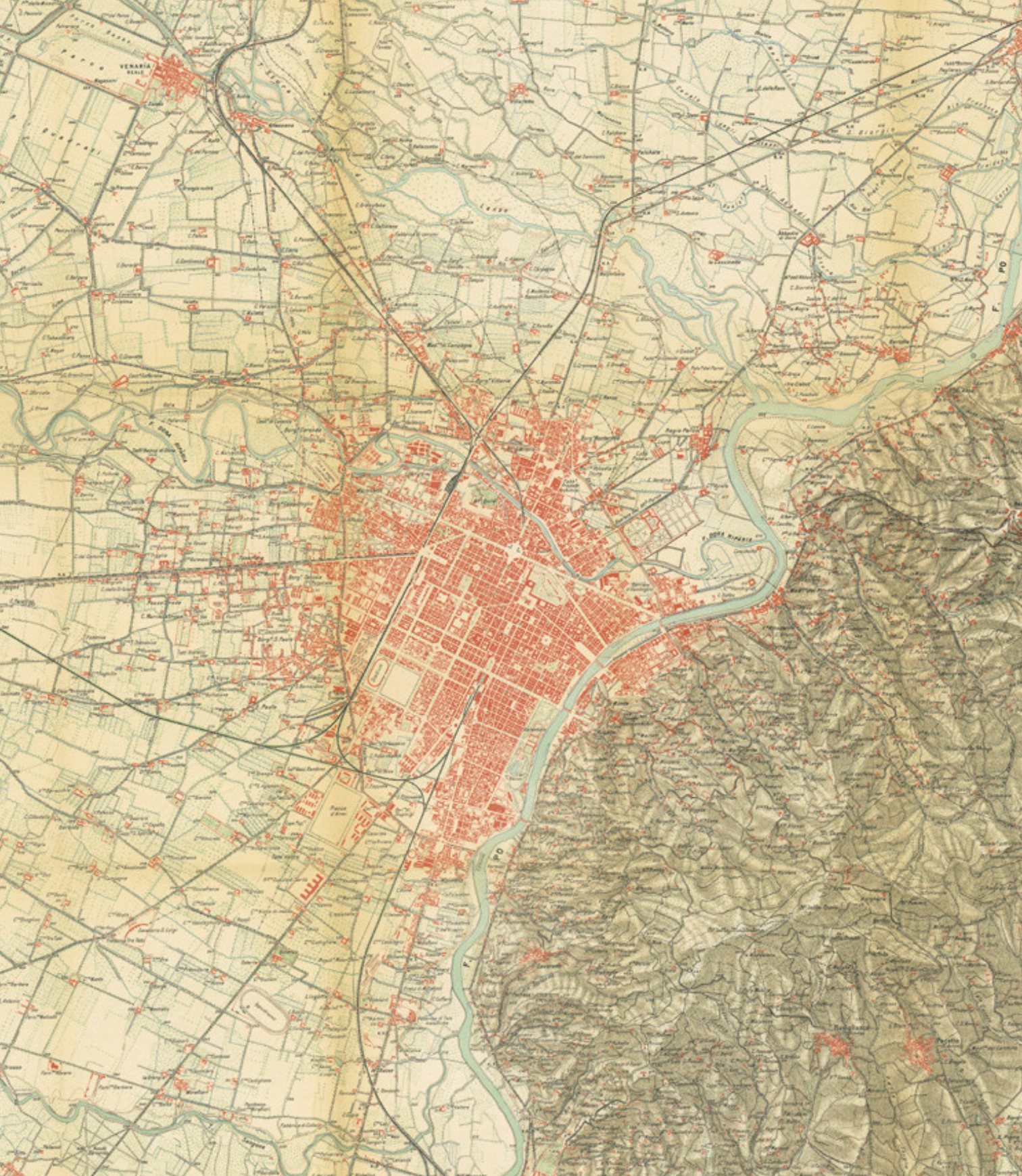
The historical development during the period of the toll gates reveals the morphological development in a period of a stable and in-stable economical period of the city.

Morphologically the area along the toll gates is formed by big plots to make industrial functions allow to operate inside the city. The city expanded out of its own walls in the beginning of the 20th century, which brought the city in a phase when the authorities of the city did not have control over the new buildings built outside the toll gates and allowed new typologies to arise. In contrast with the existing city, the urban structure and its architecture in these places, on the periphery, is formed by the rural agricultural plot structures and non-regulated buildings. The new buildings formed neighborhoods with its own intrinsic qualities, due to the regulation which later, after the neighborhoods were already existing, incorporate these neighborhoods with the orthogonal grid structure, similar to the inner city, as an instrument of plot division. This resulted in contrasts between the regulated and non-regulated areas with its own identities. Turin became an accumulation, a pragmatic conglomeration of utility and industrial buildings, combined with housing and public buildings.

The circular route of the toll gates caused a centric perception of the inner city, visualized in the diagram on the right.(fig. 1.15) Nowadays the former toll gate route is defined as a ring road around the inner city. This wide street can still be perceived as a threshold of inside and outside of the core of the city.



Fig.. 1.15 Diagram of the centric perception and the main roads connected to the city centre.



2

The fringe-belt phenomenon

A grounded urban analysis

2 The fringe-belt phenomenon

A grounded urban analysis

36

2.1 Introduction

The concentric area around the city center clearly took on a different planning principle which can not be seen anymore as a representation of one principle, but as a conglomeration of different principles. It is necessary for the continuity of the city to understand how these layers and principles are related to one another. The question is not solved yet with the findings of the morphological analysis of the first chapter, because it needs deeper understanding in the decision making which involved it. This chapter is an additional research of the previous chapter in order to understand the interactions of the decisions which can give us insight in this complex part of the city. Therefore the purpose of this chapter is to explore the nature of these decisions as they have occurred in the past. To examine the gradually evolving forms they have occurred, what influenced the circumstances in which they were made in and how they are related to one another. For this case of analysis, we can with advantage grasp to the remarkable fringe-belt analysis of M.R.G. Conzen. The fringe-belt analysis is a way to bring order in the complexity of the city.

Yet, the fringe-belt analysis is based on a historical-geographical based discipline, primarily necessary in this search to understand the city, but architecture is not integrated. Conzen's analysis has though, strong affinity with the polarity and landmark theory of Saverio Muratori and is purely based on architecture. Both theories will be explained and tested on the development of Turin. The synthesis of this work is not common in this field of inquiry, but fruitful in this case, to incorporate the knowledge into the various processes of the design task.

2.2 The Fringe-belt concept

The German geographer Herbert Louis recognized over 70 years ago that the outward growth of an urban area was very uneven in its progress. The growth of the city was made up of a series of outward expansions of the residential area separated by marked pauses. This zone of extensive land use that developed at the urban fringe during pronounced hiatuses in urban growth among which those associated with city fortifications. The term *Stadtrandzone* was first applied by Louis (1936)^{2.1}, in English “urban fringe-belt”, but usually shortened to “fringe belt”, in a study of the Berlin’s fringe belts. According to Louis(1936)^{2.2} the fringe belt included many relatively open areas, often vegetated, such as parks, sports grounds, public utilities and land attached to various institutions.

The fringe-belt initially used as a concept -a way of understanding the process of altering hiatus and growth, and the subsequent process of transformation of the alternating fringe belts and zones of residential accretion- was initiated some decades after Herbert Louis’ research of Berlin by M.R.G. Conzen for a study of the English market town of Alnwick(1960)^{2.3} and a few years later, the development of three fringe-belts was traced in Newcastle upon Tyne (Whitehand, 1967)^{2.4} M.R.G. Conzen, one of Herbert Louis’ students, later applied and sophisticated the concept in his research of Alnwick and of the big British industrial town of Newcastle. It are the studies of Conzen that formed the tradition within the historical geographical research discipline. During his research Conzen develops the theoretical framework for the heterogeneous zones between the historical and morphological consistence of the urban area. He sophisticated the concept of his mentor which will define better the area within his methodological analysis as followed:

“A belt-like zone originating from the temporary stationary or very slowly advancing fringe of a town and composed of a characteristic mixture of land-use units initially seeking peripheral location.”
M.R.G. Conzen, 1960^{2.5}

2.1. J.W.R.Whitehand, N.J. Morton. *Urban morphology and planning; the case of fringe-belts*. 2004, p. 275

2.2 *ibid*, p. 275

2.3. *Alnwick, Northumberland: a study in town-plan analysis*, institute at British Geographers Publication No. 27 (George Philip, London). 1960

2.4 Whitehand, J W R (1967) *Fringe belts: a neglected aspect of urban geography*. Transactions of the Institute of British Geographers 41, 223–233

2.5 .M.R.G.Gonzen.1960.cited in M.P. Conzen. “How cities internalize their former urban fringes: a cross-cultural comparison”. University of chicago. 2009. p.32

It was this framework from 1960 that formed the foundation for a Conzenian tradition in which he differentiated the urban landscape in three presuppositions. The first layer to be conducted in the analysis are the different functions of sites within an urban area. Secondly, the facet within urban development and change take place and provides a framework that influence the form of what is added or changed, namely the socio-economic character. Thirdly, attributes that reflect the morphological periods as additions to the urban area and internal changes.^{2.6} Basically; the urban landscape consist of three facets namely; the urban tissue, the buildings and its use. The historicity of the city is inscribed within these facets wherein the aspect of change made the facets dynamic according the current trends.^{2.7} From these three facets, the program, the functions it houses, is the most dynamic layer, which can prompt change according to the current trends. Whereupon the facet of the buildings is less susceptible, which can be declared by the reason that the buildings are the result of long term investments which makes radical changes very expensive.^{2.8} The city's urban ground plan is of the three facets the most unruliest. Again its the capital investment that translates this sustainable facet, due the fact that urban structures based on the natural existing structures are costly to change. The city's structure as in the street-layout and parceling forms a boundary, causing complications by profound changes. Changing the city's morphology means changing its buildings and ownership which makes interventions in the urban ground plan the most unlikely facet to change and most consistent in its appearance.^{2.9}

2.6. J.F. Colenbrander. *De ver-strooide stad*, NAI Uitgevers 1999 (Rotterdam), p. 45

2.7 J.F. Colenbrander (1999), *ibid* p. 45

2.8 J.F. Colenbrander (1999), *ibid* p. 45

2.9 J.W.R. Whitehand, *The Structure of urban landscapes: strengthening research and practice*, University at Birmingham. 2009, p.9

2.3 The polarities - landmarks theory

The fringe belt theory defines in substance the city development according the geographical issues. However an other possible field useful to have a further idea about the Turin fringe-belt features is represented by the architectural analysis based on the relationship between the urban growth and buildings. The studies about the building typologies are developed as an instrument to make clear the continuity of the urban structure during

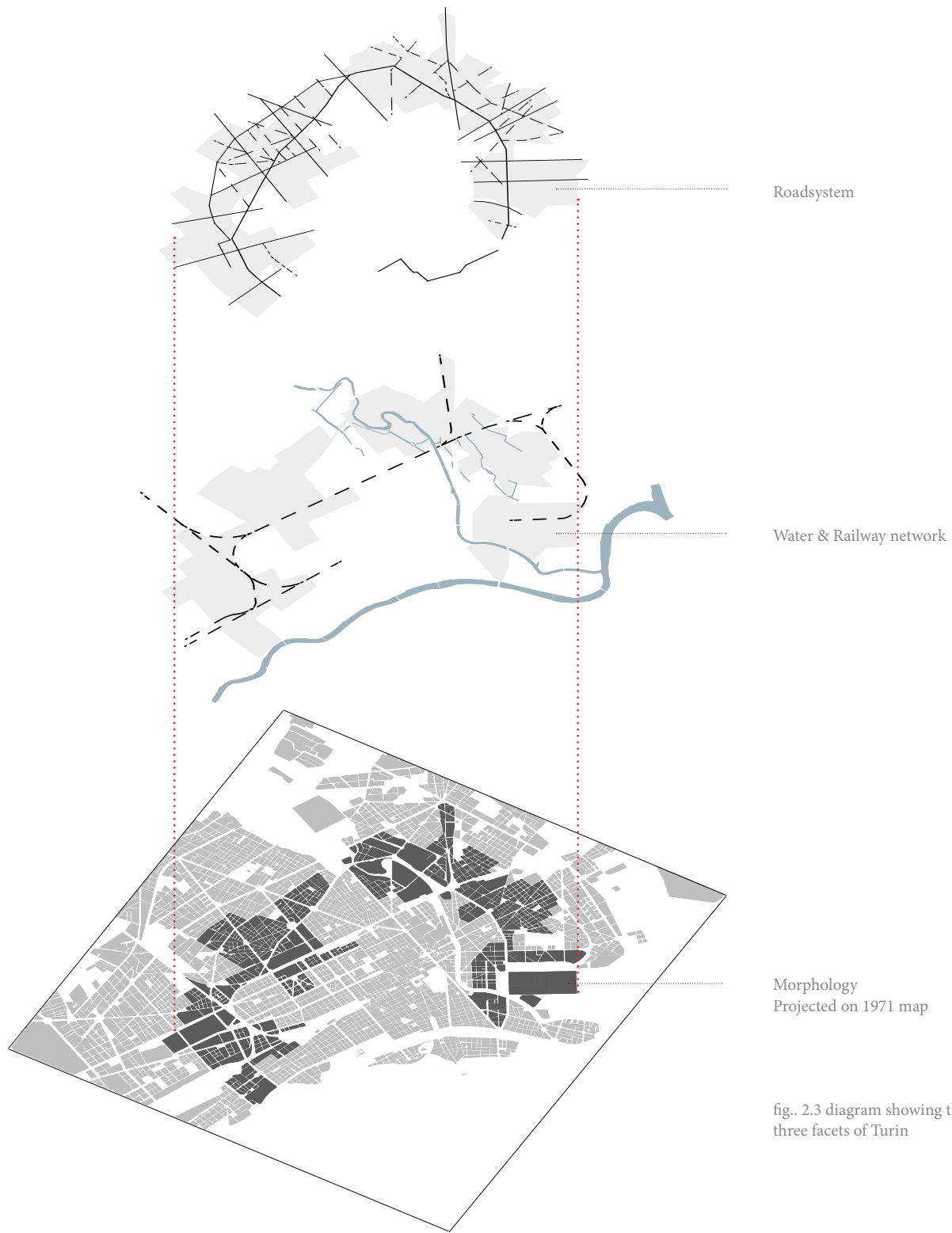


fig. 2.3 diagram showing the three facets of Turin

the centuries. The typology is itself the result of a long evolution period, and preserves inside the stratification of several changes. In his article, Marco Maretto compares the Fringe Belt Theory expressed by M.P. and M.R.G. Conzen with the Polarities - Landmarks theory of Saverio Muratori, finding some important points in common:^{2.10}

“The interpretative tools obviously differ, because of the different objectives of the disciplines involved – geography and architecture”.^{2.11}

Nevertheless the two theoretical fields share some principles, over all the interest on the urban studies developing a scientific method. The Muratorian school finds in the ground floor survey the tool that makes clear the relationship between the type evolution and the urban morphology. In this sense the case of Venice is the most clear example how the historical city had preserved its main features during the centuries. The guide traces which oriented the urban growth are recognizable analyzing the channels network that since the beginnings of its history had characterized the economical tissue of the city. At the same time some examples of singular crucial point between the water ways of communications and the pedestrians axes advantaged the Rialto area. Venice is from it origins a city formed by a polar structure where around the San Marco’s core, the cathedral of the town as well as the symbol of the Republic itself, a great number of churches organized in the surroundings parcels the first neighborhoods.

“From its origins Venice was built as an archipelago city of cores parish churches with a symmetrical rational plant, in front of which the Gothic town looks like a crisis of urbanism and the city as a successful synthesis of the Renaissance city continues and polycentric close continuity development”.^{2.12}

During one of the first stages of the urban development between the tenth and eleventh centuries the space between the beginning neighborhoods’ cores was fitted by a several number of green fields used for agriculture

2.10 M. Maratta., *Fringe-belt theory and polarities-landmarks theory* in “*Urban Morphology*” n1, Vol.13, 2009. p. 76

2.11 Ibid. p. 77

2.12 Muratori, S. (1959). *Studi per per una operante storia urbana di Venezia*, Rome p. 8

activities. The book *Studi per una operante storia urbana di Venezia*^{2.13} is the synthesis that better explain the research results committed on the typological and morphological studies. The methodology used by Muratori is based on four research lines: the environmental context of the territory, based on the natural reasons which begun the birth of some neighborhoods; the economical and technical structures based for example on the spread of the same building material and technics; the social aspects connected with the merchant society; in conclusion the architectural style matters. All these research contributed to, formed a comparison corpus of issues about the urban tissue in continuity with the historical development.

“The new society does not destroy or disintegrate the original environment, but it converts or integrates it with new elements. So it changes the sense of the whole but at the same time the original elements are preserved in their meaning and in their structure.”^{2.14}

According to Marco Maratta Muratori’s Polarities-Landmarks theory is basically defined by two principles: the internal and the external elements; the first ones with civil and the second with special features. The external landmarks embody some specific functions in a context between the city itself and the territory. At the contrary, the internal landmarks provide to public city functions.^{2.15}

In the scenery of the historical cities, such as Rome and Venice, with subjects of Muratori’s research it is possible recognize the external landmarks in a buildings category such as the monastic complex, but also hospitals, the Lazaretto or another structure requiring a large inexpensive land parcel. Placed in the middle area between the countryside and municipal boundaries these kind of buildings started to attract the addiction of new buildings with other functions. However talking about the polarities and landmarks is not the same concept:

2.13 Muratori, S. (1959). *Studi per per una operante storia urbana di Venezia*, Rome

2.14 M. Maratta., 2009. p. 77

2.15 *ibid.*, p. 77

“In general it is the polarities that set in order and hierarchize urban fabrics, while the landmarks define their ‘architectonic presence’ in the town”.^{2.16}

The Conzen’s Theory about the fringe-belt as well as the Muratori’s morphological approach reach the same kind of conclusion: they try to explain the principles behind the process of city growth. It evolves according to some economical factors, social matters and also political choices. Nevertheless, it is possible to recognize their sign in the relationship between the city and the city’s fabric and the morphological imprinting of the buildings, formed during the urban growth.

2.4 Turin’s fringe-belt

With the onset of the industrial age, taking off in Britain in the eighteenth century, cities started to grow rapidly. For Turin the industrial period started to rise some decades later, at the end of the eighteenth century, but the urban growth it produced was no less than other cities. The industrial growth came with economic acceleration and increased systematic growth cycles that contributed to the clarity with which fringe-belts emerged.^{2.17} The urban growth assimilated unconsciously at the edge of the city. A typical condition in forming the Fringe-belt, is the so called ‘fixation-line’. This line is a linear feature such as a town wall or some physical feature that introduces a discontinuity to urban expansion^{2.18}. A stereotype fringe-belt can be divided in three sub-belts, the inner-, middle- and outer fringe-belt. All phases represent a development of a spread zone till a compact dense zone with their own characteristics but have the development phases in common; fixation, expansion and consolidation phase. Once formed, fringe belts tend to remain in situ like buried fossils as the built-up area spreads outwards beyond them.

In the case of Turin we can recognize the three types of belts together with their fixation lines caused by the medieval fortifications, the first and second toll gate route. These medieval fortifications lasted intact until the beginning of the nineteenth century when the fortifications were demolished and with the exceptions of the existing villages the functions outside the walls had no

2.16 *ibid.*, p. 77

2.17. J.W.R. Whitehand,
*Fringe-belts and the recycling
of urban land: an academic
concept and planning practice.*
p. 830

2.18. Michael Barke, *Morpho-
genesis, fringe-belts and urban
size: an exploratory essay* in
T.R. Sialer, ed., *The Built Form
of Western Cities*, Leicester
University Press 1990 (Lon-
don), p.320

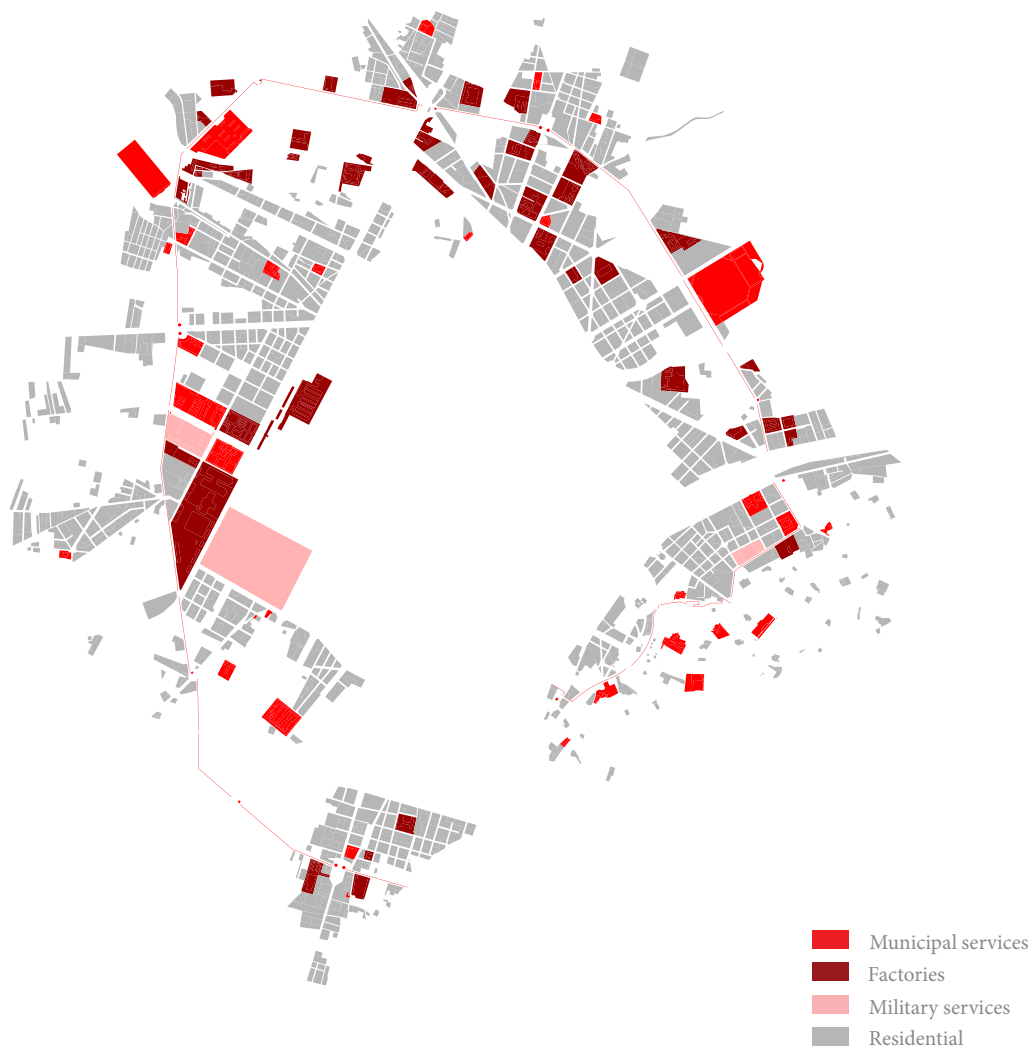


fig. 2.3 Map of 1896
showing the peripheral
functions

effect on the enlargement of the city, which continued to grow according to the leitmotiv of the roman grid and the external functions disappeared under the enlargement.^{2.19} The routes of Turin's toll gates(1853-1912 and 1912-1930) served as the fixation lines still recognizable today as the ring roads with important infrastructural functions. Besides the prescriptively described physical barriers as fixation line in the development of the fringe-belt M.R.G. Conzen takes the social-economical development of the city as important factor in the shaping of the morphological coherency^{2.20}. The social-economical development in the case of a fringe-belt is well explained by Whitehand(1967). He distinguishes periods of economic prosperity, where large areas are developed, and less favorable times in which the growth of a city stagnated and only the periphery condenses. Complex geographical situations occur in the less prosperous periods by series of spontaneous ad-hoc initiatives without any overall planning.^{2.21}

In terms of fixation, expansion and consolidation in the specific case of the industrial fringe belt of Turin they are divided to a temporal succession. The fixation phase starts from the toll gates of 1853 construction. It is during the second half of the nineteenth century that the first neighborhood centres began to organize in correspondence of the city gates, where outside the construction material costs was more less than inside. In this phase it is possible to recognize the existing agricultural parcels and the first productive buildings. Known with the name of cascina, these farming buildings could be considered as the prototypes of the later industrial structures. The economical system was mainly based on the agriculture and in part on the commercial activities: the premises of the industrial revolution wished by the Prime Minister Camillo Benso di Cavour had some difficulties to be really applied. The peak was reached during the 1880's exploding in the agricultural crisis and the credit system collapse. The trades interruption with the French Alps' side got worse exactly at the moment that the industrial companies started to modernize their production system^{2.22}. The social-economical changes in the nineteenth century coincide with the changes favored by the government. Turin went through major political and

2.19; A. Frizzi, La cinta dazaria della citta di Torino, in L'Ingegneria civile e la arti industriali, Torino XI (1885), n 10, p. 148

2.20. Whitehand. 2001, p.107

2.21. B. von der Dollen, 'An historico-geographical perspective on urban fringe-belt phenomena', in T.R.Slater, ed., *The Built Form of Western Cities*, Leicester University Press 1990 (London), p.320

2.22 V. Castronovo., *Piemonte, Priuli & Verlucca*, Ivrea. (2009), p.21

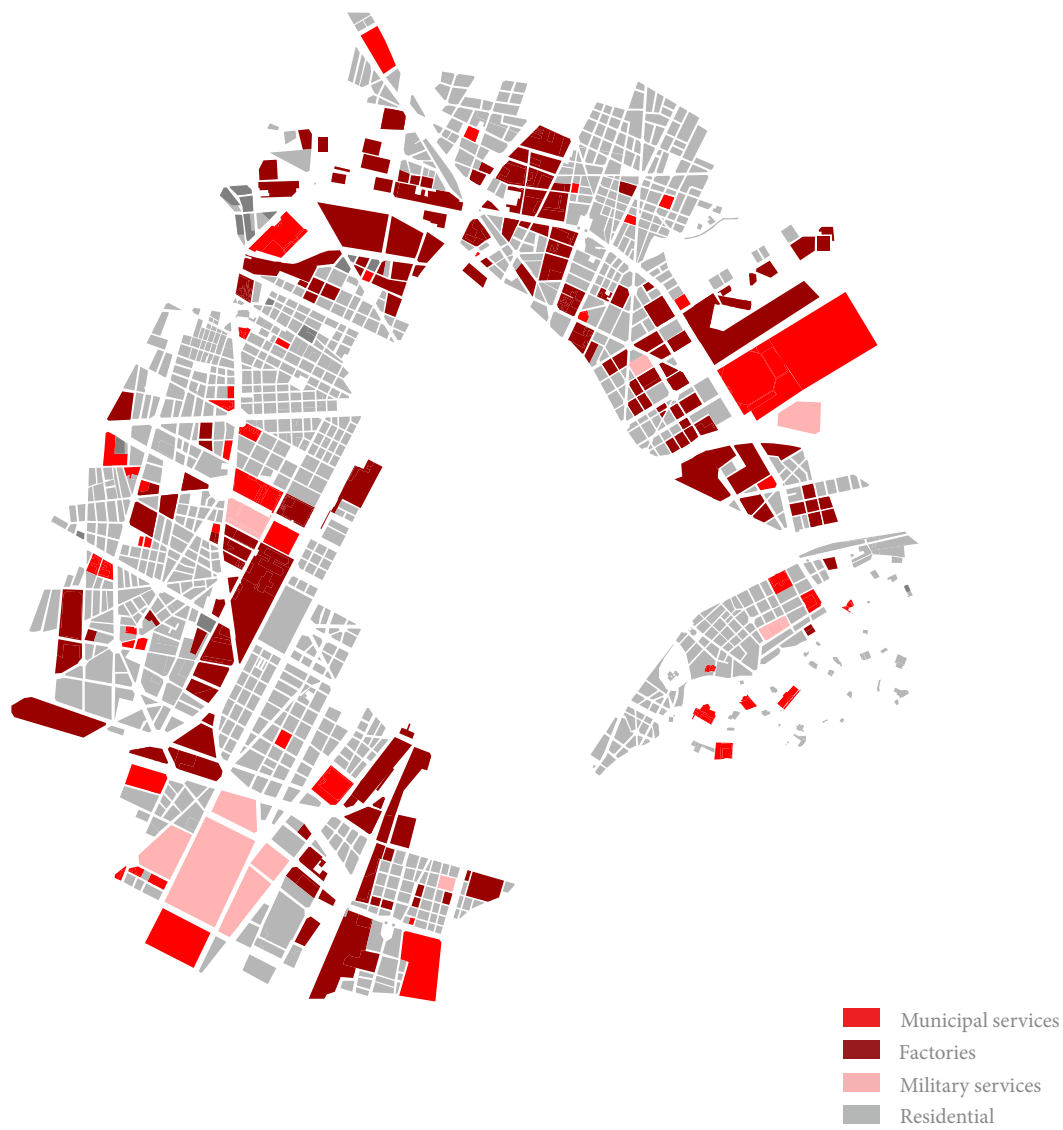


fig. 2.4 Map of 1935 showing the peripheral functions.

economical changes in the nineteenth century as result of the revolution of 1848. “The years after the revolutions of 1848 ushered in a new wave of reform initiatives in Turin that would have enduring consequences not only for the city and the Kingdom of Sardinia, but also for the political future of the Italian nation after 1861”^{2.23} It was during this period that the railway network was established which connected Turin with other major cities in Italy. In 1864 Porta Nuova was the first train-station to be finished which connected the inner city for public use were four years later Porta Susa was realized for cargo purposes. This new connection caused an enormous growth for the Turin economy, due to the existing industry who could produce now more for the hinterland and new industrial functions and workers found there way to Turin. It was mainly this industrialization that has formed the country side into an all-encompassing urban region. In general after the capital city movement from Turin to Florence in 1864, the city had to re-built its economical structure with important for its physical development. From this point of view the fixation phase developed rather slow, even if the circular new city portion, formed around the toll gates route, reveal its differences in comparison with the historical city center.

