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Alternative Housing Paradigm

Typological hybridizations and morphological variations for a dwelling innovation in the context of Tirana

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IDAUP Coordinator Prof. Roberto DI GIULIO

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(SDS: ICAR14)

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(Years 2017/2022)

Abstract (English)

This research focuses on residential urban systems and the contemporary transformations associated with them. This focus was born as an awareness of a continuous problematic situation, in the last thirty years, of housing and the socalled spatial typologies in the capital of Tirana. This situation is in fact inherited from a long period of urban planning and design, which was based for almost fifty years on the central social-communist-totalitarian system of government. But this thesis, in fact, does not aim to deepen the social problems of housing or the dwelling itself. The aim of this research thesis is to take a further step forward in the innovative ways of designing urban units linked to residential structures (such as the urban block or the urban complex). The research approach is mainly based on the experimentation of the formal aspects of residential urban systems and the urban nucleus.

Tirana is a specific morphological urban reality, because historically almost every regulatory plan (usually built on the principles of functional and physical zoning) has acted in a very partial and fragmented way in the urban territory. This, without taking into account the problems of socio-cultural-urban identity of previous periods. This fragmentation continues today, with completely partial applications that are more prey to residential building speculation by urban developers and builders, than guided by clear typological-morphological principles of the shape and the identity of the city. The city is therefore morphologically completely disconnected, but on the other hand, thanks to this fragmentation, the urban pieces of Tirana's identity are still partly there, to encourage us perhaps, as researchers of aspects of the urban form, to learn to read those existing urban tissues and to design, consequently, urban interventions that are in a clear dialogue with these parts.

Therefore, this research thesis will explore the theoretical aspects related to the urban typology (type) and the typologies of dwellings that build the urban form, making comparisons with the urban models known in history; it will deal with aspects of urban development norms and standards, such as building or housing density, or the quantitative (and further qualitative) relationships between urban elements; and will

experiment with methods of urban densification based on urban structures-models, but transforming them / "hybridizing" them in a contemporary way.

The objectives of this thesis are: (1) to build an *urban alphabet*, based on existing urban situations of Tirana; (2) generate some *aggregative urban rules*, based on contemporary examples of urban complex-blocks; (3) create a series of *urban morphemes* (syntaxes), which concretely reinterpret, in a contemporary key, the urban parameters set by the urban plan and regulations.

Keywords: *urban identities; urban typology; urban block; urban density; urban form*.

Abstract (Italiano)

Questa ricerca si concentra sui sistemi urbani residenziali e le trasformazioni contemporanee ad essi associate. Questo focus nasce come presa di coscienza riguardo una situazione problematica continua, negli ultimi trent'anni, degli alloggi e degli spazi abitati urbani (tipologie spaziali) nella capitale di Tirana. Questa situazione, di fatto è ereditata da un lungo periodo di pianificazione e progettazione urbanistica, che si è basata per quasi cinquant'anni sul sistema centrale di governo social-comunista-totalitario. Ma questa tesi, in realtà, non mira ad approfondire le problematiche sociali dell'abitare o dell'abitazione in se. Lo scopo di questa tesi di ricerca è fare un ulteriore passo avanti nelle modalità innovative di progettazione delle unità urbane legate alle strutture residenziali (come l'isolato urbano o il complesso urbano). L'approccio di ricerca si basa principalmente sulla sperimentazione degli aspetti formali dei sistemi urbani residenziali e del nucleo urbano.

Tirana è una specifica realtà urbana morfologica, perché storicamente quasi ogni piano regolatore-normativo (solitamente costruito sui principi della zonizzazione funzionale e quella fisica) ha agito in modo molto parziale e frammentato nel territorio urbano. Questo, senza tener conto delle problematiche dell'identità socio-culturale-urbana dei periodi precedenti. Questa frammentazione continua ancora oggi, con applicazioni del tutto parziali che sono più in preda alla speculazione edilizia residenziale da parte di sviluppatori urbani e costruttori, che guidate da chiari principi tipologico-morfologici della forma e dell'identità della città. La città è quindi morfologicamente completamente disconnessa, ma d'altra parte, grazie a questa frammentazione, i pezzi urbani dell'identità di Tirana sono ancora in parte lì, per incoraggiarci forse, come ricercatori degli aspetti della forma urbana, ad imparare a leggerli questi intrecci urbani esistenti e di progettare, di conseguenza, interventi ubani che si mettano in dialogo con queste parti.

Pertanto, questa tesi di ricerca esplorerà gli aspetti teorici relativi alla tipologia (tipo) urbana e alle tipologie di abitazioni che costruiscono la forma urbana, effettuando confronti con i modelli urbani conosciuti nella storia; tratterà aspetti delle norme e degli standard di sviluppo urbano, come la densità edilizia o abitativa, o le relazioni quantitative (e quelle qualitative ulteriormente) tra gli elementi urbani; e sperimenterà metodi di

densificazione urbana basandosi su strutture-modelli urbani, ma trasformandoli-"ibridizandoli" in chiave contemporanea.

Gli obiettivi di questa tesi sono: (1) costruire un *alfabeto urbano*, basandosi su situazioni urbane esistenti di Tirana; (2) generare alcune *regole urbane aggregative*, basandosi su esempi contemporanei di complessi-blocchi urbani; (3) creare una serie di *morfemi urbani* (sintassi), che reinterpretano concretamente, in chiave contemporanea, i parametri urbani prefissati dal piano e dai regolamenti urbanistici.

Parole chiave: *identità urbane; tipologia urbana; blocco urbano; densità urbana; forma urbana*.

Abstrakt (Shqip)

Ky kerkim ka si fokus sistemet urbane rezidenciale dhe transformimet bashkekohore qe lidhen me to. Ky fokus vjen si rrjedhoje e nje situate te vazhduar problematike, ne tridhjete vitet e fundit, te baneses dhe te hapesirave te banuara urbane (spatial typologies) ne kryeqytetin e Tiranes. Situate kjo, qe ne fakt vjen e trasheguar nga nje periudhe e gjate planifikimi dhe projektimi urban, i cili bazohej ne sistemin qendror qeverises social-komunist-totalitar per pothuajse pese dekada. Por kjo teze ne fakt, nuk synon te studioje ceshtjet sociale te strehimit apo baneses. Synimi i kesaj teze kerkimore eshte te hedhe nje hap me tej ne menyrat inovatore te projektimit te njesive urbane qe lidhen me strukturat rezidenciale (si blloku urban apo kompleksi urban). Qasja kerkimore bazohet kryesisht ne eksperimentime te aspekteve formale te berthames urbane dhe te sistemeve urbane rezidenciale.

Tirana perben nje realitet specifik morfologjik urban, sepse historikisht pothuajse cdo plan rregullues (ndertuar zakonisht mbi parimet e zonimit funksional dhe fizik) ka vepruar ne menyre shume pjesore dhe te fragmentuar ne territorin urban. Kjo, pa marre parasysh as ceshtjet e identitetit socio-kulturor-urban te periudhave te meparshme. Ky fragmentim vazhdon ende sot, me zbatime teresisht pjesore, te cilat jane me shume pre e spekullimit ndertimor rezidencial prej zhvilluesve urban dhe ndertuesve, se sa te udhehequra nga parime te qarta tipologjike-morfologjike te formes dhe te identitetit te qytetit. Qyteti rezulton keshtu teresisht i palidhur ne aspektin morfologjik, por nga ana tjeter, fale ketij fragmentimi, copeza urbane te identitetit te Tiranes jane pjeserisht ende aty, per te na nxitur ndoshta, si studiues te aspekteve te formes urbane, te mesojme t'i lexojme keto thurje urbane ekzistuese dhe te projektojme nderhyrje ubane qe vihen ne dialog me keto pjese.

Ndaj, kjo teze kerkimi do te hulumtoje aspektet teorike qe lidhen me tipin (tipin urban) dhe tipologjite e banimit qe ndertojne formen urbane, duke bere krahasime edhe me modele urbane te njohura ne histori; do te ballafaqoje aspekte te normativave dhe standarteve te zhvillimit urban, si densiteti i ndertimit-banimit apo raportet sasiore (e me tej cilesore) mes elementeve urban; si dhe do te eksperimentoje mbi metodat e densifikimit uban, duke u

bazuar ne struktura-modele urbane, por duke i transformuar/“hibridizuar” ato ne nje celes bashkekohor.

Objektivat e kesaj teze jane: (1) ndertimi i nje *alfabeti urban*, bazuar ne situata ekzistuese urbane; (2) gjenerimi i disa *rregullave urbane agreguese*, bazuar ne shembuj bashkekohor te bllokut-kompleksit urban; (3) krijimi i nje sere *morfemash* (sintaksash) *urbane*, te cilat ri-interpretojne konkretisht, ne celes bashkekohor, parametrat urbane te vendosura nga plani dhe rregulloret urbanistike.

Keywords: *urban identities; urban typology; urban block; urban density; urban form*.

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1 GENERAL RESEARCH FRAMEWORK

1.1 Introduction and problem statement

1.1.1 General background

After the fall of the totalitarian system in the early ‘90s, a major economic crisis afflicted the Albanian country. The crisis resulted from the confrontation with a new reality which included the simultaneous existence of an economic model inherited from this system (entirely centralized) and the participation of the domestic market in a much larger and consolidated market. A large part of the population, especially people coming from areas entirely forgotten by the previous system, migrated to Tirana which represented the only employment alternative or, at least, the one place in Albania able to provide basic services. As such, the city experienced a housing emergency in the early ‘90s. Poverty and job uncertainty meant that the first settlements were located in Tirana’s suburbs with the builders often claiming and building on land either lacking a clear ownership or belonging to the state which, at that time, barely had any experience or tools to control this phenomenon. This process produced a new reality for Tirana which gradually became surrounded by informal areas (from a legal point of view), with mostly small and simple buildings quickly built with rough materials. The period of '91-'98 was characterized by this type of construction.

Following the several political and primarily economic changes of the years '97-'98, in Tirana (as well as in some of the main cities such as Durres, Elbasan, Vlora, Saranda, Shkodra) yet another phenomenon occured, that of the increased proliferation of urban centers. The reasons for this were many. Emigrants began to significantly contribute their incomes to their households. Albanian’s expectations regarding their housing and livelihood began to change (after 50 years of dictatorship and state control). Households with more than one head seeked to become independent and reside separately, and the construction industry, being one of the most profitable activities at that time, noticed this need and, favored by the general lack of planification or strategic vision for the city as a whole, introduced offers in the construction market which were continuous but not well-researched. As such, it responded to a growing market and ever increasing demand in

an entirely uncontrolled manner. Until 2012 (with some changes in the planning law), Tirana kept the same regulatory plan, that of '89, which corresponded to quite a different population density and infrastructure. The old urban plan ('85-'89), was designed for a maximum of 300,000 inhabitants, estimated population till 2005 (Aliaj et al., 2003). Thus, for about twenty years, the Municipality of Tirana provided partial building permits based on a plan that did not take into account any of the drastic changes in the post-90's Tirana. This situation was taken advantage of by builders and by the municipality itself, something which aggravated the situation in urban centers, where the historically beautiful and charactersitic urban areas were slowly transformed into areas lacking an identity while exhibiting serious spatial and infrastructural issues.

So, we can say that today's housing problems in Tirana, but also in Albania, are, in fact, inherited. Even the long period between the years '45-'89, under the socialist system, did not solve the housing issues, despite the ideology embraced at that time whose social mission included the provision of housing for every Albanian citizen. The problems would start from the beginning with the elimination of private property and the exclusive placement of all competence and control in the hands of the state. As such, the state would bear all the costs of the housing construction. In order to do this, the Albanian state mostly used the collective residence typologies of 2 to 5 stories, which allowed for relatively fast construction, due to its type and basic design. These typologies, however, interfere with the territory by being entirely unrelated to the general context, completely ignoring the existing urban fabric and thereby wiping out the long-term typology of a single-family household. These problems, such as the question of ownership and disregard of the existing urban fabric, were later inherited, from the period of the 1990s to the present day, where housing and residence alternatives are quite limited in the urban context of Tirana.

Today's housing situation remains quite problematic. Currently in Albania, the housing market has a considerable stock of unsold apartments. According to the Association of Builders of Albania, in 2017 there are about 10,000 such apartments (and this data keeps growing). There are several reasons. The main reasons behind this remain the lack of consultation with detailed studies about this market (i.e. there has been more construction than the real necessity) and the buyers' increase in demand for quality (the term quality

refers to a better position in relation to the city, better ventilation/sun exposure, more appropriate space, etc.).

Thus far, the objective of the builders/investors has been the sale of their housing constructions. On the other hand, the residents are interested in seeing the construction of liveable residences. According to numerous indicators (INSTAT, Association of Albanian Builders, etc.), the situation is not expected to change, as no significant initiatives have yet been taken to protect customers/residents in this regard.

The image below[1] summarizes what was said above and illustrates synthetically-schematically the transformation of the city during the time under consideration. To facilitate the analysis the division is made according to calendar decades, despite the fact that many phenomena have occurred between decades.

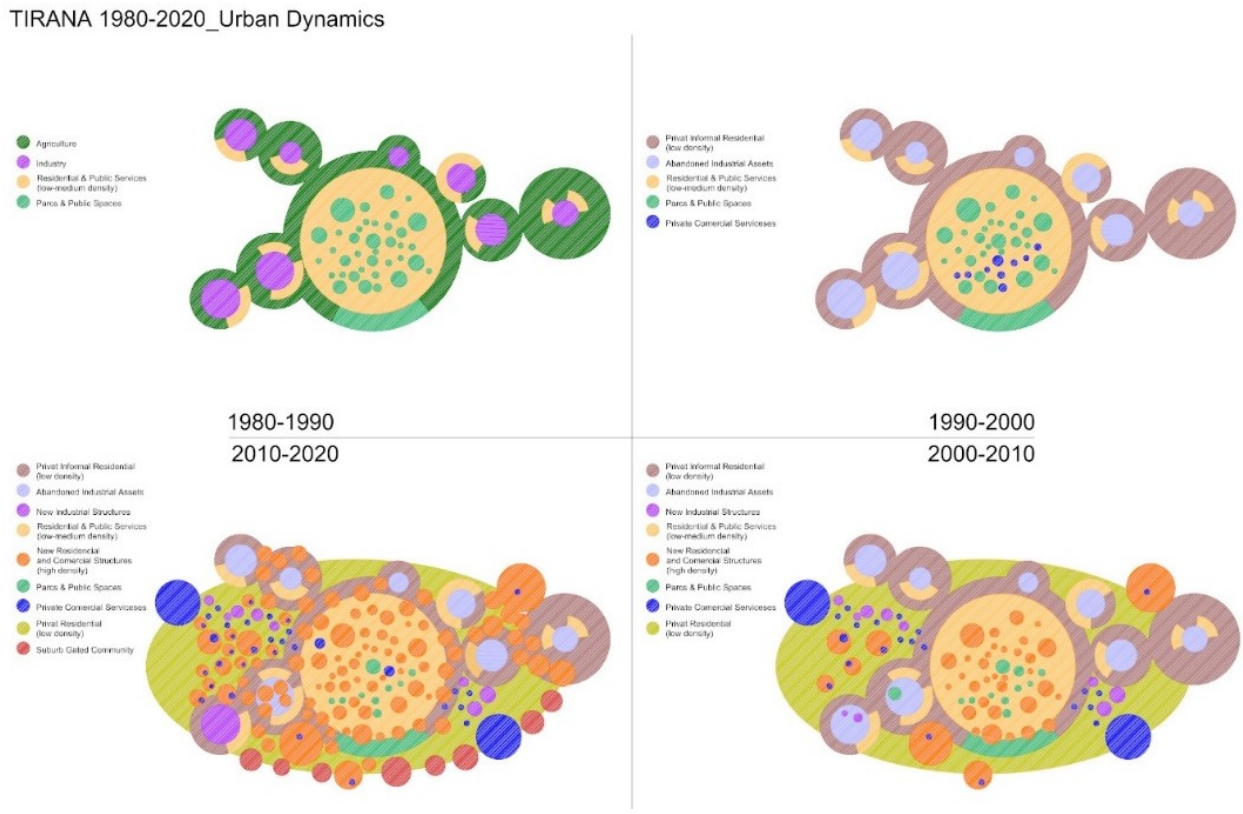


Figure 1. Diagram of urban dynamics: the densification of Tirana over the last decades.

[1] Kapo, D., *Dinamika urbane: densifikimi i tiranës gjatë dekadave të fundit*, April 2021. https://www.ekon.al/2021/04/01/dinamika-urbane-densifikimi-i-tiranes-gjate-dekadave-te-fundit/

We can see in the top-left box how during the ‘80s, the city was surrounded on the outskirts, mostly by satellite neighborhoods and with a relatively consolidated center. These suburban neighborhoods were often associated with industry or production, such as the neighborhoods of ex-*Uzina Enver*, those of *Porcelani*, *Ali Demi*, *Lapraka*, the last station of Tirana e Re, etc. The mentioned areas but also those inside the city were characterized by a low density of construction and consequently with large public spaces. Another characteristic of this period is given by the drastic cessation of the city inhabited by agricultural land and cooperativized on its outskirts.

During the '90s, the upper-right quadrants are precisely these agricultural spaces that are the first to be urbanized, often informally by private buildings. This period coincides with the deactivation of industrial areas and also with the alienation of public spaces in commercial units. The latter are exactly the first kiosks, shops and bars along the *Lana River* or civic parks, such as *Rinia*, *Vëllezërit Frashëri*, *1 Maji*, etc.

In the decade 2000-2010, these public spaces were returned to the city and commercial units began to be moved to the first floors of existing dwellings, alienating their function, or being specially relocated to new buildings. These years are characterized by the construction boom and the densification of the city center. This invasive approach was reflected even more clearly in the construction speculation of the former municipalities around the city, now the neighborhoods of *Astir*, *Liqeni i Thatë*, *Fresku*, etc. This period also coincides with the development of the main economic corridors in light and commercial industry, with the commercial centers *TEG* and *QTU* along the Durrës-Tirana-Elbasan axis.

During the last decade (2010-2020), the densification process continued at a slower pace, according to the possibility and space left in the central areas, while the municipalities continued at an intense pace until the new administrative division of 2014. Also, during this period, perhaps as a result of the consolidation of the construction industry, as well as the legalization of informal buildings, high-density residential complexes flourished in the former suburban areas of the 1980s. Along with them, a new typology arises in the construction offer, the so-called elite or luxury residences, in the last surrounding area of the city, mainly in its south-eastern edge.

In synthesis, among the main factors that have influenced the expansion in the territory or the concentration of apartments, buildings or new residential complexes, we can mention: high demand for housing and more comfortable housing during the years `80 and` 90 by the residents of Tirana ; internal migration, as a need for missing services and opportunities from their country of origin; misinterpretation of private and public property, as well as institutional fragility to better administer the city; development of the construction industry, as a key sector in the domestic economy; and property as a new concept for investing in post-communist Albania.

1.1.2 Problem statement

The main problem, which is the cause for this research thesis in the field of urban morphology, is the way in which urban units are being built-densified (according to divisions-subdivisions and physical and quantitative parameters defined by the general regulatory plan of Tirana) in the central area and within its limits (second city ring bands) by the construction industry. These rapid and massive interventions in the morphological fabric, not only are leaving serious consequences in the existing morphology of the city, but are also limiting the typological offer of residential buildings and apartments.

This problem statement comes as a result of a series of findings from the field and from other sources, such as articles or scientific research, which are mentioned below:

- as mentioned above, the inherited and continued crisis in the supply of housing in the city of Tirana, which made the construction sector convincingly take control of the densification - and consequently - the physical transformation of the shape of the city.
- rapid and massive design-construction of residential complexes-blocks, with consequences: in the quality of the apartment (private space), a topic which is treated in volume 3 of *Habitat Magazine* (Dobjani et al., 2015); in the quality of public spaces - half public - half private); in the existing urban fabric, with the final loss of traces, of identity, of the urban tissue-tissue, of the shape of the city.

- various articles from investigative periodicals on urban issues (such as magazines Monitor, Reporter, Citizens Channel)[2], which report rapid changes and demand-supply mismatch for housing.
- dubious market of apartments for sale (how many are there, which category buys them, who lives in them?) and a very high interest in building apartments, but with a very poor design and without spatial quality (many kindergartens, nurseries, clinics, call centers, etc. located in standard apartments).
- inconsistency of the proposed intensity map with the existing intensity map and existing housing typologies.
- monitoring-analysis of new residential complexes, inside the ring of Tirana or at its edge, from which a very unbalanced construction-space ratio is found.
- difficulties in reading and dividing urban units according to spatial typologies (building-space).
- Stefano Boeri's plan TR030 mentions the demolition of the complexes of the '70s and' 80s in some areas within the second ring road of the city, as already degraded. Loss of another existing urban structure.
- detached towers in historical contexts (individual towers / dwellings with gardens-yards). How can these typologies be integrated, if the other dwellings do not do the same, to redevelop the property in height?

1.2 Research questions

The initial question in this research, but which is often encountered in the subjects where I am academically engaged, is: how can one read such a complex urban reality as that of Tirana? In what theoretical key, or practical instruments?

And the second research question is: how can we densify ("quickly and correctly" in relation to the intensities proposed by the plan for a compact city and respecting the existing morphology) while maintaining urban quality in public spaces - semi-public - semi-private; also, not completely and permanently losing *urban nuclei (types)* (as a necessary information to generate urban forms of identity according to contemporary concepts)?

[2] https://www.monitor.al/; https://www.reporter.al/; https://citizens-channel.com/;

The hypothesis posed at this point is: will, at the end of this process, morphological experimentation (such as typological "combination-hybridization"), the generational qualities of the urban type be ensured and at the same time the individual and urban spatial quality be preserved?

If so, then this urban type alphabet, which allows the generation of different urban scenarios / aggregations (typological "combination-hybridization" according to some urban rules), could be an innovative way of building a contemporary urban block, as a *dwelling innovation* in Tirana.

1.3 Objectives

The main objective is the theoretical exploration (based on literary review) and then the practical one of contemporary ways of urban densification, through manual techniques (also manageable by students) that combine-graft-hybridize urban densification parameters with different typologies of compact urban form.

This main objective will be achieved through three more specific objectives:

(1) Construction of an *urban alphabet*, based on the existing types / typologies of Tirana. For the reading and interpretation of these urban types will serve theoretical framework on the type and typology in a contemporary perspective.

(2) Generation of some *aggregation rules*, based on European examples of the formation-composition of the contemporary urban block. Also, for this objective will be studied the history of morphogenesis of the urban block (as an urban structural unit of fabric), as well as cases of formation and evolution of this urban unit in Tirana.

(3) Generation of a series of *urban morphemes*, as contemporary experiments in the construction of continuous compact urban weaving and in the generation of different typologies of housing. Here urban densification techniques will be combined with the urban identity types of Tirana.

1.4 Methodological notes

This research is based on both theoretical aspects and some practical and empirical approaches. The theoretical framework, which is based on the first part on the concept of architectural type and that of typology, also in the morphological-urban aspect, tries to

give a general view of how a certain urban context can be read (in this case research Tirana), in the "key" of the type. But, given the connection of type and typology in the history of architecture and that of cities - we can mention here the compositional concept of type by Durand, which also influenced the modern movement - here, theoretical sources require a somewhat more contemporary approach to re-interpreting the type as a generating concept of the urban form.

In the second part, a historical-cartographic research is done on the city of Tirana and the evolutionary phases of urban morphology, in relation to this information that has to do with urban regulations and regulatory plans in chronological order.

In the third part the research is based on the concept of urban density, as a practical way to "control" the built urban mass and especially, the relationships between its elements. So in this way, the quantitative approach with the qualitative one is combined. So how do we know when a quantitative data corresponds to another qualitative data, related to empty space and built-in space. To understand this, quantitative parameters of urban density have been compared with its qualitative parameters. Also, different models of known cities are compared and parameters of their different densities are given, in correspondence with the respective typologies of construction-housing and spatial-urban form.

In the last part, empirical observations and quantitative-qualitative measurements (in terms of ratios-proportions) were made on selected urban contexts in Tirana. This phase will serve to move to the final phase of morphological experiments, based on the combination of urban densification techniques, such as *combination, grafting or typological hybridization*, in a key re-interpretation of the contemporary urban type of Tirana.

2 TYPE, TYPOLOGY AND TYPOLOGICAL INSTRUMENTS

2.1 Typology and typological instruments

2.1.1 Type as a pliable diagram, informing the urban plan

(Under the perspective of: de Quincy A-C. Q., Durand J-N-L, Rossi, Eisenman, Ungers, Rowe and Koetter, Christopher CM Lee and Sam Jacoby)

After introducing some concepts about urban processes and city shaping, organic or planned; understanding some aspects influencing the form, being those material and/or non-material aspects; and interpreting the city as a malleable energy field; etc. it is worth now to go through some of the main theories that see the city from a more formal position, or as a structure of parts, and better understand how all that is molded in the urban morphology. Typology andtype are two important concepts that will be presented from different points of view, including some contemporary and foregoing positions. As we will see in some details in the following paragraphs, typology and type, serve not only to have a deeper understanding of the urban morphology, but also to inform its transformations. In this section I will introduce also some concepts related to the fractal structure of the form; that see it as a system-structure organized in hierarchies and decomposed in elements; this will help further in the research to discover the order beneath of what looks to be chaotic in its superficial.

2.1.2 Resurgence of type

Recently the discourse on the typology and typological instruments has been revived. The AD (209, 2011) on *Typological Urbanism* edited by guest editors Christopher CM Lee and Sam Jacoby, bring under attention several important issues concerning this discourse that are relevant for my research. As Helen Castle states in the editorial of this AD issue (2011 p. 5), *the resurgence of type in architecture indicates a desire for syntax or underlying order*. Quoting Bos C. and van Berkel B., Castle (2011) remembers us that type provide a '*legacy of rationality'*. Type *endows architecture with coherency, logic, and structure* and especially in complex and unstructured urban situations offers order. Most importantly, what is with particular interest for my research, typological knowledge has to do with *architects' ability to assert themselves in the city*. As Castle continues, citing Serie

Architects '*the notion of type as operative theory is generic enough to overcome differences and specific enough to engage and index the cultural, social and political nuances of its host*'. As such, it has the potential to be *both universal and local, providing architectural solutions to urban problems*. Type requires to look for *commonalities and similarities between built form*, or identify *the essence* in the built form. Even in all what we said so far there are a lot of concepts and language echoing from the precedent works related to the theory of type and its relationship with the city (Rossi, Ungers, etc.), most importantly what Lee and Jacoby demonstrate in this issue of AD is that type *lends order* … but *also provides the essential catalyst for innovative design thinking at the city scale* (AD, 209, 2011 p. 5).

In the introduction of the guest editors Christopher CM Lee and Sam Jacoby, *Typological Urbanism ad the Idea of the City*, they are inclined to the idea that *typological urbanism* can be seen also as an attempt to recover architecture relevance to the city and *re-empower the architect in the context of urban architectural production* ... In fact, the introduction itself and also recent projects they use as illustrations, bring evidence about the potential to use the *notion of type in informing the idea of the city* (AD 209, 2011 pp. 17, 19).

Speaking about *type and typology* they remind us the same definition of type in architectural theory from de Quincy A-C. Q. (1825) as *the idea of an element which ought itself to serve as a rule for the model*, therefor type is something *abstract and conceptual rather than concrete and literal*. Differently from the concept of type as an idea, Durand J-N-L (almost in parallel with deQuincy) developed the idea of *type as a model*. He worked a *systematic method of classifying buildings according to genre* and type for him could be graphically reducible *to diagram*. He also introduced fundamental precepts to work typologically*: precedents, classification, taxonomy, repetition, differentiation and reinvention* (AD 209, 2011 p. 19).

These authors bring several examples to illustrate their idea. Thus, UN Studio is engaged to argue how *typological instruments* can *connect architecture and urbanism*; how the *utilization of design models* can *synthesize types with the complexities of practice and reality*; and how these models should be capable of their *transformation and hybridization*

in order to fulfil the … requirements of an architectural project in an urban context (AD 209, 2011 p. 19). In the same direction, Carl, P. in *Type, Field, Culture, Praxes* clarifies that '*types are isolated fragments of a deeper and richer structure of typicalities'*, *attempting to relate the architectural object to human situations* (p. 20).

This opens a discussion on the relationship between the typology and the urban plan. As Lee and Jacoby (2011 p. 20) write, the *instrumentality of type … lays in its ability to act as a pliable diagram, indexing the irreducible typal imprints that serves as the elemental parts to the plan.* These diagrams … *embody the basic organizational performance, history and meaning of precedent types that are then developed into new design solutions*. In fact, most of the cities canbe explained and described through some dominant types (Manhattan skyscrapers, Tirana Recording Over, etc.). As Rossi argues buildings as '*permanencies*' act as *typological repository* of a city's history, construction and form (p. 21).

The discourse on typology and typological instruments, and their role as a pliable diagram informing the city plan, touches upon a delicate topic to be discussed in the context of so many failures and disasters caused by the regulatory planning instruments. This research lays in the area of criticism to deterministic city planning methodologies. Are the refocusing on typological instruments; or the relationship between the typology and the urban plan; or the reinvigoration of the role of architect, etc. as presented in this section, some of the directions to look for? In a situation where the gap between the architecture and planning is deepening, do we need to better explore and be more open to strategies of city development in concomitance with the idea of city as an architecture project and large-scale design?

Foregoing theory and ideas about type and typology

Most of this language originate much time before the recent discourse on type and typology. It is worth here to highlight some important preceding concepts.

2.2 The Architecture of the City (Rossi, 1966)

Rossi's book was a response to a general concern manifested during 60s about difficulties to solve the crises of the city within the functionalist principles. One of the crucial arguments brought by Rossi in "*The Architecture of the City*" (1966) was the importance that he attributed to the architectural form. For him buildings are independent from their functions and functional reduction as a simplistic logic prevents from other knowledge such as, formal, historical and sociocultural (1984 pp. 46, 47). Type for Rossi is '*developed according to both, needs and aspiration to beauty; a particular type was associated with a form and a way of life, although its specific shape varied widely from society to society. The concept of type thus became the basis of architecture…*' (1984 p. 40).

For him the city was neither a subject to be approached with the economic logic, nor a mechanical object resulting from summing up its function. Contrarily, for him the city ought to be approached with the means of the city itself, which is *the architecture of the city*. For Rossi each architecture reincarnates in itself an event or an urban fact. Therefore, even the city as an artifact which is built over time contains traces, that sometimes may be also discontinuous. With the notion of traces is related the concept of *permanencies* as the past that is being experienced in the present and intimately tied to the city; and the concept of *persistence* as constancy of themes (physical structure, streets and urban monuments), which serves as generator of the plan (Rossi, 1984 p. 59).

Rossi speaks also about *locus*, as the *site of succession that like permanence is determined not just by space but also by time* (Eisenman introduction in Rossi, 1984 p. 7); Locus as *the relationship between a certain specific location and the buildings that are in it* (Rossi, 1984 p.103); that *begins in the event and in the sign that has marked the event* (1984 p. 106) (very near to quantum logic). In this concern, he argues that contextualism is an *empty* formalism, reductively seen as a relationship of figure and ground (Rossi, 1984 p. 123). For him there is a dialectic relationship between *permanence* (monuments) and *growth* and their characteristic to adapt. (Rossi, 1984 p. 60).

Rossi brought under attention also important dualities such monument-urban tissue, and most importantly morphology-typology. For him the city is connected through the typological structure as part of the urban structure. In fact, it was in the dialectical relationship between the urban morphology and typology that Rossi saw an important instrument that could be used to solve the crises in favor of creating better urban environment. This was quite revolutionary after the period of modernist planning and urban design totally excluded these concepts.

As Rossi repeats often in his book, he is *concerned with the architecture of the city*, with *its form*, *which seems to summarize the total character of urban artifacts, including their origins*… *This is in part what he means urban morphology*: *the description of the forms of an urban artifact*. As he states, this *draws us closer to a knowledge of structure but is not identical with it* (Rossi, 1984 p.32). According to him, *this permits a specific reading of the city as architecture of different parts* or components … *principally the dwelling and the primary elements* (1984 p. 61). Thus, the city as a structure of parts possesses *primary elements* around which buildings aggregate. The *dwelling area* (1984 pp. 69-72) as a piece of the city with a certain physical and social homogeneity is intimately related to its evolution.

Particular interest stays in the Eisenman's interpretation about typology as process, as the *effect of memory on type which allows for the new process of design* (Eisenman introduction in Rossi, 1984 p. 8). The type / object transformed by memory *embodies both an idea of itself and a memory of a former self* (Eisenman, 1984 p. 7). Thus, typology is seen as *animating force of design … a catalyst for invention* (Eisenman, 1984 p.8). As we saw, a similar concept was presented also in the AD issue 209 (2011) in the context of reinvigorating the typological instruments.

The concepts related to the city as an historic process and structure of parts have been important to reconstruct the urban process of Tirana based on the relationship of the history and typology, as well as to understand the morphological structure, the role of permanencies and persistencies, and the degree of discontinuity or broken relationship in the process; to understand the various cases of the dual relationship between building typology and urban morphology: such as cases when the building structure is *detached*

from the form of the district and does not follow the historic lines, and cases when the typological aspects of the houses which manifest a local culture, are *closely bound up with urban form*. In many cases the form of historic neighborhoods/ *mohallas* was mostly lost and morphological tensions were created because of this situation. These concepts are used in the 2nd chapter dedicated to historic analyzes and also in the 4th chapter dedicated to sample analyzes to designate and refine the selection of the samples.

2.3 Ungers, the rationalization of the existing

For Ungers architecture … *is the creative expression of the "vital clash between the active individual and his environment*": "*architecture is a vital penetration into a multilayered, mysterious, evolved and structured reality. Its creative function is to … integrate itself into that which already exits, to accentuate and amplify its surroundings. It always consists in the recognition of the genius loci out of which it grows*." (Ungers and Gieselmann 1960, in Hertweck and Marot, 2013 p. 26).

In terms of urban design (early sixties), Ungers' projects demonstrate *profound empathy for the situations that they reshape* … Typologies *are … rationally inflected* (modulated) *on the basis of logics and syntaxes abstracted from the existing situation*. This method that Ungers later described as the "*rationalization of the existing*" consists in the reinterpretation and rationalization of the morphologies that *provide the underlying themes* for the proposed configurations. For Ungers, *the site is the essence*, *the … material of the project*. He *entered in interaction with history* … not in the *way that could be said to 'take into account the old city'*, but also *drawing upon history for formative principles that could be transferred to the present* (Hertweck and Marot, 2013 pp. 26, 27). Ungers has much in common with Rowe, however he believes *in architecture ability to embody and intensify the site*, much more than Rowe's formal bricolage that reconciles the masterpieces of modern architecture with the ancient city (2013 p. 29). For Ungers, all interventions are *imaginary museums, forums of contradictions, Noah's Arks* sheltering the genetic heritage of architecture, in order to survive functionalism (2013 p. 27).

Ungers and Rossi bore the conviction that architecture is a *cultivated art*, rich with precedents such as *concepts, forms, and figures, capable of teasing out from reality* …

typologies to inflect … or latencies to reveal. In his text '*Planning criteria*' written in 1976 he sustained that one of the most significant architectural principles was the *dialectical relationship with existing reality*, the *ambition to intensify the place*. However, what makes him different is the *ambition to overcome the dramatic tension between the rational order and the … contingency … nature of the real* (Hertweck and Marot, 2013 p. 36). For this, Ungers uses his concept of *morphological urbanism*: he transposes *all the ingredients of the Genius Loci (blocks, streets, avenues, the park) …* precipitating them *into a kind of laboratory in which their process of evolutive metamorphoses is accelerated*. For him *the imagination is the principal faculty that makes it possible to extract from reality patterns or images that can be in turn manipulated and transformed.* (Hertweck and Marot, 2013 p. 37).

Ungers focuses also in the topic of the block and *urban villas* that … can *regenerate with materials drawn from its own genetic code an urban fabric threatened by decline*. Urban villa is an *architectural organism*, … alternative to the standard models, *that synthesizes the gen of urbanity*, *a micro city, a "city within the city"* (Hertweck and Marot, 2013 p. 39).

The above paragraphs are an inspiring guide to penetrate into the multilayered city phenomena and to explore the dialectical relationship between the built form and the reality in each city, including Tirana. In a similar way, among others, this research is an attempt to empathize with the situation that is trying to reshape, abstracting from the reality latencies of the genetic heritage, logics and syntaxes, or different motives with the ambition to intensify the site. Other important issues concern the exploration of Tirana's precedents that synthesize the gen of urbanity; and the identification of ways that contribute to overcome the dramatic tension between the proposed city and the real Tirana.

2.4 Rowe and Koetter, Formal analyses, coexistence of different models

"*Collage City*" is a research work carried by Rowe, C. and Koetter, F. (1978), as an anti utopian and revised version of Modern Movement urban design. Analyzing the failures of the city of modern architecture, they invite for solutions that support coexistence of

different models and bring arguments in favor of a more open and inclusive approach as alternative to the abstract modern proposals. Eclectic, hybrid, juxtaposition, and sanitation of chaos through collage technique, to name a few, are presented as formal remedies that conduce to a more diversified urban environment. According to them the situation to be hopped might allow for the *joint existence of the overtly planned and the genuinely unplanned, of the set piece and the accident, of the public and the private, of the state and the individual* (Rowe and Koetter, 1978 p. 83).

Based on rigorous formal analyses, contrasting figure-ground images of architectural and urban modernist proposals, with the rich and continuous textures of traditional historic urban contexts (ex. Unite d'abitation vs Ufizi Gallery), they bring into attention important design principles such as this of *urbanistically* active model, meaning to be *responsive to the close context* and *engaging empirical circumstances*, and at the same time defining an *ideal world*; *reconciling … self-conscious order and spontaneous randomness*; … *conferring value upon both new and old* (Rowe and Koetter, 1978 p. 68); or analyzing Asplund they speak about the use of *multiple design strategies*, that simultaneously combine the *empiricist reacting to site and the idealist* one; behave like *passive recipient and active reverberator* (Rowe and Koetter, 1978 pp. 72, 77).

The inclusive reasoning based on the acceptance of the reality, the coexistence of all potentialities that the city contains combined with the inspirations coming from history, hybrid and juxtaposition, are some key principles adopted by this research, especially during the historic analyses. However, beyond the inclusive logic which mostly remains in the formal aspects of the collage technique, the research tries to explore deeper in the meaning and motives of the different pieces of Tirana's collage, positioning it in a society-space-time frame; understand how and why these pieces inform, form and deform each other in order to use this information as a formative principle for a more conscious urban design.

As we mention above, Rowe stays in a more formal position focusing its analyses almost exclusively in the syntactic phenomenon and diminishing the importance of the relationships that architecture has with the society, construction and history. In fact, his examples are transhistoric. Instead, Ungers and Rossi tries to see internally and more in

depth in the form of the city. Rossi does this through the idea of *typology* as process in architecture (let us remember again: the type transformed by memory; typology as animating force of design, etc.). Ungers does this through the idea of *rationalization of the existing* in order to provide the underlying themes abstracted from the existing situation, and using them to intensify the place through the new proposals (let us remember also the design of Noah's Arks to shelter the genetic heritage, and other concepts elaborated in the respective paragraphs).

3 THE RELEVANCE OF THE MORPHOLOGICAL APPROACH TODAY

As an expression of the space-time relationships that bind it to other dimensions of reality, the form is configured as the set of material elements that the physicality of the territory allows us to inherit, in other words it represents the concrete support that history it delivers and hosts the currents of everyday social life. "*Societies are spatial phenomena, which anthropize space by defining territorial types of settlement that determine the genetic code and are substantiated in a series of precise structural invariants*" (Lombardini 2005). As anticipated in the first part of the thesis in this research, the study of form is the key to the interpretation chosen to understand the logic of anthropization of space typical of the contemporary city; in this perspective, the topicality of a morphological approach is justified by the novelty of the object of study: the City-Territory, which can be read as the evolution of the traditional city. Traditional morphological studies must therefore be recalibrated to the current scale, without however losing the continuous line with the traditional city.

Pinzòn Cortez (2009) reports two arguments in favor of a morphological approach for the study of the urban form of the contemporary city.

A first argument recovers the concept of *longue durée* according to which the urban form should be considered a long-lasting element as it would change more slowly than other layers such as functions, social dynamics or use of spaces; it is therefore useful to study it as its organizational logics are more lasting and therefore legible over time.

Another argument concerns the one-to-one relationship between space and social, economic or political dynamics. In fact, the physical dimension of the urban space reflects and records the transformations relating to these dynamics which over time leave their tangible marks in the articulation of the settlements. On the other hand, the shape of the city, which is anything but neutral with respect to these transformation processes, often affects its trends, even in a significant way.

Recently, as Cappuccitti and Piroddi (2004) point out, a renewed interest and a different analytical disposition can be identified in the application of morphological reading methods to the new settlement forms of the contemporary city. Citing the work of Boeri

and Lanzani, the authors highlight how in the latest urban studies the scale of analysis is mainly the territorial one, within which the description of the settlement forms is articulated through readings and classifications of the new settlement typologies. At the territorial scale, the analysis of the morphology given by the volumetric aggregation in relation to the patterns of the paths, leads to the reading and representation of the logic of occupation, identifying principles and recurring forms of evolution of the anthropic space.

Other researches have instead tried to grasp the general features of the new urban phenomenon. In *New Territories* (Viganò 2004) there is an attempt to make a descriptive synthesis of what are the new typologies of anthropization of space; while in the research *L'Explosió de la ciutat* (Font Arellano et al. 2004) thirteen European regions are analyzed, thus laying the foundations for identifying the general characteristics of the contemporary city.

From all these studies, on the one hand, we can see a renewed interest in urban morphology, this time, however, declined on the scale of entire territories; on the other hand, the need to trace the general traits of the shape of the territory is highlighted, trying to establish new taxonomies, or identifying repetitive logics or common traits.

3.1 Morphological approach to the urban scale

The morphological approach was particularly popular in the 70s and 80s. In those years, studies on urban form focused on finding explanations for the formation of urban areas, based on the idea that the study of form could generate specific knowledge regarding their physicality and spatiality. In this field of research particular emphasis was given to the physical data of the aggregation logics of urban elements.

More recently, the research group ISUF (*International Seminar of Urban Form*) continues the legacy of these morphological studies through a minute reinterpretation and criticism of the material produced in those years and through a readjustment of those ideas with respect to current urban studies.

Within the ISUF A.V. Moudon has developed his own research and in particular in his article *Urban morphology as an emerging interdisciplinary field* (1997) he offers a

synthesis of the main contributions of the current of urban morphology studies in vogue in the 70s-80s and identifies three schools that have marked the foundations for contemporary morphological theory.

In particular, Moudon summarizes the contribution relating to the French school of Panerai and Castex, to the English school of M.R.G. Conzen and Whitehand and at the Italian school of Muratori, Caniggia and Rossi.

Salient characteristics of the schools and points of convergence emerge from this synthesis:

- A first point in common is certainly the idea that the city can be read through its shape and in particular through three physical elements: buildings, roads and land uses.

- A second common aspect concerns the different resolution scales through which the city can be read: buildings - lots, streets - blocks, city, region.

- Finally, a third point in common concerns the interpretation of the city as a historical product: reading carried out through the analysis of the transformation and replacement processes. Only in a historical dimension can transformations and permanences be observed. By studying the main elements of the shape in the different periods it is possible to reconstruct the occupation process of an area, identify typical configurations for the different periods and elements that remain constant during the transformations.

3.2 The school of Venice

Also in the context of the ISUF, N. Marzot (2002) offers in his article *The study of urban form in Italy* a summary of the Italian contribution. Taking a cue from this review, we can identify in the concept of *'type'* and in the assertion of the existence of a close link between urban morphology and building type, a background common to many authors. Some differences, on the other hand, should be emphasized on the particular perspectives that each offers with respect to the contemporary city, perspectives that in one way or another also influence the specific reading of the urban form.

In the context of the Italian school, the critical interpretation of the urban phenomenon cannot be considered regardless of specific design strategies since the theoretical production within this school has had a strong ideological connotation linked to the criticism of the modern movement. This split has pushed the research of the morphological school towards a more specifically architectural sphere, devoted to the recovery and revision of the vernacular phenomena relating to the formation of the *'urban fabric'* and of the *'type'*.

3.2.1 Muratori: an operational history, type, fabric

The Italian morphological tradition has a peculiarity for identifying a close link between tradition and innovation, between analysis and the project. This relationship is particularly evident in the design outcomes of many interventions in existing urban fabrics. The typological approach represents a particular contribution to the concept of architecture as a tectonic system, the result of principles and rules deriving from the practice of construction in opposition to the modern movement accused of having interrupted the relationship of continuity between tradition and innovation.

Muratori applied his analyzes to concrete case studies, to find the laws of continuity in the morphogenetic processes of the urban form: with *Studi per un operante storia urbana di Venezia* (Muratori & Maretto 1960) he laid the foundations for a new line of research.

Muratori's studies highlight the rationality of history through the reconstruction of the morphogenesis processes of the urban and architectural form. This process preserves in itself the traces of the grafts that over the centuries have been superimposed through a spontaneous, artisanal tectonic procedure.

In Muratori's vision, the building type is identified only in its concrete application which is the building fabric, and the urban fabric must be analyzed within the urban organism, just as the totality of the urban organism can be grasped only in its historical dimension.

Compared to Muratori's contribution, there is a leap that coincides with the transition from the University of Venice to that of Rome in which a decisive step is taken on the territorial

scale with *Studi per un'operante storia urbana di Roma* (Muratori et al. 1963) and then *Studi per un operante storia del territorio* (unfinished).

In Muratori's vision, the operating studios served to direct the architect's design practice, legitimizing the transition from analysis to design as a logical continuity of knowledge and work.

3.2.2 Caniggia: relazione interscalare nello spazio antropico

The work of Caniggia and Maffei *Lettura dell'edilizia di base* (1979) sets the discourse starting from the scale of the building and then continuing through the explanation of the logic of aggregation of the blocks up to the settlements or territorial entities, finally exploring the relationship between the settlements and the system of connections and territorial crossings. The geographical quality of Caniggia's work emerges strongly above all compared to the work of some of his contemporaries, including Aldo Rossi.

The text by Caniggia and Maffei places a strong emphasis on the modularity that geographers use to describe the urban structure. They recognize hierarchies of modules which in a sense evoke Christaller's theory of central places.

The importance attributed by the authors to connections and the recognition of modules and hierarchies produces a completely different type of theory of regionalization, for example from that of Conzen[3].

Another point of interest in Caniggia's contribution is the link with biology: the typological processes of aggregation are assimilated to biological processes in many aspects.

Giuseppe Strappa who continued his morphological studies on the territory within the ISUF in one of his articles clarifies and summarizes the contribution of Caniggia (Strappa 1998):

"*The territory is a heritage in which the choices and transformations made by the populations who have lived there are inscribed. It is possible to read it through the notion of organism, that is, a set of elements, structures, systems linked by a relationship*

[3] The townscape units of Conzen are based on morphological uniformity, rather than on functional relationships. Its spatial units represent what geographers refer to as morphological regions.

(variable over time) of necessity. And as in any organism, it is possible to recognize historical phases and cycles in the territory that determine its formation, transformation, fragmentation and ruin.

The historical-processual meaning of an urban organism or a system of paths is not understandable, if their formation is not placed within a relationship of necessity with the set of relationships established in time and space within its surroundings. territorial. This form of the anthropized territory is nothing more than the visible aspect of a structure of relations that binds the different scalar degrees of the building in the notion of organism".

The territorial organism, like any other anthropic process, develops following a typicality. We can therefore speak of territorial types. The type can also consist of autonomous or serial elements which are in any case organized with respect to a hierarchical order. For Caniggia the process of consolidation of the anthropized territory plays around the dialectic between settlements - production areas and private property - system of routes.

To understand the process of formation of the territorial organism, it is necessary not only to take into consideration these factors but also the way in which they relate to each other and to the oro-hydrographic system. For Caniggia the first step for the representation and understanding of the territory are the paths. Determining the study of the territory is the subdivision of the routes with respect to the geographical context into: ridge routes, and valley floor routes. Compared to this vision of anthropic settlement in the area, a further contribution of Caniggia is represented by the schematization of the cycles of the territory's history, organized into: plant cycle, consolidation cycle, recovery cycle, restructuring cycle.

3.2.3 Rossi: primary elements, residence

Rossi's contribution entered as part of the 'Tendenza'[4] its primary objective is the re-foundation of urban planning and its legitimation as a discipline inextricably linked to

[4] By 'Tendenza' we mean a group of Milanese architects who in the early 1960s began a rethinking of the architectural and urban planning discipline, born in opposition to the modern movement. The 'Tendenza' had as its point of reference Gramsci's Marxist revisionism and his intent to build a culture of the left.

architecture and independent from other disciplines that also deal with the urban phenomenon such as planning, sociology, economics or more generally politics.

Urban planning and architecture therefore recover their dignity as city science and urban analysis stands out as a cognitive tool par excellence. With this in mind, the theoretical study of the urban form and the laws that govern it becomes a priority for the purposes of understanding the transformation processes of the city.

For Rossi, urban analysis has as its object the city understood as an anthropic artefact over time and moves along two lines, one concerning the historical dimension and the other the formal dimension.

For the purposes of a diachronic study of the urban phenomenon, the concept of 'permanence' and the dialectical process between primary elements - residential areas acquire particular interest.

This concept concerns those elements that persist during the different phases of the transformation process: historical axes, paths, physical signs or primary elements around which the city develops. The phenomenon of 'permanence' is, so to speak, genetic of the architecture and formation of the city regardless of its size.

The streets and the plan are for Rossi the most permanent element within the city, and the one that most defines its shape. The positions of the main lines also connect the city to the geographic territory and condition its future developments.

The identification of the generators of the plan is one of the first objectives of urban analysis since from its understanding it is possible to trace the spatial genesis of the city and understand the polarization logics of the different urban facts, buildings, monuments.

As regards the second concept relating to the dialectic between buildings and monuments or more generally between residential areas and primary elements, Rossi considers that the shape of the urban fabric springs from this dialectic.

"The primary elements are in general fixed activities that have the ability to give an impulse to the formation of the city, they have not only a particular functional character, but also positional and are constituted as polarities" (Rossi 1966).

Monuments are primary urban facts because they are capable of accelerating the urbanization process of a city, they were born with a function and over time they may have received other uses but have always participated in the idea of the city. They are history, permanent and immutable realities, places of attraction and therefore they are at the center, in a primary position; due to their singularity they are transformed into the supports of collective memory since they summarize the image of the city in every era. Their forms document the social and anthropic trends of the era in which they were produced.

Rossi's interpretation of the architectural type coincides with that of the primary elements, so he rejects the historical dimension of the type which instead becomes a constant element almost an 'archetype'. The residential areas, on the other hand, are subjected to continuous changes in shape, which demonstrate their contingent and precarious nature, they occupy most of the city and their arrangement depends on the generators and primary elements in a continuous dialectical process of formation and transformation. Compared to the urban analysis, Rossi specifies how a reading by primary elements gives the possibility to read the city in its historical development regardless of the scale of the settlement. "*The interpretation of the city by primary elements, constituted urban facts, and areas of influence allows us to study the growth of the city without the changed dimension influencing the laws of development.* [....] *In truth we find ourselves, as in all times, in a situation which, from a general point of view, presents man and space in balanced dimensions of relationships analogous to the ancient ones, except that in today's relationships all the spatial measurements are greater than they were the more static ones of fifty years ago* " (Rossi 1966).

3.3 Urban form and the approach towards normativity

"Urban indicators are one of the most common and widely-used tools in worldwide planning practice" (Pissourious, 2014). Thus, they can help understand the gap between theory and practice in urban development. It is important to underline the shift in mindset that occured in the planning process, from the 60's and 70's, when the aproach was

technocratic and rational, to the mid 70's, where planning was seen as a political discourse, and finishing with the 90's, where this approach was taken into extremes (Pissourios, 2013). Following, there is an overview of some of the theories on the city, that have changed the concept of planning and development standards, from the middle of the XIX century, to present days.

One of the most crucial moments in city planning history, as well as the first milestone in planning theory, was the Beautiful City Movement, in the XIX century. Following the industrialization period, and the emergence of a new city structure, this Movement focused on the monumental qualities of the city, as well as the rational allocation of space to different purposes. Some representative examples of the large scale interventions of the time were the Ringstrasse of Vienna, "Hausmann's transformation of Paris, Cerda's extension of Barcelona, and, somewhat later, the City Beautiful tradition in the United States (Cowan, 2002). Focussing exclusively on utility and aesthetics, monumental planning was a purely technical matter" (Panerai, et al., 2004), thus standards for the development of urban blocks, were widely used and required. The Haussmannien Block, for example, had a fixed surface, varying from 30000 to 50000 sq. meters, integrating the image of the new bourgeois Paris. The density, height, even the length of different modules inside the block, were standardized and used throughout all new developments. Nevertheless, the attention to city planning parameters was scarce, and the public investments were mostly focused on infrastructural interventions (road and sewage system). The main problem of these interventions, besides the obvious rigidity and the disregard of the existing urban form, was the fact that this breakthrough in planning theory didn't encompass the social aspect of the city, which was changing in it's own paste.

With the emergence of the Garden City Movement, first conceptualized by Ebeneezer Howard, the purpose of planning seemed to shift from a mere aesthetic expression of the city, to a more social dimension. The emphasis was put on the development of new, self-sufficient cities, as well as a better quality of life. "Even though the concept gained immense popularity, it quickly mutated into an urban design approach, stripped of its original regional potential, as well as its organizational and social principles" (Steino, 2003). As such, following R. Unwin's theory on City Planning in *Town Planning in Practice,* new developments were set to have a density of 20 dwellings per hectare, facades at

least 16 meters distanced from each other, streets with a width of 13 m, which would be lined with trees, etc (Hampstead Garden Suburb Trust, 1906). In theory, this radical movement aimed at setting principles and indicators of qualitative living in city scale, but practically it was limited to physical standards, and rather simplicistic planning indicators (Oliveira, 2016).

Next, after a transitional period where the traditional architecture was dominant, the modernist movement emerged, as a response to the evident changes in technology (the wide use of cars) and policy making. The period 1920-1930 was associated with a new kind of building block, the *Siedlungen,* housing districts of the new industrial cities (Panerai, 2004). In these projects, where Ernst May was a main contributor, there was a standardization of building height and length, or in some cases, the repetition of the same module, and there was an emphasis on the public, common space, in contrast to the private courtyards. The modernist utopia, as called by Gosling & Maitland (1984), came with ideas, such as the Vertical Block, and the Radiant City, and was dominated by Le Corbusier. The modernist approach was radical and it changed the perception of dimensions and space. The old urban forms were disregarded and the development focused on the power of the modern factory and the vehicles. Therefore, there was a strong disregard of the social dimension.

The approach was strongly functionalist, thus, planning and development standards were determined in city scale, using zoning as a primary instrument. The universalization was the main characteristic of the modernist principles, which were implemented only in a few cases in urban planning. One of them was Chandigarh, designed by Le Corbusier in 1947. It was concieved as a “post-war” garden city, with well-established neigbourhood sectors of 800 x 1200 meters, a population of 3000-20000 inhabitants per sector, where each sector was self-sufficient and provided shops, a school, a health center, places for recreation and worship (Chandigarh Urban Planning Concepts). The rational segregation of functions was the main objective of the urban planner in that time. (Steino, 2003).

Anyway the approach to design during the modernist period can be considered abstract, and even shallow, because of its standardization. Postmodernism, which came as a rejection of the “totality” and the comprehensive nature of planning, presented itself in the

following planning models: systems view of planning, rational planning, the New Right and communicative planning (Hirt, 2002).

In the systems view of planning, which focused on the acceptance of the settlement as a system, it is argued that there was a need for social accounts for urban units, “to measure the state of the city by a few simple indices” (McLoughlin, 1969). As far as the projected, desired indicators, they are defined in the planning programme, and are not quantified (Harvey, 1991).

The rational process, represented by Faludi, “goes through the following stages:

1. the systematic analysis,

2. the definition of problems,

3. the programme formulation,

4. the logical production of plans,

5. the evaluation of plans and the monitoring” (Healey, 1992)

Faludi still stretches on the need to “accept the idea of proceeding on the basis of statements concerning the direction into which one ought to move to reduce a tension, instead of objectives precisely describing a world in which that source of tension has been removed” (Pissourios, 2013). Anyway he acknowledges the existence of minimum requirements in physical planning, and the use of analytical indicators of the existing situations (Faludi, 1973).

The New Right approach is based on a market-oriented state, in combination with the authoritarian strong state (Pissouris, 2013). The three grounds on which they operate, are: “improving the performance of market economies, ensuring minimum social standards and maintaining the integrity of the state” (Sorenson and Day, 1981). But these minimum standards are applied uniformly, in all communities with different needs (Pissouris, 2013).

The communicative approach to planning was developed in the 1980s and 1990s by John Forester and Patsy Healey (Taylor 1998). This is a theory that supports participatory

planning and decision making, and a deeply bottom-up approach, where all decisions are based on people's perceptions, and not on measurable desirable outcomes.

At this point, we can differentiate between planning as a mere design and physical field, and planning as a multidimensional process. Parallel to the development of the above planning theories, there was the emergence of several postmodern theories regarding urban design and the urban form. They can be divided into 3 categories: theories regarding the formal aspects (Collage city, Wholism), theories regarding the environmental aspect (Liveable Streets, Urban Quarters), and a combination of both (New Urbanism).

The theories regarding formal aspects in planning are deeply related to the morphological aspects of the city. Following Aldo Rossi's theory on the supremacy of the architectural form as the main component of the city, Rowe & Koetter (1978) develop the concept of **collage** in urban design, as a way to overcome the false scientific claims of the modernist movement , and in the same time, the undesirable "ad-hocism" of postmodernist planning approaches, such as communicative or advocacy planning (Steino, 2003). Rowe & Koetter's theory is a conceptual view of the city, arguing against grand schemes and total designs, in favor of a more pragmatic approach to urban design, which acknowledges the complexity of power and uses in contemporary societies. This approach is quite important in the way we can read and understand today's cities, but it remains vague, hence the normative aspects of this pragmatic goals are not explicit.

Contrary to this approach, Alexander (1977) argues that there should be an 'overriding rule' in the urban development process, which will make sure that the outcome is "whole". This guides Alexander's "**wholism**" theory into understanding how every project must be seen as a contributor of a bigger part of the city, by enhancing the quality of the larger context (Steino, 2003). When it comes to the architectural scale, Alexander argues that there should be arbitraty aesthetic rules about the building materials, using a traditionalist design. In his theory, Alexander doesn't specify explicit standards or performance indicators in city or district scale, but bases his arguments on principles and on a specific "language" of the components of the "whole".

Parallel with the postmodern trend towards formal approaches, the environmental theories of urban design see the urban space as a living environment, and emphasize the importance of the community and public spaces. One of the most popular theories of this category is the **Livable Streets** approach, introduced by Jacobs and Appleyard (1987) in an urban design manifesto. The main concern of this theory is focusing on the urban space and its role for public life, rather than buildings, and eventually achieving a good liveability, good health and comfort. Specifically, according to Jacobs and Appleyard, 5 physical characteristics are essential in the fulfillment of the liveability: livable streets and neighborhoods, minimum densities, functional integration and proximity, positive urban space, and human scale and variation. Liveability, in terms of high standards for sunlight, clean air and open space, as well as strict limits for noise and pollution, is regarded as a primary goal in modernist urban planning. Nevertheless, according to this theory, too strict norms can also reduce liveability because of the unintended implications of these norms. They therefore plea for ‘reasonable’ rather than ‘excessive’ liveability standards (Steino, 2003).

Another well-known theory related to the environmental approach towards urban design, is the **Urban Quarters** theory, introduced by Leon Krier in 1981. In search for the principles of a good city life and a good society, Krier goes back to the post-industrial city, as an ideal example of spatial organization, and finds the ultimate solution for all problems of the urban space in the “Urban Quarters”. According to this theory, architecture and society should embrace once again the values of craftsmanship and artisan, condemning the capitalist society and the private ownership. These ideas are rather radical, therefore do not apply to contemporary cases. Nevertheless, the idea of the urban quarter remains one of the strongest points in the theory. According to Krier (1981), each quarter must have its own periphery, center and limit. “It should integrate all daily functions of urban life (dwelling, working and leisure) and be dimensioned on the basis of the comfort of a walking man (not exceeding 35 ha and 15000 inhabitants)” (Williamson, 1996). Furthermore, he gives principles on the orientation of the urban quarters, the relationship between the squares, the streets and the buildings, the density of the block in response to the typology of it, etc. These urban components have become a basis for the emerging

New Urbanism tradition, which is widely spread and implemented in the USA. (Aureli, 2011)

Opposing the vehicle-oriented model of city-planning in the USA, **New Urbanism** emerged in the 80's, promoting healthy neighbourhoods, higher densities and a better social interaction. At the core of the New Urbanist Movement is the idea that you can match the typological layout of an area with development indicators (Bohl, 2000). The Charter of New Urbanism offers some main principles for city development, in three different scales:

a. the regional scale (metropolis, city and town),

b. the neighbourhood (district or corridor) and

c. the block, street or building.

This emphasizes the importance of planning standards, as well as land development ones, in specific cases of spatial typologies. Some principles that implicate development and planning standards, are:

a. "Appropriate building densities and land uses should be within walking distance of transit stops, permitting public transit to become a viable alternative to the automobile.

b. Many activities of daily living should occur within walking distance, allowing independence to those who do not drive, especially the elderly and the young. Interconnected networks of streets should be designed to encourage walking, reduce the number and length of automobile trips, and conserve energy

c. A range of parks, from tot-lots and village greens to ballfields and community gardens, should be distributed within neighbourhoods. Conservation areas and open lands should be used to define and connect different neighbourhoods and districts.

d. A primary task of all urban architecture and landscape design is the physical definition of streets and public spaces as places of shared use." (Congress for the New Urbanism, 2004)

e. It is important to state, nonetheless, that the principles of New Urbanism, despite their wide successful implementation, are not comprehensive enough: they apply mostly to a

particular culture and tradition, and to a specific middle class. It is difficult to include more socioeconomic aspects in this scenario, without a strong legislative, financial support from the government (Chellman, 2000).

In conclusion, we can state that normativity in planning theories varies according to the period and the focus of each theory. There is a distinguishable shift from rigid and more physical approaches to planning and urban design, which encouraged the use of physical standards of aesthetics, function or services, to a postmodern perception of planning, where the situation is guided by principles, rather than strict standards (Moudon, 1997). Furthermore, in the postmodern period, we can differentiate between planning and urban design theories, as two different fields, addressing interconnected issues. It is important to make an evaluation of the contribution of each of these theories, and to emphasize the best outcome and principles of each of them, that can help the process of setting development and planning standards for Albania. The following is a list of principles that can be acknowledged from these theories:

1. the urban environment we live in should offer a good liveability, good health and comfort

2. urban quarters are a concept that can be used in city formation, as a substituent of the rigid urban block, which can be regarded as outdated in contemporary mixed-use cities

3. the smaller the urban quarters are, the more access and public frontage they create

4. perimeter blocks are not preferred, since, in repetition, they encourage social disruption

5. in order for a block to be orientable and of good formal qualities, it must either be created from a typologically classifiable street pattern, or from a classifiable building typology, or have public spaces which have classifiable typology. The three can not occur in the same time because it then leads to chaos.

6. a city must have functional integration and proximity between neighbourhoods

7. the areas need to have positive urban space that encourages people to express themselves

8. human scale and variation are important for the perception of the area

9. buildings should be positioned in such way, as to define/enclose the public space

10. the criteria for qualitative living can be measured in different scale typologies: region/city, neighbourhood/district/corridor, block/street/building

3.4 Morphology and quantitative approaches to spatial form

To understand how morphology affects the planning and development standards, it is first important to outline what morphology means. Essentially, urban morphology deals with the knowledge of the logic of the urban form. Thompson and Bonner (1969) explain that many disciplines study the logic of form, because the morphological dimension is a crucial part of the explanation of how things are and how they transform, paralleled to the living organism. Thus, we can only conclude that studying the morphology means to discover the history itself. Form is also a suggestive word in this case, because “the contemporary city is form-less since one of its main characteristics is the impossibility to define a contour, a clear line that divides the city from the countryside” (Narvaez, 2017). The form referred to in this paper, is that of recognisable spatial configurations within the city, not that of the city itself.

Nevertheless, the study of urban morphology is already a well-known and consolidated approach which has been applied to the urban environment (Cortes, 2009). The emphasis seems to be on the study of buildings, open spaces and their logic of formation and transformation. However, morphology is often seen as a branch of geography, rather than of urban planning, so, when it comes to designing spaces, the morphological approach is a rarity. As explained by Evans (2005), this is because it is perceived as a theoretical study of urban form, whereas the actual creation of urban form, the design, is regarded as unrelated to the former, due to an educational barrier between geography and architecture sciences (with no rational basis, indeed).

Three directions of morphological research have been developed: the Italian school, the French school and the English school (Allmendinger, 2001).

The Italian approach is represented by the work of Salverio Muratori, who is considered as the first analytic researcher of urban form (Kropf & Malfoy, 2013). This approach is often referred to as typo-morphological, because it focuses on typologies. Spatial

structures are considered concrete material forms, rather than abstract, as in modernism. The method is applied in 4 scale levels: buildings, district, city and territory (Caniggia, 2001). For each of them there are four aspects that contribute:

- the elements of design (building parts, urban spaces..),
- the internal structure of elements (f.e. the disposition of buildings and spaces),
- the relation between form and use, and
- the materialisation, i.e. the formal aspect.

Muratori defined a type as “a construct of conventions and norms that exist in a certain region or town and that evolved over time on the basis of experience” (Cataldi, 2003). Thus, his theoretical premises, which than became the main points of the italian morphological school, were:

1. Building and environment can not be separated. They should be taken into consideration together in analysis and design.

2. Parts of the city cannot be considered separately from the whole city.

3. The city can only be understood in its historical dimension because it emerges from a succession of reactions and processes of growth.

Following Muratori, there were three generations of researchers, who represented the italian morphological school: Aldo Rossi and Carlo Aymonino in the 60’s, Gianfranco Cannigia and Gian Luigi Maffei in the 80’s and Bernardo Secchi in the 90’s (Marzot, 2002). Rossi and Aymonino were known for a strong emphasis on the small scale, on streets and squares, and for their notion of “permanence” in urban structure (Rossi, 1984). Cannigia and Maffei, on the other hand, developed a chain of interaction between 5 scale levels of urban morphology, as a continuation of Muratori’s theory:

1. the parcel; 2. the urban block; 3. the urban tissue; 4. the urban quarter; 5. the city

These theorists support the idea that first, an archetype should be discovered, which is the backbone of the urban form. Then the development occurs following, expanding this primar form (Newman, et al., 2016). The main think that can be recognised in today’s

contemporary cities, is that there is an inherent evolution of form, which can be traced back at the origin of some spatial formations (Kostoff, 2005).

This is helpful to the objective of this thesis, because it gives insight on the methodology that can be used to address the morphological study, and sheds light on the issue of expansion, densification of areas and new developments.

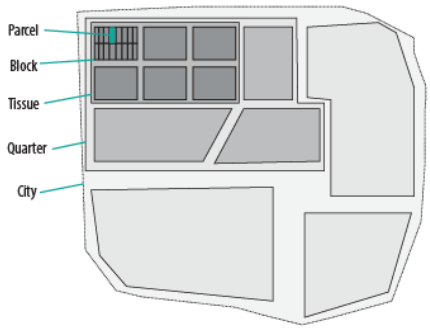


Figure 2. Morphological layering

The second school of morphology is the French approach. It is represented by the work of Phillippe Panerai, Jean Castex and Jean-Charles Depaule and emerged in the late 60's, as a reaction against modernist architecture (Oliveira, 2018). The main scope of this approach is discovering the traces that inhabitants leave in the urban environment, and giving solutions, by understanding the existing, not imitating it.

According to the French morphologists, there are 5 types of spatial analysis:

1. urban structures

2. phenomena of growth (spatial traces of the past)

3. typology

4. urban landscape (as explained by Lynch, Unwin and Cullen)

5. social practices in urban space (relation between behaviour and urban space)

The typological approach is a considerable contribution of the French school in morphological studies. It starts from the existing, not an idealized situation, and for every situation there can be a specific method applied. Thus, general criteria can not be applied everywhere. The method proposes different sorts of type:

1. ‘the family’, which is represented by a “typical example”

2. ‘the base type’, which is exemplary for a certain period

3. the ‘archetype’, an idealized model by which other forms evolve

4. levels, similar to the Italian school, which can be categorized into parts of buildings, buildings, parcels, groups of parcels and global level

5. variations and transitions to the typologies

This approach is valuable, because it shows that typologies can not be predefined, but are determined after a thorough study of the morphology of an area. Also, the analysis of urban tissues, the incorporation of the third social dimension, and the idea of closed and open blocks can be a good starting point to approach today’s cities (Cortes, 2009).

Finally, the English school, which is known as te oldest, has a more systematic and concept-based approach. It is represented mainly by Conzen, and is strongly related to geography, because the main concepts are ground use and function. Conzen has contributed in developing a morphogenetic method for the analysis, emphasizing the cartographic representation and the terminological precision. According to him, 3 levels can be distinguished in morphology (Conzen, 1969):

1. the city form; 2. the urban tissue (the composition of buildings and spaces); 3. the use of ground and buildings

The basis of the analysis are three main elements: streets, parcels, buildings. Conzen uses the concept of “compositeness” to explain the collection of different patterns, and the “plan units” are the configurational parts of a city form. These contribute to the “stratification” of the urban landscape, i.e. layering of the city form. Finally, he uses the term “fringe belt” to describe areas that are in state of transition, or don’t have clear urban tissue.

The English approach is widely used in today’s morphological studies. It is helpful also in modern cities, whereas the Italian and French approach are more successful in discovering the historic development of form in old cities.

3.5 Towards operational morphology

In his study on mapping urban form, Cortes (2009) argues that today, urban morphology seems to have lost importance within the mainstream of approaches to urban design, and is considered merely as a methodology of New Urbanism. This is because today we speak of complexity, non linearity, a new paradigm of architecture...a theoretical approach which is distanced from the specific locations and dimensions of the space (Llewelyn-Davies; Alan Baxter & Associates, 2007). On the other hand, most of the morphological studies concentrated on historical centers, which has limited its application in today's world (Gauthier & Gilliland, 2006). Finally, the morphological approaches, although systematic, can not fit to a specific scientific field, because they are either too historic, or not enough mathematical, or too empirical (Panerai, 1997). Nevertheless, morphological studies help to understand the ratio between built and void, the relation between spaces, etc.