After the economical and political deadlock period, it is from 1907 onwards that the industrial revolution really transforms the city’s shape and the fringe belt itself. The expansion phase occupies a short temporal period, nevertheless it is signed by the main transformations. The promoter of the industrial development is the Municipality of Turin, under the leadership of Secondo Frola as the major of the city. The municipality reforms were especially oriented on two fronts: the low cost electrical energy supply towards the foundation of the electrical municipal company AEM,^{2.24} and the customs duty abolition for the industrial raw materials. For those reasons the factories, obligated in the past to be placed close to the canals, spread over the empty parcels between the neighborhoods in the periphery. The water which, until that moment was the main energy source for the factories, during the next decades were embedded: nevertheless their traces

2.23 A.L. Cardoza, G.W. Symcox, *History of Turin*, Einaudi, Torino, 2006, p. 183.

2.24 AEM Azienda Elettrica municipale was founded in 1911.

are still recognizable in the urban fabric within the plots and also in some buildings typology.

In terms of urban development, the population suddenly increased. The toll gates, that until that moment embodied the municipal boundaries, were not big enough to contain the city in expansion. In 1912 the second toll gates route (1912-1930) was fixed and the industrial fringe-belt of Turin reached the maximum boundaries extension.

The last phase, the consolidation phase, corresponds to the 1930's. Another economical crisis, but in this time with an international impact, made a stop in the industrialization process. The crisis' created two opposite urban phenomena: the urban population and the widespread unemployment in the industrial sector increased. Nevertheless the neighborhoods born outside the toll gates, which define the fringe belt itself, reached in that time the maximum crowding: is the case of Barriera di Milano, Madonna di Campagna and Lingotto. The reason can be found in the great number of new employees coming from the South of Italy and so this fact activated the growing demand of social housing.

In general in the case of Turin the consolidation phase of the fringe-belt corresponds in the densification process of that part of city occupying the intermediate location between the center and the periphery. In terms of economical features this moment is particularly signed by the housing speculation, which has left a great quantity of less qualities buildings.

Turin's fringe-belt represents a truly hiatus in urban growth, which is imprinted on the urban landscape. The marks in the urban circle around the city is emphasized by the contrast between the housing areas of the historical city of Turin and the edge of the city. Seen from the city center today, the zone is the first transect outwards which encounters a major zone of open spaces. It is also in this zone where the fringe-belt plots have some boundaries formed from the rural landscape. The plots are located and aligned to the movement patterns within and through the countryside. The rural morphology was more powerful than the planning methods applied

for the neighborhoods which arose in that period at the edge of the city up until today.

The expansion phenomenon of the industrial fringe-belt has not developed homogeneously but it is polarized around some main spots. In this case the landmarks-polarities theory, introduced by Muratori's studies, is particularly helpful to understand how the fringe-belt formed itself in the time.

The rule of the buildings in the process is primary. The toll gates with its barriers could be considered as the first physical structure that really influenced the city expansion. The buildings of the barriers represented for long time the gates of the city. Analyzing their architectural style, and at the same time the typology, repeated for all the gates buildings around the city, we can recognize in them the landmark principle. The architectural issues are also emphasized by the square's morphology: despite the post-war alteration Piazza Crispi, Piazza Carducci and Piazza Bernini are still preserving the same morphology like a sort of funnel shape. During the period after the toll gates formation some dwelling buildings started to arise spontaneously, placed there to avoid the construction material payment.

From this point of view the gates of the city acquire also the rule of polarities in the sense that they hierarchize the core of the first neighborhood outside the city boundaries. Moreover, in some other situations the relation is completely overturned: the toll gates route was defined by the aim to connect preexisting villages. For example this is the case in Madonna di Campagna where some farming structures and housing were organized around the ancient chapel of the seventeenth century. But inside this first network of gates, housings and workshops of another level of scale begun to emerge. Hospitals, religious schools, military infrastructures and buildings with a civil function defined the new external polarities, placed between the countryside and the city. Turin's fringe-belt during its fixation phase has similarities with the archipelago city of Venice under the centuries Tenth and Eleventh.

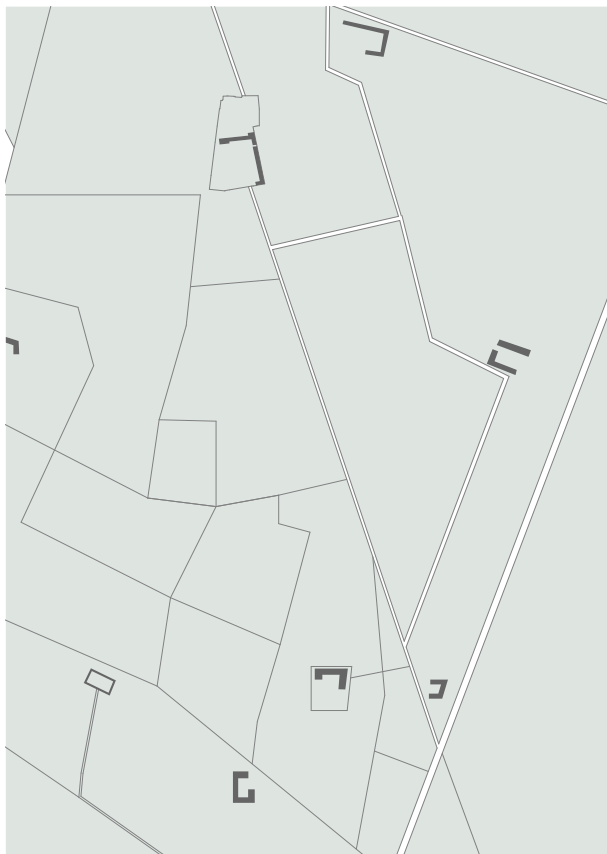


fig. 2.5 Situation 1840

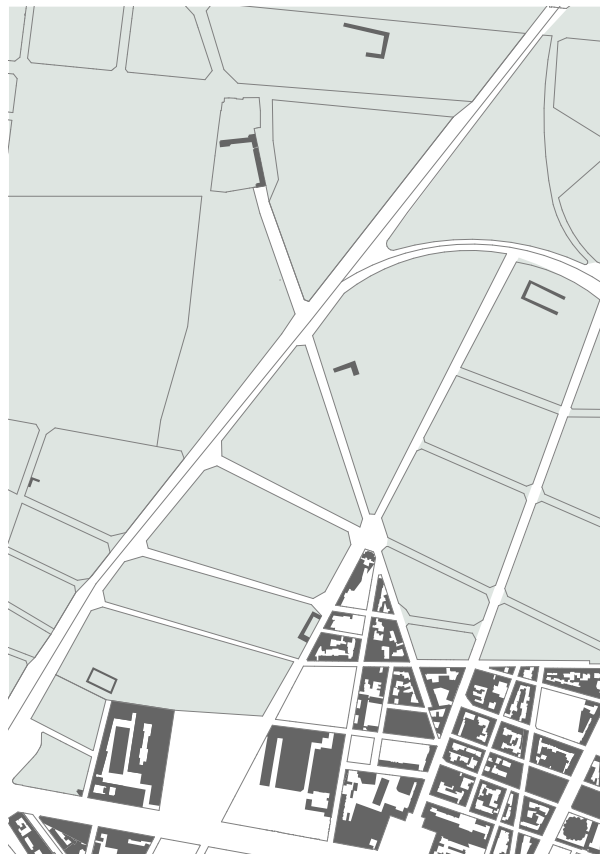


fig. 2.6 Situation 1907

The maps showing the development a fragment of the north of Turin considering the area outside the former toll-gate route and the industrial development around Docks Dora. (also fig. 2.7 - fig. 2.8)

2.5 Conclusion

The fringe-belt analysis not only helped in the understanding of the spatial structure and the traces they produced at all the scales of the geography, also showed the pertinent to future urban planning.

We can recognize the three facets posted by Conzen. Analyzing Turin's development, we recognized that the land-use is the most nondurable of the three aspects: its function, its daily program. The city is easily adaptable without too many drastic interventions and consequences. The buildings are slightly more sustainable because they represent capital that is amortized over a longer period and therefore usually allowed fairly slow aging before action is taken. The most durable part of the city is its urban tissue. This can be shown in this layer where the factories are along the rivers and channels and the parcels are still there. The 'void' already in its definition means that there is nothing but empty space. Two of the three facets now are only there as nothing but the past, but still recognizable is the first facet, its the urban tissue. The new modifications of the design task on the fringe-belt should react on these facets in order to avoid normalization of the urban tissue and a new project becomes just another project in the fringe-belt, without regarding the fringe-belt construction and so the construction of the city.

In terms of the economic system we recognize in Turin that the first neighborhoods outside the city arose as polarities for the future, with the example as in Venice where the churches formed an archipelago and where the impellent of the city, which on there turn put the neighborhoods into motion which surrounds it and gradually grown towards each other.

In the case of a fringe-belt this did not happen gradually, it was an hiatus state of flux in the growing development. The notion of these polarities, which are in a sense polycentric forces for the neighborhoods are important. This also applies for the large factories which arose in a later stage in the development of the fringe-belt. However, the reverse is true for the fringe-belt today or better said, the future. The fringe-belt, or the whole city in general suffers the lack of major polarities since the decline of the industrial period, which were once the driving force of the economy. For the design task, we are not only searching for another new housing project, what is more important is the task of the project as new polarity inside the existing city.



fig. 2.7 Situation 1935

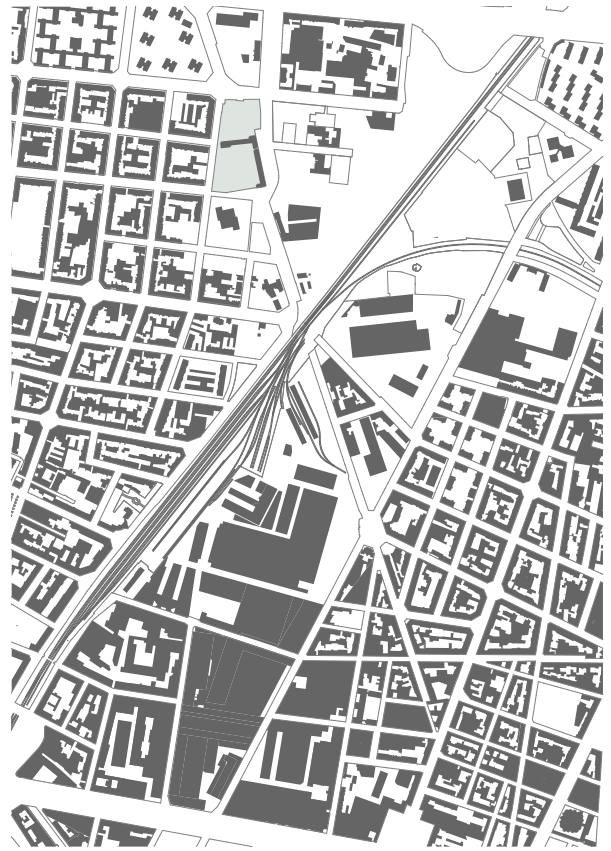


fig. 2.8 Situation 1995



3

New city idea, new strategy

The representation of form

3 New city idea, new strategy

The representation of form

3.1 Introduction

The form of the city is determined by the diversity of decisions made by the citizens who live in it. Such decisions in certain circumstances produced a pure clarity and form that a noble city has been born.^{2.1}

“The building of cities” states the American architect and urban planner Edmund Bacon (1973) *“is one of man’s greatest achievements. The form of the city always has been and always will be the pitiless indicator of the state of civilization”*^{2.2}

Almost a hundred years before, the art of building cities was described by Camillo Sitte(1889) as follows; *“The built city is a place representing our culture, a place in whose forms we recognize our identity”*.^{2.3} In the development of building cities the urban planners are always seeking to a new set of rules for our time.

Turin’s historical center is a well known example of this, because it represents the city’s history, rules, meaning, quality and identity at the same time.

Over the years of the ancient regime, Turin underwent many transformation according to a set of urban laws defined according to the will and taste of the ruling class. The House of Savoy used also architecture as a mean to legitimize itself and its expansions, as Pollak observes *“Turin became the principal theater for the legitimization process of the Savoy dynasty”*^{2.4}

When we seek for the identity and meaning of the place in the studied area, the centrifuged parts of the city caused by the periods of growth over time we will facing a halt of this strong identity. The focus of this chapter is that of defining a new idea of city with its own rules in the periphery, of that peculiar and usually underestimated zone between the center and the periphery, which can not be grasped anymore as an unified system.

2.1 Bacon, E. (1967). *Design of cities*. New York: Viking Press. p. 13

2.2 *Ibid*, p. 13

2.3 C. Sitte, *Der Stadtebau nach seinen künstlerischen Grundsätzen*, 1889; *City Planning according to artistic Principles*, 1986

2.4. The ‘condition of watchfulness’ is attributed to Pollak, M.D. (1991). Turin 1564-1680: *Urban Design, Military Culture, and the Creation of the Absolutist Capital*. Chicago: University of Chicago Press. p.18

Turin, like many other European cities, deals with the problem of pluriform parts of the city, which are unable to represent a strong place with meaning, new centrifugal growing realities without identity. That being so, a basic question arises: if the form of the city represent the state of civilization of the time, how would it be possible to create noble cities in our own day, representing our time?

This chapter starts with a brief elaboration of the principles of design ideas over time, followed by a part in which this idea is put forward for the project, the aim is to put into practice in the contemporary city of Turin today, in such a way that the urban form that it will take could be seen as a true representation our civilization. Important to clarify is that the aim of this chapters is not based on summarizing all the city ideas that have been passed along and their motives, rather it tries to find the relationship between some of the major city ideas in order to gain knowledge of how to continue on it.

“The resulting form at the end of the work will have a value as a form corresponding to our interrogation on the sense, as a form that manifests the reason of the object.”^{2.5}

The previous chapter outlined the concentric area as the ‘fringe-belt’, because of its characteristics it houses. This term, during the time, became the widely accepted. However, the notion of this area in the city, takes on different terms among the many who described, for example; described by O.M. Ungers it is the ‘periphery’^{2.6} A. Rossi takes on two terms, both ‘periphery’ and ‘territory’^{2.7} In all cases the correct term which should be carried out is the ‘fringe-belt’ Although the theoreticians and architects lived around the same time they seem not to know of the existence of, since they never quote each other. In all cases of formulation, the different terms used in this chapter correspond with the same location in the city.

2.5 Moccia, C. (2012). *Carlo Moccia: Architetture 2000 - 2010*. p. 9

2.6 Ungers, O., & Vieths, S. (1997). Oswald Mathias Ungers: *The dialectic city*. Milano: Skira.

2.7 Aldo Rossi et al., ‘Il problema della periferia nella città moderna’, Casabella no. 241, 1960

The act of defining new rules and to create something new is defined under the heading of *modern*. Modern or modernity is a constant process of re-establishing the relationship between the past and now.^{2.8} This way, we assume that the new city idea for the contemporary city of Turin can not be based on the principles of the 19th and 20th century city anymore.

3.2 Development of city ideas

Our civilization is constant changing during the time, according to the new needs we asks ourselves in the society and the changing technology. Urban planning plays a major role in the changing way of life, because the urban space defines the way of living. With the development of a new plan, the designers ask themselves how the urban planning should interact with the newest position in life. If we think of for example the role in which hygiene or the car influenced the way urban planning the last decades, it is easy to understand that the city is in a constant process of rethinking the urban principles, which fits the civilization best of the current time. The principles used in the past centuries do not correspond to the current state anymore. Simultaneously, every city or region had its own way of civilization, according to the culture of that place. This culture can be expressed through the architecture of the city. That being so, the question would therefore be about how the new city part would be shaped? Edmund N. Bacon, who described architecture as the interrelation between mass and space, thinks that the clarity and vigor with which mass and space are resolved and set level of excellence of architectural work at any period of a culture's development. A new idea for the city arises when we think further the design of one new building and circulation systems, rather "*we must establish volumes of space that are in scale with the needs of the present time and defined by means which are in harmony with modern technology*"^{2.9}

Two types of new ideas can be distinguished from the past; on one hand there is the idea of breaking with the past, a sort of need to "escape" both history and any type of tradition. On the other hand a less radical approach by updating the existing and building further on the tradition. In both cases

2.8 Monestiroli, A. (2005). *The metope and the triglyph: Nine lectures on architecture*. Amsterdam. p. 123

2.9 Bacon, E. (1967). *Design of cities*. New York: Viking Press. p. 16

being modern means drawing a boundary between the modern time and the newest times. The present according to Antonio Monestiroli has to be seen as the latest stage in the newest times.^{2.10}

“What is meant by ‘modern’ is the result of a continual re-establishing of the relationship between forms and identity in time”.^{2.11}

Monestiroli thinks that the term ‘revolution’ as posted by most of the contemporary architectural books about modern thinking has to be seen in a more realistic term as ‘evolution.’ Lines can be traced from the classic to the modern tradition in architecture in order to built in *continuity* of the city.^{2.12} Architectural designs has its roots in the place it has been built in, at least it should have. It derives its meaning from the condition of its location -its landscape- and the rules of the urban construction defined by the people who set up those rules. Existing places, formed in history, already formed a culture of habitation. These places could be either urban or natural environment, their configuration corresponds to our knowledge and as a consequence we can recognize ourselves in. Building further on these sites, and therefore working on its configuration, means that the place should be analyzed and interpreted in order to continue according to its contemporary trends, to be adjusted in case of lacks. In short, it means you work on the *idea of the city*, a site of architecture and to the rules of its construction.^{2.13}

According to O.M. Ungers all the idealogical endeavors of the last centuries failed miserably and can be understood as laboratory trials. He suggests a city model of complementary places^{2.14}. A strategy based on taking existing models from the city in order to create new places, which is, also being modern, because the architect in this way decides how this ‘new’ architecture fits the city today. At the same time it is true as well that the model does not represent our time or our civilization.

The historical city of Turin was born as a Roman city and the characteristics of the historical part of the city is derived from the Roman Castrum. The

2.10 Monestiroli, A. (2005). *The metope and the triglyph: Nine lectures on architecture*. Amsterdam p. 123

2.11 *Ibid.*, p.160

2.12 *Ibid.*, p.30

2.13 *Ibid.*, p. 30

2.14 Ungers, O., & Vieths, S. (1997). Oswald Mathias Ungers: *The dialectic city*. Milano: Skira. p.17



fig. 3.2 Ludwig Hilberseimer, Chicago lato nord, 1954

2.15 Monestirolì, A. (2005). *The metope and the triglyph: Nine lectures on architecture*. Amsterdam: p. 30.

2.16 *ibid.*, p. 42.

2.17 L.Hilberseimer, *entfaltung einer Planungsidee*, 1963

2.18 C.-N. Ledoux, *L'architecture considérée sous les rapports de l'art, des moeurs et de la législation*, 1804-1807

2.19 C. Sitte, *Der Städtebau nach seinen künstlerischen Grundsätzen*, 1889; *City Planning according to artistic Principles*, 1986

public space is made up by urban blocks elongated a strict grid system corresponding to the culture of that period, which was strongly influenced by military reasons. In this set of rules of the ancient city where upon the next generation of the city is built, resulting in the late 19th and 20th century city where those rules were adopted to be built in the countryside. This phase of the city no longer corresponds to our culture anymore. This dichotomy between urban and natural is typical of the 19th and 20th century city.^{2.15}

“The contemporary city with its infrastructures would seem to permit, at least in theory, the realization of the ancient dream of equipping nature for habitation.”^{2.16}

We see a change in those new city ideas developed after the first world war, in which natural spaces taken on a new role in the construction of the city. This conceptual reversal of the principles clearly influenced the definition of the characteristics of the urban elements. For example as in the urban renewal project for Chicago by Ludwig Hilberseimer where nature and city are not separated, but where they are designed as a whole^{2.17} The changed relationship between the nature and construction simultaneously brings a change in the condition of the houses and public buildings (fig. 3.2). Since it was underlined the need for them to find a new relationship among each other, because the buildings defining the street made place by a street trough nature connecting the buildings.

The debate on this dichotomy between nature and city can be traced back at least till the enlightenment. The ideal city according to Claude Nicolas Ledoux coincides with nature. The city is no longer constructed according to the rules of the mercantile city, rather the buildings have a relationship with nature.^{2.18} A city opposite to the city of stone. A treatise written over hundred years ago by Camillo Sitte is called *The art of building cities* (1889). The city as an *artwork* should not just be placed in the context of making beautiful building or bridges, but also within the idea of representing a culture of living.^{2.19} Monestirolì continues to place Sitte's treatise in comparison with

other new conceptual thinkers. Although his vision on the city is crucial on how we might built it today, the cities who Sitte analyzed were based on the ancient towns and therefore can not be implemented for a model today, since we are searching for a city idea for today. The reason of Sitte's importance in the architectural debate on new city ideas is his recognition that we have to built the city as a place representing our culture, a place in whose form we can find identity^{2.20}

All new city ideas seem to start from the critique of the current ones prevalent at the moment they were conceived, like Sitte's critique on the 18th century city. Other ideas on the city which asserted alternative on the current city are Ebenezer Howard's *Garden cities of Tomorrow*^{2.21} and *The manual for town planning* by Herman Josef Stubben.^{2.22}

The Garden city was the last one of the three but also the most radical one. Where Stubben's manual for town planning envisioned a new idea by dividing the city in parts where nature undoubtedly had its role, Howard insisted on a city model where nature is completely involved to become part of the city. It was the urge towards an ideal city which motivated the Modern Movement in order to develop there ideas.

Camillo Sitte, whose formulation was based on the closed-, walled-city, is the opposite of the city as being a part of the nature like in the garden cities. The nature in Sitte's city model is based on open spaces between different urban elements. An important element in Sitte's treatise is the square, it is a meaningful place of a culture of living. Although Sitte's research was never realized, the city as an artwork where the places should be representative as stated earlier is still valid.

“The theme the modern city has to tackle is the search for a rule of construction of open spaces, which is a rule recognized and shared, as was that of the closed spaces in cities before and during the 19th century”^{2.23}

Miserably failed models of the Modern Movement represented by Le Corbusier, Mies van der Rohe and Gropius, which passed down into the

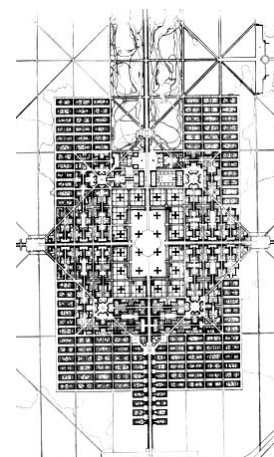


fig. 3.3 Le Corbusier,
Ville Contemporaine, 1922

2.20 Monestiroli, A. (2005). *The metope and the triglyph: Nine lectures on architecture*. Amsterdam p. 63.

2.21 E. Howard, *Garden cities of tomorrow*, 1902;1965

2.22 J. Stubben, *Der stadtebau*, 1890

2.23 Monestiroli, A. (2005). *The metope and the triglyph: Nine lectures on architecture*. Amsterdam p. 63.

history of urban development as mutilated fragments caused a radical dismantling of the building process of the 19th and 20th century city, but had in common with the earlier movements; the new relationship with nature. The historical mercantile city caused houses facing the streets, with the urban block as the fundamental part containing these houses. Is that what went miserably wrong with the Modern Movement, the rejecting of houses facing the street? Yes! The rejecting of the street as a place and the rejection of the block as a crucial city part where life takes place. The Modern Movement replaced the building block by a complex residential unit surrounded by nature with the overall infrastructure as the only relation between them^{2.24} These principles dismantled the building process of the 19th century city. An important priority within these city ideas is the relationship with nature.

In the first place; considering the urban quality of living the Modern Movement had indeed proven to be a mistake for proper urban life, but the second important aspect is the notion of building in the periphery, they considered the historical heart of the city as the only center of reference and by doing so, they created their own identity as well as their own character around the center.^{2.25} In terms of urban morphology the role of nature and the built area within it had an impact on the cities' morphology as a whole, the Modern Movement had there own standards and thus created there own idea of the city.

The Modern Movement undoubtedly proved to be an unreliable and non-durable city model and it received many remarks within the 1960's and 1970's debates, where it was often seen as anti-thesis for the proposals of that time. The urban studies of the sixties, for example that of Muratori^{2.26}, Aymonino and Rossi^{2.27} laid the groundwork for the attack on the Modern movement by restarting from the traditions of the European compact city. This *Critical Reconstruction*^{2.28} was supported by the Krier brothers, Bernard Huet and others. The historical centres are the place to rediscover the true origins of the city by means of studying its typologies and urban spaces. Based on the institutional monuments of Durand's typologies the urban space functions as a archive of spaces, like the street, the square, the

2.24 *Ibid.*, p.63

2.25 *Ibid.*, p.63

2.26 S. Muratori, *Studi per una operante storia urbana di Venezia*, Istituto Poligrafico dello Stato, Roma 1959;

2.27 C. Aymonino, A. Rossi; *La città di Padova. Saggio di analisi urbana*, Officina, Roma 1970.

2.28 *Rational Architecture: The reconstruction of the European City*, exhibition catalogue edited by R. Delevoy, A.A.M., Brussels 1978.

architecture and monuments.^{2.29} Leon Krier based his theory mainly by relying back on the historical city again, which is the opposite way of the intention posted in this research, does that mean we need to go back in time and accept that the historical city is the city of now? No! It would be a shame to throw away all the effort done by the Modern Movement and others, who had a strong, although radical and mistakable, new idea on the city. Instead of giving up on the search for a theory of open spaces with the nature as general context of the city, we need to continue on the theoretical legacy of the Modern Movement. The problem of the Modern Movement seems to lie in the urban construction, and the relation to man within it.

It's again Monestiroli who sees that the enormous theoretical efforts of the latest 50 years were only focused on the negative results of that period, but they were all accepting the notion of the city from around a single center. The city failed to recognize the morphological value and treats the outward growth as surplus to be occupied. Important is the notion of the periphery and the center^{2.30}

“The question is how to transform the monocentric city into a polycentric city”.^{2.31}

In the 1960's the Italian debate on the periphery or territory and the importance of it was broadly discussed in the Casabella journal (Fig. 3.4). Aldo Rossi (1931), belonging to the publication vehicle named as the Tendenza Movement^{2.32}, stated that the physical properties such as the morphology, geographical and economical situation of the modern city can not be compared with the situation of the traditional city.^{2.33}

According to Rossi, the structuring element in such areas were the network of roads, public transport and building complexes of institutions and therefore, such buildings could evolve into new monuments of the expanding urban territory, such as the Palazzo della Ragione in Padua - a classical example of “The architecture of the City”^{2.34}

2.29 L. Krier, The reconstruction of the city, in *Rational Architecture*, p.41

2.30 Monestiroli, A. (2005). *The metope and the triglyph: Nine lectures on architecture*. Amsterdam. p.65

2.31 *Ibid.*, p.65

2.32 M. Tafuri, *History of Italian Architecture, 1944–1985*, p. 76-77.

2.33 See Aldo Rossi, ‘Città e territorio’, in Rossi, *Scritti scelti*, op. cit. (note 5), p. 290-291.

2.34 Claessens, F. (2006). *Reinventing architectural monumentality*. Oase, 71, 100-113.

2.35 Aldo Rossi, 'Nuovi problemi', Casabella no. 264, 1962; quoted here from Aldo Rossi, *Scritti scelti sull'architettura e la città 1956-1972* (Milan, 1978), 175-192. Rossi's publications on the urban periphery appeared from 1960 onwards: Aldo Rossi et al., 'Il problema della periferia nella città moderna', Casabella no. 241, 1960; Aldo Rossi et al., 'La città e la periferia', Casabella no. 253, 1961; Aldo Rossi et al., 'Città territorio negli aspetti funzionali e figurativi della pianificazione continua' (1965), all included in *Scritti scelti sull'architettura e la città 1956-1972* (Turin, 1975, 1978). Casabella no. 278, 1963.

2.36 See design report: Aldo Rossi et al., 'Locomotiva 2',

2.37 Monestiroli, A. (2005). *The metope and the triglyph: Nine lectures on architecture*. Amsterdam. p.65

2.38 G.U. Polesello, A. Rossi, F. Tentori, *Il problema della periferia nella città moderna*, in 'Casabella' n. 241, 1960, p. 38.

2.39 Ungers, O., & Vieths, S. (1997). *Oswald Mathias Ungers: The dialectic city*. Milano: Skira. p.17

2.40 M. Tafuri, *Storia dell'architettura italiana 1944-1985*, cit., p. 155.

However, Rossi envisaged an important difference between the center and the urban territory, namely that the elements of the city due to the scale of the territory have been exploded. "*The accumulations on these sites are so vast that they call for an extremely specific architectural statement*".^{2.35} It is in Rossi's proposal for the competition for a business center in the periphery of Turin(1962) - in terms of scale the same as the project area in this inquiry - his vision on the role of the primary monument in the urban periphery is transposed. What is interesting is that the program for the project was similar to that of a small town. He designed an enormous building on city scale.(fig. 3.5) The building had no relationship with the adjoining city in terms of scale or form and neither was related with the existing morphology or whatsoever, by raising it up of the ground with 30m and placing it on 12 gigantic columns. Rossi believed that such area's required a closed structural form in order not to get swallowed up by its surroundings^{2.36}

The emerging visions at that time about mega-structures during the 1960's has been long gone, and the project was more or less an experiment of the architect. However, his vision on the scale of the periphery still remains valid. It was then Monestiroli, pupil of Rossi, to carry on this studies and to notice that the city, has decentralized a number of its vital parts(administrative, service or production functions), without a clear design-model in which they were organized. A reciprocal relationship between public and private life like that in the historical city, would bind together public and private functions. Monestiroli continues by stating that the reason for the absolute supremacy of the old city is the fact that public and private were perfectly related to each other.^{2.37} The organization of the city of the Modern Movement and also Aldo Rossi's mega structure failed or would have failed to cope with the subsequent urban growth.

3.3 The periphery

The cities' periphery has proved its position within the architectural debate, if we look among the many architects who tried to describe it. For example; parasite^{2.38}, cancer^{2.39} or forest^{2.40} The difficulties of defining a direct and precise multiform peripheral space led to describe not only through



fig.. 3.4 Concorso per il Centro Direzionale del Torino, numero monografico di 'Casabella', n. 278, 1963

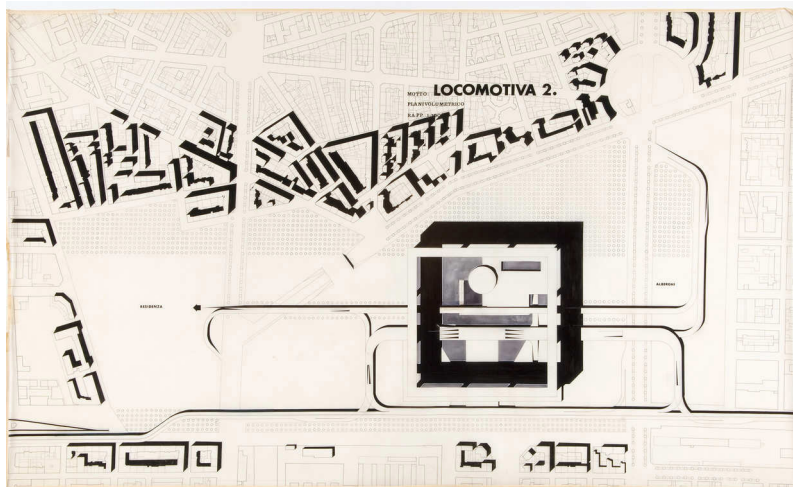
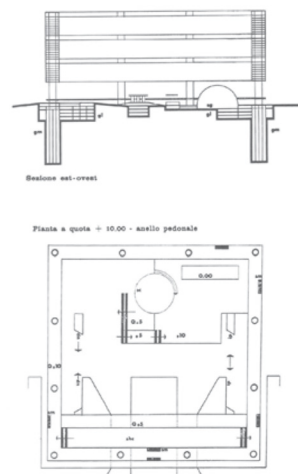


fig.. 3.5 Aldo Rossi and others, design for a business centre in Turin, 1962, situation, section and floor plan, model



metaphors, but also to indicate its denial: the periphery is clearly not the countryside, but on the other hand, its also not including the actual cities' identity anymore. Michelucci(1952) describes the zone as oil-slick: "*The sub-urban melancholic grew towards the countryside, it spread like an oil-slick on absorbing paper, spreading in unexpected direction*".^{2.41} It's a place in the city where the city lost its articulation with the historical city and consistence of the tissue. The clear threshold between the boundaries and form got lost. The fringe-belt became an statement.

The project area seems to be in a not, well defined or, readable place of the periphery. But you cannot ignore the existing structure of its context. That is were new problem rises. It became clear that the part of the city of Turin developed in the 20th century and later, is far too heterogeneous and contradictory to be integrated in a single plan. The contemporary Turin is not one single place but many places. Or as O. M. Ungers(1997) stated: "*It is a complex, many-layered, multifarious structure, made up of complementary and interconnected ideas, concepts and systems*".^{2.42}

The fringe-zone of Turin seems to be have grown uncontrolled and still today the development of the empty voids - as part of the new strategy of the city today- of the new urban plan seems to be occupied by commercial buildings and shopping malls and are like diseases filling up the space, making the city meaningless. This complex city system is getting filled with structures with no aesthetic or rational meaning.

The planning methods applied in the past can not be used as a contemporary strategy today. The urban plan is a loose, more or less differentiated conglomerate of disparate structures. Within this plan the infrastructure supplemented by public buildings.^{2.43} As mentioned in the first chapter, the fringe zone of Turin is an accumulation, a pragmatic conglomeration of different building types including utility and industrial buildings, often combined with housing and public buildings. The disorder in the area resembles the rural settlements of historical urban settlements, where every period has chosen the building types that suited it best and adapted it to its

2.41 G. Michelucci, *La macchina d'olio*, in 'La nuova città' n. 10, 1952, p. 372.

2.42 Ungers, O., & Vieths, S. (1997). *Oswald Mathias Ungers: The dialectic city*. Milano: Skira. p.17

2.43 *ibid.*, p.17

needs. The problem arises when the new systems are applied exclusively in isolation, built as autonomous systems.

So far, we have noticed a true evolution of city concepts, reflecting back on it we can distinguish different kinds of aspects which have to be conducted. The cities' urban construction in order to understand its functioning. Especially the transport infrastructure of the territory is crucial for constructing the polycentric city. The infrastructure ensures the connection between the city parts. The cities residential areas and the public functions have still to be defined in order to let the polycentric city work.

Yet, for the new intervention, the form of the place and the urban grammar, has still to be defined.

3.4 New city idea, new strategy

As previously described, the planning methods applied in the 19th and 20th century can not be used as a contemporary strategy. Unlike an attempt at standardization, I propose to describe an urban strategy that encompasses a modern city idea based on continuity of the city and above all a strategy which is appropriate to the zeitgeist of our time. Seen from a chronological perspective of city ideas, we already know we have to reflect on the relationship between city and nature; *“the nature is no more the ‘other’ space that is external to the city, but becomes the context of the urban construction”*.^{2.44} It is for that reason that the void as focused on in this inquiry can become the place of construction restored as nature.

The natural void evolves from the idea of the city in the Modern Movement. This new idea should correspond to our necessity of recognizing the civil characteristics of urban life in urban spaces. We need to re-establish the urban principles evocative the urban conditions and density of the historical city in relationship with the broadened dimensions of the natural space. Urban conditions for a habitation, a culture of living. The simplest components of the urban space should not be ignored when dealing with projects for the periphery. I would suggest to consider for a moment that simple, yet crucial space of the urban square, which was described by

2.44 Moccia, C. (2012). Carlo Moccia: Architetture 2000 - 2010. p. 13-14

Agostino Renna(1975) with the following words:

“We can say that the square, as a constructed public place, as opposed to the city’s leftover open spaces, fulfills a very wide and general necessity, due to the fact that with it the city represents itself. The city or part of it, displays itself in the square and the latter is the mirror, the representation, of the former. Perhaps the architectural history of a city starts here”.^{2.44}

This way, a new paradigm should be necessary to formulate a new relationship to the existing city, like with the modern movement the discontinuity of the built-up space and therefore created a strong own identity. This paradigm is derived by a new relationship between the built space(internal) and natural space(external). The urban grammar of the new idea represents forms of architecture corresponding to our time and expresses the new relationship between city and nature. The necessity for nature is described by Friedrich Nietzsche(1844) more than hundred years ago, a philosopher who lived in Turin for many years says about the city and nature:

“Namely, quiet, spacious, and widely extended places for reflection, places to go for a walk in ourselves”^{2.45}

Yet, this description is in contradiction with the cities’ urban life, which is not associated to the definition of Nietzsche. Streets and squares are important, because this collective space gives a recognizable place to the city. New streets and squares are places where new history can arise. Natural space on the other hand, in the specific case of Turin, is hard to find. The new urban grammar should therefore be different from the built construction of the past where ‘only’ the street and the square where the primarily ordering element and defined the urban block. This will result in a specific new relationship between the built-up space and the void. In order to achieve that, the void should be considered as positive value in relationship with the city. The junk space will transform into a place.

2.44 Renna, A., Gli spazi liberi nella costruzione della città, in *normativa architettonica regolamenti edilizi*, 1975, p. 61 quoted from Monestiroli, A. (2005). *The metope and the triglyph: Nine lectures on architecture*. Amsterdam., p. 65

2.45 Nietzsche, F., *The Gay Science. Die fröhliche Wissenschaft*.1882

Carlo Moccia, colleague of Antonio Monestiroli lays the fundamental for this new urban principle. The new built-up space could be described with the term 'architectural island'. This new paradigm implies discontinuity in the existing built-up space and therefore resulting in an individualization of the morphology in the urban construction. The architectural islands will evoke the dual relationship between the nature and built-up space. The resting void space whereupon the architectural islands will be built has not to become a residual space with islands occupying the space but should define the space by a certain tension between them to acquire the value of the space.^{2.46}

A fundamental question remains about the order of which the architectural islands are supposed to be made of. The leading order is not the geometrical shape it tends to create, but rather the representation of it. Is What it means what should the order represent? This is established in the concept of type. We know that the architectural island consists the need for civil characteristics. The type can be specified to the conditions of our time, without re-inventing it. In a way building on a tradition of architectural forms recognized by the people who live in it.

Carlo Moccia says about type,

"The type allows us to establish some analogies between the "rituals" of our life and architectural forms, between the meaning of a building and the structure of relation between the parts that compose it."^{2.47}

The urban block showed its robustness and endurance during the development of European cities in its essence it represents civil characteristics. The courtyard for example is hard to imagine of not being collective.

Besides the urban grammar, the position of the 'void' and so the new architectural forms, within the city should not be neglected. From the lessons we have learned from the Modern Movement, the new city part should be built regarding the geographical, social, economic, political or

2.46 Moccia, C. (2012). *Carlo Moccia: Architetture 2000 - 2010*. p. 16

2.47 *ibid.*, p 11

technical requirements and not generate a system of isolation, of autonomy and free choice of site and their material independence^{2.48} It is clear we cannot neglect the existing structure of the city, but anticipate on what is already there. The outcome of the former fringe-belt analyses offers the answer to this question.

The void is the new place of construction which interacts at a distance with other urban poles. The peripheral area can be seen as an opportunity to transform the monocentric model of Turin into a polycentric model. Like Aldo Rossi envisioned with his mega-structure in Turin in 1962, the new construction can serve as a focal point for other urban functions and so allow the development of a new piece of city in which the collective structure would stand proudly for the community. Such a model will be recognized in every part of the territory. In a sense it is a system of the 'city within the city'.



4

The fringe-belt building block

Typological analysis

4 The fringe-belt building block

Typological analysis

72

4.1 Introduction

The notion and the importance of the ‘type’ in the development of new city ideas has already been introduced in the present thesis. The point was also made on the previous pages (cf. chapter 3) that the major theories that arose against the traditional conception of the city; would probably no need to underline how prevailed the Modern Movement was within this group.

Despite the differences, all the anti-urban visions shared the belief in the denial of the cities’ locus, history, social, morphological and typological development. This chapter can be seen as a critique against those theories who ignored the identity of the city and instead defends the opposite vision: not to break with the past. On the other hand, the idea herein defended would be that of looking back to Turin’s history as if it is a source of inspiration and with which it is possible to define contemporary interventions on the basis of traditional guidelines. From this perspective, the fringe-belt in consideration has a remarkable stable typology, which will be analyzed and should be useful in the design process.

The fringe-belt analysis as discussed in the previous chapters covers the parceling and other structures that make up the built environment of Turin. At the most detailed, local scale, it becomes clear that the buildings are related to particular socio-cultural forms and functions needed at particular sites and therefore express great individual variety^{4.1} The Fringe-belt of Turin is a region with a construct of conventions and norms that evolved over time on the basis of experience, an aspect which is well reflected in the typologies of the area. Despite the “*minestrone*” of different buildings apparently very different from one another, in terms of plot sizes as well as functions, among the fringe-belt houses it is still possible to identify a

4.1.J.WR . Whitehand.
*British Urban Morphology the
Conzenian tradition.* Universi-
ty of Birmmgham. 2001. p.105

common dominator, that set of features which make them ascribable to the same “type” and allowed them to change and adopt over the decades and therefore gets stronger over time.

The sub-question (3) in the introduction of this booklet ushered; What are the typological characteristics in the area? The present chapter deals more in the specific with the typological characteristics of the buildings analyzed, in order to put them in evidence for further references in the design, where their use will represent a link to emphasize continuity between historical knowledge and the contemporary action in the project conceived.

4.2 Typological research

This method of historical research according to the typo-morphological research finds its origins in the 1950's as a response to the modernists. Architects like Saverio Muratori(1910-1973)^{4.2} took his position against the ‘tabula rasa attitude of architects unjust to the historical urban tissue. Muratori is the seminal figure in the development of systematic ways of investigating the evolution of the Italian city and can be seen as the founder of typo-morphological research. Muratori was appointed to the chair in the *Instituto Universitario di Architettura* of Venice where he focused on a program of urban analysis. He had, in his own words, “*To make the hardest effort to unburden myself of the platitudes I had acquired as a son of foolish modern ambitions; I devoted all my experience from twenty to forty years on, with study of the urban tissues of Venice and Rome, I was able to understand the laws of typology, of urban form and of urban cycles*”^{4.3}

The postwar period in Italy is characterized by the critiques on the Modern movement and Muratori was one among those who were concerned the most about the effects which the Modern movement had on the architecture and urbanism in Italian cities. He believed the braking of traditions in the production of the cities led to a total crisis. His vision on ‘modern’ architecture is described in *Vita e storia della città*(1950)^{4.4}, in which he proposes a strategy based on the necessity to let the modern project adapt to the urban characteristics of the existing city. This could

4.2 Zeijl, van G (1987), in: *Typologie, het ombuigen van het modernisme*, OASE (15) p. 7

4.3 Muratori, S. (1948), quote here from from Samuels, I.(1983) ‘*Towards an architectural analysis of urban form: conservation studies in Britain and Italy*’ p.417

4.4 Panerai (1979), in: “*DAT is architectuur*”, H. Heynen/A. Loeckx/L. de Caeter/K. van Herck, p. 538

only be reached by a grounded urban analysis prior to the design process. The strategy is based on a systematical methodology called ‘*Storia Operante*’. He emphasized the urban structure defining it as the result of a collection of ideas, choices and proceedings which is translated into the building structure and related spaces.

It is within this urban structure that different kind of types can be classified, which are all related to the urban form and the given historical period wherein it was built. This is what he calls the ‘*Tipologia Edizilia*’^{4.5} Muratori’s theory reached posture with his research on Venice where he analyzed the transformations of the types and the relation with its surroundings.

His analysis moved from the premise that the environment influences the way people live in it and therefore a fundamental step according to him was in the study of human behavior within the city. The outcomes of this research were published in the book ‘*Studi per una operante storia urbana di Venezia*’ which has been published in 1959^{4.6} He ensures that the urban organism in its totality can only be understood by understanding the history of it. With the rising of the Modern Movement, we have lost the ability to read the layers that were added throughout the history.

Muratori as a teacher had students who fruitfully brought this research methodology onto the next generation, perhaps the most significant of these students, both from the point of view of specific town studies and the development of techniques in general is Gianfranco Caniggia. He taught at Genoa and Florence where he developed further the concept of urban form on those cities. Later he had a chair of architectural composition based in Rome from 1983, until his death in 1987. His work undertook also cities as Como and was involved in the reconstruction Naples after an devastating earthquake. In essence, Caniggia’s ideas are based on the concern for the maintenance of the parts of the city and its form by a continuity of its ‘first building’^{4.7} The ‘basic type’ of any ‘urban tissue’ is formed by the dwellings. Caniggia describes the basic type as: ‘*This basic type is modified according to changing social and economic conditions. In times of economic growth, buildings become more complex with the addition of rooms which*

4.5 *ibid*, p. 538

4.6 Muratori, S. (1959). *Studi per una operante storia urbana di Venezia*, Rome

4.7 Caniggia, G., & Maffei, G. (2001). *Interpreting basic building*. Firenze: Alinea. p. 94

are designated for more specialized activity, while during periods of economic decline the reverse is true^{4.8} Against the idea of autonomous and placeless form Caniggia conceived the idea of autonomous formative processes and place dependency to emphasize the relation between building type and city form. It is together with Maffei that he introduced the concept of the 'archetype.' Their research aimed first of all to search for the very meaning of 'building type', from which all of secondary types and models would derive. The most remarkable example of type that they pointed out is that of the roman 'domus' as the basic type for later medieval types. The result with this method is to get a grounded insight into the characteristics of a type, which later can be used to develop new buildings that already incorporate the evolution of the past without being doomed to fail and extend this into the present. In Rome, the medieval decline is expressed by a regression of the 'domus', resulting in a single-cell dwelling. It is a perfect example of what is definable as the '*tipo portante*', or leading type, which mutated according to the transformation of the urban fabric. The leading type can be represented by a form of a dwelling which is not mutated, transformed or restricted by any kind of urban tissue. A model without context only representing the necessary characteristics of the type.

Although Caniggia developed further Muratori's research, both theories do seem implicit for most Italian practices concerning the conservation or rehabilitating historic towns. Which is not explicitly applicable in our case, because we are searching for the way of re-interpretation tis typologies in a modern way, according the new urban principles.

Rafael Moneo responds on the notion of transforming the typology more radically. The type can most simply be defined as '*a concept which describes a group of objects characterized by the same formal structure*^{4.9} To him, architecture is not only described by types, it is also produced by through them. In this way it can be understood why and how the architect identifies his work with a precise type. The architect uses the type as a starting point were he can act on: '*he can destroy it, transform it, respect it*', but the type is the starting point. By accepting this notion, the design process is thus

4.8 *ibid*, p. 97

4.9 Moneo, R., (1978) "*On Typology*," in *Oppositions* 07.13 p. 23

a way of bringing the elements of the typology into the precise state that characterizes the single work.^{4.10} Important here is to understand the formal structure, because the formal structure in this sense is not only based on the same characteristics of the geometry, formal structure means also that the building is intimately connected with reality, where the building's construction is related to the social activity of that period. The type has a precise position in history. Reinterpreting types in a modern way means that one type becomes the other type when substantial elements in the formal structure are changed.^{4.11} This brings an interesting perspective towards the continuation of this research and the evolution of the type in a modern type. In a sense the typology produces guidelines from its context in which the architect can be creative with.

4.3 The fringe-belt building block

The first buildings which can be found in the fringe-belt area are the farm-buildings or the so called 'Cascina' or 'Grange', which stretches out over the countryside. However this analysis goes further into the building typologies which arose in the area in a period at the end of the 19th century, when the city started to expand outside the toll gates. The period during which the fringe-belt started to rise brought a rich development of typologies that were transformed over time. The buildings are integrated in the geography of the city. Besides, the collective urban characteristics of the block is where we are looking for to re-use, Within this rich period of different typologies there is one which stands out and is present in the whole area along the former toll gates, surviving the fluctuations of the economical growth and regressions. This typology is that of the local dwelling block. The choice to analyze this typology is derived from several reasons, but was first of all a consequence of the fact that typology somehow can be seen as the "common ground" for all the characteristic buildings of the Barrier of Milan neighborhood. The buildings in the neighborhood of Barrier of Milan had the same type as other parts of the city in the expansion as Borgo San Paolo, Martinetto and Madonna di Campagna. The four neighborhoods outside the toll gates border have different characteristics in terms of infrastructural

4.10 *ibid*, p. 27

4.11 *ibid*, p. 27

organization, but share the same typologies.

Among these characteristics of the fringe-belt's urban block, there is the ordering of the blocks; since it is not based on an overall rational planning, but they are placed along the ancient roads passing the area and the agricultural division of the land. The blocks are composed by different buildings placed on the mashed plot division, which results in fragmented blocks. This kind of fragmentation is derived from the farmers and landowners who gradually sold there parcels to individuals and housing companies. The wide mixture of buildings occupying the block are all based on the same typology whatever the size or amount of dwellings it consists.



fig. 4.2 Street view of an urban block in the fringe-belt on 'Via Leini'

Many of these buildings have been demolished, in parts or completely, or have been modified by restructuring due to the implementation of the masterplan of 1908. The buildings were mainly poorly built, due which it can be explained that not all of them are left.

Although the neighborhoods derive their identity from their strong heterogeneous character and specific buildings' appearance in terms of their building height, plot-size, or amount of dwellings it houses, it is based on one strongly well represented typology and therefore can be seen as the *tipo portante* in this research. Besides the durability as a typology it also defines the collective character which we are aiming for in the resulting new city idea. The typology has a clear threshold between public, private and collective.

There are urban block in the area which contain the different dwelling buildings based on that single typology. The block analyzed in this chapter is enclosed by the streets via Fossata, via Goletta, via Matterone and via Valprato and is representative for the urban block in the area. The block was developed at the end of the 18th century and can be seen as the first generation of blocks arising outside the toll gates of Turin. The urban block transformed frequently till today, which mainly consists of transformations on building scale which transformed independently from each other within the block. The major transformations on the building scale could be divided into two categories, namely a densification of the urban block towards the inside of the block or either a densification on top of the building, but the perimeter of the block remained unchanged. Aesthetic building regulations did not exist at the time the first buildings of the block were built, which gave freedom to primitive building types. The social situation of the area consisted mainly of social working class for the rising industry in the area. These buildings are characterized by its fixation within the building block on the different property sizes. It is intended to accommodate the lower social class, one or multiple families, combined with the area to perform a craft activity within the building itself.



fig. 4.3 The building block situated in 1907



fig. 4.4 The building block situated in 1995



fig. 4.5 The block in its ensemble.