According to the latest studies of The Urban Morphology Lab, the city fabric can by divided into 6 different levels and every level should be analysed separately in order to have a better understanding of the city fabric as a whole (Salat, 2009):

1. Human beings and activities; 2. Street network; 3. Parcels; 4. Topography and relief; 5. Land use and repartition activities; 6. Three dimensions of the city, solids and empty.

These contribute to planning standards, and to the human dimension of the city. As far as morphological study goes, (Marshall, 2011) argues that "according to the Figure and Ground theory, the urban fabric can be divided into two primary categories; the built form (the figure) which consist of building complex, outdoor barriers and landscape enclosure components; and the public space (the ground) which consist of the open spaces (squares and piazzas) , courtyards and movement components (streets, paths, …etc)" (Gauthiez, 2004). Consequently, the main vocabulary can be deduced as following:

1- Building complex; 2- Streets and networks; 3- Squares and nodes; 4- Landscape and greenery.

Other definitions cathegorize it as:

1. Plot; 2. Streets; 3. Open space; 4. Constructed space (Levy, 1999)

These two structures will be followed also in the analysis of the samples, by emphasizing on some specific characteristics of the morphological approach of the different schools, according to the inherent character of the areas.

How to link this approach to the actual “search” for suitable development standards?

Levy (1999) argues that to understand the relation between building type and urban fabric, we have to use a synthetic model, by examining each relationship one by one: P/OS, P/CS, S/P, S/OS, etc...

Another approach is to “read the table diagonally”, by analysing only the relations: S/S, P/P, CS/CS, OS/OS, which correspond to a typological analysis of the elements.

The relationship between the constructed space and other elements defines “the typology of settlement”. Finally, the relation between street and constructed space (S/CS) and open space to constructed space (OS/CS) best describes the relationship between private and public, and is often used in regulations, to achieve uniformity and harmony in the urban landscape...

To conclude, we can state that the morphological approach helps discover the various relationships between built and void space. This relationship should not only be seen in a physical and empirical dimension, but, following the logic of the Italian, French and English school of morphology, it should encompass many elements by which it is defined, like the typological features, the historical background of a site, the resolution and scale of analysis, etc. Thus, the morphological analysis is the first step towards a realistic and enhanced determination of development standards for an area. To go into more advanced techniques, space syntax and the relationship between spatial configurations and the points in space, should be taken into account.

4 URBAN DENSITY – MEASURING CITY MORPHOLOGY

Currently: **20%** of the territory is **urban / city**

53% of people is **living in cities**

80% of **CO2** is produced **in the city**

80% of European "creative" **industries operate in the city**

Meanwhile: **2050** – Approximately **70% of the population** will be concentrated **in the city**

(- 80% of CO2 emissions; international conventions)[5]

This research thesis aims to focus on what is the measurement of urban phenomena, or more precisely, to describe and measure the different ways in which the constructed form is organized and distributed (urban morphology) depending on several parameters.

In the case of Tirana, the areas where the study focuses are those intermediate areas, between the "historic" center and the second ring, which are for the most part the areas where the urban structures of socialism ('50 -'90) remain as a clear legacy after the '90s of the way of construction of residential blocks. These are also the structures / urban areas where the morphological transformations have occurred the most.

In conditions where globalization ("free" relocation of a large number of people / population, to another particular place, for work, economic and living reasons - high density or "sprawl") and new urbanism (need to create or re-acquire city pieces that promote sustainable living, short distances, mix of functions - low-medium density and "compact city") continue at a rapid pace and their effects appear very openly in countries like China and India, or even London or Istanbul, where we see these two phenomena

[5] Carta, M., *Anthropocene – Augmented City: il paradigma dell'innovazione per le città del futuro,* Jannuary 2019.

https://www.youtube.com/watch?v=65P-CKzIe8E&ab_channel=TEDxTalks

intertwined, it becomes necessary to retrieve urban measurement instruments and the need to integrate also in the measurement processes new contemporary parameters.

Urban density (built - inhabited) is a measurement parameter / an urban variable, now for more than a century, which is closely related to phenomena such as *congestione, affollamento, accumulazione, citta compatta, rarefazione, dispersione, urban sprawl, gentrification* and shows not only quantity but also urban quality. As Real puts it: "*ripartendo da un parametro numerico, si puo dunque tentare di portare questo ragionamento nello spazio rimasto pericolosamente vuoto tra la citta dell'architetto (utopia) e la citta degli abitanti: caotica, spontanea, abusiva (messtopia)*". (L. Reale, *Densita, citta, residenza*, 2008, pg. 10).

Cities, especially in the case of Tirana, are already a "product" of private interests (builders, developers) and urban planners, as their configuration seems to depend almost entirely on market laws and urban norms. The role of the architect, as a professional figure who controls and manages the issues of form and quality of space in the city, has remained in the shadows, leaving in his hands only the design of the building or the special / strategic project.

The purpose of this research (case study) is in fact the restoration of the role of the architect in the "measurement" of urban physical realities and the translation of these "parameters" into operational instruments of urban design.

Density parameters

"At first glance, the concept of density is wonderfully appealing to planners. It is an objective, quantitative, and, by itself, neutral term. However, a second and third glance reveals that it is a very complex concept. Some of the complexity is inherent to the nature of the phenomena associated with density, but part of the complexity stems from the different ways in which density is defined and used in different countries and different disciplines." (Churchman, 1999)

Following this stream of thought, density is one of the main standards to be determined in an area, but in the same time, one of the most difficult. The way it is expressed is crucial in its successful understanding and application. This section will deal with ways to measure density and how to calculate it, by focusing also on disentangling the concept of density itself.

Pont & Haupt (2009) argue that, “although the concept of density in urbanism is frequently used to describe the relationship between a given area and the number of certain entities in that area”, from 1985 there have been conducted 56 studies on “measuring urban form”, of which only 4 discuss directly the concept of density. The approach to density is different. Unwin (1909) states that “Nothing is gained by overcrowding” and claims that the best density is less than 30 dwellings/hectar (Ellis, 2004). On the other hand, Hoening, focuses on the concept of open space, by arguing that a spaciousness of at least 1 is needed for successful urban design (Çavusoglu, et al., n.d.). Jane Jacobs (1961), on the contrary, explains that a better quality needs a better coverage (over 60%), and a no. of 250 dwelling per ha. These approaches, despite being controversary, give an insight on how the density can influence the spatial configuration and living quality of a space.

We can therefore recognise 7 density measures, applied and standardized differently in different periods (Pont & Haupt, 2009):

1. The population density

It is measured according to inhabitants/hectare, and is not commonly used any more. The most distinctive norms were applied by Howard, in 1899, where a district had less than 75 inh/ha, and by Le Corbusier, arguing that there should be 1000 dwellers/ ha.

2. The dwelling density

It measures dwellings/hectare, and is used in some theories of New Urbanism, by Unwin, Van Eesteren (55-110 dw/ha) and Jacobs.

3. The land use intensity

This indicator is applied in different forms. The most common is the Floor to Area Ratio (FAR), applied in New Zork Zoning Resolution (1961), which is specified as a maximum idicator per lot.

The Floor Space Index (FSI), is the same, but implemented by the planning system in the Netherlands (2003).

The “ausnutzungziffer”, applied according to the Building Ordinance in Berlin, varies from 20-300, and equals FSI*100.

Finally, the Land Index, measured as 1/FSI, was applied in Grand Britain since 1949. Essentially, this index evaluates the three-dimensional space occupied by buildings in a specific area.

4. The coverage

The coverage deals with the occupation of the plot by the building’s footprint. It is expressed as Ground Space Index (GSI), in the Netherlands, but mostly it is found as “coverage” = GSI*100, in the New York Zoning Resolution, by Cerda (who argues that a plot should be used less than 50%), in the Building Ordinance of Berlin (optimal 0,10-0,60) and by Jane Jacobs, who argues that higher coverage is better (0,6-0,8).

5. The building height

The building height can be measured according to the height in meters, or the amount of stories. The most commonly used method is the latter: in London (1667), from Baumeister (1880), and in the Ordinance of Paris (1902), where the maximum height allowed was 7 + attic.

6. The spaciousness

This concept is rather new and it was first explored by Hoening, in 1928, under the term “Weitraumigkeit”. Later, it was used also in the New York Zoning Resolution, as Open Space Ratio = OSR*100.

Urban density

The density parameter is one of the most important urban parameters, which is an indicator not only quantitative but also qualitative in a certain urban context. This parameter is not always understood correctly, as it is often automatically related to the concept of high concentration, thus bringing to mind all the consequences, until recently considered negative, of overcrowded areas, congested with traffic and pollution. Density, in fact, is a parameter which expresses a simple ratio between a given surface and the mass built (or inhabited) on this surface and it can be low, medium, or even high, depending on of the data we analyze. J. Jacobs writes about this concept: *"Elevata densita di abitazioni significa un alto numero di alloggi per ettaro; sovraffollamento vuol dire invece che troppe persone abitano in un alloggio in relazione al numero dei vani che lo compongono"*. (J. Jacobs, *The Death and Life of Great American Cities*, 1961, trad. It.: *Vita e morte delle grandi citta. Saggio sulla metropoli americana*, Edizioni di Comunita, Torino 2000, pg. 191-192.).

Density can express quantitative and qualitative parameters both at the city level and at the urban or building scale, so density becomes a very important factor if we want to see these urban scales interconnected in a system. By knowing the typologies of buildings and their housing capacities, it is possible to combine different morphological configurations (responding efficiently to the demands of the market / society) and consequently to "control" the shape and extent of the city. This principle of escalation may be valid in the opposite sense.

Urban identity

It is already clear that one of the crises of the modern city is the contrast between individual housing and that in collective buildings, so most people would aim for an individual housing. But of course this is not possible, given here the environmental consequences, the consumption of agricultural land, transport to centers and workplaces, as well as social marginalization.

Also, in terms of private and public spaces (semi-public / semi-private) it is already understood how important it is for these spaces to be intertwined at different urban levels. This would avoid the anonymity of entire areas with individual villas or mass standardization in collective housing extending along the periphery (and would stimulate personalization processes by the residents themselves). Very interesting cases come from the Netherlands, where for almost two decades, studios like *MVRDV – Ypenburg Waterwijk* Delft; *W. Neutelings* and *M. Riedijk* – typological studies for dwellings – *El Croquis* n. 94/1999; studio *S333* – new residential typologies in *Groningen*; propose different aggregations of individual dwellings (but preserving the identity of each), overlap apartments with different dimensions and shapes in large collective buildings (in mixed typology), mix different functions together with that of living in small urban areas or even inside a single building. All this, to achieve a diversification of urban densities, which helps in establishing an identity for an urban area / unit.

This new compositional process touches not only aspects of the typology of dwellings, but also of the architectural language, thus bringing back the design methodology of the "list", which Bruno Zevi would call *“principio generativo del linguaggio moderno e invariante basilare del codice contemporaneo” (“Elencare significa risemantizzare”* thote Zevi tek *Il linguaggio moderno dell’architettura, Guida al codice anticlassico*, Einaudi, Torino 1973, pg.13-20).

4.1 Density as a ratio and comparative analyses

Determination of densities - method of calculation

Urban density can be measured in several ways. However, among the most used are three: number of dwellings / inhabited area; number of inhabitants / inhabited area; usable area / inhabited area. Initially the urban density will be used as an analysis tool and then it will be seen as a design tool in a second phase.

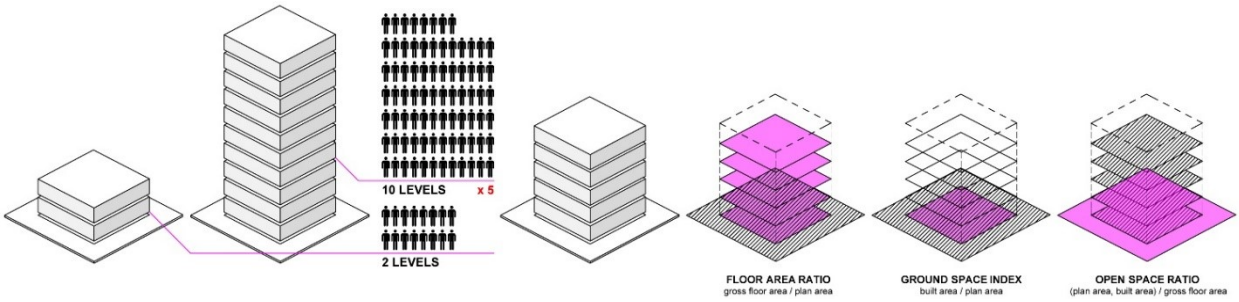


Figure 1. Population density – Building density[6]

Inhabitant / hectare

The calculation of density per capita / ha is mainly the method of calculation used until recently in Italy and by landscape and geographers, as it served to calculate the distribution of infrastructure and services per capita (housing capacity) for a given area. This is also a good way to analyze different densities (according to an average) in a relatively large area (eg in Italy it is estimated that each resident has an average of 80 mc of residential area, which translates to approximately 25 m2 of living space. used per capita.

Given that these data are average and approximate, they can be very useful for analyzing a large area or an entire city, where the degree of error may be negligible for the type of analysis. But if this calculation were to be applied to a block of flats, or a single building, the error rate could be very high and with serious consequences for construction investments (eg entire areas of Berlin, where quality in construction is quite high, designed mainly for offices, remain unused for a long time .... similar case Tirana?).

Dwelling units / hektar

It is a way to measure urban density, which is most commonly used in Spanish countries. It's a good way to match the standards used (per capita) with density, but not too good to start a design phase. In fig. 2 shows how the same number of apartments / flats can be

[6] *High-Density Forms in Contemporary Architecture, Maja Bâldea, Cristian Dumitrescu, First International Conference for PhD students in Civil Engineering, CE-PhD 2012, 4-7 November 2012, Cluj-Napoca, Romania. https://www.researchgate.net/publication/233842165_High-Density_Forms_in_Contemporary_Architecture*

distributed in three different ways over an area of 1 ha of land[7]. So the same amount of construction is configured in three ways, which create different spaces at ground level, different distances in relation to each other and different widths of roads.

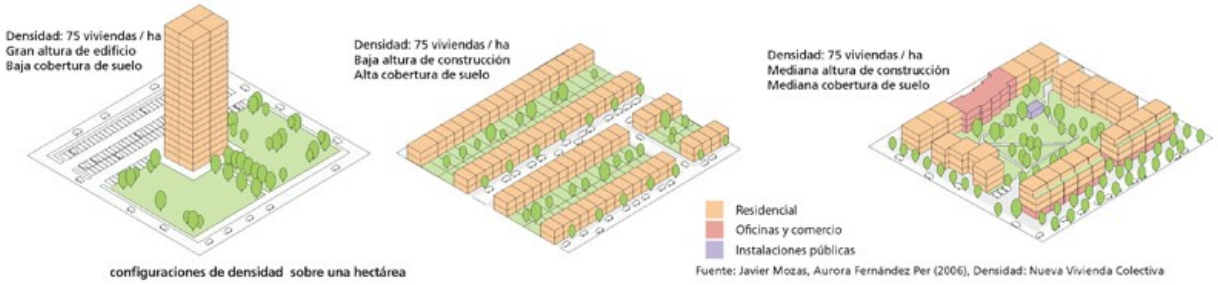


Figura 2. Calculation of density - apartments per hectare; same density - different typologies and different soil area occupation.

Usable area / hectare (Floor Area Ratio)

This is a measure of density, as an urban ratio, in countries mainly in northern Europe (especially in the Netherlands) and more recently in the US. It is a simple ratio of the sum of usable built-up areas, to the total usable area of the land. So it is a ratio that is related only to the built volume, not to the function, so it is an important parameter that closely connects the figures (data) with the form built at the area or city level, ie with the urban morphology.

It is a parameter, which studios like MVRDV use not only in terms of analyzing an existing urban situation, but especially in the design phases. This parameter is decomposed very easily by a figure in the built-in density, so for MVRDV, in the summary of some realized Farmax projects (FAR-max, maximizing the floor area ratio), different ways are shown how the build-up density can be turned into design instrument, creating urban projects with diversity not only typological and architectural, but also functional.

This parameter removes the limitation of the architectural design and also the urban one, which was once related to the height of the floors, the height of the building, or the volume

[7] *"a+t", Density/Densidad, nr. 19 and 20, 2002, nr. 21, 2003 and J. Mozas, A. Fernandez for DENSIDAD / DENSITY, nueva viviendas colectiva / new collective housing, a+t ediciones, Victoria-Gasteiz, 2004.*
https://arquitecturayempresa.es/noticia/un-habitat-planeamiento-urbano-para-dirigentes-municipales

of a building, thus giving the project more opportunities to adapt to existing situations such as and to find better and faster compliance with the parameters used by the municipality / cadastre or real estate operators.

Placement e.g. of this urban parameter in the new Regulatory Plan of Rome (Norme Tecniche di Attuazione del PRG di Roma, March 2003) and the removal of the height restriction of floors or buildings, stimulated another architectural quality and at the same time more diverse typological combinations. It became possible, for example, the more frequent use of duplex dwellings, or of intermediate heights. But in the case of Tirana, how did this parameter come about and what did it bring to the new General Plan ??? Analysis ...

The issue of density, therefore, turns into an important parameter-instrument to bring the figure of the architect closer to that of the urban planner / urban planner. In fact, contrary to what is usually thought, today's city does not reflect the image of the architect, but that of the urban planner, who has predetermined the norms and urban parameters that in the plan and the architect suffices with point intervention, building, or intervention strategic.

In Italy, for example, as a result of the situation of cities and especially their suburbs until the '80s, there has "ruled" until recently a pronounced urban-normative (and typological) rigidity. As Real stated (*Densità, città, residenza*, 2008, pg 20): *“Dagli anni ’60 in poi si è sviluppato infatti un filone di ricerca (guidato da Quaroni e Samonà attraverso i loro scritti e progetti) che tendendo ad avvicinare architettura e urbanistica, arrivò negli anni ’70 a fondere sostanzialmente le due discipline nella progettazione di macrostrutture di tipo direzionale prima, e poi anche residenziale. Questo modo di far coincidere disegno urbano e disegno architettonico, ha portato alla realizzazione di esempi in cui l’architettura “generava direttamente la città” [...]”*, this rigidity was attempted to be overcome by architects in the realization of macro-structures, where the urban scale of the city was almost represented by a massive building.

The design approach for the architect, which should start as a result of the initial analysis of the data coming from the territory / context and from the urban plan, should be further based on the identification of a general guiding structure (defined by rules, norms,

conditioning, etc.) and finally to interpret urban parameters (such as the same / similar densities) in urban, typological-architectural form.

4.2 Comparative analysis between different urban densities and relevant housing typologies

As mentioned before, one of the urban parameters, which better relates urban density to the typologies of housing in a given territory, is *Floor Area Ratio* (FAR). 293 / 5000

Translation results

This parameter also separates us from other urban factors, such as function-use, public-private, etc., and focuses on the analysis only formal urban (morphological) elements. Different typologies of dwellings, with the respective housing capacity, aggregate with each other and create *urban form - morphology*, which, located in an *urban unit - residential block* of 1ha (100 m x 100 m), give us immediately a clear idea of the uban density that manages to "absorb" a certain typology of habitation. This kind of comparison between different housing typologies and the respective FARs, makes us immediately understand the relationship density (dwelling / ha) -hypological typology-urban morphology.

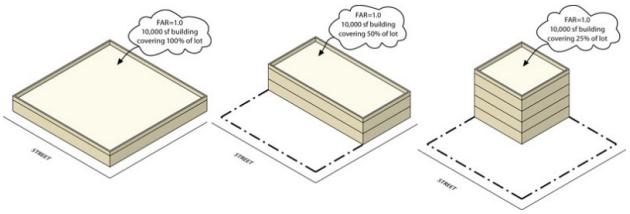


Figure 3. Diagram demonstrating how FAR affects buildings' bulk. (Courtesy New York City Department of City Planning)[8]

Since the origins of modern urbanism, housing typologies have shaped the urban fabric of European cities. Also, the concept of typology was related to the way of life / residence and aspects of density. Suffice it to bring here the cases of rowhouse dwellings of the

[8] *https://www.archpaper.com/2018/03/new-york-state-assembly-vote-lifting-city-density-caps/*

industrial period, in which mass workers were sheltered en masse and where they lived in very poor conditions, or the case of MietKasernen, who from the second half of the 1800s began to populate the suburbs of Berlin or Vienna, where living conditions were also very difficult. But what has happened today is that rowhouses are among the most preferred middle-class dwellings / models or that MietKasermen today are considered safe dwellings located in residential areas preferred by the upper classes of the Berlin population. So it cannot be said that a certain typology or a certain density can be directly related to the social status of an urban context. But a typology of housing can be related to the urban conditions that are created and the possibility to intervene directly in the urban standards of a certain context.

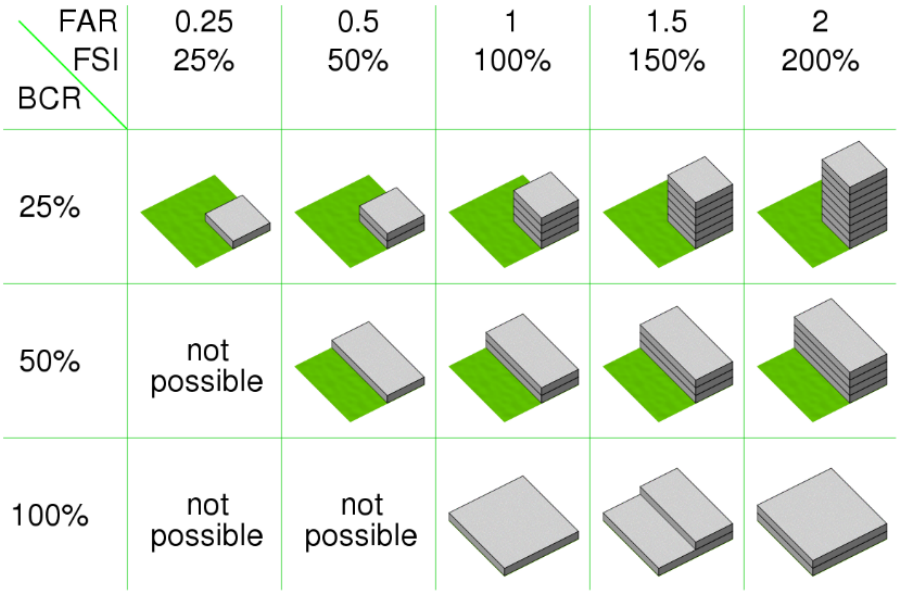
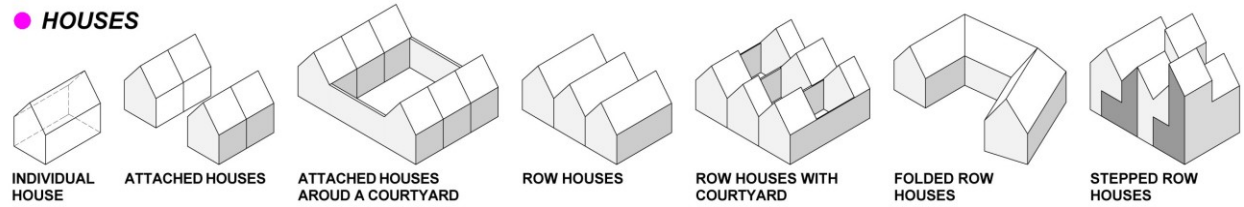


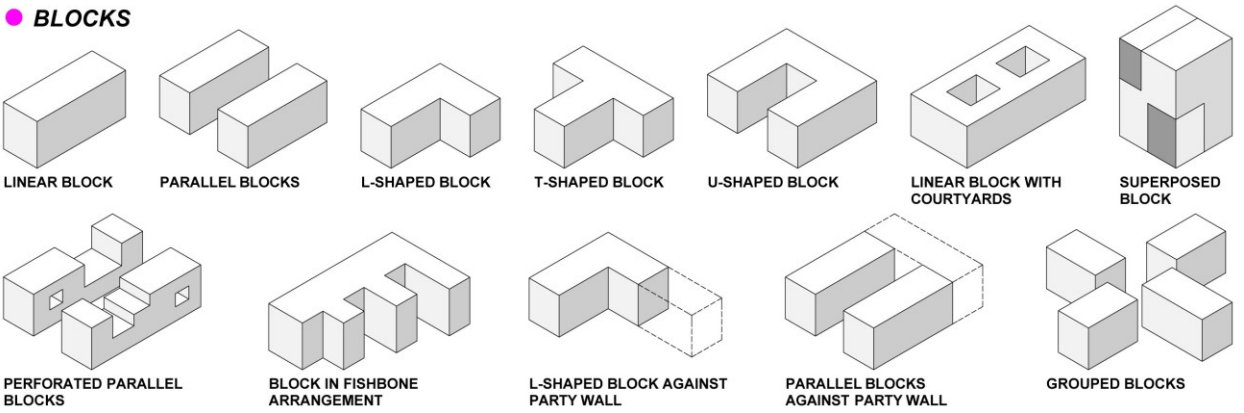
Figure 4. Diagram of FAR and FSI[9]

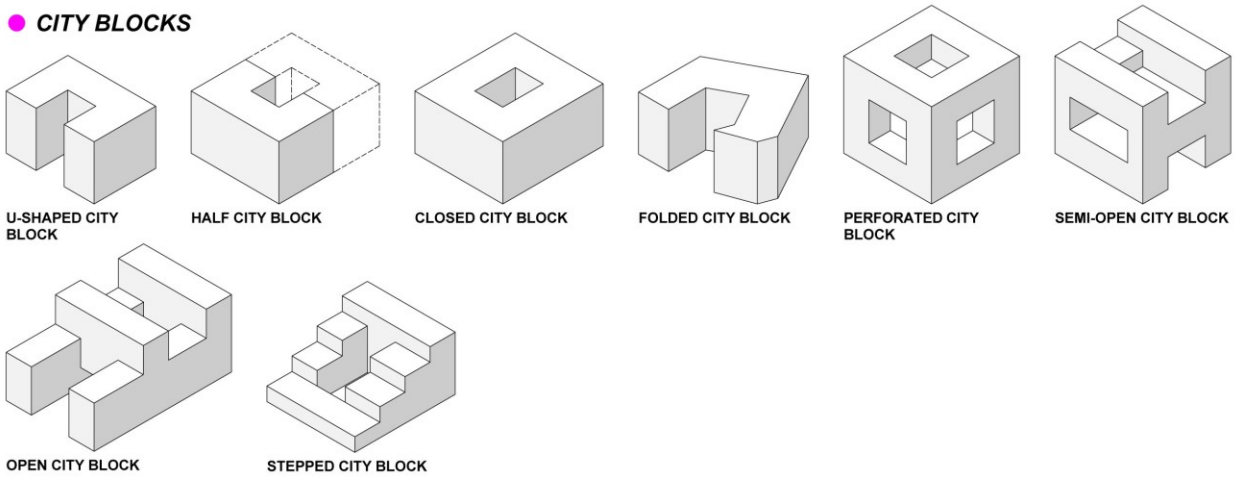
[9] *https://en.wikipedia.org/wiki/Floor_area_ratio*

Density sheets related to housing typologies

Alphabet of typologies in urban blocks

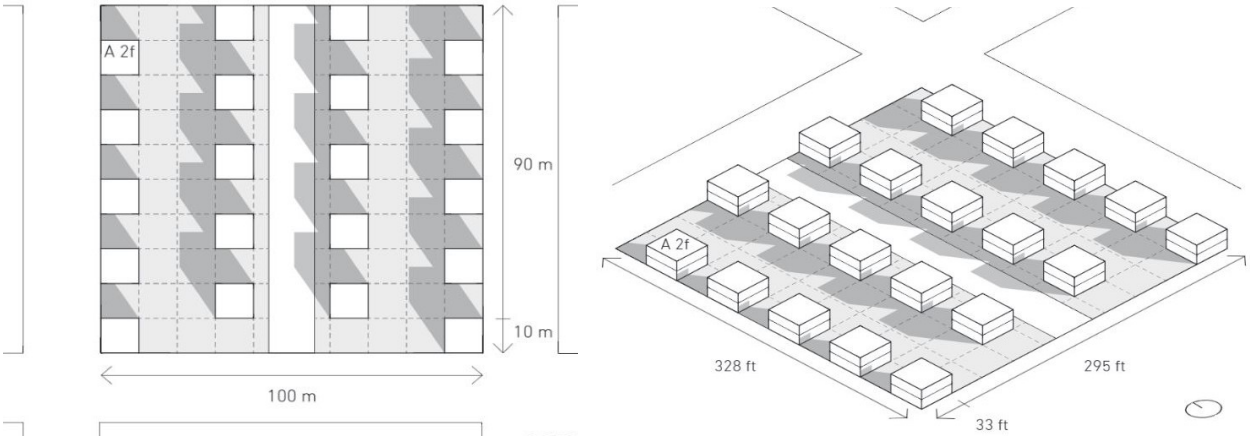




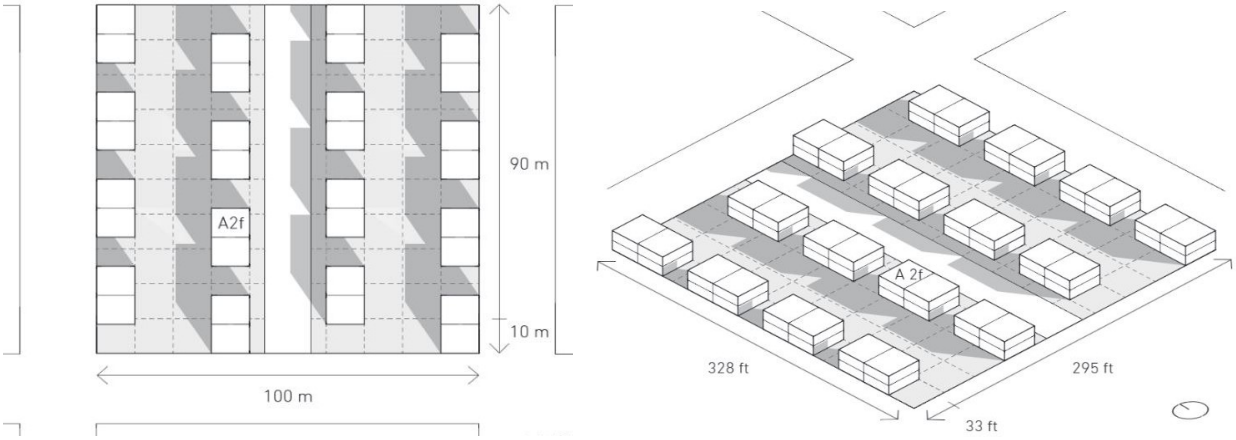


Typologies of urban blocks

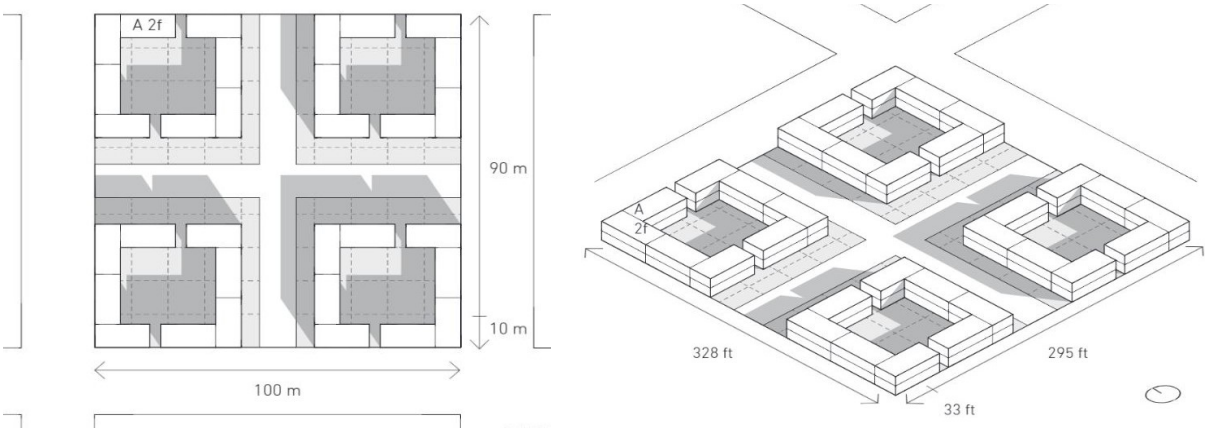
Poor Density FAR 0.4 – 1.25



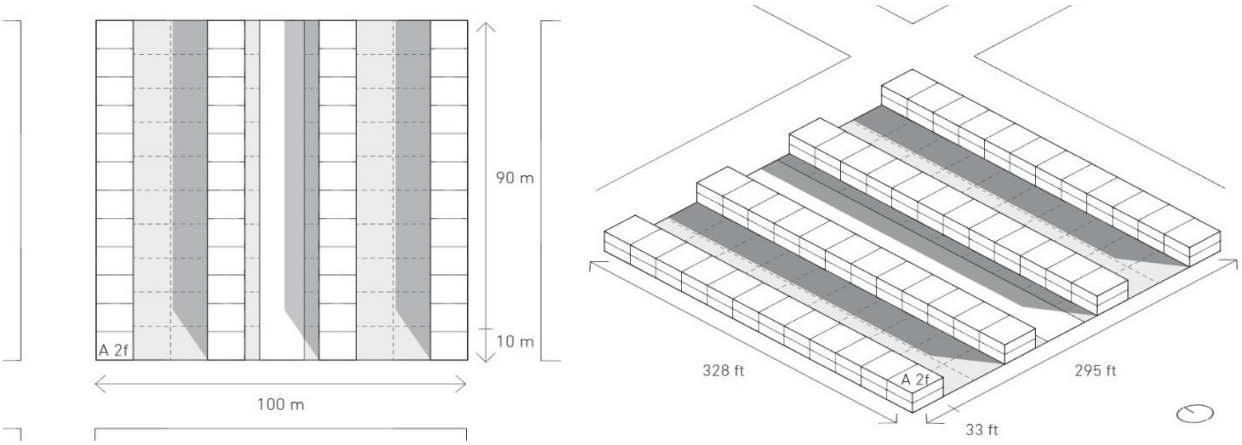
Detached Houses_FAR 0.4 _ Coverage 20% _ 2 Floors



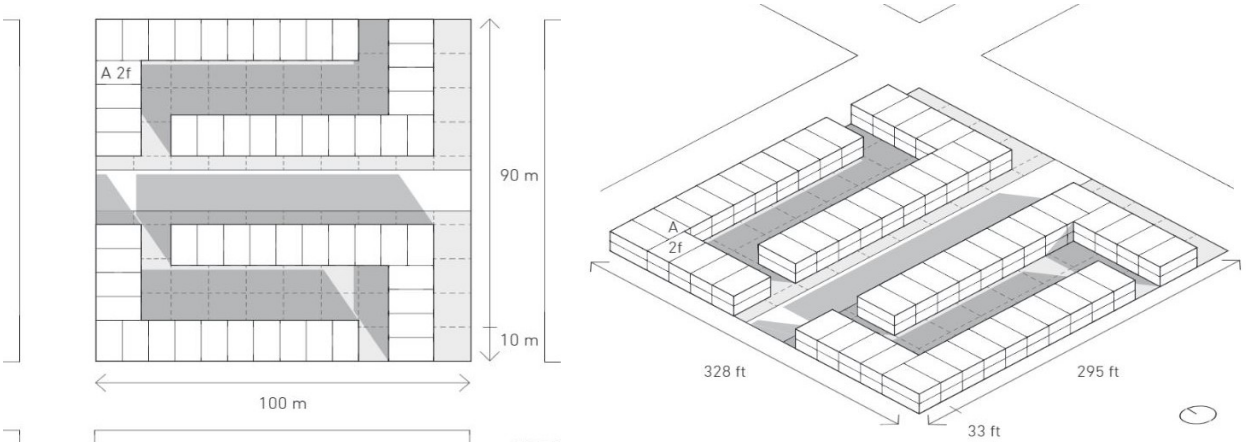
Semi-Detached Houses FAR 0.64 _ Coverage 32% _ 2 Floors



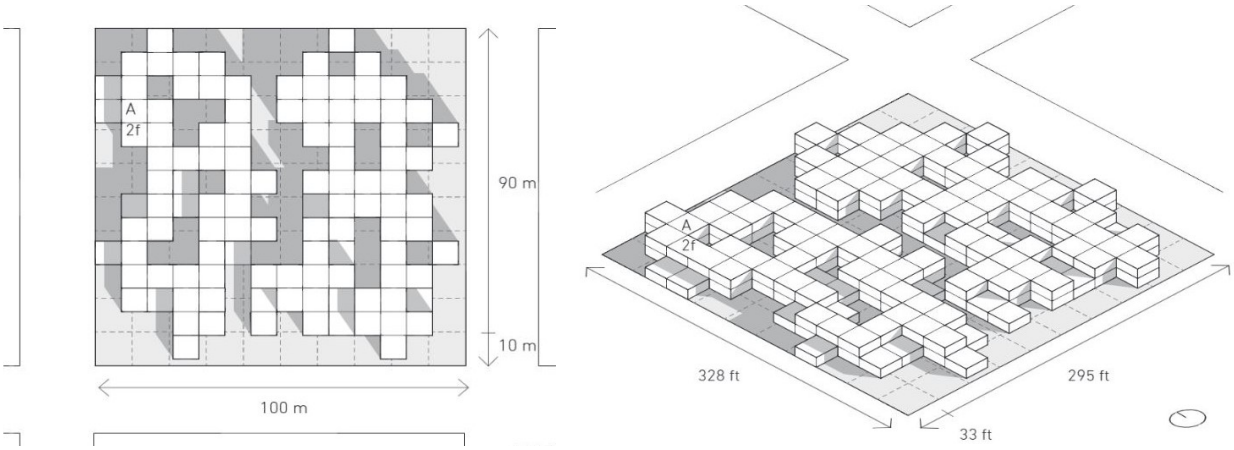
Clustered Houses_FAR 0.67 _ Coverage 34% _ 2 Floors



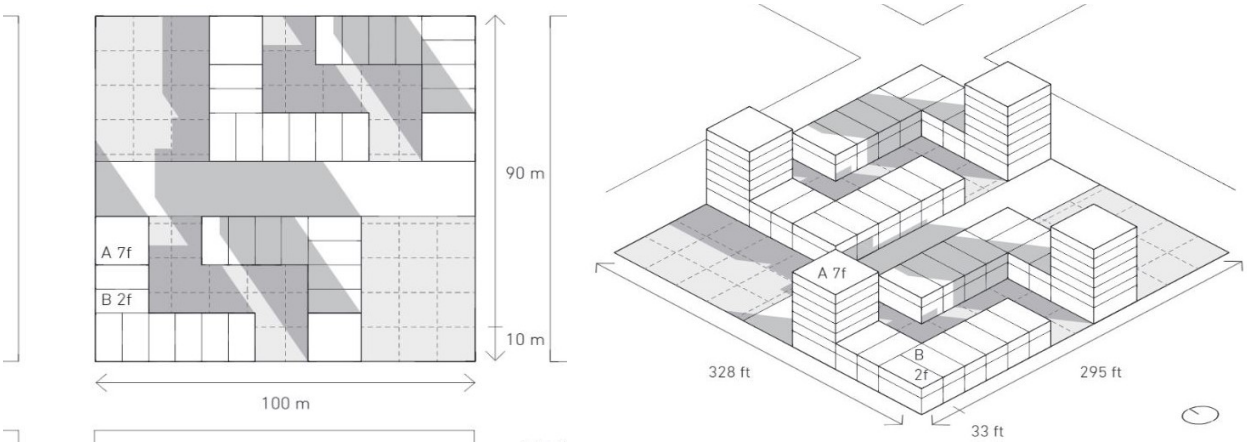
Rowhouses_FAR 0.8 _ Coverage 40% _ 2 Floors



L-Shaped Rowhouses_FAR 0.94 _ Coverage 47% _ 2 Floors

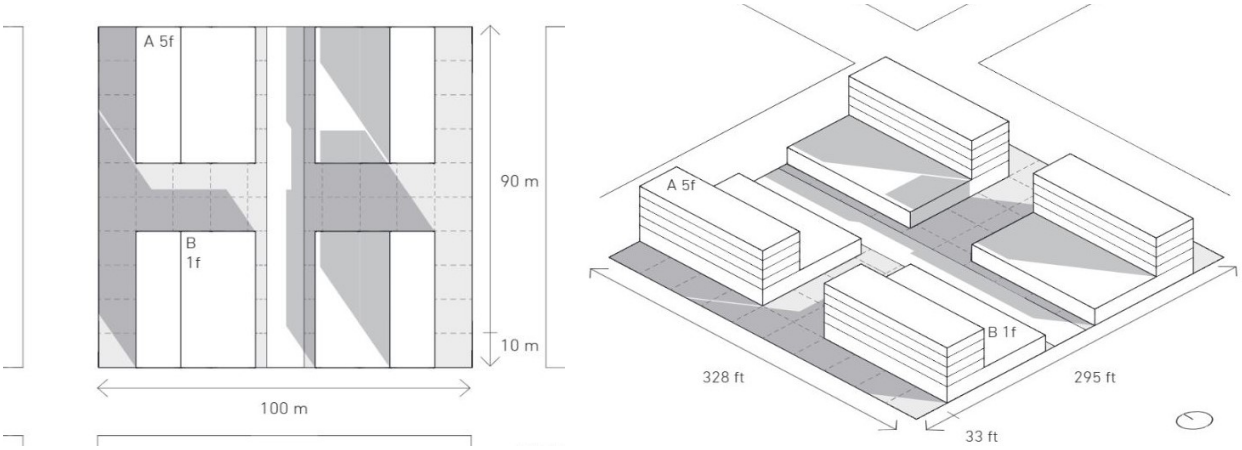


Kasbah_ FAR 0.97 _ Coverage 53% _ 2 Floors

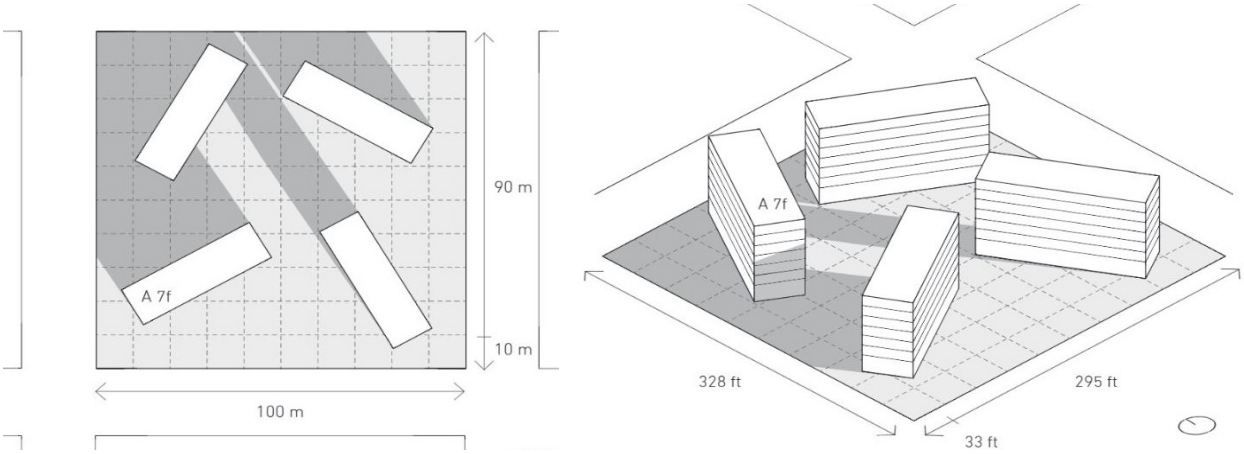


Rowhouses + Towers_ FAR 1.18 _ Coverage 39% _ 2+7 Floors

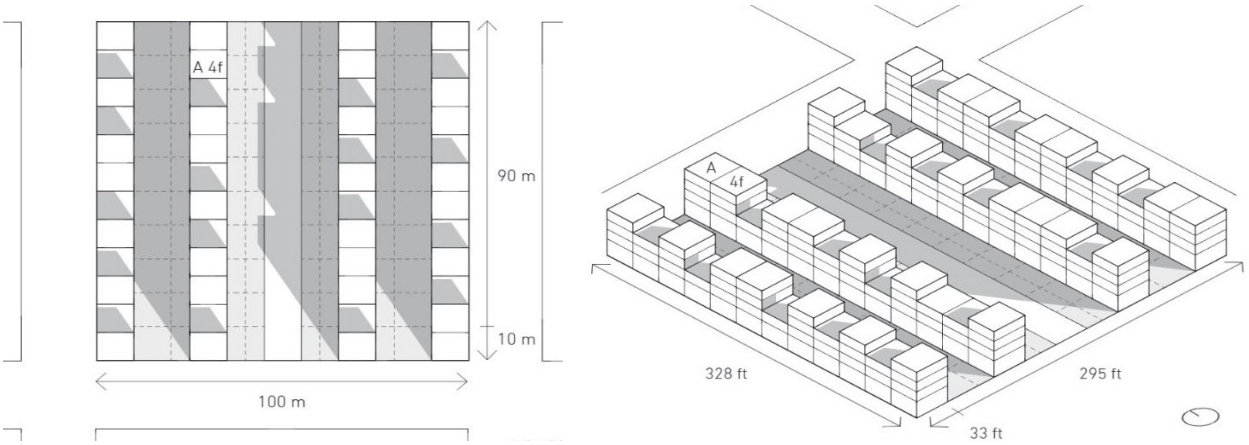
Moderate Density FAR 1.25 – 2.5



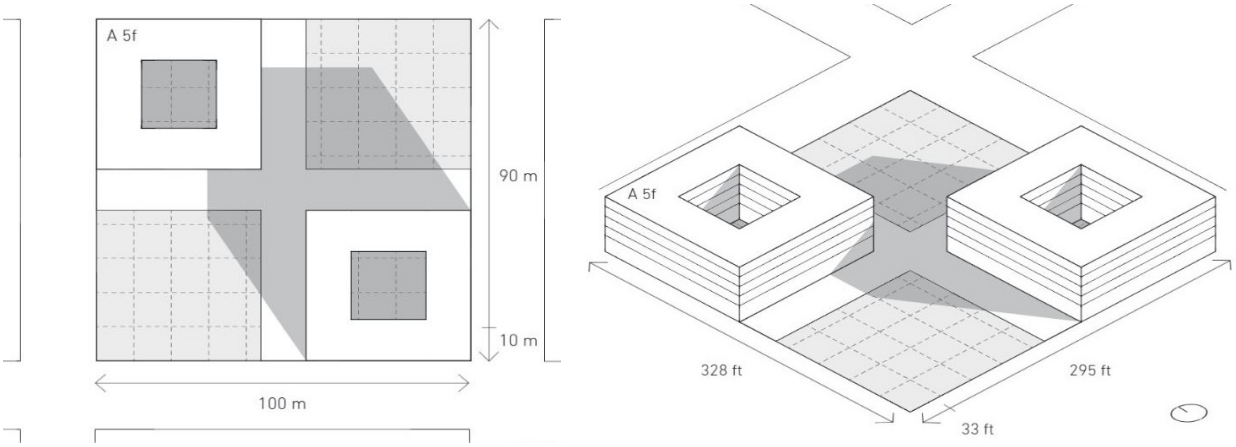
Plinth + Slabs_ FAR 1.28 _ Coverage 51% _ 1+5 Floors



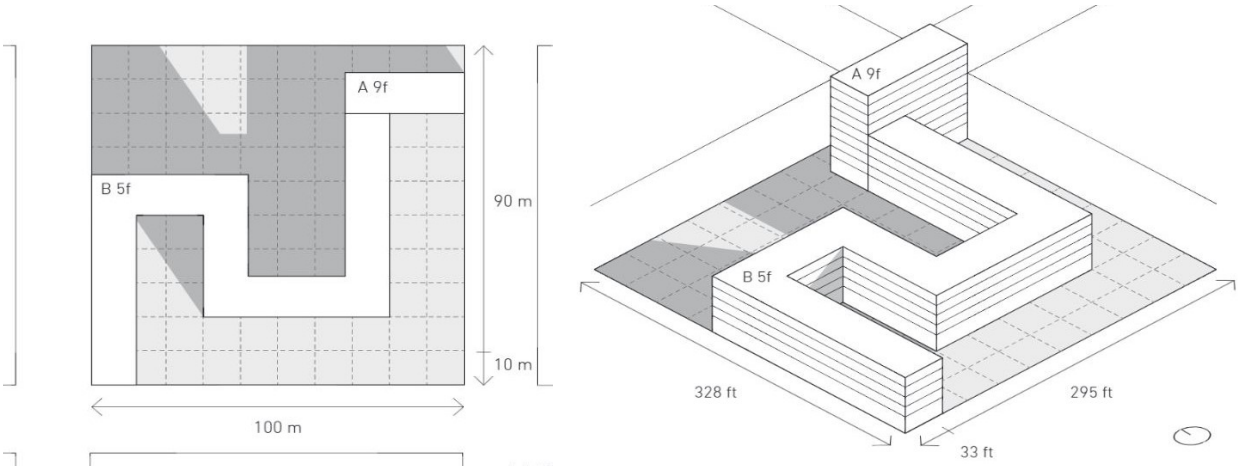
Cluster of Slabs_ FAR 1.34 _ Coverage 19% _ 7 Floors



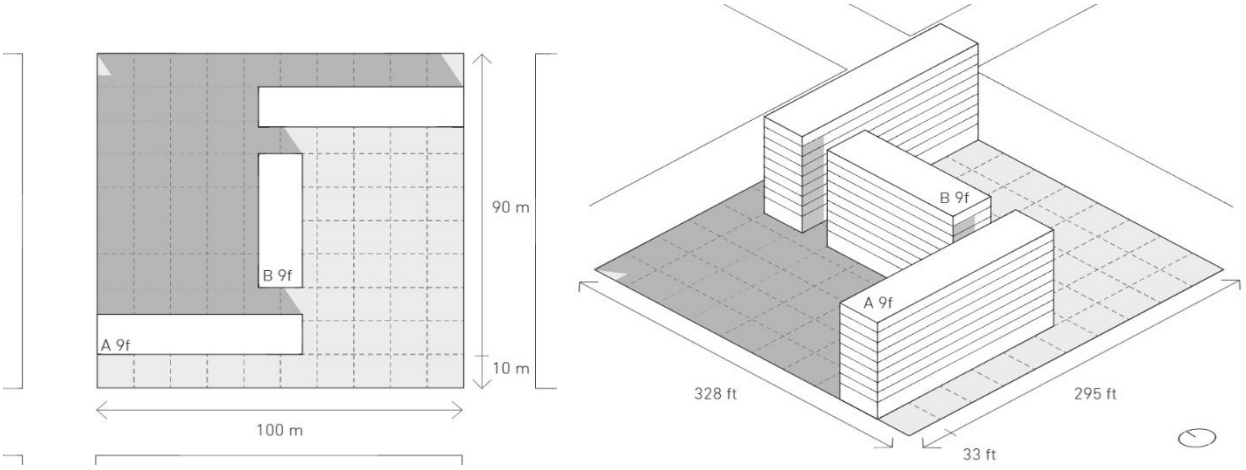
Townhouses_ FAR 1.40 _ Coverage 40% _ 2-3-4 Floors



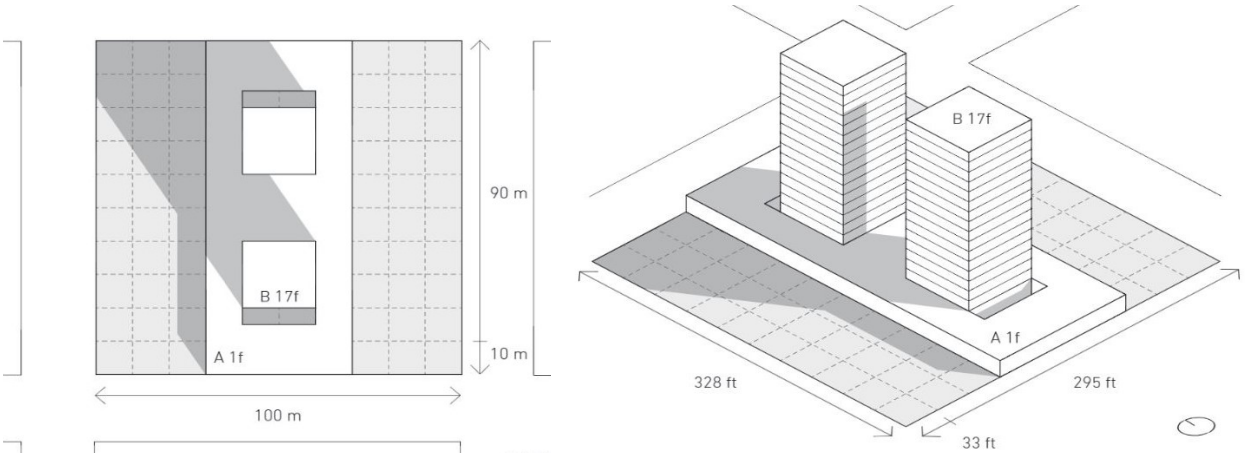
Patio Houses_ FAR 1.54 _ Coverage 31% _ 5 Floors



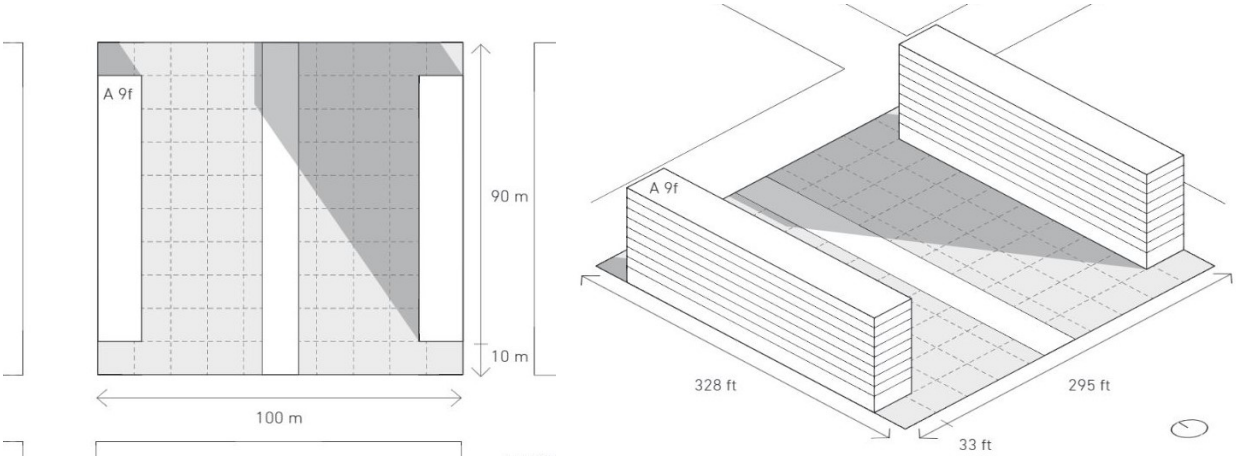
Snake Urban Block_ FAR 1.59 _ Coverage 29% _ 5+9 Floors



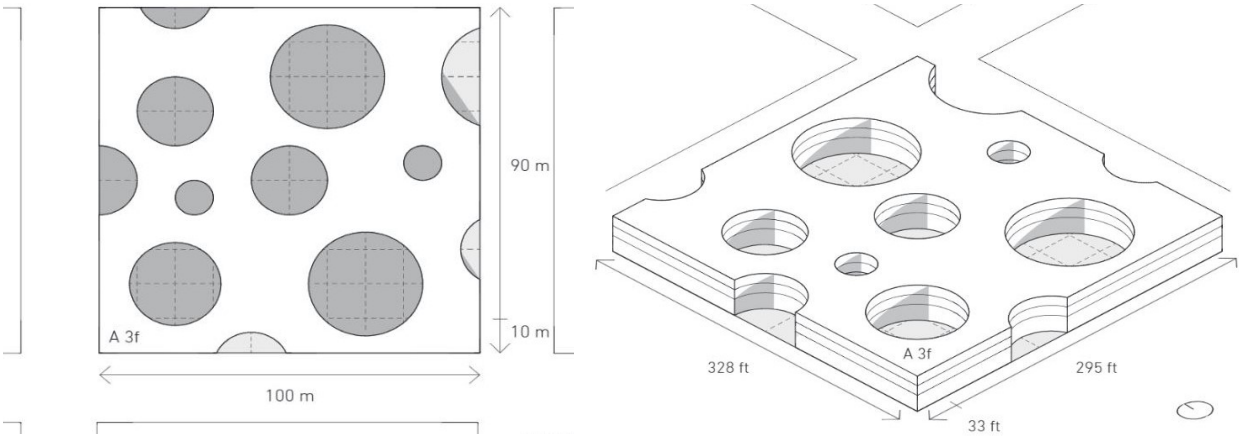
Z-Layout Slabs_ FAR 1.64 _ Coverage 18% _ 9 Floors



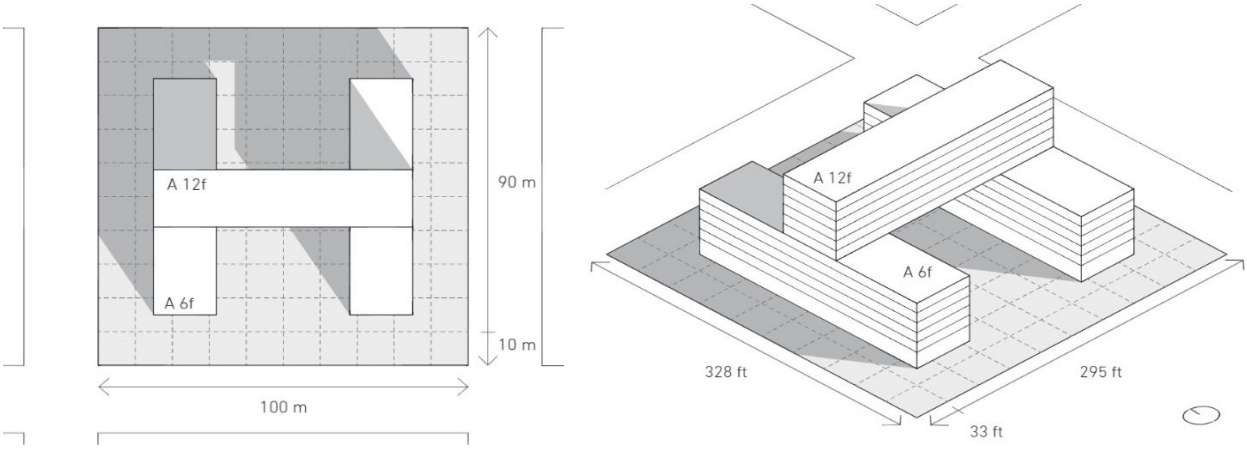
Plinth + Towers_ FAR 1.66 _ Coverage 38% _ 1+17 Floors



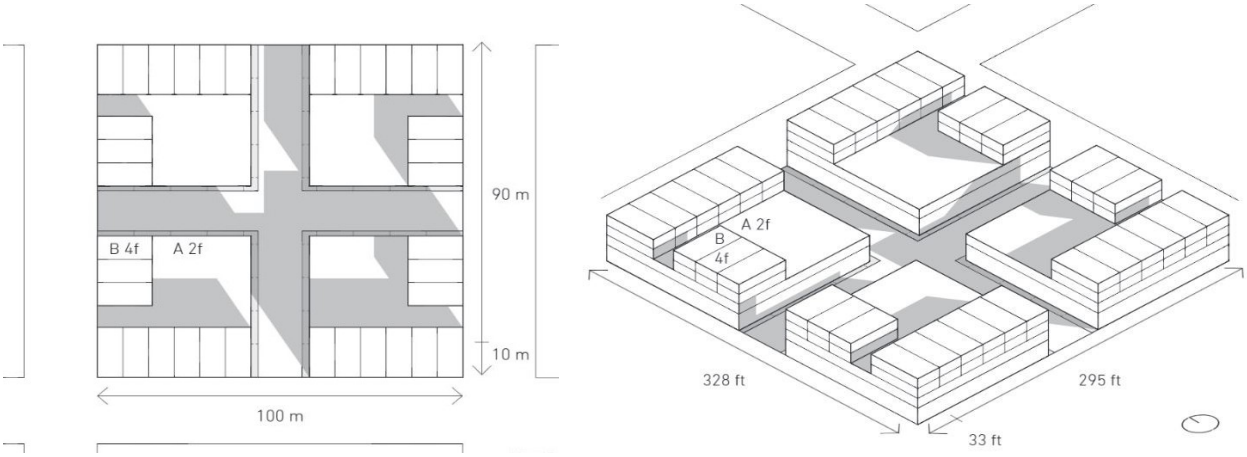
Slabs _ FAR 1.73 _ Coverage 19% _ 9 Floors



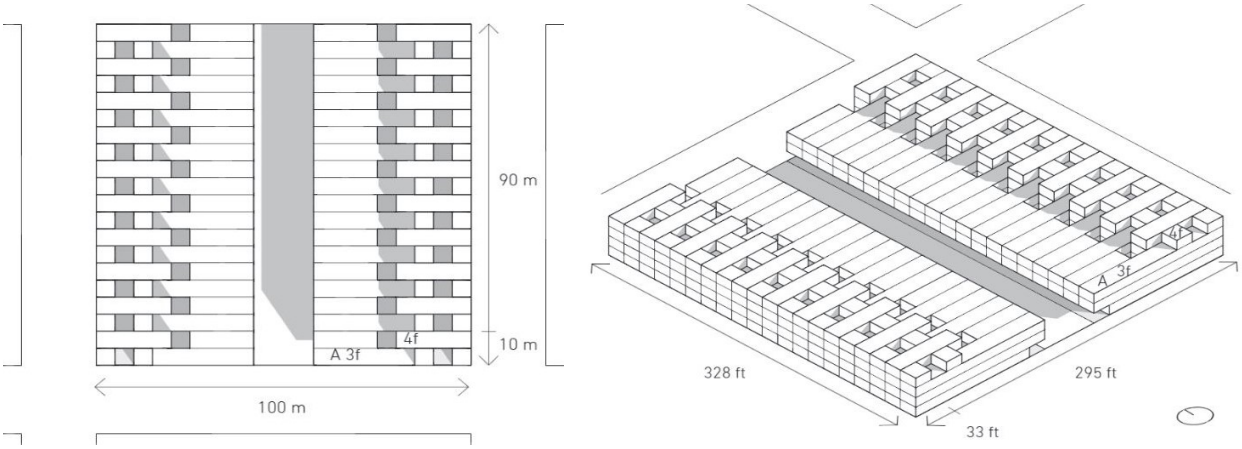
Gruyere Urban Block _ FAR 2.03 _ Coverage 68% _ 3 Floors



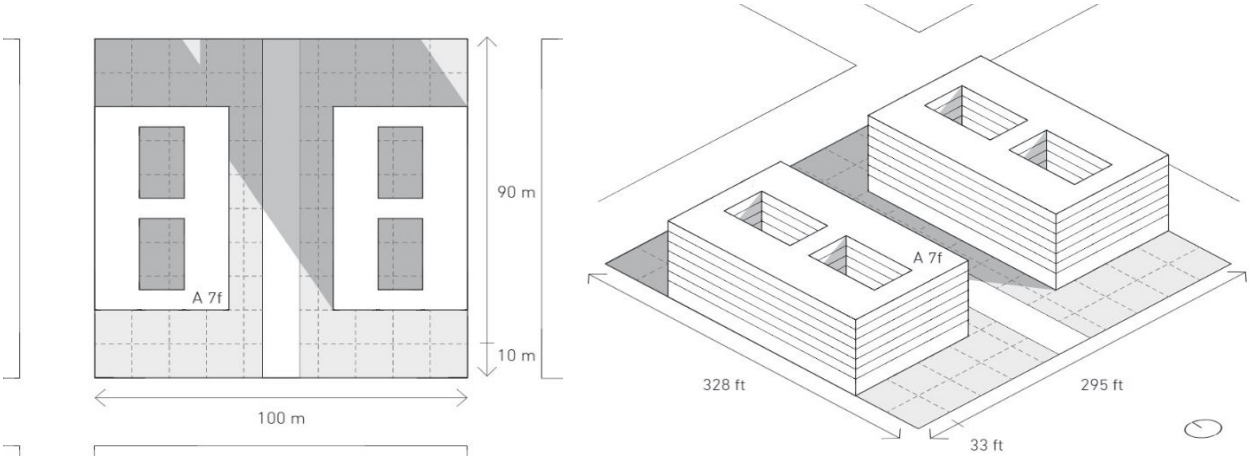
Stacked Slabs _ FAR 2.14 _ Coverage 24% _ 6+12 Floors



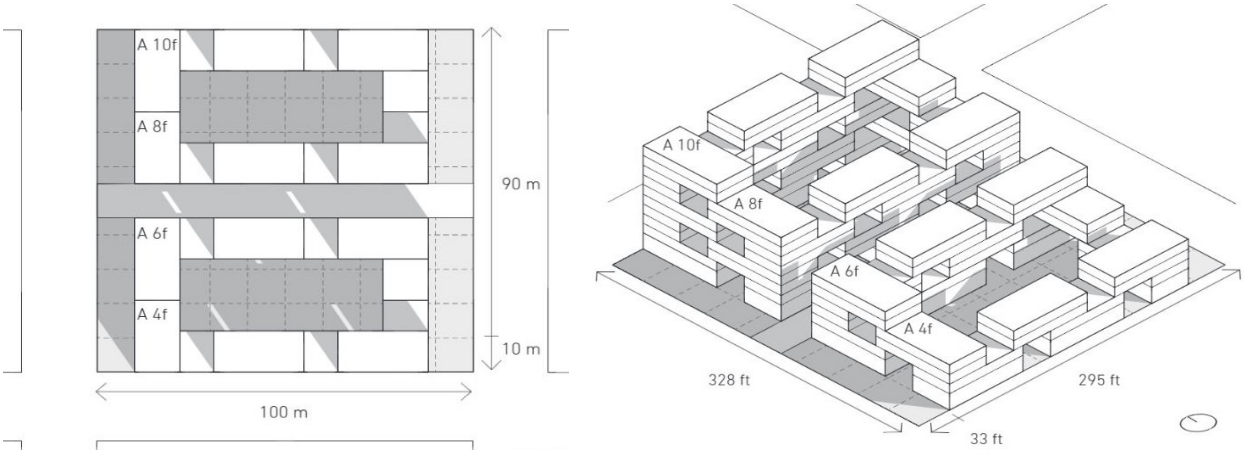
Plinth + Rowhouses _ FAR 2.18 _ Coverage 71% _ 2+4 Floors



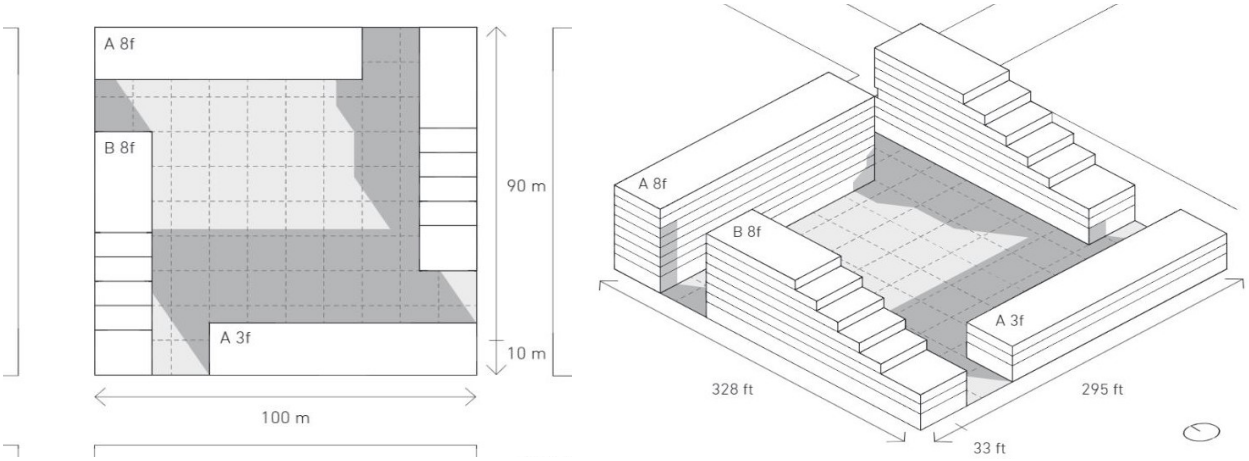
Rowhouses with Patio_ FAR 2.22 _ Coverage 59% _ 3+4 Floors



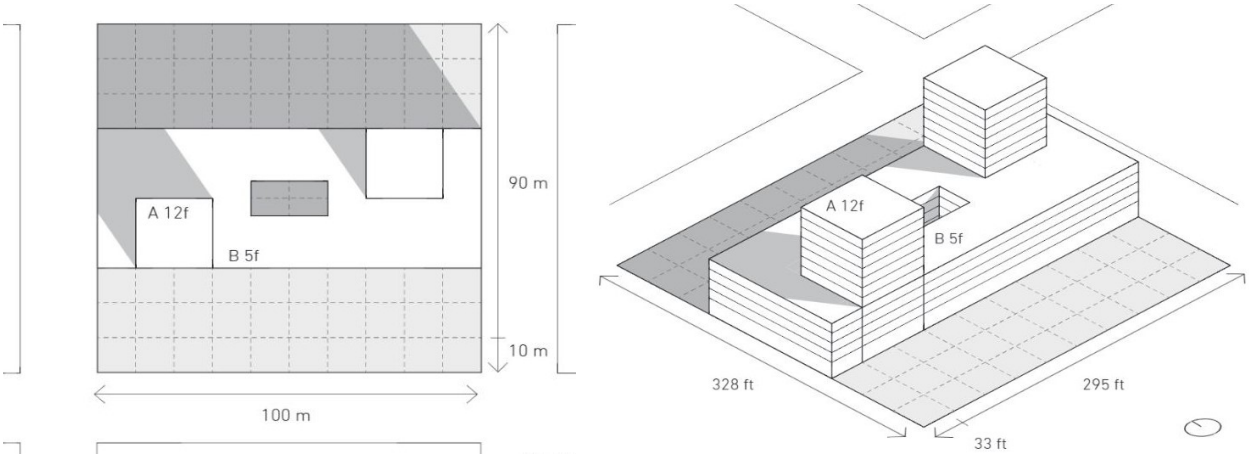
Twin Slabs _ FAR 2.18 _ Coverage 71% _ 2+4 Floors



Perforated Urban Block _ FAR 2.42 _ Coverage 35% _ 4-6-8-10 Floors

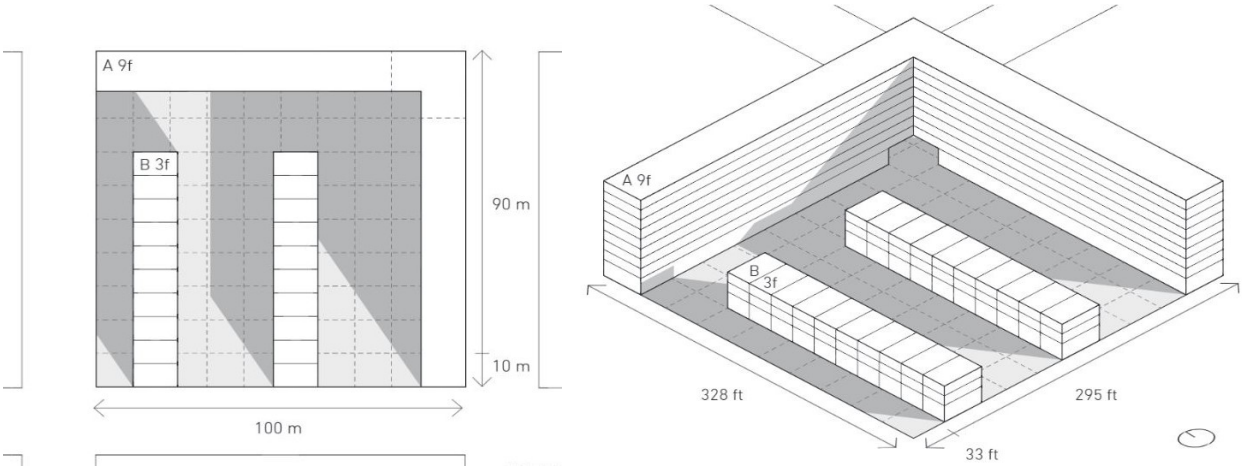


Stepped Urban Block _ FAR 2.43 _ Coverage 42% _ 3-8 Floors

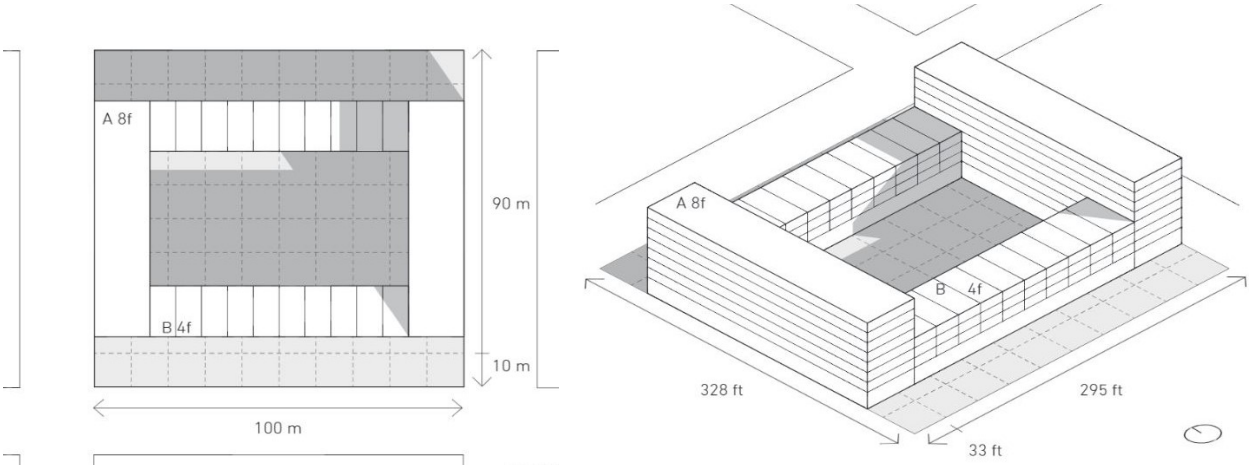


Plinth + Point-Blocks _ FAR 2.46 _ Coverage 38% _ 5+12 Floors

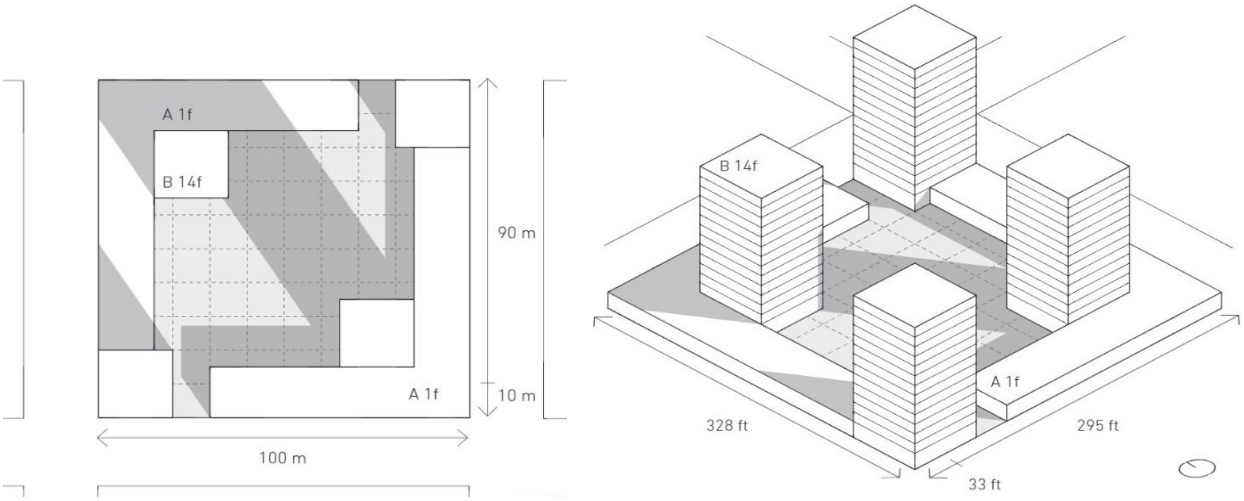
Intense Density FAR 2.5 – 3.75



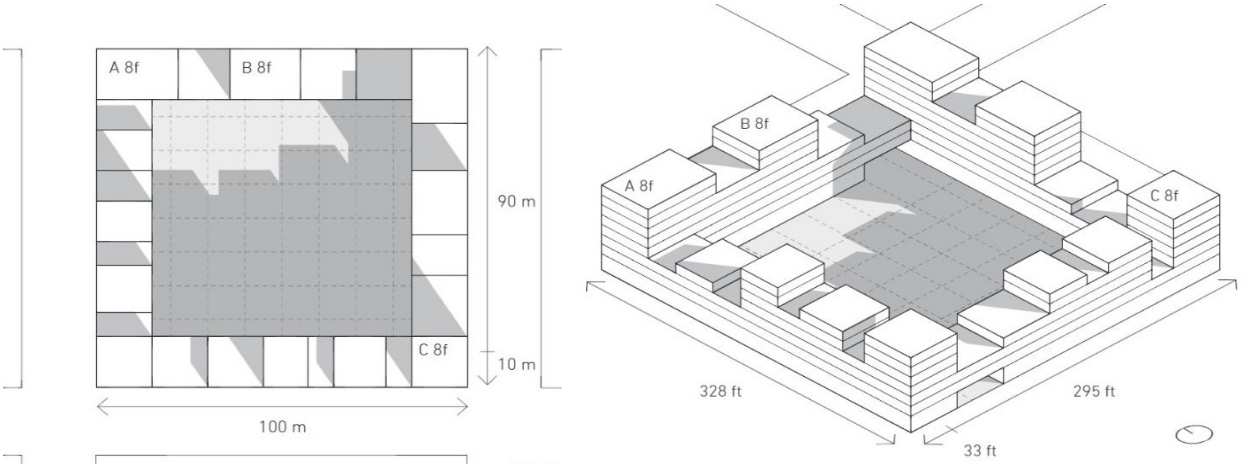
L-Shaped Slabs + Rowhouses _ FAR 2.50 _ Coverage 36% _ 3+9 Floors



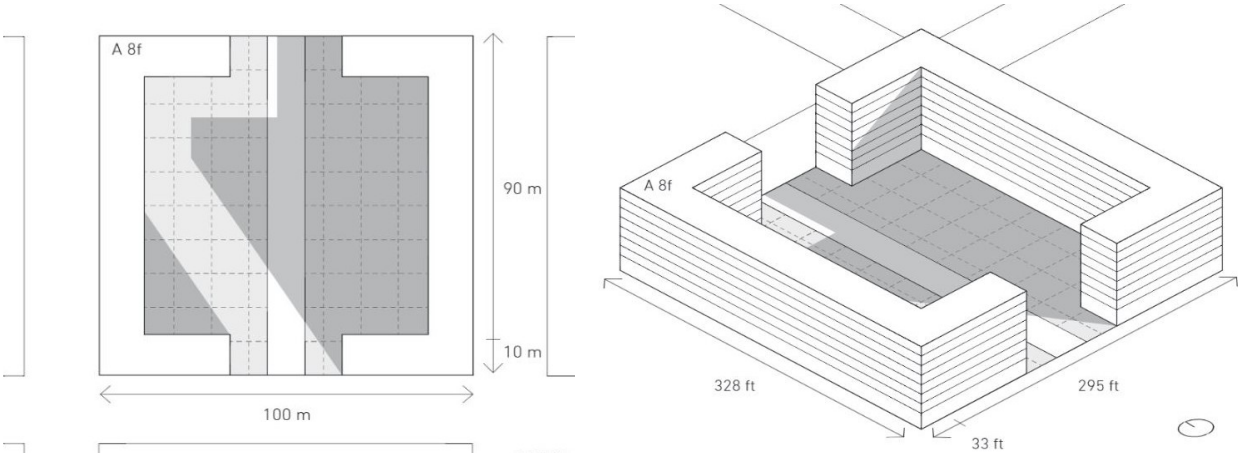
Hybrid Urban Block _ FAR 2.52 _ Coverage 42% _ 4+8 Floors



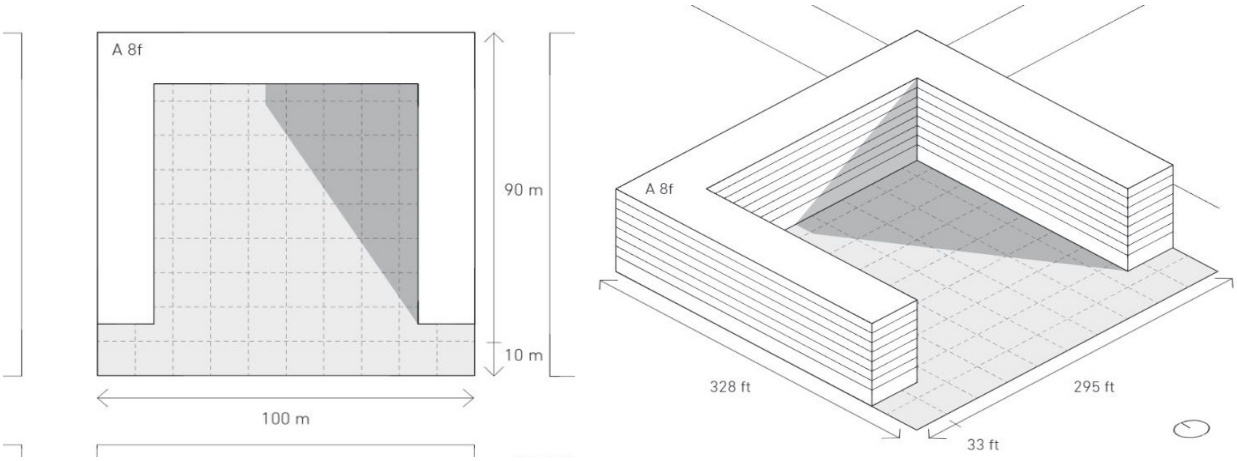
Open Block + Towers _ FAR 2.65 _ Coverage 57% _ 1+14 Floors



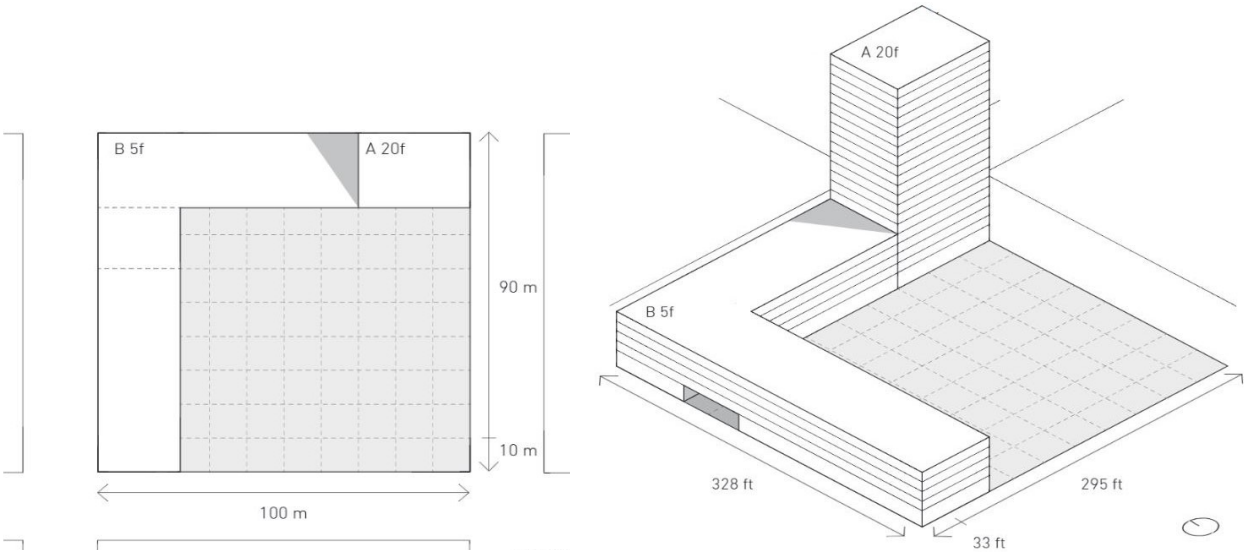
Sculpted Urban Block _ FAR 2.74 _ Coverage 47% _ 3-8 Floors



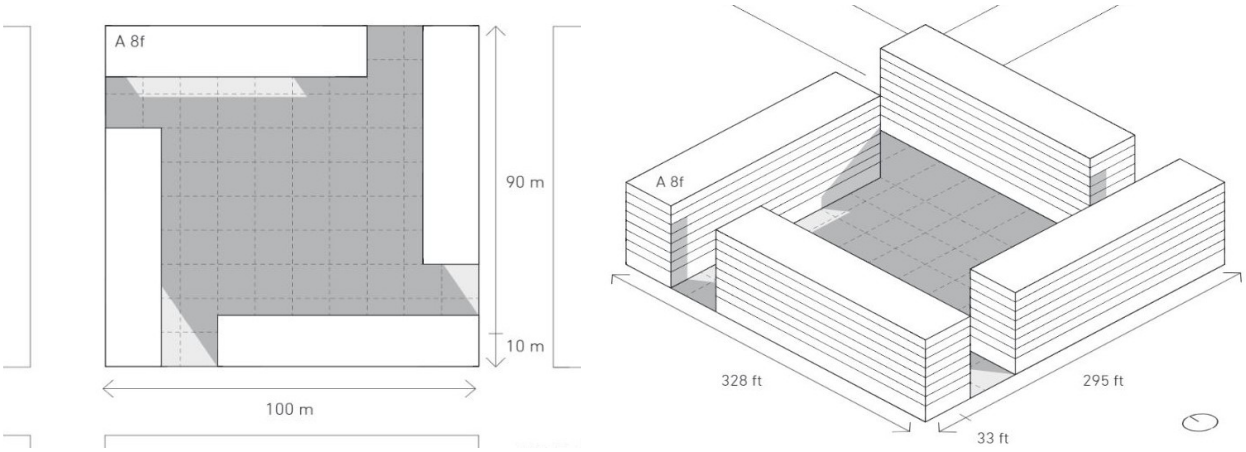
Half Urban Block _ FAR 2.80 _ Coverage 35% _ 8 Floors



¼ Open Urban Block _ FAR 2.88 _ Coverage 36% _ 8 Floors

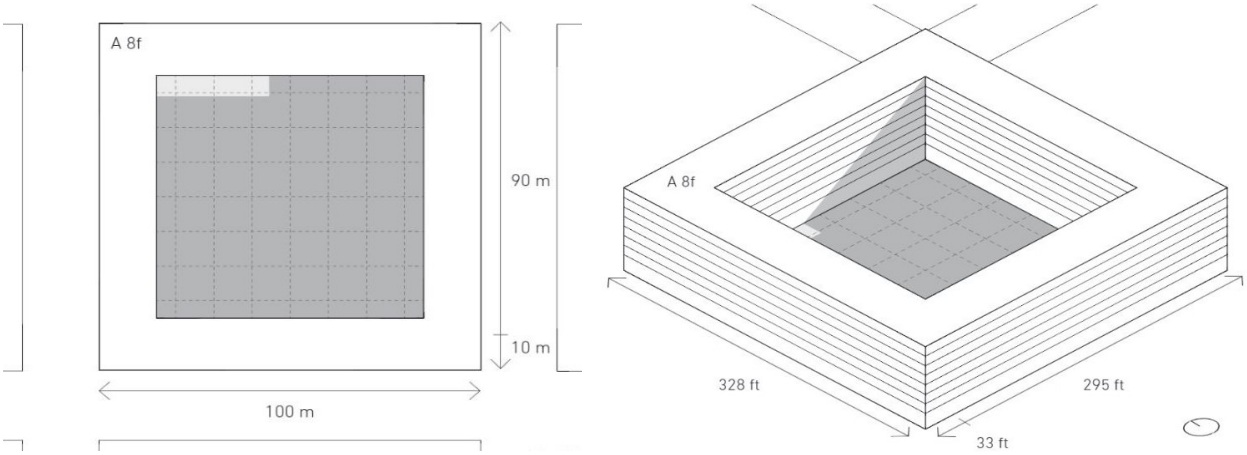


3D Folded Slab_ FAR 2.91 _ Coverage 35% _ 5+20 Floors



Open Urban Block _ FAR 3.36 _ Coverage 42% _ 8 Floors

Extreme Density FAR 3.75 – 5.0



Closed Urban Block _ FAR 4.09 _ Coverage 51% _ 8 Floors

Comparative analysis between densities of historical urban models [10]

The city is a very complex organism, shaped by a series of social, economic, and cultural processes, which, stretched over relatively long periods of time, materialize in urban forms that characterize certain areas or contexts. Therefore, it is quite difficult in a relatively large area within a city (especially like that of Tirana) to clearly define the typologies of housing and urban phenomena that have generated.

[10] Reale, L., *Densità, Città, Residenza. Techniche di densificazione e strategie anti-sprawl,* Gangemi Editore, Roma, 2008 (pg. 28-32).

Industrial-modern city

It can be started by giving some urban parameters (inhabitant density / ha and FAR ratio), accompanied by the respective images of the spatial composition of some of the most popular urban models of the industrial-modernist period. Although models have been selected which are characterized by a spatial and typological clarity, it still cannot be said that a figure / parameter can fully and accurately express the complexity of an entire area under consideration. So the value of these parameters can be considered approximate.

It must be said that this period, the '30s, is characterized by important research of architects regarding the relationship that was created between the optimal dimensions of the interior dwelling (existenzminimum), the dwelling building and the land where the dwelling was located. Their approach was mainly guided by the systems of classification and creation of housing models (fig. 5-7). Le Corbusier, for example, in the Ville Radieuse project estimates that each resident should have 14 m2 of available / habitable space available. While today, this standard has changed. In Italy e.g. estimated 25 m2 usable area per inhabitant.

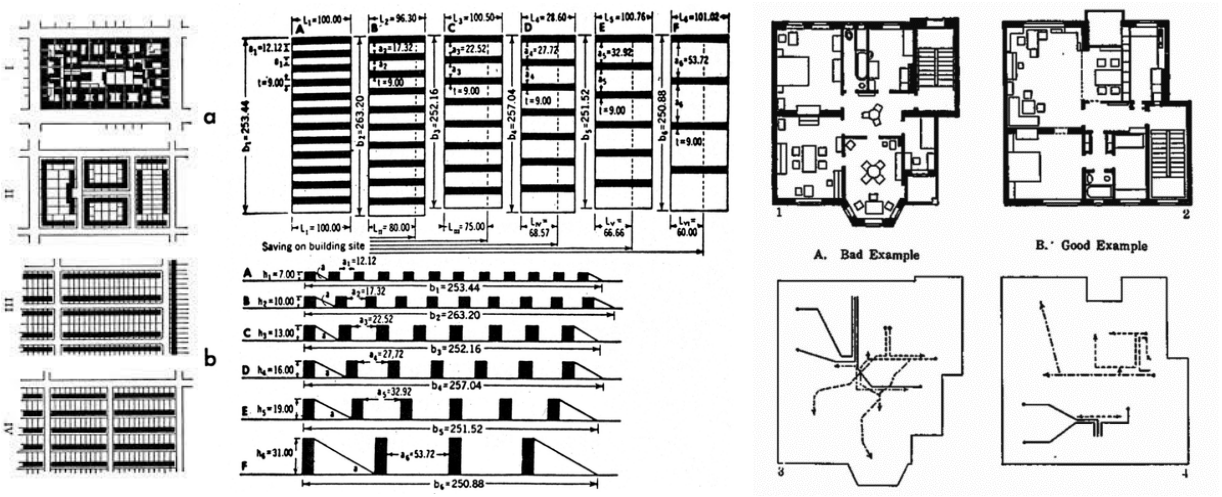


Figure 5. Ernst May, Four Stages in German Block-Planning, 1932[11]

Figure 6. Walter Gropius, Diagrams of low-rise, mid-rise and high-rise housing densities 1929-30

Figure 7. A. Klein, studies and diagrams of composition of a traditional popular house, 1928

[11] *https://static1.squarespace.com/static/512f8523e4b02ab8ee84fa44/t/590785c3197aea1972797a90/1493665221713/Denzer+ASES+2014+final.pdf*

La città compatta *Ensanche* di Barcellona (*Idelfonso Cerdà*);

250 ab/ha; FAR 1.33

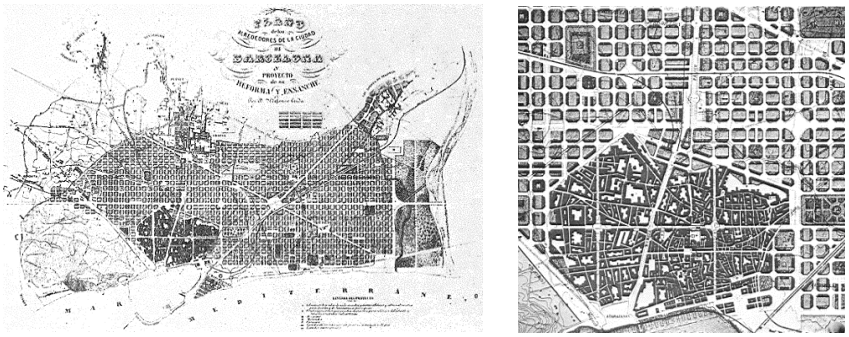


Figure 8. Plan Cerdà, Barcelona 1854-59[12]

La città per nuclei conclusi *Garden City* (*Ebenezer Howard*);

60 ab/ha; FAR 0.32

Greater London Plan (*Patric Abercombie*);

72-240 ab/ha; FAR 0.38 - 1.28

72-240 ab/ha; FAR 0.38 - 1.28

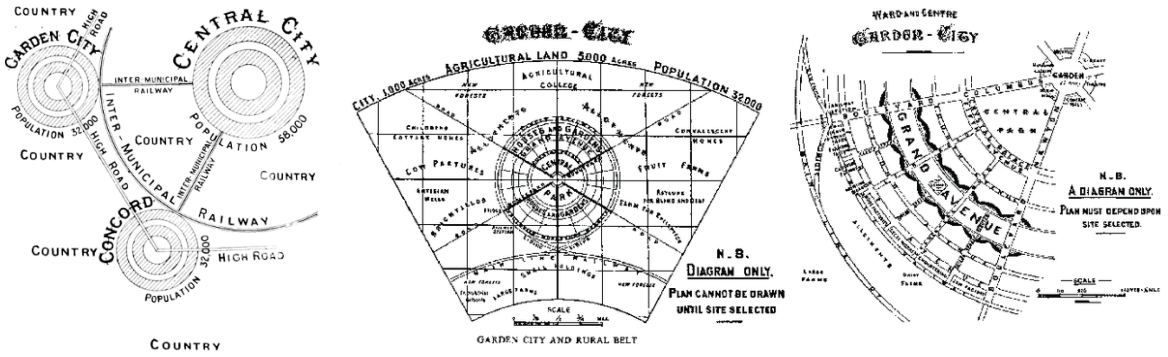


Figura 9. E. Howard, Diagrams of the Garden City, 1898[13]

La città distribuita linearmente *Ciudad Lineal* (*Arturo Soría y Mata*);

60 ab/ha; FAR 0.32

Cité linéaire Industrielle (*Le Corbusier*);

50 - 400 ab/ha; FAR 0.27 - 2.13

[12] *https://urbanter.wordpress.com/2011/10/05/barcelona-urban-plannings-forgotten-birthplac/*
[13] *https://www.researchgate.net/figure/The-principle-of-the-Garden-City-of-Ebenezer-Howard-1898-from-Choay-1969_fig4_277771240*

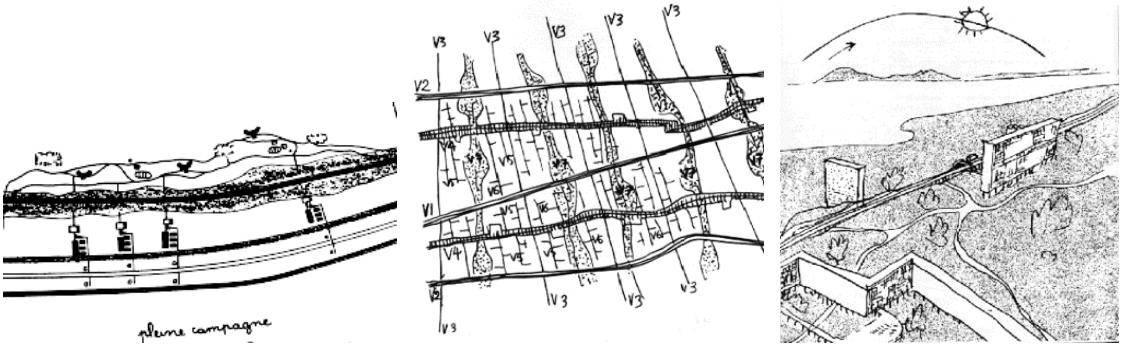


Figura 10. Le Corbusier, Cité linéaire Industrielle, 1942[14]

La città sviluppata in altezza *Großstadt* (*Ludwig Hilberseimer*);

715 ab/ha; FAR 3.81

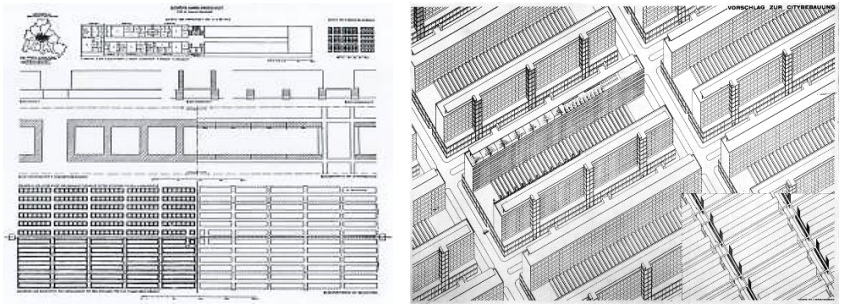


Figure 11. L. Hilberseimer, plan for Großstadt (1927): study of proportions between built density, urban block and flats[15]

La città estesa *Broadacre City* (*Frank L. Wright*);

16 ab/ha; FAR 0.09

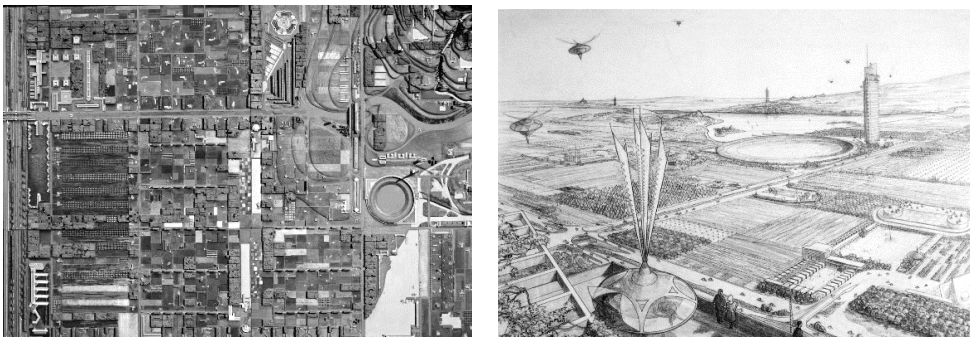


Figura 12. Frank L. Wright, Broadacre City, 1935[16]

[14] *https://www.researchgate.net/figure/Le-Corbusier-1942-La-cite-lineaire-industrielle-Extrait-de-Le-Corbusier-1942-Les_fig14_284367252*
[15] *http://fidaspracticas.blogspot.com/2014/05/ludwig-hilberseimer-vertical-city-cesar.html*
[16] *https://franklloydwright.org/reading-broadacre/*

La città funzionale

Cité Industrielle (*Tony Garnier*);

65 ab/ha; FAR 0.35

Algemeen Uitbreidingsplaan (*C. Van Eestern*);

235 ab/ha; FAR 1.25

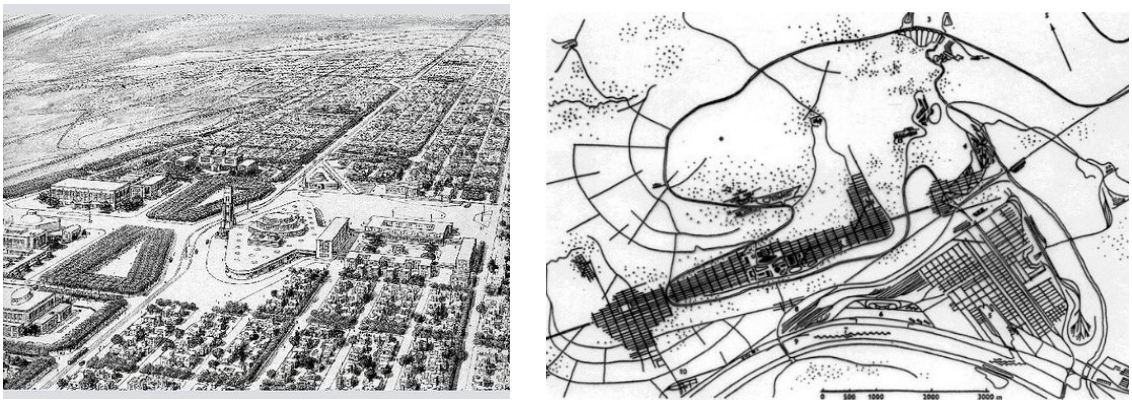


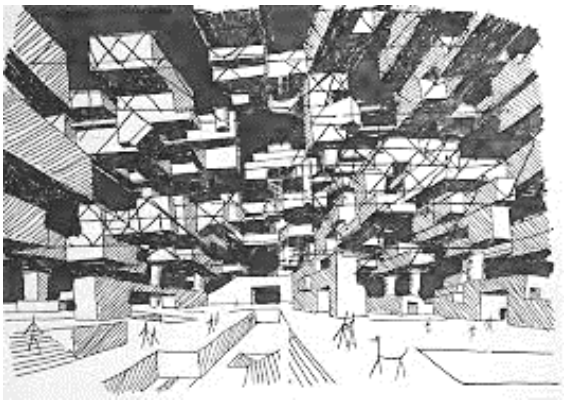
Figura 13. T.Garnier, Cité Industrielle, 1904[17]

The utopian city of the ’50s-’70s

Undoubtedly the visions for the cities of this period (’50 -’60) were guided by the rapid advancement of technology and the addition of infrastructure in general. This conception of the city caused that little by little the border between the city and the village (or rather, the territory around the city) melted, lost. The degree of design even within the city itself had reached an intermediate degree, between architecture and urban planning. *Macrostructure and city-building* were the key words in the urban and architectural design of that period. The landscape is almost completely anthropized and the shadows of environmental catastrophes begin to become present in the discussions of architecture and the city. It is in this design environment that Archigram's ideas for *Walking City arise*, macrostructures of the dimensions of an entire city, which move through several legs mechanical "extensions" over a world already destroyed by nuclear technology. Together with Archigram, almost all the most famous exponents of this period keep in their focus the environment and the density inhabited by cities.

[17] *https://commons.wikimedia.org/wiki/File:Garnier-Tony,_Cit%C3%A9_industrielle,_centre,_vue_perspective.jpg*

In many cases, the proposed projects are autonomous urban structures, which are almost entirely detached from the existing city and traditional housing typologies, and this is what makes them utopian. *Yona Friedman* e.g. in *Spatial City 3* (1958) proposed dependent residential structures, which overlapped the existing city. Arata Isozaki over the Tokyo metropolis organized giant vertical structures (vertical infrastructure columns), where residential modules were captured one after another (*City on the Air*, 1961). These projects generally aimed at a large increase in housing density within existing cities, but in terms of urban morphology, they bypassed it almost completely.



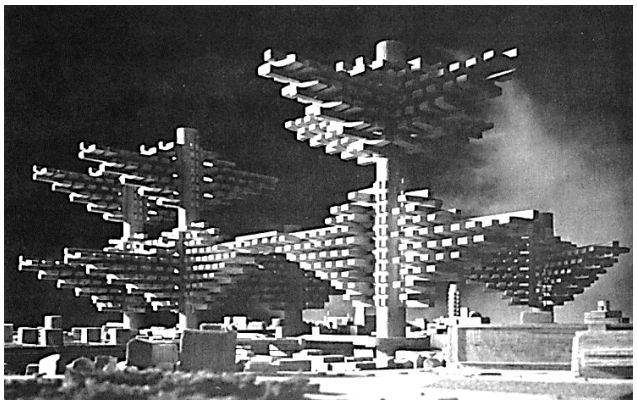


Figura 14. Y. Friedman, Spatial city 3, 1958

Figura 15. A. Isozaki, City on the air, 1961

The demographic growth of those years ('50 -'60), especially in Japan, led Japanese architects, such as *Kurokawa, Kikutake, Tange*, etc., to propose models of cities that were capable of transforming in time and reacting metabolically. to the exponentially growing demand for housing in urban-city centers.

Such concepts still inspire famous architects today, such as *B. Tschumi* in his project *Factory 798*, in Beijing (2004).

He proposes the preservation of the existing structure, which is a former factory turned into a museum, and the realization of a new structure (where residences and commercial

units are located), which extends horizontally as an intertwined network of volumes that rise 25 mt above the museum. existing.

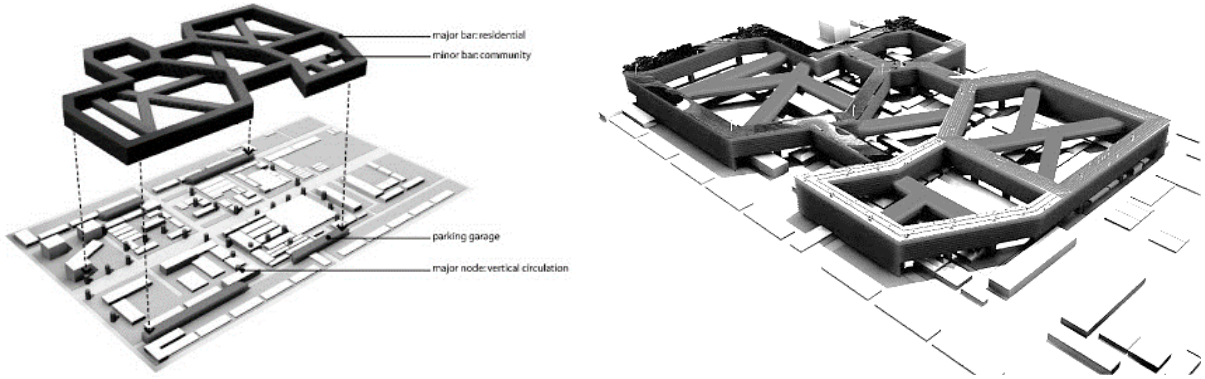


Figura 16. B. Tschumi, Factory 798, Beijing, 2004[18]

Translation of the density parameter from quantitative to qualitative

As mentioned above, the built-up density and especially the inhabited density, is closely related to social aspects. Different types of densities mean different opportunities to be in contact with other people and to interact with them culturally, socially, economically, etc.

Proxemics is the science that studies precisely the relationship between physical space and its perception by humans. From the Latin *proximus* (other-the next) and from the Greek *séma* (sign), prosemics interprets personal and social space, the way the human body relates not only to the environment where it is located and resides, but also to other persons.

It is here that we can relate to what Edward T. Hall calls social distance and how it relates to how people from different cultural and social backgrounds perceive living space and distances from each other[19]:

> *"Le grandi costruzioni progettate da Le Corbusier a Chandigarth, capitale del Punjab, hanno dovuto essere modificate dai residenti per diventare utilizzabili: gli Indiani hanno murato i balconi di Le Corbusier, transformandoli in cucine! Allo stesso modo,*

[18] *http://www.vg-hortus.it/index2.php?option=com_content&task=emailform&id=405&itemid=1*
[19] Reale, L., *Densità, Città, Residenza. Techniche di densificazione e strategie anti-sprawl,* Gangemi Editore, Roma, 2008 (pg. 36).

gli Arabi, quando vengono negli Stati Uniti, trovano le abitazioni americane assolutamente non rispondenti al loro sentimento dello spazio: si sentono oppressi dai soffitti bassi e dalle stanze troppo piccole, trovano l'intimità della casa troppo poco protetta dall'esterno, e lamentano infine la mancanza di panorama" (Edward T. Hall, *La dimensione nascosta,* Bompiani, Milano 1968, pg. 145-146)

It is important to achieve different densities in the city, which should not be too low (not to ensure minimal human interaction, the reason for the very existence of the city), but not too high, leading to overcrowding and misuse of public and communal spaces. Therefore care must be taken with balancing these density-poximity parameters. This is especially true if we take into account the forecasts for the concentration of the world population in urban centers, which since 2008 has exceeded 50% (it is predicted that by 2050 68% of the population will live in urban centers, *UN Department of Economic and Social Affairs,* May 2018, New York)[20].

Jane Jacobs, one of the main inspirers of American *New Urbanism* architects, in her book *Death and life of Great American cities*[21], argues the importance of inhabited density in the economic and cultural life of a city. Also, medium and high densities, according to *Jacobs*, are a guarantee against social divisions and intolerance. *Functional mixité* and *urban diversity,* which work when there is medium-high density, also ensure the success of an urban intervention. It can be mentioned here e.g. the case of the Le Albere project [22] in Trento, Italy, by the architect *R. Piano.* The project, which lasted 14 years (2002-2016), although designed by a star-architect, still remains uninhabited in its southern part. Among the main reasons remain the low density of housing, the undifferentiated supply of housing and the insufficient functional mix.

Density and diversity can therefore be considered as two very important parameters in an urban context, so Jacobs writes about this: "[...] *nei quartieri dove la gente abita dev'esserci una forte concentrazione di abitazioni sul suolo a ciò destinato. In mancanza*

[20] *https://www.un.org/development/desa/en/news/population/2018-revision-of-world-urbanization-prospects.html*
[21] Jacobs, J., *Death and life of Great American cities*, Penguin, Harmondsworth, 1961, trad, It. *Vita e morte delle grandi città. Saggio sulla metropoli americana*, Edizioni di Comunità, Torino 2000.
[22] *https://www.designboom.com/architecture/renzo-piano-le-albere-urban-development-project/*

di un numero sufficiente di persone, gli altri fattori che influenzano l'intensità e la localizzazione della diversità non avrebbero gran che su cui agire".[23]

4.3 Urban sprawl and anti-sprawl strategies

Vittorio Gregotti: *"Sprawl significa sdraiato, senza forma, ma anche nebuloso, diffuso. Un mondo molteplice, mobile, senza limite non e' il mondo della liberta', ma solo il mondo dell'assenza di progetto"* (*"la Reppublica"*, 27 marzo 2005).

When we talk about the dispersed city we should not mean an urban model, but rather a real phenomenon, which is closely related to the demographic and socio-economic changes of a city and then to its morphological and urban aspects. It comes as a result of an economic-technological development and the possibility for a part of the population to move to the perifery of the city to have a larger property and an individual house.

Defused city *Broadacre City* (1934), conceived and visualized by Wright as a utopian city for the time, represented in fact more of a social model, which would subsequently shape American suburbs and beyond. Of course, this social vision and this housing model spread to such an extent thanks to the technological and economic innovation developed by Henry Ford between the 1920s and 1930s. Almost anyone could afford a car and thus, could live far away from work. The suburban population in the 1920s in the USA reached 20%, but in the following decades experienced a rapid increase, reaching figures of 30% in the 1960s and exceeding the population of urban areas in the last decade. (ref. *The Endless City*, or A. Prat, A. Gurney, *Il rinnovamento sostenibile delle aree suburbane inglesi*, in: *Urbanistica 112/1999*).

The beginnings of this way of living actually come as a counter-response to the situation created during the industrial revolution in England in the mid '800s. Living in English cities was quite difficult for the working class, as industrial pollution was located very close to urban centers. Also, the great need for employment and housing had made these urban nuclei extremely dense and completely out of the conditions of a healthy life. While the norms allowed by the Public Health Act of 1875 set out some very general basic rules of

[23] J. Jacobs, *ibid*, pg. 191.

building aggregation, which were used by construction companies to maximize construction and profit within a given land. Below is shown how it was a typical scheme of a suburban urban unit (fig. Xx, Reale, pg. 49) ....

The responses of the time to these major urban problems were mainly two. On the one hand we have Ebenezer Howard's proposals for the garden city of 1898. To liberate the existing urban centers, he proposed the creation of garden towns, which stood as peripheral satellites of the main urban core. It plunged into the greenery and through mainly public transport links (then combined with the private one), provided an opportunity to "vent" the urban density of the center towards these peripheral satellites. These urban models are realized in the cities of Letchworth, Welwyn and the Hampstead Garden Suburbs in London, designed by Raymond Unwin and Berry Parker in 1905 (images...).

The other alternative of the time to reduce the density of existing urban centers, was the model of falanister of Charles Fourier in 1841 (image...), where the community of inhabitants lived in collective buildings combining craft activities with those of education and leisure. A similar model was that of Jean Baptiste Godin's Familisterio of 1870 (image...), where the concept of collective housing consisted of autonomous houses for each family nucleus, but sharing with other residents common services, such as kindergarten, school, theater, baths, laundry, etc. (image...). It should be mentioned that Le Corbusier also relies on this model when designing later *unité d'habitation*.

Although it has been more than 20 years since the *sprawl* phenomenon was attempted to be curbed through various urban policies and strategies, its extension continues today in European cities (historically known as compact model cities), increasingly blurring the border. between urban and rural.

Contemporary solutions to the sprawl phenomenon start from the urgent need to solve some problems that come from the city with low density and that appeared in the beginning of the Anglo-Saxon periphery of the mid ‘800, as i.e. dependence on the vehicle, very high energy consumption, endless landscape repetition and very low social interaction. We can group these answers into three main categories 1. *compact European city* and its contemporary variations; 2. *new urbanism* and *smart growth*; 3. *new typologism*.

4.3.1 The three responses to the difused city

According to Reale (*Reale*, 2008, pg. 52), it can be said that we have two completely opposite approaches to today's city: that of the "small" city, where the main exponent is Leon Krier and the "generic" city, where the main exponent is Rem Koolhaas (R. Ingersoll, *ibid*, pg. 16-17). Krier bases his urban theory on the idea that the spread of the city can be controlled through the dimension and rules of the small preindustrial town. (images...). Koolhaas, on the other hand, thinks we should accept the city today as it is, with the obvious consequences of globalization. (S. Kwinter and M. Rainò, (a cura di), *Rem Koolhaas, Verso un'architettura estrema*, Postmediabooks, Milano 2002, pg. 22). If the shape of the city can no longer be controlled through urban planning or architecture, then there is no choice but to control the "scale". Precisely in this approach are some of the latest projects of Koolhaas oma studio, such as *Mc Cormick Tribune Campus Center* in Chicago, where the new structure connects two entire urban areas and includes within it the subway line located between them (image).

But while Krier's approach may sound a bit "moralistic" today and Koolhaa's somewhat "ironic" and cynical, today in the construction of the city appear three other alternatives as urban models (which were mentioned above): that of the *compact European city*, *new urbanism*, and the last, *new typologism.* These three models can be intertwined because they have in common the anti-sprawl approach and are three concrete responses to the spread of the horizontal city and the disintegration of its existing structure. Regarding this phenomenon, Bernardo Secchi in *"Diario di un urbanista"* (Cfr. B. Secchi, Scenari, Planum, www.planum.net, 2002) speaks of two concrete concerns: that of the ever-growing city and that consequently loses its form, and that of the city as we know it and as we have inherited it from history. He thinks that this situation can be overcome by paying attention to some precise orientations: an urban growth that favors medium-high densities; placement of multi-functionality in new residential blocks; rebuilding the sense of community; restriction of movements only by private and individual means; creating an identity belonging to the space ubane and the inhabitants themselves.

4.3.2 Compact contemporary European city

The compact city is related primaly with the question of the shape of the urban units that make it up and of course, with the shape as a whole. He by definition is the opposite of the scattered city. In the compact city, the relationship, the connection-aggregation between the buildings, the relationship that they create with each other, but also with the street element is very important.

There is a return to the structure of the urban block (typical of the pre-industrial period, which was so strongly fought by modernity), as one of the urban forms that maintains compactness, guarantees a medium-high building density, sufficient housing density to provide functional-typological mixing and interaction in the community. For the compact European city the urban project turns into a re-connecting, re-sewing and re-interpreting instrument of the existing structure of the city. We see how these compact city principles are re-proposed in contemporary European cities and how these principles are intertwined with new urban interventions.

The British Cities of Richard Rogers

In the case of British cities, the Urban Task Force, led by Richard Rogers, was launched in 1998 with the aim of *"…identify causes of urban decline and establish a vision for cities in England, founded on the principles of design excellence, social well-being and environmental responsibility within appropriate delivery, fiscal and legal frameworks"* (ref. *The Urban Renaissance* six years on, Richard Rogers[24]). The main idea was related to the compact high-density city, which was structured around public spaces. Within this framework, Rogers's approach to *sustainable urban development* led to a reinterpretation of the high-density city model, which had to be based on: the concept of neighborhood, the quality of public space, the presence of the natural landscape, the use of of innovative technologies and in the conservation of rural territory versus the development of urban territories. These measures were to bring a series of positive effects, such as: less need

[24] https://www.designingbuildings.co.uk/wiki/Urban_Task_Force

for connecting roads, increase of green spaces, reduction of automobile traffic, improving air quality and reducing infrastructure costs of urban plants.

Also, according to his vision for a sostainable city model, Rogers focuses on a very important, but often underestimated, aspect of the transition from public to private space. At this point we should relate to the case perhaps with representatives of this topic. G. B. Nolli, on commission of Pope Benedict XIV to survey Rome, draws up a new map of the city (1748), which is composed of 12 copper plate engravings. Drawing in dark buildings and private spaces, it becomes very clear - as negative - the structure and network of public and semi-public spaces (engraved in the "body" of the city), such as churches, public baths, communal palaces, courtyards domestic and markets and brands (fig. Xx). This map of Nolli serves as the basis for the exhibition Roma Interrota of 1979 (curated by GC Argan and C. Norberg-Schulz), where the participants (among whom we mention R. Venturi, A. Rossi, C. Rowe, J Rauch, P. Portoghesi, M. Graves, L. and R. Krier, D. Dardi, M. Graves, J. Stirling, C. Rowe, etc.) re-interpret this method to treat space in city. On the occasion of the exhibition, C. Rowe proposes a series of point-based interventions in the city aimed at restoring the continuity of the historic space. These new interventions had to be a natural extension of the existing urban fabric.

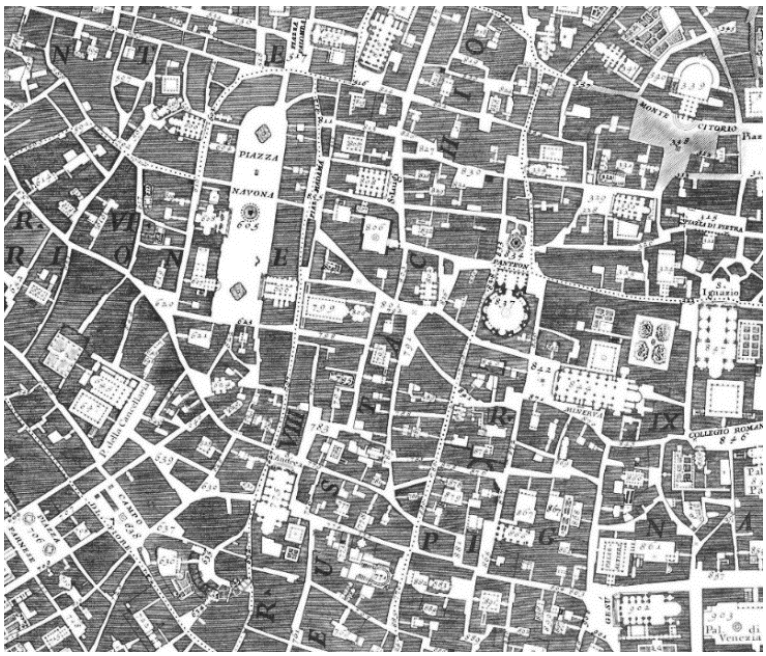


Figura 17. G. B. Nolli, parts of Nuova Pianta di Roma, 1748 (source: https://landlab.wordpress.com/2009/03/22/about-pubblicspace/)

To return to Rogers's strategy for a compact and sustainable city, we are referring to his essay *An Urban Renaissance* at *A+U* (Cfr. *A+U*, nr. 407), where it analyzes the case of London, as the metropolis with the largest growth projected for the next 15 years, with 700,000 inhabitants. He states that: "*l'unica via ecologicamante e socialmente sostenibile è una crescita vitale, compatta, policentrica, e mixed-use. [...] C'è ancora una certa paura dell'affollamento, ma ambienti a densità più alta possono essere con immaginazione progettati evitando la perdita di privacy o il senso di congestione. L'affollamento ha molto più a che fare con povertà progettuale che non con i puri numeri*". So, if having a city requires a minimum density, to start an urban renaissance must be designed "*luoghi per la gente, building homes piuttosto che semplice housing* [...], *città compatte con spazi pubblici ben disegnati ed edifici che facilitino e migliorino la qualità della vita di residenti e lavoratori*".

After six years at the helm of the *Urban Task Force Rogers* compiles the balance sheets of the first results. The figures show that, in addition to a "cultural" change in the British, who now prefer a compact city to an outlying one, building densities have increased from 25 dwellings / ha to 40 dwellings / ha in 2005[25]. Private investments are oriented towards the city and also public investments are concentrated in public infrastructure, transport, etc. Urbanized areas (*brownfield*) and not free areas (*greenfield*) were used for new constructions. London already realizes 70% of new construction in *brownfield*.

Of course, the increase in urban density does not immediately solve the problems associated with urban regeneration, such as: rising prices due to competition in land use, difficult access of low-income families to the real estate market, supply and poor in social housing, difficulty in realizing a social, typological and functional mix.

The case of Berlin as an urban model

The compact, high-density city dates back to the medieval city, and clearly follows the model of the eighteenth-century city ('800). An emblematic case for this city model is Berlin, both for the historic addition of residential urban blocks and for the way he has

[25] Cfr. R. Rogers, *Towards a Strong Urban Renaissance. An independent report by members of the Urban Task Force chaired by Lord Rogers of Riverside*, november 2005.

chosen to develop the future of the city form. To illustrate this point, Real quotes Stimmann (Real 2008, pg. 63) as the coordinator of the post-war regulatory plan:

"[...] *Con grande determinazione i pianificatori tedeschi hanno dichiarato guerra al tessuto tradizionale della città. In testa a tutti Le Corbusier, Ludwig Hilbersaimer e, dopo il 1945, Hans Sharoun come assesore all'urbanistica di Berlino. Là dove da secoli gli edifici erano orientati verso la strada e la piazza e la facciata marcava la transizione tra spazio pubblico della strada e terreno privato, la modernità ha piazzato oggetti entro uno spazio fluido, serviti da strade dal tracciato estremamente libero che – spesso su vari livelli – si mostrano palesemente prone alla logica della velocità automobilistica. In queste nuove strutture ha perduto la propria identità non solo il centro di Berlino. La città tradizionale con le sue strade a corridoio e le sue piazze geometriche è stata cancellata a favore di una raccolta di oggetti, a composizione libera, che instaurano tra loro solo rapporti astratti* [...]".[26]

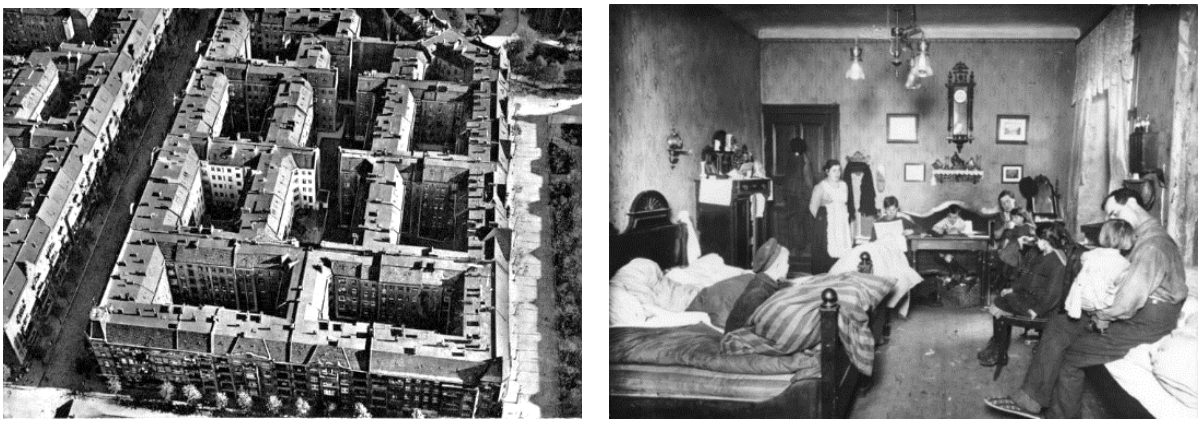


Figura 18. Berlin Mietkasernen and interior atmosphere.

In 1989, after the fall of the wall, Berlin found itself between two very different urban models. On the one hand, the city model of '800, with *mietkasernen* (image)[27], large urban blocks with successive inner courtyards, high density and sometimes very high; on the other hand the city of modernity, which after the war was characterized by very large spaces and buildings detached from each other, which often lost any physical connection

[26] H. Stimman (a cura di), *Berlino / Berlin: 1940-1953-1989-2000-2010. Fisionomia di una grande città*, Skira, Milano 2000, p. 13.
[27] https://www.berlinlayers.com/blog/berlin-mietskaserne

with the street. These urban units were mainly formed by extended residential buildings located in line (plattenbauten) combined with tower typology (image).

Figura 19. Plattenbauten of East Berlin

The urban choice, how Berlin would develop after the reunification, was that of the ‘800 compact city model, with high-density construction of functions and the facades of buildings that continuously outline the street. Also, they chose to keep in some cases the modernist tradition of the archetype of the perimeter block and that of the siedlungen of the years ’20-’30[28] (image).

Figura 20. Siedlungen, Berliner modernist heritage

According to Stimmann, in the case of Berlin, two were the main inputs on which the process of rebuilding the new German capital was based. The first was one based on

[28] https://welterbedeutschland.de/siedlungen-der-berliner-moderne/

Ross's permanences, the city plan and architectural monuments; the second was based on "drawn in black" analyzes of C. Rowe at *Collage City* (Cfr. C. Rowe, *Collage City*, Cambridge, London, 1978). Based on these two inputs, we can say that the principles of this reconstruction were the return to the "city" and the transition from the "object" to the context. This is also reiterated by Stimmann, when he says that: "*la decisione strategica di principio recita che Berlino, almeno per quanto concerne la pianta della città, non doveva essere reinventata*" (ibid. Reale 2008, pg. 65).

The approach taken entirely by *Stimmann's Planwerk Innenstadt* Berlin (1999), as a guide to urban design in Berlin, is that of direct design through architecture. In this way, the existing traces of historical urban structures are preserved and reused as contemporary instruments of reinterpretation of the European model of the city. This "critical reconstruction", based on the footprints of the existing city, is able to create different urban realities through direct design / three-dimensional planning, rather than based on macro-zoning. This design is able to re-sew and connect existing parts ensuring urban continuity.

In the case of *plattenbauten* contexts, *Planwerk's* approach changes. Interventions are usually limited to the creation of additional functions and services, which are located on the lower floors of urban structures. In case of more consistent interventions, the density of construction increases by integrating new volumes between existing spaces and taking into account the addition of different typologies of housing, to diversify the offer of housing (small apartments in row - *rowhouses*; or groups of low-rise buildings - *lowrise buildings*). In cases of more critical interventions, the volumes are completely replaced, providing a new relationship "building facade - street" and making clear the change of model, from modern to traditional European.

Urban block: from the urban unit of '800, disintegration and recomposition in compact urban form

The merger, the disintegration of the urban block of '800, as the structural structural unit of the city form, begins during the' 20s-'30s of the last century. According to the studies of one of the main exponents of Frankfurt urban transformations of the early '900s

(*Siedlung Westhausen*, or *Römerstadt*), architect and urban planner Ernst Maythe typical '800 block begins to fragment into smaller urban units, moving further and further away from the closed perimeter character (image)[29]. In this way, moving towards the *semi-open* block, it is required to provide (almost) equal lighting and ventilation conditions for all new units. In the later stages, experiments are continued that lead to the further opening of the block, for reasons related to the mismanagement of angular dwellings. In the last phase, the block is practically divided into several urban sub-units, where the apartments are lined up one after the other along a north-south axis, in order to obtain exclusively "optimal" apartments with east-west lighting / ventilation and additional green areas.

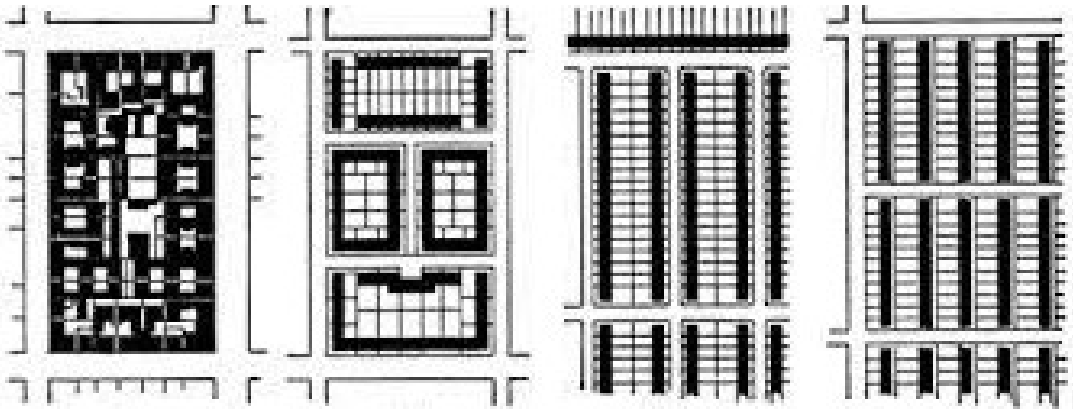


Figura 21. Evolutive phases of Frankfurt residential urban block

This process of erosion and disintegration of the compact urban block continues until CIAM finally puts an end to the road-building relationship (image). Significant in this sense is the image we find in *Collage City* (Rowe, Koetter 1978), which compares Le Corbusier's project for the center of St. Sun and the current center of the city of Parma. The result is a completely new relationship between public space and urban fabric, where urban parts remain unconnected and the housing-road infrastructure relationship is completely

[29] Malcovati, S. (2019). *Das alte Frankfurt: Urban Neighborhood versus Housing Estate, the Rebirth of Urban Architecture.* Urban Planning, 4(3), 117-133. https://doi.org/10.17645/up.v4i3.2164

disconnected. The density of construction is significantly reduced and the idea of a compact city is completely abandoned.

Figura 22. Modern city versus traditional city: Le Corbusier's project for St. Dié and the historical city center of Parma. (Source: Rowe and Koetter, 1978).

However, in parallel with this tendency of the urban fabric to disintegrate and the city to disperse into territory, in the 1970s an important movement began to somehow restore the European urban bloc. Such is the case with the *IBA* International Exhibition in Berlin (*Internationale Bauastellung* 1987). During this experience (divided into two different strategies: *"careful urban renewal"* and *"critical reconstruction"*), realized by world-renowned architects of that period - such as Mario Botta, Peter Eisenman, Vittorio Gregotti, John Hejduk, Herman Hertzberger, Hans Hollein, Arata Isozaki, Léon and Rob Krier, Charles Moore, Aldo Rossi, James Stirling and others - a series integrated urban projects. These "urban pieces" best represent the successful models of European housing, put together, constitute a major reconstruction project of the western part of Berlin. The sewing of the urban parts of is achieved in this way for *Kreüzberg* and *Südliche Friedrichstrasse*, which after the fall of the wall (1989) return again to central areas for the city.

It should be noted that during the 1980s, efforts were made to restore a continuum with the city's historic strata through urban renovation projects. The cases of *Barrios en Remodelaciòn* in Madrid, *Gran Project* in Paris, *Vila Olimpica* in Barcelona, or *Kop van Zuid* in Roterdam, seem to have the same focus. In the case of Rome, under the influence of Carlo Aymonino as city planning commissioner, urban renewal and sewing projects are developed in Testaccio, Flaminio, or Esquilino.

Newly developed European experiments, from *open block* to *neoclusters*, focus on the reconstruction of the urban block and the restructuring of urban fronts, but this time not more related to urban sections, but to the ways of penetration-permeability of the block and the possibility of connection with urban green spaces, are i.e. the case of *housing Baltic* in Stockholm, or *Millenium Greenwich* block (image)[30] in London, in 2002.

Figura 23. R. Erskine, Millenium Greenwich Village, London 2002. Masterplan and facades.

Christian de Portzamparc is also one of the main exponents of the *open block* idea and many of his projects are based on this theory [31]. In the case of the proposal for Paris Massena (1995-2012), he seeks to create a new "piece" of the city based on a series of open blocks, which, in terms of morphological structure, are a graft between the urban block of '800 and the free planimetry of modernity (image Xx)[32]. The volumes of the

[30] EPR Architects, Ralph Erskine, *Millenium Greenwich Village*; https://www.epr.co.uk/projects/architects-masterplanning/greenwich-millenium-village/
[31] C. de Portzamparc, *the open block*, in A+U, n. 407.
[32] C. de Portzamparc, Paris – Quartier Massena 1995 – 2012 https://www.christiandeportzamparc.com/en/projects/quartier-massena/

buildings, although in planimetry they compose together an urban block, are all autonomous. They vary in height, color, materials and even architectural language. Essentially, the same density (medium-high) of the closed / continuous perimeter block is maintained, but the diversified distribution of volumes allows a good part of the apartments a better view and workmanship. Also, this volume articulation game allows Portzamparc to occasionally use volume breaks downstairs to create visual and physical connections to the exterior and the inner courtyard of the block. Its purpose is through the metaphor of still life, to manage to group and compose in harmony objects that are very different in some formal aspects and that as a whole create the feeling of a non-monotonous neighborhood.

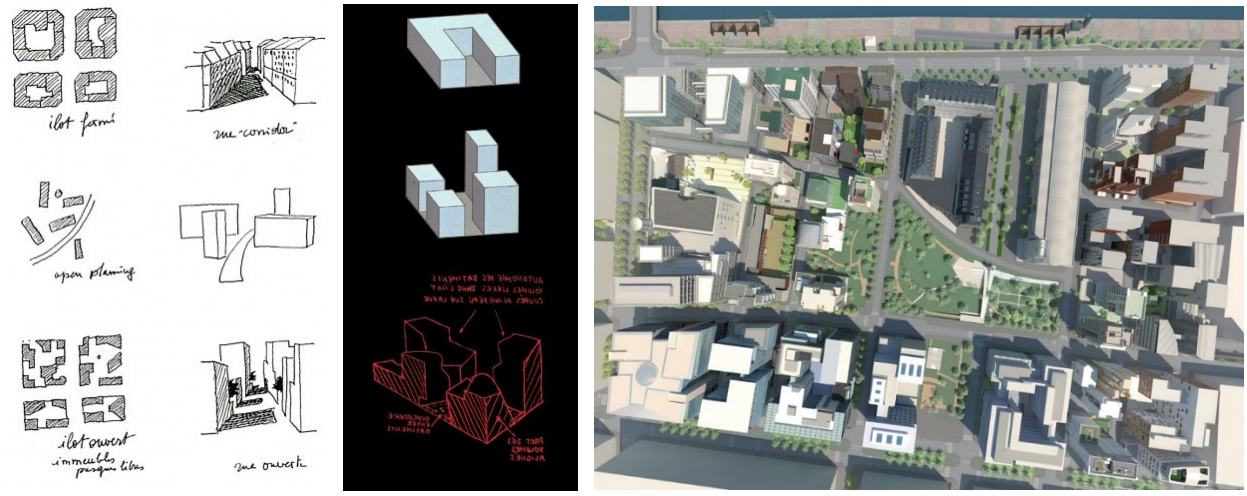


Figura 24. C. de Portzamparc, sketches and diagrams on the open block; Paris Massena 3D Masterplan.

Another important project, on the topic of *open block*, is that of Peter Eisenman for *Rebstock Park* in Frankfurt, in the years 1990-1992This project also reconfirms the tendency of that period (’80 -’90) to work with urban perimeter blocks, but by transforming, deforming them. In the case of *Rebstock Park*, Eisenman, already known for using territorial-urban networks as project generators, grafts two territorial networks here (image. X)[33], which are borrowed from the existing semi-urban context itself. Eisenman also grafts construction typologies. He retrieves the closed block of '800 and the linear typologies of dwellings (*siedlungen*), typical of Ernst May's Frankfurt, and deforms, folds,

[33] Eisenman Architects, *Rebstockpark Masterplan*, Frankfurt am Main, Germany (1990-1992); https://eisenmanarchitects.com/Rebstockpark-Masterplan-1992

shreds them according to the orientations of the generating networks. This articulation occurs not only in the planimetry of the master plan, but is also perceived in the volumetrics of the buildings, which rise in the northern part overlooking the highway and sit in the southern part, towards the green spaces and recreation areas.

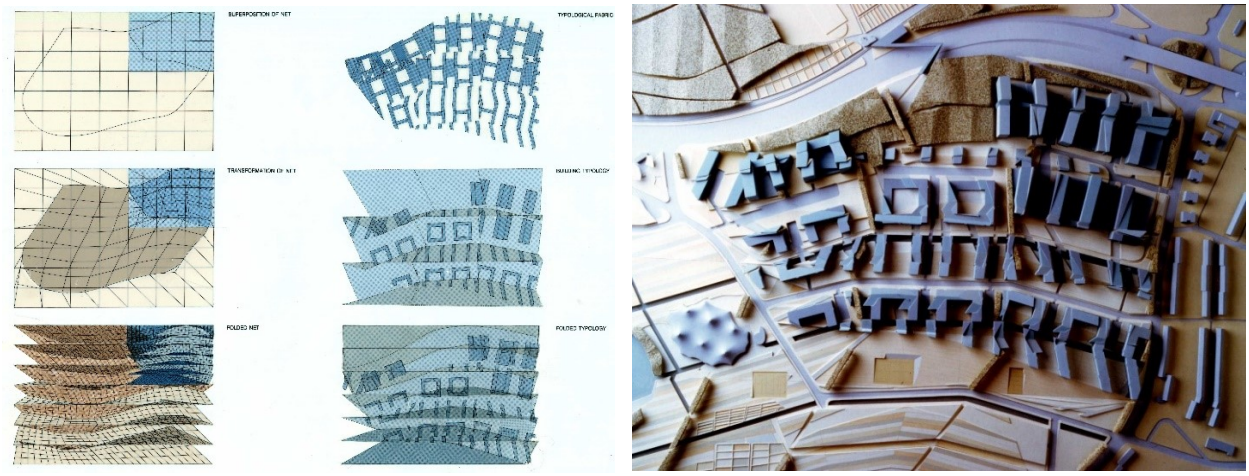


Figure 3. P. Eisenman, Rebstock Park, Frankfurt; Conceptual diagrams of the generative grids and the 3D model of the masterplan.

If in the case of *Rebstock Park* the volumes of urban blocks were deformed due to territorial grids, in the case of Hans Kolhof's project for apartment building *KNSM-Eisland* (1994), the opening and deformation of the urban block occurs due to a pre-existence, a historic building . The perimeter of the traditional block here is folded to the point that it seems to embrace the historic building (image. X) and is practically divided into two inner courtyards.

Figure 4. H. Kollhof, apartment building KNSM-Eiland; views of the couryard and a planimetric view of the transformed block, in order to include the preexisting building.

In the following two projects, we see how the reconceptualization of the urban block does not occur only in its perimeter, in deformation, in extension-extension towards the landscape, or in erosion-deformation. In the Herman Herzberger project for a block of flats in Cologne and in the housing project of the Atelier Kempe Thill in Roubaix, experiments are performed on different ways in which a given space can be configured through the construction of a perimeter: e.g. overturning the idea of a closed perimeter block; or the construction of a new, continuous perimeter, to highlight a large empty space. In both cases it is required to articulate the space of the block starting from its interior.

In the case of H. Hertzberger's *Mediapark Block* 4, the inside-outside ratio is completely reversed (image. X). This ensures greater permeability of the central space and also a continued use of "external" public spaces and semi-private "internal" spaces.