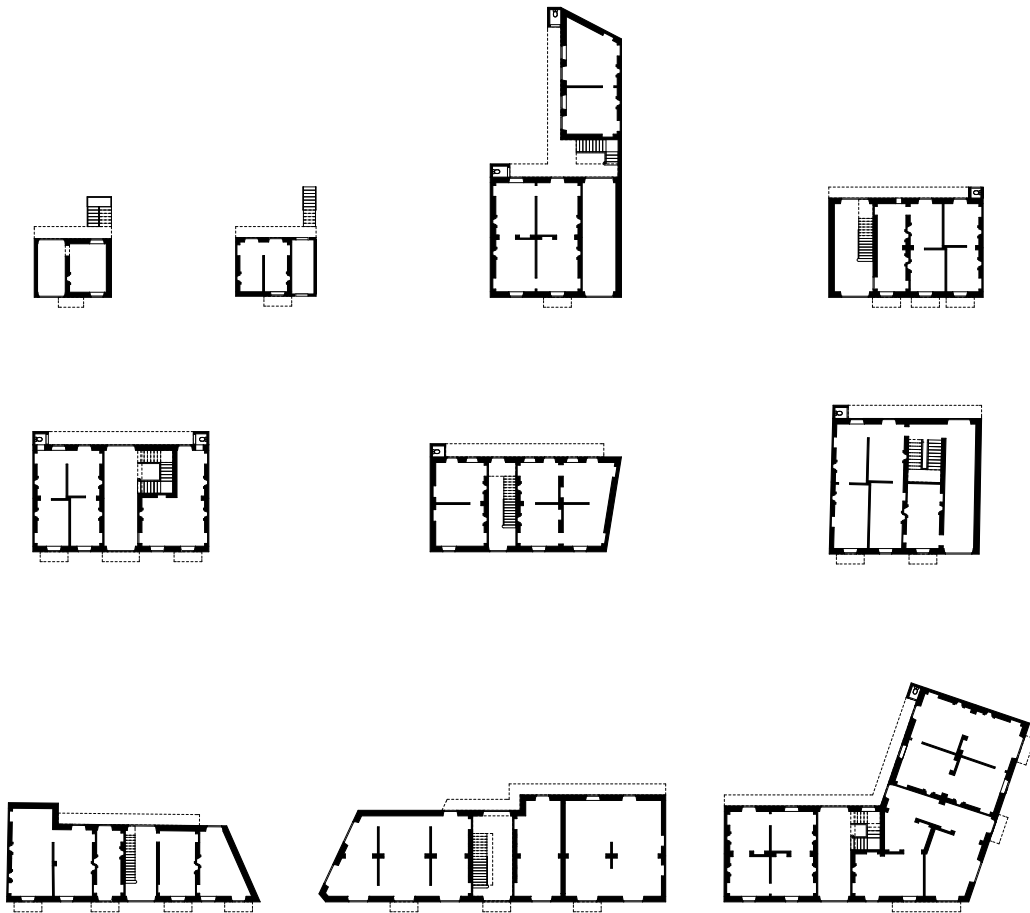
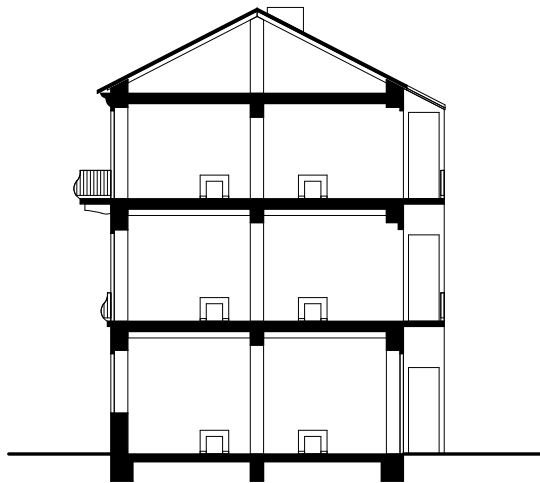
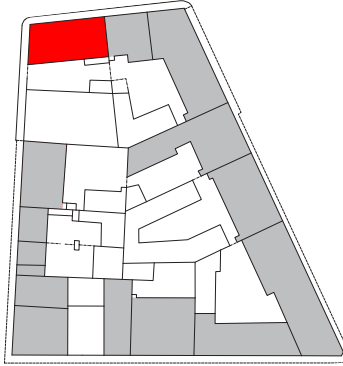
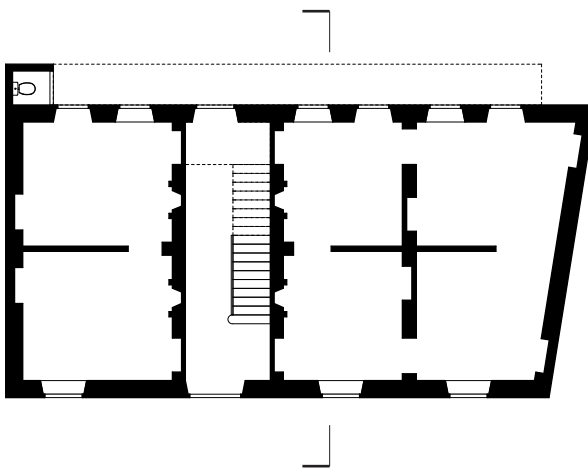


fig. 4.6 Dissembled building block

via Valprato 11

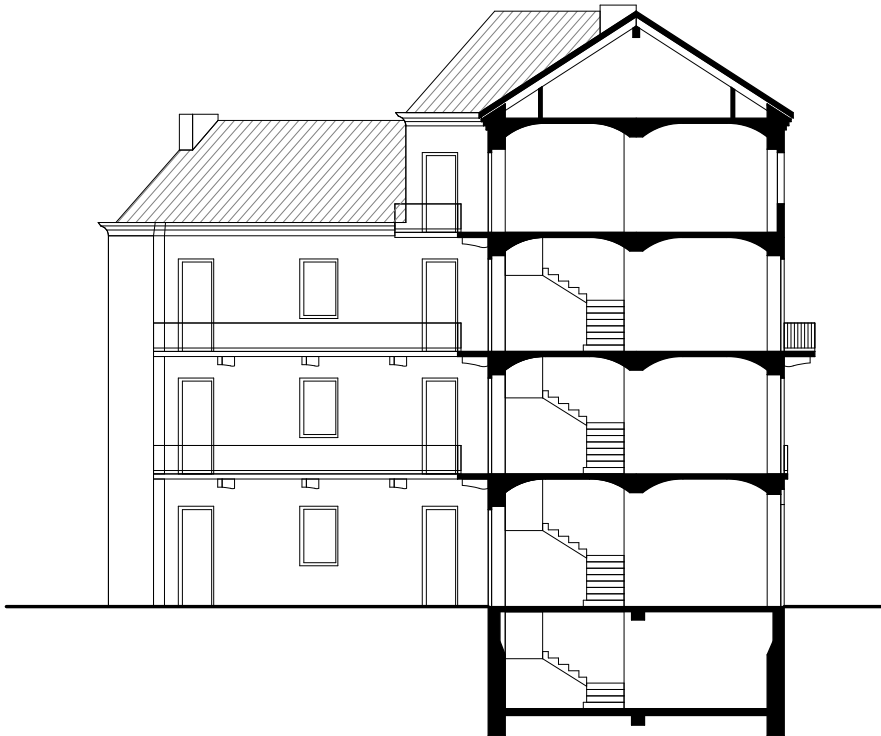
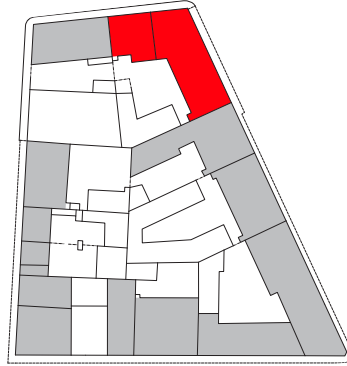
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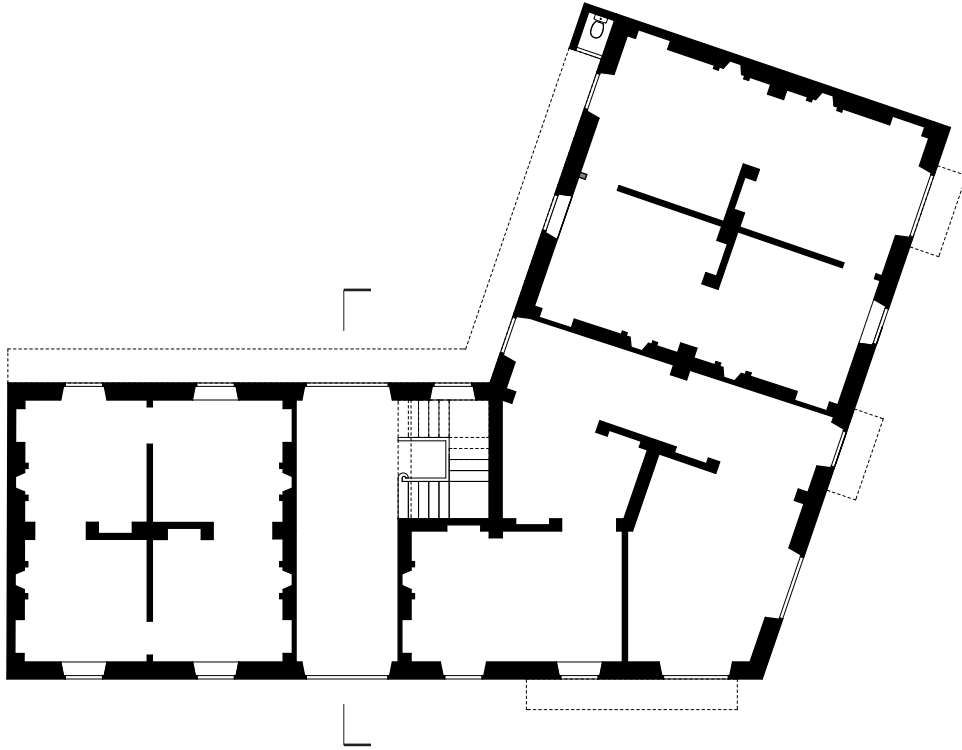




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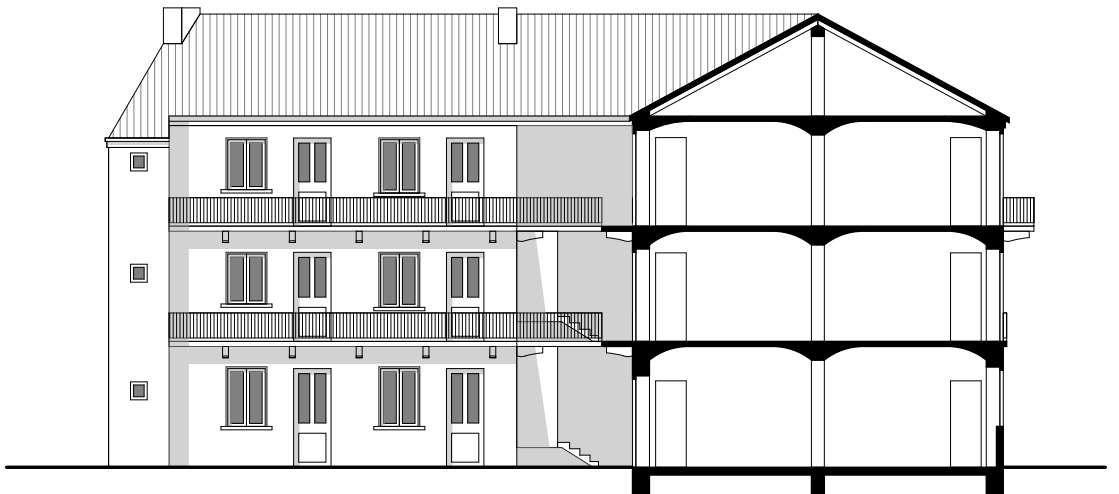
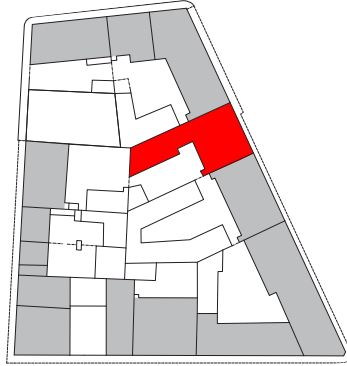
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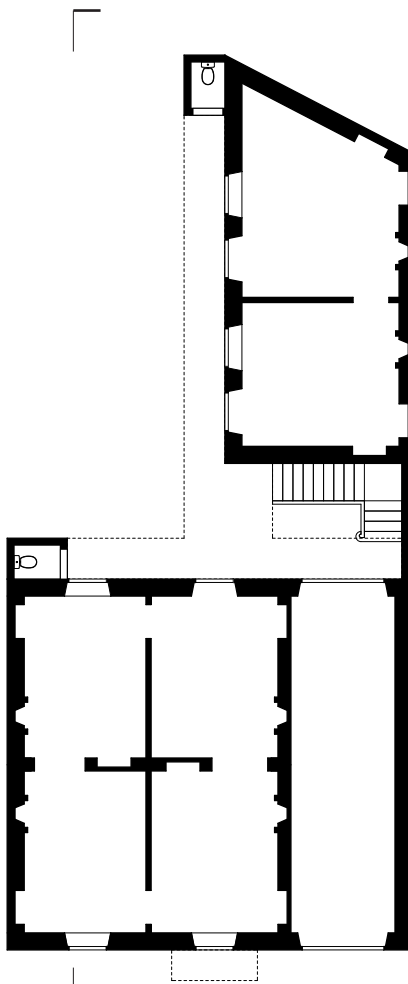




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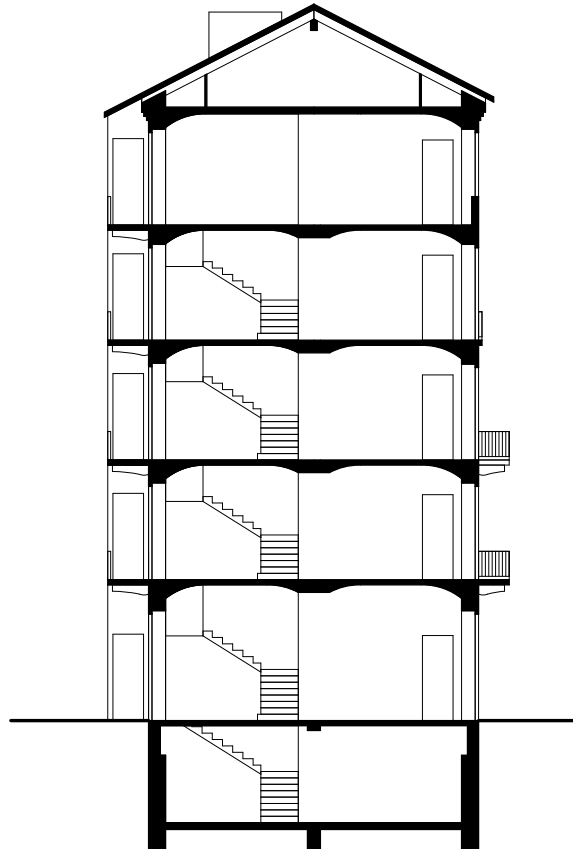
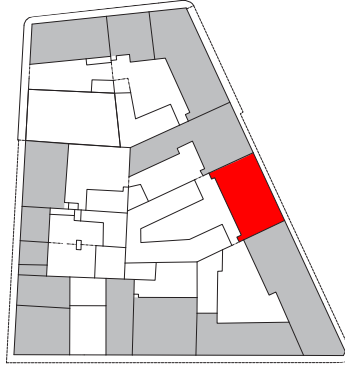
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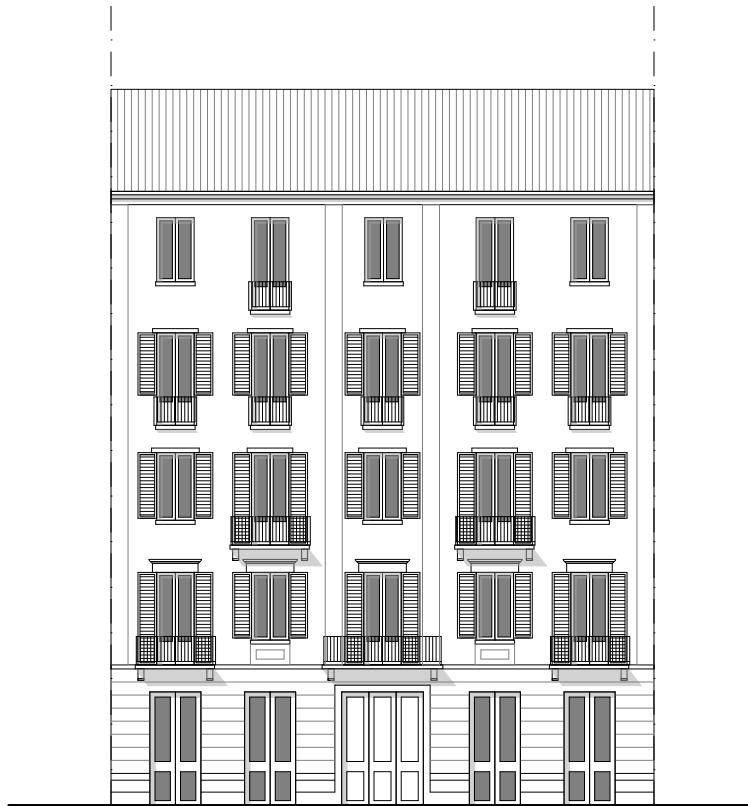
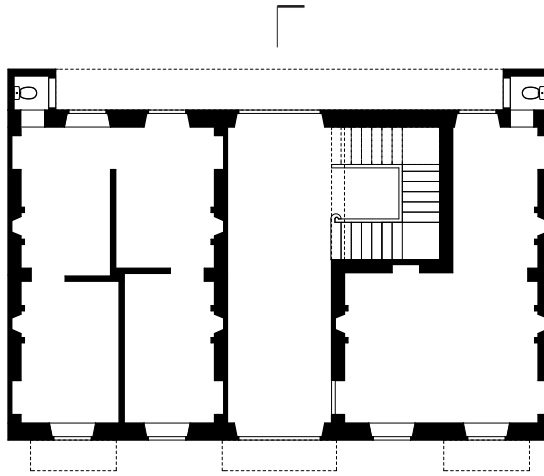




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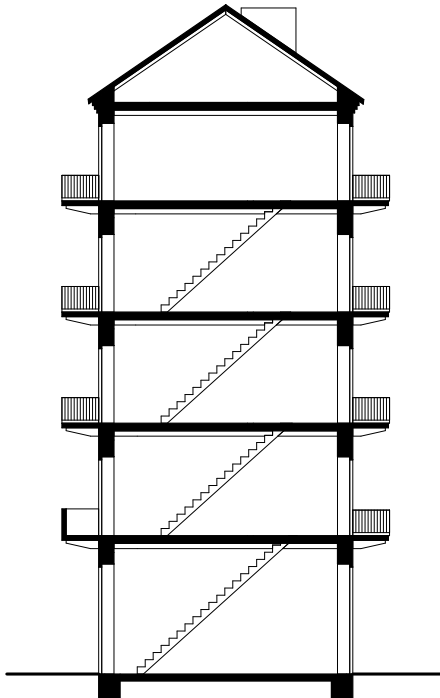
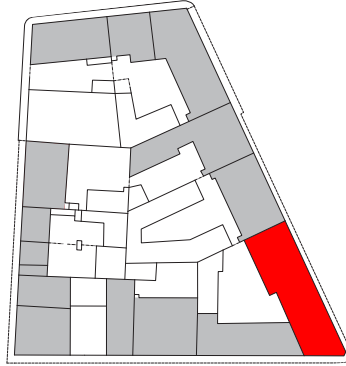
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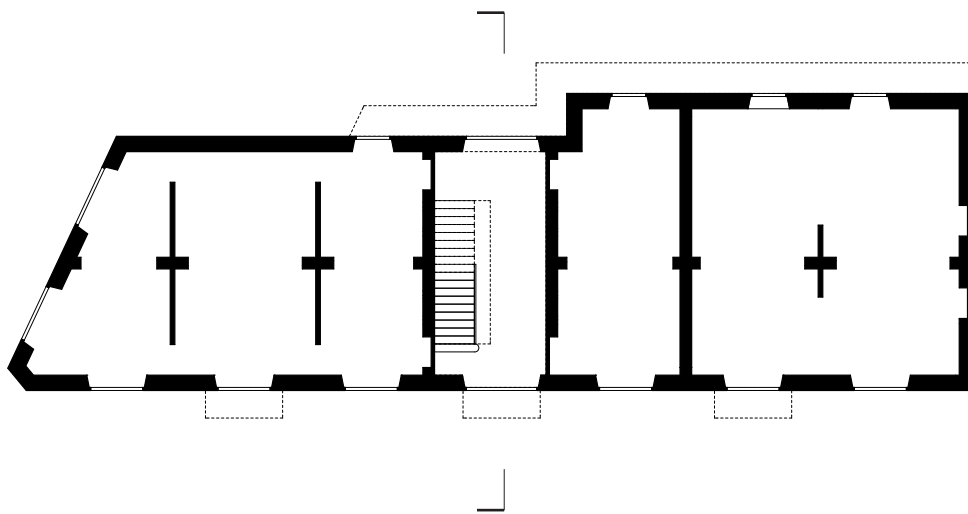




Via Falprato 8

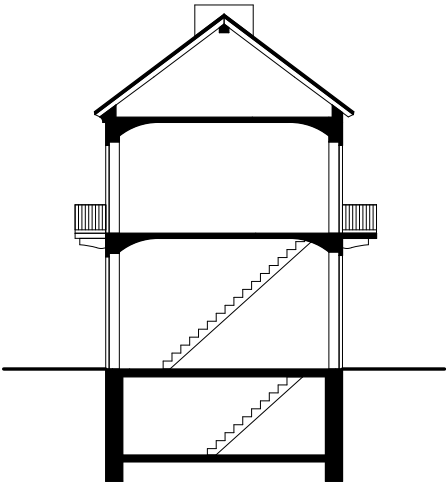
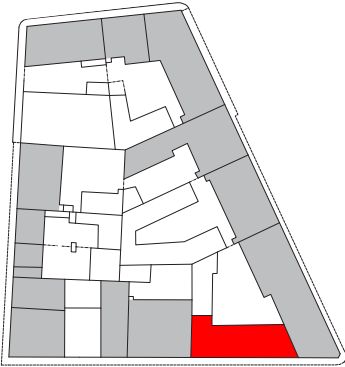
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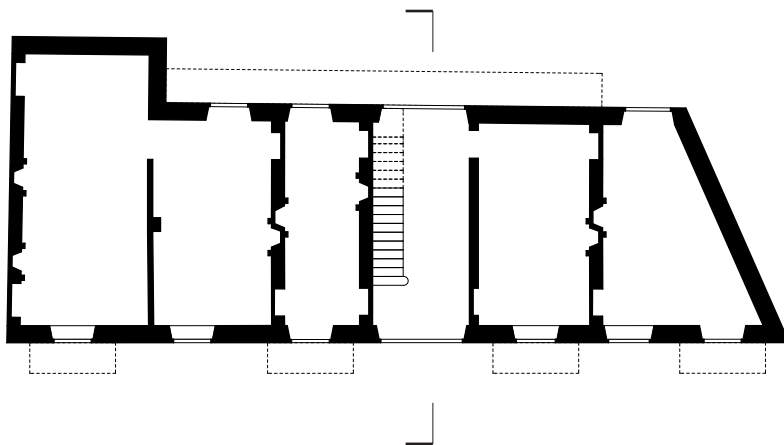




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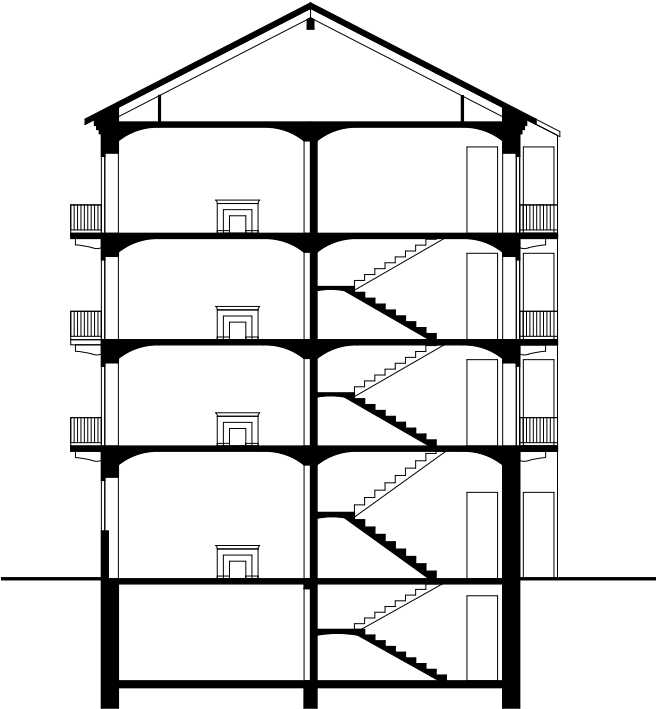
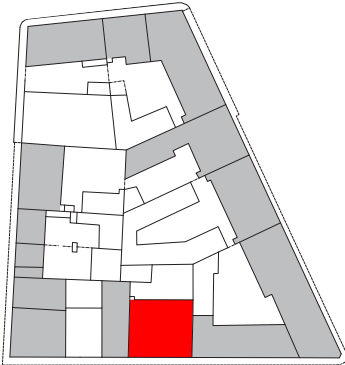
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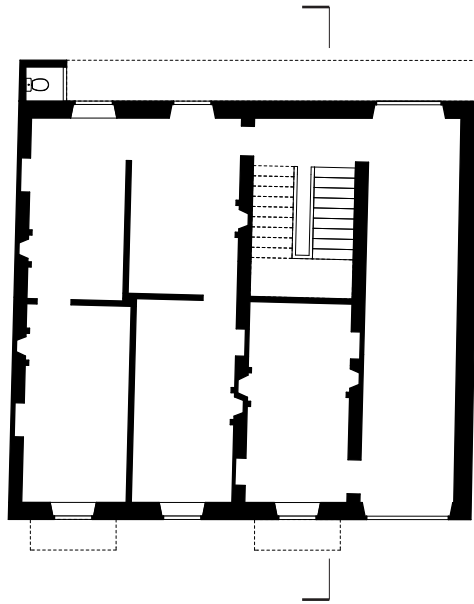




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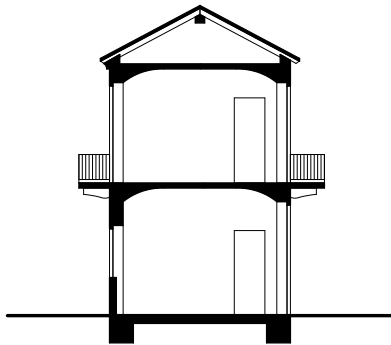
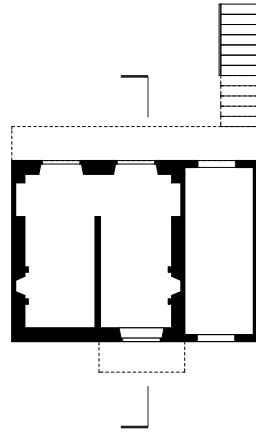
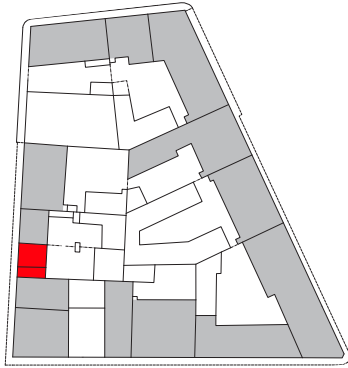
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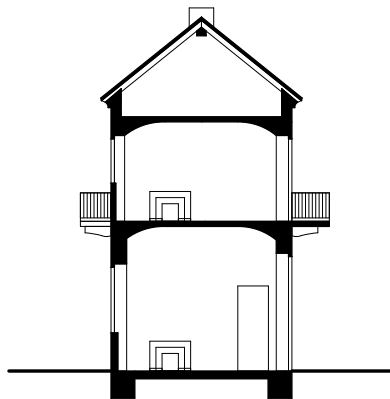
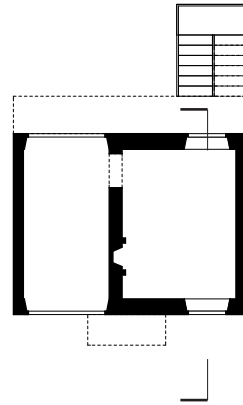
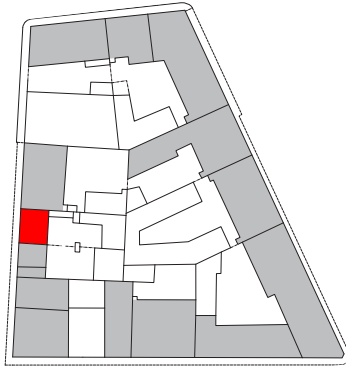


via Mottarone 8

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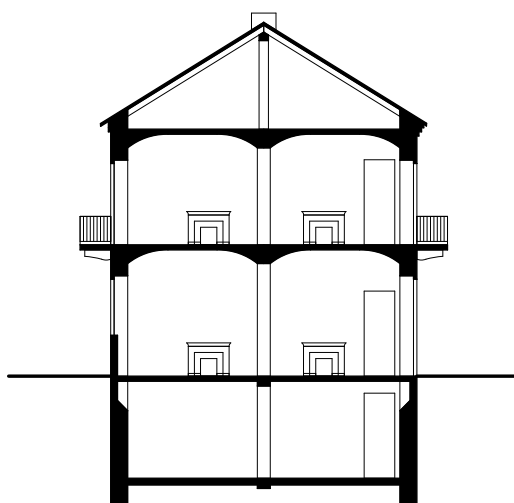
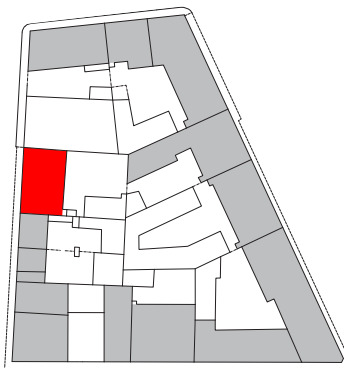


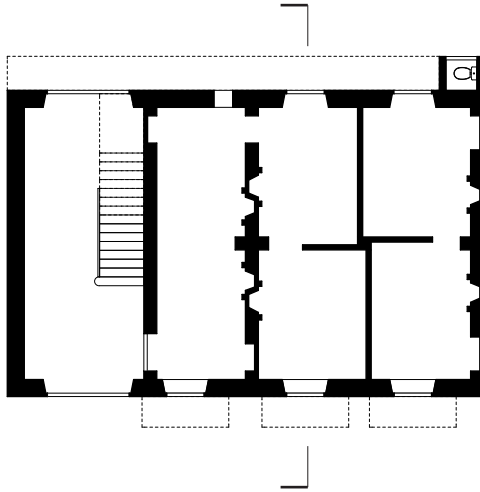
via Mottarone 10



via Mottarone 12

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Distribution system

Taking into account the formal structure of the building, the different schemes on the opposite page refer to the distribution system of the typology. As can be seen it is not restricted by the size of the building neither the amount of dwelling it contains.

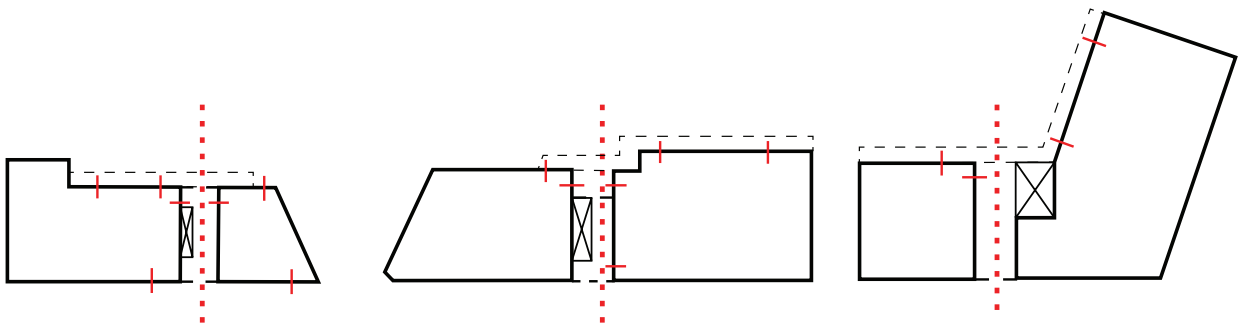
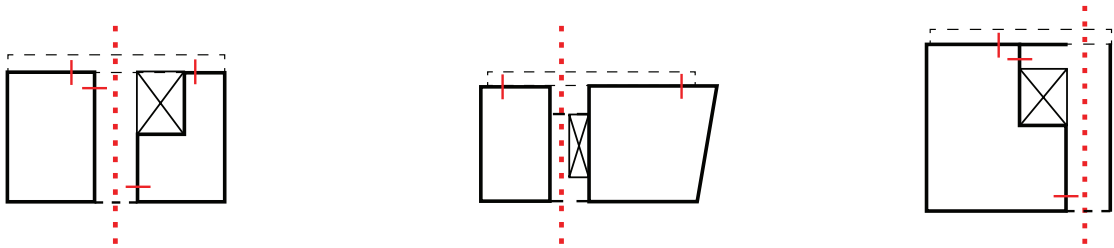
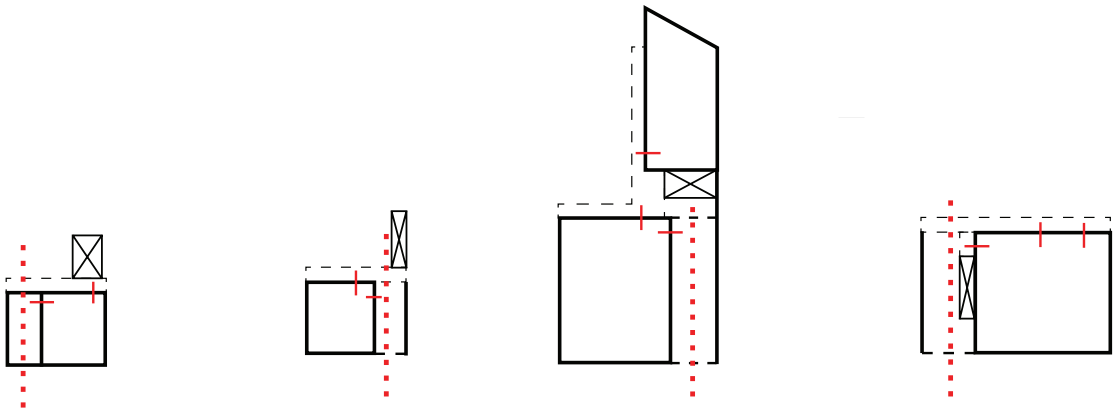
The system consists of a sequence of spaces, starting from the public street, moving into a collective hallway that leads to a staircase- which can be either internal or external- that finally end on a balcony from which the dwelling is accessible.

The ground floor is not used for living, which is also common in other parts of Turin. Instead of living, the ground floor is originally used as a space to practice crafts or shops serving the public space. Some of the ground-floor still houses its original functions, but since not that many inhabitants actually employ crafts anymore, it has made place for storage space.

The distribution system lends itself properly for densification's upwards, which also appeared to happen in some of the analyzed buildings. The system stayed intact during these transformations.

What can be distinguished further is the a-symmetrical positioning of the staircase, the attention is not meant to be monumental and is positioned only for pragmatic reasons.

Opposite:
Fig. 4.17 distribution diagrams
of the dwellings



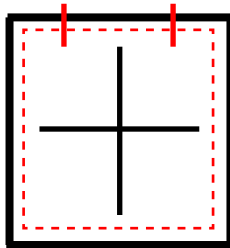
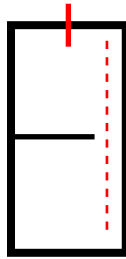
Circulation

The circulation within the dwellings itself are comparable to each other. With an average depth of 8 meters, the rooms are generally divided in two or more rooms. It does not always appear in the typologies that the circulation can be fully circular, but if there is an opening towards another room then this goes along the façade.

The rooms or housing-units are basic in its plans. The spaces along the balconies are frequently used as the kitchen or bedrooms, but this could easily be adapted or changed due to the flexible division of the spaces corresponding to the current needs.

The combination of the circulation along the façade and the construction in the core, makes the core ideal to facilitate cabinets or the kitchen. The bathroom on this behalf can be found on the balcony. The dwellings are always based on one story, which means that the dwelling is not vertical divided.

Although the diagram suggests perfect proportions of the spaces into rectangular subdivided spaces, in the actual the configuration of walls and spaces is adopted to pragmatic reasons and therefore can take on different proportions.



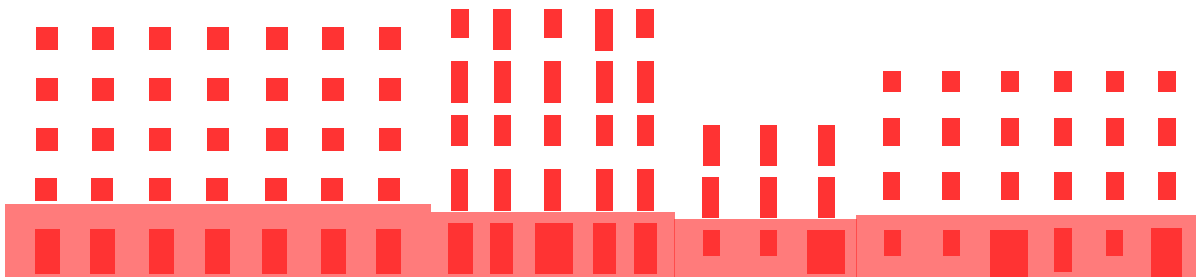
Façade

Clearly readable from the façade of the urban block is the individual character of the buildings within the building block. All the façades are built according to their own set of rules and there seems to be no harmony between the adjoining buildings since every façade has its own rhythm and composition. The extra layers of the façade appears due to the balconies from the first floor and above. These create there own rhythm within the buildings composition. It is clear that there were no such strict rules about the uniformity between the buildings as there was in the city center.

Although the buildings have an individual character, they share similar aspects, but always adjusted to their own needs.

The common element of the buildings is the emphasized ground floor of which the façade is materialized with natural stone, often covered by fake bognato. Another common characteristic is the direct relation between the openings on the ground and the upper floors. The ground floor façade has the same rhythm of openings as the upper floors.

Opposite:
Fig. 4.9 façade drawing of
the block along *Via fossata*
and façade diagram of the
dwellings



4.4 Conclusion

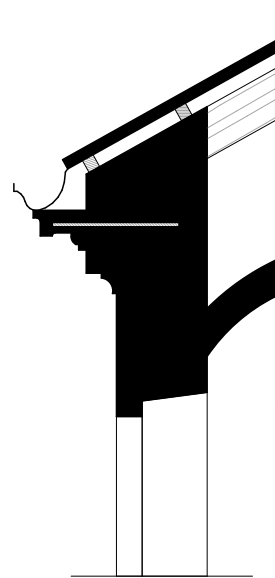
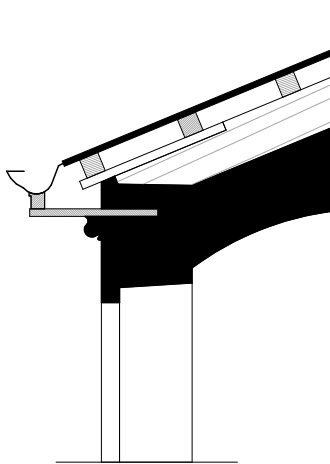
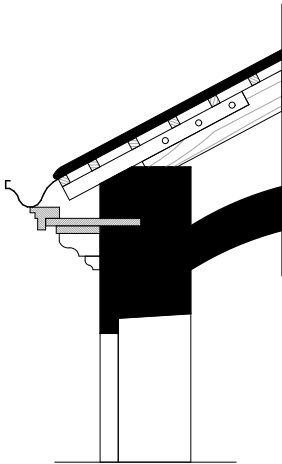
This chapter explores not only the questions of what the typological characteristics are in the fringe-belt, but it also aims to investigate on which parts of the typologies in the fringe-belt area are most fruitful for reuse and reinterpretation. Several main figures in the subject of typological analysis and the continuity of it have been examined in the second part of this chapter. Bringing the theory and the analysis together we can recognize the possibilities of this typology which found its origin in the late 19th century. Imitating the typology of the past would result today of no use, because the formal structure of every single type is related to the social activity within the period it was built in. The forms of this typology is more than a container for its functions, it also encompasses the ideas and experiences of the local culture.

As shown in the analyses, the single family house shares characteristics with the multi family house. Although it was not restricted by constraints of a complex construction in order to house as many families as possible, it still had the same characteristic. Reconnecting this topic with Caniggia's theories, it can be said that this single family house can be seen as the 'basic type' which was modified and changed according to the needs and changing conditions of each period.

This typology will be the starting point whereupon we can act and bring it into the precise state that characterizes the elements of the existing typology on one hand and the modern characteristics of the single work in the later design phase on the other hand. This can be accomplished by understanding its formal structure in order to bring it further. The formal structure whereupon this typology is built is based on the distribution system, circulation of the rooms and the façade elements. It are these elements that are coherent through the development of the type.

Reinterpreting this type in a modern way means that the type becomes the other type, because substantial elements in the formal structure are changed. The design approach in the fringe-belt is not only based on the continuity of the geographical approach, but also on the typological development. The gained knowledge of this chapter will be examined and tested within the specific design task of this research.

Opposite:
Fig. 4.20 Gutter details of
analyzed building





5

The masterplan

Urban renewal of a junk space

5 The masterplan

Urban renewal of a junk space

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The urban proposal subject of the present chapter comes from the need to work on a new paradigm in relationship with the existing city. With the background provided by the research which preceded it, the urban strategy envisaged is based on the will to re-establish the principles of the past into new ones more appropriate to our time.

Yet, this strategy has still to be tested. The design of the masterplan can be considered as the intermediate scale which precedes the design itself before the architectural design is set. It is a crucial step towards the aim to test the possibilities of the strategy which is set in the previous work. In so far, this has led to the need for an intervention in one of the abounded spaces in the construction of the city.

The masterplans location in the city is specified in the figure on the opposite page. (fig. 5.2) The area in consideration is one among the many voids in the urban construction of Turin; its choice can be justified by the peculiar condition of the place, a wide open and empty space in between the compact heterogeneous urban tissue. The area of intervention is the first which would be herein explained, followed by the design actions, which take it to the final masterplan.



fig. 5.2 Design location shown on the swazplan of 2012



Design location

The resulting strategy of the analytical and theoretical approaches will be applied on the site-specific location. The starting point of the research which in the methodological point of view can be defined in terms of “researching by design”. The major white area within the urban tissue is the ‘void’ in search.

The starting point of the conditions in the area, an empty ‘hole’ in the compact urban tissue, is not the result of a “tabula rasa” conceived to allow more freedom in design, yet it was the result of sanitation work previously carried out by the municipality for further developments. The result of those intervention is the confused situation shown in fig. 5.3

The design location is characterized by the presence of the former railway line and is assessed to the new entrance of the city which takes on the name of ‘Spina centrale.’ The above mentioned railway, along which the industrial functions were situated, formed a fixation line in the history of the construction of Turin and today it connects the main new features of the city. The location takes on the name of: ‘Spina 4’. After the four major areas to be reconstructed in the city along the Spina centrale today.

At present state the space is nothing more than a building site where new projects can establish. The big factories, once seen as ‘temples for labor’ became with the time nothing more than empty shells or have been given way to large voids in the urban fabric as result of the sanitation. Despite the conservation attitude of the municipality, who has troubles with dealing with many monuments in the city, did not bow for the architecture in this area. Only the pre-industrial buildings of the former distribution center Docks Dora are deservedly preserved.

The design steps that underlay the final masterplan are presented in the following pages. These steps will explain how the junk space will be transformed to a new place for habitation. According to Fritz Neumeyer it is the task of the architect to deal with these problems.

“It is to the architect to transform the non-space into a place”^{5.1}



fig. 5.3 Situation of the starting point for the new design

Design steps

1.

The first step is to devote the great empty space to nature. Nature, in this way, would be no longer alien to the city, yet instead it would represent part of its construction and forms the new base upon which the new part of the city is to be built. The pre-industrial building of Docks Dora becomes the first building embedded in nature.

2.

The roman foundation of Turin, its genesis, is re-proposed in the new project. The start of the new urban grammar is based on the first morphological scheme of the *castrum* from Turin. The grid system under the angle of 26 degrees, which at the same time is aligned with the ancient road towards the historical core, the 'Via Fransesco Cigna'.



fig. 5.4 Step 1

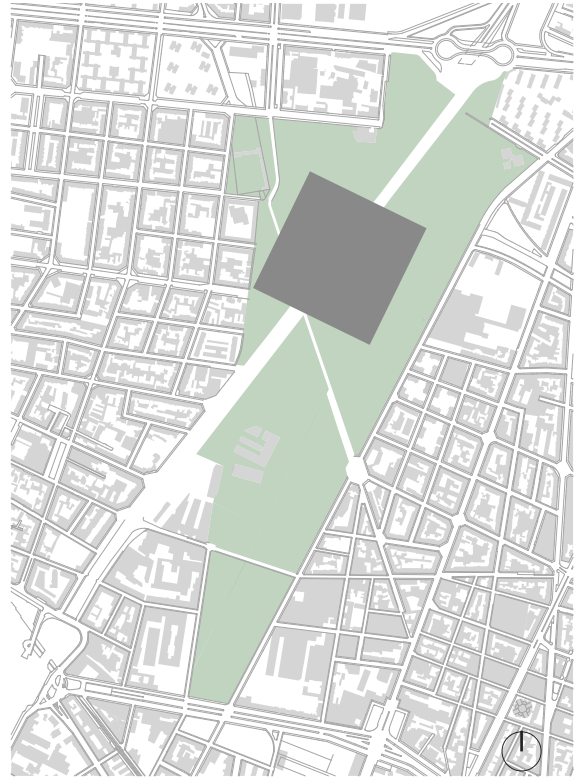
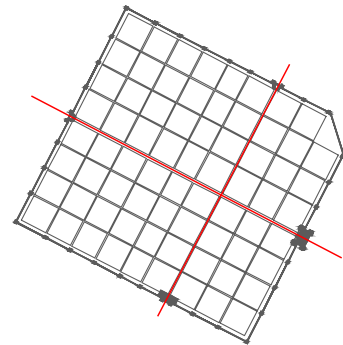


fig. 5.5 Step 2



3.

An step of major importance is the new relation between the two historical neighborhoods. Simultaneously the agricultural road 'Via Fossata' is strengthened by making an incision aligned with this primary ordering element in the fringe-belt. The incision is a negative form inside the new square. By doing so, the first enclosed space is established. (fig. 5.6)

4.

The necessity for public space is initially derived by the incision through the island. The resulting enclosed space defines the new principle-street. The new polarities placed within the island are located along this street. (fig. 5.7)

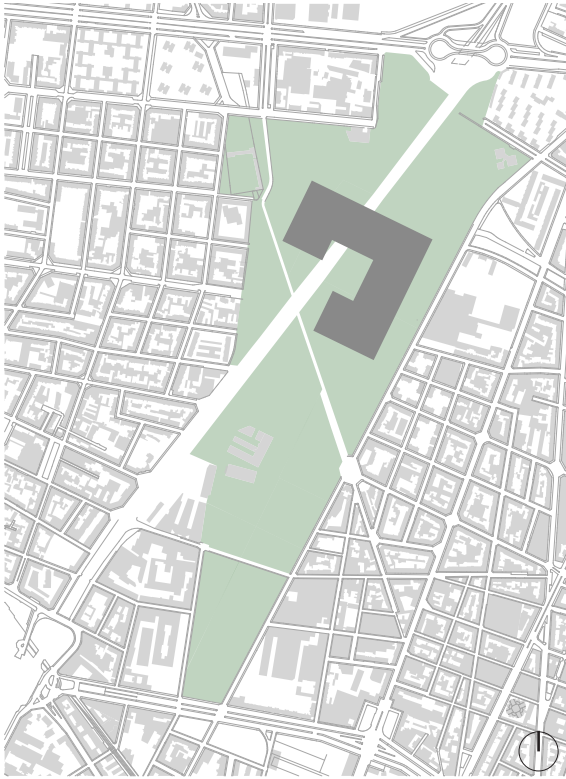


fig. 5.6 Step 3

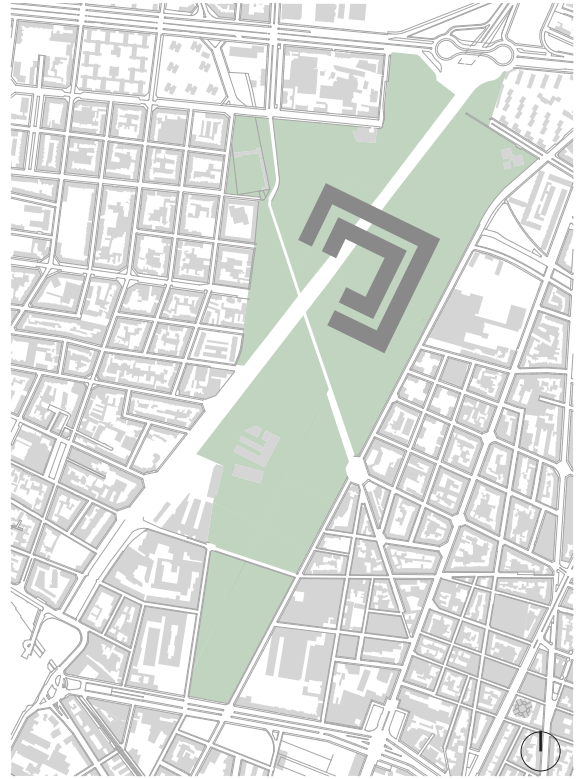
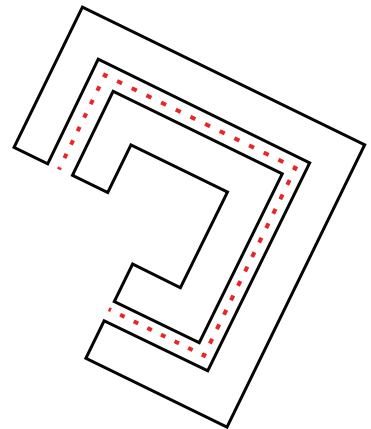
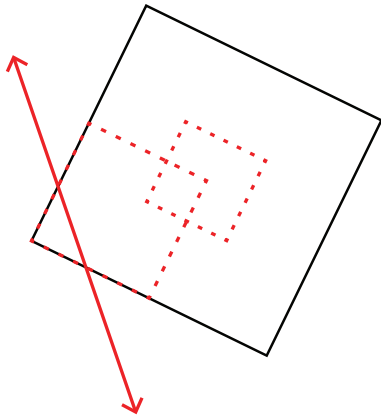


fig. 5.7 Step 4



4.

The urban blocks of the perimeter ring are derived from the new public spaces, the street. The width of these streets- 10meters -actually corresponds to the closets distance possible of opposing windows facing each other by the Italian building regulations. (fig. 5.8)

5.

The most important aspect to be taken into account when introducing the last step proposed is with no doubt the movement of people. The sequence of the inner-blocks create a variety of public spaces as streets and squares. The latter ones are positioned in a way that they are always limiting a street of the outer ring of blocks. This influence the urban experience when entering the city from the external space, because the inner-blocks form a boundary for the view towards the open area. The street is not to be seen anymore as the functional meaning of the grid structure. The car as way of transport within the island has become useless due to the walking distances.

6.

The linear buildings aligned along the street, facing the existing context, go in dialogue with the new island and the existing city.