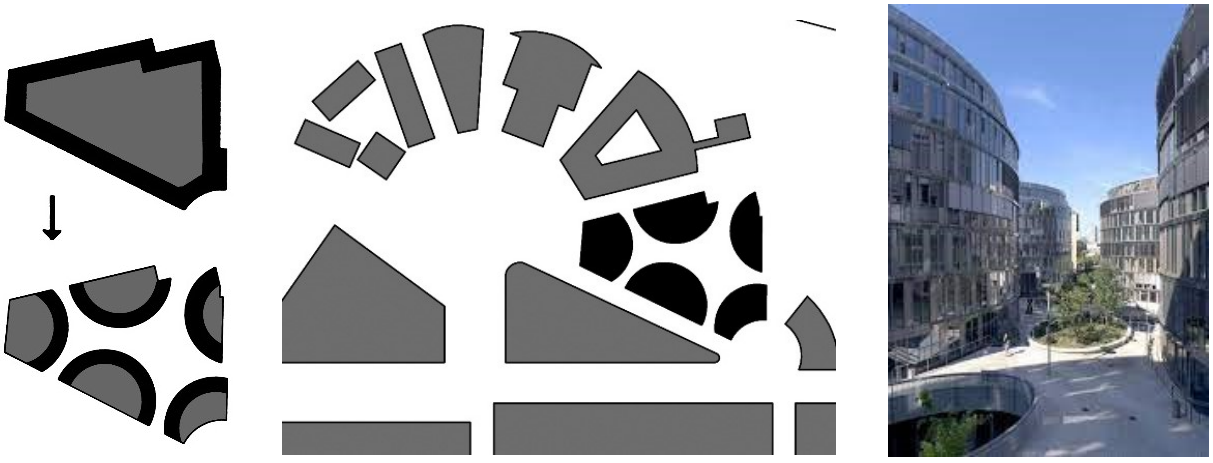
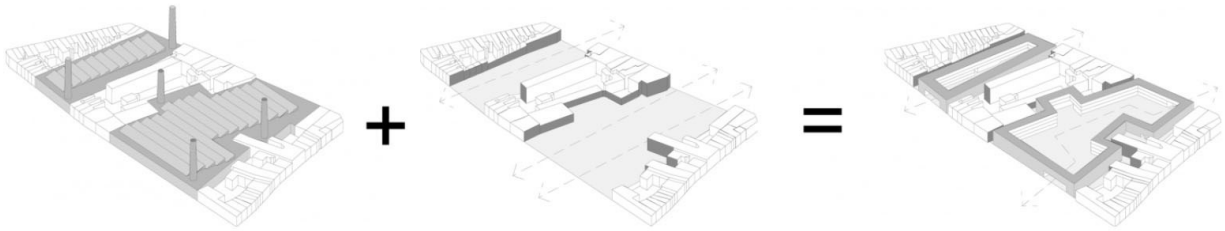


Figure 5. H. Hertzberger, Mediapark Block 4; Conceptual diagrams of the inverted perimeter of the urban block; view of the intermediate semiprivate space.

Meanwhile, in the other case, that of Atelier Kempe Thill in Roubaix, the designers seek to create in the middle of free space a landscape completely different from the context (image. X). Their concept is more related to an urban oasis, than to the idea of an ordinary neighborhood.



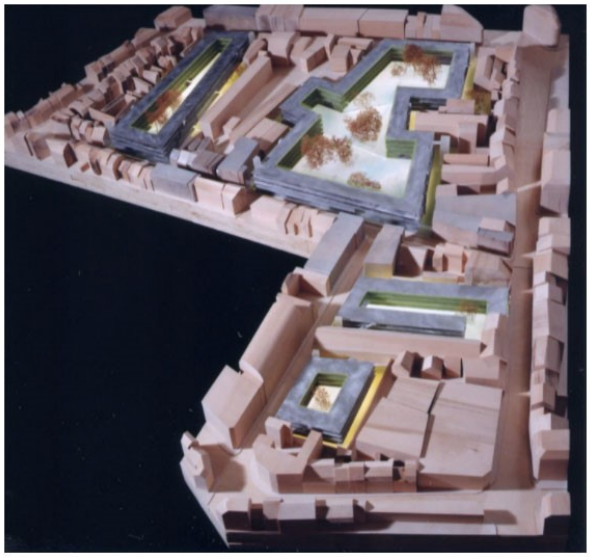


Figure 6. Atelier Kempe Thill, Roubaix; framing the urban voids conceptual schemes and 3D model of the urban intervention

The protected perimeter space offers an ecological environment, with recycled water and urban gardens. The perimeter volume offers environments with flexible use. They can be apartments, multistorey houses, offices or shops. Basically, within the transcended concept of the block, the neighborhood, here offers a combination between housing, tranquility, environmental well-being and securitty, the primary demand already for urban centers.

Typological collage and neo-clusters

In the last twenty years other ideas of urban block re-processing have been developed in Europe - mainly in the Netherlands - e.g. *neo-cluster* and *typological collage*. In both of these urban models, the placement of buildings loses all reference to the continuous road-building connection of the traditional European city and also to the hierarchical and rigid approach of modernity. As C. Zucchi puts it (Zucchi, *Urban Housing*, 2004), in the contemporary city these urban structures are more like plug-in projects, which are placed

in relation to the existing infrastructure, and consequently, are dimensioned at the appropriate urban scale. In the MVRDV project for Brussels Central Station, the intervention consists of a large piastre that overlaps the railway infrastructure and physically connects on both sides three high-density urban custers (FAR 3-6.5). The orientations of the buildings do not correspond to the urban conditions - as in the structure of the block - but rather to the landscape conditions.

Another example is the project of the new urban block Chassè Campus in Breda, by the famous OMA studio of Rem Koolhaa. The buildings are all of different typologies and are placed within the urban unit depending on the landscape and the connection with the green space (image. X). The typological collage aims to bring together, in an urban space, buildings that complement each other in the functional aspect, but not in the formal aspect.

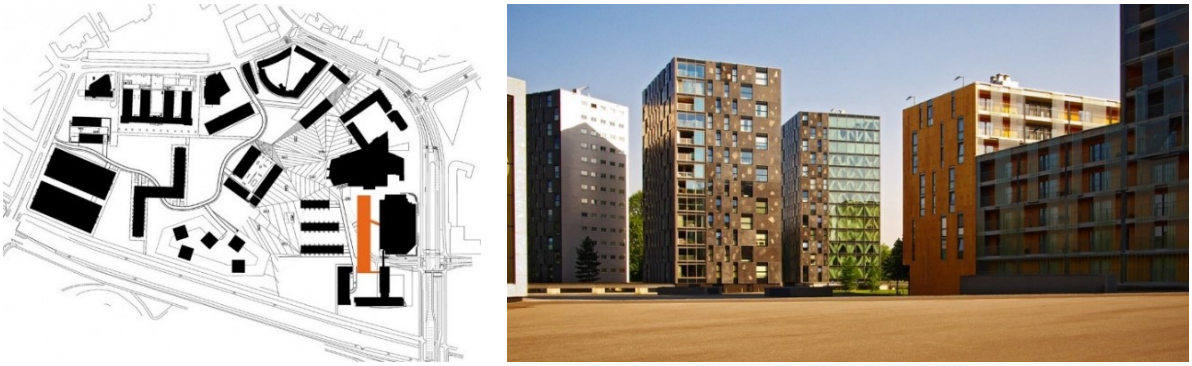


Figure 7. OMA, Breda Chassé Campus; Masterplan that shows typological collage urban model.

A similar idea of a typological collage is the KCAP master plan for Müllerpier in Rotterdam. In this master plan, the thirteen residential blocks are articulated in completely different typologies. The orientation of the buildings within the block, as well as the morphology of the urban structure as a whole, is dictated by factors such as the surrounding landscape and viewing angles, by climatic and environmental factors, by the continued use of public space by residents and passers-by (image. X)[34].

[34] KCAP, *Müllerpier*, Rotterdam 1998-2003;
https://www.kcap.eu/projects/35/mullerpier

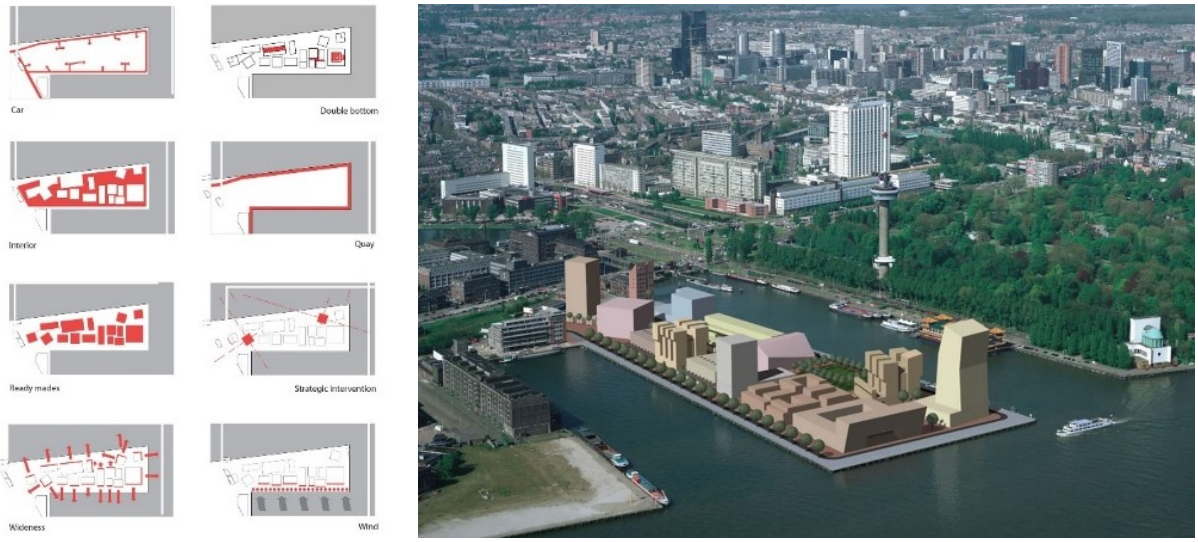


Figure 8. KCAP, Müllerpier, Rotterdam; Conceptual diagrams of the typological collage and 3D masterplan.

4.3.3 New Urbanism and Smart Growth

One of the most popular anti-sprawl urban movements in America - where this phenomenon developed even more - is *New Urbanism* (NU), which started in 1980 as an organization of architects, urban planners and entrepreneurs. In essence, this movement sought, through certain urban principles and rules, to encourage professionals in the field (but also the residents / citizens themselves through the participatory processes) to intervene in the territory by "simulating" "traditional" cities. This move comes as a result of the influences of Ian Mc Hargh, Paul Davidoff and Jane Jacobs (between the '60s and' 70s), who had begun to question whether the endless expansion into territory was still something positive for American society, and that perhaps the time had come to look for other forms of development.

NU actually stands under a larger theoretical umbrella, which is Smart Growth (SG) (diagram...). SG can be summarized in 10 main points:

1. mix land uses
2. take advantage of compact building design
3. create a range of housing opportunities and choices
4. create walkable neighborhoods

5. foster distinct communities with a strong sense of place
6. preserve open space
7. direct development toward existing communities
8. provide a variety of transportation choices
9. make development decisions predictable, fair, and cost-effective
10. encourage community and stakeholder collaboration

Some of these principles, such as compact urban forms, mix land uses, wakable neighborhoods, etc., are also included in the NU, which, as mentioned, has an *anti-sprawl* purpose - the response to CSD (*Conventional Suburban Development*) – and the construction of the city in such a way that dwellings, offices, schools, manufacturing industry, are not always separate functions in the territory. So clearly the NU is another strong critique of modernity and functional zoning, as critical was the urban theory of L. Krier and C. Alexander at the time, which focused on the advantages of vernacular architecture and "traditional" design. It was at this time, in 1981, that Andres Duany and Elizabeth Plater-Ziberk (among the leading exponents of the NU) designed the *Seaside* Florida holiday center / village. The project focuses on restoring typical urban elements of the traditional city, isolato / block, road and buildings. Krier and his projects for the European city are here the design basis, from which emerge a series of urban norms and rules (image *Seaside Florida*).

In the end, we can say that, in order to avoid *sprawl* and the repetition of very few architectural components - which in total create a dull, *redundant*, and ultimately strongly segregated homogeneity) - NU has as its final final goal- elaborate new norms of housing design, abacus design schemes which can be more easily spread among professionals and affect the design of *aggregate* construction in general.

Also under the SG umbrella we find the theory of *Transport - Oriented - Development* (TOD), which aims to create compact urban nuclei in the vicinity of the main stations of public transport (train or tram). Again, the main focus is to avoid sprawl, mix functions, better connection with the territory of metropolises and quality public service, affordable by all. To a European these may seem familiar and not very original strategies, but in the context of American territory these strategies still sound innovative. One of the most

famous exponents of this urban theory is the architect and urban planner, Peter Calthorpe. He proposes several urban models that can sostainablely restructure the peripheral centers on a territorial metropolitan scale (image). These models are based on a series of elements that can be combined with each other and create genuine urban planning and design instruments. We are mentioning some of them below:

- Increase of the variety of uses
- Redesign of suburban centers
- Development of urban voids
- Selective residential densification
- Introduction and strengthening of sustainable transport
- Regional planning that recognizes the problems of suburban areas
- Participation and consultation with the inhabitants
- Prescriptive and indicative regulation of the quality of design
- Improvement of green spaces and ecological areas
- Help for the maintenance and diversification of the building stock
- More accessible and efficient public services

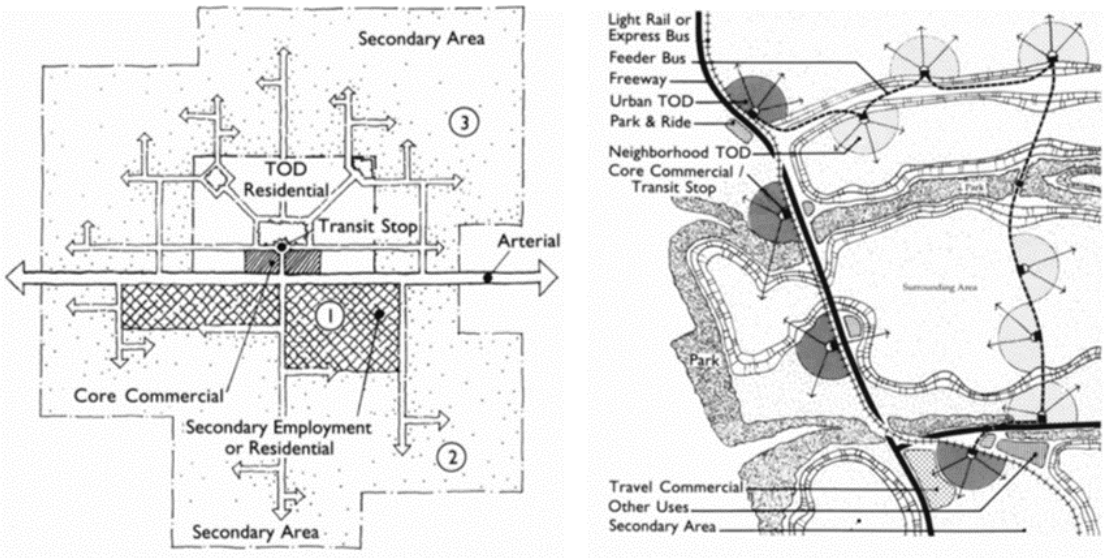
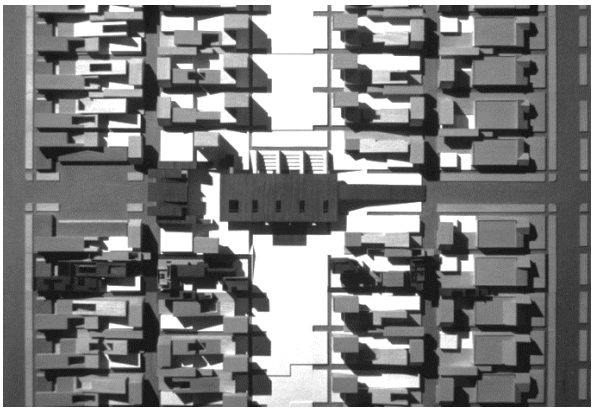


Figure 9. TOD ....

It can be concluded that, although with a corservative historicist tendency, in the American context there are many architects who have supported the NU and are using it as a more

"human" alternative to urban rehabilitation. NU-based densification techniques - among which are: *suburban town centre, mix-use, urban infill and infill development* – are a more sustainable urban alternative to auto-segregation of *gated communities*. Among the interesting examples of interventions of this type can be mentioned the case of a residential block in Los Angeles (image), designed in 1999 by architects D. Guthrie and T. Buresh (https://guthrieburesh.com/American-Dream). Through a *zonning diversificato* process (which tries to mix different economic and social layers within a block) and the return of the "street" element, as the main public space and at the same time the fragmentation element of the typical Los Angeles block (15m x 45m), created the possibility of increasing the density of construction and housing on existing plots and conservation of other vacant spaces.



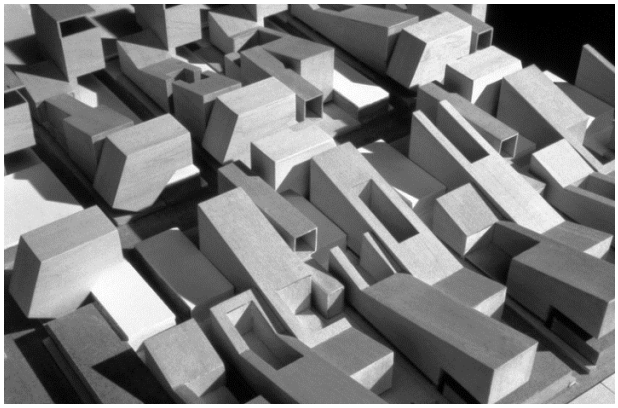


Figure 10. D. Guthrie, T. Buresh, Los Angeles; ...

In the UK there is also already a special focus on the *sprawl* phenomenon. Through New *Traditional Urban Planning*, which is based on the principle of determining the street space from the line of buildings and the principle of the city that develops in urban blocks of approximately 800m diameter (due to the distance that can be walked normally on foot and that is about 400m), aims to double the density in the English suburbs. *Urban Village Forum* is another urban policy instrument, which aims to restructure the English suburban landscape, through a series of *selective densification* processes, where in large suburban areas are introduced building blocks with other non-residential functions, in order to create blocks smaller with urban character (imazh i skanuar, Reale).

4.3.4 New Typologism (typological-urbanism)

The third response to the sprawl city is more experimental than the first two, as in the *New Typologism* (NT) framework the references from the European city tradition are no more, while the connection becomes more natural with modern urbanism, according to a typological key and that based on urban models. The urban processes suggested by NT are not related to the history of the city, so the connection between the architecture and the urban project does not make sense. Experimentation is already done at the apartment level, starting from the typological aggregations of its cells. R. Koolhaa's writings and his studies on the issues of *urban density* and *scale of the project* of the ’90s become the beginning of a wide professional debate for a whole generation of architects and urban planners. Housing and new housing requirements are the focus of this debate, but not in relation to the *existenzminimum*, but - always in relation to typological research - in the way in which current functions and activities can be integrated into the housing structure.

In fact, this re-discussion of CIAM principles begins even earlier thanks to some experiments by A. and P. Smithson within the Team X group in the mid-1950s. The aim was to expand the field of research from that of architecture to that of habitat. The focus is on the concepts of *identity*, *neighborhood* and *association*, which can change the relationship between public and private space in the topic of housing. It is thus becoming increasingly important to define connecting spaces and establish a hierarchy between public, semi-public, semi-private and private spaces. This approach is not limited only to the planimetric solutions of settlements - ie to the horizontal movement - but also to the dimension of "height". Smithson's proposal in this respect, with the city developing at several levels of elevation, is emblematic. Between the ’50s-’55 they lead to a city scheme based on the concept of clusters, which was also a model of association-interaction, free grouping but systematized (image. X)[35].

[35] https://nathaliestachnik.wordpress.com/2015/05/18/alison-peter-smithson-haupstadt-berlin/

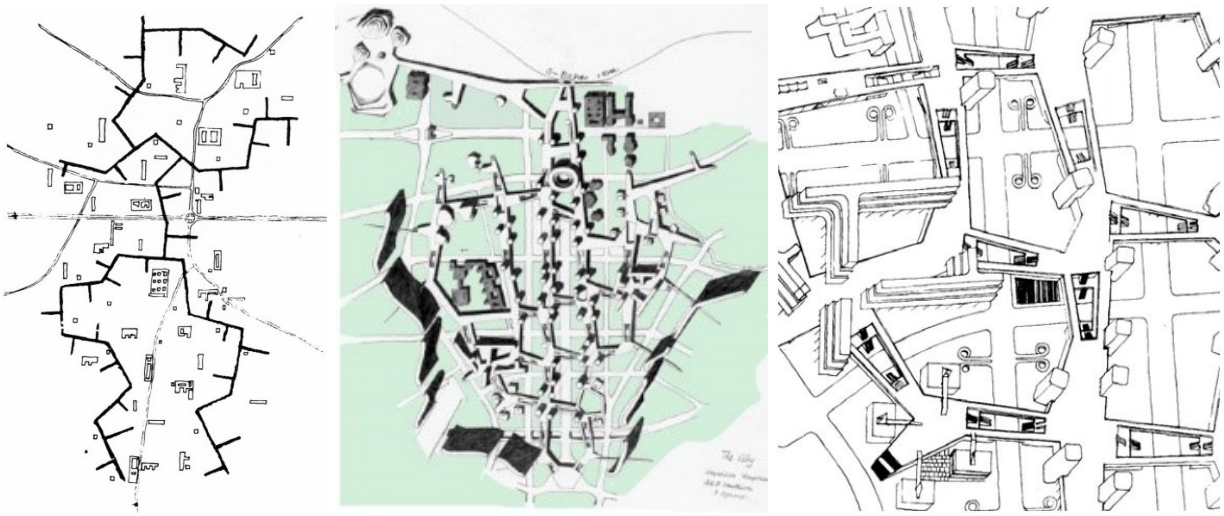


Figure 11. Alison and Peter Smithson, The Golden Lane (1966); Berlin Haupstadt (1957-58); urban detail of Berlin Haupstadt and the idea of clusters.

"[...] *il cluster è una maglia fitta, complessa, che spesso produce un'aggregazione dotata di una struttura ben definita* [...] *Nell'idea di cluster non c'è un centro unico, ma molti*"[36] (Reale 2008, pg. 73). At this point, Smithson argues with Jakob Bakema (at the same time), who advocated the idea of macrostructures as an instrument to establish a rule-structure in the form of a scattered city. But in the meantime, their ideas were similar to those of Aldo Van Eyck (one of the leading figures in modern evolution), who no longer spoke of form in itself, but of relationship-relations. We must keep in mind his famous concept of "labyrinthine clarity." A. Van Eyck and his ideas lead to a series of researches on "low rise - high density" housing typology.

In the '50s and' 70s, many experiments were attempted in "fabric-knitting" housing systems, where the focus is on the relationship between housing units. Some examples of this experimental approach are the *Siedlung Halen* complex in Bern (1955–61), from Atelier 5, *Penn's Landing Square* in Philadelphia (1968), from Louis Sauer or *Villaggio Matteotti* in Terni (1969-75), from Giancarlo De Carlo (image. X-x). The difference from Penn's *Landing Square* from other cases is that it rebuilds an urban unit within an existing urban block. However, the whole project is based on the research and typological articulation of *low rise - high density*.

[36] A+P Smithson, *Cluster city: a new shape for the community*, in: *The Architectural Review*, nov. 1957, riportato in: M. Vidotto, *A+P Smithson*, Sagep Editrice, Genova 1991, p. 21.

In the three projects mentioned above, typological experimentation, interconnection at different stages of the project, participation of residents in the architectural project, or environmental design are combined.

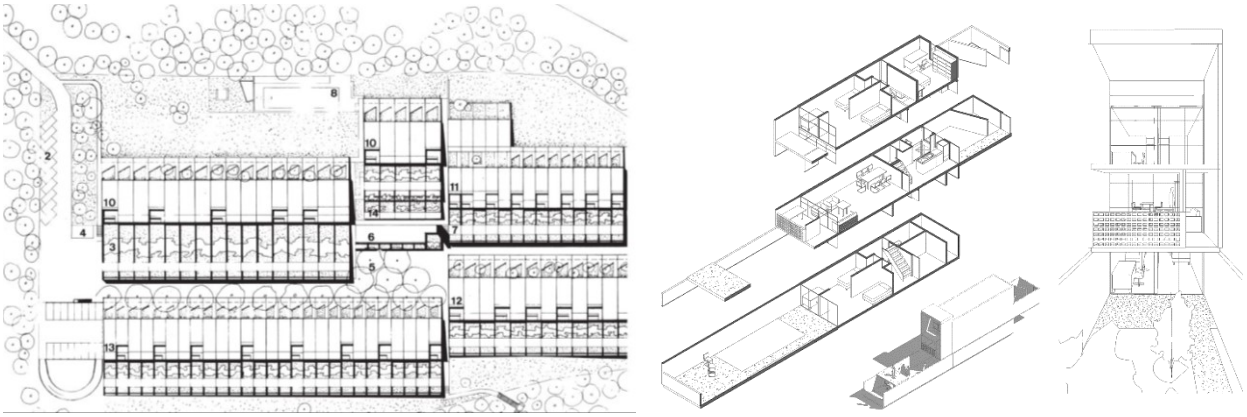


Figure 12. Siedlung Halen[37], Atelier 5

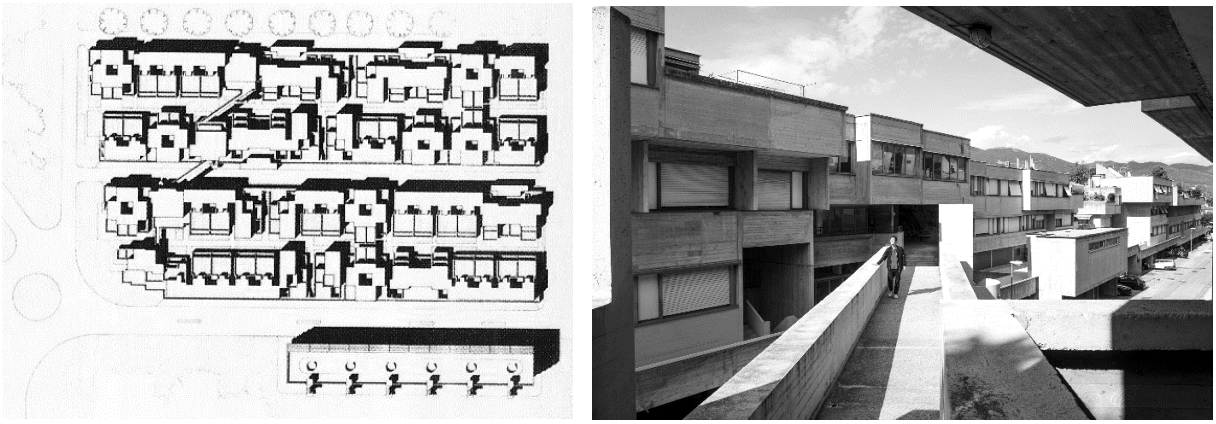


Figure 13. Villaggio Matteotti[38], Giancarlo De Carlo.

[37] https://atelier5.ch/arbeiten/1961-siedlung-halen-herrenschwanden
[38] https://www.professionearchitetto.it/news/notizie/29200/Il-Villaggio-Matteotti-di-Giancarlo-De-Carlo-in-20-fotografie-di-Mario-Ferrara

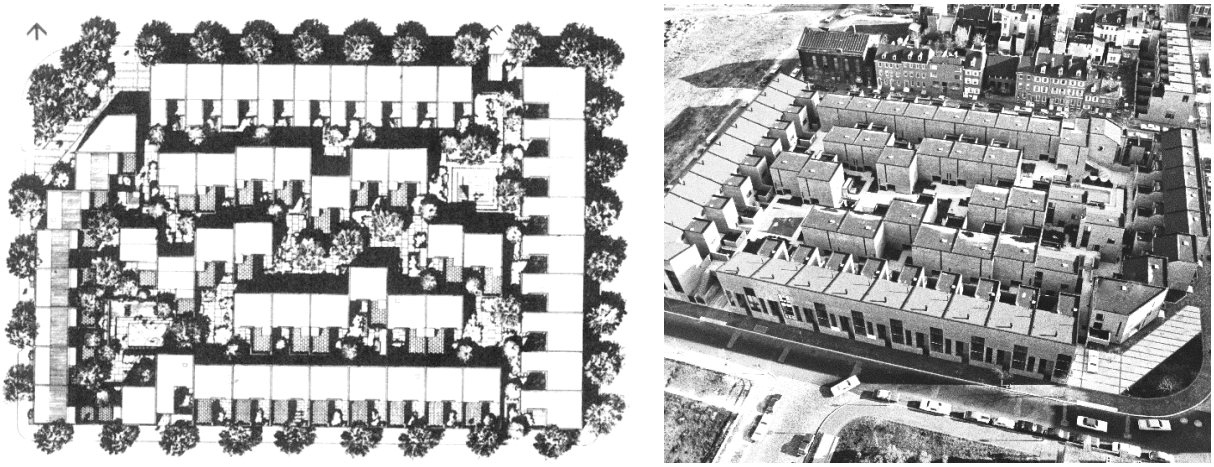


Figure 14. Penn's Landing Square[39], Louis Sauer.

If in the case of the New Urbanism city theory there stood a polycentric model, in the case of the city models developed over the last twenty years by Dutch architects, there are no more contrapositions between the traditional center or the new centralities. Urban and suburban are a continuation. The whole territory can be considered habitable, but while the concept of center in the urban context gradually loses importance, the opposite happens for the idea of landscape and territory. Thus, the topics related to the typology of the dwelling and the weaving of a settlement become central. This is also because the anti-sprawl approach still remains a priority, so this type of research aims first to densify the existing urban contexts, and then to set a boundary-limit in an urban settlement.

The typological approach - as an alternative to the compact city and the urban block - as an experiment of new urban aggregations, obviously influenced by urban planning, planning and landscape architecture, becomes a cultural and methodological tradition for the architects of the last twenty years (especially those Dutch).

Residential issue - in the European panorama and beyond

In Europe, research on housing typologies gradually lost importance until the late 1980s, when the idea of a strategic urban project or a separate architectural project began to be

[39] https://hiddenarchitecture.net/penns-landing-square/

articulated, thinking that these types of interventions could have the strength to make a structural change in urban fabric. This approach led research and experimentation on housing typologies to be abandoned by architects, who focused (for global politico-economic reasons) on the project of a museum, cultural or commercial center, etc. As a result, the design and implementation of residential structures remained in the hands of construction investment companies.

But clearly the current situation, related to housing, residential structures and the social consequences caused by them, requires the return of professionals to research on typology. This situation is mainly confirmed by two main data at the global level. The first has to do with Europe and the fact that a good part of the population has moved from the country of origin for economic, social, or political reasons and has inhabited urban territories and other residential structures. About 40 million people currently live in *grand ensembles* - popular / social housing; 12 million of them live in France alone (Reale 2008, pg. 75). These residential structures require rehabilitation of functional, typological, but also social type. The question that arises here is: how can the important issue of housing and residence be raised once again? In what form or manner (densification or reduction of density)?

The second data has to do with the rapid urbanization that is taking place in developing countries. In China, for example, a population shift of 300 million people from rural to urban areas is projected within ten years. This will undoubtedly be accompanied by social and economic changes, which will also have consequences on the fabric and urban layout. (the employed population in agriculture will decrease from 40% to 20% in ten years). These urgent challenges must find answers to the figures of the architect and urban planner through research and experimentation on the residential typologies and urban form of the cities of the future.

On the other hand, the changes that come naturally may be the impetus for new research in housing typology. Social, or economic change, can be a strong motivation to change — looking for new housing alternatives. Emigration and migrations-daily movements, the different formation of the family nucleus (parents without children, singles, elderly people living alone or in a couple), are also important reasons to consider. Residents' demands

are constantly changing, but in the meantime housing supply or building regulations remain incompatible. NT seems to leave room to experiment in this direction, not only with collective residence buildings, but also with individual solutions based on social strata and specific identity affiliation.

To be appreciated in this respect are some examples from MVRDV, who have always been at the forefront of change and have experimented e.g. with the building linear typology, which is also articulated in height by interfering with the tower typology, as in *Mirador*, Madrid 2004 (image. X). Steven Holl also interweaves different density parameters with the residential typology "yard block", in linear or tower, as in the *Toolenburg-Zuid* residential complex in Amsterdam 2001, or *Linked Hybrid* in Pekin, 2004 (image. X). Claus en Kaan, in his studies of the *Ijlburg-Amsterdam* master plan, experiments with the maximum functional program that can be mixed in one of the urban blocks. Nijric + Nijric, in the 1996 project for social housing in Glasgow, hybridize the typologies of "yard housing" with those in a row -rowhouses and with those in linear (image. X).

In conclusion, we can talk about New Typologism in three different typological strategies: *hybridization,* or overlap, deformation – merging of existing housing typologies*; combination,* which consists in the aggregation of typologies through actions of removal-addition of housing-type dwellings (image. X); and *comparison*, where different typological solutions are evaluated as alternatives to the same urban density parameters (image. X).

4.4 How to Generate a Thousand Masterplans: A framework for Computational Urban Design

Luc Wilson, Jason Danforth, Carlos Cerezo Davila, and Dee Harvey, SimAUD 2019

Computational Urban Design and Analysis

Of course, the ways of designing and generating the urban form have further evolved thanks to the methods of "Generative Design". "Computational Urban Design" (or Generative Design ") is a relatively new way to quickly and automatically generate urban master plans and structures that respect urban parameters for quality living space.

It seems that thanks to some digital instruments and their control, it has become easier to quickly produce urban "products" and also to replicate them in different variants and in different situations. It seems like the question: Can the "smart city" be more than technology grafted onto a traditional design?, posed by the KPF group, we can answer that "*by privileging performance over form, and merging the concerns of human experience (comfort, daylight, visual interest) with functional efficiency (sustainability, building efficiency, access to transit and green spaces), we are able to embed computational intelligence directly into the built form of the city*[40]*.*

The research group sets up a digital "model" which translates urban density parameters (FAR), building-housing typology, road network and volume distances, into quality urban parameters (*comfort, enjoyment, and livability as well as functional efficiency*).

Learning from Cities

Qualitative urban parameters are taken from some existing references, concrete cities which are considered as successful cases. For example, New York's case and its famous orthogonal street network, allows and promotes a *flexible, efficient, mixing of high-density uses*. Barcelona is taken as a successful case of public spaces, which with their variety support various activities. Tokyo is taken as a reference for its well-known Transit Oriented Development system of subways. Rome is taken as a successful case of

[40] https://ui.kpf.com/smarter-city

pleasurable pedestrian experience and walkability in the typical streets of the historic center.

These basic urban features are translated by the KPF group into measurable quantitative parameters, which are integrated into the digital model and contribute in qualitative terms to the creation of different urban scenarios generated by the software.

Building the Model

Choosing Inputs

Two of the main inputs that build the model are: road network (width of road, orientation-rotation, position of joints); pixel map where functions and services are located (residential, office, retail, manufacturing, education, parks, etc.), according to an organizational logic and quantitative proportions. Then, the volumes of buildings, shapes, heights and distances between them are processed by the model based on the above inputs. The typologies used, even based on the required urban density, are three main types (fig. 15): *high density towers on podia, middle density buildings* (either courtyards, bar buildings setback from their base, or large floorplate industrial warehouses), and *low-density infill buildings* (such as townhouses and small offices).

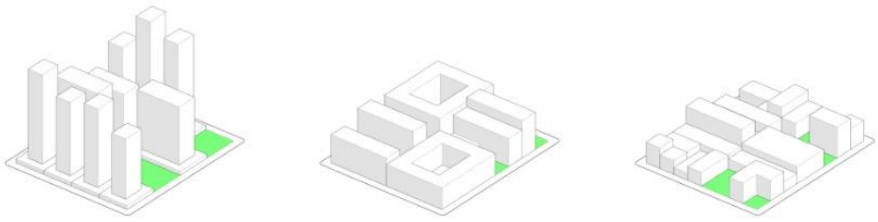


Figure 15. Parametric building typologies for high density, middle density, and low-density parcels. Source: KPFui

Design Generation

The methodology followed, up to this point, to generate a long series of urban combinations and scenarios, applying computational design at the urban scale, is summarized in these four points: *1) Simplified Input Definition 2) Procedural Geometry Generation, 3) Performance Evaluation and 4) Analysis & Communication to generate and test thousands of master planning scenarios.*

This methodology allows the process of generating hundreds or thousands of urban iterations to be relatively fast and to give immediate visualizable and clear results (fig. 16) both for architects and urban planners, but also for other stakeholders, such as residents, investors, municipalities, businesses, etc.

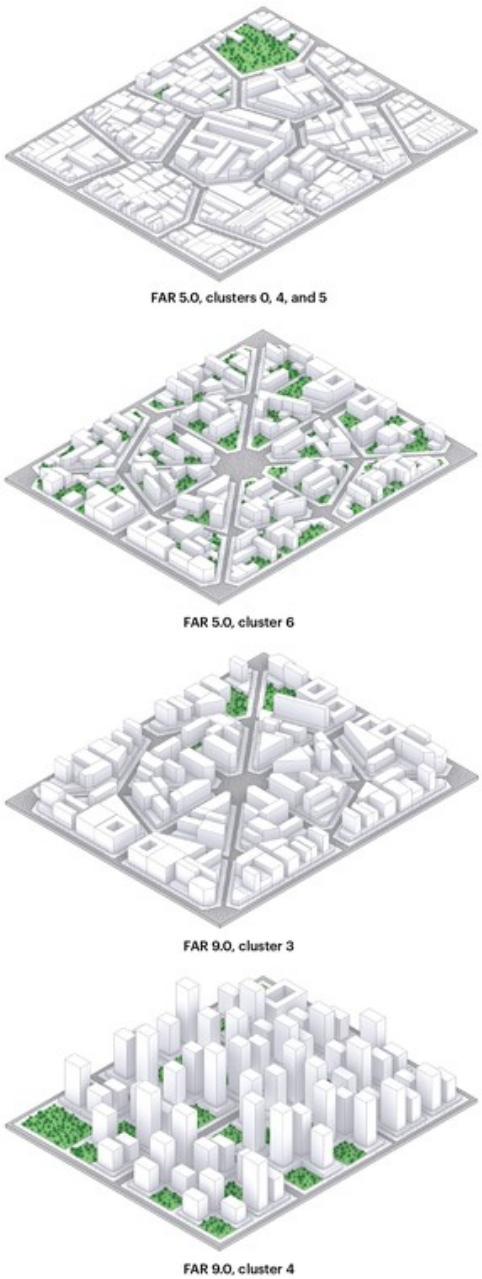


Figure 16. Urban scenarios-iterations: the buildings, along with the streets and parks, form the geometric composition of each design iterations.

Analysis and Results

All iterations (fig. 16), with different road network options and construction-residential typologies, pass to a final stage, that of quality assessment, where they are measured almost anything, *from views, to daylight, comfort, sky exposure, solar radiation, wind, energy efficiency, visibility of buildings from/to landmarks, access to parks and transit, mobility, and even subjective characteristics like "visual interest"*. After evaluating all the case-scenarios, the working group uses *Scout*, a web-based platform for data-visualization, in order to select successful trends and cases, in terms of quality (fig. 17).

These cases become readable and understandable by urban experts-architects, but also by ordinary people. Herein lies their strong point, as residents or other stakeholders can become part of the modifications and re-generation of other versions, which come closer to the needs of parties directly affected by these urban scenarios.

Conclusions

It should be noted that, despite the ease with which all these scenarios can be generated, or the fact that this procedure-method allows to generate an evaluation-comparative table immediately (fig. 17) and for stakeholders to intervene in real time in modifying any scenario, these variants of models or scenarios seem to be proposals detached from the existing urban situation. Existing buildings or existing urban patterns do not seem to be included in these scenarios. Elements of identity or existing urban character are not included in the urban quality parameters. This could further enrich this method of generating the urban form and perhaps make it adaptable to a context like that of Tirana.

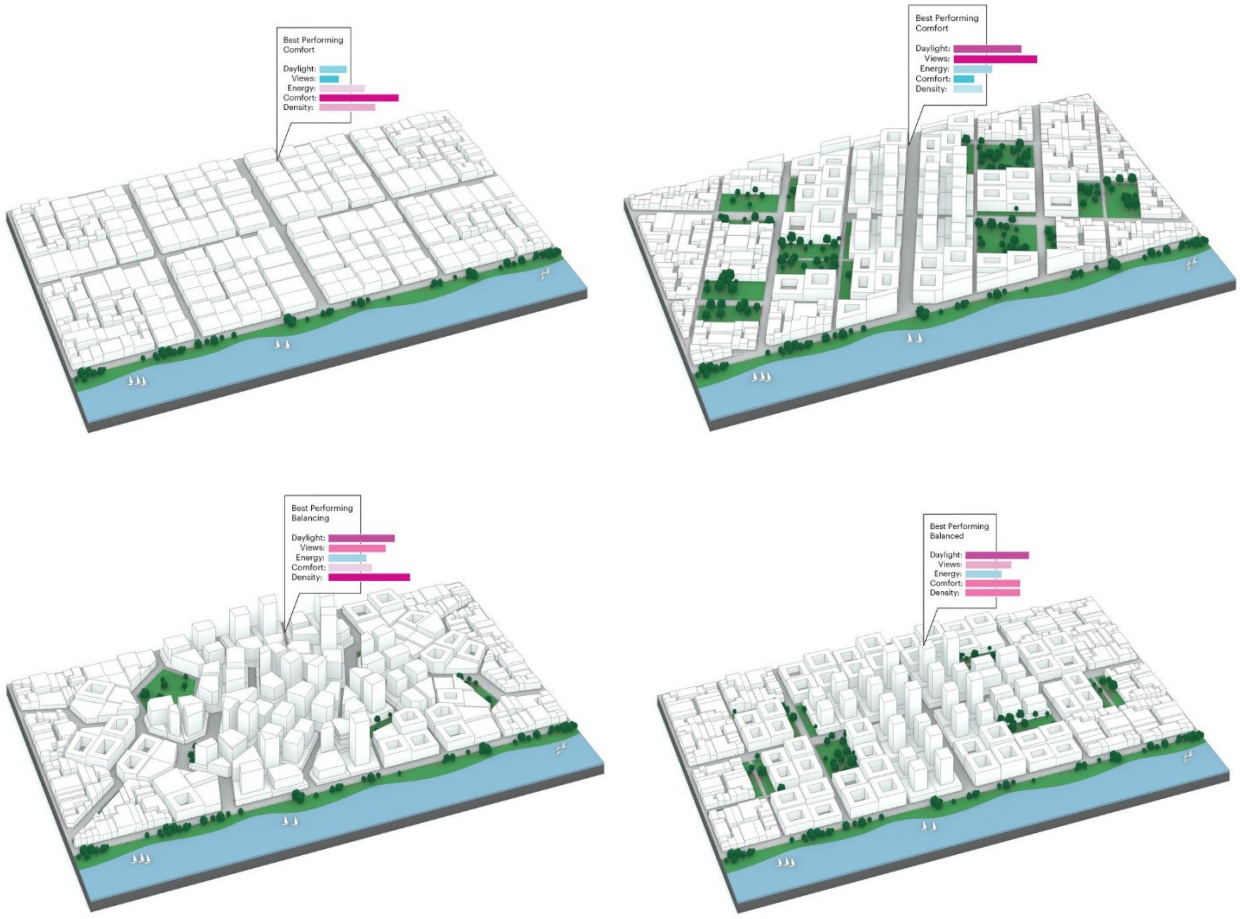


Figure 17. Iterations of different urban scenarios and analysis-evaluations of urban quality parameters.

4.5 Advanced Studio in Architecture and IT

Students of 4th year of Architecture and Urban Design

Led by PhD. Ledian Bregasi, and PhD. Valerio Perna. Theoretical framework based on Sotir Dhamo's PhD. Thesis. Software: *Voronoi, Decoding Space, Visual Cones, Machine Learning*

An attempt to generate urban forms, starting and based throughout the process on existing urban weaving, is the work developed by S. Dhamo, L. Bregasi, V. Perna and fourth year architecture students, Polis University. The generation process is based on the study of an existing urban context of organic Tirana and further, the interpretation of existing urban fabrics through fractal theory and self-organization (fig. 18). The obtained information is processed in a second phase by parametric software, which recreate from the beginning similar urban scenarios, where new urban forms can be re-created which carry the character and self-organization of the organic city (part of the original identity of Tirana).

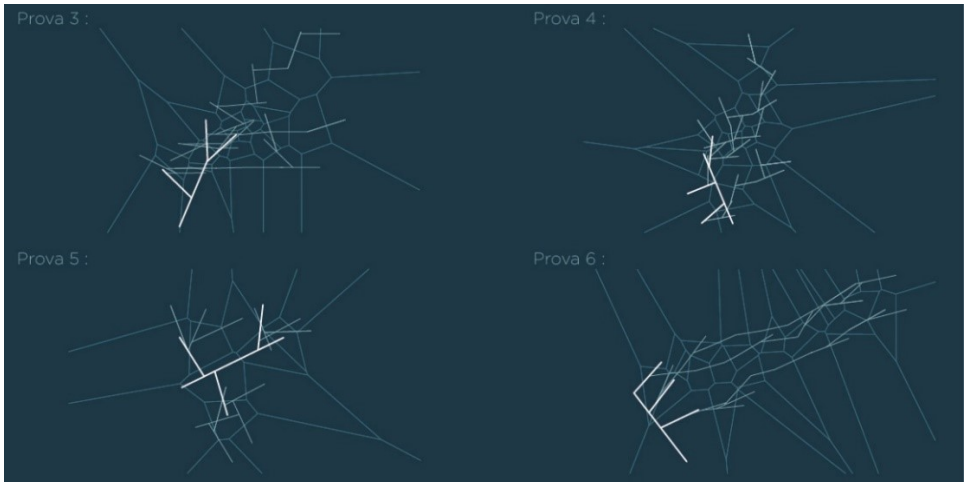


Figure 18. Reinterpretations of existing urban tissues through fractals theory and thanks to parametric software as Voronoi. Source: students work, A. Çepele, D. Sherri, E. Xhafaj.

In the image above, as well as in the following images in this part, are presented parts from the work of students Aurora Çepele, Doriana Sherri, Ensixhei Xhafaj (architecture 4). Unable to reflect all the work of the students, one of them has been selected here and different phases of this work have been shown. Figure 18 shows four of their evidence to re-interpret four organic urban contexts through software-it *Voronoi*. This software, in this case, recreates urban divisions (urban units) based on how organic urban elements are organized.

Outputs expanded through *Voronoi* have been used to design urban interventions in existing contexts, restructuring existing elements and adding elements such as public-sports and green spaces, or even proposing developments in entirely new urban disputes (but preserving the organic-fractal character), as shown in figure 19.

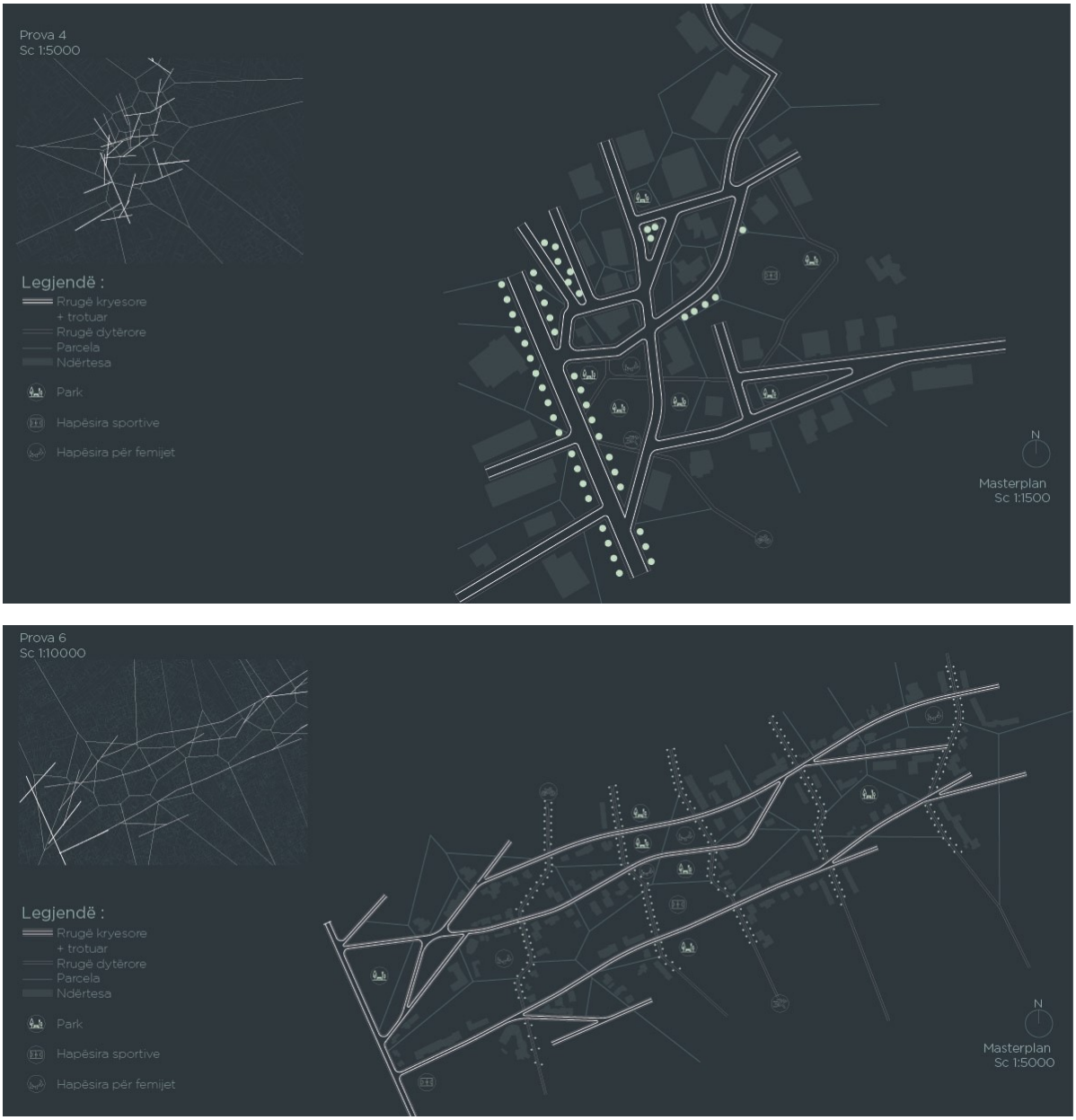


Figure 19. Urban interventions based on Voronoi outputs. Source: students work, A. Çepele, D. Sherri, E. Xhafaj.

While to work with buildings and empty space, software was used in the next phase as *Decoding Space*, *Gaussian Misture* and *Neutral Network* (fig. 20-21).

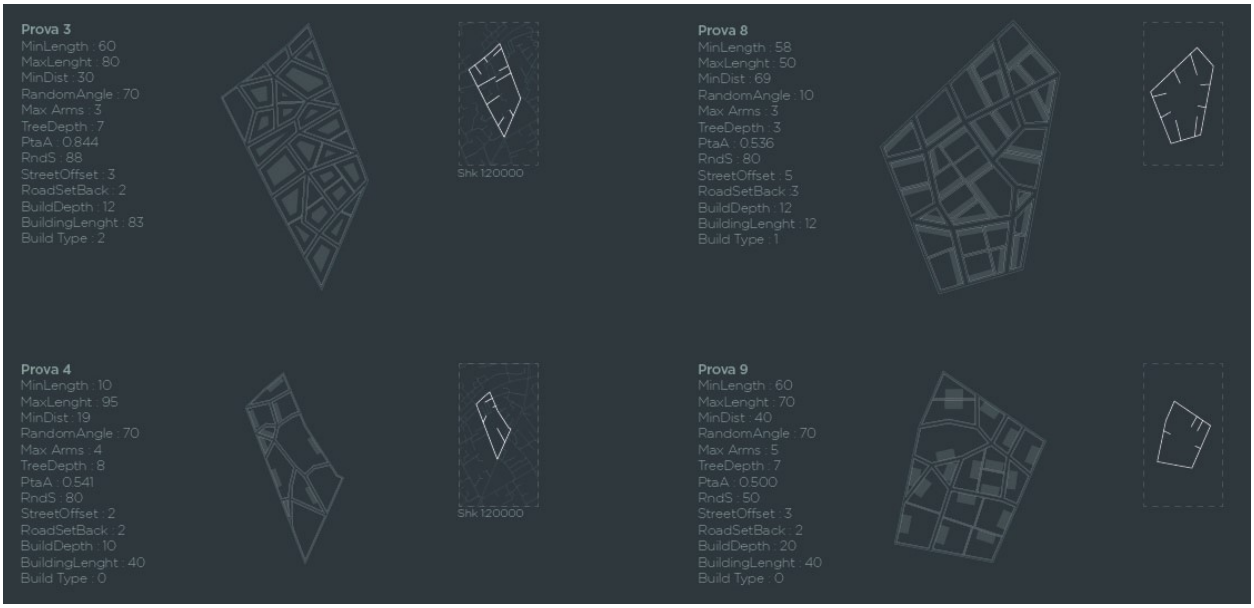


Figure 20. Opsions of different ways to organize buildings and space (Decoding Space). Source: students work, A. Çepele, D. Sherri, E. Xhafaj.

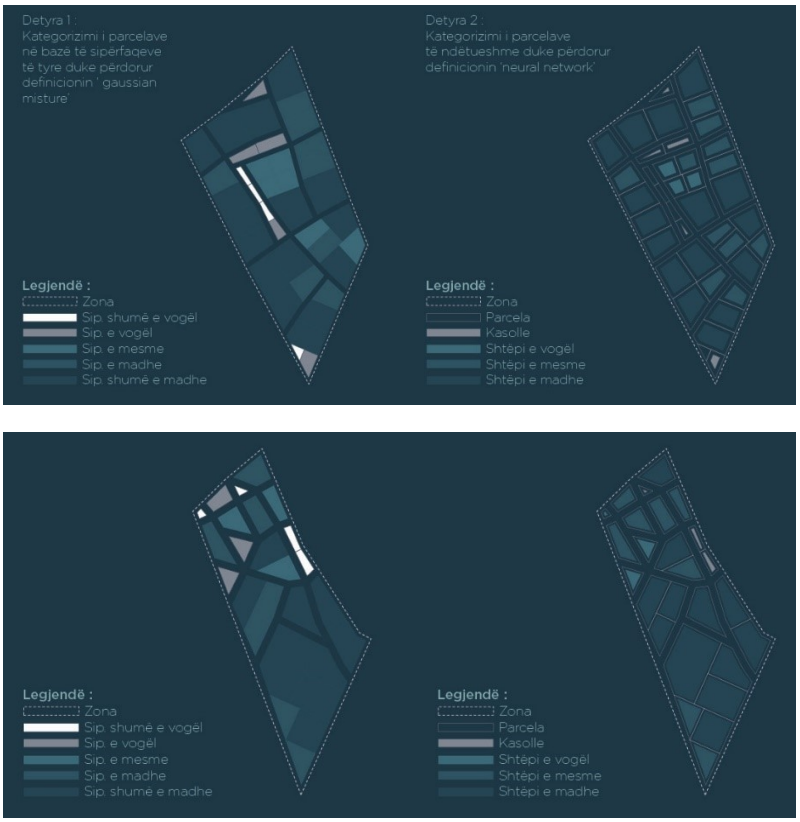


Figure 21. Parametric software (Machine Learning) working with plot dimentions (left) and building dimentions (right). Source: students work, A. Çepele, D. Sherri, E. Xhafaj.

These softwares tend to automatically, parameterize, connect the new urban stream (also generated through the software) to the built-in form. Figures 20 and 21 also give some options on how different typologies of buildings can be positioned, depending on the size, shape and orientation of the plot. In this case, two different definitions are used for the same urban unit, one to estimate the size of the plots and one for the dimension of the buildings.

The conclusions for this part, where the concepts of fractals and self-organization are intertwined with parametric software to control the generation of the urban form through the control of some parameters, still carry some difficulties.

First, the relationship between the interpretation of fractal logic and the parametric logic itself that software uses requires a well-studied process. This in the sense of knowing the programs of course (which probably consequently limits the number of people who can use it, be they architects or urban planners), but also in the sense of a reading and a deep knowledge of the morphology of a certain context urban. Second, it seems that the attempt to use parametric software to generate urban forms seeks to speed up some design processes, thus jeopardizing the simplification of some urban dimensions and the concentration of many steps and many decisions in the hands of the program. This leads us to the next difficulty, the third problem, that of deciding how far the software can operate-decide for these urban dimensions and where the architect or urban planner should decide?

The final three-dimensional products of this design study, even according to the work supervisors, turned out to be dimensionless, disproportionate in volume and distance. The final observation from them turns out to be that perhaps, the element "building typology" or "urban type", should be included earlier in the process, as an instrument that controls from the beginning the dimensions of *density* and *form*.

5 HISTORICAL BACKGROUND – TIRANA'S CITY MORPHOLOGY

An historical overview of the main stages of morphological transformations of the city of Tirana

Tirana still remains today an example of a multi-faceted city. Perhaps one of the characters that makes Tirana so interesting in the eyes of those who study urban development, but also of ordinary tourists, is its urban complexity. It is very easy to walk in Tirana along the main roads and wonder why the buildings that outline these roads do not have a "uniform" appearance with each other, or why they do not have the same or at least approximate heights. Behind the facades of the buildings of the first row of these streets, fragments of the organic city, of that city and that spontaneous architecture that Rudofsky writes about in "Architecture without architects" (Rudofsky, 1964) are still hidden. Between morphological and architectural mixes, indeterminate intermediate spaces are formed all the time. No one can say for sure if it is in a public or perhaps in a private space. Small alleys and squares merge with each other.

Tirana in its steps of urban evolution, has never fully followed what the urban plans projected for it. Due simply to a historical moment, or to the economic, political, or even cultural situation, Tirana, although a relatively small city (in extent and density and remained so until the early 2000s), failed to fully implement none of the plans designed by the Italians and Austrians ('30 -'40) nor those of the socialist-communist period ('45 -

'89). All these plans have been implemented only partially, in pieces. Today again, the urban plan is perceived as a rigid, artificial and authoritarian instrument, which in fact is more in the service of the interests of developers-builders, than the real interests of the inhabitants themselves. All these have caused Tirana to change in a very fragmented way (in the last 30 years with rapid rhythms and intensities) and that the pieces of urban fabrics often remain disconnected and without a connection between each other. This is one of the main difficulties of this study, the identification of urban fragments and their identity.

5.1 Why Tirana is specific?

Tirana, like many cities around the world isa multifaceted reality. However, in the previous paragraphs I tried to show the specifics of Tirana starting from geographical and historical circumstances, their relationship to social structures and how they are reflected in the morphology of the city. Tirana moved from the organic nucleus created in the middle of agricultural fields to the urban abstract axis of the boulevard; from the system of *imarets* disseminated form the Ottoman culture to the straight line open perspectives that pierced the city in the name of Europeanization; from a solely spontaneous entity to also a designed/structured city; from concentric rings to the dissolved vaporized archipelago city; from dictatorial interventions to spontaneously self-made incremental housing and

neighborhoods; from big scale interventions to small scale pixelated infill(s); from single reality to multiplex reality, from linear to complex, from founding to refounding; from extremely strict application of rules to the total abolishment of rules; from clear to unclear and clear.

These apparently contradicting dualities constitute the specifics of Tirana, which are different from many other European capitals, but rather similar with other Balkan cities. Three are the main points of difference: the city foundation under the Ottoman culture that lasted in Albania up the end of the first decade of the 20th century; The long period of dictatorship and absolute self-isolation that started after the Second World War and lasted for more than four and a half decades; The violent spontaneous waves that exploded after the collapse of the dictatorship and lasted for more than two decades.

In Tirana there is a great proportion of the city which is "designed" and made by people that falls out of the authority control. The traces of this *natural city*[41]**,** can be seen at different stages of the city history and at different scales, starting from single buildings, neighborhoods, and up to the entire city shape. As we noticed from the historic analyzes, Tirana initially started as an organic city, and returned to the organic spontaneity several times, including the last twentyfive years. From another point of view, these developments that reflect more the natural properties and the concerns at the local level, are related to the interpretations of the *organic city* understood as individual arrangements *at the smaller scale*, as Batty and Longley argue (1994 pp. 8, 28, 31).

While observing Tirana's urban condition there is always a degree of indecision how to classify some fundamental categories, such as public-private, designed-non designed (even in the legal sense), or different functional uses, relationships, etc. These categories contain simultaneously some states in-between: what you see may become or leap to another state in-between of this category depending on the specific circumstances. For example, the parties test permissibility to approach (or to touch) one or the other "extreme" status of a category by perception (after each step they undertake). This indeterminacy is related to a mentality that consciously generates unclearness and blurred situations in order to create more personal freedom through widening the space

[41] Expression hired by Alexander Ch. In the paper: *The city is not a tree*, 1965.

in-between two corresponding categories: private-public; invasionmediation; interference-combination; imposition-superposition-stratification-du(tri)plication; interlocking-adhesion; etc. These characteristics make the legibility of Tirana urban condition a very challenging exercise.

Tirana lives in a specific situation where there are no clear “limits” and differences between planned and unplanned (Figure), designed or un-designed, and where the geometrically designed city is organically deregulated (Figure). Under this urban and social conditions, identifying alternative design methods that are sensitive to place and process becomes important. Here we come again to an important issue: what kind of planning and urban design methodologies we need in order to cope with the reality? This research is a reflection in this direction too. We have to identify instruments nearer to what people need, not only through classic participatory processes, typical of ‘70s, and ‘80s, but most importantly through trying to realistically understand their “instinct” of city-making and identify methodologies that make this “instinct” part of the design input. Clearly, participatory processes focusing mostly in the organization of the community, trying to give a voice to people (mostly or exclusively in the poor areas) without spending much efforts in the design logics and processes, are not enough. Methodologies that try to combine better these components with their citymaking logics need to be identified.

5.2 The urban origin of Tirana as a dwelling

(the beginning of the 17th century, 1614)

Evolution of the organic patterns guided by physical determinants, topography, and land divisions as preconditions of irregular city form.

Intertwining of the regional commerce routes and the generation of the old Bazar

The system of Imaret and kulliye as a city foundation devise during the Ottoman Empire: religious nucleus and the related urban areas

The process of syenoicism as merging and cohesion of the several urban nucleuses; Urban improvisations based on the social structure and the lack of public control

The persistence of the plan (Rossi, 1984 p. 51) as a morphological originating element: the generation of centripetal, centrifugal and string-form forces (fluxes), to and around the regional intersection of the Old Bazar.

The first urban nucleus of Tirana as a settlement, and then as a real city, is created at the beginning of the 17th century. According to Frashëri (Frashëri, 2004, pg. 17), this nucleus was founded in 1614, while this territory was under the rule of the Ottoman Empire. It is formed as a group of services which are located near the "Old Mosque" of Sulejman Pasha (the oldest mosque in Tirana, demolished in 1944). The services in question were a bakery, a hammam and an inn, which ended with the Old Bazaar (even this urban structure no longer exists, demolished in 1958). This was according to Frashëri (Frashëri, 2004, pg. 161-67, 71-72, 169-173) and according to Aliaj et al. (2003, pp. 14-15) the first urban structure, which was positioned near the Lana River, where today is the monument of the Unknown Partisan. But now no sign of this nucleus exists anymore.

The reason why this urban nucleus, with its respective services, was formed exactly at that point of the territory is because there met 5 of the most important trade itineraries of the time, which connected the major economic centers of the region with each other. These itineraries connected Dibra and Elbasan (East) with Durres (port) and Kavaja (West), and also an itinerary went up to the North and connected Tirana with Shkodra (fig. 1). So, the urban beginning of Tirana was a rest station at the point where these

itineraries met. Therefore, the first urban structure simply met the basic needs for this station (Aliaj et al., 2003, pp. 14-15).

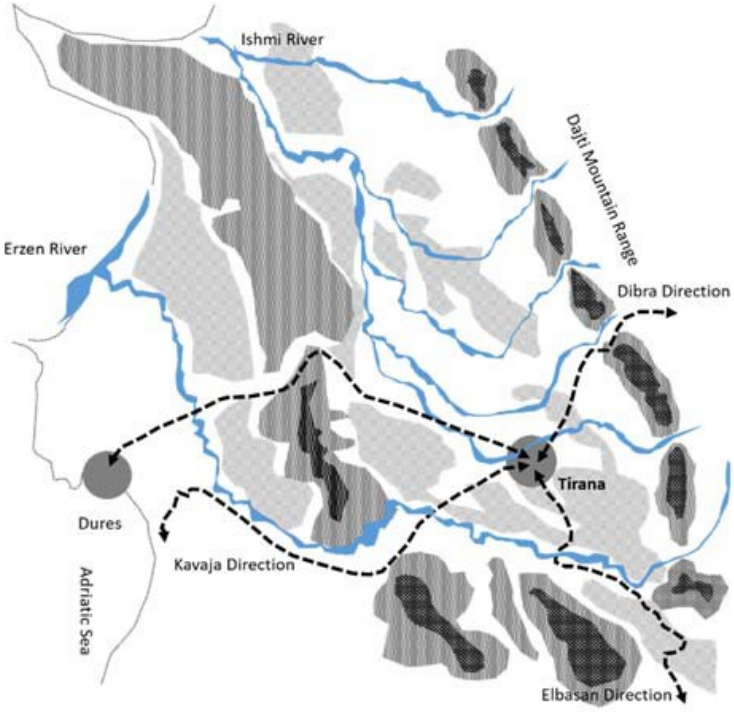


Figure 22. Position of the first urban nucleus and natural conditions of territorial elements

The settlement of Tirana is undoubtedly favored by its geographical position. In the East it is bordered by the Dajti Range (natural monument), in the South and West by hilly ranges, which leave open only the north-west direction (the mouth of the Ishm River in the Adriatic Sea) and thus clearly determine the orientation of the development of city (north).

The whole territory where Tirana lies is crossed by numerous water sources: in the south flows the river Erzen, while within the current city flows the river Lana and the river of Tirana, which together with the rivers Terkuza and Zeza in the north create the flow of Ishm, which also flows in the Adriatic (fig. 1). Also, the underground of Tirana is rich in groundwater, which has greatly favored the spread of urban nuclei in the beginning of the city, when it did not yet have drinking water infrastructure.

As mentioned, the beginnings of the city of Tirana were completely organic and the first urban nuclei were created according to the way of social and cultural organization that was directly influenced by the Ottoman Empire. The system of that time of Imaret was the way this socio-cultural structure was translated into urban structure (fig. 2-3).

This system, embraced by the Ottomans in the 14th century, was a form of "Muslim propaganda to a predominantly Christian population… for promoting Islam and the Ottoman way of life… through devote and moral religious conduct and works of welfare" (Ingersoll and Kostov, 2013 pg. 439). This was a way how the Ottomans promoted urban life through building markets, baths and religious complexes. According to these authors

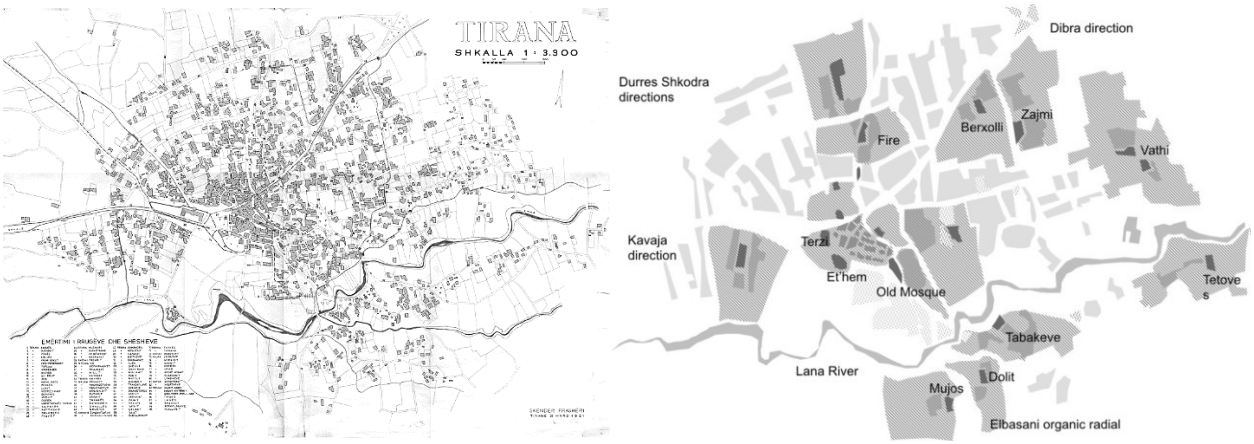


Figure 23-3. Map of Tirana of 1921 (left) and a scheme of the first urban nucleus "Kulliyes" (right)

(2013), Imarets usually included a cami (mosque), a turbe (tomb of the donor), one or more madrassas (religious schools), a hammam (bath), sometimes a hospital, sometimes a tekke for dervish monks, and an imaret or public soup kitchen, by which was named the entire nucleus. In the 20th century was introduced the new term kulliye to indicate the public function of this nucleus and dissociate its name from the “soup kitchen” (Ingersoll and Kostov, cited by Dhamo, 2018, pg. 21).

Always according to Ingersoll and Kostov (2013, pg. 439), the urban concept of Imarets evolved into that of Mehalla (neighborhoods), which were also urban groups (dwellings) organized according to family, tribal ties or even professions (crafts). Even today, in certain areas of organic (historical) Tirana, people refer to neighborhoods known as the mahalla and ... and is followed by the historical name of a Tirana family or an early local craft.

So, with the term Imaret, Kulliye or Mehalle, beyond a social and cultural organization, we can mean the whole group of urban services (economic, social, administrative, sanitary, etc.) which were organized around the "spiritual service", the building of mosque. These public buildings were the beginning, as a pre-urban nuclei, for a larger urban organism, where all the other elements were aggregated little by little, such as dwellings, courtyards, barns, wells, green groves, lanes, sqares, graveyards, etc. (Aliaj et al., 2003 pg. 18).

The geographical position of these pre-urban nuclei was initially determined by pre-existing natural elements, such as water sources, rivers, wells, large trees, etc. or from

artificial elements, such as religious buildings, ruins, cemeteries, etc. Subsequently, the nucleus began to spread in the territory and the buildings to aggregate with each other mainly depending on the topographic situation (relief, terrain morphology), until they encountered a physical boundary. In this way, in organic Tirana, the well-known urban nuclei are created in turn, according to the same logic: Sulejman Pasha mosque / 1st nucleus (17th century), Fire mosque / 2nd nucleus (18th century), Zajmi mosque / 3rd nucleus, Haxhi Et 'hem mosque / 4th nucleus, Stermasi mosque / 5th nucleus, Karapici and Kokonozi mosque / 6th nucleus, Berxolli mosque / 7th nucleus, Mujo mosque / 8th nucleus, Reçi mosque / 9th nucleus (Aliaj et al., pg. 19-20) . According to Rossi's concept (1984 p. 82), these initial nuclei can also be called primary elements, since according to these artifacts the urban structure has been further developed.