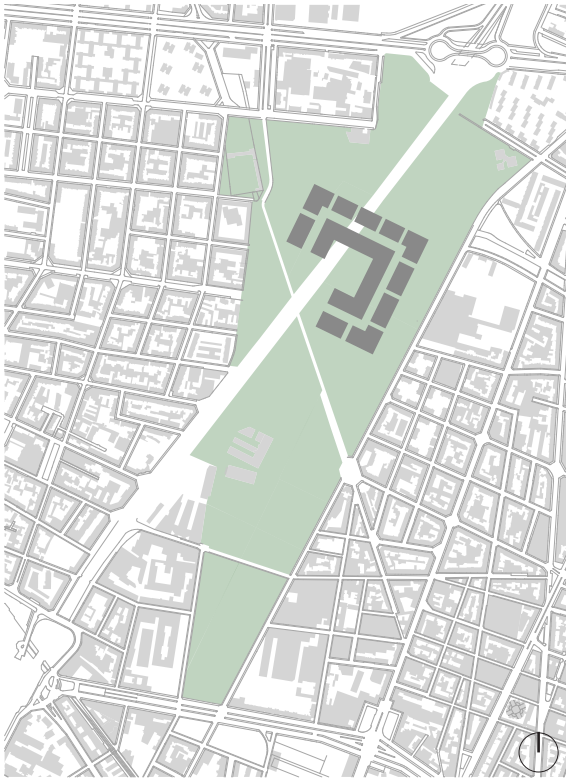


fig. 5.8 Step 5

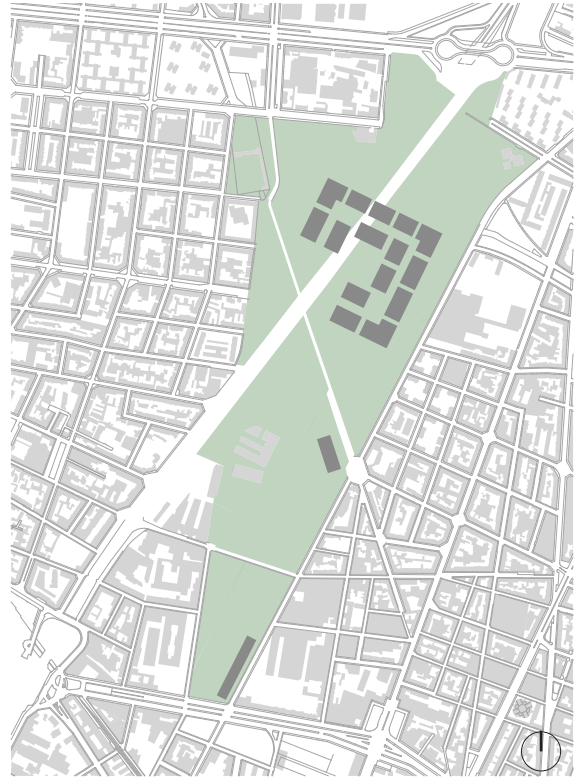
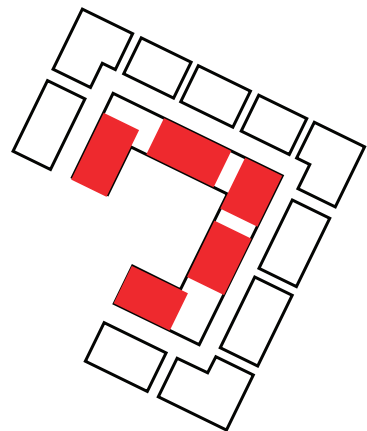
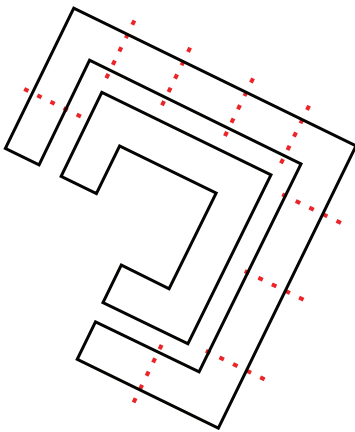


fig. 5.9 Step 6



The masterplan

Both the strategy and the guidelines resulted in the masterplan shown on the opposite page (fig 5.10) The urban tissue, one of the dynamic facets in the theory of M.R.G Conzen is modified in the sense that the former agricultural access sustained its existence, while the Spina centrale is pushed underground in order to create a natural connection between the two neighborhoods, without disturbing the traffic access of the Spina centrale. The two southern linear buildings are both placed along the historical access and agricultural traces and somehow strengthen the local ancient paths. An interesting contradiction appears when we search to the origin of the word 'Park'.

West Germanic '*parruk* "enclosed tract of land". (cognates: Old English *pearruc*, root of *paddock*, Old High German *pfarrih* "fencing about, enclosure," German *pferch* "fold for sheep," Dutch; park).^{5.1}

The west Germanic word originally meant the 'fencing' and not the parc as the enclosed space. In Medieval Latin on the other hand the word *parricus* means 'enclosure, park'. The contradiction arises with the word nature, because it does not imply any enclosure, which is instead among the very physical premises for a park. A park cannot be a park without urban context; its essence lies in its natural elements as much as in the presence of a urban tissue that encloses it.

The park needs the urban space to be enclosed with. If we look from this perspective to the masterplan we can distinguish two types of park, namely; The park within the cities context where the architectural islands are placed in and secondly the park enclosed by the architectural island itself. This makes the inhabitants experience different park setting when going true the area.

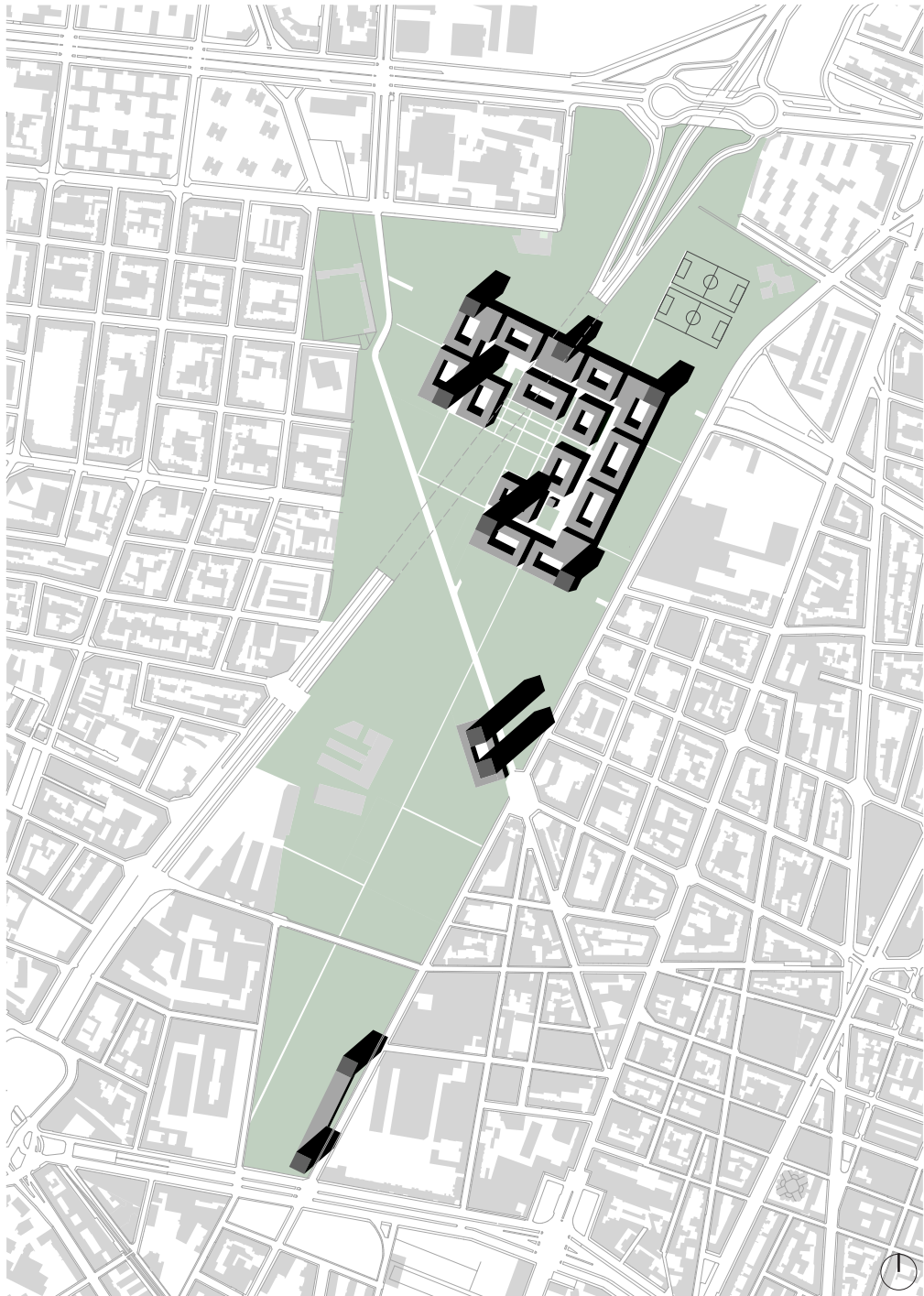


fig. 5.10 Situation map of new masterplan



The surroundings

The role of architecture in its volumetric and planimetric, as stated before by Carlo Moccia, is getting fully expressed when perceiving the place from a greater distance of moving faster than walking or running. The void is the new place of construction which interacts at a distance with other urban poles, as a focal point for the territory.

The towers are offered to the city as new landmarks; they would be the first object to be noticed in the place when going along the Spina Centrale by car. For that, we miss out on opportunity to grasp detail and buildings that are seen at a distance and only generalities are perceived.

The former role of the factories in this piece of Turin, attractive poles for people towards their surroundings and model for the community, is now somehow inherited by the ensemble of buildings proposed. The system of blocks and towers can be seen as a collective structure that stands proudly in the fringe-belt area which would work as new entrance of the city, interacting both with its historical city and the periphery. From this tensions between the inner city and its borders, a whole recovery of the area would be allowed. The buildings interfere with the context, giving it a new identity towards the surrounding at different scales and distances.



fig.. 5.11 Impression from the natural place towards the island.

Public space

The opposite pages features the ground floor of the southern square of the island. From the outer perimeter, the entrance is solved thanks to the presence of a stair between the blocks, which evoke the experience of entering to a sort of different dimension, that of the urban island. The internal access to each of this “island blocks” is featured with a slope which marks the difference between “outside” and “inside”. The reciprocal relationship between public and private spaces within the new plan is achieved according to the characteristics of the historical city. It is the public ground floor which binds together the buildings. The public streets and the square connects the surrounding urban block, whose ground-floors functioning has a clear threshold between the public and private space. This threshold is achieved by the building block which houses the collective courtyard.

The ground floor is set upon by rules of repetition. However, the wide variety of the shop units within the repetition is what makes the ground floor interesting livable experience when moving through it. The variety of functions in relationship with the changing street-scape make the activity level changing over the different parts of the island and interesting moving through. The ground floor gives opportunity for big and small scale initiatives.

The essence of Camillo Sitte’s treatise about the characteristics of a noble city was already outlined in the third chapter and it is in this masterplan where some of his premises are used. The major public function, which in the design proposal can be seen as correspondent to the right-bottom block takes on an important position within the ensemble of the square. Similar to Camillo Sitte’s proposal, the building does not take on central isolated position, instead it is placed as part of the perimeter. The same counts for the metro pavilion in the top left of the square.^{5,2}

The collective closed courtyards form a hierarchy of delimited spaces in the island. This sequence of thresholds from public to private form interactions on different scales.

5.2 C. Sitte, Der Stadtebau nach seinen künstlerischen Grundsätzen, 1889

Public accessibility

Selective accessibility

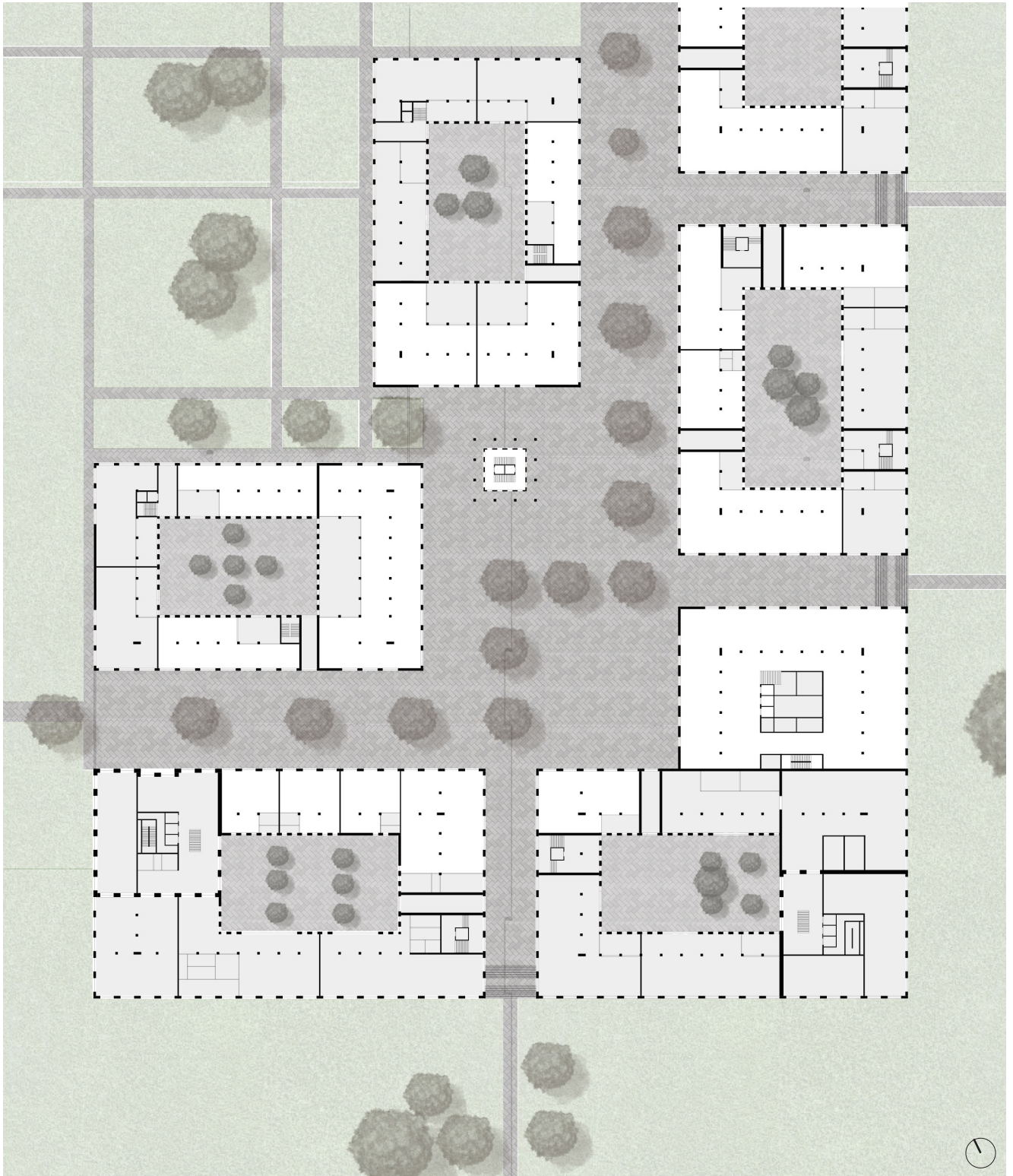


fig.. 5.12 Groundfloor of southern piazza with surrounding buildings 1:1000



fig.. 5.13 Impression from the internal park enclosed by the island



fig.. 5.14 Impression from the internal park enclosed by the island

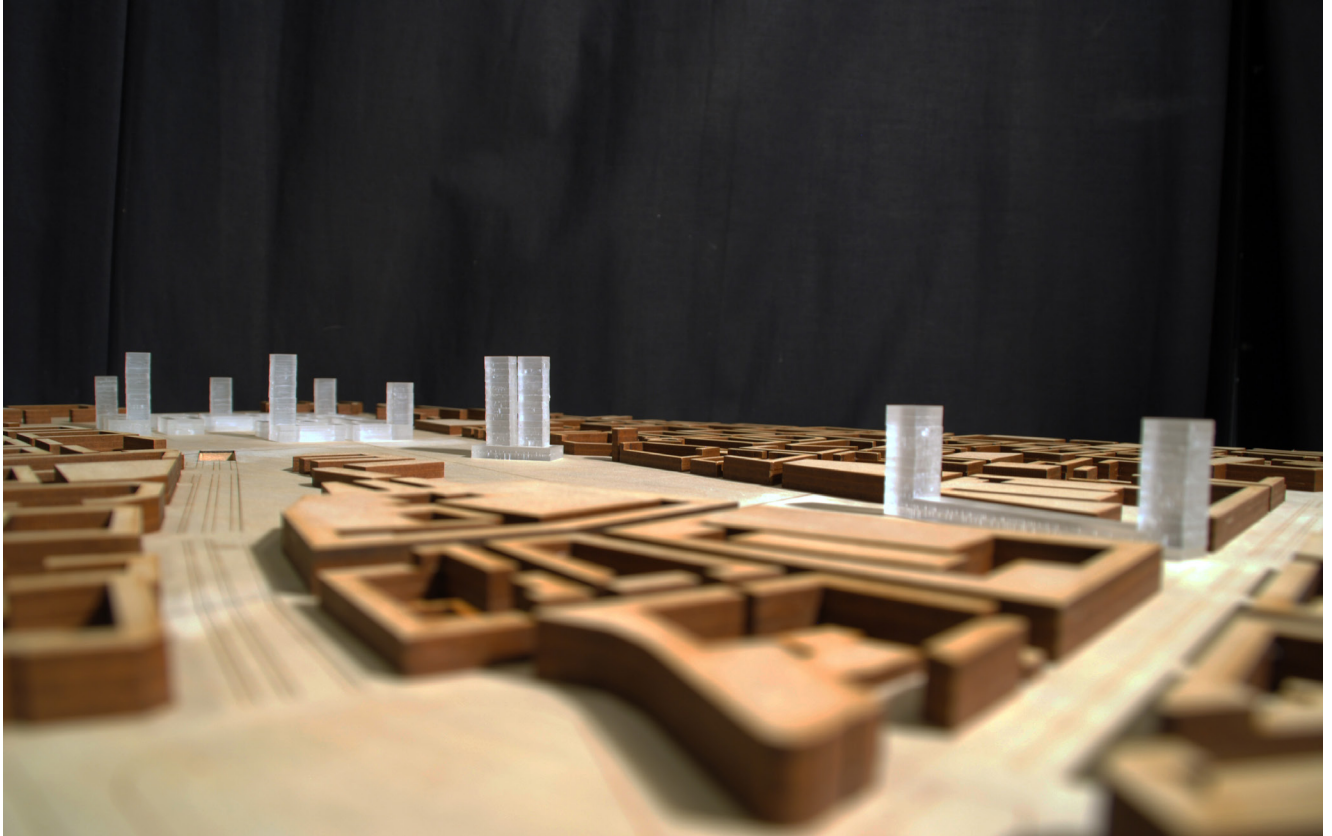


fig.. 5.15 Model of urban plan in the context

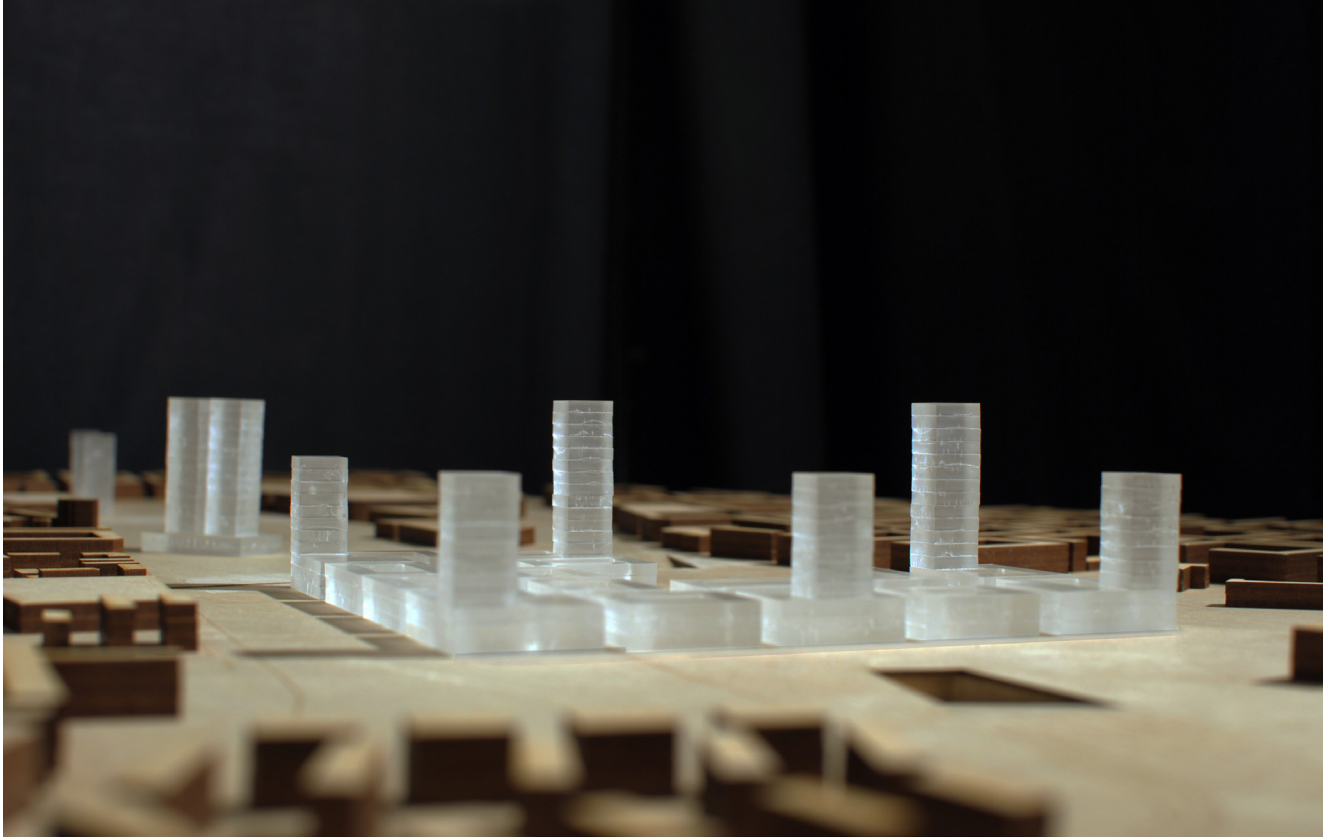
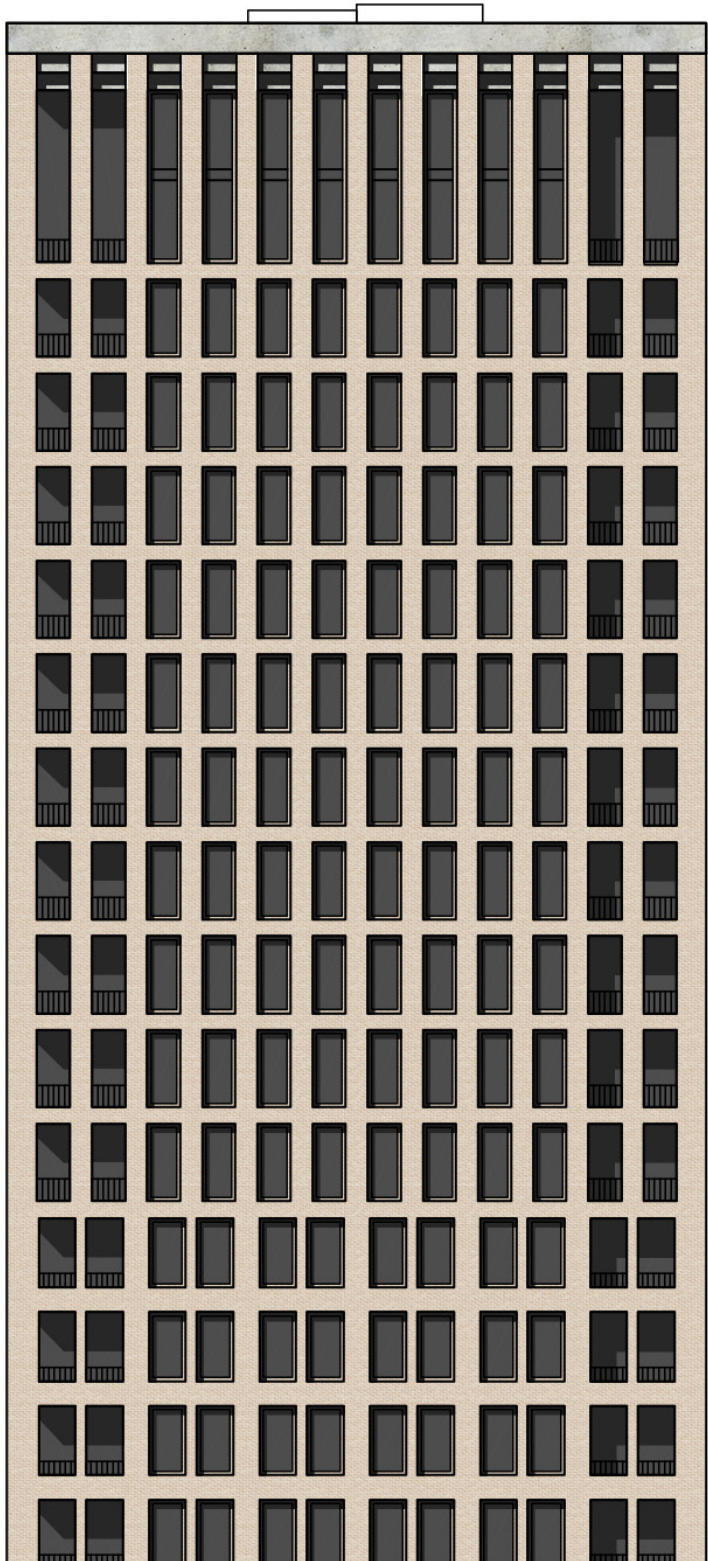


fig.. 5.14 Model of urban plan in the context



6

Architectural design

The tower building

5 Architectural design

The tower building

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The starting point for the new building is the output emerged from the study of the traditional typology, the one analyzed in the fourth chapter of this thesis. The location of the building in the context of the masterplan is shown in fig. 5.2 The distribution system, circulation of the dwelling and the facade characteristics are used in the design. This way, the fringe-belt typology evolved, establishing a new relationship with nature and the public space connecting the buildings.

The uniform character of the whole ensemble of the masterplan makes it possible to perceive the system of buildings as a sort of “architectural island”. An important role from this point of view is that of the buildings’ plinth, which allows to perceive the whole ensemble as coherent and can be seen as the “foundation” of the above mentioned island on wherein the buildings are placed.

The architectural order of the façade response to the urban context of the building within the uniform architectural language of the island. This is achieved by a basic window type which takes on different proportions according the urban or natural context. This means in the case of the urban block the openings are derived from, either the relationship with the public space of the street and square or the natural context of the park. The façade of the tower reacts to the scale of the natural context as well as to the city scale. The tower is mainly perceived from a remarkable distance and act as focal points in the territory. The facade response to this by a gradually changing window proportion towards the sky.