In fact, we can say that the organic city, as a whole, is formed precisely by the time cohesion of these small nuclei with each other. This process, writes Dhamo (2018, pg. 22), can also be called an initial stage of a "synoecism". He refers here to Kostov (2003, pg. 62), who describes this phenomenon as one of the most common processes of establishing a city from a rural context. This phenomenon is known not only in Western cities, but also in those of the Islamic world or African countries.

We must keep in mind this structure of the nuclei of the city of Tirana, especially when we have to analyze the further growth of the city and when we have to connect this analysis with the future urban plans. Referring again to Rossi, he considers the most valid Poete's point related to the city basic layout and plan: cities tend to remain on their axis of development, maintaining the position of their original layout and growing according to the direction their of their older artifacts… often deformed but… not displaced (1984 p. 59). For him the persistence of the plan is at the bases of the collective organism that is the city (Dhamo referring Rossi, 2018, pg. 22).

All these urban elements of the beginnings of organic Tirana, help us to understand the morphology of this city until the moment when it is declared the capital (1920) and starts for another historical moment, where its form begins to be designed by architects and urban planners. famous (Austrian and then Italian). But sticking to its organic morphology so far, we can say that urban fabrics are shaped as a result of some modeling forces.

Dhamo in his study (2018, pg 22) identifies these generating vector forces: "*the centripetal regional fluxes which collided in the center and created the old bazar, and the secondary centrifugal and centripetal fluxes from and to the Bazar. This energy created the third tendential force which wrapped like a magnetic field around the main nucleus of the Old Bazar […]. The interaction of these forces, in close relation to the preexisting physical determinants, shaped the modality of growth of the city that was being created. For this reason, the first nuclei (including Imarets) settled not only along the main centripetal radials but also along the wrapping waves around the Bazar. Filaments in the form of strings, following the rotating force lines, and intersecting with the centripetal and centrifugal fluxes, knitted the urban mass with a tendentially round shape"* (fig. 4).

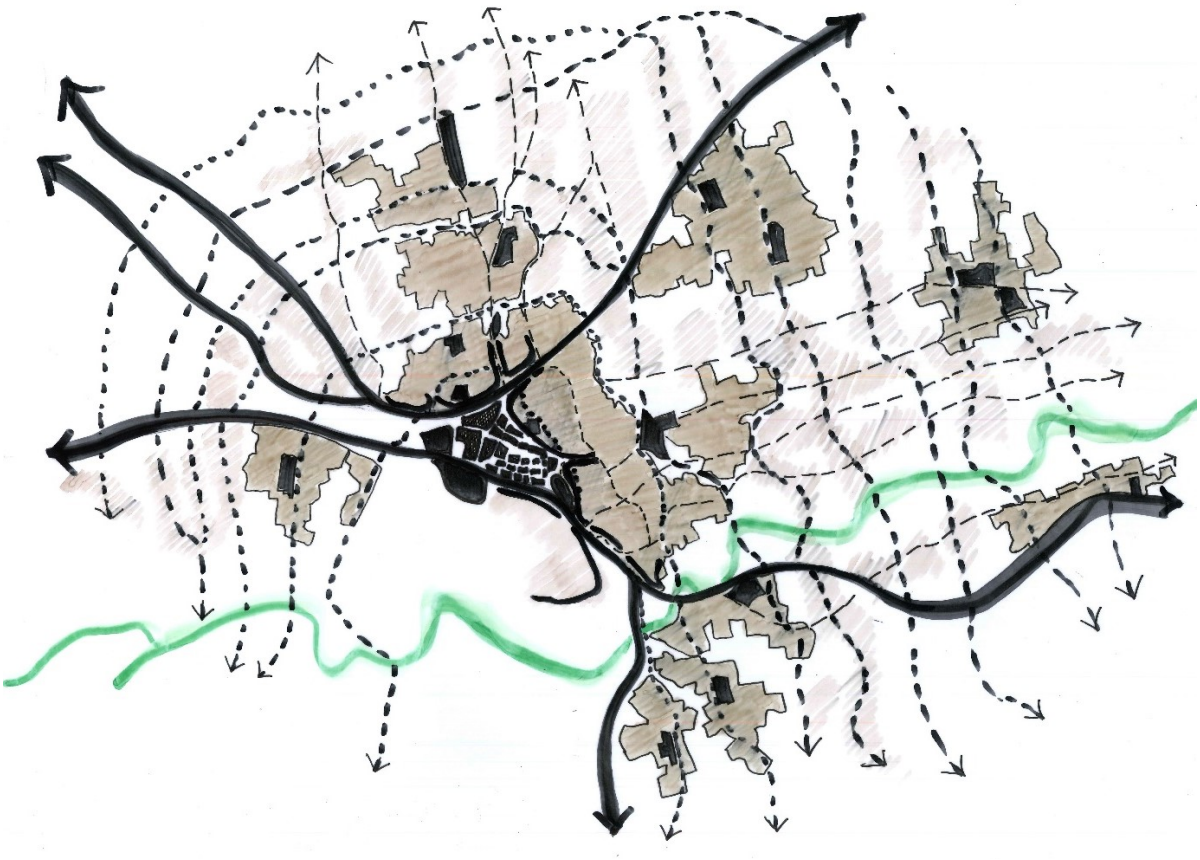


Figure 4. Diagram of the vectorial forces shaping the main urban tissue of the organic city. The first urban nuclei and their connections with these forces. Light gray, the process of synoecism.

Conclusions – Organic city

At this stage of the city shaping process, some important aspects that influenced Tirana geneses and the initial growth became clear. These aspects include: the main natural values and historic conditions that guided and influenced Tirana urban morphology; the modality of growth and the specific nature of the first nuclei that gave birth to Tirana; the combined nature of spontaneous processes with a premeditated strategy based on religious practices nourished by the Ottoman culture of that period; the existence of cultural bases and the underlying anthropological factors that guided the birth and the city shaping process; the potential influence and the persistence of these factors in the future of the city.

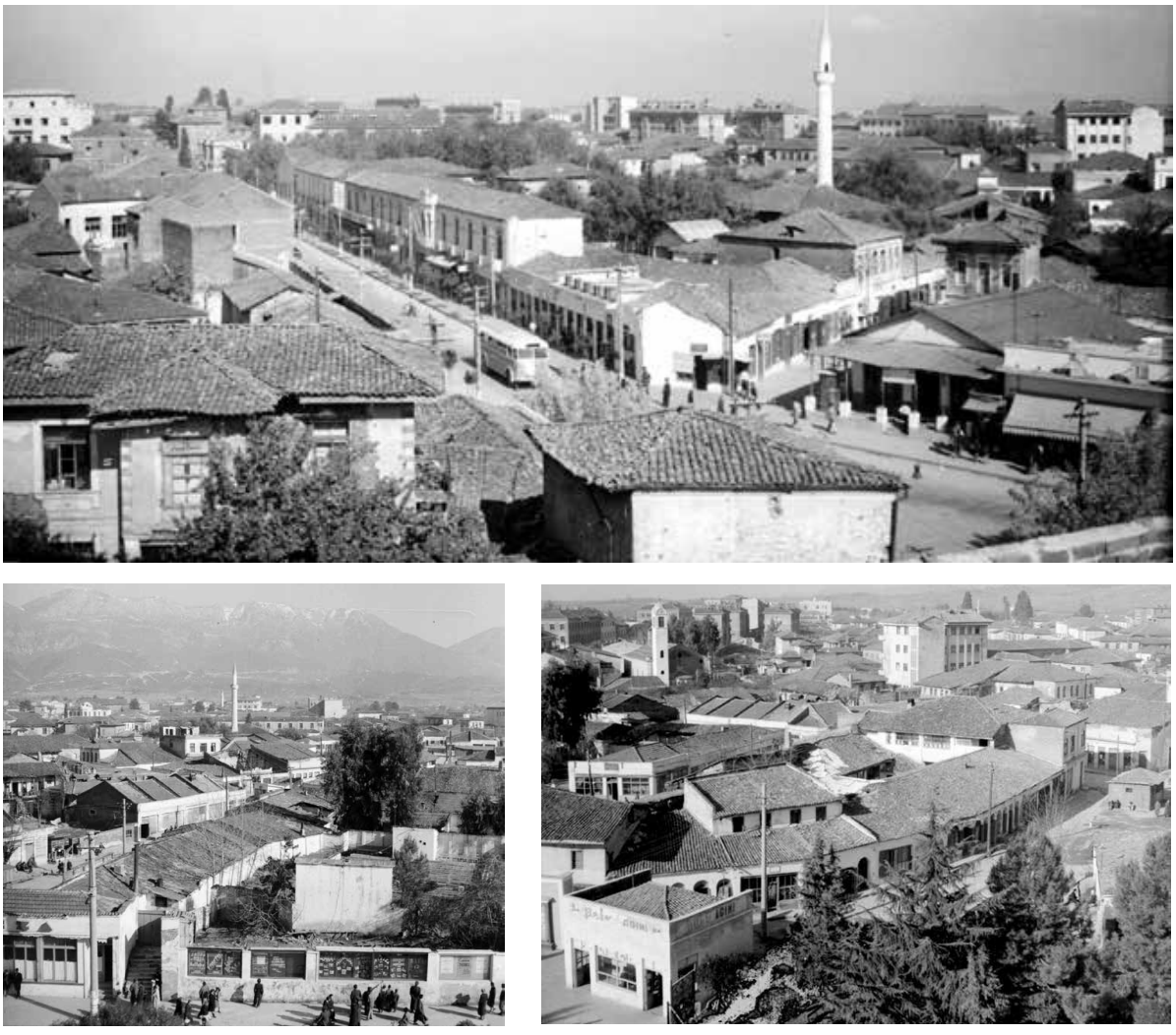


Figure 5-6-7. Areal views of the Old Bazar and some religious buildings marking the first urban nucleus

5.3 City of '20 -'44 - Austrian and Italian plans

From the system of Imarets to the attempts for Europeanization of Tirana: the first layer of “disturbance” to the continuity of organic structures

Brief: King’s Zog “Grand Travaux”

Fascist Italian occupation and the import of “Stile Littorio”: monumentality separated from the social reality

The grand Boulevard as generator for a new restart of Tirana

The creation of Two Tirana(s)

After the proclamation of Tirana as the capital of Albania in 1920, the city normally required significant transformations. So the new "status" that he received required that Tirana be no longer only that of organic nuclei and the Old Bazaar, but also begin to have large spaces and important axes where the representative administrative buildings would be located. In this period Albania was a monarchy and King Zogu I, who had established his governing structures in Tirana, demanded that the capital enter a phase of urban Europeanization. Thus, in Tirana of the organic pattern, the "artificial" interventions of the direction and expansion of the main roads (Rruga e Durresit, Rruga e Kavajës and Rruga e Barrikadave) start. Of course, these kinds of interventions were too late for Tirana, if we were to compare these interventions with other European capitals, where the opening of the axes and the widening of the boulevards took place a century ago. However, we can

Figure 8. Pamje e përgjithshme e aksit të Brasinit, 1925.

say that the most important intervention of this kind was the opening of the central boulevard, the new north-south axis, designed by Armando Brasini in 1925 (fig. 8).

This axis was placed as a connecting point between the old center (Old Bazar) and the new city, which in fact would thus mark the beginning of a completely different city (fig.9-10). When Brasini projects the orientation of the axis, he refers to the orientation of the Dajti mountain range, the silhouette of which historically accompanies the city of Tirana in the background. So the axis runs parallel to Dajti and naturally shows the vector of development of the city in the future (plain area with north-south direction, with a slight slope to the west). This direction cuts, almost perpendicularly, in the south the river Lana and in the north the river of Tirana and Tërkuzë. So it is an axis closely related to the natural identity of the territory of Tirana.

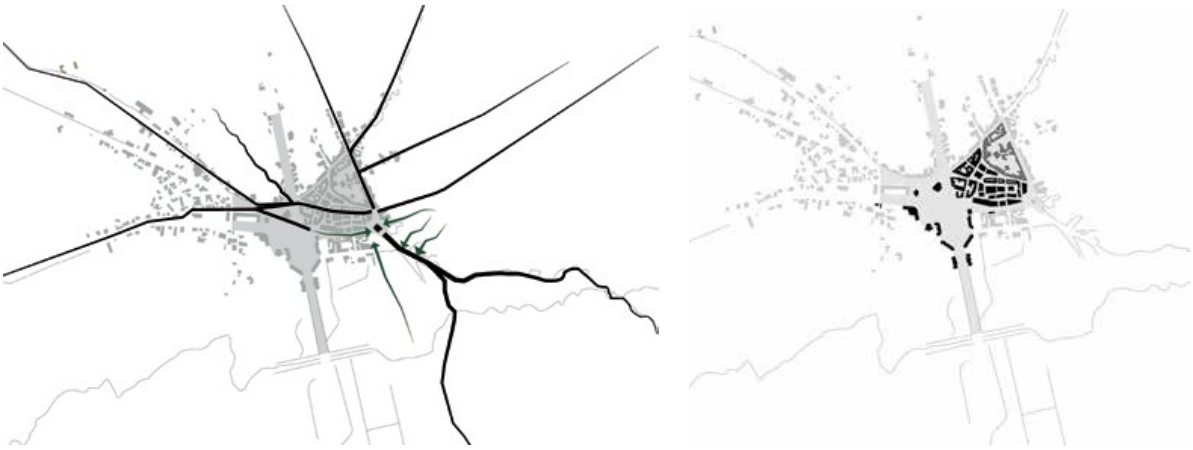


Figure 9-10. Bërthama e parë qendrore në kryqëzimin e trajektoreve ndërrajonale në afërsi të përroit të Lanës dhe gjurma e aksit te ri te bulevardit ne te majte te kesaj berthame (Old Bazar).

This axial scheme of Brasin can also be interpreted as a manifestation of political power by King Zog I, i.e. as a structure representing a political diagram. As Kostov argues in the book City Shaped (2003, pg. 174), the boulevard manifests the features of a monocentric dominance. Monumental linear axes are often used in the context of a general urban scheme which helps to emphasize the features and effects of the axis. In the case of Tirana, the axis of the boulevard is in stark contrast to the existing city with an organic labyrinthine structure, as well as to the surrounding territory.

The new north-south urban axis, which placed to some extent a symmetrical cut in the existing urban fabric of Tirana, was also taken into account by the regulatory plans of later periods, 1925, 1926, 1928, 1929, 1930, 1931. Bird I and that of 1939-43 of fascist Italy. Although after Brasini this axis was redesigned by Florestano Di Fausto, again in a neo-classic style full of decor and ornaments, this axis nevertheless left its clear mark in the context where it was placed and its effects on urban morphology of Tirana are still felt today.

For the first time for Tirana, since 1923 (by Italian and Austrian engineers), we have urban regulatory plans, which try to break away from the previous organic character and already establish a regular infrastructure system that combines rings and radials, restructuring thus existing urban fabrics and structuring new fabrics in new areas.

In 1926 a comprehensive plan for Tirana was drafted, which was more of an adaptation of the plan previously drafted in 1923 (fig. 11). Three authors contributed to this plan; Albanian engineer Eshref Frashëri, Italian engineer Castellani and Austrian engineer Weiss (Aliaj, et al. 2003, p. 34). As mentioned, the aim was for the road structure of Tirana to be corrected and adjusted according to a more rectangular shape, which should find as much harmony as possible with the existing network, as well as to preserve the directions of the main radials of the origin of the city. . While in areas that at that time were free from construction the plan aimed to create a clean quadratic network.

Figure 11. Skema e përgjithshme e planit të vitit 1923 nga E. Frashëri, Castellani, Weiss. Grey color the existing organic city. White color the new proposal for a regular infrastructure grid.

Figure 12. Detaj pjesor i planit të vitit 1928, Frashëri, Köhler.

In 1928, King Zog I commissioned the Austrian Kohler and the Albanian Frashëri to draw up a more complete plan for Tirana. This would be the first plan that included the entire territory of Tirana. The city was proposed to grow in a southwesterly direction, in the area of New Tirana, where the outline of the regular quadratic grid in an area that was empty at the time was clearly discernible. This area was envisaged with extensive development (low density), ie with villas located on relatively large plots, with an area of 1000-1500 m2 (fig. 14). This enabled the creation of green gardens with trees that also formulated the landscape along the wide roads in the quadratic network, thus creating the character of a "garden city". This plan also outlined the axis of the boulevard, but with a length that started from the square of the royal palace in the south, to the square "Skenderbej" in the north (fig. 12), ideas that were carried from the previous plans.

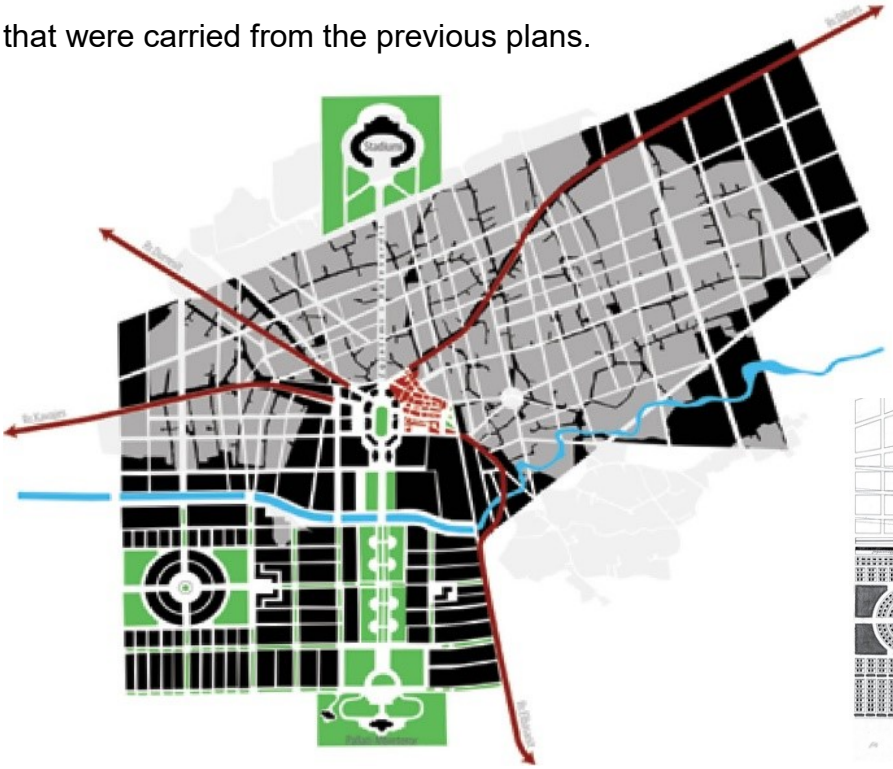


Figure 13. Plani i vitit 1929, skema e përgjithshme. In gray color on the background is the maximum extention of the organic city.

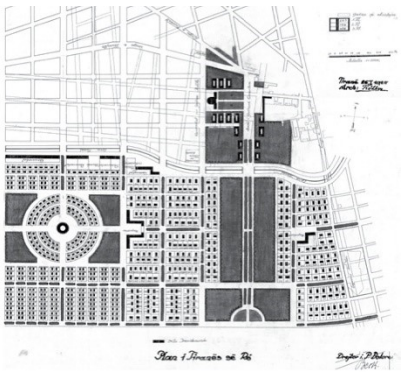


Figure 14. Plani i Tiranës së Re i vitit 1928 nga Köhler.

The plan of 1929, which was prepared by the municipality of that time, was based on three main materials: the previous plan prepared by E. Frashëri, the plan of the center prepared by F. Di Fausto and the plan for New Tirana prepared by W. Köhler. This plan made some other modifications from that of '28. The axis of the boulevard extended more towards the north, taking its full length of 2 km, starting from the royal palace in the south and continuing in the direction of "Skënderbej" square, extending to the new stadium of (fig. . 13), which was located in the north (where until a few years ago the old train station was located).

On the basis of this plan, the boundaries of the city area (4.5 km2) were marked and the most central areas along the boulevard were outlined, as well as along the main historical entrance trajectories (Roads of Durrës, Kavaja, Elbasan) to undergo reconstruction. and construction along them. Very soon after this plan, in the years 1930-1931, due to the developments in Tirana, its borders had to be reviewed. This expansion would be made to enable the potential extension of the residential area and larger parks to the east, while in the western direction, from Durrës, would expand industrial activity as well as installations as slaughterhouses and sites. for wastewater treatment.

"According to the 1930 version, the boundaries of the jurisdiction of the Municipality of Tirana were determined based on the Order of the Royal Court, Military Department, no. 3094, dated 15 December 1930 (fig. 15,17). The demarcation procedure was exclusively technical and geometrically abstract" (Dhamo et al, 2016, pg. 35). According to this procedure for the specific case, the following was done: 1. The central point from where the district would be removed was designated the center in the middle of the square "Sulejman Pasha" (today's square "Avni Rustemi"); 2. The definition of the radius would be such as to include a sufficient area for a large peripheral area, to create opportunities for further development with housing and small industries; 3. On this basis the length of the beam was determined 2200 mt; 4. In this district, 8 points would be determined for the landfill which would summarize the area under the jurisdiction of the Municipality of Tirana; etc. The polygon thus obtained included an area of approximately size **12 km^2**. Based on the most recent census of that time the population within this area would be **30 000 inhabitants**, with a density of approximately **2500 inhabitants for each km^2**.

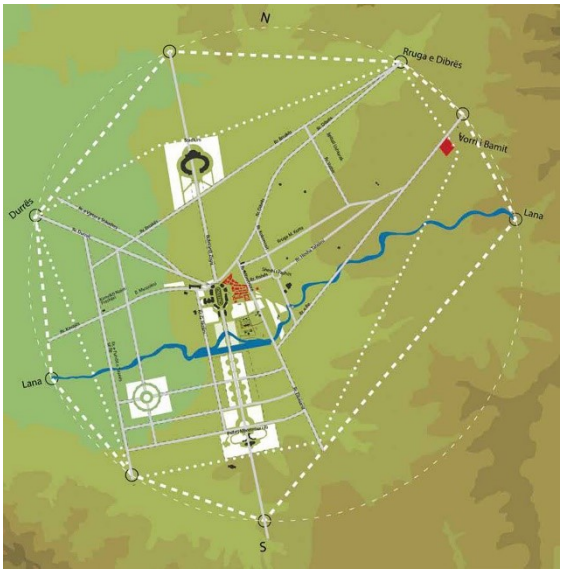


Figure 15. Defining the boundaries of the jurisdiction of the municipality of Tirana and the relationship with the main natural geographical elements.

Figure 15 shows the borders of Tirana, defined by the radius of 220 mt centered at A. Rustemi Square, in relation to the territory and the topographic situation. The large polygon (1930) and the small polygon (1931) show the boundaries of the inner urban span according to the royal order and the Ministry of Internal Affairs.

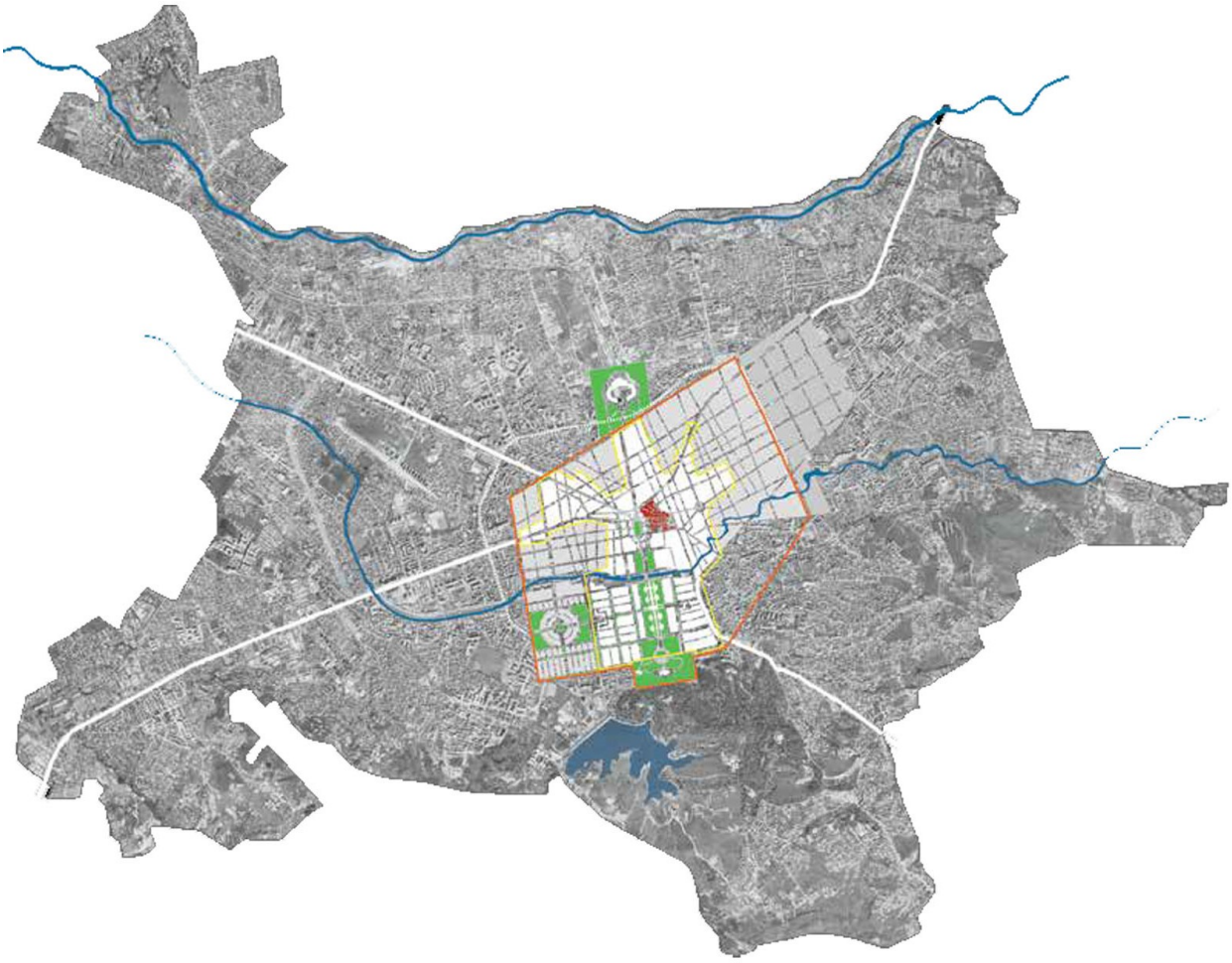


Figure 16. Kufijtë e qytetit ekzistues të Tiranës dhe Tirana e planit te 1929 me poligonin e kufinjve territoriale.

Regarding the new typologies of dwellings, especially those that were designed for the new urban units that would be located in the area of New Tirana, are mainly 1-2-storey dwellings, which were built by the bourgeois middle class of the time (fig. 17, 18 ...). According to Bushati, these villas contained a wide variation of their architectural expression, starting from the most traditional ones which were often built without an architect (by craftsmen), and continuing with those which were characterized by a neoclassical, eclectic language and up to to those who expressed themselves in a more rationalist language and similar to what represented the most advanced current of the time (Bushati, 2012, pp. 8-9). The owners of these villas were politicians, intellectuals, government officials, merchants and well-known families in Tirana and in the country. Owning one of these villas, immersed in orchards, was an indicator of the social status of Tirana in the 1920s and 1940s.

5.4 Italian Urban Plans (’39 -’43)

During this period, until 1939, Albania had launched a strategic partnership in the fields of economy and culture with neighboring Italy, which at that time was under the fascist regime and led by Benito Mussolini (in 1939, this alliance would return to occupation by Italy). This partnership between Albania and Italy was extended to the field of urban planning and architectural design. Already the urban projects of Tirana and other major Albanian cities had to conform to the visions of the scale of an empire much larger than Albania itself.

Due to the short period that Italian urban planners and architects stayed in Albania-Tirana, a large part of the designed urban plans failed to be implemented. However, we can say with certainty that one of the important interventions in the urban structure of Tirana at that time was the continuation of the boulevard axis, started by Brasini in '25. The continuation of the axis, a good part of which managed to be realized in that period, was deeply influenced by "Stile Littorio", or by that of "New Tradition", as Frampton would call it (2007, pg. 204 , 214-215), because it was an architectural-urban language that was closely related to political power.

For the continuation of the axis in the south and its conclusion with a very important urban complex for today's Tirana, Dhamo writes (2018, pg. 28): "The most typical expression of the New Tradition in Tirana was the new complex of" Piazza Littorio ", forming a quadratic square in the southern part of the city and at the end of the main boulevard […]. This complex included "La casa del Fascio" in the center of the axial perspective, the "dopo lavoro complex", the stadium, the gym, etc. " (fig. xxx)

From the urban point of view, this complex that was built on the southern edge of Tirana at that time, is a parallel to the smallest scale of EUR in Rome. For this type of structure Framton (2007, pg. 215) says that it is a utopia and a monumentality which in fact is almost completely detached from the urban reality and social life of the existing city and this was true for Tirana at that time. Piazza Littorio Square together with the boulevard "Viale dell'Impero" (its realized part) gave Tirana a new urban dimension, very different from the existing organic one, but which over the years would leave a mark permanently important in urban life.

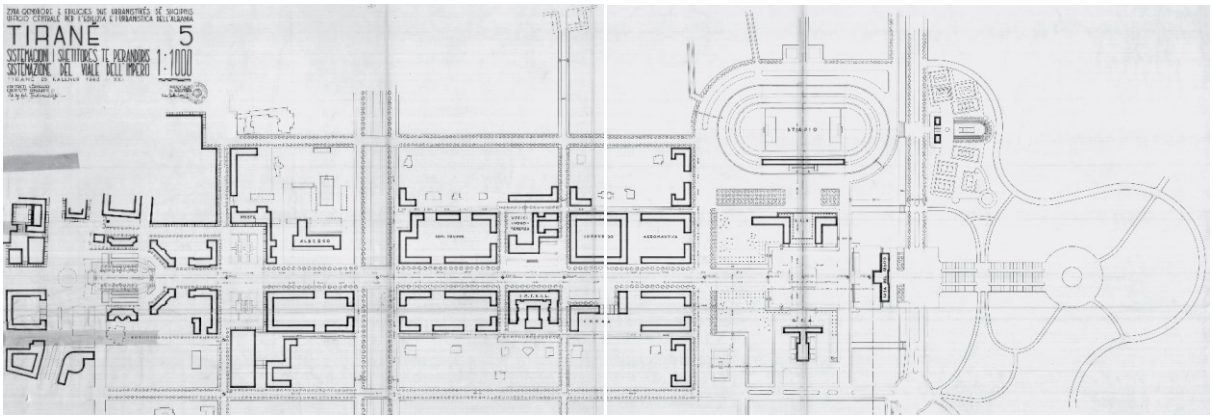


Figura 20. Projekti për "Viale dell Impero", G. Bosio, 1939.

Organized / designed city

Other very important changes, which belong to the morphological aspects of the way how the city of Tirana would change in the future, are those that were foreseen by the regulatory plan. So, again Tirana was expected to make a very big urban leap and important morphological transformations. It can be said that in the urban and architectural aspect Italy has already started the process of colonization in Tirana (as well as in other countries where it had extended its protectorate).

The Tirana Regulatory Plan, which was finalized in January 1943, was drafted in two phases:

The first phase was the drafting of the Outline Plan (by this term the relation of the plan meant that phase of the plan which was later called the "draft" of the plan). This phase of the plan was completed in October 1939. The drafting of the Plan was directed by the Italian architect Gherardo Bosio in the role of First Counselor and Director of the Urban Office ("Official for L'edilizia and L'urbanistica Dell'Albania") who laid out the concepts of the plan in a relation attached to that plan. This phase of the plan mainly foresaw the resettlement of some of the streets of the center and some of the main axes of the city. These transformations of the center were some of the projects that not only created the main skeleton of Tirana at that time, but also of Tirana that we inherit to this day.

The second phase of the plan was the Study of the Definitive Regulatory Plan, which was approved in 1941. On the basis of this study of 1941, the Definitive Regulatory Plan was drafted by the Central Office of Edilicje and Urbanism of Albania, which finally bears the date January 1943 (Dhamo et al, 2016, pg. 61). After the death of Gherardo Bosio, Ivo Lambertini was placed in the role of design architect and Ferdinando Poggi in the role of consulting architect.

The edilicje regulation served to dictate the general norms of the way of construction and to precede the agreements between the neighbors, the hygienic conditions, the safety of the citizens, the decoration of the city, etc. The judicial regulation of the plan had brought some additions to the judicial regulation of Tirana to make it clearer about the regulatory plan.

The urban regulation served to define concretely and specifically the norms and standards such as, distances between buildings, widths of streets and heights of floors in relation to them, construction lines and possibilities of drawing this line, uses of ground floors and floors upper, uses of underground floors, etc. The definition of these indicators guaranteed the realization of the concepts laid down by the regulatory plan. This regulation also included special regulations such as those for the Empire Promenade, the Mussolini Promenade, the Prince of Piedmont Promenade, the Victor Emanuel Promenade, etc.

It should be noted here that the Final Regulatory Plan was worked on maps of scale 1: 5000 and 1: 2500 (this scale is small for the plan of an entire city). Although this was not something common for a regulatory plan, for Tirana this was possible due to the limited extent of the city at that time (how many km ...?). The positive aspect in this case, was that the transition from the regulatory plan to the level of urban and architectural design, thanks to detailed maps, was much easier and well connected at different levels (urban-regulations and normative-architectural). This way of working and design had somewhat positive reflections on the plan of '57 -'58 (where even here elements of large-scale planning, as well as urban design and regulations and norms are merged), but lost as a method in the plan of the years '85 -'89.

Urban visions expressed in the plan

The moment when the ideas for drafting the Regulatory Plan of Tirana during the years 1939-1943 were worked out and thrown out, is one of the most important in the history of urban consolidation of the city. The drafting of this plan was clearly an inspirational moment when it was thought that the push towards the big city was synonymous with well-being and improved living conditions. The city was the place of new opportunities, leaps and quality hopes of life, especially for a city like Tirana that was still in its most childish stages.

This plan is the first which includes a comprehensive vision for the perspective development of Tirana for the next 50 years, not only in terms of the content of technical elements and implementing and monitoring instruments, but also in terms of the territorial

dimension that includes, an unprecedented dimension up to that period and more than necessary for long-term forecasts according to the mentality and ideology of the time.

Tirana of 1938 with an area of **500 ha** and a population of **35,000 inhabitants** had the infrastructure of a city for three-four thousand inhabitants. At the beginning of the study of this plan ('39 -'40) at least **40,000 inhabitants** were registered [42] (Dhamo et al, 2016, pg. 67). The plan, at this point, was asked to build the vision of where and how the new parts of the city would be located and how the existing ones would be transformed. The final vision on which the plan gave its predictions was determined on the basis of comparing two visions quite different from each other - the linear and the concentric-compact - but with a common feature, that of the "garden city". The vision of the plan also combined other theoretical concepts such as that of "satellite neighborhoods" (fig. 21), etc.

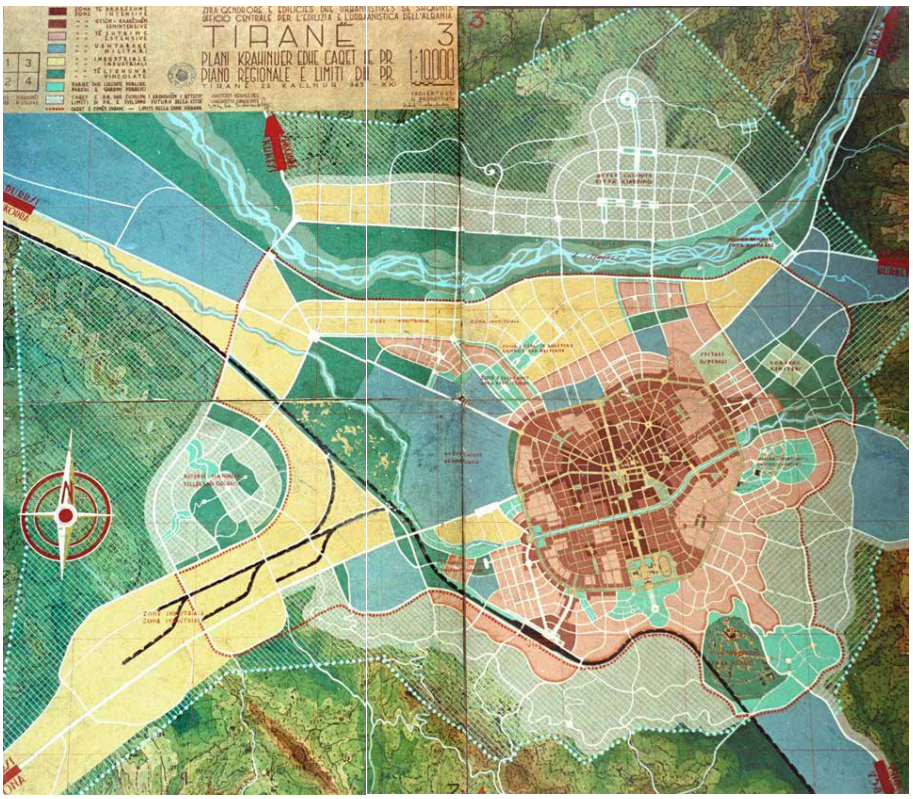


Figura 21. Skemë e Tiranës në raport me rrethinat ("Plani krahinuer dhe caqet" i punuar në shkallën 1: 10 000).

[42] *Lambertini, I., Poggi, F. (1943), Zyra Qendrore e Edilicjes dhe Urbanistikës së Shqipnis, Ufficio Centrale per L'edilizia e L'urbanistica dell'Albania, Plani Rregullues i Tiranës, Relacion nga Arkitekti Projektues Lambertini, I. dhe Arkitekti Këshillues Poggi, F., Tiranë, Kallnuer 1943. Kapitulli: Qyteti përpara studimeve të planit rregullues.*

The first vision, in direct reference to the theoretical model of linear cities, meant the creation of a new city which would develop linearly in the form of a semicircle at the foot of the hills around the existing city and completely independent of it. The linear city would be separated from the existing one by a wide belt of gardens and parking lots that would be even wider along the Lana. The development of the city in these areas without constructions would be much simpler, as the parceling of properties would be easier and the city could take on a modern character, as it should be a capital. This solution was undoubtedly quite attractive and would allow the city to be completely regulated from the beginning in a rational and independent way from the historic city, thus constituting an advantage over the second solution, the concentric scheme. Also, the old town would retain its oriental features and remain secluded.

This urbanization model, however, remained merely a project-idea, as its implementation could bring problems for the development of property to the autochthonous owners in the

Figura 22. Skema e përgjithshme e planit të vitit 1939-1943 (sipas skenarit koncentrik).

historic part of the city. Italian designers, however, remained quite sensitive to the property and economic elements in the plan.

Thus, the second model was preferred, that of the concentric city. The city would grow on the basis of bandages that wrap phase by phase around the existing center and along important historical trajectories-axes (radial scheme). This is to evaluate more the existing properties in the historic city and to make better use of the infrastructure realized in the meantime (fig. 22).

Beyond the "concentric / ring-radial" system, Tirana would have its suburbs (nearby suburbs) areas with specific functions and infrastructure. We can mention e.g. briefly: the new urban pole of the south-west train station (fig. 25); northwest airport; industrial areas and working quarters again in the north-west; "Garden city" in the north, across the Tirana River; hippodrome in the south-east (fig. 26); "Lake park" in the south.

All these would bring to the urban structure new connecting infrastructure (fig. 21) and the improvement of the existing one. Unfortunately for Tirana, from that plan very few of these were realized.

Land use rates - urban parameters

In the vision of the garden city, which combined the concentric and to some extent the radial scheme, the urban parameters such as the density of construction and that of the population were also important. These parameters were guaranteed through land use norms and the use of typologies suitable for intensive, semi-intensive and extended (extensive) areas, thus combining aesthetic, hygienic and practical needs.

These areas had the following parameters, as follows (fig. 23):

Intensive Zone - *area* ***110 ha, 33,000 inhabitants,*** *average density* ***300 inhabitants/ha***

Semi-intensive area - *area* ***280 ha, 56,000 inhabitants,*** *average density* ***220 inhabitants / ha***

Extensive area - *area* ***550 ha, 44,000 inhabitants,*** *average density* ***80 inhabitants/ha***

Total urban area **1100 ha**

In **60 years** it was projected to have **130,000 inhabitants**. Plus extra-urban areas **180,000 inhabitants**.

The "garden city" of Tirana had an average of **130 ba / ha.**

If we look at these forecasts from a critical point of view, their value does not lie in accuracy, but in their meaning as bearing capacities within a certain standard of population density for the garden city (approximately 130 inhabitants / ha that was considered a very good average for a city with extensive / extensive / low density character), distribution of services per inhabitant and public and green areas, standards that were quite high, but never achieved.

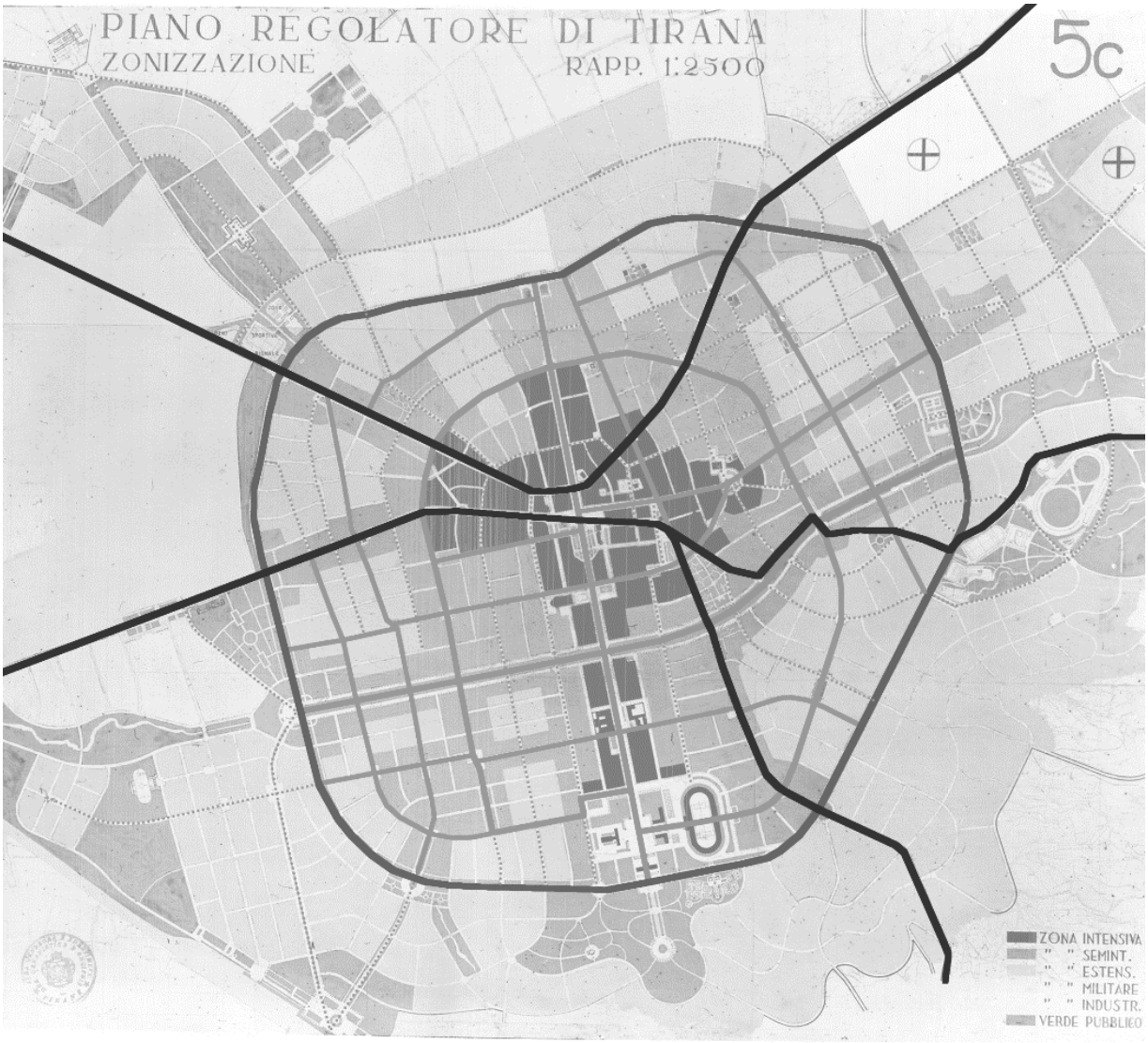


Figura 23. Regulatory Plan with densities divisions. Black-intensive; gray-semi intensive; light gray-extensive.

Formation of urban morphology

This plan with clear characteristics of a "garden city", also had a clear division of functions, as well as the opportunities it created for different segments of the population according to economic income. In this sense, this is the only plan drafted in Albania, which carried a clear concept of the division of class classes: residential neighborhoods of gentlemen, residential neighborhoods for the middle class and popular neighborhoods. Beyond that, this plan had a clear way of how the urban units (quarters and isolates) would be divided, not only according to the parameters of urban densities, but also according to the way of typological-morphological urban formulation of the Italian tradition. It is clear that urban units are separated from each other by the street element and within them the volumes of dwellings are organized in the form of a closed (or semi-closed) block within itself. In each block there are several perimeter cracks which enable the passage inside the block or from one block to another, thus creating the possibility of subdivision of the unit into smaller units. Each block has its own central internal space, as a public / semi-public space (fig. 24-26).

Figura 24. The central area with the Boulevard and the Old Bazar transformations. Also, the density divisions and the typology-morphology proposal for the intensive / semi-intensive areas (on the left).

Figura 25. Fokus i rregullimeve të planit tek poli i ri i stacionit të trenit në jugperëndim, sheshet urbane, kryqëzimet kryesore, lidhja me Tiranën e Re dhe aerostacionin.

Figure 24 clearly shows the transition from the first (left) scheme of intense densities (A) and semi-intensive (B), to the second (right) scheme of translation of these parameters in urban typology-morphology, as described in paragraph previous. It is noticed in the center area that the urban blocks here are more compact and mainly in a narrow-longitudinal shape (fig. 24, 27). This begins to change by moving away from the center and the main axes and moving towards the nearest periphery (suburb).

Figura 26. Fokus i rregullimeve të planit tek poli i ri i zonës sportive në lindje të qytetit.

Main residential areas and housing typologies

Along the main leading roads that entered from the sea, that of Durrës and Shkodra, industrial areas would be located on flat lands with favorable wind direction in relation to the city. Around them, on the plain or on the terraces of the hills, the workers' dwellings would be located, creating neighborhoods of an extensive (extended) character. The industrial zone in the north located between the Tirana River and Shkodra Street would have two workers' quarters that would be located north of the outer ring, in the land belt between the ring and the industrial zone. These popular neighborhoods would have a special regulation to favor public buildings and constructions of permanent, semi-permanent and temporary character, to give development to an unsuitable area. These settlement models that bore the model of industrial satellite neighborhoods were essentially a model of the capitalist city, but never fully developed in the Albanian reality. These neighborhoods were also thought to be connected by a railway system that would operate at the local and regional level between Durrës, Tirana and Elbasan.

Collective housing for civil servants (fig. 27) was proposed in the area of New Tirana in the southwest between the offices of Fashio and Lana. These apartments would have a maximum height of 6 floors, with spaces and gardens between them. According to Dhamo (2016, pp. 108-9) “These would be built by a public housing entity so that after a period when officials would have paid a portion, they could become their owners. This way would not only favor the layer of officials, but would also curb land speculation in the new Tirana by offering housing solutions to the advantage of the Entity, which could thus own other plots to build. These buildings, which were considered tall for the time, would also create an aesthetically interesting perspective and form a kind of city contour.

In order to precede even greater developments of the city, the plan foresaw for private constructions also extra urban areas in the form of satellite neighborhoods around Tirana, conceived as a flower city. These areas were defined north of the Tirana River in the present-day hills of Paskuqan (today the informal settlement Bathore-Paskuqan); and in the hills south and east of Tirana (fig. 28). The Lapraka area (fig. 42) or as it was otherwise called "Villaggio del Littorio" was also included in this plan.

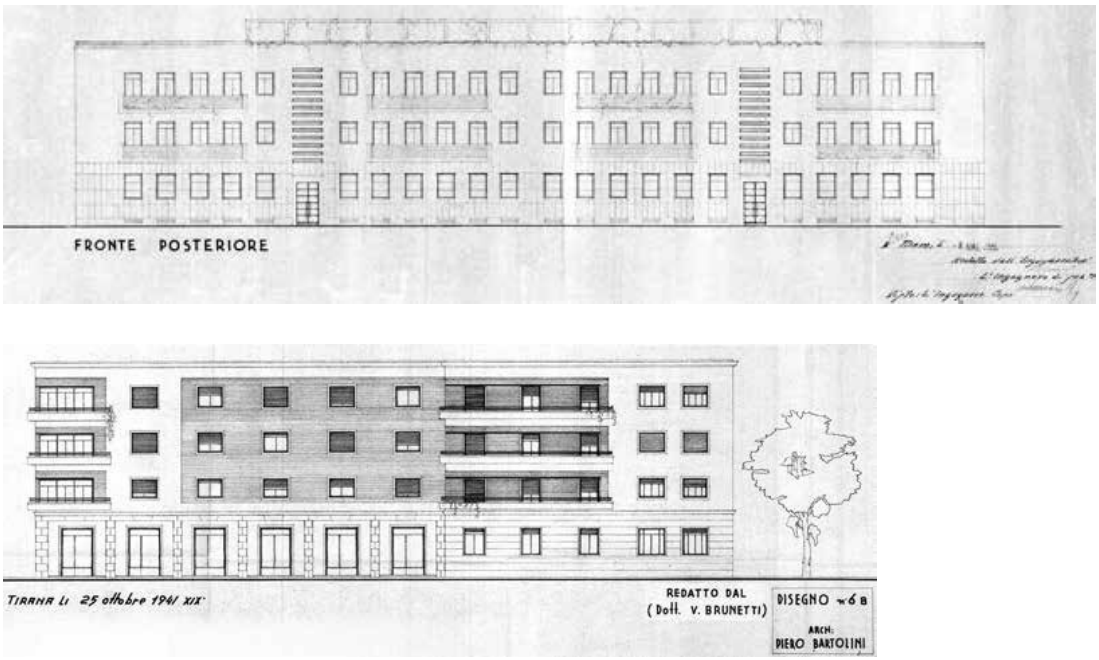


Figura 27. Tipologji të reja për banesat kolektive të nëpunësve

Figura 28. Projektet për ndërtimin e Lagjes Laprakë "Villaggio del Littorio". Ne qender te bllokut vendosen ndertesat fetare dhe administrative, duke krijuar edhe sheshin qendror.

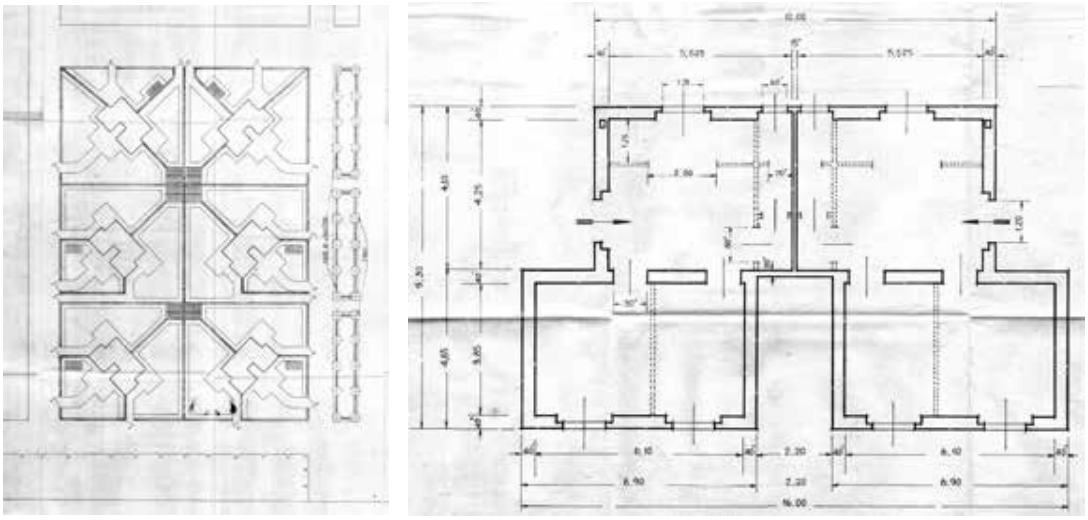


Figura 29. An Urban Unit "isolato" of detached houses in Villaggio del Littorio. A tipical floor plan.

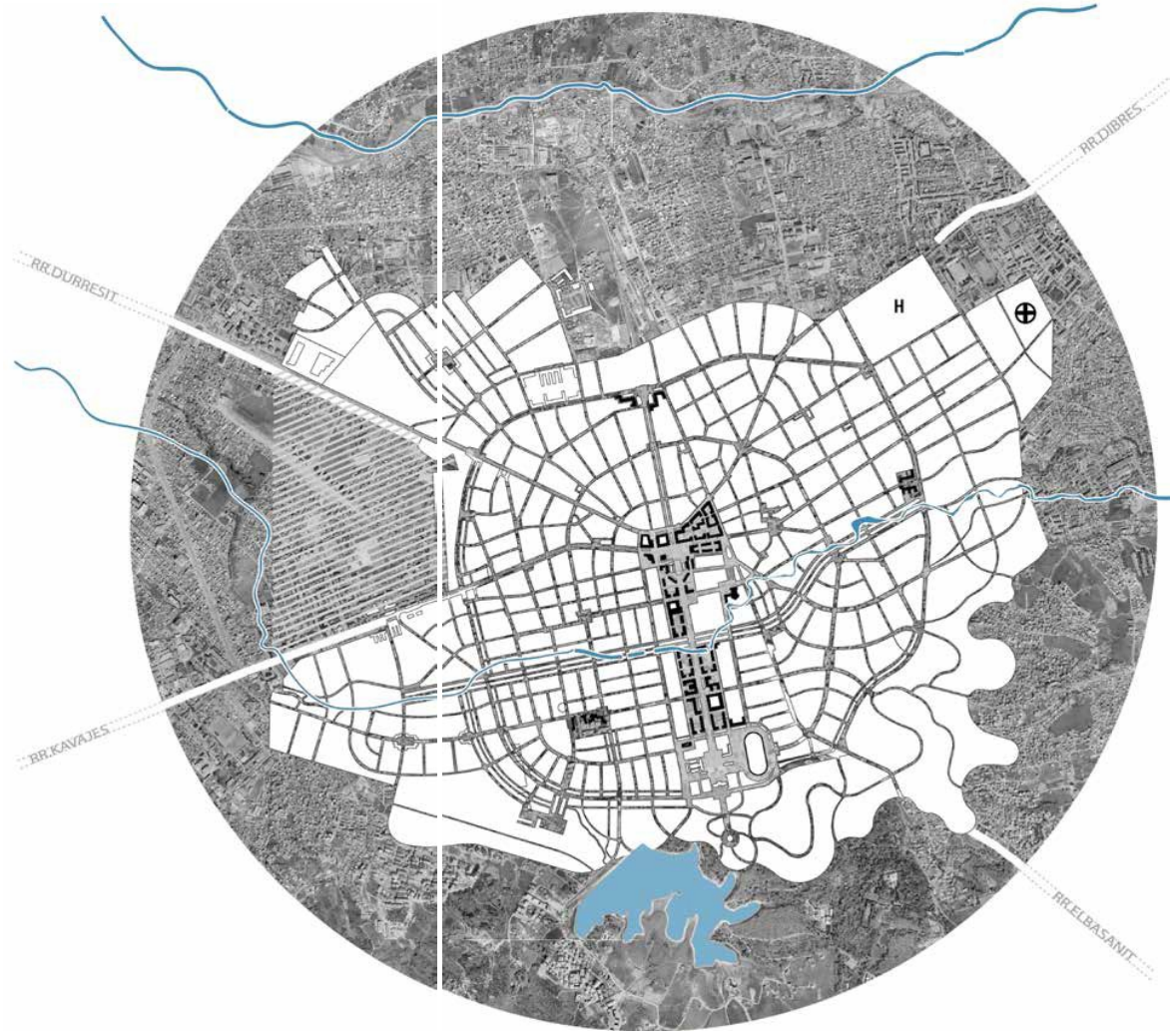


Figura 27. Gjurma e planit të vitit 1939-1943 mbi foton ajrore të Tiranës së sotme.

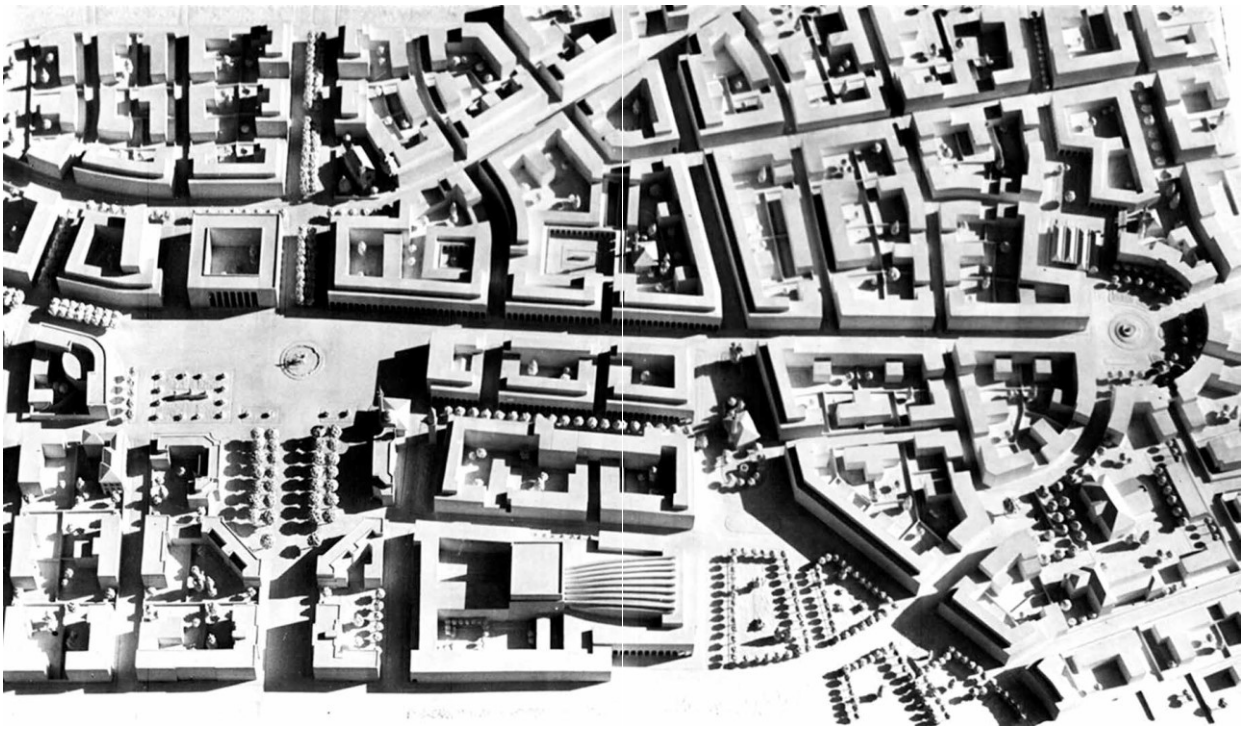


Figure 28. Maket i studimit të sheshit "Skenderbej" dhe risistemimit të Pazarit të Vjetë e zonave përreth, 1942. The plasic model also shows the new morphology of the city center, organized in small urban blocks "isolati".

Conclusions for the period from 1920 to 1944

At the end of this period two different Tirana/s with legible architectonic and urban differences were created: one rooted in the organic radials and the other one rooted in the re-foundation axis of the boulevard. The organic structure of the meshing islands routed in the Ottoman culture, was in a drastic contrast with the orthogonal grid and prospected avenues inspired from the European renaissance, or some years later also with the "new" interpretation of the historic tradition according to the Fascist principles imported from Italy. The new parts of the city, designed and developed during this period expressed the will towards progress, in clear contrast with the oriental organic ones. They brought a drastically different approach to city design and perception: from dead end labyrinths and closed perspectives, to open and continuous perspectives designed and built mostly under the influence of western culture. What happened during this period can also be interpreted as a clash between Ottoman and Western civilizations, represented in the diametrically different ways of living and reflected in the respective space anthropologies. Despite serious attempts to decrease or dilute the ottoman influence, this

remained strong because it was niched in the visceral parts of the city and was sleeping there since five centuries. Most importantly, these operations were mostly limited only at the image level and physical structure of the city, rather than in education or other aspects of the civil life. However, after that period Tirana was no longer the same.

The architecture and the urban traces from this period played an important role for the future urban structure and city shaping. A new urban scale, and most importantly a new typology of the public space appeared in Tirana. However, this relatively short period that lasted from the beginning of the ‘20s till the end of the Second World War could not fully give to Tirana the aspect of a European historic city. Despite these planned interventions, and the appearance of some new buildings in historicist expression, the real history of Tirana still remained in the organic town of the origin, which was intimately embodied in its old neighborhoods, and in some public buildings such as the old bazaar, the old mosques, etc. Such buildings were inexorably demolished after the end of the Second World War.

5.5 Tirana of ‘45-’90

Morphological urban frames

Brief: Architecture and urban planning embraced ideological principles to support the socalled revolution and social progress; from the influence of the Eastern Block to a totally self-isolation;

The creation of new collective residential blocs in the center and in periphery next to industrial zones;

These housing blocks were supposed to bring in the city a new model of life that in fact was never born; Within the frames of the new housing blocs were created the condition of emptiness, suitable condition for further transformations in subsequent periods.

Starting from 1945, after the Second World War and after Albania is placed on the side of the Eastern axis, a process of reconstruction of the country begins. This process was initially supported by Tito's former Yugoslavia (until 1948), and then moved on to other phases supported by Stalin's Russia (until 1961) and finally by China (until 1978). All of these supported the socialist "Revolution", so alliances with them were marked by periods of "harsh" transformations in the urban and architectural context. Of course, these transformations were also guided by the ideological line, which generally sought to break away from the past, before WWII, (… and create the new man) and create a new reality (urban as well).

The regulatory plans 1957-'58 and 1985-'89 turned into genuine instruments to translate ideological objectives directly into the territory on a large scale, but also on a small urban one. Thus, between the first and the second plan, there are some of the biggest destructions in the center of Tirana, such as the destruction of the *Old Bazaar*, some mosques, the hamam, the *Barrikada street* (a commercial street), and also the destructions extend in parts. other of the city.

In fact, what transformed Tirana the most, even beyond the center area, were the so-called "housing blocks", considered as incubators for the "new" collective proletarian life. The purpose of these "urban structures" was primarily to provide an apartment of minimum standards for each resident, as private property in that system no longer

existed. It was the state (central government) that had to guarantee housing for everyone. These urban structures, "residential blocks", were low-cost apartments (often with voluntary work) that were located in "mansions"/collective buildings (4-5 story standardized buildings) designed according to a very strict and basic normative (fig. 28-29).

In the morphological-urban aspect, these urban structures (residential blocks) were completely foreign in relation to historical organic patterns. It was not at all difficult for the regulatory plan to massively demolish groups of individual buildings from the organic context and to establish these new urban structures, creating large morphological differences between the existing and the newly created context. For these "urban complexes" Dhamo states that: "*In most of the cases the new blocs were never completed with the required services and playground equipment supposed to be the social catalyzers for the new life*. […] *The effects of such environment lasted beyond the collapse of the system that created them, causing serious consequences for the Albanian society. Loss of identity and social depression that followed the collapse of the communist regime, were also due to the alienation of public space created by such constructions*" (Dhamo, 2018, pg 42).

Figure 29. Collective residential blocs defining new limits for the city center (end '60s-beginning of '70s); (Source National Technical Archive)

5.5.1 General regulatory plan of Tirana of 1957-'58

General concepts of the plan - from Italian and Russian plans to an Albanian plan

The project of this plan was drafted by the Urban Sector of the State Enterprise (*Sektori i Urbanistikës së Ndërmarrjes Shtetërore N.SH*.) of the Project (this structure during the following years was transformed into several Design Institutes) and is authored by the Albanian architect Misto Mele and the Bulgarian architect Dimo Angelov. It should be noted that these years also coincide with the return to the country of urban and architecture students who were originally educated in the Soviet Union or in other countries of origin, such as Bulgaria, Romania, Czech Republic, etc. This influence on formation was also reflected in other plans for the following decades, perhaps until the early 1990s. Especially in terms of how blocks of flats and apartment complexes were composed until the late 1980s, the influence of that school and the principles of modernity (design according to strict housing and functionalism standards) was clear, although this was not accepted. never open because of the ideology in force.

The General Regulatory Plan of Tirana, drafted and approved during the years 1957-1958, is based on two main previous experiences: the outline-idea of the Tirana Regulatory Plan drafted in 1953 by the Albanian architect Gani Strazimiri in collaboration

with two Soviet specialists, as also in the draft general regulatory plan elaborated and approved between 1939-1943 by the Italians, a plan which was discussed in the previous chapter. In relation to these experiences, the review of the plan of 1957-1958 drafted by the architects Anton Lufi and Besim Daja, claimed that the project-idea of this plan had advantages in relation to previous ideas, as it was more realistic for the life of the country.

We can say that the fundamental changes drafted by this plan and related to the shape and morphology of the city, are mainly the reconfirmation of the main central axis (Boulevard designed since the time of King Zog and restructured in the Fascist period), which was used also throughout the period from the communist regime (as a perfect totalitarian space for mass manifestations with a propagandistic political background), as well as the expansion of the city border in several directions, which coincided mainly with new economic zones and important industrial infrastructure. mechanical manufacturing and food industry. Thus, the northern axis (the main boulevard, which started in the city center and ended south at the *University Corpus*, the former administration of *Fascio*), was extended to the new train station and the industrial area near it. The center space itself underwent a reconstruction (fig. 30) and consequently it was expanded beyond the existing boundaries (those originally designed by the architect Di Fausto).

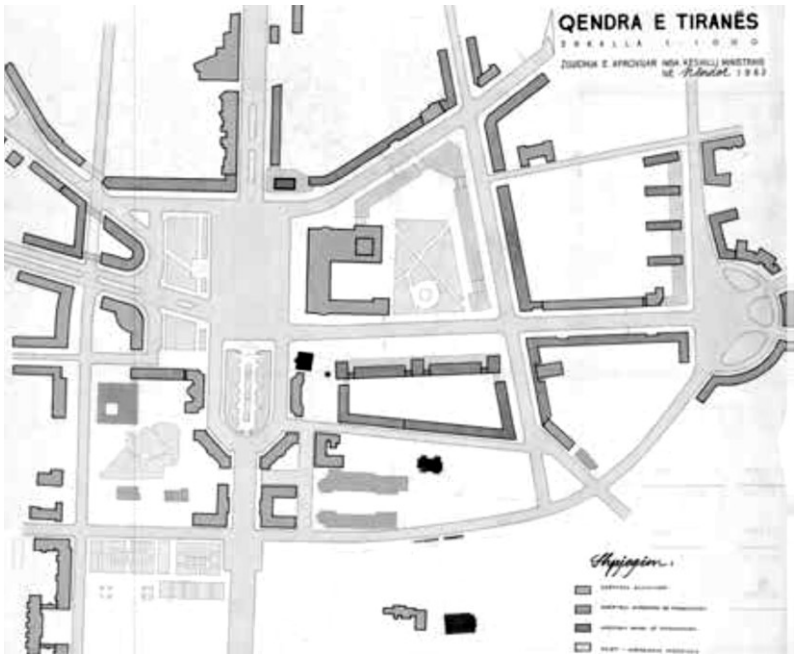


Figure 30. An approved version of different projects for the central square; approved by the Council of Ministers, November 1963.

The block of villas south of the Boulevard axis, designed in the ’39 -’43 plan, was also used by politburo executives, and the same villas, intended for the bourgeoisie of the monarchy administration, were now inhabited by them. During this period, the whole area was closed to the public and was commonly called by the people "the Block".

Meanwhile, as mentioned above, new economic zones and industrial structures were combined with low-cost residential blocks, which were intended for industry workers. The emblematic case for this urban model was that of the "Stalin" textile factory complex, where together with the industrial structure was created at the same time the largest residential block for workers. The housing model was certainly based on the Soviet ones and together with the public squares created a genuine urban satellite, detached from the existing city structure (fig. 31-32).

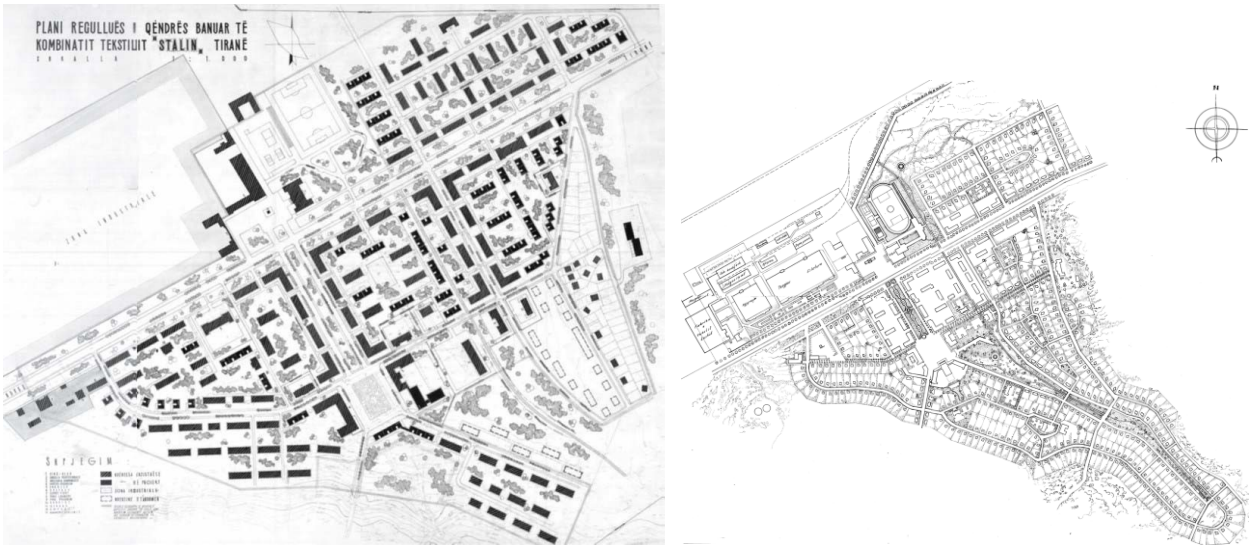


Figure 31. The “Kombinat” city, or a satelite neigborhood of Tirana (starting from early ‘50s)

The plan also presented the vision of an extensive city with many parks and water reservoirs (artificial lakes) around the city, with building heights limited to 1-3 floors and only in the most central parts the height could reach up to 4, and even less often 5 floors.

Despite these ideas that today do not seem at all aggressive in relation to development, the plan was guided by concepts that seem to have aimed primarily at construction and less other important aspects for the city such as historical recovery, or the provision of other services. This is understandable within the theoretical concepts and references of the time and above all for the phase where Tirana itself was located as a constantly growing but controlled city. From the point of view of the way of construction and creation of urban space of residential neighborhoods, although in the extreme it seems that the plan brought a mentality that reflected some principles of the industrial period and modern construction mechanism, it must be said that the application of these principles in of ever-increasing poverty, prepared the city where there was a lack of human feeling and consequently paved the way for almost retaliatory interventions against the "vast space" that occurred after the 90s.

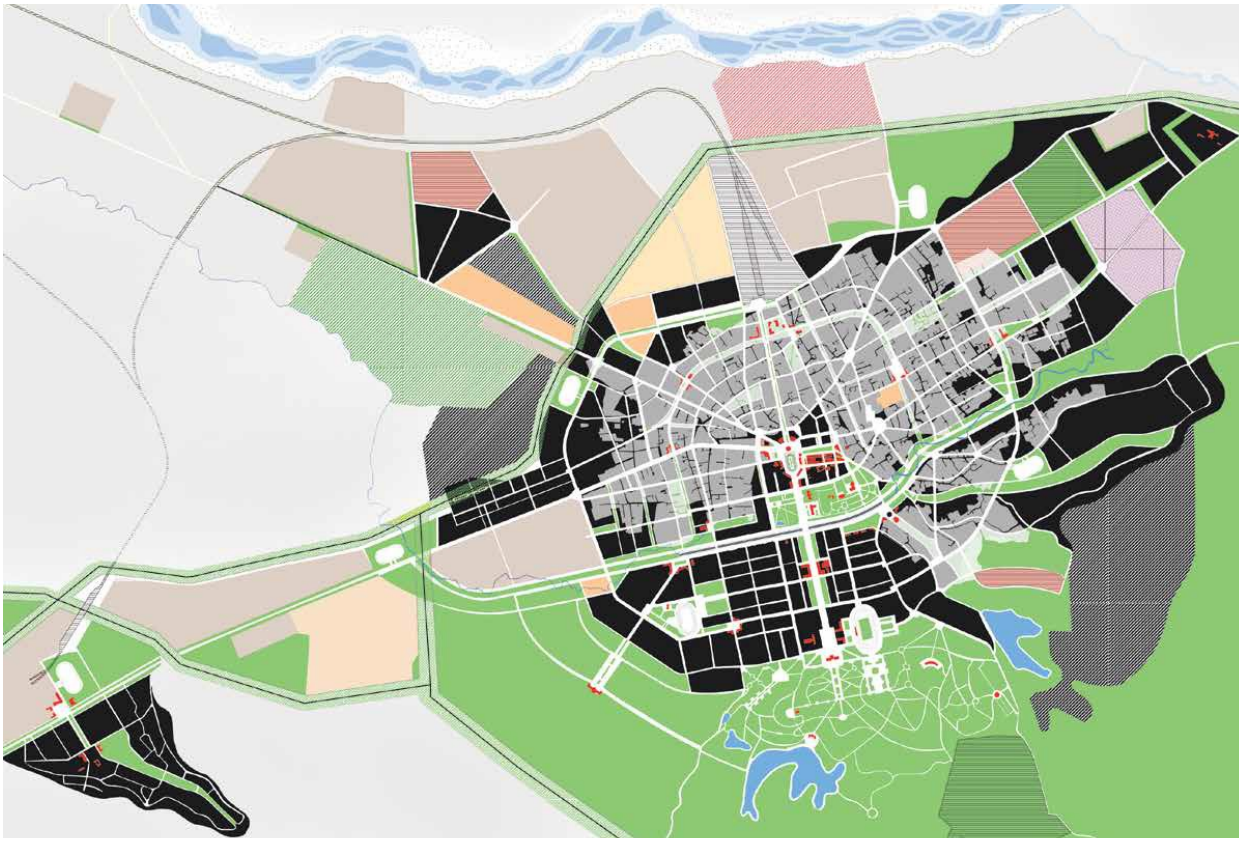


Figura 25. Skema e përgjithshme e planit të vitit 1957-58. Autoret e planit: Misto Mele dhe Dimo Anjgellov.

The main urban structure defined by the road network scheme

The road scheme was proposed to operate in a "radial-circular" manner with radials entering the city center, with external and internal rings, as well as two parallel discharges with the central axis of the city that traversed the city in north directions. -south, thus guaranteeing a good distribution of movement in different areas of the city at that time (fig. xx). The cracking of a series of secondary roads that would improve the functioning of the network as a whole also served this purpose. As can be seen, this road scheme in its general conception, especially for the area inside the outer ring, referred a lot to the scheme proposed in the regulatory plan approved in 1943. It must be said that the implementation of this road scheme, especially that part which is described by the plan as the outer ring, created the skeleton for the extension of the city structure, for changing the construction typologies in accordance with this new skeleton (from individual villas to collective residential apartments on the basis of certain models), as well as the bases for the functioning of the road network of Tirana in a more organized way. Unfortunately, some segments of the outer ring proposed by this plan and not realized during the period of its implementation, were never realized, which has brought problems for connection and circulation in a considerable part of the city.

Figura 26. Outer and inner rings and combination with radials

Regarding the inner ring, starting from the “Stalin” boulevard to the intersection with the promenades along the *Lana River*, this ring passed over low-value construction areas, always according to the plan estimates. Often those areas that were considered "of little value", as mentioned above, were areas with very dense traditional constructions of Tirana. Time showed that some parts of the inner ring could never be realized. It is clear that the fixation of urban solutions according to "typical" schemes, as was in this case the radial-ring scheme, has not left the authors to look for more specific solutions, especially in the context of a relatively small city like Tirana, where traffic for short distances could also be guaranteed in the context of other conceptions that did not so severely damage the traces of the city's history. But as mentioned above, the damage of history was not a concern.

Key data regarding the current situation and plan forecasts

Below are the main figures regarding city areas, population and other indicators, as given in the various chapters of the plan materials. This is also the reason why it is difficult to clearly understand the specific division of the proposed area to be included in the plan, as for the same indicator different figures are found in different chapters. Also the housing densities and floor heights were not given specifically for different areas. For this reason it is difficult to understand whether the population would be 150,000 or 180,000 inhabitants, a comment also noted by the group of reviewers (review report, p. 3)[43].

Summary of key areas and indicators of the plan

Population growth over the years[44]:
Year 1930 25 000 inhabitants
Year 1945 68 000 inhabitants

[43] *Relacioni i Reçencës* mbi projektidenë e *Planit rregullues të qytetit Tiranë* (8 faqe). Hartuar nga Anton Lufi, Besim Daja, Tiranë më 15.03.1957.
[44] Relacion mbi projektidenë e *Planit Rregullues të qytetit të Tiranës*, hartuar nga *Sektori i urbanistikës* së N.SH. Projektit me date 28.02.1957 (fq. 9).

Year 1950 72 000 inhabitants

Year 1953 85 000 inhabitants

Year 1954 99 000 inhabitants

Perspective of plan forecasts, or time horizon: **10-15 years**.

Existing area of the city **1200 ha.**

The **existing population** of the city is **120,000 inhabitants**, it was predicted that **in the 15-20 year perspective** it would reach 150,000 - 180,000 - **200,000 inhabitants** (as it was pointed out, different figures are given).

The **average density in residential areas** would be about **300 inhabitants / ha** (net density).

The **average density for the entire territory** of the city would be about **140 inhabitants / ha** (gross density).

Heights of buildings and floors

The plan also set out a specific policy regarding floor height and housing density. Thus, the area inside the inner ring and along the main highways was proposed to be built with a maximum height of 4 floors and only a few architectural accents within the center would be 5 storeys high (fig. Xx). The rest of the city was proposed to be built with lower floor height: 2 and 1 floors (fig. Xx) (relation, p. 7) [45]. These figures, which were based on the experience and technical capacities so far, speak of the very low value of the land and a non-existent construction market, as everything was controlled by the state and that is why the pressure of urbanization was limited. Recall also that the use of limited floor heights was also related to the technical and economic possibilities of the time. The use of more expensive materials for higher floor heights (concrete and iron) was not economically efficient for the population and density of Albanian cities.

[45] *Relacion mbi projektidenë e Planit Rregullues te qytetit të Tiranës, hartuar nga Sektori I urbanistikës së N.SH. Projektit më datë 28.02.1957.*

Figura 27. New housing typologies along the main roads: Durrësi Street

The height of the floors proposed by this plan reached almost unchanged until the eve of the 90s, with very few exceptions when in the central areas were used construction types that reached 5, 6 floors (mainly after the 70s: typical was the road "Luigji Gurakuqi"), and in some very special cases the types of construction that reached 7-9 floors (the last ones in the early 80s: typical was "Rruga e Barrikadave").

Figura 28. New 2-storey residential typologies: Kavaja Street, industrial area.

For areas with 3, 2 and 1 storey buildings the density would be 220 inhabitants / ha, while for areas with 3 and 2 storey buildings (*New Tirana* area) the density would be 350 inhabitants / ha. In the more central areas the plan accepted a density of 500 inhabitants / ha and as this seemed very high, the justification was used that it was in line with the tradition of the southern cities and that of Tirana itself (abovementioned report, p. 7).

The type of construction in Tirana according to the urban regulations of the plan of '57 - '58

In the "*Report on the manner of construction in the city of Tirana*", it is reported that by 1960 around 4000 new apartments would be built throughout Albania, 2000 of which in Tirana, noting the fact that Tirana did not have never seen more magnificent construction. In this respect, the determination of the places where these dwellings would be built was considered as a priority issue, both in the aesthetic and the economic aspect.

The report on the manner of construction in the city of Tirana drew attention to the fact that construction had to be carried out in two ways: along the main roads and in free squares. First, the report also explained why in the first years after the liberation construction focused mainly on what was then considered a suburb (eg. *New Tirana*). One-story dwellings could be built in these areas, saving on deficient materials such as cement and iron needed for high-rise construction. But, in the first period of the plan, this way of construction in the suburbs was not applied (except in some cases), as the construction in the suburbs required the realization of all infrastructure networks and this increased the construction costs by 15-20%.

Thus, after the criticism of the construction in the suburbs, the report also gave the reasons why this type of construction could not be completely abandoned. First, according to the report, "building on the main roads in the center means increasing the housing problem disproportionately" (report, p. 2)[46] due to the expropriations and demolitions needed to free the territories. Secondly, another reason why construction in the suburbs could not be abandoned was the fact that in order to build in a standardized way and as quickly and mechanically as possible, free squares and wide work fronts were needed, which could be found. only on the outskirts. So as a conclusion, in the first place the construction had to start in the free squares (fig. Xx) and then on a smaller scale and with more sacrifices in the main roads (fig. Xx) where the demolition of the existing constructions had to be done.

[46] Miho, K., Dobi, E., Mele, M., Strazimiri, G., Lufi, A. (1958) *Relacion mbi mënyrën e ndërtimit të Tiranës*. Tiranë, Dhjetor 1958.

Figura 29. New constructions in free areas.

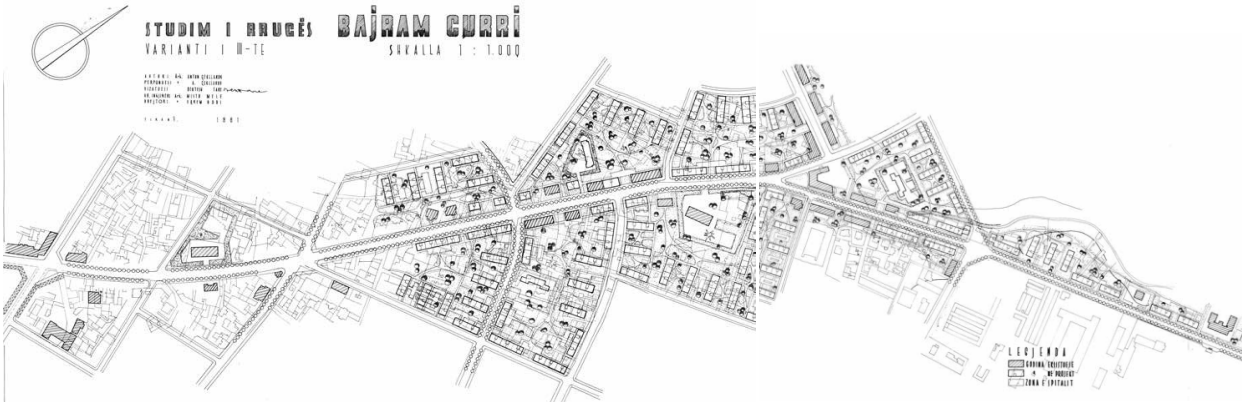


Figura 30. Project and constructions on “Bajram Curri” street between the years 1957-1961. The authors of the urban study A. Cheklarov and Ll. Kule.

Figura 31. New constructions on "Bajram Curri" street.

In addition, the material gave some reasons why it could be built along the main roads, especially in the form of corridor roads, despite the difficulties that this way of construction presented. Among the reasons in favor were mentioned: the aspect of saving as it used the existing infrastructure, favorable conditions due to the position closer to the center, the efficiency of land use as the same number of apartments needed a smaller land area

due to the greater height of floors and finally, this way of construction was considered as a way of beautifying the city. If the existing dwellings were to be demolished, the optimal ratio between the buildings that were to be demolished and those that were to be acquired was considered to be 4:1, so for 1 demolished dwelling 4 new dwellings were to be demolished.

The report on the manner of construction in Tirana determined that the basis for construction along the roads should be the approved urban study. Meanwhile, urban studies were ready for the street "Bajram Curri" (fig. xx) and the streets "Kongresi i Përmetit" (fig. Xx) and "Konferenca e Peza" (fig. Xx). These studies were carried out on the basis of some approved types and mostly without shops downstairs, but the treatment of the facades had to be special. The average height was proposed 4 floors. According to the recommendations of this report, the constructions along the main roads had to reconcile the need to use standardized constructions, with the creation of special views that would come as a result of the personalized processing of the facades.

Figura 32. The project (without author name) and constructions on “Kongresi i Përmetit” street (Durrësi Street)

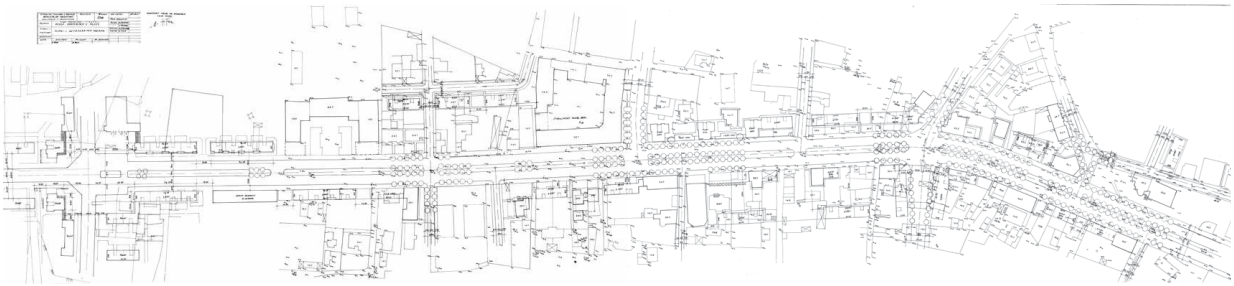


Figura 33. The project and constructions along the boulevard "Konferenca e Peza" (Kavaja Street) between the years 1957-1961, Authors of urban study R. Stojanov, V. Arunov.

Mixed typology - collective apartments with commercial areas on the ground floors

The construction of commercials/shops on the ground floors was another issue addressed by the report on the manner of construction in the city of Tirana. The roads proposed to be built according to the criteria of trade routes (with mixed typology) were: “Stalin” boulevard, “Kongresi i Përmetit” street and “Peza Conference” until they met the first ring road, “28 Nëntori” street , Elbasan Street to the cultural connection, Barricade Street to "Bajram Curri" Street, "Bajram Curri" Street to Barricade Street, Street After the *Clock Tower*, the *New Post* Street and the *Old Post* to the *Old Bazaar*. Priority was given to the junctions of the main intersections, where the influx was somewhat greater and there was created the image of a "developed" city.

The plan also proposed that due to the construction of shops on the ground floors, changes had to be made to the types of buildings as well. Thus, symbolically, on the one hand, the plan physically destroyed the space of the capitalist economy (with the collapse of the *Old Bazaar*), on the other hand, it created new spaces and opportunities to exercise commercial activities and services in the conditions of the socialist economy, officially paving the way for mixed typologies, collective residential apartments with shops and services on the ground floors (fig. xx).

Figura 34. Corridor urban-shape, created by constructions with shops along the main roads. "Luigji Gurakuqi" Street after its expansion.

5.5.2 General Regulatory Plan of Tirana of 1985-1989

Historical background 1960-1989 - the complete self-isolation of Albania and the end of the Cold War

The end of the '80s and the threshold of the' 90s was the period when the Cold War was coming to an end and a period of transition would begin for all the countries of the former Eastern Bloc, including Albania. Totalitarian regimes had begun to falter in the countries of the former Eastern Bloc such as Poland, East Germany, Czechoslovakia, Hungary, Bulgaria and Romania. By the end of the Cold War period (which also coincides with the period when the plan addressed in this chapter was drafted), Albania had achieved its full self-isolation in the international arena: since 1978 the partition with China had taken place, the last country with which Albania tried to establish a relationship of interest, but hidden under the guise of ideology. All this was leading Albania to the inevitable economic collapse.

In Albania, in the late 1980s, only 35% of the population lived in urban areas; while the agricultural sector accounted for 55% of the country's economy (Dhamo, Thomai, Aliaj, 2016). Regarding urbanization, Albania pursued the policy of controlling the urban population, often forcing them to move in the opposite direction, from city to village, which was best expressed in the motto: "let’s make the village like the city". This restraining policy in relation to urbanization also caused the massive and uncontrolled movement of the population towards the cities immediately after the removal of ideological barriers.

This was the general atmosphere and ideological background, almost at the end of the communist regime in Albania, when the world was changing rapidly. This phase and all the preceding events coincide with the time when the general regulatory plan of 1985-1989 began to be drafted. In fact, at the end of this period of 45 years of totalitarian regime in Albania, it was clearly understood that architecture and urban planning not only did not create a better environment, but on the contrary, they had materialized in space the oppression, lack of identity and the spiritual emptiness that characterized the whole life of the country.

Figura 35. Emptiness; "Skenderbej" Square and its arrangement after the completion of the works of the National Historical Museum.

General description of the plan

The General Regulatory Plan of 1985-1989 was drafted by the *Institute of Architectural and Urban Studies and Design* (Instituti i Studimeve dhe Projektimeve të Arkitekturës dhe Urbanistikës I.S.P.1). The drafting of this plan was a necessity as the previous plan, that of 1957-1958, had lost its relevance. The draft idea of the General Regulatory Plan of the City of Tirana with the perspective of 20-year forecasts (until 2005), was approved by *Decision of the Council of Ministers* no. 45 dated 07.02.1990. The main graphic material bears the signature of the then Prime Minister, Adil Çarçani.

The plan for the years 1985-1989 and approved in 1990, is a realistic regulatory plan and does not constitute a conceptual leap even though it was drafted many years after the deadline of the last plan (1957-1958) had expired. This plan made the best use of all

previous experiences of Tirana plans, starting from the plan of 1939-1943 and further that of 1957-1958. On this basis many elements were restored in a rethought and filtered way for the conditions of the time. Thus, the plan tried to provide concrete solutions to some of the most worrying problems that Tirana had at that time such as: the housing problem, the creation of a structure with clean functional areas, the creation of continuity between areas with similar uses, the regulation of the norm of greenery available to each resident, as well as completing the road network scheme with elements that were missing, or that were not realized by previous plans. In connection with this plan further consolidated the complete radial ring scheme (proposal started with the plan of 1939) by completing it with five levels of rings, by extending the existing radials in accordance with these rings and by completing several radials new (fig. x).

Figura 36. General scheme of 1985-89 plan with functional areas and main radial-ring road system.

The plan of 1985-1989 proposed a compact and centralized structure around the main core of the city, with the exception of two or three very small "islands" in the form of previously created working quarters (*Kombinat* and *Lapraka* area, etc.) located at a distance from the center, which by the way they were treated seemed more like a displacement to remove something unpleasant, than the creation of satellite neighborhoods with certain criteria. Nowadays, the structure of Tirana, although physically much larger than that foreseen in the plan of 1985-1989, is tightened even more around the main center, even in the conditions of the pronounced lack of road network. With the structure that has already been formed in Tirana almost spontaneously, it has become necessary to complete at least some of the levels of the rings as proposed by this plan and the combination of this ring scheme with orbital and tangential.

Key plan proposals

Population growth and residential area

One of the main problems that Tirana was facing in these years was the ever-increasing demand for housing, despite the control that existed over the movements of the population. At the time this plan was being drafted, Tirana was approaching a population of 300,000. Clearly both the increase in population and the increase in the physical size of the territory had already exceeded the limits of the predictions of the previous plan. We recall here that the Plan of 1957-1958 foresaw the increase of the population of Tirana for the period of 15-20 years in the limits of 150 000-200 000 inhabitants. Also, the area of Tirana in 1985 was 1540 ha from 1360 ha provided by the plan of 1957-1958.

In line with this growing demand, the plan envisaged that within the forecast horizon, in the time frame of 15-20 years (until 2005), the population of Tirana would increase to 317,000 inhabitants, the total area would reach 3238 ha (32 km2), while the housing density in 2005 decreased to 170 inhabitants / ha from 224 inhabitants / ha in 1988, as a result of the increase of the living area, ie the increase of the quality of the space available to the inhabitants.

Key data regarding the status and forecast of the plan (Aliaj et al. p. 65) [47]

Estimated population **for 2005**: **317 000 inhabitants**
Total existing area in 1985: 1540 ha
Total projected area for 2005: 3238 ha, of which:
1902 ha residential area
524 ha of industrial area
293 ha services
439 ha of greenery
80 ha nursery, greenhouse, agricultural area
Existing housing density in 1988: **224 inhabitants / ha**
Housing density forecast **for 2005: 170 inhabitants / ha**

It is noted that the forecast of population figures for 2005 was made very conservatively, as this figure included almost only the natural increase of the population and not other factors which made Tirana in 2005, out of 317 000 inhabitants predicted by this plan would reach 585,756 inhabitants, ie almost double. While according to the data of the Institute of Statistics for 2005 the total population of the prefecture of Tirana was 667 405 inhabitants and the urban one 448 140 inhabitants[48].

Zoning scheme

The plan of the zoning scheme (fig. 12?) prepared at a scale of 1:10 000 foresaw a compact and grouped city structure around the main center of "Skënderbej" square which

[47] Aliaj, B., Lulo, K., Myftiu, G. (2003) Tirana Sfida e Zhvillimit urban, Co-PLAN, Seda, Tiranë.
[48] http://www.instat.gov.al/al/themes/popullsia.aspx
Ky link përmban të dhënat më të fundit të publikuara të popullsisë sipas qarqeve (urbane/rurale) për periudhën 2001-2015).

according to this plan continued to be the only point of gravity. This was further emphasized by the functional scheme of the radial-ring road network, where the tendencies of decentralization through orbitals or tangentials had not yet appeared.

A very positive element of the proposed structure of the city was the creation of an interconnected system of sanitary protection belts, recreation areas and sports parks and areas around the proposed outer ring of Tirana. This continuous system, somewhere wider and somewhere narrower, created almost a green ring, green belt around Tirana, to serve as a kind of restriction for the built area. Thus Tirana really gained the values of a city against the background of nature and agricultural territories, an element that unfortunately lost today as a result of the phenomenon of urban sprawl[49].

Residential area

Residential areas were summarized within the large ring road proposed by this plan, with the exception of some residential areas in the more distant perspective such as those near *Farka Lake* (in the east) and those on the *Tirana River* near *Paskuqan* (in the north). For the residential areas within the existing ring road the plan also defined the areas where the reconstruction would be carried out and the areas where it would be built on open ground (fig. Xx). These were also divided into four phases. Thus, the reconstruction would be carried out with time priority starting from the most central areas and moving towards the periphery. While the construction of residential areas in free terrain would start as the first phase from the area of "Kodra e Priftit" near the village of *Shkoza* and the industrial area of the *Combine of Tractors*.

It is clear that the areas proposed for construction in open fields were selected mainly in the vicinity of the existing industrial areas as well as the small villages surrounding Tirana, which at that time were still isolated. They were also proposed along the existing main roads or proposed by the plan itself. This created continuity of the inhabited area as well as a more efficient land use in relation to infrastructure development.

[49] Plani rregullues i Qytetit Tiranë, Skema e zonimit, shk. 1: 50 000, Tiranë, 1990.

Figura 37. this immage will be changed with the reelaborated one.. Fazat e rikonstruksionit dhe ndërtimit të qytetit.

The zoning scheme also defined some residential areas with urban values (fig. 14). As such two areas were defined. First, the area with traditional Tirana constructions which was included in the sectors between Dibra Street, “Qemal Stafa” Street, “Ali Pasha Gucia” Street and the existing Ring Road. This area was presented with labyrinthine structure, typical oriental and with cobbled alleys. Currently, significant parts of this area still exist and despite the damage they have suffered, they still present irreplaceable values for the history of Tirana and its formation as an organic city. But, despite its categorization as a value area, no urban restoration or regeneration project has been implemented on them. They have been able to resist to this day only because of the economic inability of their inhabitants to build.

Figura 38. this immage will be changed with the reelaborated one.. Skema e zonimit për mënyrën e rikonstrukskionit

Secondly, the area with urban values was defined as the one between the *Radio Television Street* and the *Elbasan Street* with constructions of the late 20s and 30s (fig. 114). This area represents another important moment in the history of Tirana, when it began to be renovated and built with plans and projects (the plan for the new Tirana mentioned in the first chapter), which made it completely different from the first area. described above. In this sense, this area preserved the characteristics of a quadratic network of 2-storey villas built according to a more European architectural language, which often found expressions of Italian rationalist architecture or the beginnings of modernity, designed and built by Italian architects as well. by the few Albanian architects of that time. Even in this case, despite the protective statuses defined not only by this plan, but also by other subsequent plans, the area has suffered great damage, especially in terms of disrupting the unity of language and the architectural scale due to the construction of multi-storey dwellings, as well as due to incorrect restorations.

Figura 39. Characteristic views of dwellings from two areas of urban value proposed by the plan to be preserved; Areas with traditional Tirana constructions; The area of "New Tirana" (years 20-30).

Central areas

The plan was an attempt to create a series of more secondary level centers. As such some of the main intersections scattered throughout the city structure were identified. These centers, organized around existing public spaces or obtained as a result of separate studies, meant more the combination of mixed uses and different services with public space, rather than the creation of a city with many centers, as they in each cases were at very short distances and remained very powerless in relation to the main center. As such, the intersection at the *Madrasa*, at *Selvia*, at *Xhamlliku*, at the "Ali Demi" cinema, at the "Ali Demi" sports field, at the entrance of the embassy street, at *Zogu i Zi*, etc. were defined. Nowadays, these points play the role of traffic hubs and carriers of trade and service premises. The idea of tackling through urban design operations, and bringing more usable public space into spaces that were initially merely street junctions and then only played the role of traffic collectors and distributors, still remains valid.

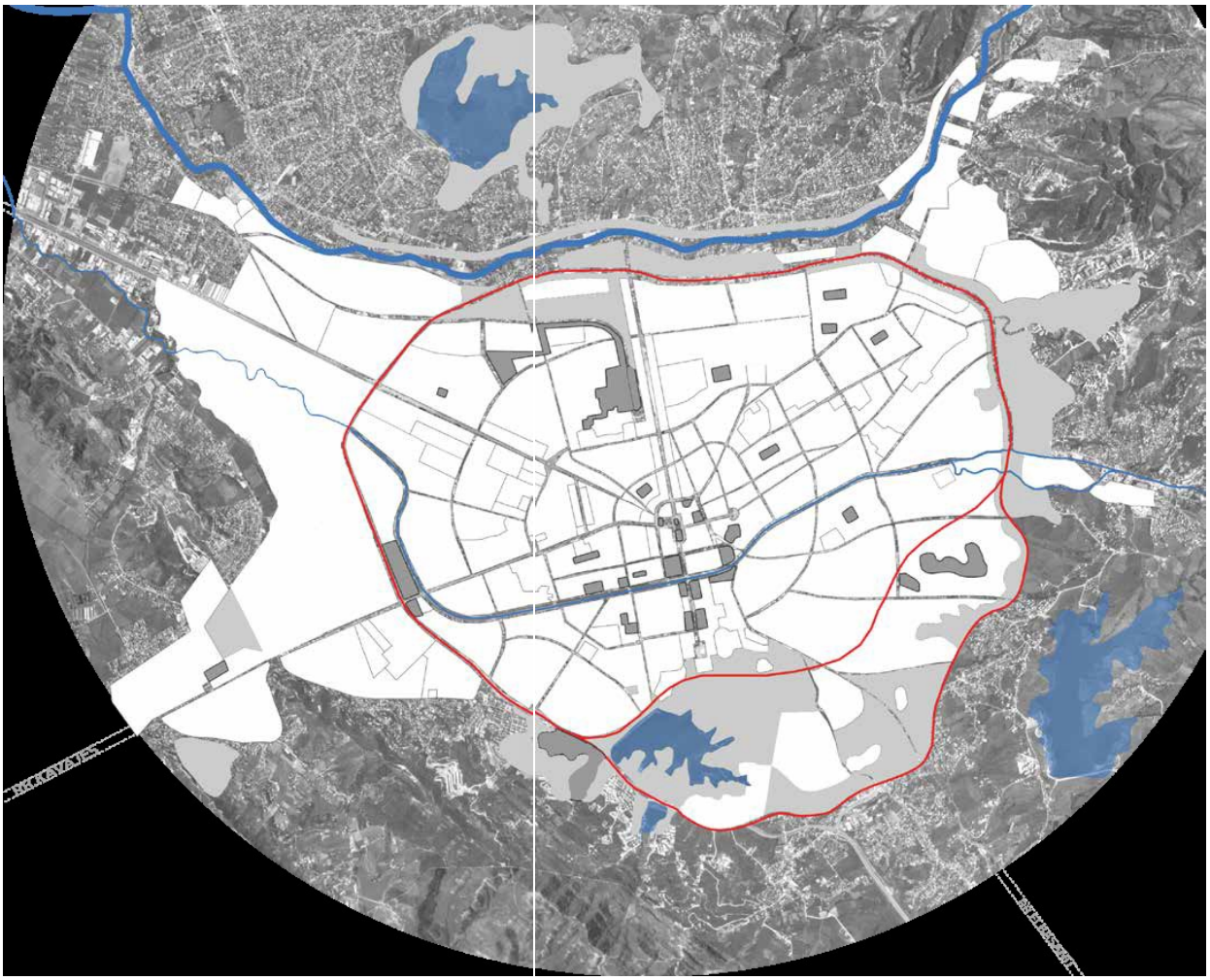


Figura 40. Traces of the plan of 1985-1989 on the aerial photo of today's Tirana

Conclusion for the period from 1944 to 1991

The plan of 1985-1989 is the plan which closed a phase of the history of Albanian planning starting with the plans of the 20s and further with those of the years 1939-1943 and 1957-1958. This plan crowned and assimilated all previous experiences of this type of traditional planning (Taylor and Williams, 1982)[50]. According to this methodology, the "correct" and scientific collection and interpretation of data became a crucial element in starting or not starting the planning process. This paradigm assumed solutions in the context of complex, perfect data and centralized information. In fact, not only can reality

[50] Taylor, John L. and Williams, David G., (1982), *Urban Planning Practice in Developing Countries*, Pergamon Press – Oxford, New York, Toronto, Sydney, Paris, Frankfurt.

not be perfect, but we often have to act in conditions of "uncertainty" and lack of data. Typical in this regard have been population growth forecasts, based on a centralized economic and political model, as well as forecasts of additional areas that should carry this city growth. As can be seen from the descriptions in this paper, none of the regulatory plans analyzed were able to make "accurate" predictions (as assumed) both in terms of population growth and in terms of area required, and consequently also the density of inhabitants and related services. So the "accuracy" that was supposed to characterize this kind of planning was just a fiction and a false myth. This is also because these plans placed emphasis on long-term forecasts, 20 years and more, which made them unrealistic.

The lack or inadequacy of data often turned into a fictitious "obstacle" to drawing up plans, even when the need for them was immediate. Even after its drafting began, the process of data processing, their interpretation on the basis of objectives which originated from the highest level of policies inspired by the ideology of the time and their breakdown into developmental details according to legal norms, took a very long time. The actuality of many of the elements of the plans was often lost from the moment these plans were approved. Such was the case with the plan of 1985-1989: along with the approval of this plan, the political system in Albania also changed.

However, this almost 70-year phase, which began to take the first steps with the plans of the 20s, was refined with the plan of 1939-1943, consolidated with the following plans and closed with the approval of the last plan of this period, that of 1985-1989, was very important, as it laid the foundations of planning in Albania. Despite their "inaccuracy", these plans have played a primary role in orienting issues crucial to the development of Tirana. Without a doubt, today's Tirana is also their result. Especially after the 90s, the reality changed much faster than these plans managed to predict the evolving problems. Making plans according to these concepts and methodologies was no longer possible or necessary.

Tirana of 1990 had a compressed ellipse shape and a relatively clear "border" in relation to the free non-urban territories that surrounded it. While the situation in Tirana in the early 2000s was similar to the historical situation when the traditional compact pre-

industrial city exploded beyond the "walls" and urban sprawl in the suburbs began to outline "de facto" on the ground the metropolitan region (fig. 17). Planning efforts until the early 2000s did not fit into a broader vision of the metropolitan region and aimed "fixedly" for Tirana to complete its concentric form, combining only radials and rings, although already "explosion" trends beyond the center were clear.

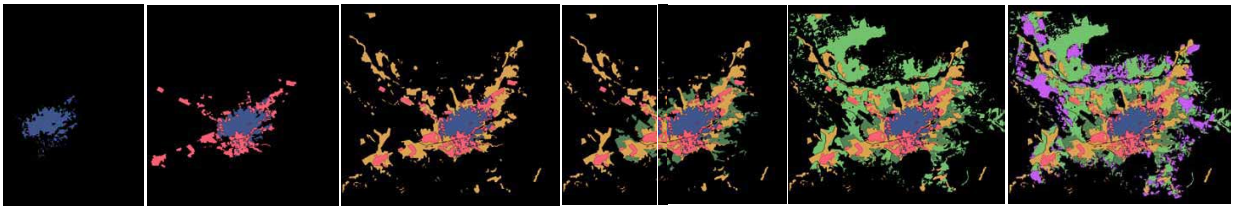


Figura 41. this immage will be changed with the reelaborated one.. Shpërthimi i Tiranës nga vitet 20-të deri në dhjetëvjeçarin e parë të viteve 2000.

5.5.3 The urban block in Tirana during ‘80, building and city scale

The period of '80 -'90 closes a long chapter in the history of urban transformations of Tirana. The morphology of the city is, in many cases, a fabric left in half, where often read some urban frames "frames" (blocks-residential complexes), which fold at the edges of urban units, but remain "uncovered" and do not reach to define urban forms (fig. 24).

The way these complex-blocks were conceived and composed from the formal point of view, is given to us by two urban architects of the time, E. Faja and F. Alimehmeti, who published in 1983 the two volumes of "Urbanism". These two texts summarize a series of rules and norms on how to conceive and design the urban block, and further the urban complex, even according to the ideological (socialist) principles of the time. It should also be noted that at the time, there were no other texts in this field to consider urban morphology and the shape of the city.

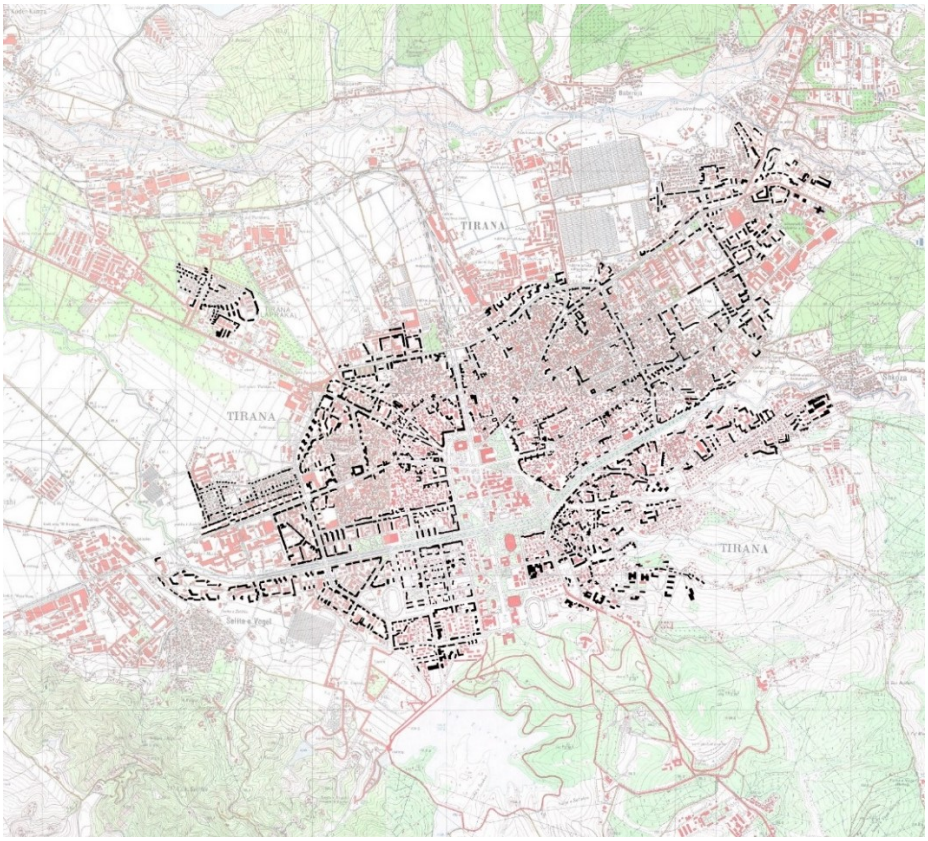


Figure 24. Map of Tirana of the year '89 -'90. The urban structures "frames" realized during the 45-year socialist-communist period are highlighted in black.

Regarding the structure of residential areas they give an interesting definition, which is related as mentioned above, also to the ideology of the time:

“By structure of the residential area we mean the totality of functional technical-economic and compositional requirements of the division of its territory into residential units as well as the organization of reciprocal connections between them (road network).

The residential area in the revisionist capitalist cities is built and constructed completely according to the systems: with quarters, micro-regions and residential regions.

In our country, the division of the residential area [...] is done with residential blocks, with residential complexes and with residential neighborhoods” [51] (Faja and Alimehmeti, 1983 p. 121).

Also, based on the experience of building cities as well as the territorial size and population, they thought that residential areas should be divided into structural units which were: *residential block, residential complex and residential neighborhood*.

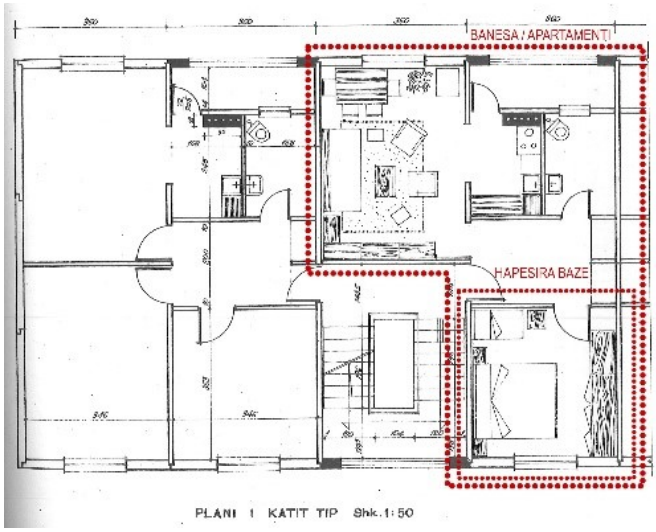
The residential block is the smallest structural unit of the organization of the residential areas of the cities, which represents a territory surrounded or not on all sides by roads, in which the residential and socio-cultural buildings are placed to meet the needs. "Most necessary" of the inhabitants (nurseries, gardens, grocery stores). The residential block has *an area of about 3-5 ha, a population of about 1500-3000 inhabitants and the net density of housing is (about) 600 inhabitants / ha.*

Residential complex is the structural unit of division of the residential area which consists of two or three blocks of housing limited by residential roads or main roads, in which are located the residential buildings, the socio-cultural ones and those of the "daily" service (nurseries, kindergartens, 8-year school, commercial services complex, sports fields, etc.). The residential complex has an *area of 7-15 ha* and a *population of about 3500-8000 inhabitants.*

[51] In the text, it is clarified that: “*the differences between the residential block and the quarter or between the residential complex and the micro-district do not lie only in their physical size, but primarily in the ideology expressed by the constructions within them, in the factors of residential comfort and in the compositional ones”.*

Residential neighborhood is the largest structural unit of the division of the residential area, which consists of two or three residential complexes, in which are located the residential buildings, the socio-cultural ones and the service ones of the "periodic needs" of the inhabitants (nursery, kindergartens, 8-year school, high school, center of administrative, cultural, commercial, handicraft and health services, etc.). The residential neighborhood has an *area of 30-70 ha* and a *population of about 10,000-20,000 inhabitants* (Ibid, pg. 104).

Housing structures are therefore conceived as a sum of smaller housing elements. The residential building itself is conceived as the basic element in the construction of the residential area. The union of alcoves (basic spaces) necessary for the life of a family forms the cell of residence, the apartment. The basic typological module (typological section, in Albanian terminology) had to consist of at least three apartments per floor. In conclusion, the residential building had to consist of the successive aggregation of at least three typological sections, but without creating numerous fractures (indentations). (fig. 25-27). It is understood here why many residential blocks always ended with "blind" end facades (adjacent wall) and did not prefer to provide angular solutions. In this way, the new urban frames were totally detached from the morphology of the existing organic city.



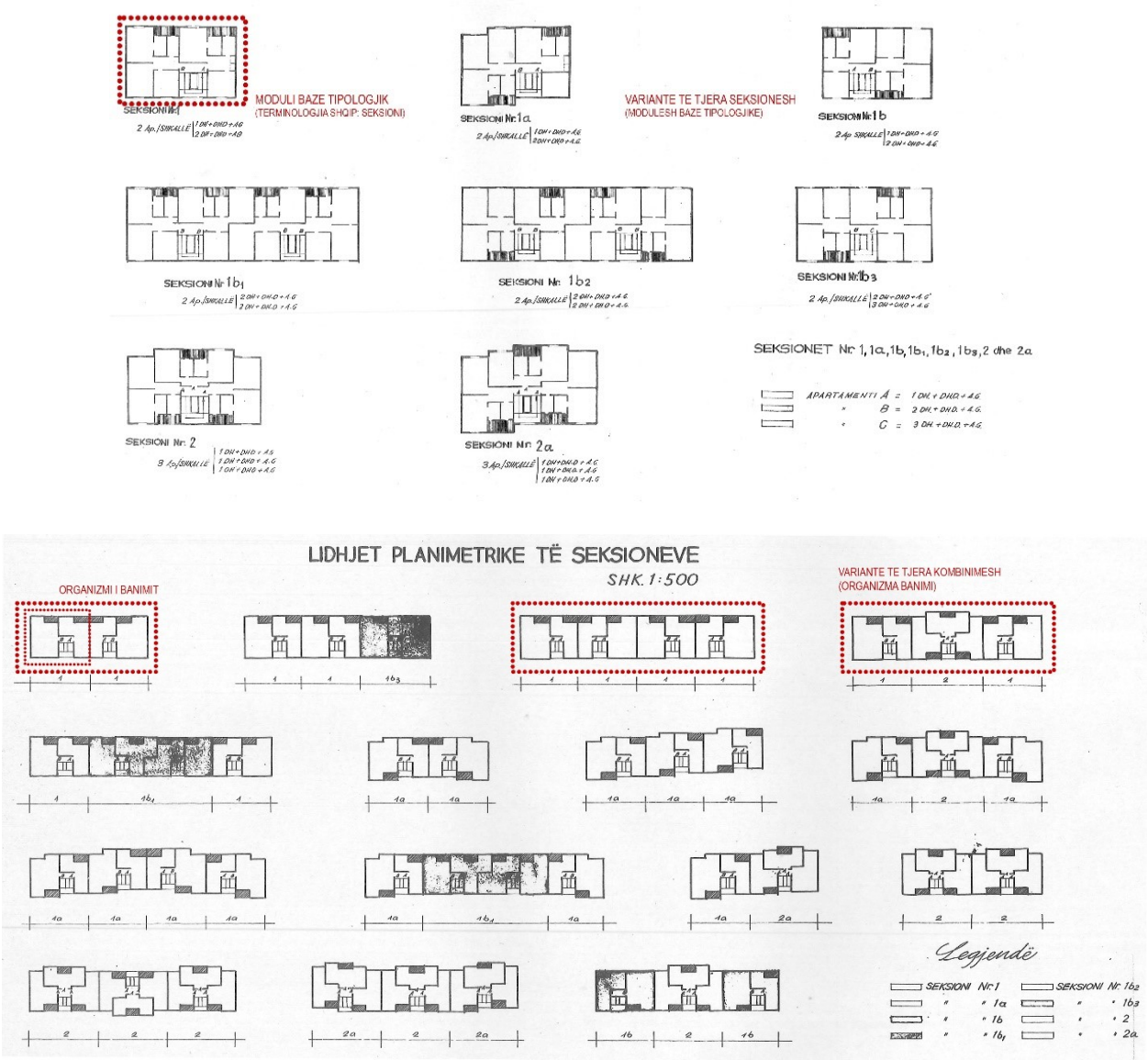


Figure 25-27. Organizimi i ndertesave te banimit (parafabrikate) ne hapesire baze (fig. 25), ne modul tipologjik (fig. 26) dhe ne seksione (fig. 27). Source: author re-elaborations from "SEKTORI I TIPIZIMIT TË ISP NR. 1"

Menyrat e Kompozimit te Ndertimit te Blloqeve dhe Kompleksеve te Banimit

The design and composition of residential buildings in both the system with residential blocks and the one with residential complexes has been realized in several ways of composition; eg the system with residential blocks is realized with the “perimeter” (closed) way, in the “queue” and “combined” way of construction, while the more complex residential system, as a newer system, is realized mainly with the “combined” way ”Of constructions (fig. 28-29).

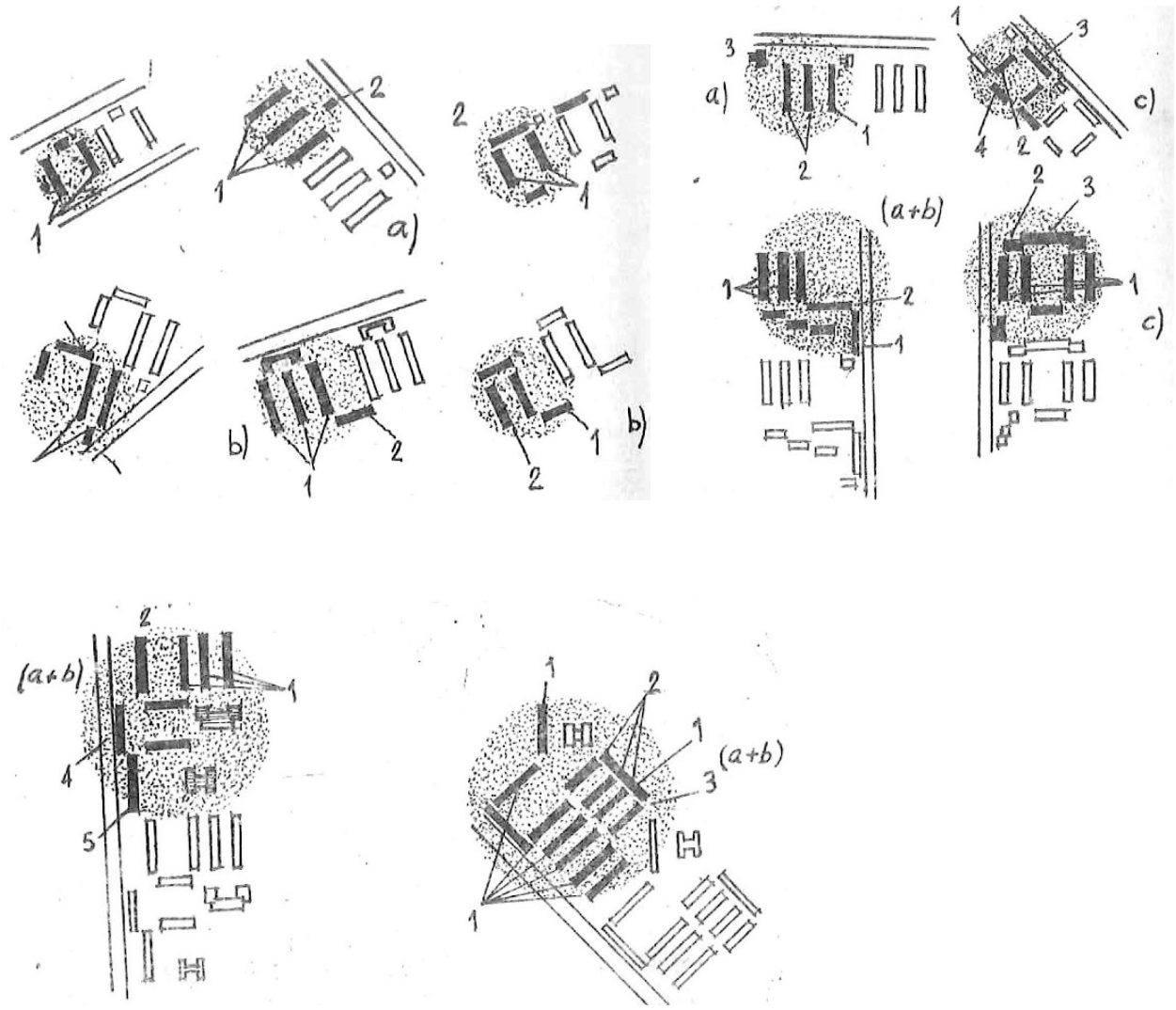


Figure 28-29. Scheme of composition of residential buildings in groups. a) scheme of open yards; b) scheme of semi-open yards; c) scheme of closed yards. Numbers 1,2,3,4,5 represent buildings with the same number of floors and different lengths.

Perimeter mode: according to this way, residential buildings are developed along the perimeter of the block, with longitudinal sides, along highways, with small spaces between them and, as a rule, their edges are organized with residential buildings with closed corners. The inner territory of the block is divided through residential buildings with small yards (closed or semi-closed). The perimeter way can be with open corners or with closed corners (fig. 30-31).

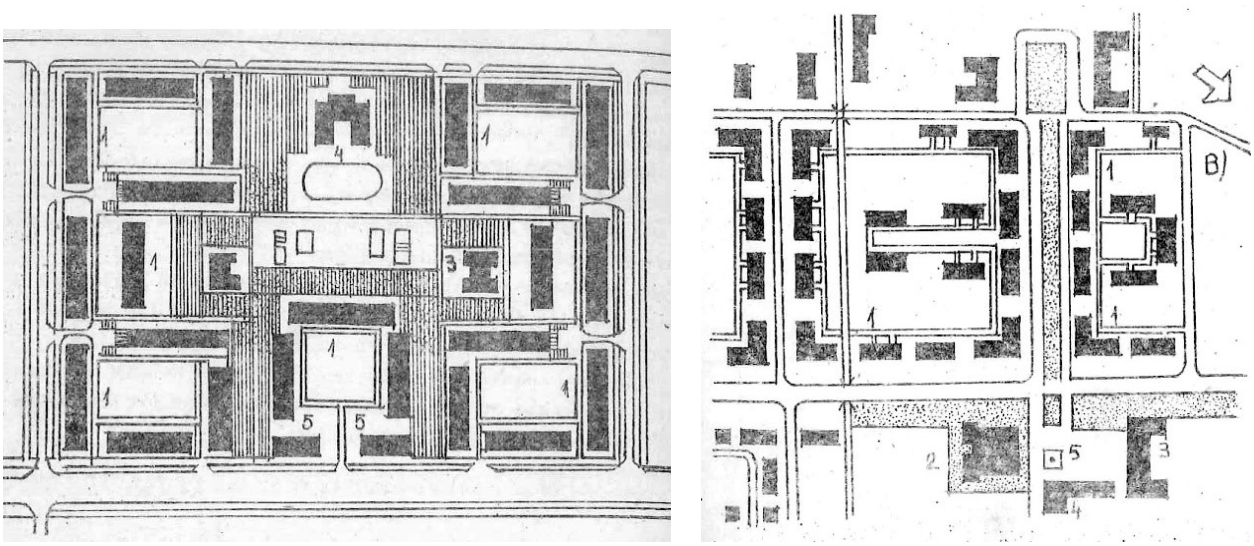


Figure 30-31. Residential blocks built perimetrically; right: with open corners; left: with closed corners.

The perimetral method has been used mainly due to the economic benefit (which comes from the small number of demolitions of existing buildings and the use of the existing engineering network), the opportunities it provides for the faster creation of the appearance of city streets, which inherited from the past, and for its aesthetic values. Also, with the removal of buildings of broken shapes at the edges (corners) of blocks, the authors think that this way of construction underwent significant improvements, moving to the so-called "row" or "open" way of building blocks.

The mode in rows (opened): this mode was characterized by the parallel placement of buildings with each other and with equal distances between them (fig. 32). In relation to the perimeter mode, a series of positive and negative aspects are given. Among the positive aspects, the emphasis is mainly on hygienic reasons, those of orientation and sunbathing, and finally the possibility to build quickly and in series new volumes and surfaces (prefabricated technology). Among the negative reasons are mainly mentioned the aesthetic ones, such as the "corridor" effect, and the monotonous appearance on the facades and along the streets.

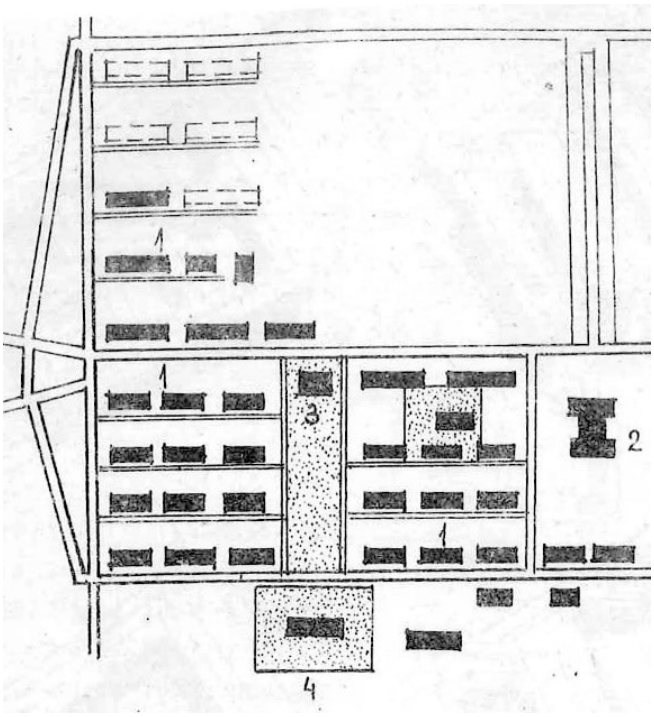


Figure 32. Scheme of how to build a residential block in a row (open).

Combined mode: used in the design of blocks and mainly in the design of residential complexes. This way was characterized by the extension and connection of residential buildings as best suited to the natural factors of the country (relief, orientation, climate, greenery, etc.). Buildings in this way lie with a certain transverse regularity, parallel or at an angle to the city streets.

Mode of construction with plots: was used mainly in the design and construction of villages (according to the authors) and partly in the blocks of private buildings of cities (fig. 33). The way of construction with plots is characterized by a low density of construction and a greater range of constructions (compared to all the ways of construction mentioned above), significantly increasing the areas of roads and engineering services.

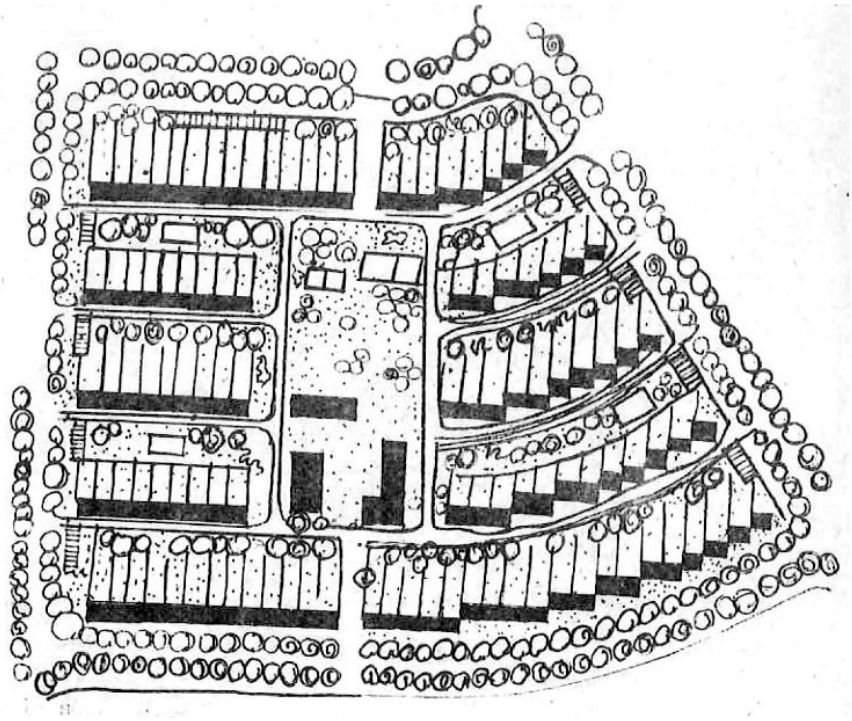


Figure 33. Skeme e ndertimit te bllokut te banimit bazuar ne parcela.

Residential complex: Represents the construction space occupied by residential groups with those of service buildings, social, commercial, recreation and playgrounds for children and sports. "*The residential complex, with its territorial size, creates better opportunities for organizing the life of the inhabitants within its borders, technical-economic indicators of the use of the most suitable land and at the same time greater opportunities for the creation of urban-architectural ensembles. , than the system with housing blocks* (Ibid., p. 1, 2nd volume).

In relation to the dimensions of the Albanian cities in that period and the natural increase of the population, it can be said that the optimal size of the complex (for buildings with 4-5 floors) is considered the *surface about 8-12 ha* (or equal to the territory of 3 -5 residential blocks) and with *about 5000-7000 inhabitants*.

The division into residential complexes, from the largest structure of the residential neighborhood, could be done in several ways:

a. *Through the residential streets of the city*
b. *Through its inner roads*
c. *Through green areas*

As mentioned again in the text, *the urban architectural ensemble of the space of the territory of the complex should be achieved with the construction of typical residential sections*. So, the different scales of urban residential structures were achieved by starting the design from the smallest basic structure, that of the typical section. Also, in the design of the residential complex, care had to be taken towards the composition of the interior space of the complex and the buildings along the main city streets.

In the way the residential buildings were to be placed in a residential complex, we can divide them into three categories:

a. *Residential buildings located parallel or in the direction of the road*
b. *Residential buildings located in regular geometric spaces (characteristic of plain terrains)*
c. *Residential buildings located in irregular geometric spaces, in accordance with the relief (characteristic of sloping terrains)*
d. *Residential buildings located in the form of "groups".*

The construction in the form of a "group" in the conditions of the repetition of the cities presented some difficulties, which were related to the lack of relatively large and free spaces for constructions, (although it still gave the possibility of construction in stages). This was also one of the reasons why this type of construction was not used often.

While in the construction according to the direction of the road, the residential buildings with the same volumes and equal spaces, located in a "construction line", created monotony and uniformity, so for this purpose places were passed to a second construction line. This way of urban construction found more application, due to economic factors and better opportunities to implement construction in stages (fig. 34). As a result, in the late ’80s, early’ 90s, the urban morphology frames of Tirana were created mainly by this way of construction.

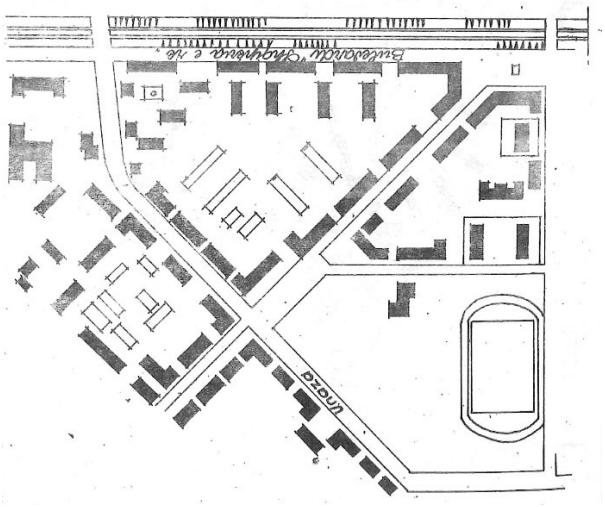


Figure 34. Scheme of placement of buildings according to the direction of roads. Residential block "1 Maji", Tirana

I am bringing here the example of the residential complex "50th Anniversary of Independence / Work", in Tirana, which is also analyzed by Dhamo (2018, pp. 139-153), in the way this urban structure is transformed, densified, in thirty consecutive years (fig. 35). Below are some quantitative data, which were essential in the way the complex was designed.

Territory area 15.70 ha - 1.90 ha; 330 m2 / inhabitant; No. of apartments 900 ap .; No. of inhabitants 5700 inhabitants; Net density (about) 630 inhabitants / ha - gross density (about) 350 inhabitants / ha.

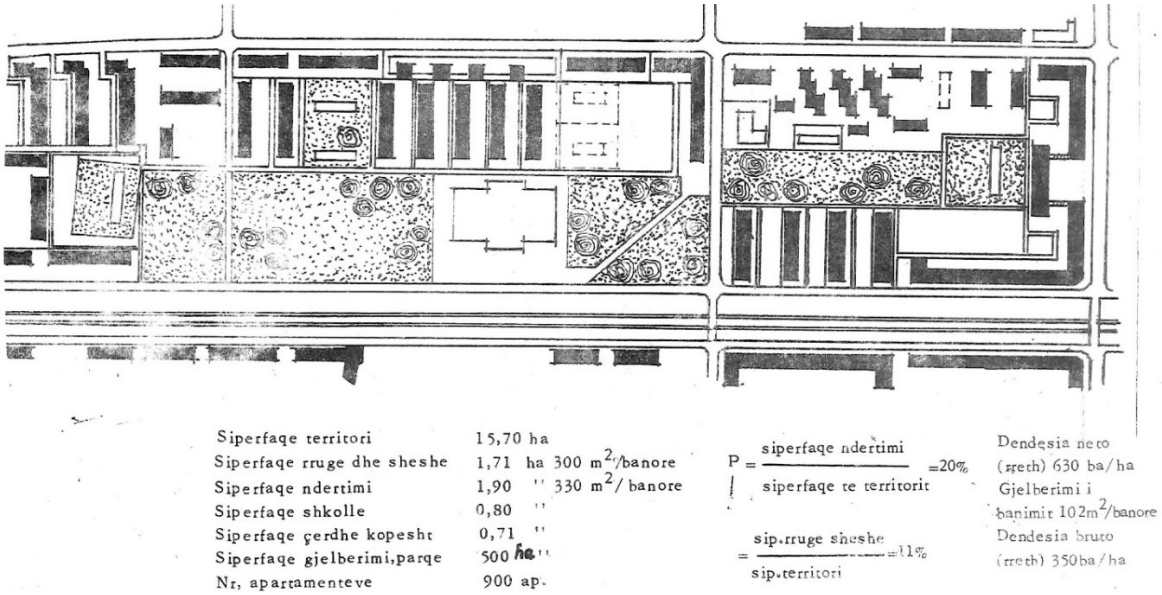


Figure 35. Residential complex "50 Vjetori i Pavaresise" or "Puna".

Residential neighborhood

At the end of this part, which explains the parts of the city construction according to urban methods and the ideology of the time, is the *residential neighborhood*. The residential neighborhood *is the largest structural unit of the organization of residential areas, which consists of a complex of residential buildings and social and commercial buildings to meet the "periodic" needs of residents.* The residential neighborhood is formed on the basis of some residential blocks or on the basis of some residential complexes. The size of the residential neighborhood depends on the size of the city, the density of construction, as well as the natural climatic characteristics (Faja and Alimehmeti, 1983 p. 56, 2nd volume).

A residential neighborhood, approximately, it can be said that had a **a surface area of about 30-70 ha,** or **the sum of the territories of 2-4 residential complexes,** or of some residential blocks, and with a population of **about 10,000-20,000 inhabitants**.

It should be concluded that due to the large dimensions of the residential neighborhood and consequently, the large investment required in engineering infrastructure and services, the cases of realization of these structures are very few in Albania.

6 FROM 1991 TO DATE

Return to the organic city: The third layer of interference, atomization and / or vaporization of the city.
From compact urban form to advanced state of dissolution and not continuous urban form. Efforts to stabilize limits of urbanization.
Tirana changed from within and from without. Infill densification in the center and sprawled city in periphery.
Metropolitan interplays: From Tirana to Greater Tirana, to Parallel Tirana and Durana.
The city of separated / isolated projects.

The decay of the communist utopia and the vacuum left behind (not only physical but also psychological) was the origin of the dramatic and uncontrolled political-economic-social collision that happened afterwards. This condition drastically changed the role of the state in all fields, including construction activity and territorial control. Rapid and uncontrolled urbanization in Tirana and in the main urban areas was triggered: the emergence of the first informal suburbs stared, and the public space was gradually reduced through progressive infill. The reform of land and housing privatization that started from 1993 was followed by considerable changes in the economic, social and spatial structure of the city.

There are two main tendencies related to the city shaping during the first decade after ‘90s: the core densification and/or consolidation; and the “foundation” of a new peripheral and evaporated city all around the main core.

Related to the first tendency, there were efforts to improve the living conditions in the central areas of the city mainly through improving the existing infrastructure services (enlarging the main roads, improving the water and power supply, etc.), which contributed to increase the density within the urban structures located along the main roads. A lot of infill development contributed to loose most of the open public spaces and facilities in these areas and to decrease the quality of life. In addition, freed from the previous oppression Tirana was resurrecting from the latent layers of former property, hidden interests, etc. The only legal criteria for this kind of plot based infill development was the “respect” of the normative distances, which were only measured geometrically and

calculated arithmetically. As we mentioned, the precedent of intervening without a holistic consideration of the surrounding context and the entire neighborhood, was created since the period of dictatorship. What makes it worst is the bigger mass of the infiltrated volumes: from 4-5 stories buildings they increased to 10-12 stories.

The second tendency is related to the city that was self-developing and finding its own way without being "disturbed" by the government control and assistance: the city outside of the official boundary. This new city was taking place in the nearest periphery, or in some cases in former agricultural fields which were located more distant from the center, already distributed to the farmers by a specific law. It was a kind of shapeless "vaporized city", a second return to the organic process of city creation. This kind of "city", extended in endless intricate ramifications in former agricultural land and swallowed preexisting villages, former state farms (*kooperativa)*, or even small towns, resulting in an always bigger, shapeless and unstable organism. However, during the last decade, this kind of informal sprawl is undergoing an organic densification process. Analysis of satellite imagery conducted during 2001 by the team *Strategic Planning for Greater Tirana*[52] showed a massive population expansion in the Greater Tirana area: from an area of 12 km2 before 1991 to 32 km2 in 1994 and 56 km2 in 2001, or almost a five-fold increase. Tirana, the biggest city in the country, experienced an annual population increase of almost 7% during the first ten years after the political change.

The city reborn: again, Tirana drastically changed from within and from without. Evidently, the "proletarian city" did not fully succeed to sterilize the human and the physical energy of the real city. Life invaded the city again.

Different labels came out to define and characterize this new phenomenon of spreading informal neighborhoods around Tirana: informal, illegal, new-comers' city, sprawl, etc. The main characteristics of these areas in Tirana coincide with what is considered by De Geyter Architects (2002 pp. 21, 23) as the *negative, global and generalizing* idea about sprawl: *chaos, lack of structure or demonstrable catalysts*. In most of the cases, these floating entities are not only physically detached from the center, but they are also

[52] Working Report for *Strategic Plan for Greater Tirana*, PADCO, ULMP 2001, Tirana; A project under the framework of the Urban Land Management Program financed by The World Bank.

morphologically different in their lack of compactness and great voids alongside them. However, while sprawl is a term hired from other cultures and social conditions, the other terms, such as illegal or informal, are mostly related to their legal status and carry a prejudicial connotation. These labels definitely derived to a simplistic reasoning and hindered the deep understanding of the phenomena and the related urban effects.

The distinctive characteristics of urban spread in Albania derive from the specific socioeconomic conditions that are different in comparison with those that triggered and motivated sprawl as a phenomenon in western countries. These factors include the high demand for housing combined with the poor economic conditions and the inability of government sector to offer affordable alternatives; the lack of operational and realistic planning system which is more focused on banning, and prohibition rather than on enabling; un-clarity of land ownership; massive dis-respect for the rule of law, etc. The urban spread in Albania, especially in the first period (1994-2000) started as a phenomenon of the poor people, and still they remain the main stratus of society feeding new sprawl contingencies. Only during the last five years, sprawl is also emerging as a phenomenon of the rich people who are “safely isolating” themselves in gated communities around the periphery. This phenomenon is expected to grow in the next coming decade.

The first tentative to create a vision beyond the traditional borders aiming to shape the vaporized metropolitan region, was made by the Strategic Plan for Greater Tirana in 2001

formulated under the Urban Land Management Project with the assistance of the World Bank; in 2004 another inspiring vision called Tirana Metropolis was formulated by Berlage Institute. While the former was based on a more classical planning approach, the later was a strategic vision for the definition of a more intelligible metropolitan geography. Tirana Metropolis aimed to transform the city based on seven projects at the metropolitan and urban scale through reinforcing what already existed by following a super contextual approach. The proposals of both plans better than anything, give an idea about the main problems and characteristics of the urban conditions at that time, as well as the origin of many todays problems.