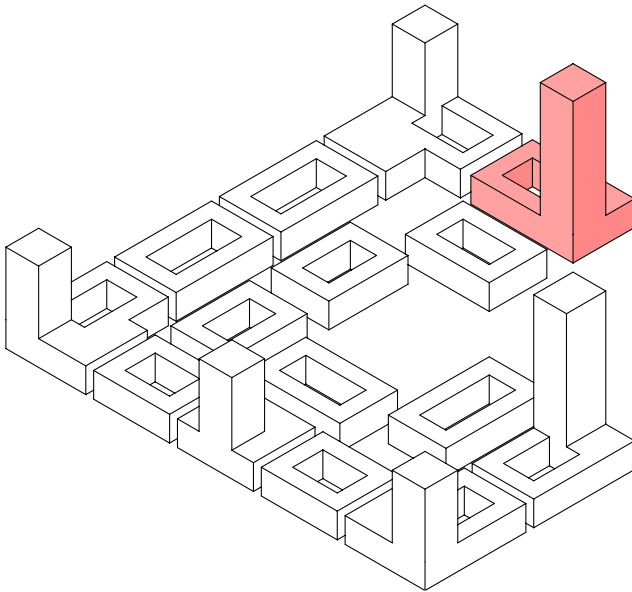


fig.. 5.2 The tower building in the context of the island

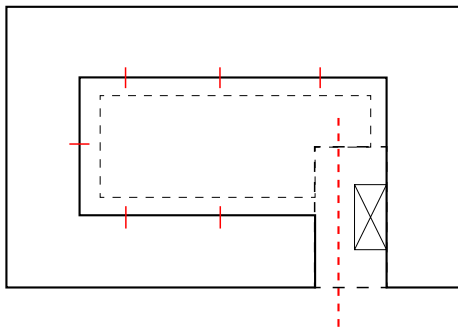


Fig.. 5.3 Distribution system, derived from the typological analysis

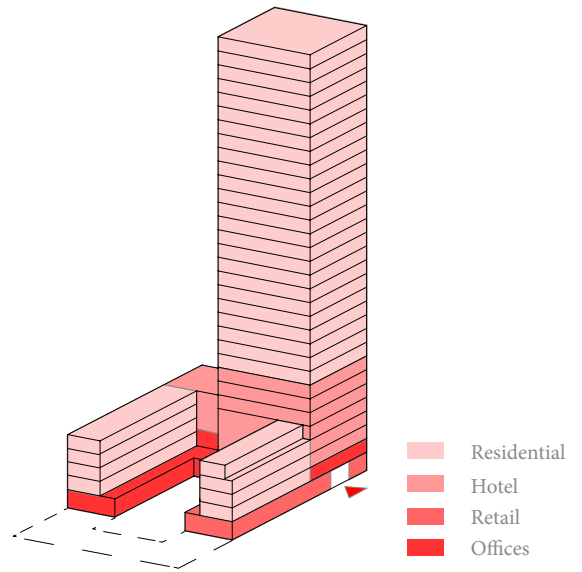
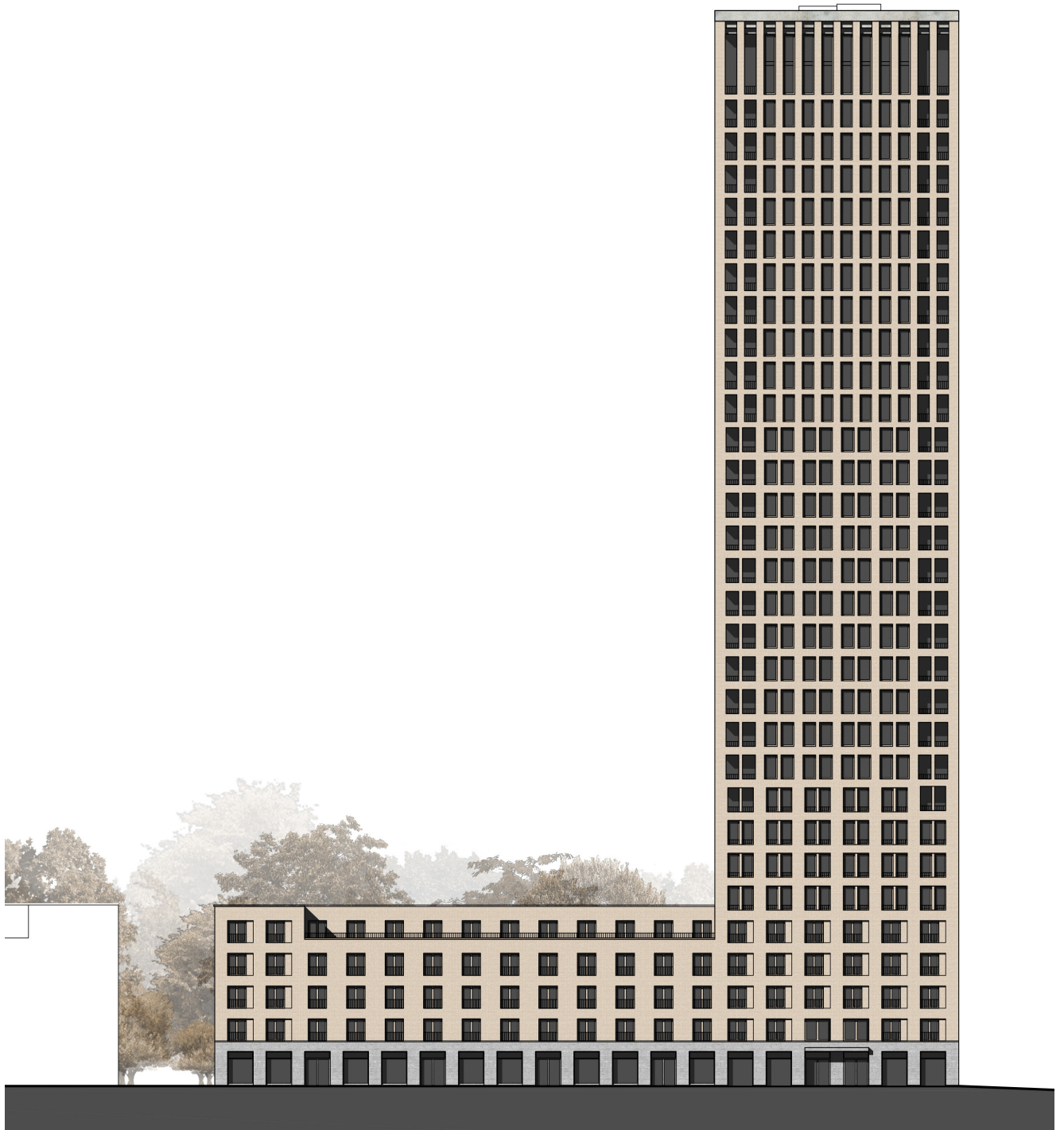
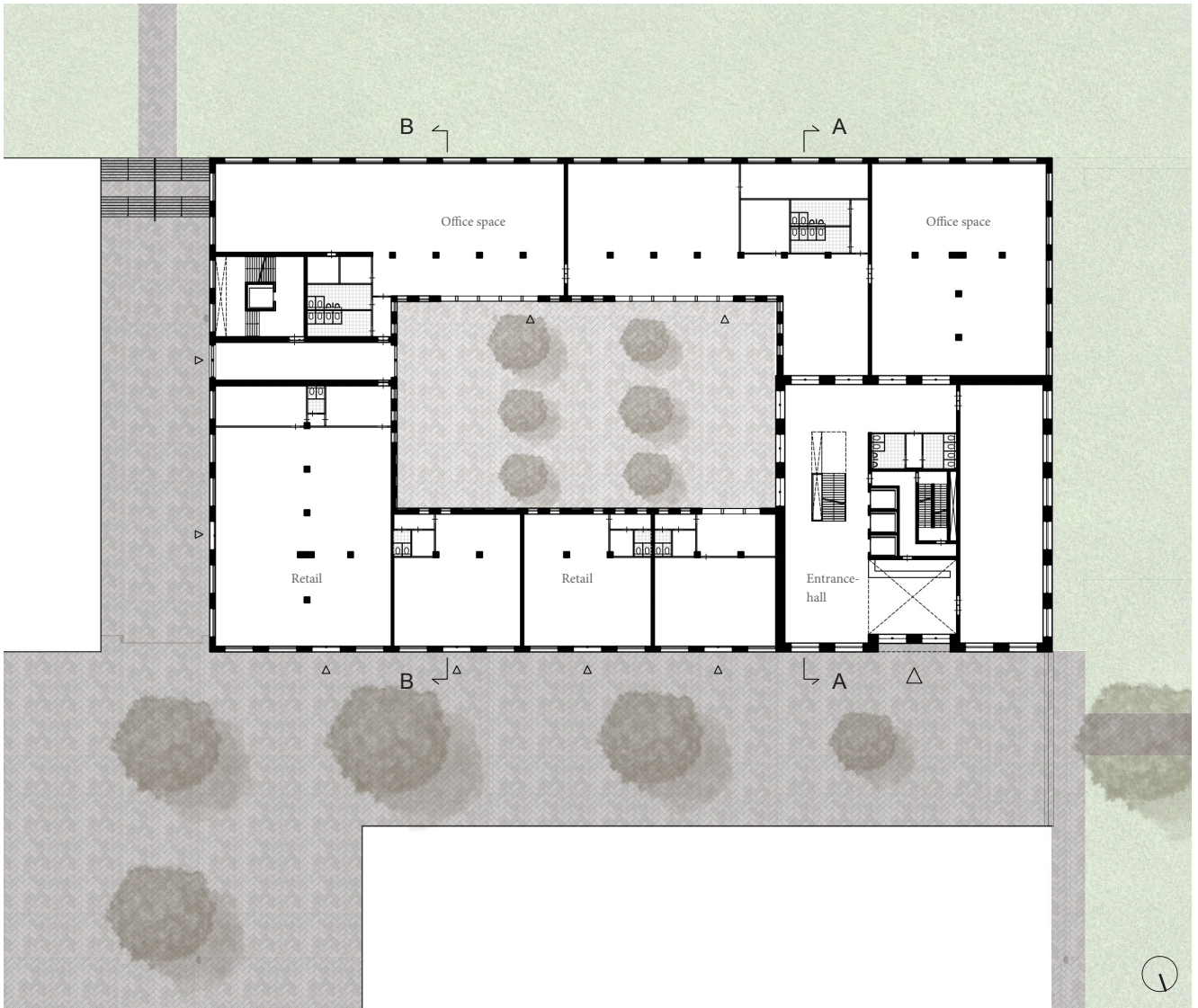