The Strategic Plan for Greater Tirana among other proposed the compacting of the city to reach a more efficient use of the urban land combined with a polycentric vision around newly created poles such as Kamza, Berxull, Paskuqan, Kombinat, Vora, Rinasi, etc.; the stabilization of physical limits of urbanization through green belts and land reservation; the deviation of the traffic from the center projecting the combination of three levels of concentric rings with two orbitals and two tangentials; two light rail trains connecting the center and the airport; They proposed also the establishment of Metropolitan Authorities for transportation and other services; etc. But the professional and administrative mentality was not yet prepared to absorb these ideas. Due to disagreements between local and central institutions this plan was never fully approved. At the same time, this failure was a clear sign that Tirana could no longer be managed by traditional city planning instruments.

In the vision of Berlage Institute (2004), Tirana was a metropolis still under formation and not in transformation. The city was seen as an archipelago, or complementary centralities outside the city center. Among the most distinct proposals of Tirana Metropolis are those of "*Parallel Tirana*" and "*Durana*". The former was proposed as a *mirror* ring city, offering a provocative vision reflecting on the *epidemic of sprawl* in Tirana (pp. 22, 114-118). Following a similar logic, "*Durana*" was used as a tool to think about the metropolitan region: *an eventual fusion of Tirana and Durres into a new Metropolis with a green heart* in between (pp. 22, 126-131).

From 2010 up to date, the trend in the construction industry and urbanization calmed down. A new plan could be officially approved, only in 2012, however, it was substituted by a new one only after five years, in 2017. Both plans do not represent a real qualitative shift in methodology and in what they propose. Contrarily, they are prey to the developers' interests being mostly focused in increasing intensities and buildable areas, including in the historic parts of the city.

Meanwhile there is a tendency to develop and transform the city through isolated projects. The most emblematic one is the extension of the 3 km Northern Tirana Boulevard and the organization of a 7 km river side park that is supposed to give a new dimension to the city. While too much effort is spent in the redesign of the central areas especially those

located along the main axis of the boulevard, the periphery and the newly created suburbs are totally neglected. The lack of willingness to treat the urban problems in a systemic way is gradually driving to the creation of double standard parallel cities: the “city of appearance” where the legislation and other living standards and services are supposed to be applied, and the “hidden city” where there is an implicit compromise that the application of the same legislative standards is not obligatory. This is because no further steps have been taken to create legal opportunities for affordable housing.

Conclusion for the period from 1991 to date

A quadruple combination in the city morphology:

Organic + axial monumental / orthogonal + frames of emptiness + spontaneous new organic

In two and a half decades Tirana changed more than ever: the city changed from within and from without; in its internal structure and in its size; in its typological structure and in their relationship with the city. Despite several attempts during the last ten years to reconfigure a cohesive city shape at the urban and metropolitan scale, they failed because of the lack of professional know-how and administrative capacities to cope the city growth at the metropolitan scale.

The uncontrolled urbanization as a reaction to something that was denied to Tirana occurred in some different ways: in the center through infill densification (infiltration of massive or smaller volumes mostly through corruptive practices) and in periphery emerged the shapeless “vaporized city” showing characteristics of chaos and apparently lack of structure.

Albania, Tirana especially, is entering in a phase where there is no trust on regulatory instruments to solve the real problems. The instability of planning instruments reflected in the abolishing of plans after the change of political mandates, clearly demonstrates a non-functional planning system. The last regulatory plans approved in 2012 and in 2017, both formulated with international assistance, are only the last evidence of an ill planning system. The validity of this kind of regulatory planning instruments has also been

questioned in many cases and in many other countries. In fact, there are still relatively standard and similar procedures acting in many different social contexts and countries. In a city like Tirana, where the organic origin of the city is still legible, where planning instruments were used or misused mainly for political capital or as ideological power instruments (Zog, Fascism, Communism); where planning was almost totally abolished after the collapse of the dictatorship and the city went again through an organic and rapid process of urbanization; where people implicitly know that planning serves only as alibi to support the land speculation but not to solve the real problems of the city; alternative ways need to be explored within the planning system. Most importantly, the planning practice in countries like Albania shows that there is a need to totally repair and to introduce new methodologies. This renewal should start from the observation and analytical instruments, in order to better understand the real city, up to the design and implementation phase.

6.1.1 Tirana designed ’90 to date

Attempts to an urban restructuring-densification and the “Parallel Tirana”

Regional Consulting and the Municipality of Tirana, 1995-1996

After the fall of the socialist-communist system in 1991, the central intervention of the housing department to build new blocks and complexes in Tirana ceased. For about 2 decades after this period, the interventions in the new housing units in Tirana are left entirely in the hands of the private construction sector, not only in the sense of economic investment, but almost in the urban aspect as well. In this period, due to the lack of a new regulatory plan (General Regulatory Plan of '89 remains in force and completely out of date until 2012), new buildings and (somewhat rarely) new housing blocks, were realized as a result of partial plans and permits. This made it very difficult to control urban and non-urban territory as a whole and many of these interventions conflicted with urban regulations and the public interest of urban space.

However, there have been several attempts to structure morphological aspects in some important urban parts of Tirana, although almost all of them remain only on paper. One of these is the work of the Austrian group of Regional Consulting, in collaboration with the Municipality of Tirana. "Development of the City of Tirana" is the study they present in 1995-1996. In the second phase of the study they come up with a proposal on how to restructure a historic area in the center of Tirana (area between the *New Bazaar*, "Nente-Katsheve" and "Selvise"), which serves in the project as a pilot area. The pilot area is chosen to have a functional mix consisting of residential area, commercial area and that of enterprises. According to the Austrian group, the *"Islamic" housing structure* (the term used by them) and the highly fragmented property parcel system could not respond to the strong pressure of market economy demands in the early 1990s. Therefore, the complete and immediate redevelopment of the area was not possible. But this process, according to them, could be divided into phases and occur gradually at different times.

The strategic objectives of this urban transformation, which could be applied to other areas, were:

- *Provide such a width of the main peripheral roads, that they can withstand the main functions they perform.*
- *Creating a system of bridging roads with the respective widths foreseen, utilizing the existing system of endless roads, thus enabling the internal connection through the traffic as well as a greater development in the height of the constructions.*
- *Offer opportunities for different types of construction, as needed for a mixed area near the center, in terms of special consideration of requests for existing or future trade routes.*
- *Free preservation of public areas (squares) inside the special building blocks, to create opportunities for construction development, from inside the area-outside it.*
- *Creating a spatial connection between narrow spaces (traditional) and square spaces (green), to aim for a quality corresponding to the rhythm of the outer space.*
- *Consideration of special functions, which are in the public interest, such as market area, schools, administrative buildings, hospitals, etc.*
- *Development of a gradual road, which is oriented in the long run by the development of motorization, to meet the demands for real traffic areas.*
- It should be noted that the study in question is among the first to exhaustively analyze the existing urban elements and factors and also, articulates how these urban interventions are translated into legal and normative terms, but especially physical form (fig. 26). This is also emphasized by them, since the setting of objectives: "*These goals are listed from a spatial point of view in a structural concept. This structural concept defines the principles of form. It presents a possible variant of construction, for which consequently the construction plan constitutes the legal framework. There are types of construction, which means generalized and not detailed solutions*" (Regional Consulting 1996, pg. 3-4).

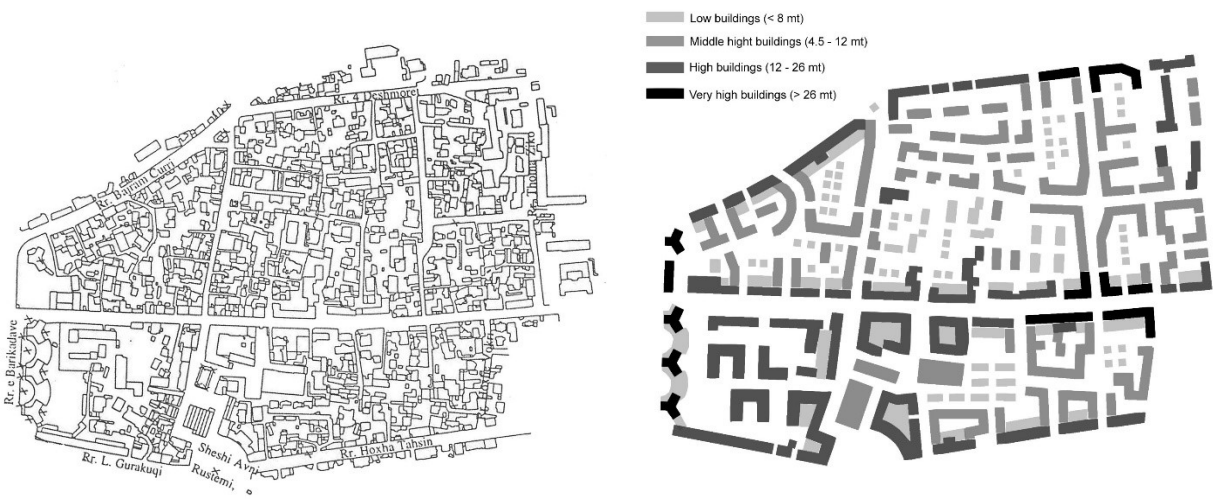


Figure 26. Pilot area in existing condition (left). The organic- "Islamic" urban structure is clearly distinguished. Pilot area after interventions (right) in the road system and in the complexes of buildings-apartments, morphology.

According to the 1995 study, the pilot area has an area of 26 ha, of which about 40% is built. The average number of floors is 2.04 and it is estimated that the areas built on the floors are 180,000 m2, which corresponds to a construction intensity of 0.9. This intensity, for an area near the historic center is estimated as relatively low.

Regarding this low intensity, as mentioned above and as can be understood from figure 26, the urban form and its structure in this area comes as a result of the basic "urban cell". It is a spatial unit conceived on the basis of neighborhood and serves as the dominant dividing element. In this case it is the residential structure that defines the streets and public and semi-public spaces and not vice versa. The private sphere, closing to what is "outside", seems to be more important than appearance, permeability or continuity. Semi-private spaces could be considered mainly the series of headless alleys, which were often closed to access at night. After the 1990s, in those areas where the "Islamic" structure was changed from multi-storey buildings, the free space around the buildings remained in a state between the private and the public. Unlike the semi-private spaces just mentioned, this space does not belong to any user, so it is often left in oblivion or taken very simply in possession-use by interested parties.

Figure 27. The first interventions foreseen in the organic-Islamic structure (left). The new road axes divide the pilot area into smaller urban units and make it more accessible. Together with the 9-storey buildings in the 'Y' shape of the social-communist period, other high-rise buildings, linear typology, are foreseen in the main nodes. The new urban frames (right) are formed by tall and semi-tall buildings, in a second phase.

The study focuses on the first phase in improving the circulation network and accessibility. Figure 27 (left) shows how the pilot area is divided into smaller urban units (from 270 m x 270 m approximately, to 100 m x 100 m approximately; the example comes from the dimensions of the urban block in Vienna) and in addition to tall buildings (for the average time was 4-6 floors), realized in the social-communist period, the so-called "9 floors" [9 floors] due to the unusual height for the time, provides for tall buildings at the main nodes. In the second phase, figure 27 on the right, shows how the construction of urban frames continues through tall buildings. Also, urban units are further subdivided, in favor of better accessibility-permeability. The southern part, near the market "New Bazaar" - "Avni Rustemi" Square, undergoes the largest interventions in the structure. This is because the interventions in the organic structure have occurred since the years '70 -'80.

In figure 28, the final stage, it seems that little by little the organic-Islamic structure is replaced by a new concept of the organization of space and buildings. Urban units seem to be organized more according to the idea of the urban residential block, where even public spaces, semi-public, semi-private and building-street relations are more defined and clearer.

Figure 28. Third phase (left) and final phase (right), showing progressive restructuring and densification of residential buildings. The types of buildings-dwellings are different, in order to favor the functional and typological mix.

The Austrian Regional Consulting experts try to best interpret the existing urban structure and to adapt their urban densification interventions within the identity frameworks and those of classical urban planning. So the blocks (closed form construction; 5 floors) contour the urban unit perimetrically. Inside the apartment blocks they try to maintain some existing walkways and the typology of the apartments is mixed. Intermediate typology (3-4 floors) and low intensity typology, villa type or grouped individual dwellings (1-2 floors).

It should be noted that in the process of densification of the pilot area, experts define a scheme in general lines (fig. 26), which aims to link aspects of form-morphology with aspects of the normative and legal type. According to them "*if the types of constructions shown in the structural concept are fully realized and the spaces of action are fully utilized, then the following quantitative ratios result: [...] the gross floor surfaces can more than double (+ 135%); the intensity of net construction increases, compared to the existing one, from 0.93 to 2.14, which corresponds to a net urban intensity in a central position. [...] is intended to be achieved in terms of an average number of constant floors (eg 5 floors) in the first case a net construction intensity of 1.5 with a percentage of land use 30%, while in the latter case a net construction intensity of 2.5 is achieved with a percentage of land use 50" (ibid. pg. 32).*

Figure 29. Satellite photos (Google Earth) of today's pilot area. The difference between the new high-rise buildings and the remaining organic structure is clear.

Figure 29 shows a satellite image (from Google Earth Pro), showing the current morphological situation in the pilot area. Clearly, contrary to what is proposed in the Regional Consulting pilot intervention, almost nothing has happened under the project. The high-rise buildings (8-12 floors) are built where the resident-owners have reached an agreement with the developer-builder for the merger of the properties and not according to the spatial concept of the proposed project. Consequently, there are still strong and clear morphological differences between new constructions (after ’90) and organic urban structure. Spatial affiliation remains undefined and unclear. Development-densification at height seems to depend entirely on the owner / private-developer / builder negotiations and not on any morphological restructuring plan-project. The road network remains fragmented and difficulties in accessing and parking make this area one of the most problematic in Tirana, despite partial studies and projects. It should be noted, in conclusion, that the overall scheme of urban restructuring in the pilot area would greatly help in the structured densification of the area as a whole. But perhaps a more detailed scheme, with typological variants and the way of mixing them, could make the intervention in the area more tangible and more concrete for all parties, private, developer-builder and municipality.

6.1.2 Tirana Metropolis

A Modern European Capital under the guidance of Elia Zenghelis and Pier Vittorio Aureli and the *Tirana Summer Academy* park projects.

The Berlage Insitute 2004

In the 2000s, as a result of a new change in the direction and organization of the Municipality of Tirana (now Edi Rama is the new mayor), there is a will and energy to change something in the city of Tirana after '90, especially in terms of belongs to the image of the city.

In this context, the group of Berlage Institute is invited to Tirana, together with the well-known architects Elia Zenghelis and Pier Vittorio Aureli, to give their contribution in the way how the new vision for the city will be built. The work of this group, published in 2004 under the title "Tirana Metropolis", summarizes a series of hypothetical projects, which are based on a theoretical concept, that of "the city as an archipelago". Tirana as archipelago is based on some analyzes of morphology and urban weaving in the strata of Tirana (fig. 30), which determine a rough division of the urban characters of Tirana.

> *"Applied to the idea of the city, the Archipelago denotes a discrete concentration of city parts clearly identified or identifiable as towns, districts, clusters, enclaves, buildings or objects, or whatever urban unit that can imply by its pure dimentional definition a clearly bounded area of intervention. The notion of discrete concentration indicates that these island-parts are not merely distributed according to the flows of mobility, individualization and infrastructural control that, as we know, mark the territory isotropically, but that they are stirred by a hierarchical impetus that transcends and invests them with the sense of moving towards a center that they all lack"* (Aureli, Zenghelis 2004, pp. 22).

Through *discreteness* and *concentration*, as a quality of this form of urbanization, the Archipelago places in a critical sense the relationship between the city and its architecture, as well as between the city and its border with rural areas. Established in this type of relationship, urban interventions at the "island" level are considered as short-term point interventions, which can function as pilot interventions that can be repeated in other situations and allow a degree of flexibility. While the common concept of Archipelago gives the city as a whole a long-term sustainability dimension.

Figure 30. Different structures of Tirana's city fabric, defining the archipelago concept. On the right, a diagram that synthetizes the concept. Source: Tirana Metropolis, a project by Lu Zhang, 2004 (pg. 57).

In the effort to read and further, to strengthen the structure and urban weaving of each part of the city-archipelago, in the chapter *PATTERNING – Reinforcing patterns and structures*, from Lu Zhang (ibid. p. 58) five urban specimens have been extracted, which correspond to the most characteristic parts of the archipelago islands. Figure 31 lists these samples of urban patterns according to the density of construction and according to the position in relation to the central-neutral part of the city.

The specific patterns for each part of the city-archipelago and the differences between them reinforce the idea that it can intervene in the transformation-densification of a part by clearly having its existing structure. The patterns listed below are: *reticular* pattern, *radial* pattern, *straight linear* pattern, *curved linear* pattren and *cul-de-sac* pattern. The urban parameters that are analyzed for each pattern are: density and scale of buildings, functional program, dimension of road network and streetscape.

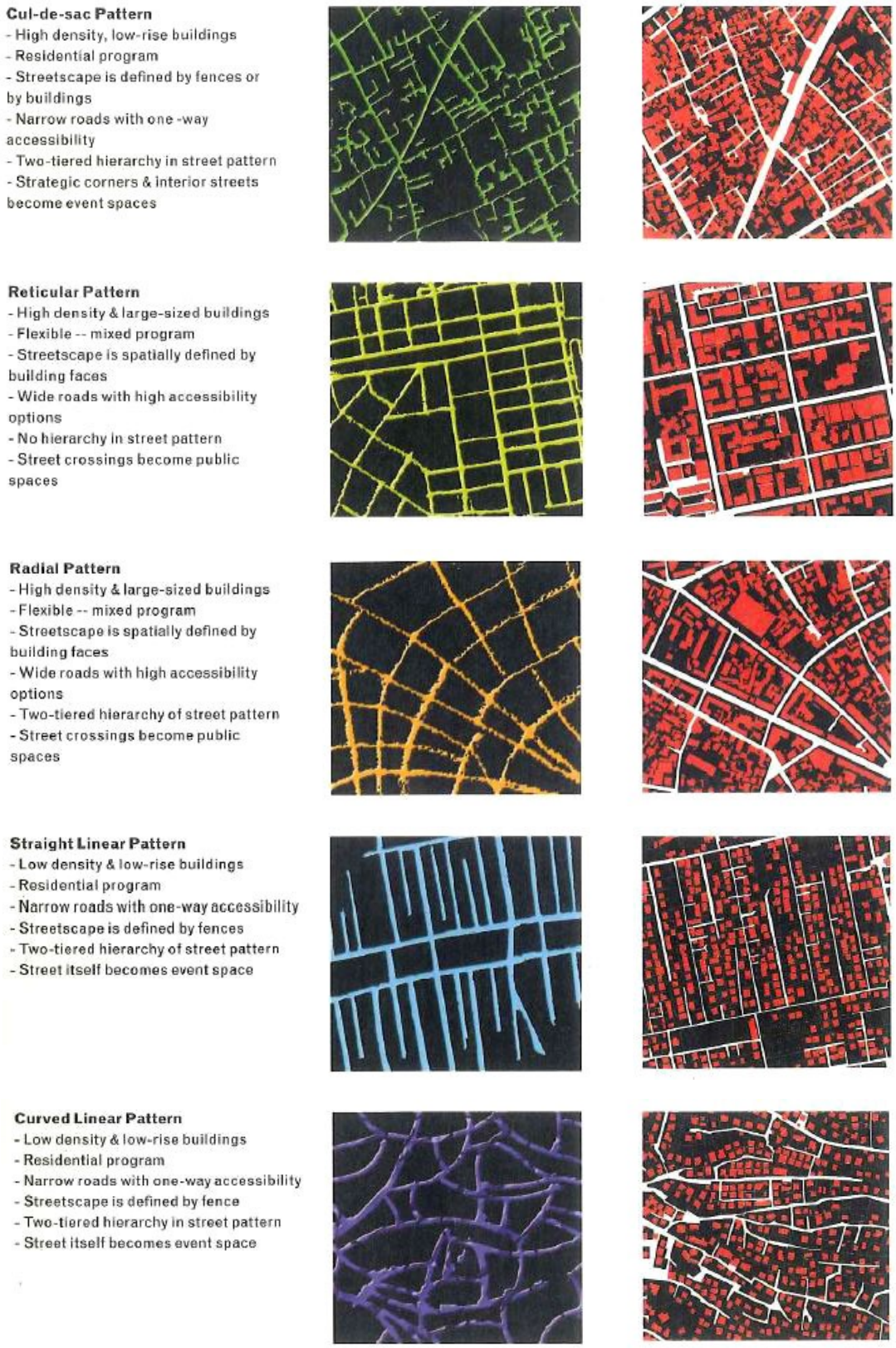


Figure 31. Patterns and structures of urban samples from the Archipelago-city. Source: Tirana Metropolis, a project by Lu Zhang, 2004 (pg. 58-59).

In this context, in the part worked by Bart Melort, Federico Rodriguez and Reto Durrer, *CONCENTRATING - Modes of concentration* (ibid. pp. 93-99), the project shows that the character of the existing urban pattern can be preserved, by restructuring and densifying one of the end areas of the second inner ring of the city. Figure 32-33 shows the positioning of the area in relation to the city center (the neutral part where the islands of the archipelago converge) and the rectangular-grid character of the former industrial structures.

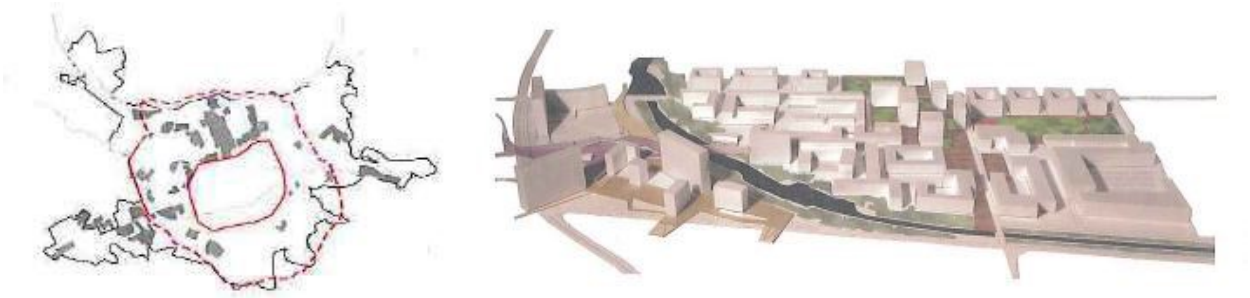


Figure 32. Between the first and the second ringroads (left). A lot of former industrial sites. Tredimentional model of the densificaton of the area (right). Source: Tirana Metropolis, p. 98.

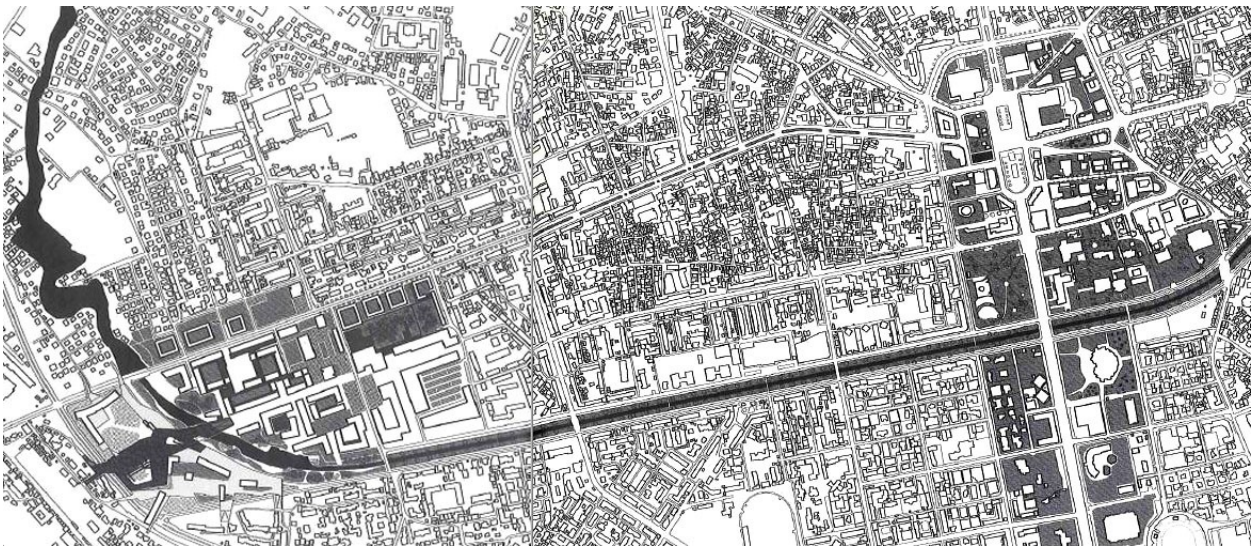


Figure 33. The urban intervention (on the left) and the city center (on the right). The intervention follows the existing pattern of that part of the city. The intervention beyond the river changes in structure and morphology. Source: Tirana Metropolis, p. 96.

The diagrams in figure 34 show how the area is structured in smaller blocks through horizontal and vertical axes (existing) and through new itineraries. The built form, in closed rectangular blocks, which from time to time partially open in the direction of a square or space also rectangular, follows this structure-weaving to the edge of the area,

where it meets the river Lana. As shown in figure 32 (right), in the three-dimensional model, the new apartment blocks, which are combined with a mixed program of functions on the first floors, experience a stair jump compared to other existing buildings. The intensity of construction increases significantly, but the quality of space and accessibility also improves significantly. The urban structure and pattern change completely from the moment it is crossed to the other side of the river (fig. 33). So the "island" with a regular rectangular structure closes there. Across the river the structure ends with a plateau-public platform, which includes cultural functions, recreation parks, public transportation hub, parking lots, etc. Figure 36 shows the situation today, in a satellite image (Google Earth Pro) and we have no characteristic industrial pattern, no public spaces, no connection to the other side of the river, no recreational parks, no cultural spaces.

Figure 34. Diagrams explaining the intervention: existing and new connections in the area; built-unbuilt analysis; connecting existing and new tissues (a jump in scale); the new tissue, respecting the existing pattern. Source: Tirana Metropolis, p. 99.

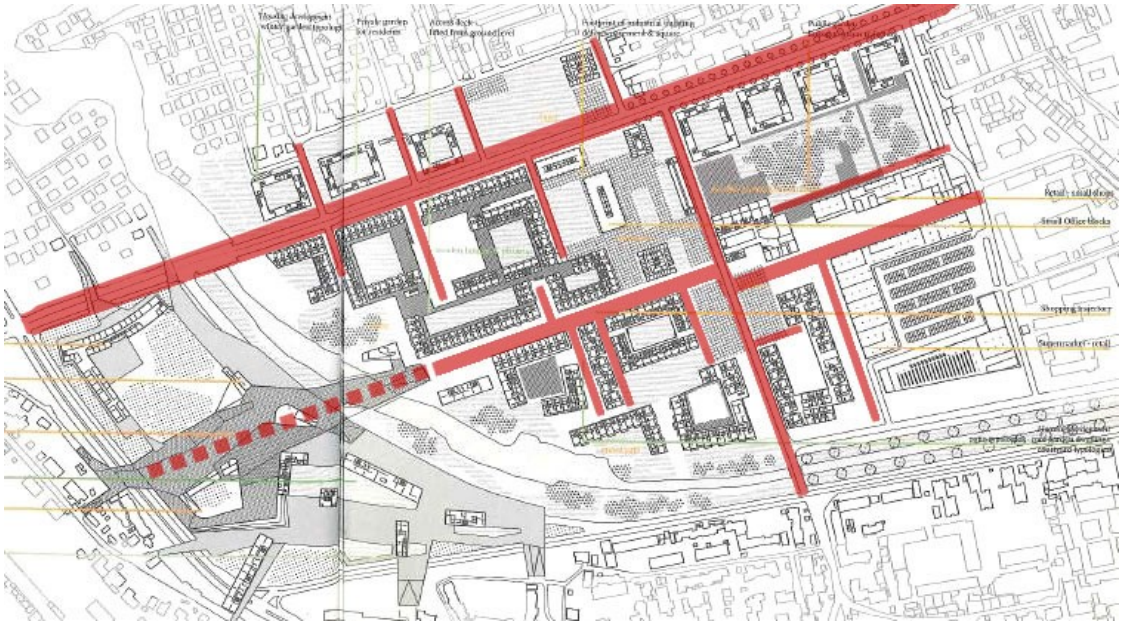


Figure 35. The new urban blocks, following the existing pattern. Built form and public spaces creates a new tissue, in a bigger scale compared to the previous one. The regular-orthogonal grid is interrupted by the river and the extension towards the plateau changes completely in structure (freestanding high-rise slabs). Source: Tirana Metropolis, p. 99.

Figure 36. Actual situation of the area, in a Google Earth orthophoto. Clearly recognizable high buildings, occupying free plots, but not creating public or semi-public spaces.

In the chapter *COMPLEMENTING – Parallel Tirana*, Martino Tattara (ibid. pp. 113 - 123), brings another very interesting project, where the concept of Tirana as Archipelago goes to another level. In the direction of Durres Street, at the limits of the second ring, a new section is created (according to the concept of the archipelago). But in this case, this new part is as big as the dimensions of Tirana inside the first inner ring. A parallel Tirana, which holds within it four other parts and distinct from each other (fig. 37, left). The parallel Tirana is a regular orthogonal grid, divided into four parts symmetrically. Each of these parts has morphological characteristics and carries the pattern of the original Tirana parts. These patterns and the morphology of each part, precisely from the reading given to Tirana in the *PATTERNING* chapter, could be reinforced and extended to one dimension and to another scale (fig. 37, right). There are the organic city, the garden city, the labyrinth city and the city of blocks. This is another way of dealing with the topic of city form, morphology and how the city can be further expanded or densified.

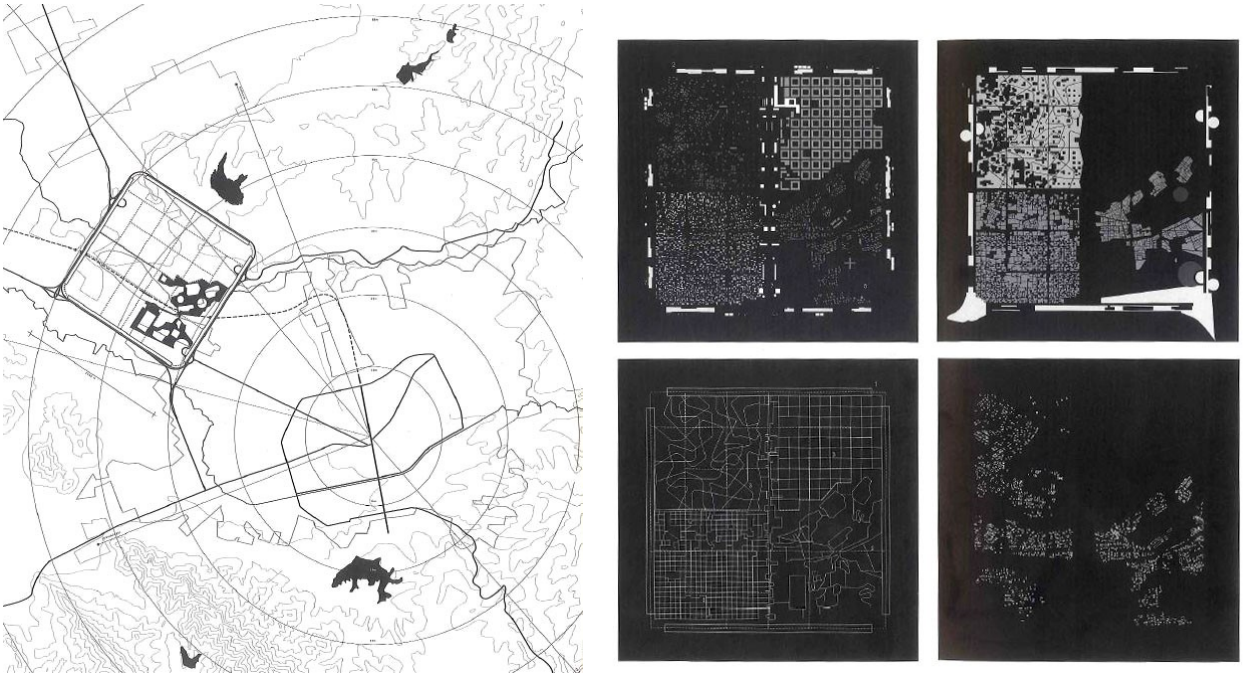


Figure 37. Parallel Tirana in the outskirts of the urban Tirana (left). It is almost as big as the existing Tirana, inside the first ring. On the right, the four districts recognizable from the patterns of the urban tissue. Source: Tirana Metropolis, p. 120-21).

As the author himself states at the end: "*Parallel Tirana is not an escape from the reality of the Albanin urban condition, nor is the "good copy" of the existing center. [...] Parallel Tirana is, by definition, a complementary city and its conception is based on the assumption that through concentration and the creation of new centralities it is possible to intervene within urban sprawl, reshaping the city in its entirety*" (ibid. 118).

6.1.3 Tirana Boulevard Extension – North Tirana

Forum A+P 14, *Visions for a new Tirana*, 2014

Always in the context of large-scale changes in the morphology of Tirana, the year 2012 marks an important moment. The Municipality of Tirana organizes a project competition for one of the most discussed areas regarding the shape and dimension of the city. The central axis of the existing boulevard, would extend northwards, to *Paskuqan Lake* (in the first version), crossing the *Tirana River* and thus connecting urbanized Tirana with the parts added after the '90s, which are characterized by a spontaneous development and have always been called informal areas (in legal terms). In the changed version in 2015, also as a result of the territorial reform and the new administrative borders, the boulevard project stops at *Tirana River*, without exceeding it.

The areas included in the 2012 competition were four, given that Zone 1 was the city center itself, with which the continuation of the project had to be connected. Zones 2, 3 and 4 included the extension of the existing boulevard, the extension of the boulevard beyond *Tirana River* (up to *Paskuqani Lake*) and the resettlement of the two wings along the Tirana River (fig. 38).

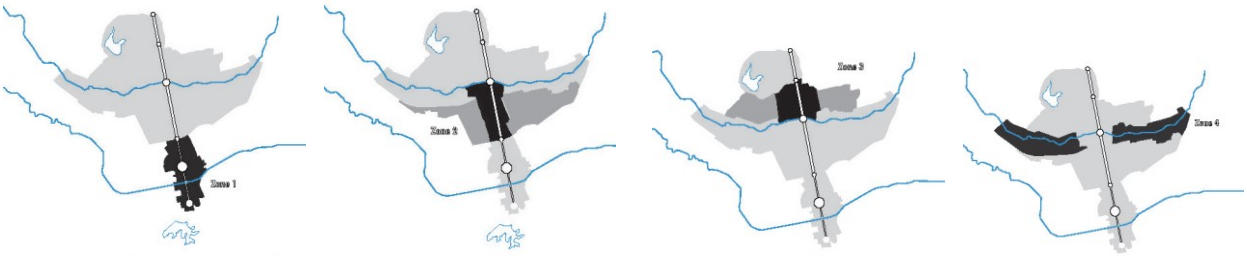


Figure 38. Diagrams of the areas involved in the competition of the extension of the existing boulevard of Tirana. Source: Forum A+P 14, 2014 p. 37).

The competition area covered 14 km^2, which was almost ¼ the size of the existing city. So, it was a project and an intervention with a very large impact on urban morphology and the shape of the whole city as a whole. Some of the requirements of the Municipality of Tirana, listed below, were that the morphology proposed in the project follow the model of compact city, ie urban densification instead of the continuation of urban sprawl (Forum A+P 14, 2014, p. 38). Also, mentioned below, some areas should be reserved for flexible

development. These two points also coincide with the line of discussion in this research thesis.

> *"All design proposals must reflect the principles of sustainability planning through the following actions:*
>
> - *Reinforce the ecological potentials of both corridors*
> - *Respect the model of the compact city (densification vs further urban sprawl)*
> - *Provide multifunctional mixed urban areas (residential + small / medium business, small-scale industry and craft activities), reinforce the local daily activity avoiding regular long-distance travel within the city*
> - *Apply site-specific planning and design ideas regarding climate, economy and construction heritage*
> - *Provide feasible solutions based on a good understanding of local restrictions and limitations regarding legislation, operation of maintenance, know-how and the level of experience, ownership conflicts, etc.,*
> - *Reserve areas for flexible development*
> - *Integrate innovative ideas about renewable"*

The winners of the competition were the British group Grimshaw Architects, who were evaluated as the project with the most complete urban analysis and proposals closer to what the Municipality of Tirana required. In the first version, as seen in figure 39, the extension went as far as Paskuqan. In 2015, they present a modified master plan project, closing the boulevard with a public square over the *Tirana River* (fig. 40) [53]. This also happens as a result of the territorial reform 2013-2014, which removes from the map of Tirana the territories above the river and *Paskuqan*.

[53] https://grimshaw.global/zh/projects/tirana-master-plan/

Figure 39. First masterplan of the extension of the boulevard till the Paskuqani Lake (North). On the left and on the right of the boulevard the morphology is created by closed urban blocks (compact city model). Grimshaw Architects, 2012. Source: Forum A+P 14, 2014 pp. 42).

In figure 39-40, despite some changes, the compact morphological structure, with closed blocks, is clearly seen on both sides (left and right) of the boulevard. The blocks have larger dimensions at the edges of the boulevard axis and shrink away from the axis. Along the *Tirana River* the blocks are half open and the height of the volumes is decreasing (in the first version of the master plan, figure 39).

Figure 40. Second masterplan, reduced. The extension of the boulevard finishes with a square on the Tirana River. Clearly there are some changes on the morphology from the previous masterplan. Still, the closed urban block from the compact city is evident.

In the boulevard area the urban density is 250 dph and 550 people per hectare. In the areas left-right of the boulevard (compact-city) the urban density is 150 dph and 330 people per hectare. In the city-edge area the urban density drops to 60 dph and has 132 people per hectare. In the city-fringe area the density is 35 dph and 77 people per hectare (fig. 41).

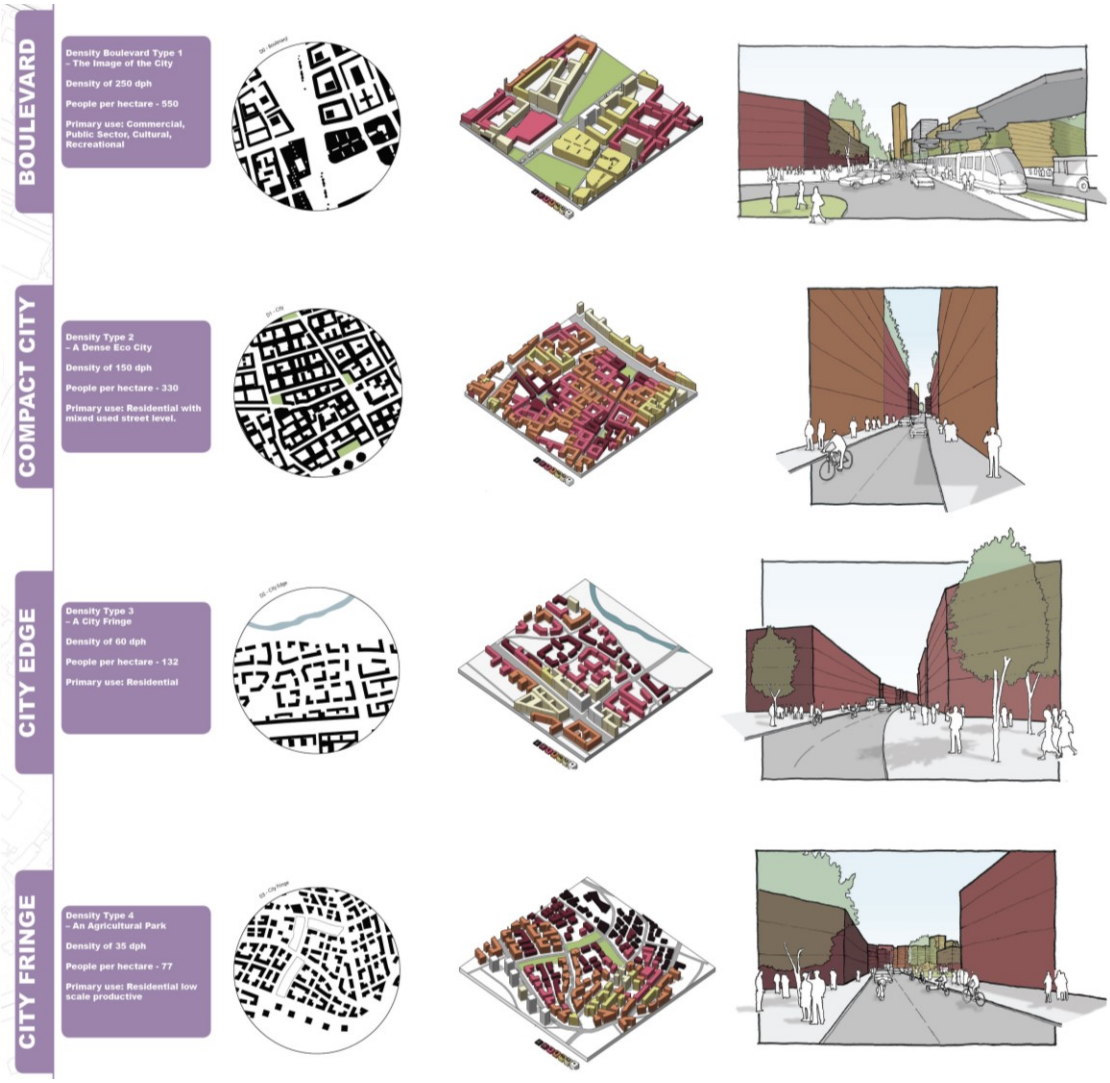


Figure 41. Strategy for urban densification in different areas of the boulevard-city.

It should be noted that Tirana has never had a compact morphological structure. Therefore, the proposal of Grimshaw Architects, as well as other studios, must be understood what consequences it has on urban fabric, on property issues and if residents would easily switch to this new urban form (for them) and housing.

Below are some of the other projects that participated in the competition. Those projects have been selected that have clearly shown in the strategy how the compact city would be formed and how the urban morphology would change in these contexts, existing and new. Below (fig. 42) is the project of Cino Zucchi Architetti and how, beyond the buildings and blocks that form the "wavy axis" of the boulevard, urban super-blocks (with red contour) will be created. This is their strategy on how the urban form in the northern area of Tirana will be compacted over time.

Figure 42. Cino Zucchi Architettti masterplan for the extension of the boulevard. Framed in red color are the super-blocks. Filled in red are the special function buildings. Source: Forum A+P 14, 2014 pp. 104-5).

Figure 43 shows the urban densification strategy in some timely development scenarios. As context, one of the areas above Tirana River has been selected, which has had a spontaneous urban development in the last two decades. The intensity of construction (Floor Area Ratio) is given from the existing situation 0.34 (quite low) to 0.88 in the first scenario, where initially the contour of the urban unit is densified with buildings mainly "linear" typology, 4-5 floors. In other scenarios several different further densification options are given. The second scenario, "vernacular" densification, after the contours of the urban unit, densifies along the existing middle roads with typology of 2-3 storey dwellings, bringing the FAR to 0.97. The other two scenarios add the tower typology and

other typology of collective buildings, thus freeing up the public spaces between the block and bringing the FAR to 1.06 and 1.14.

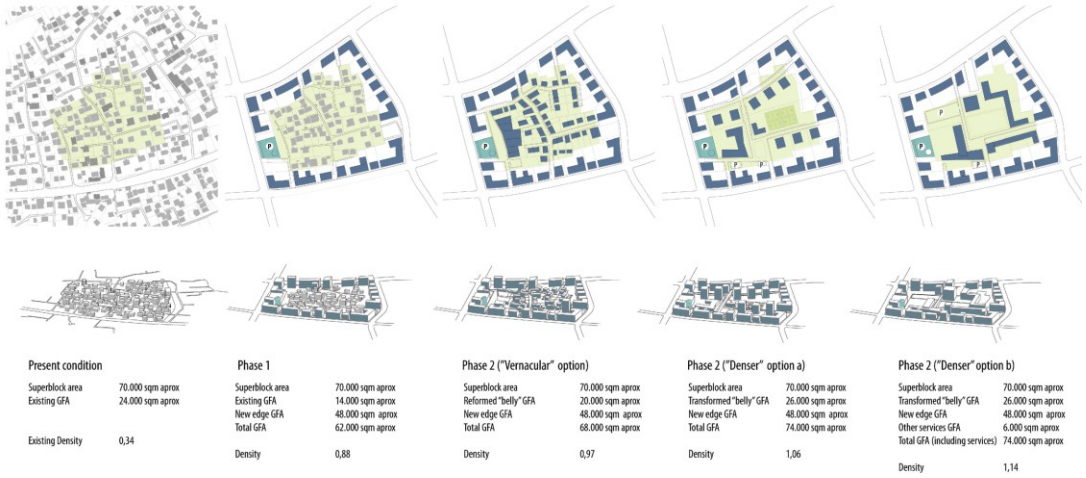


Figure 43. Strategy for urban densification in different scenarios. Density goes from FAR 0.34 (present condition) to FAR 1.14 (denser option). Source: Forum A+P 14, 2014 p. 109).

The other two projects are from West 8 (fig. 44) and GMP (fig. 45). These two projects have been selected as valuable examples to show the proposed changes in urban morphology. In the case of West 8, it is the undulating shape of the boulevard axis that "deforms" and transforms the urban blocks that outline it. The typologies of buildings are mixed and alternate according to the position they have along the axis and according to the heights.

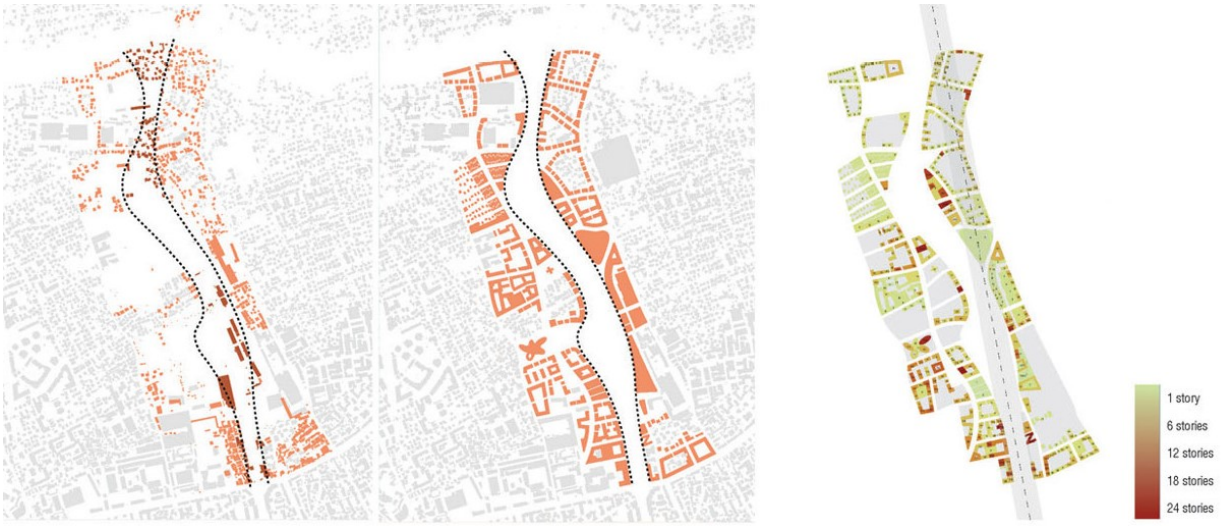


Figure 44. West 8 masterplan diagrams. First left, the new fluid shape of the boulevard and existing buildings to be demolished; middle, proposed structure of the new morphology that contours the boulevard; third right, the building heights and hierarchy of urban form. Source: Forum A+P 14, 2014 p. 77).

The GMP case has been brought to show what impact the repeated use of the urban block, which has been used mainly in the closed form, would have on morphology, with some exceptions in the area near *Paskuqani Lake*. However, the designers have tried to alternate the continuous repetition of closed urban blocks from time to time with green spaces - urban squares, where public buildings with a special function are positioned. It remains interesting, however, how the urban form, although with very clear contours, intertwines in the form of "fingers" with suburban-rural areas and natural areas.

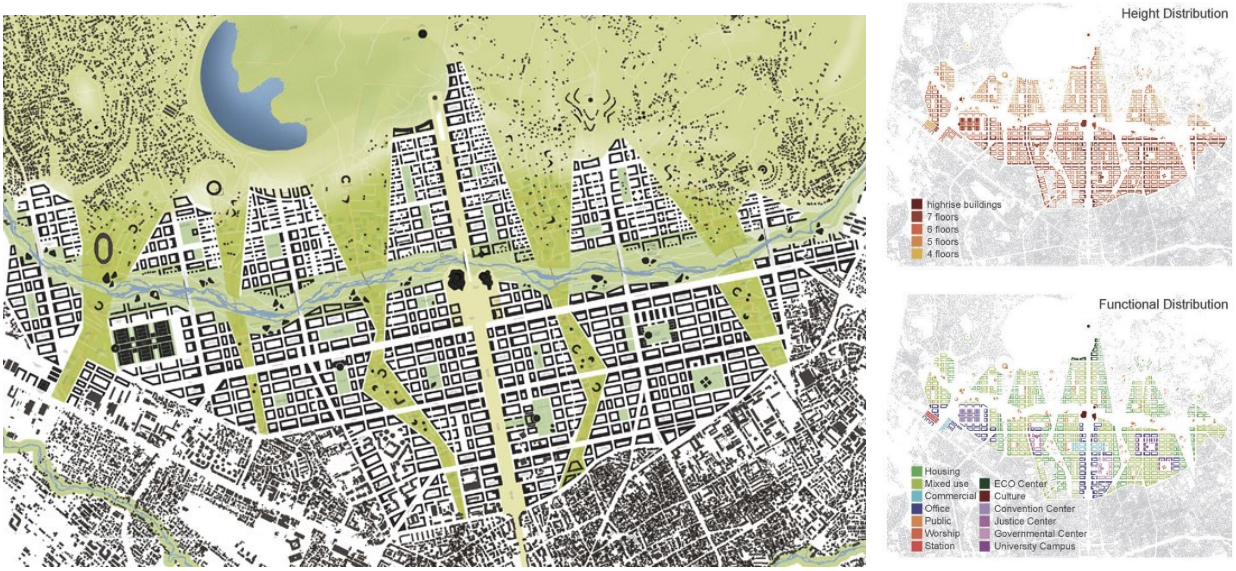


Figure 45. GMP proposal for the extension of the boulevard and other three "urban fingers": quarter of Convention, quarter of Justice, the Boulevard and University quarter. Source: Forum A+P 14, 2014 pp. 114.

6.1.4 Tirana Riverside – "Lagjja 5 Maji"

Stefano Boeri Architetti (2020 – ongoing)

In 2020, while the pandemic and its effects were still felt very strongly, after the earthquake of November 2019 which left many consequences in people's lives and in urban construction (but also in many rural constructions), the relevant ministry for reconstruction and the Municipality of Tirana entrust to Stefano Boeri Architetti's group the project for the regeneration of the existing *5 Maji* neighborhood, which will now be called *Tirana Riverside*. This project, driven by the situation created, is in the process of restructuring the areas along the new boulevard in the north of Tirana and the areas bordering it, in the direction of the Tirana River.

Basically, this neighborhood (new urban unit) must respond to urban parameters and needs in terms of emergencies (terms, pandemics, etc.). The designers themselves express themselves: "*Tirana Riverside* […] *is conceived as a large urban regeneration project that favours a functional and social mixité and welcomes within various cultures and backgrounds, in an accessible and self-sufficient district from the point of view of clean energy, water, food and all urban public services. The Masterplan, planned to accommodate 12,000 people, is a 29-hectare green neighbourhood, equipped with all the technologies of a Smart City and able to guarantee the safeguards and health safety requirements necessary to face contemporary seismic and pandemic emergencies"* [54].

Figure 46. Tirana Riverside Masterplan. In the upper part is the Tirana River. On the left, the new boulevard.

[54] https://www.stefanoboeriarchitetti.net/en/project/tirana-riverside/

What is noticed in the master plan (top-down view) is the greenery in every space and even on the top floors of buildings, which can help create a "green-sustainable" / "pandemic-proof" image for this lagje (fig. 40). But what we can distinguish beyond this image is the fact that this urban unit is completely detached from the existing dispute. The proposed buildings, as seen in the project, but also from what is described by the designers, are of a larger scale: *The central backbone available for gentle mobility and powered by electricity crosses 90 thousand square meters of open public spaces, in an interplay of courtyard, tower, in-line, L-shaped buildings, which mix residential, working and service realities to the citizen".*

Figure 47. Three-dimentional model of the masterplan. It is obvious the change in scale. Buildings typologies are towers, L-shaped, in-line slabs.

Figure 47 clearly shows the large scale of the buildings and their difference with other buildings around the context. Although in the central parts the volumes create some spaces such as squares or inner courtyards, the lack of smaller typologies of housing stands out. In case of emergencies, such as earthquakes or pandemics, the height of the buildings becomes very important, not only for technical construction reasons, but also to avoid elevators and narrow spaces of distribution corridors. In cases of pandemics we saw how important were common, public, semi-public spaces, or even some private spaces (balconies, courtyards, etc.). Buildings of a smaller scale, of some lower typologies or of a typological mix, would probably be more suitable to respond to the requirements and parameters of an urban area that has to withstand the emergencies of today.

In conclusion, it should be said that this project has encountered many objections from the current residents of the area. Property and legal problems have sparked numerous protests by residents stationed there since the 1990s. Many of them oppose not only the manner of decision-making or the value of compensation, but also the form of housing where they are being forced to settle. In the few interviews given to him by local television, they say that private housing (by some called villas) is considered an investment for the future, but also a way of life (in low housing), in contact with the residents of others and land-related activities.

6.1.5 KombinArt – the former Kombinati i Tekstileve Stalin

(2022 – ongoing) **Marco Casamonti** (Archea Associati)

If we talk about urban projects and transformational interventions of a relatively large scale in relation to the city, we must mention here the project of KombinArt, by Marco Casamonti (Archea Associati). It is about the transformation of one of the famous districts for Tirana. The Stalin Textile Factory, built between '48 -'50, was for Tirana the case of a "satellite city", which united industrial structures with residential neighborhoods, according to the model of socialist ideology.

After the earthquake, according to experts and the municipality, some of these buildings (about 50) will have to collapse, as they are damaged and uninhabitable. While the whole former district will be converted into a cultural pole, where buildings and cultural spaces will be intertwined with residential buildings: "[…] *as an area with development potential to accommodate about 21 thousand inhabitants. There will be 4 new educational institutions; 9 social and cultural points, as well as 5 public squares with new services: Technology Square, Museum Square, University Square, Garibaldi Square and Gastronomy Square"*[55] (fig. 48).

In the three-dimensional model, in addition to the squares and former industrial buildings that will be converted into cultural or educational function, there is a contrast between the

[55] https://tirana.al/artikull/kombinart-projekti-qe-e-transformon-kombinatin-ne-polin-e-ri-te-kryeqytetit

existing low-rise buildings (lowrise) of the block of the '50s and the new blocks. It is noticed that the typology of dwellings area of closed or semi-closed block type, with inner yard and medium-high density. Also, the weaving of the urban structure seems to be another degree, denser and higher, compared to the existing structure.

Figure 48. KombinArt masterplan and three-dimentional model. The new buildings are organized in closed or semi-closed blocks with courtyard. The existing urban structure is densified in plan and in high.

Even in the case of urban transformations in "Kombinat", the existing residents of the area have protested in the streets regarding the way they are being forced to move from their current homes or the reward offered by the municipality. Here, as in the case of "Lagja 5 Maji", the question arises again how urban transformations are taking place in Tirana. How much do these transformations correspond to the way of living of the existing inhabitants, but also to the urban quality (construction - space) that contemporary European cities should have?

6.1.6 A representative case study – The "Puna-Shallvare" urban block

The essence of the Recording Over pattern

The *Recording Over* (Dhamo, 2018 p. 139) is an independent layer of planned and unplanned interventions which over time tends to osmose with the frames (collective apartment blocks) within which it occurs. The process cannot take place outside the presence of predesigned frames.

Frames are buildings which layout mostly follows an abstract logic related to the preexisting elements of the territory where they were built. Frames that in fact were supposed to create the public space within them, created the condition of emptiness, which was expressed in the form of a spaces never used, or a meaningless space.

Recording Over is an inward filling-in and/or parasiting of the internal "public space", or of the emptiness. It consists in the interiorization of the emptiness transforming it in an involute space through carving and imploding the space within the frames preceding this process.

Interestingly, all this metamorphic process reflects on one side the changes in the socio economic situation and the weak public control, and on the other side a social harm emerging from the past: the denied property rights during the communist regime. This kind of social complex evolved almost in a mass psychosis and motivated a revenge on everything that was considered to be public. In addition, we also mentioned in the previous chapter the inherited attitude towards the public space before the Second World War: the public space was the result of what was left after the private space was occupied.

In this sense, *Recording Over* may be considered as a re-appropriative *deregulation* process, as a re-composition or decomposition of space, where a lot of *coexistence and transcription* (Kostov, 2003 p. 46) happens through a complex and adaptive behavior.

Figure 49. Recording Over space-occupiers: fill-in; and parasite-ing structures in relation to the frames.

Rise, evolution and reasons behind

The recording over (or interior-ization) process started after the collapse of the communist regime, in ’90. There were several reasons that gave rise to this metamorphic process that involved the ubiquitous emptiness (in the sense of dehumanized and meaningless space). First, the change of socio economic situation and the law on housing privatization. This opened new possibilities for the families to invest individually their modest finances and incrementally enlarge their tiny apartments. Balconies, rooms, terraces, etc. extruded as much as the conditions could allow (Fig. 2). There were no other realistic opportunities to reach the same objective at that time. From a unified state enterprise during the dictatorship, after several reforms the provision of housing atomized at the individual level. Second, the dream for more habitable private space was much easier to be realized under the situation of the weak public control. Quarrels and neighborhood conflicts reappeared: under these conditions, the old tradition about the use of space based on a social formula was more efficient than the regulations and the state control (which was heavily corrupted). People felt more confidence in the informal neighborhood arrangements rather than trusting the state to guarantee the use of space. Third, in many cases it was also an issue of property claim: during the communist regime many people were expropriated without any compensation and their houses were demolished to clear up the terrain for the construction of new apartment blocks. In these cases, people claimed to rebuild their houses (or sometimes even apartment blocks) in the same place/property lot, or in the portions of property lot that remained free after the apartment blocks (frames) were built during the communist regime (Fig. 3). However, in many other cases, the land was claimed and “restituted” based on corruptive and false practices. Thus, the layer “killed” during the previous period started to resurrect, piece by piece, sometimes physically separated from the collective apartment blocks (mostly based in an abstract geometric design), and sometimes tacked to them. This juxtaposed layer gradually started to fill-in the public space (considered mostly as emptiness) with new housing or other services. At that time, this was considered as a legitimated revenge for the years of dictatorship. Interestingly, despite the supposition of the absolutist planning to break with the past and with the evils that could cause the private property, in a way or in another, there was a large social consent for all this informal and formal developments

which could be also considered a social therapy for relieve. Fourth, in many cases, residents (especially those who lost their titles because of the land reform during the communist regime) considered the extensions and/or the filling-in of the public space as an opportunity to start up a family business activity: commercial services, restaurants, cafés, parking lots, store houses, etc. Fifth, this kind of attitude towards the public space was an old tradition in Tirana.

Figure 50. Areas where the Recording Over, or tendencies of that pattern exist; The relationship with the Organic Pattern

Space-occupiers

The recording over pattern consists of two main space-occupiers:

- **Fill-in independent structures** (Figures), which are mostly new housing (villas or multistory apartment buildings), garages, commercial services or other activities such as restaurants, cafés, parking, store houses, open markets, etc. These added structures gradually eroded and recomposed the predesigned void spaces, or in many

cases even decomposed it in tiny meanders and labyrinths. Thus, gradually the dead, empty, sterile space became full with new activities, with life, and most importantly with a new meaning. This small-scale (sometimes even big) invasion process of the space was the opposite of the bigger scale erasure process that took place when the housing blocks, or the recording over frames, were constructed.

- **Parasite-ing structures** created by the extension of services or commercial activities mostly at the ground floor; and the extension of housing space in the full height of the apartment building, or in specific floors, especially on the rooftop (Figures). These structures added more to the re-composition or decomposition of the predesigned space, and most importantly blurred the rigidity of the urban walls (frames) built in the previous period.

Samples:

Block 1 "Shallvare-Italian palazzine"; Block 2 "Puna"; Block 3 Gjykata (figures). The selected samples constitute a longitudinal urban strip, which is composed from three main parts. They represent the full variety of phenomena that characterize this pattern. As shown below, this stripe with a considerable extension starts almost from the city center and continues up to the first ring (Figures). For practical reasons, the three of them will be treated together.

Form and growth: Understanding structural properties of the specific Recorded Over form

Before going further, I try to understand how the frames where the Recording Over pattern took place, were designed and built. From a compositional point of view, the analyzed samples include at least three typical frames or building blocks (Figure). First, the so-called "*Italian palazzine*", a residential block built during late '30s over the Italian fascist period in a free area at that time. This block embodies the (rationalist) principles of the Italian architecture and urban design of that period; second, "*Shallvaret*", a residential complex built at the end of '50s under the strong influence of the Russian socio-realist architecture and urban design. This complex, built in an almost free area is one of the largest collective apartment blocks in Tirana, and represents one of the first attempts to integrate social and commercial services within the complex; and third, "*Puna*" and

"*Gjykata*", two residential complexes that started during the late '60s and continued to be constructed up to the beginning of '70s in a partially free area.

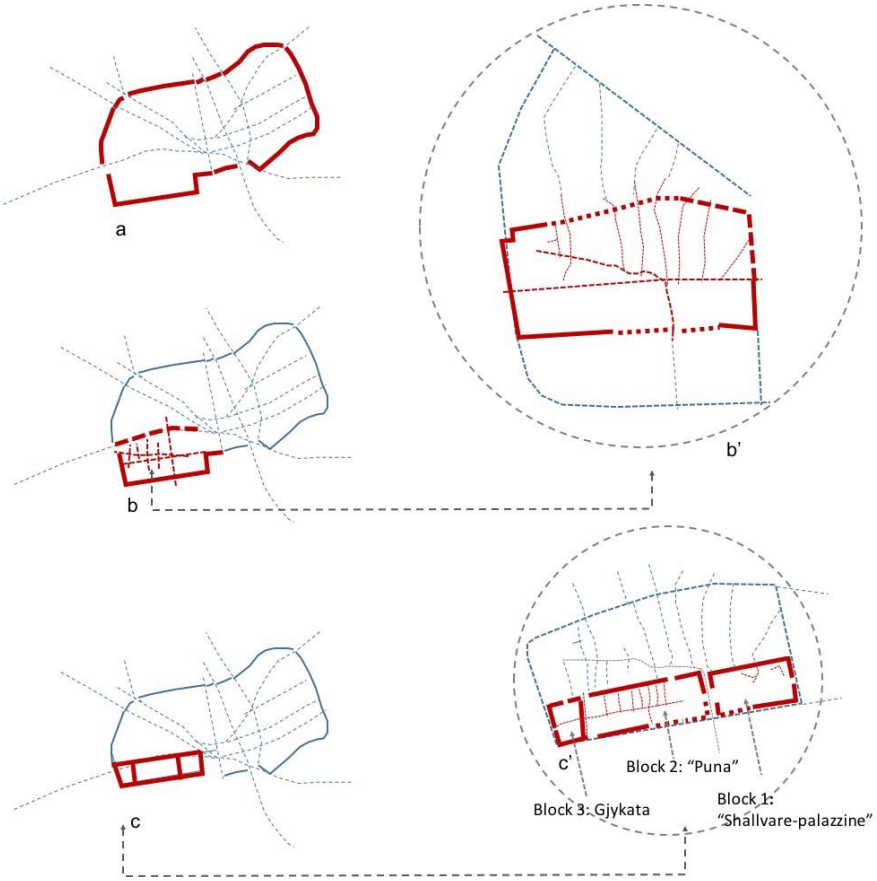


Figure 51. The three analyzed samples in relation to the city.

The idea of the frames is visible also in the city scale; As we see from the scheme, the urban design of this period (from '45 to '90) was attempting to treat the entire city, especially along the main roads, through walls and frames (blocks added in a simplistic logic like mechanical additional boxes);

In many cases these walls played more the role of urban curtains to masque the historic city which was considered in a temporary status (ready to be demolished at any time), because it was representing the past.

These blocks represent some of the most successful realizations built in Tirana according to the so-called Albanian socialist town planning principles. Each of these pieces represent specific characteristics not only from the architecture point of view, but most

importantly, from the urban space they offer. These frames and the urban space they involved, created the special niche / habitat for their specific Recording Over.

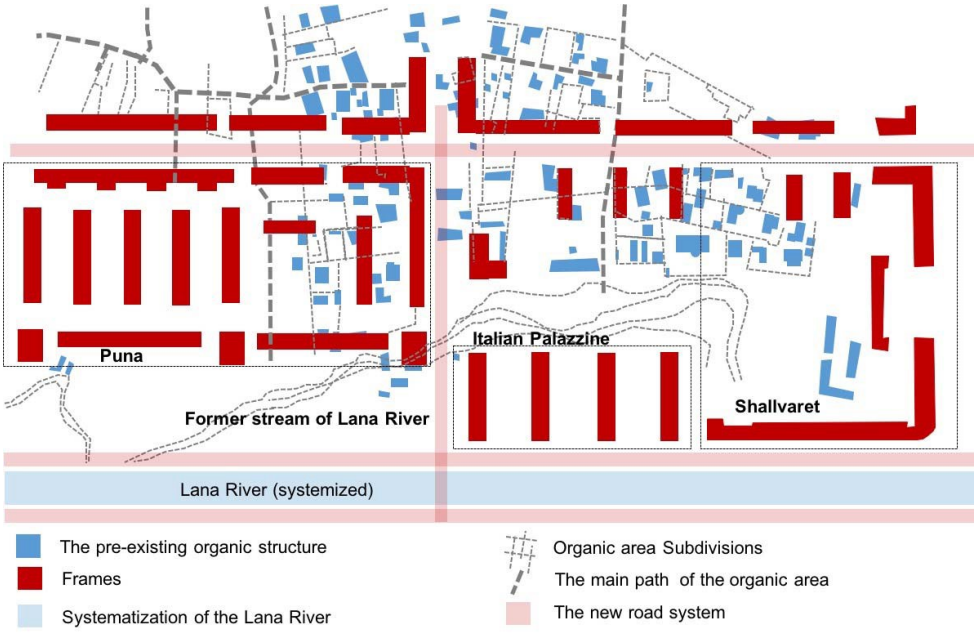


Figure 52. Fragment from sample 1 and 2 showing the superposition of frames over organic structure.

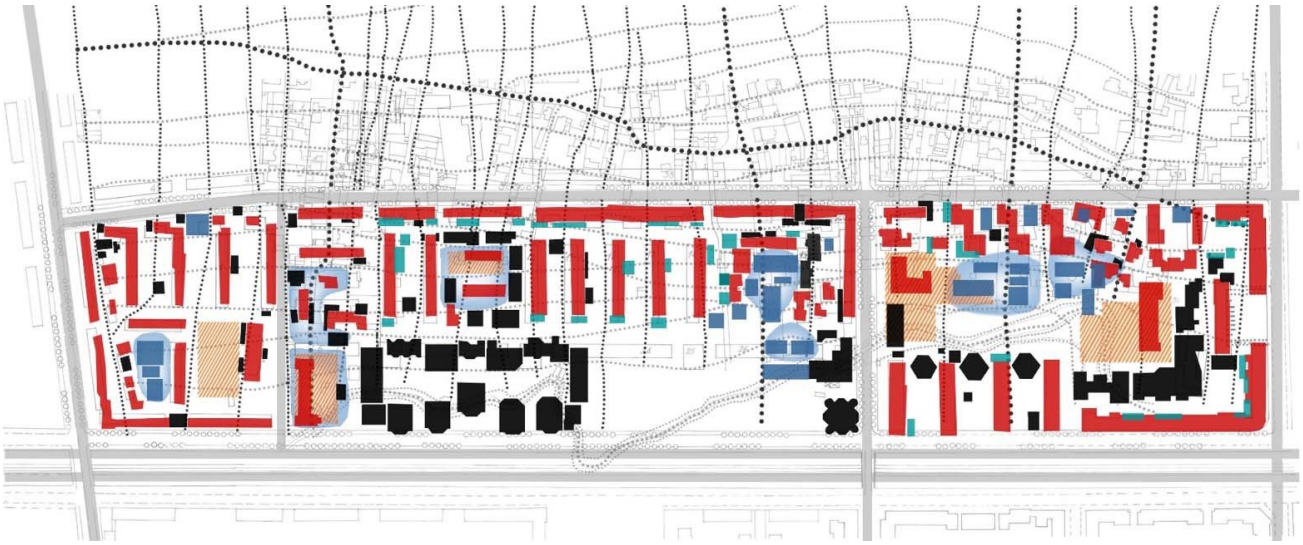


Figure 53. The hidden frame: five potential layers of Recording Over elements.

The former original organic layer
Frames built during the communist regime
Resurrected
The second superimposed layer
Blurring parasites
Schools and public buildings
The original organic layer

These blocks represent some of the most successful realizations built in Tirana according to the so-called Albanian socialist town planning principles. Each of these pieces represent specific characteristics not only from the architecture point of view, but most importantly, from the urban space they offer. These frames and the urban space they involved, created the special niche / habitat for their specific Recording Over.

From the morphological point of view, the analyzed samples, at least at the initial stage, are a combination of natural and artificial design elements and factors. Social structure and improvisations played an important role at a later stage, during the Recording Over phase. The three parts of the analyzed sample are located in the interstitial area between Lana River and the preexisting organic city (Figures). Because of the risks of flooding and other geological problems, the organic city avoided to occupy this area. The "*Italian palazzine*" were the first "high rise" buildings that opened the way for other interventions during the communist regime starting from the late '50s, 'up to the '70s.