Fig.. 5.4 Functional scheme

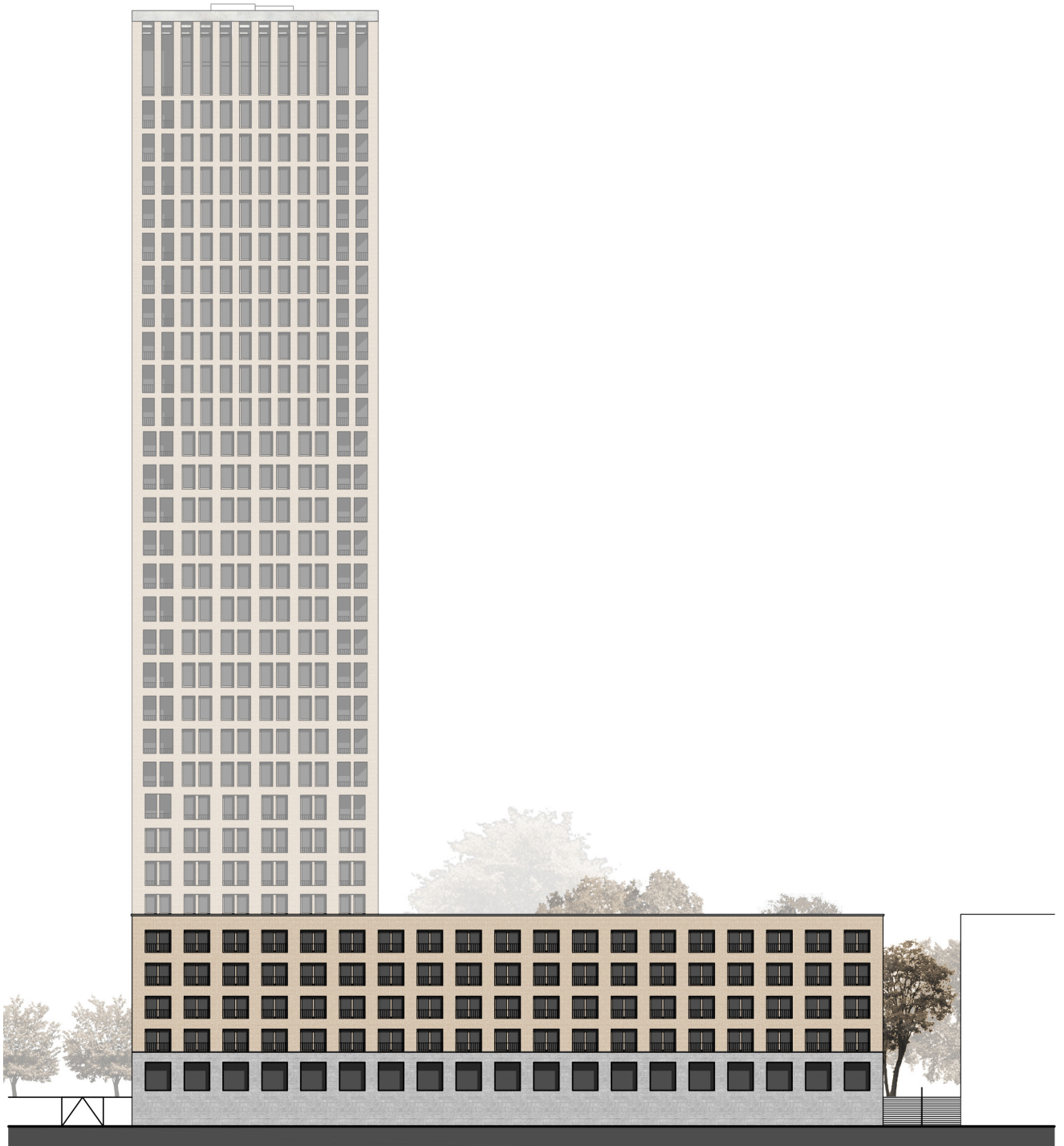


North façade

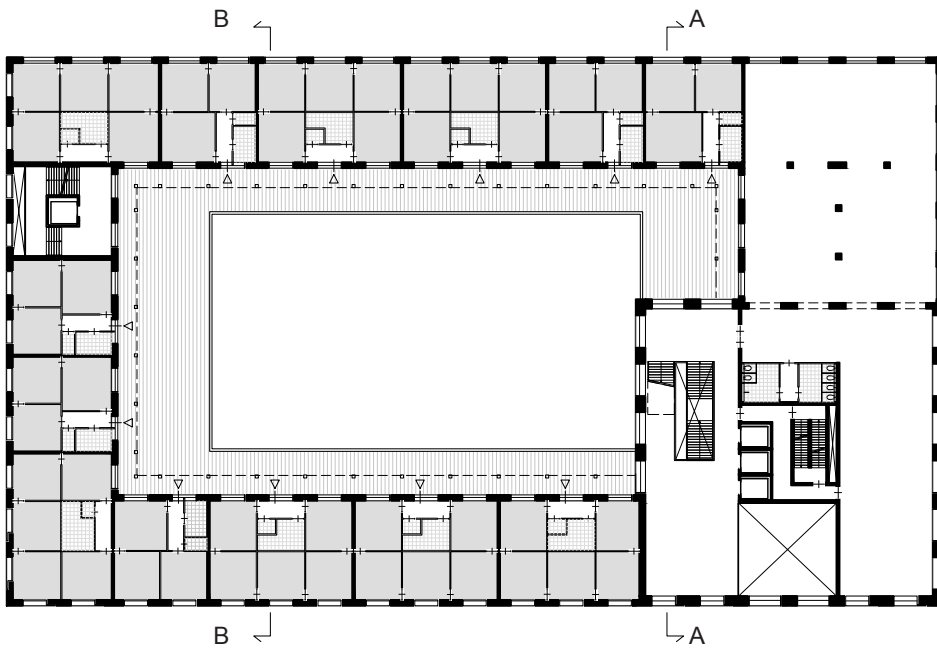


Groundfloor



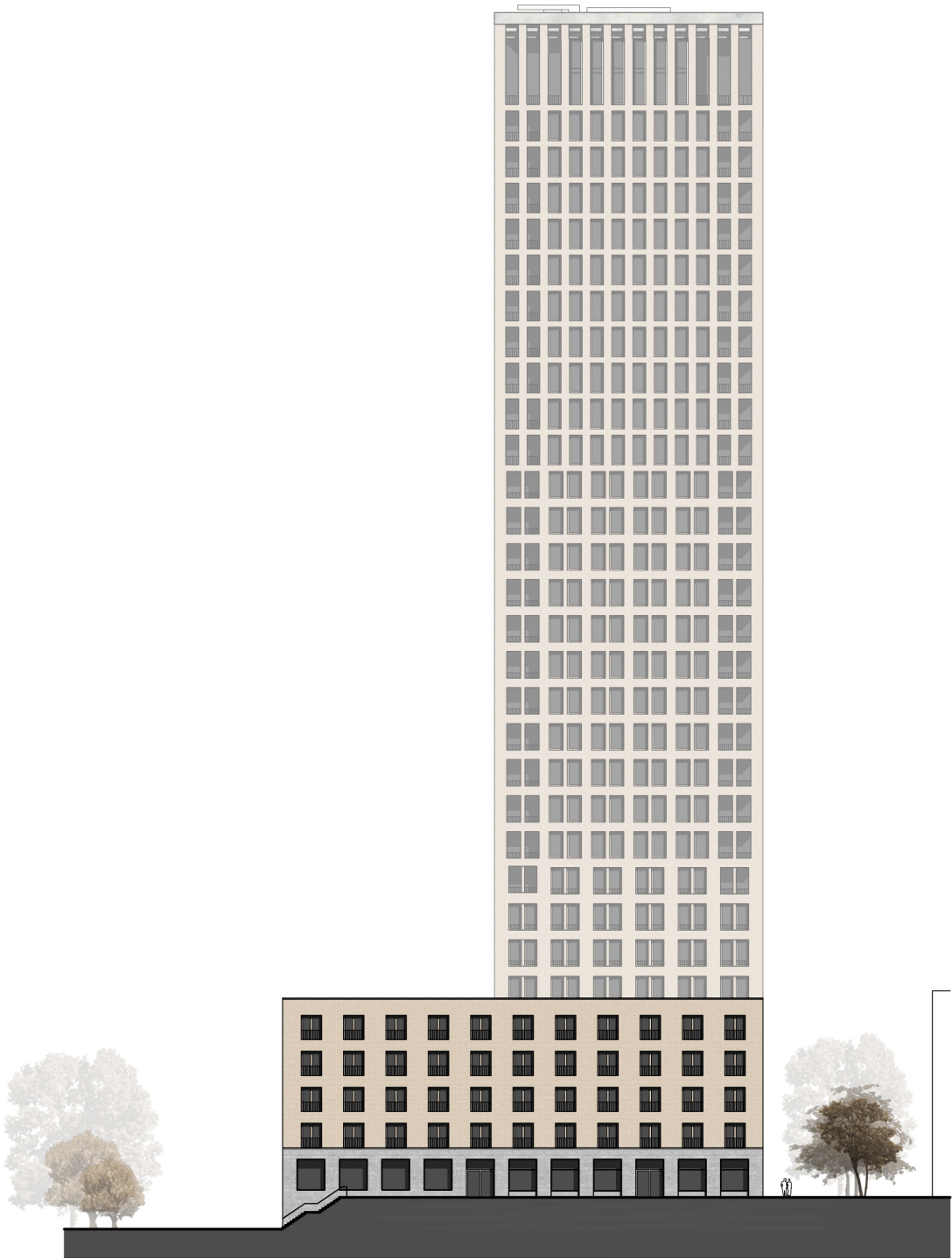


South façade

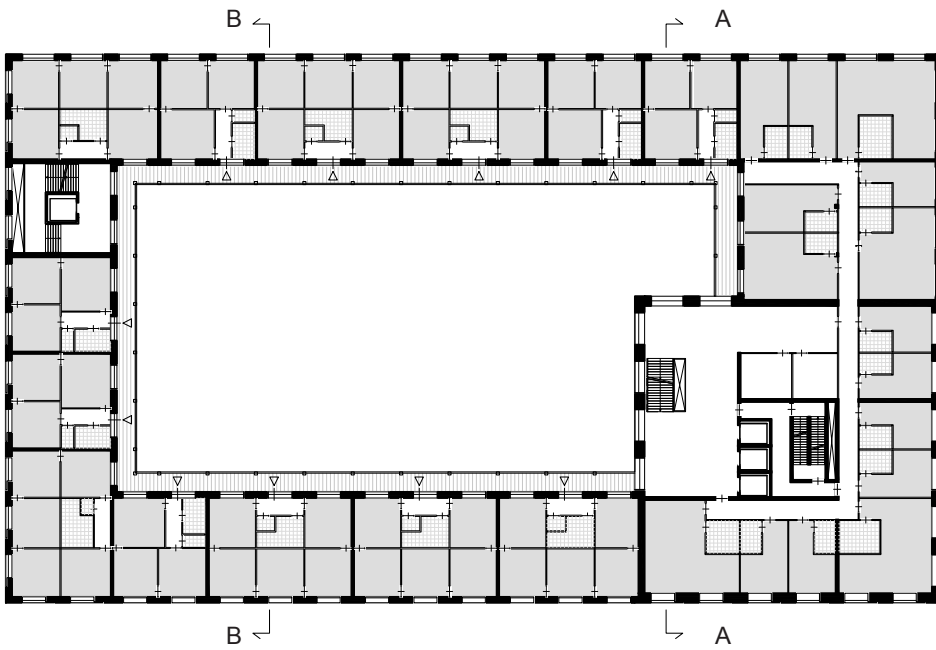


First floor



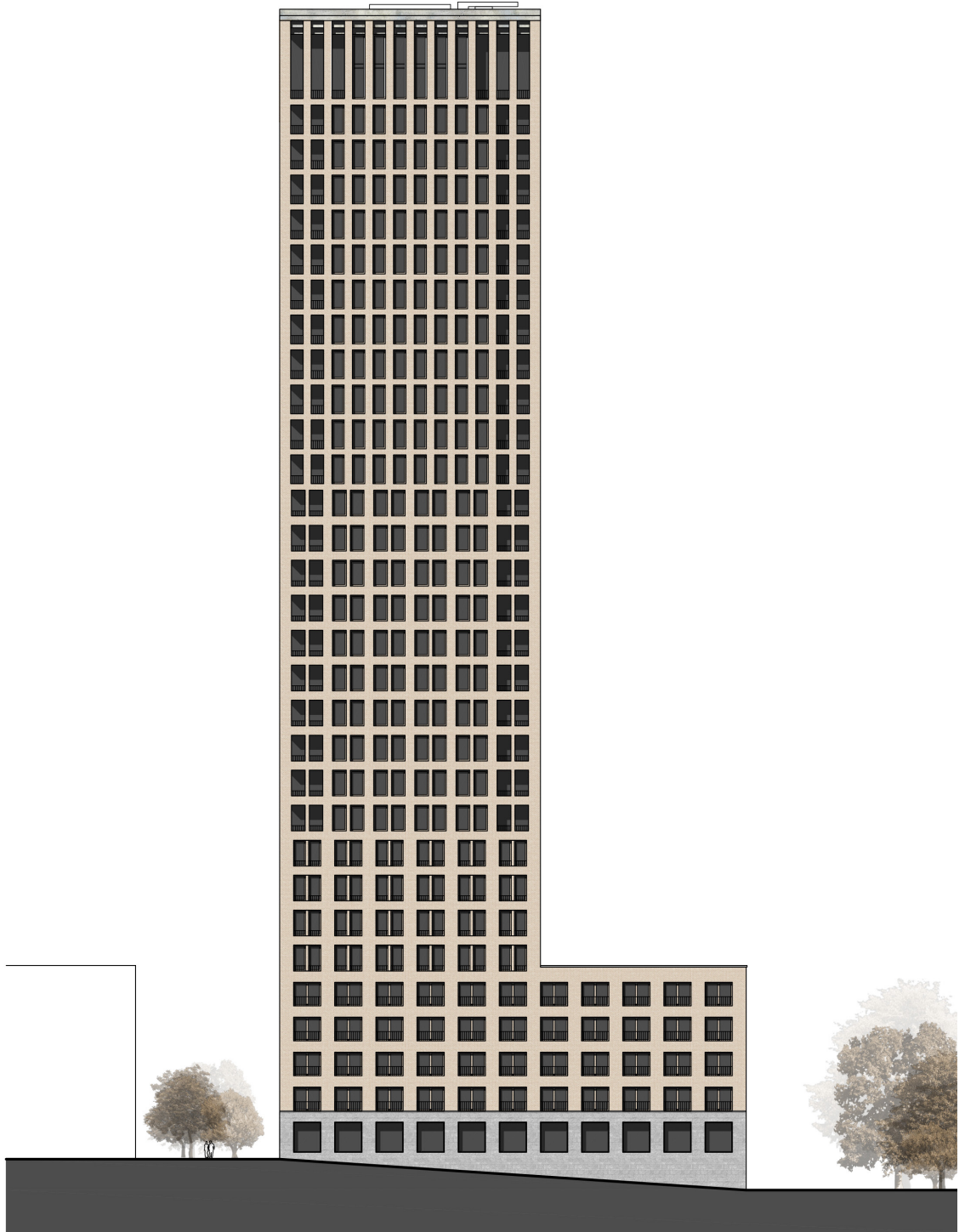


East façade

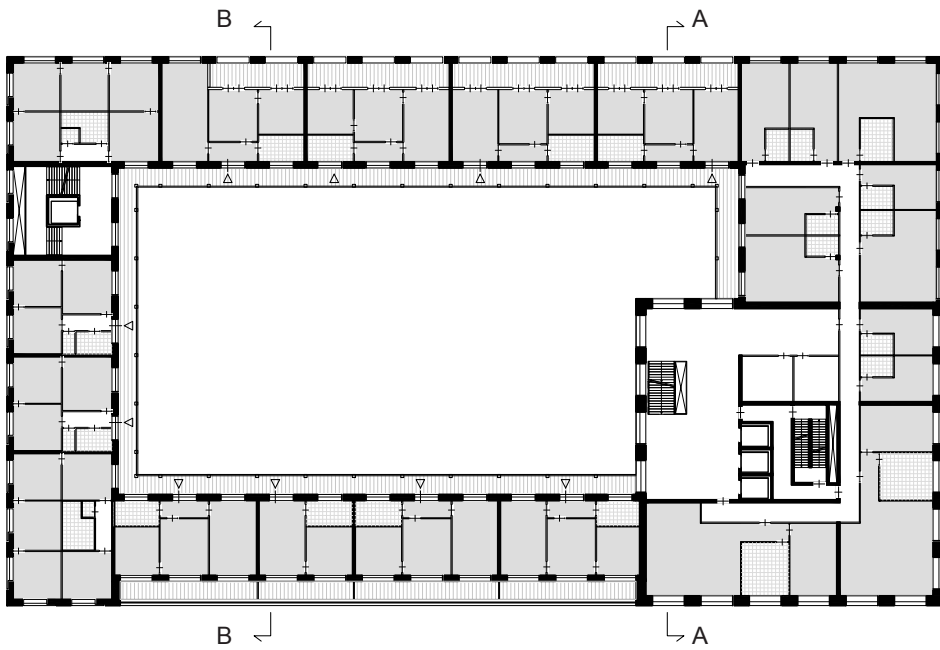


Second & third floor



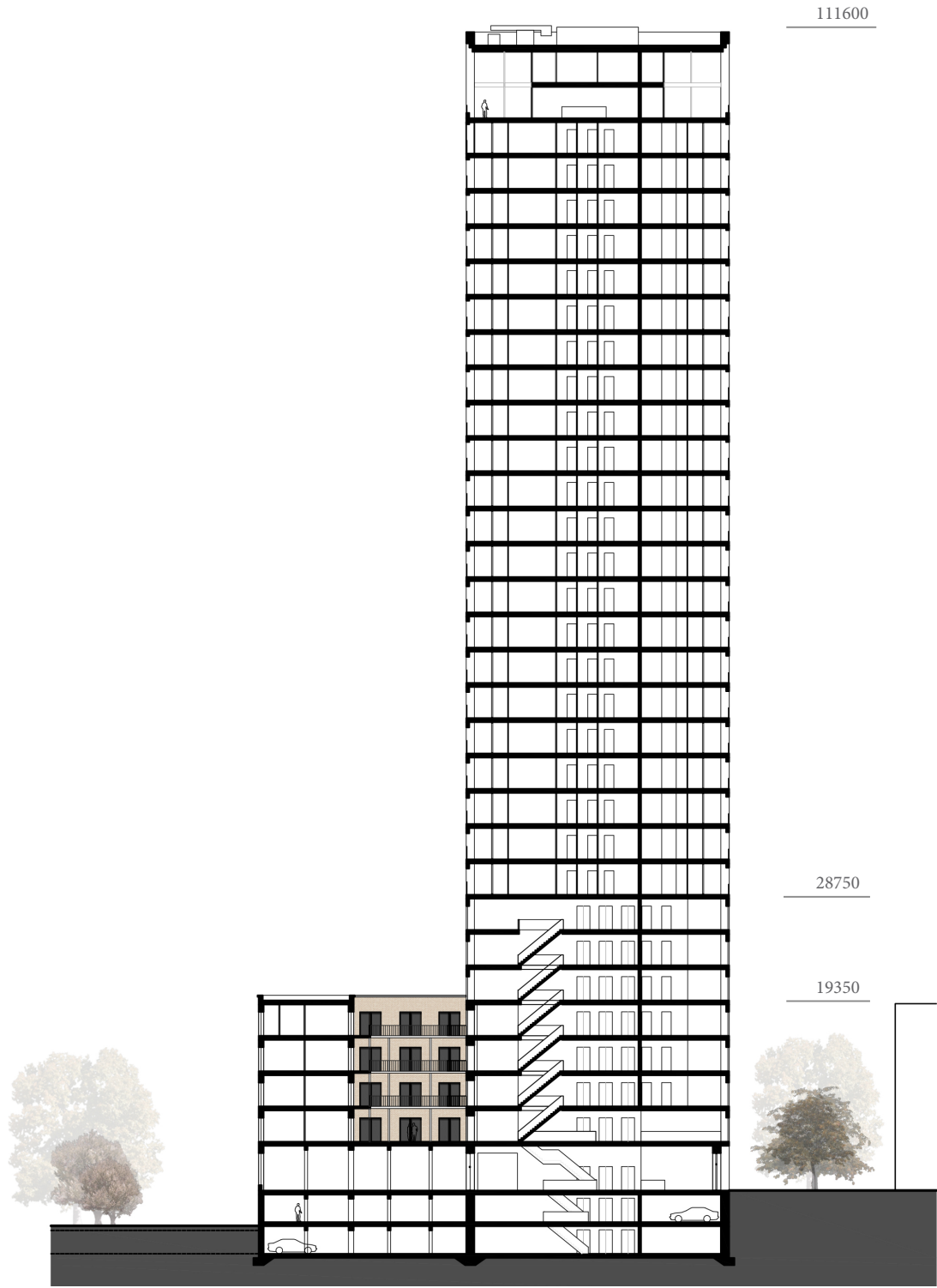


West façade

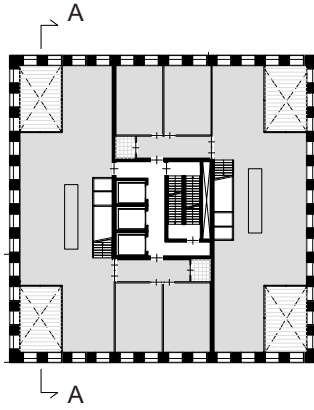


Fourth floor

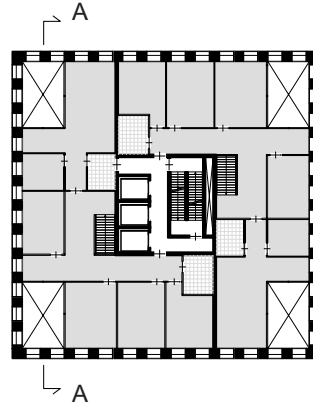




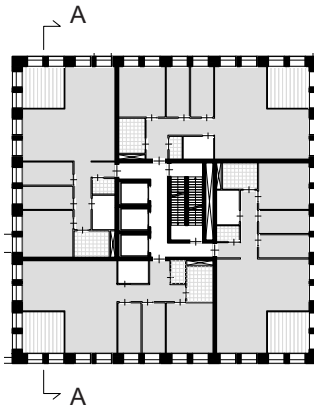
Section A-A



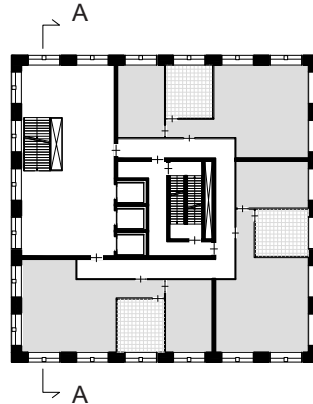
Penthouse 1/2 floor



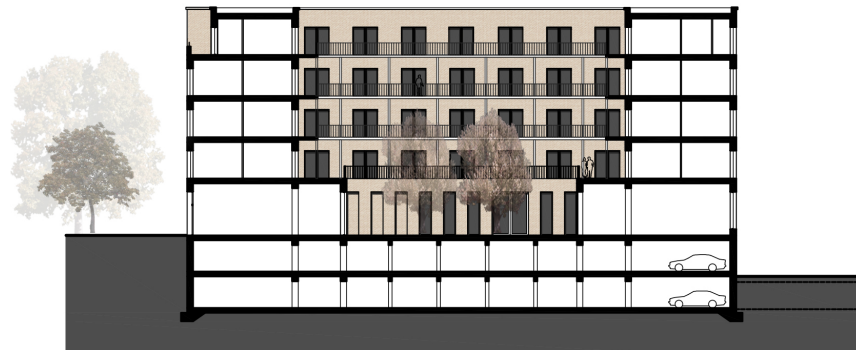
Penthouse 2/2 floor



Apartment floor

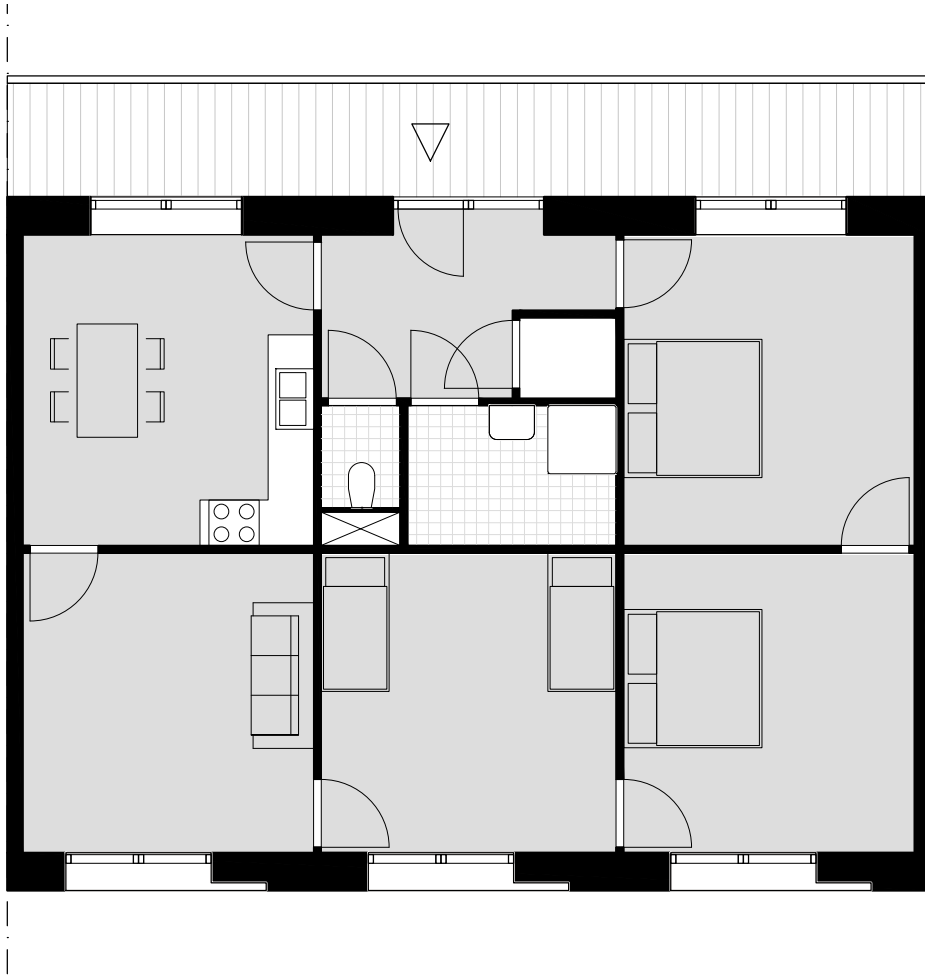


Hotel floor

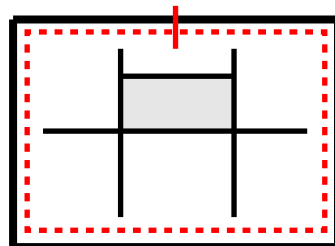


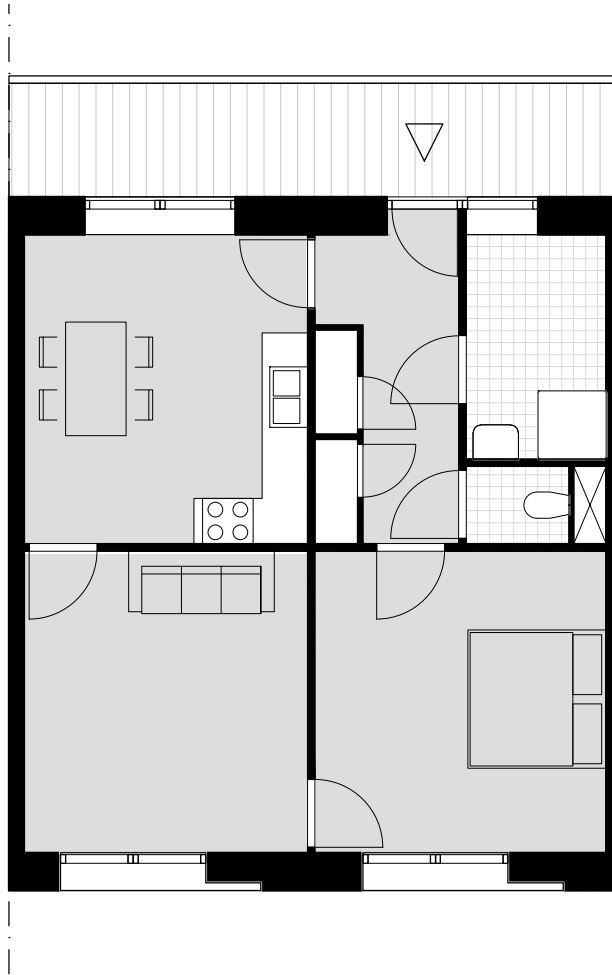
Section B-B



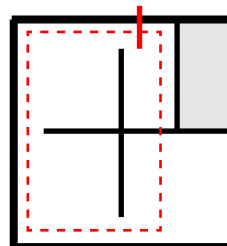


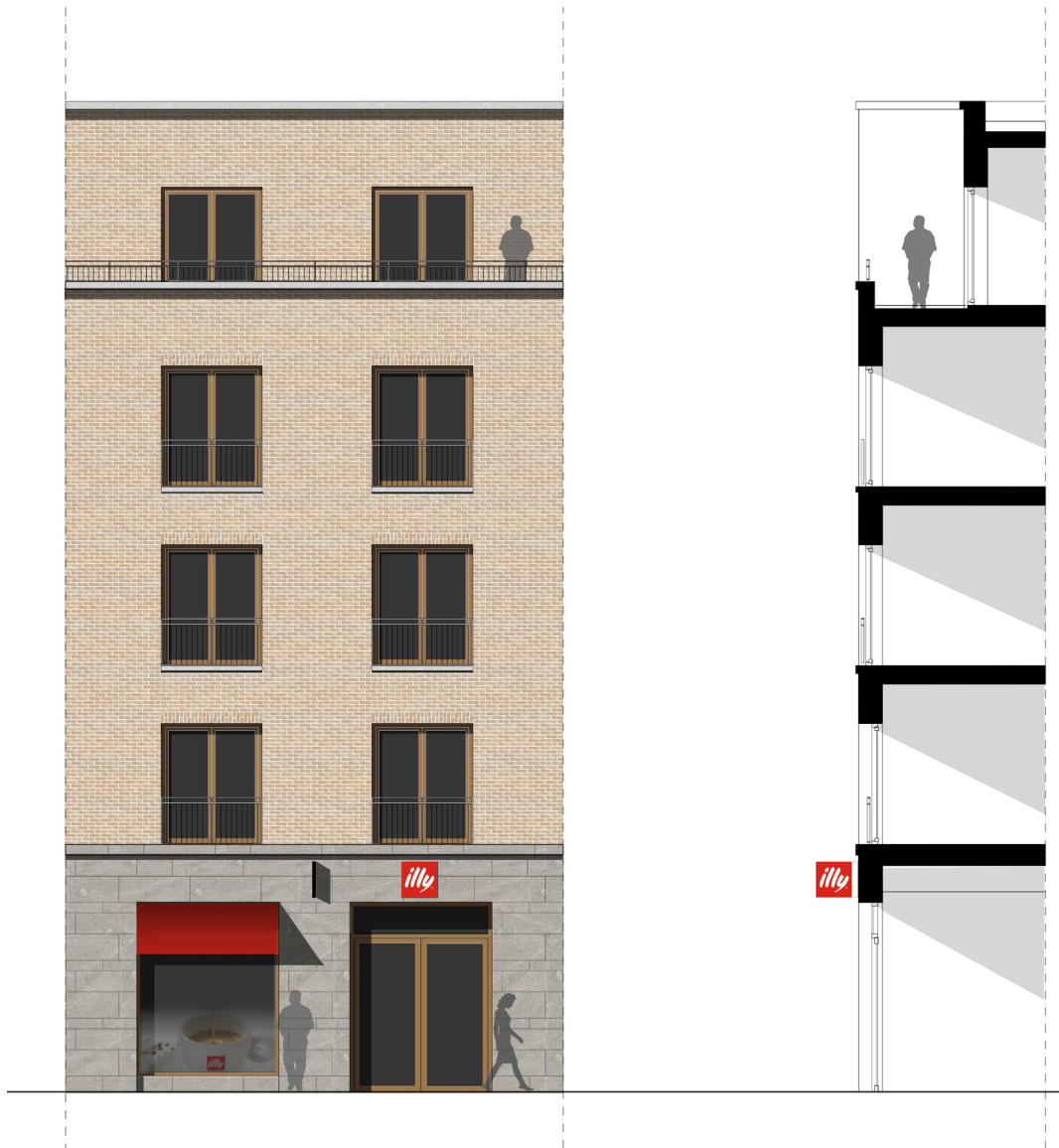
Plan dwelling type 1



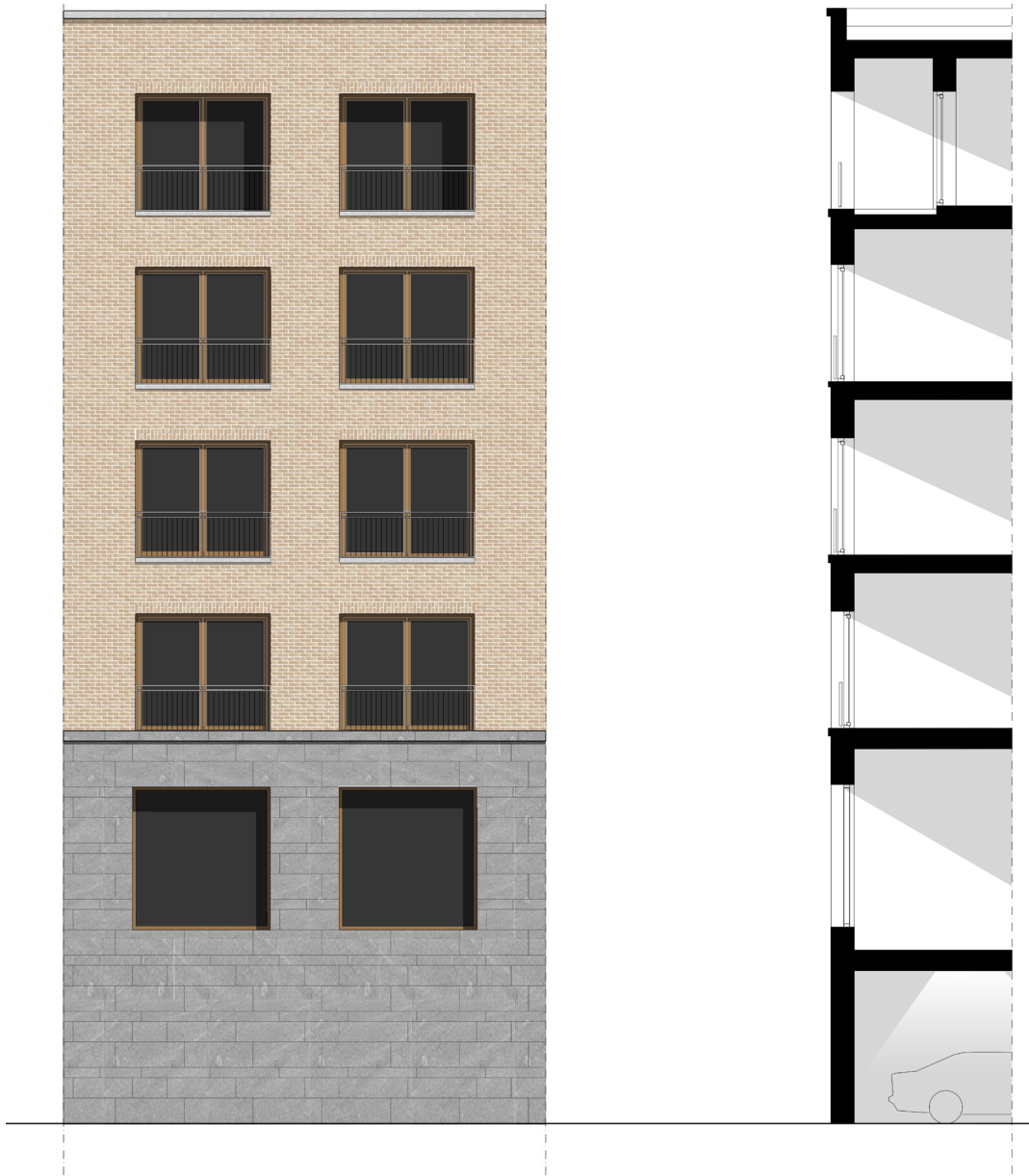


Plan dwelling type 2





North façade fragment



South façade fragment



Courtyard façade fragment

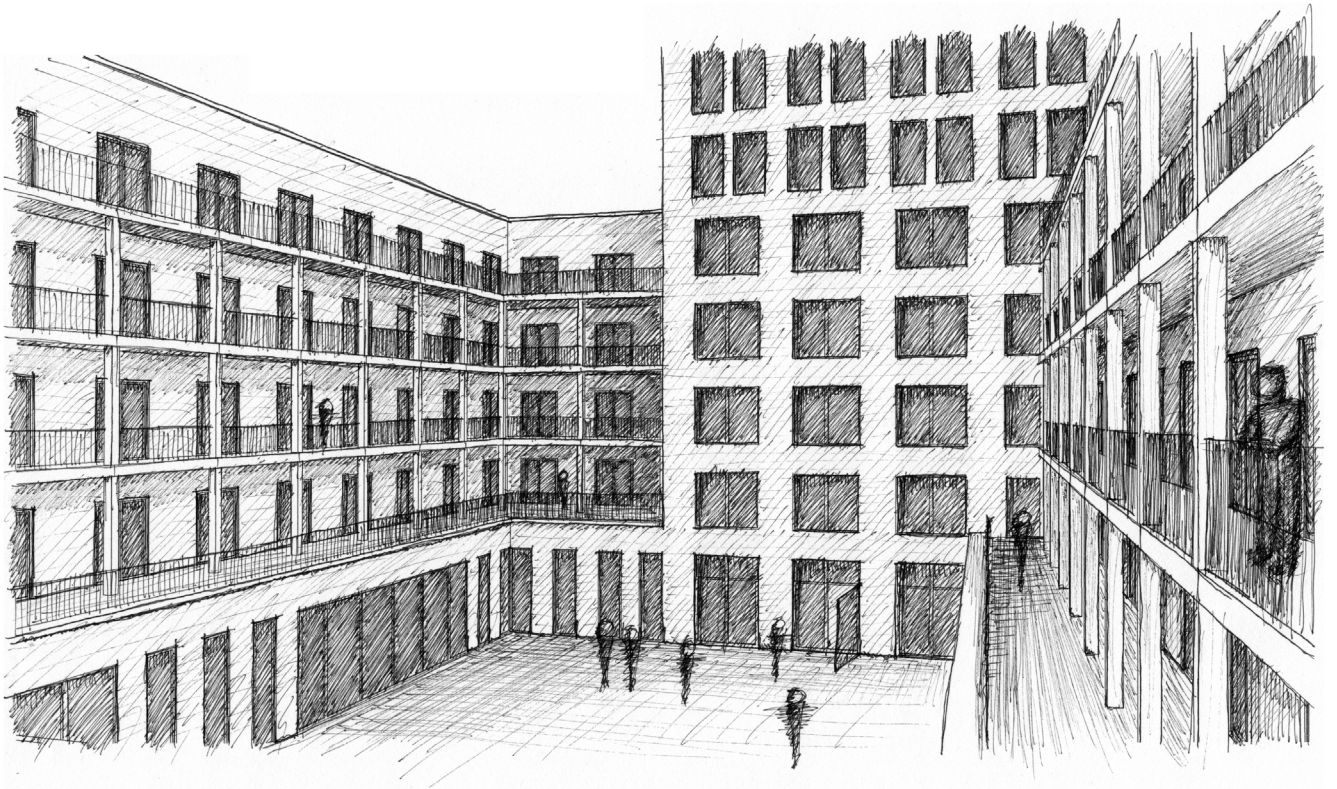


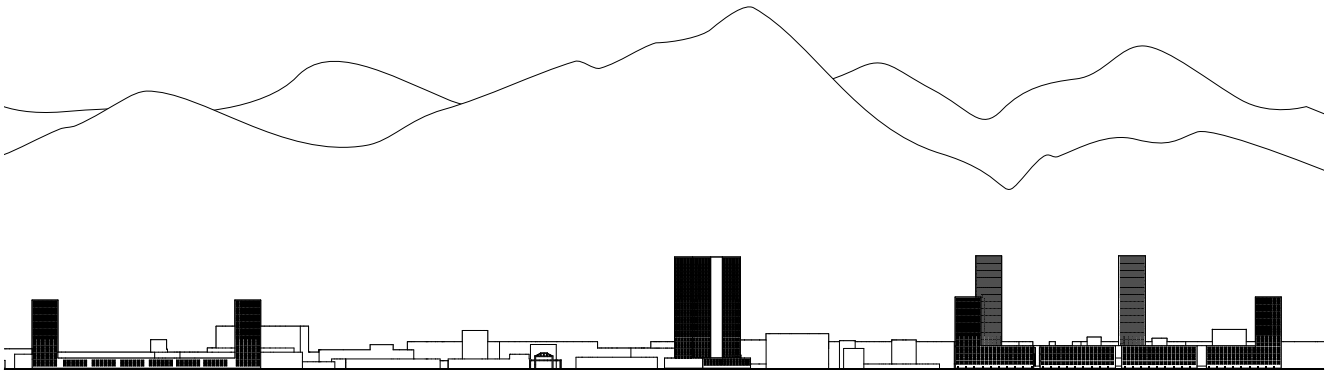
fig. 6.24 Impression of the courtyard



fig. 6.25 Model showing the tower building



fig. 6.26 Model showing the tower building



7 Conclusion

7 Conclusion

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In conclusion the 'Gran Torino' studio can be characterized, I think, by the aim to 'define form(s)'. Initially the atlas elaborates on this topic by undertaking the city of Turin by a typo-morphological research in order not to understand only the form in abstract, but what precedes the work of the form. The corresponding form to our sense is what the reason represents. Also in my thesis the theme of representation took a central role, if not the main one.

At first glance, the project might show some intrinsic ambiguities: it is conceived for the peri-urban but make use of the traditional urban typologies; and it is uniform, regular, in a surrounding which is heterogeneous in its order. Despite it might appear that it is the result of a design process carried out for themselves, on the other hand the proposal does not ignore the existent Turin, with which indeed is first of all in constant visual relationship thanks to its towers, new landmarks in the city skyline. More than that, it should be added that among the design aims there is that of being a contribute to the city, providing it with a new attractive pole in an area that would have otherwise developed randomly and with no qualities. Turin is not "cut out" from it; the same opening of the central core towards the surrounding is proof of the will for the project to establish a dialogue with the existent city and to involve it inside of its border.

A representation so uniform and exclusive in its expression, but inclusive in the continuity of the city.

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Image references

fig. 1.1 Unkown author, 'Map of Turin of 1887', Archivio Storico della Città di Torino.

fig. 1.2 Lupo, G. M., (1989), *Cartografia di Torino 1572-1954*, Torino, Stamperia artistica nazionale

fig. 1.3 E. Pecco, (1989) *Progetto della cinta daziaria; Disegni dei passaggi dei corsi d'acqua secondari*, Torino, 1 Agosto 1853, (Archivio Storico del Comune, Decreti Reali, 1849-1863) in G.M. Lupo [a cura di], *Cartografia di Torino 1572-1954*, Torino, Stamperia artistica nazionale, p.172.

fig. 1.4 Unkown author, (1874) 'Barriera di Piacenza on the right' [Photograph]. Retrieved November 28, 2014, from; <http://www.skyscrapercity.com/>

fig. 1.9 Ufficio Tecnico Municipale dei Lavori Pubblici, (1908) *Piano Unico Regolatore di ampliamento della città di Torino*, Torino, Archivio storico del Comune.

fig. 2.1 Unknown author, (ed) 'map of Turin situated in 1835' Retrieved May 27, 2015 from www.museotorino.it

fig. 3.2 Ludwig Hilberseimer, (1954) 'Chicago lato Nord' Retrieved June 12, 2015 from www.archiwatch.files.wordpress.com/

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fig. 3.4 Unkown author, *Cover page of 'Casabella' n. 278, 1963* retrieved June 09, 2015 from www.casadellarchitettura.eu/fascicolo/photos/

fig. 3.5 Rossi, A., Et al, (1962) 'Drawings of Locomotiva 2' 1962. Retrieved June 09, 2015 from: www.cca.qc.ca

fig. 3.6 Ernst May, 'Scheme of Ernst May's evolution of the building block' Original retrieved from: Panerai, P., & Castex, J. (2004). *Urban forms death and life of the urban block*. Oxford [England: Architectural Press p. 165 [edited by the author]

fig. 4.3 Unkown author, 'Map of Turin of 1907', Archivio Storico della Città di Torino.

All other images are made by the author.