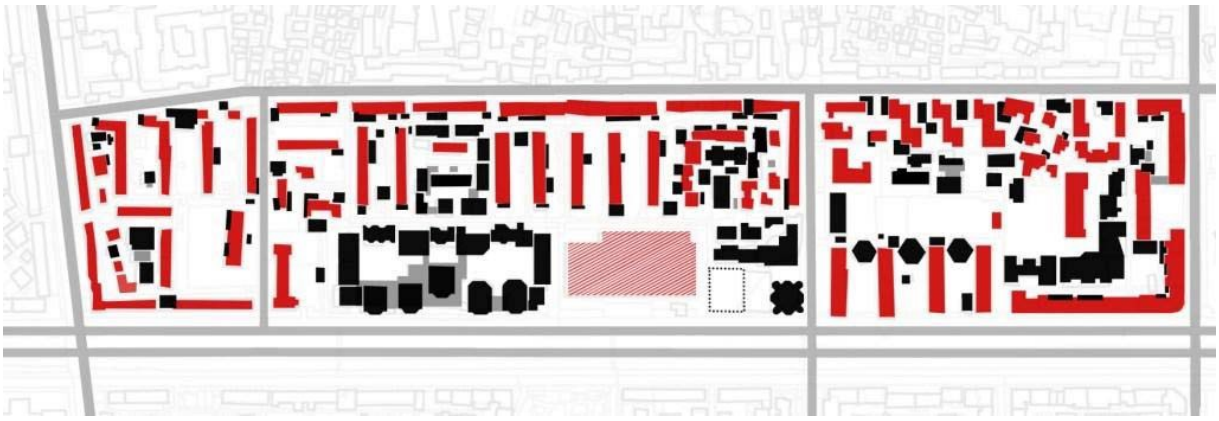


Figure 54. The Recording Over of frames; Fill-ins and parasites marked with black (roof-top elements are not shown).

Figure 55. The Recording Over structure tend to entirely redefine the existing spatial system

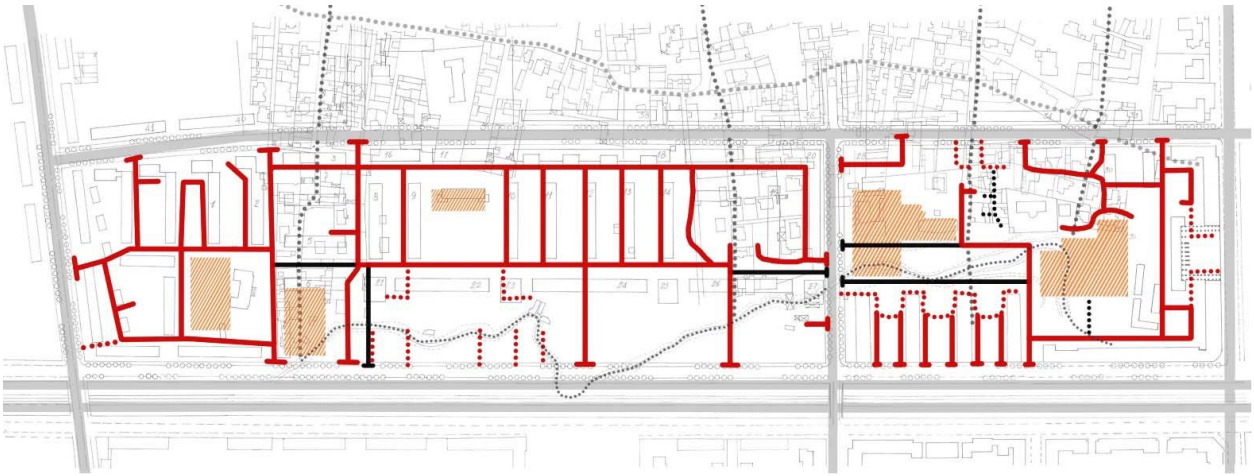


Figure 56.The gradual influence of the Recording Over process on the communication network (deforming, blocking or atrophying parts of the structure within frames; marked in full black lines).

The design principles, especially those for the blocks built during the '50s and '70s, on one side had to take in account restrictions deriving from the natural environment, such as geological risks because of the vicinity to the river, risks of flooding, or restrictions deriving from the preexisting organic structures; on the other side, had to be driven by very clear design and normative objectives: to create in Tirana the first seeds of collective urban spaces based on a new social formula and inspired by the general ideas of social progress. The later was the most important! Based on these principles, the government seized the land. Therefore, individual land subdivisions and private property could not impose any limitations. Public space was sublime, therefore, in order to create the collective space, the new blocks were designed as if no previous layers existed. The figure ground urban layout (but not the architecture) especially in the case of "*Puna*" housing block, follows a similar logic with the layout of the initial stages of modernist urban design: 4 to 5 stories apartment blocks distant from each other, detached from the historic traces of the city, orientated according to the elio-thermic logic in order to permit light, fresh air, and the green vegetation to penetrate, and with the community services and education institutions in between. However, as I mentioned before, even in this case some small pieces of the previous organic structures still remained within "*Puna*" and "*Shallvare*" blocks.

Thus, the design principles used after the Second World War were completely different from the social formula on the use of space. The so-called socialist town planning

principles “apt” to create an egalitarian structure prevailed on any other formative principles. Instead, in the areas where the preexisting and the new structures were overlapping, the organic ones either were demolished, or indifferently were overlaid by the new ones.

The analyzed samples are bordered by a road system that was not part of the historic organic structure of Tirana, but was designed by the urban plans. These circumstances supported an urban design that could be easily detached from the previous organic structure of Tirana. Therefore, there is not a binary relationship between the adjacent organic city and the frames of the urban walls. While the historic organic growth of Tirana during the 19th- 20th century was generated by the development of the city as a market hub, the growth after the Second World War was generated by the development of Tirana as an industrial pole. This was th precondition for shifting the design mentality and using a new formula on the collective space.

7 MEASURING TIRANA – AN OPERATIVE APPROACH

7.1 Type and typological approach in the context of Tirana

In this research, so far an attempt has been made to address issues of the contemporary city and the ways in which this city is transformed, stratified, densified and evolved over time. In these processes, as ancient as the city itself, the actors continue to be the same today: dwellings (cell-type), buildings (typology), space between buildings, urban (and non-urban) parts and thus, the morphology itself of the city as a whole, as an artifact (Rossi, 1978). As stated in the first chapters of this research, *typological urbanism* is concerned precisely with reading the city and its transformations over time through the key of *type* and *typology*, as a way to create continuity in the local building culture (*locus*) and also, to more easily control urban ratios such as "form-density". This becomes even more necessary in a moment like this, where construction is rapid, globalization continues to be used as a slogan of transformation and the urban sprawl can not be with a (sustainable) model of urbanization. Also, on the other hand, care must be taken that the restoration of the type-typology is not simply translated repeatedly in the facade of the traditional elements of local architecture, or of the endless repetition vertically or horizontally (in the form of a sprawl) of the modules-types of dwellings similar to the typical buildings of a certain area or locality (Figure 57).

Figure 57. Restoration of types-typologies of local dwellings in various architectural and urban compositions. From left to right: Netherlands, China, Egypt.

In the context of typological transformations in dwellings, it is difficult to speak of architectural type and residential typology in a context like that of Tirana. The traditional dwelling type of Tirana (Thomo, et al., 2004) has been completely abandoned as a way of construction and is

disappearing, in terms of preservation as cultural monuments (excluding any samples left in the city). The simple house, with 1-2 floors, which formed the urban fabric of organic Tirana, after partial transformations (within the plot) of the last thirty years (during the 45-year period of communism, no transformations could be made on the property), is now going towards total deletion. The owners, unable to invest in maintenance and having no other economic alternatives, prefer to let the property and the apartment for redevelopment by private builders-investors. The urban villas of the period of Italian architectural influence of the '30s-'40s are experiencing almost the same fate (Figure 58).

Figure 58. Low-rise apartments of the '20s and' 30s in Tirana and buildings of the last 30 years in the background.

The typologies of housing of the socialist-communist period, mainly those of the period '70 -'80, were 4-5 storey dwellings (very rarely up to 6 floors), organized in line. As mentioned in chapters 5.5.2 - 5.5.3, some of them were built on the lower dwellings of the organic city, completely demolishing them (especially on the contours of the main road axes) and thus building a new urban structure (*urban frames*) to a greater extent. Typological transformations of these dwellings after the '90s, mainly inside or adjacent to the main volume of the dwelling building, functioned as *parasites volumes*, which were "installed" in the side facades, or filled the outer spaces of the

ground floors, or were added on the top floors. (Figure 59). These interventions were made mainly due to the change of the family nucleus, which was increased by 1 or 2 children, or for economic reasons (mainly the external additions on the ground floors were turned into commercial shops or services).

Figure 59. Volumetric transformations, “parasite volumes” type, in residential buildings of the '70s-'80s in Tirana.

In the case of post-1990s housing typologies (30 years have already passed), it remains quite difficult to understand or interpret typological transformations. It can be said that the very process of building a certain apartment (individual or collective, apartments that develop in several floors) started from unclassifiable conditions or criteria. It was mainly the shape of the plot that conditioned the building, while the way of internal organization did not follow any known (or inherited) typological principle. The builders satisfied mainly the "functional" requirements of the owners or simply their personal aesthetic tastes (Figure 60). These residential buildings, as seen in the photo, could occupy free space, but also be built by demolishing existing buildings. In any

case, the final form-typology did not seem to follow criteria related to urban parameters from the existing context.

Figure 60. Ndertesa banimi, tipologji "mix", te pas viteve '90 ne Tirane.

Meanwhile, in the last decade, the typologies used are multi-storey buildings (8 to 11 floors) detached, tower type (central core for vertical distribution and apartments distributed on the perimeter) and those organized in the form of *residential block*s. The detached tower typology is used mainly within the second urban ring of the city, while the *residential block* typologies are placed mainly at the ends of this ring. Recently, this building typology and urban organization has been used in suburban areas, near important roads.

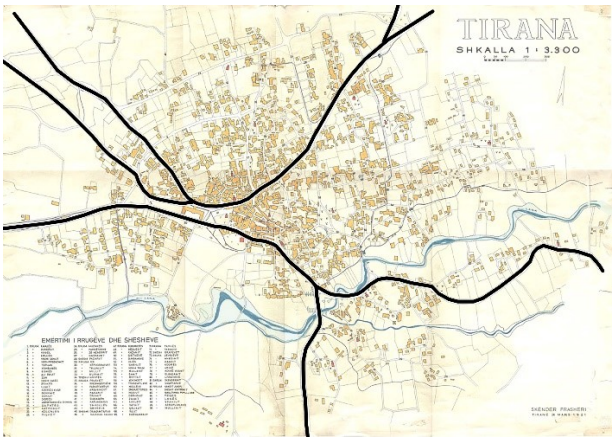
The other typology of the apartment, which has been built on the outskirts of Tirana in the last 2-3 decades, is the detached individual house, with the respective plot along the secondary and tertiary roads (often just paths), mainly called *Elbasan model-type* with a central corridor and living rooms scattered on the side wings and toilet-bath located at the end of this corridor.

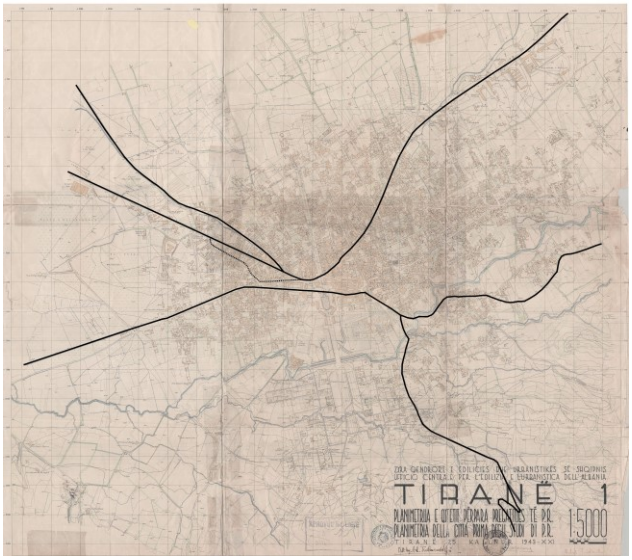
But, these typologies are quite new and in the case of urban towers or *residential blocks*, these buildings are either built on free territory, or have completely erased the previous buildings-dwellings. It is therefore quite early and difficult to interpret possible transformations of the architectural type.

Therefore, at this point it can be said that in the case of Tirana, this study - about bringing back the concept of type and typology as a key factor in reading the city and as one of the important actors in structuring urban interventions - can be oriented towards the idea than the Rossi for type and typology. In the following it will be researched (through reading and morphological interpretation of historical maps) about the idea of urban parts and urban types in the context of Tirana, as urban facts of timely transformations of form and as an opportunity to generate form again.

7.2 Morphological transformations to discover an urban type

As mentioned in the introduction, general background and in the chapter that deals with the historical stages of morphological-urban transformations, Tirana is a complex city. Due to the partial implementation of regulatory plans, its morphological layers are still visible, but completely fragmented and fragmented.




TIRANË 1
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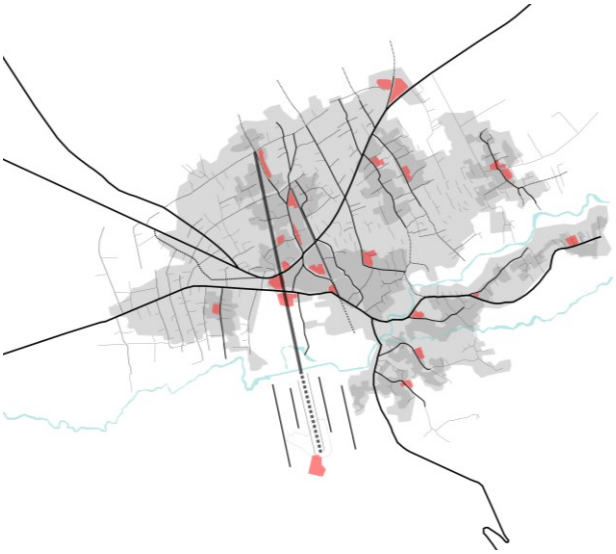
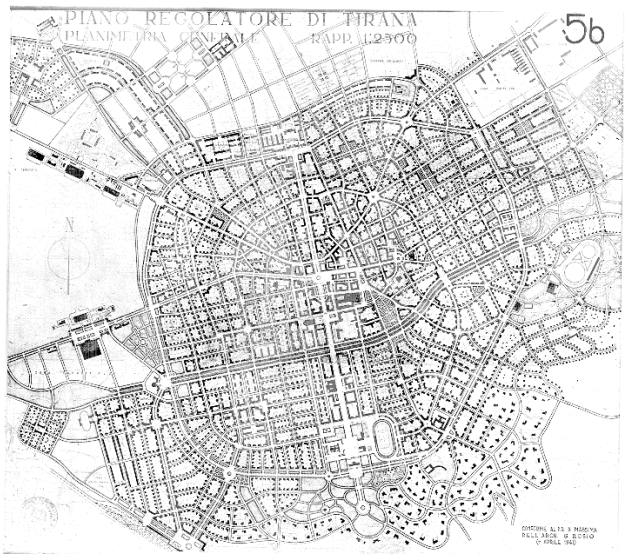
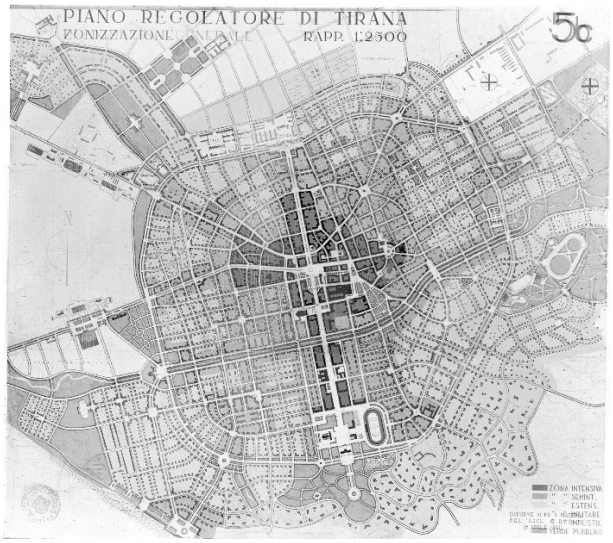



PIANO REGOLATORE DI TIRANA
RAPP. 1:2500
5b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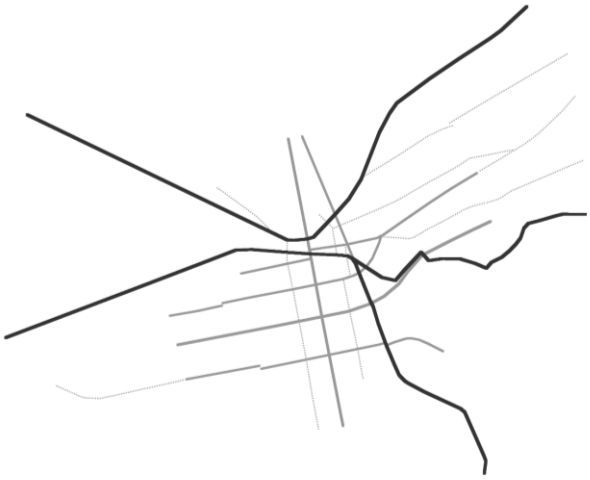
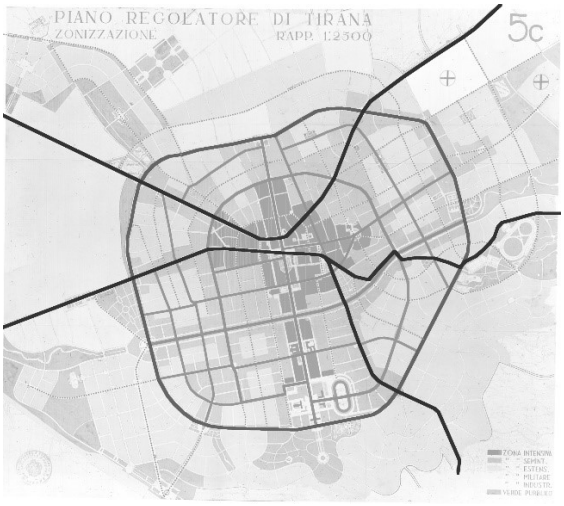
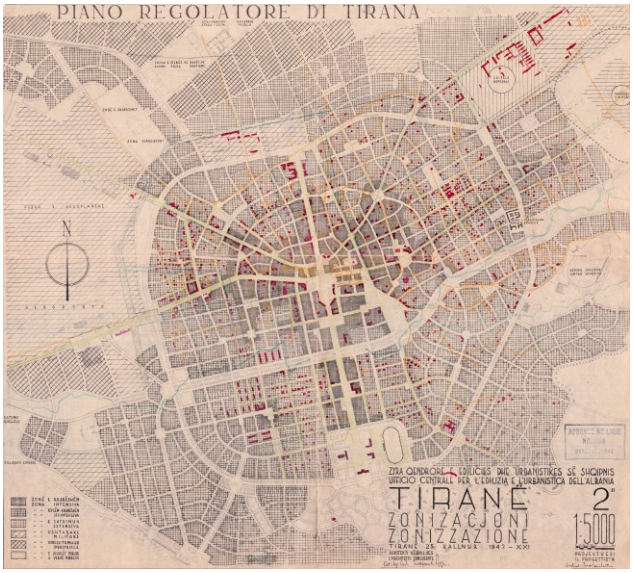
RAPP. 1:2500
5c




PIANO REGOLATORE DI TIRANA
ZONIZZAZIONE
RAPP. 1:2500
5c


PIANO REGOLATORE DI TIRANA
ZONIZZAZIONE
RAPP. 1:2500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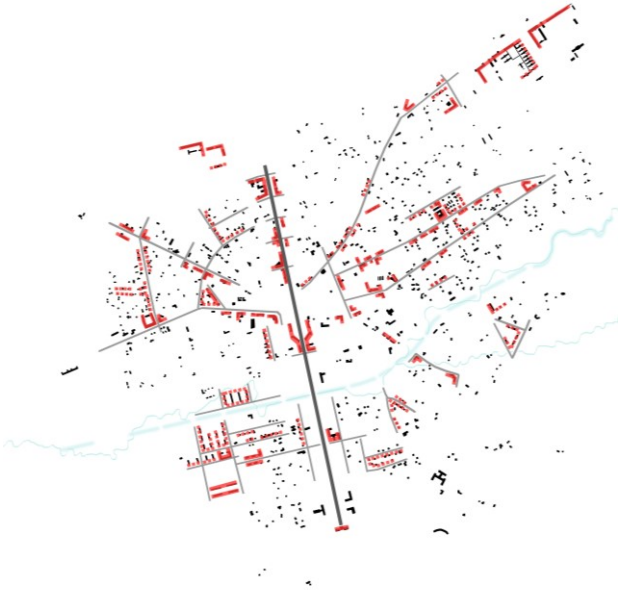
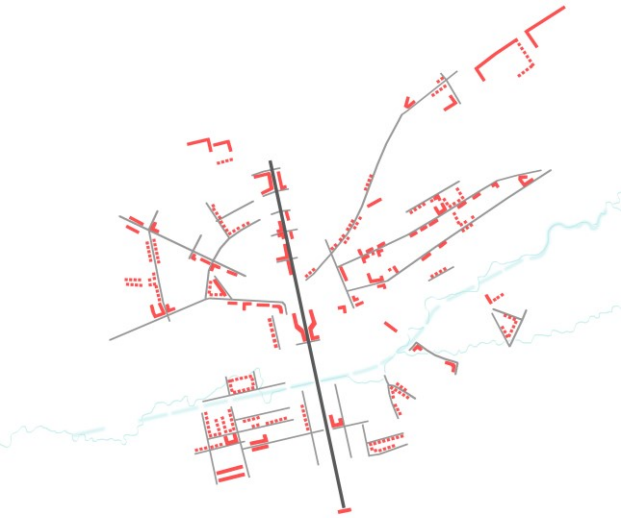
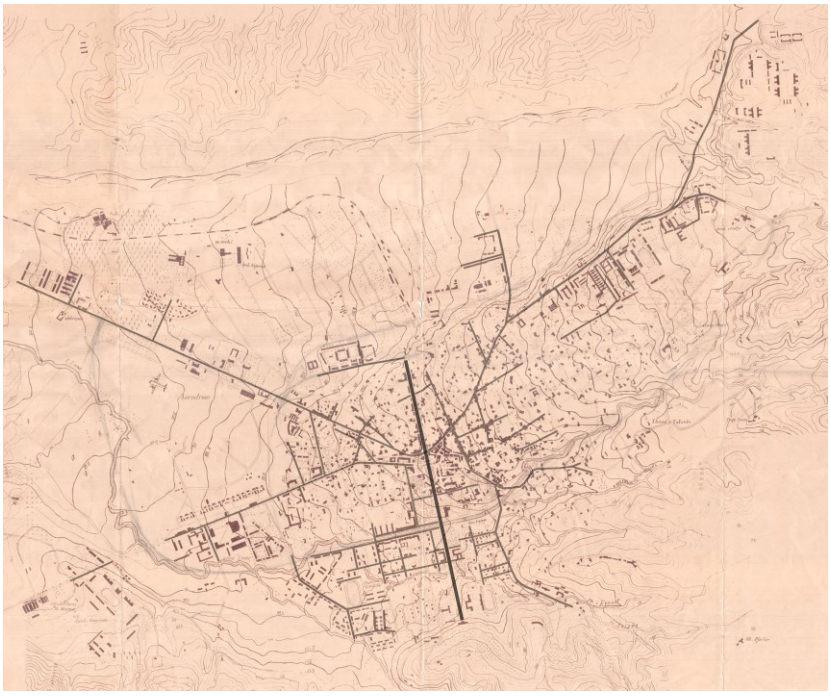
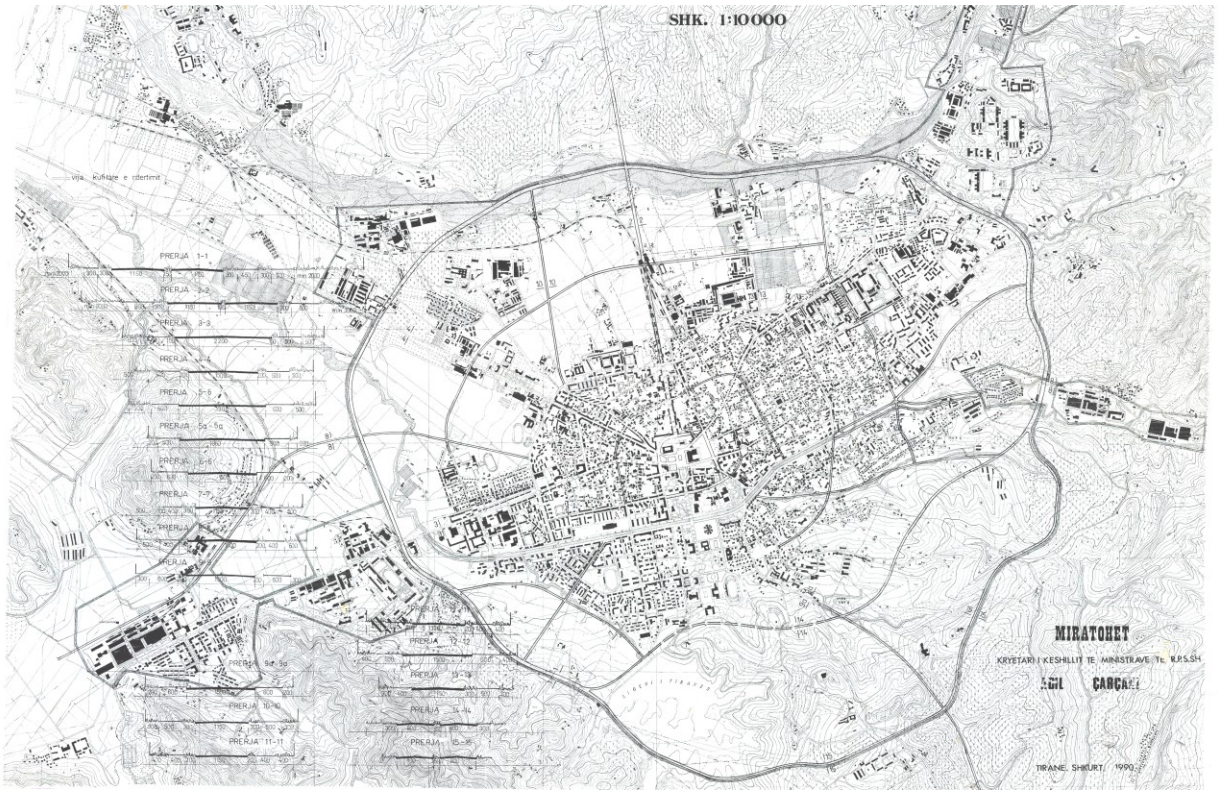
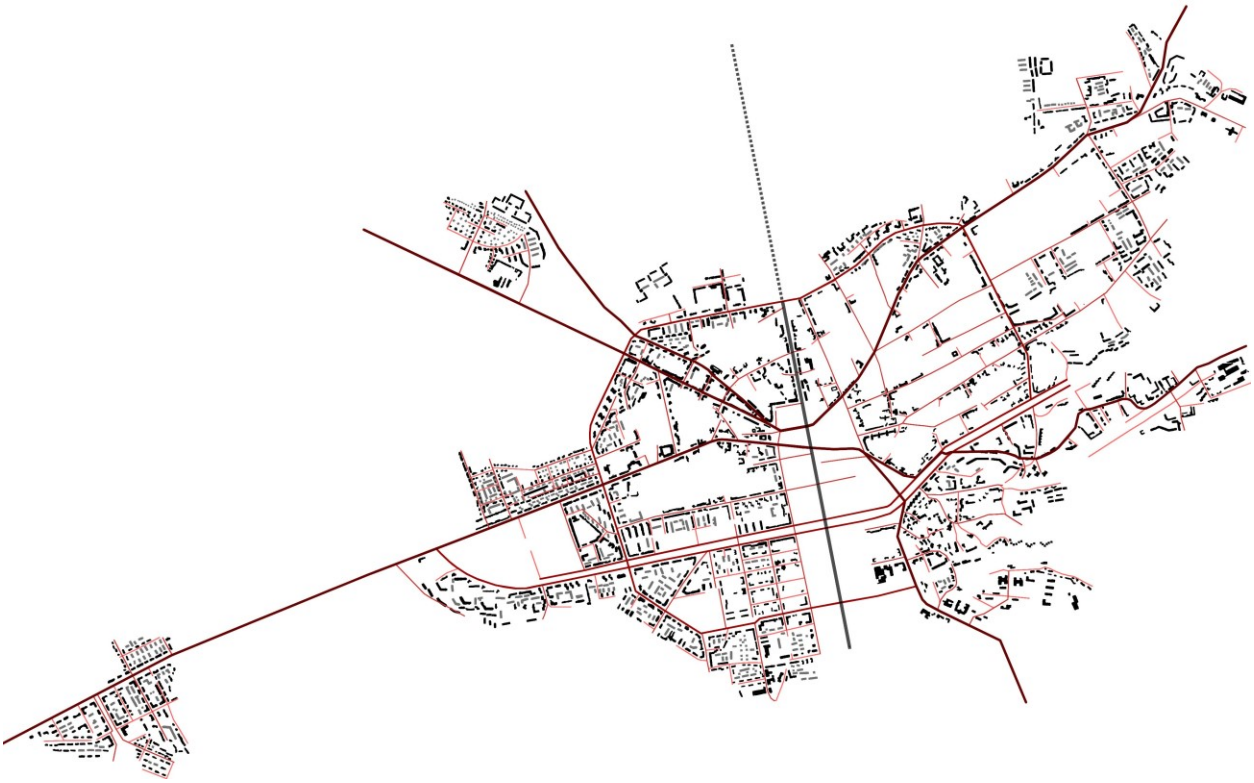
TIRANE
ZONIZACJONI
ZONIZZAZIONE
2"
1:5000

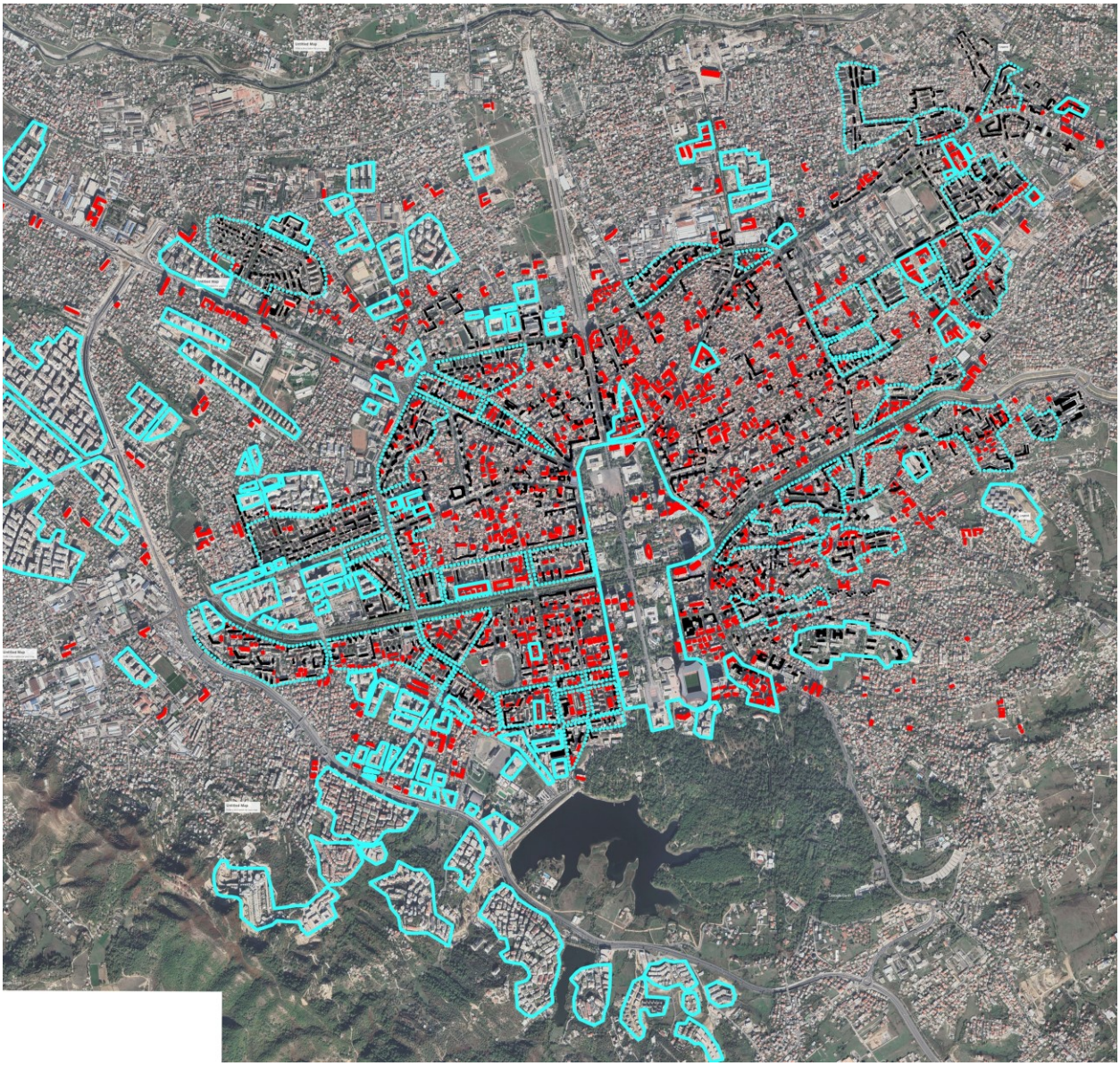


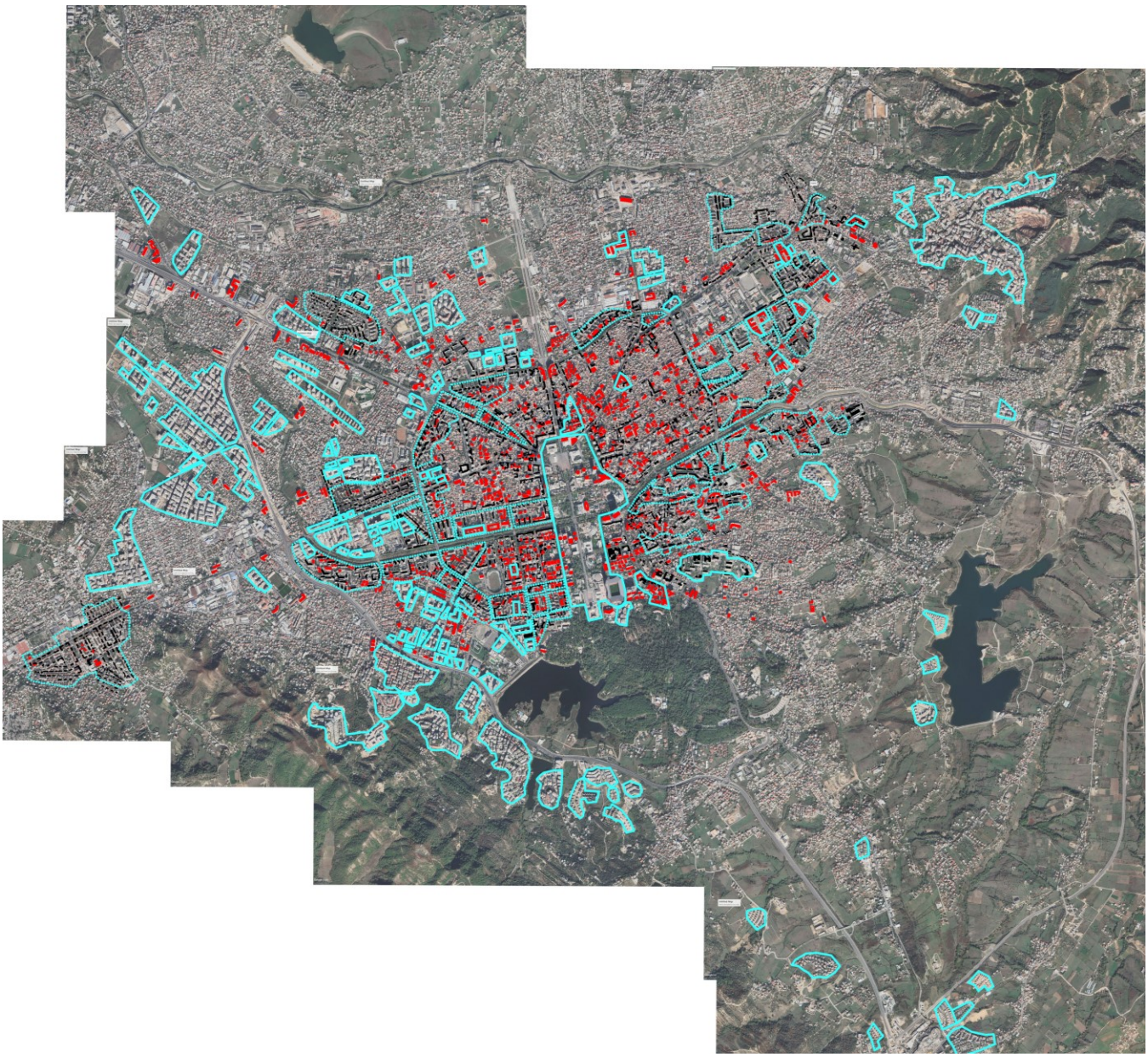


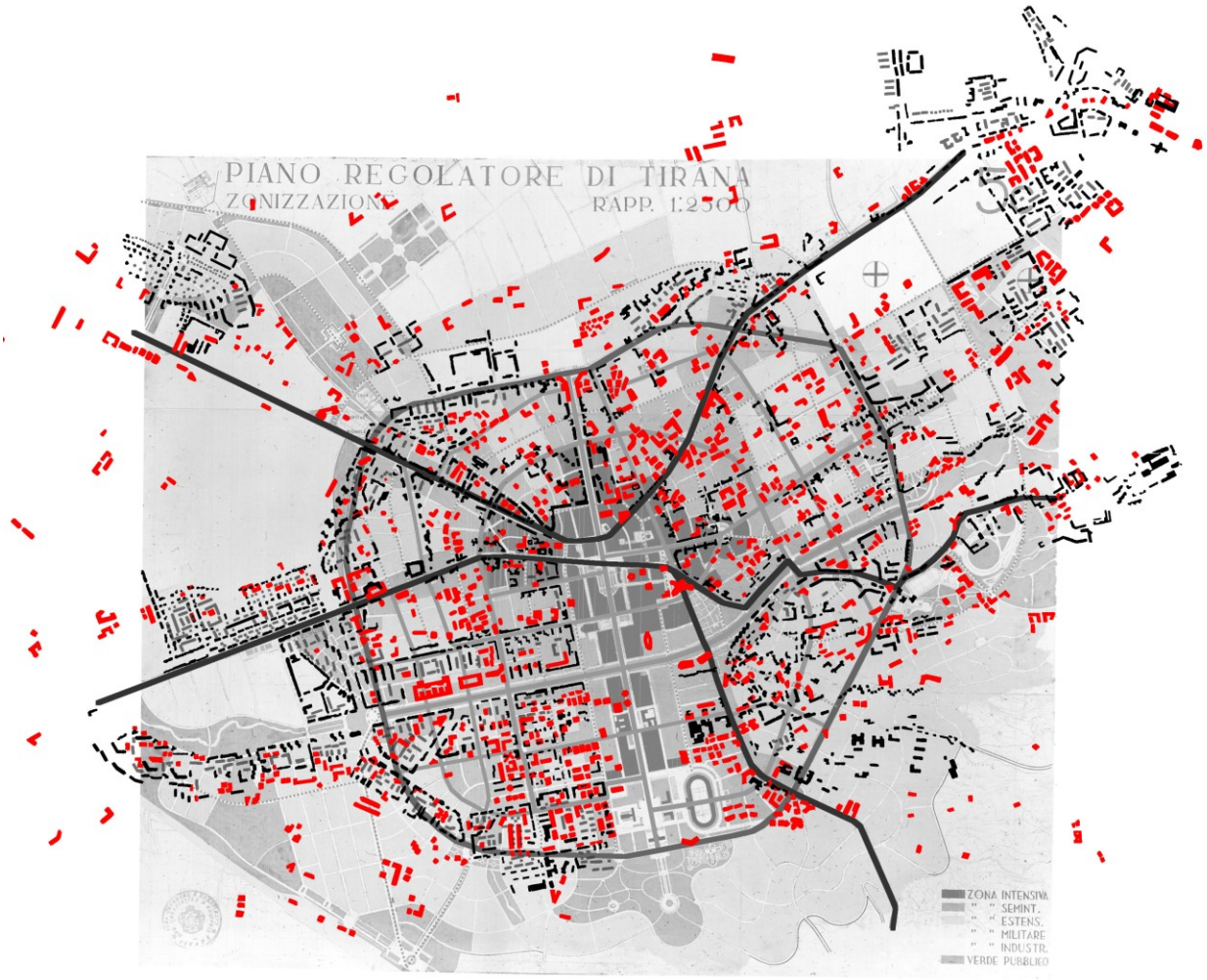


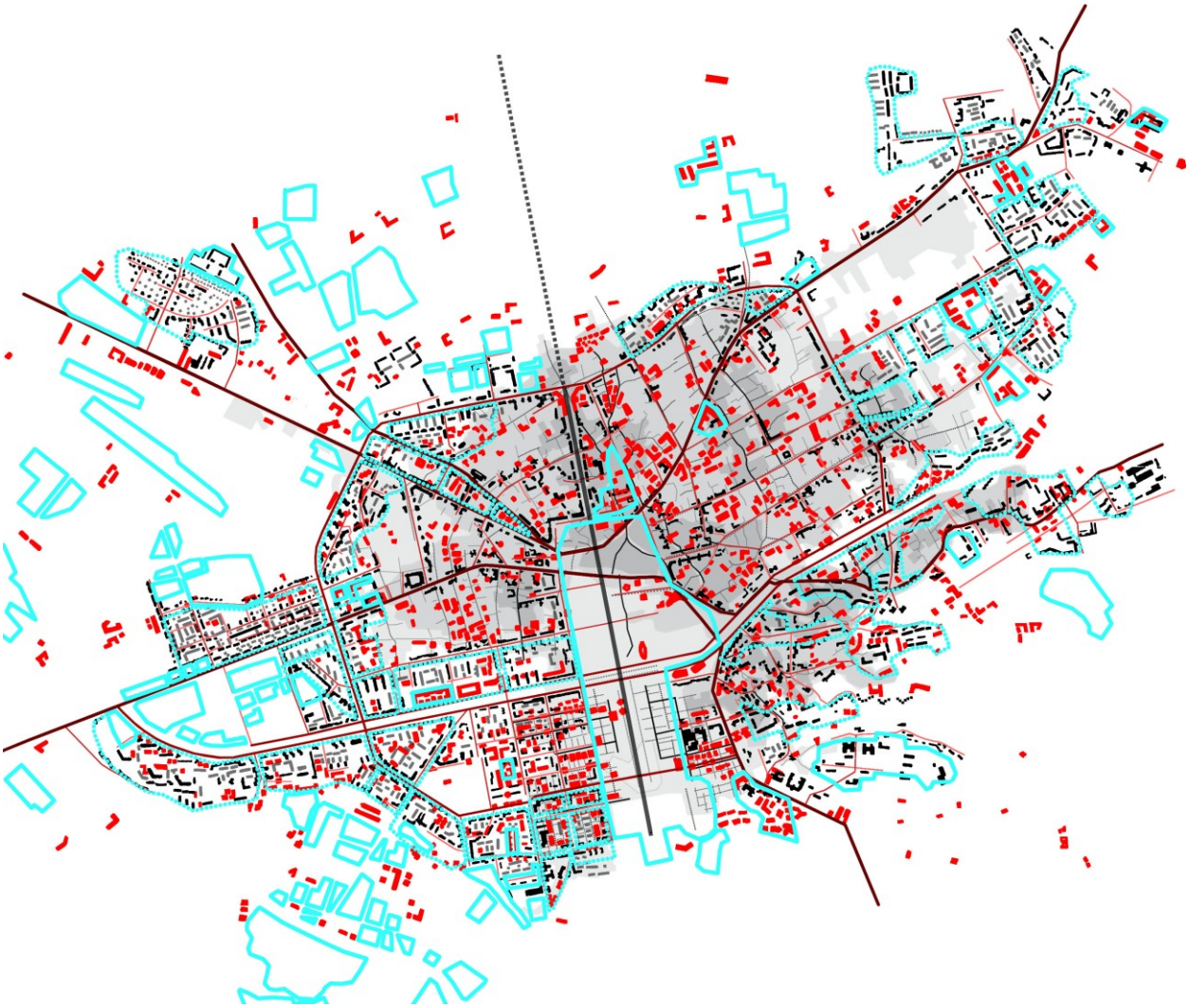

SHK. 1:10000
MIRATOHET
TIRANE, SHKURT, 1990








PIANO REGOLATORE DI TIRANA
ZONIZZAZIONE
RAPP. 1:2500
ZONA INTENSIVA
" " SEMINT.
" " ESTENS.
" " MILITARE
" " INDUSTR.
VERDE PUBBLICO

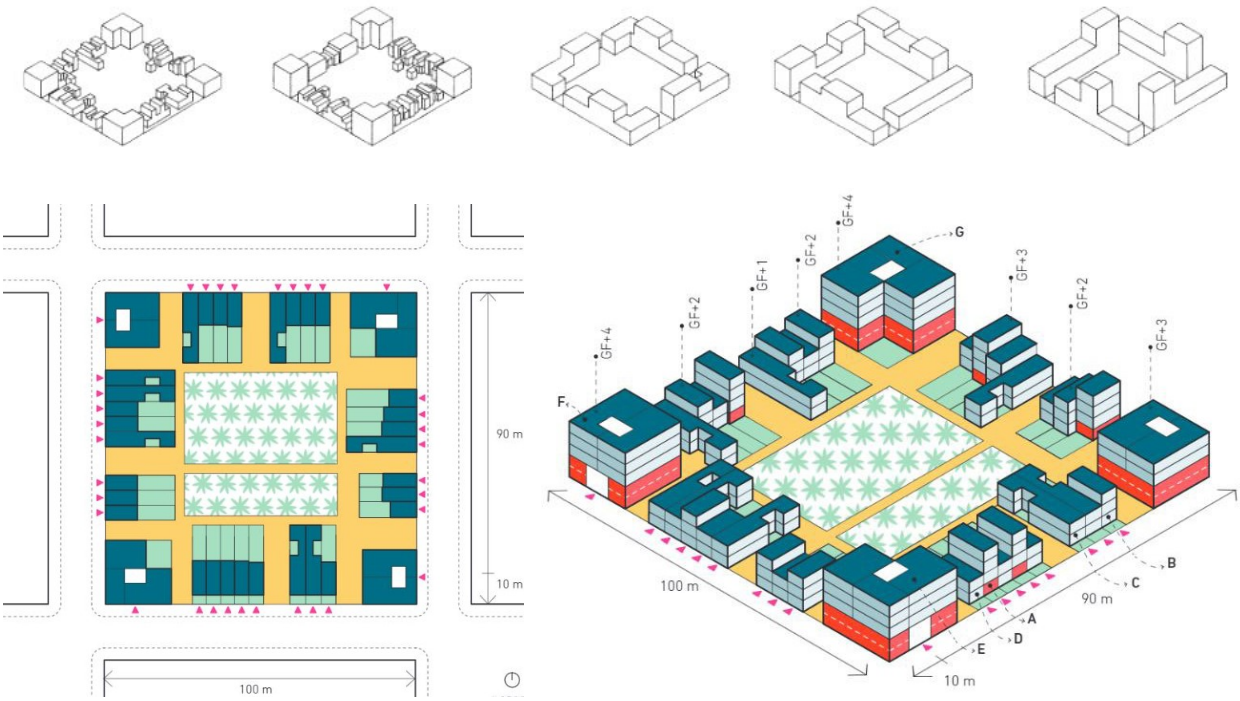


8 CONCLUSIONS AND DISCUSSIONS

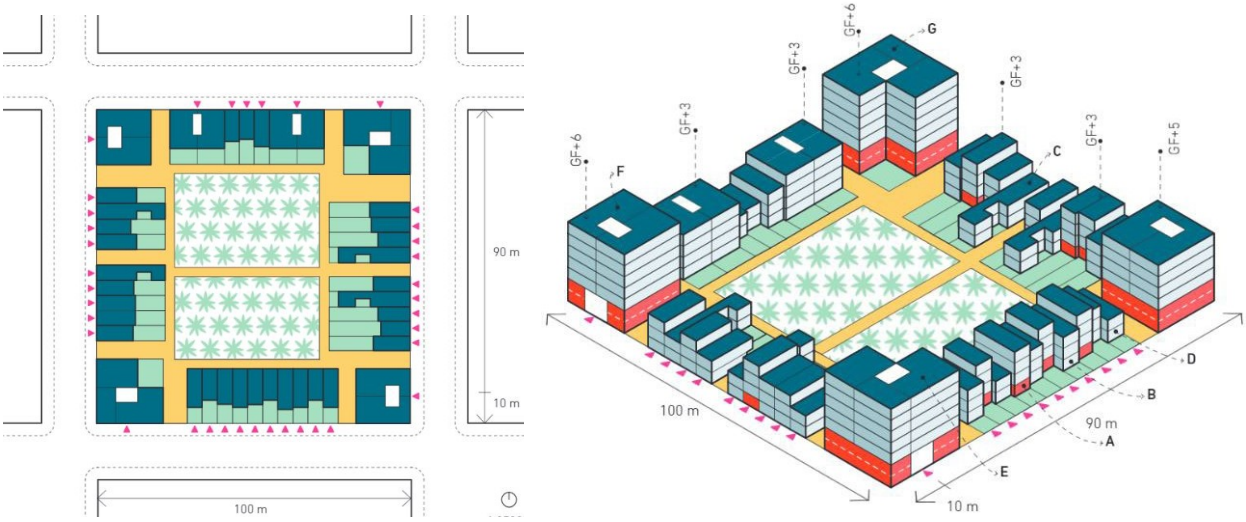
8.1 Uban alphabet and morphological aggregations

How to use Form; How to use FAR, How to use Density

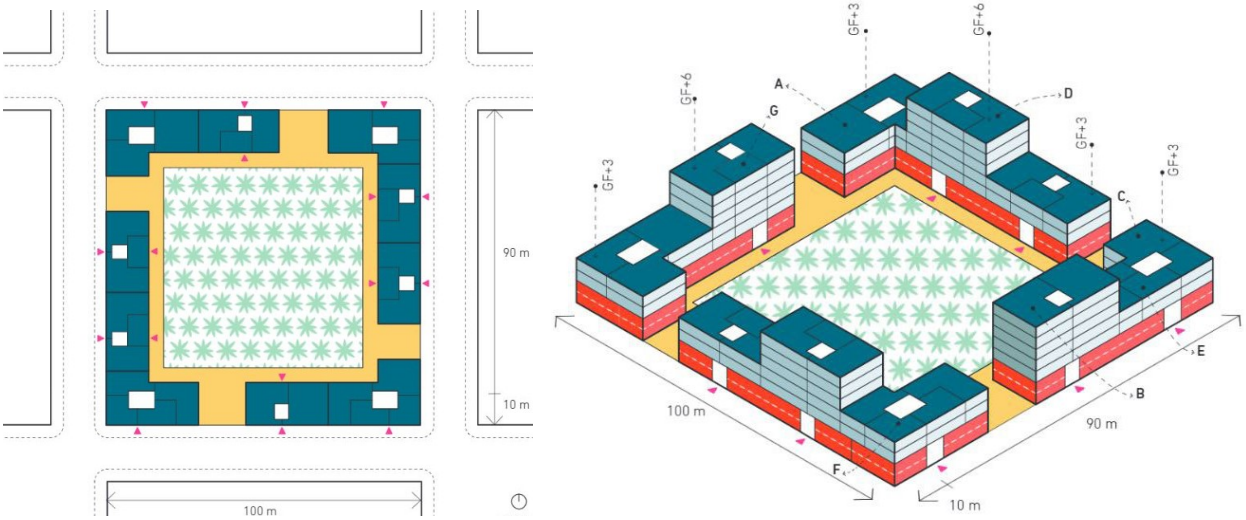
Family Form *Citadel*



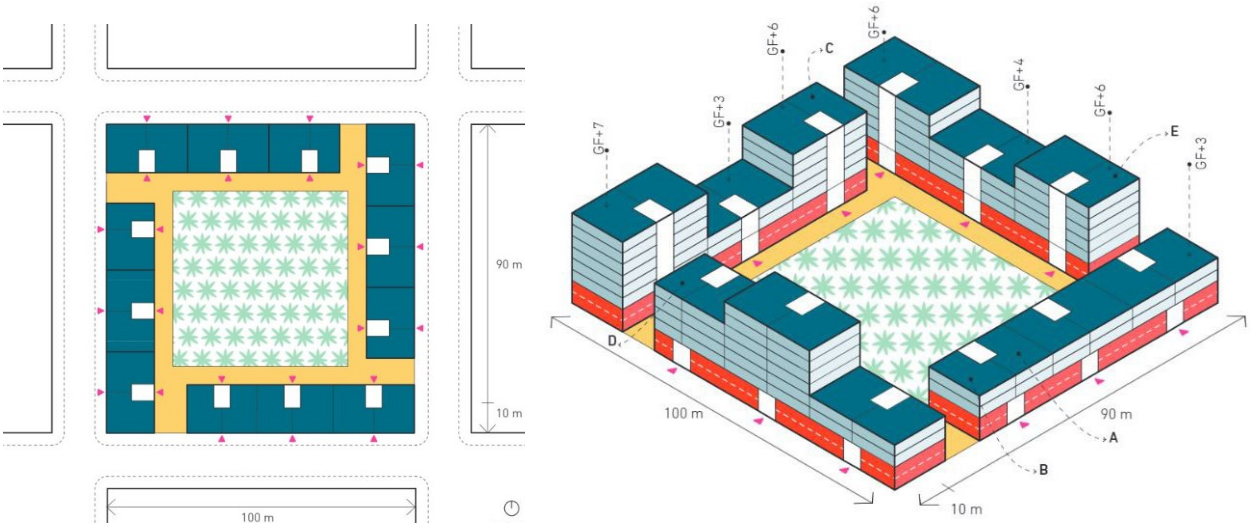
Based on: MVRDV, Urban Hybrid, Emmen, CH 2013_ Low _ FAR 1.0



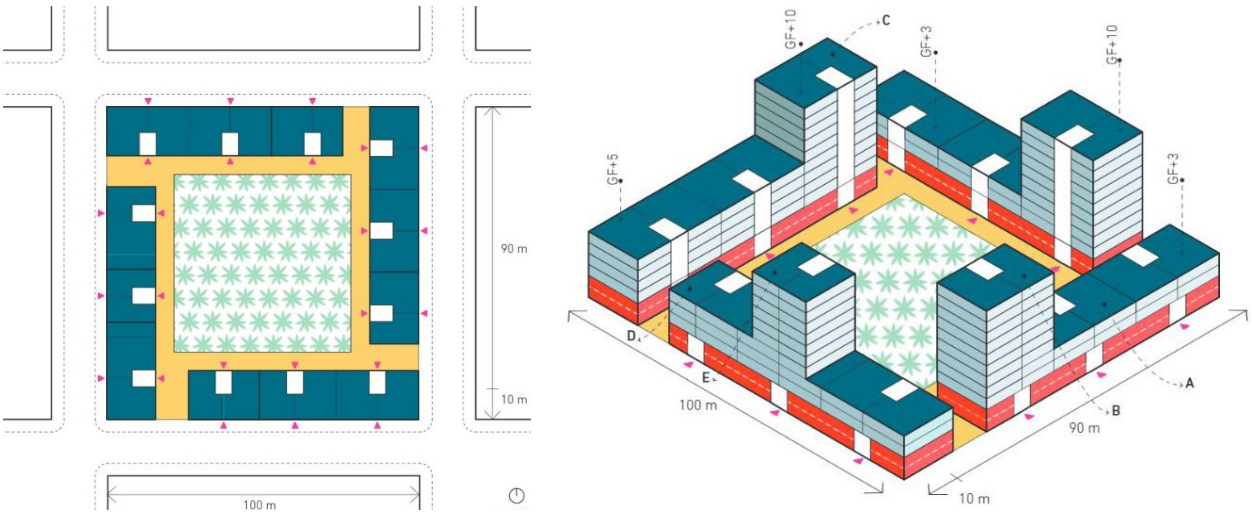
Based on: MVRDV, Urban Hybrid, Emmen, CH 2013_ Moderate _FAR 1.5



Based on: Kjellelander Sjöberg, Monoliten, Stockholm, SE 2015_ Moderate+ _FAR 2.0

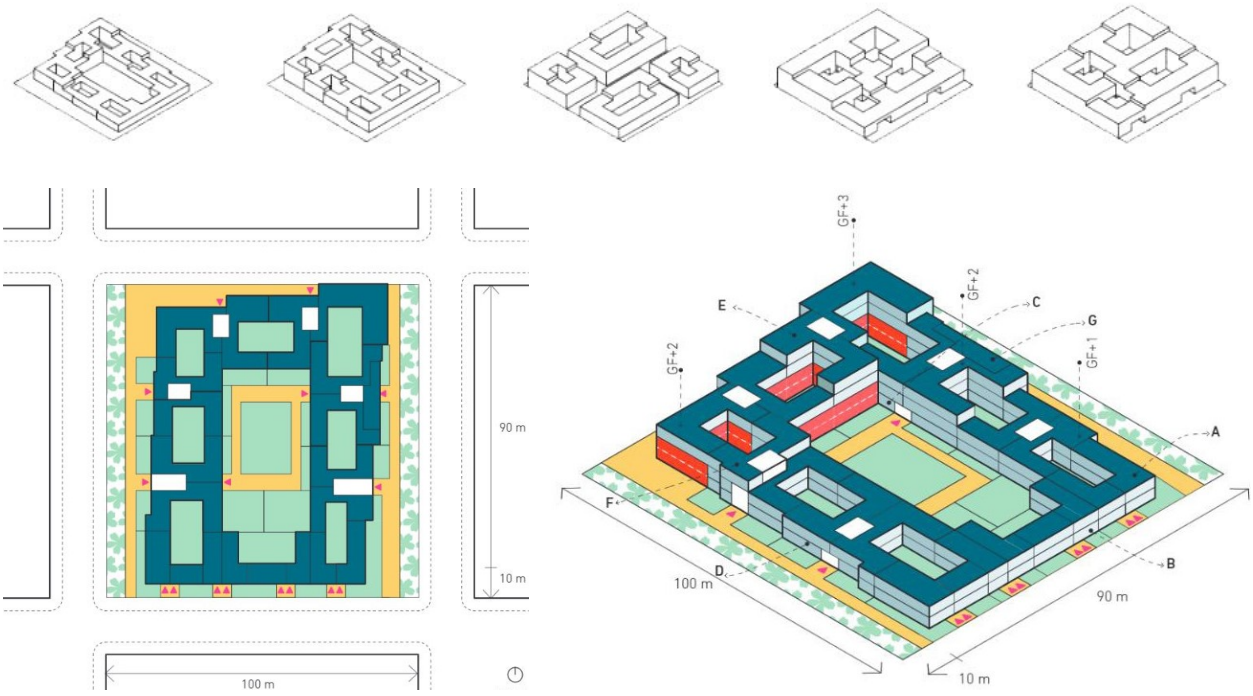


Based on: Promontorio, Oriente Complex, Lisbon, PT 2004 _ Intense _FAR 2.5



Based on: Promontorio, Oriente Complex, Lisbon, PT 2004 _ Intense _FAR 3.0

Family Form *Patio*



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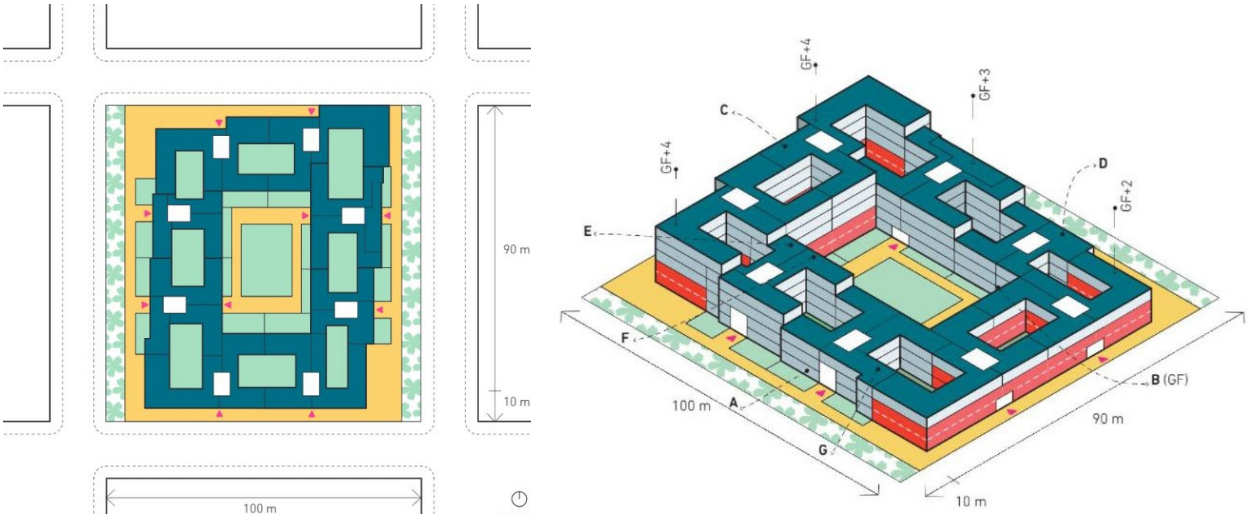

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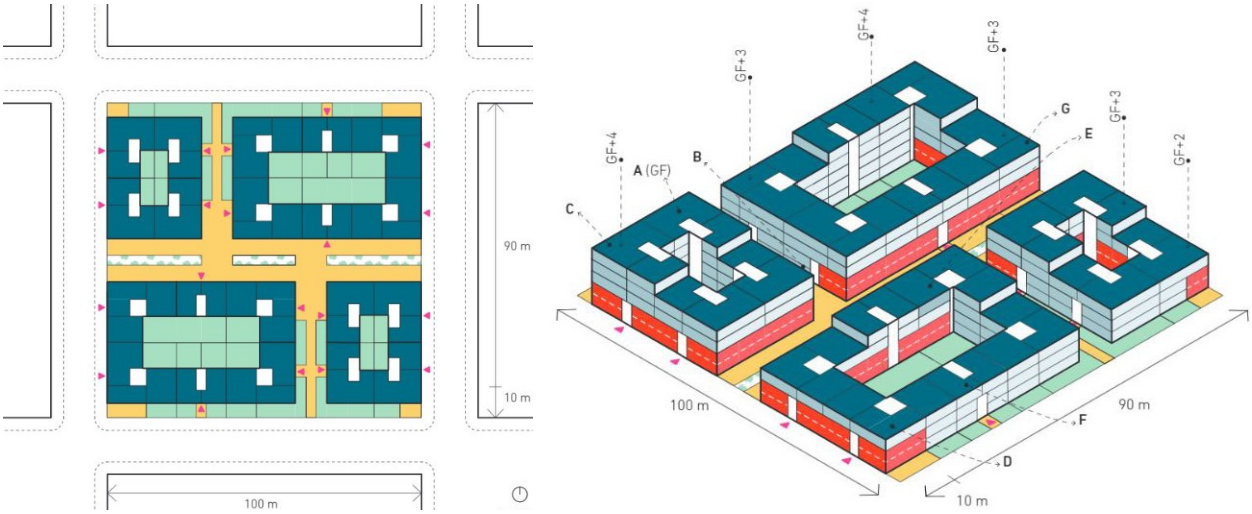

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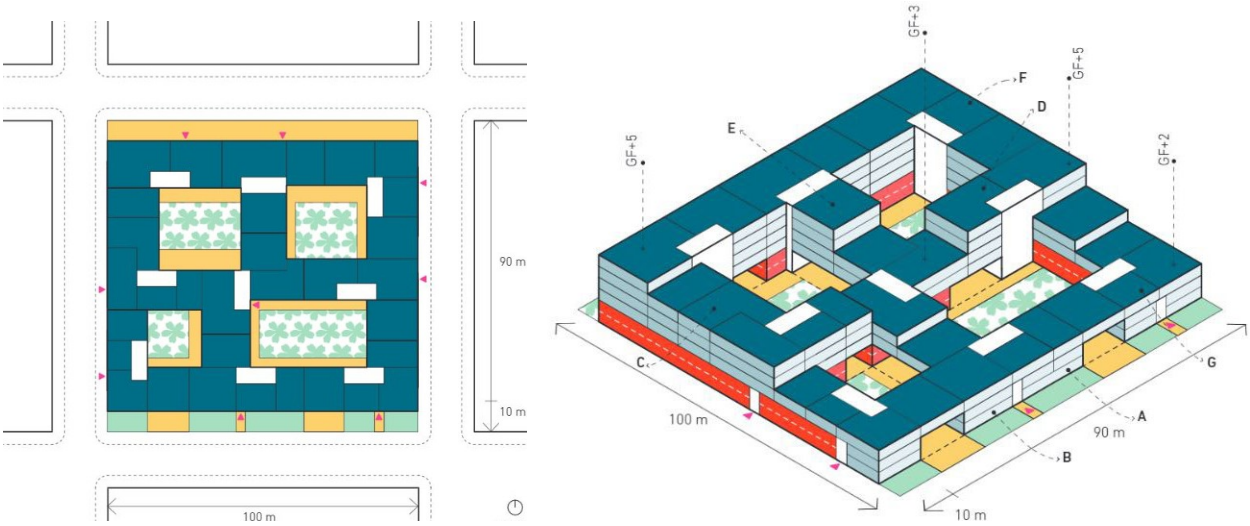

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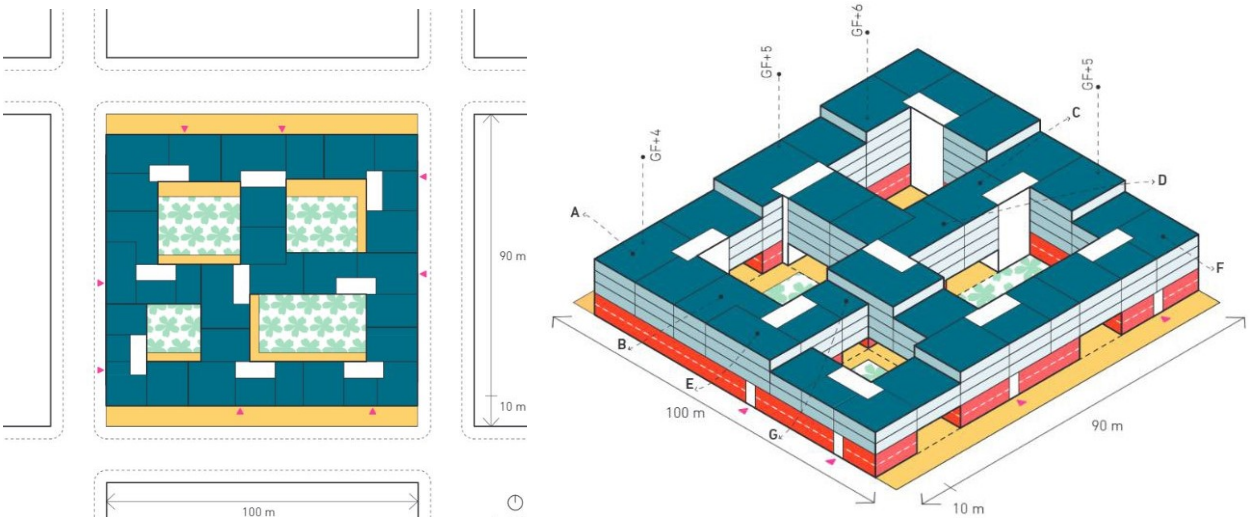

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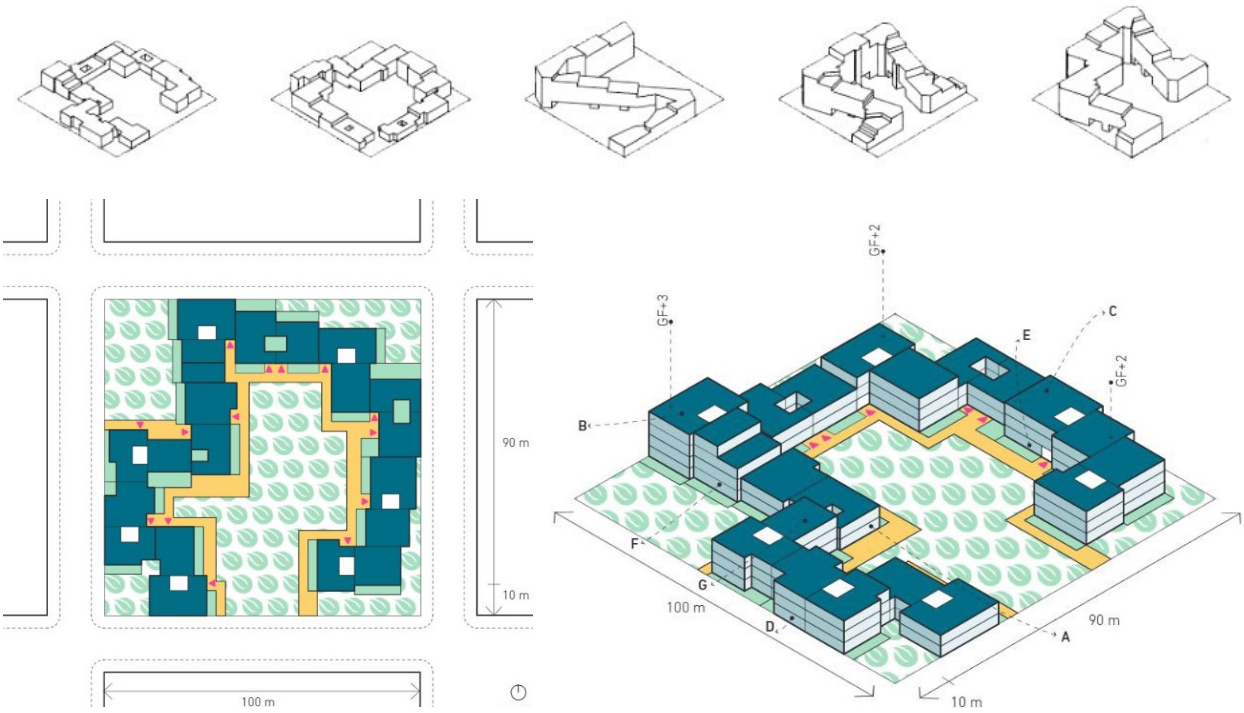
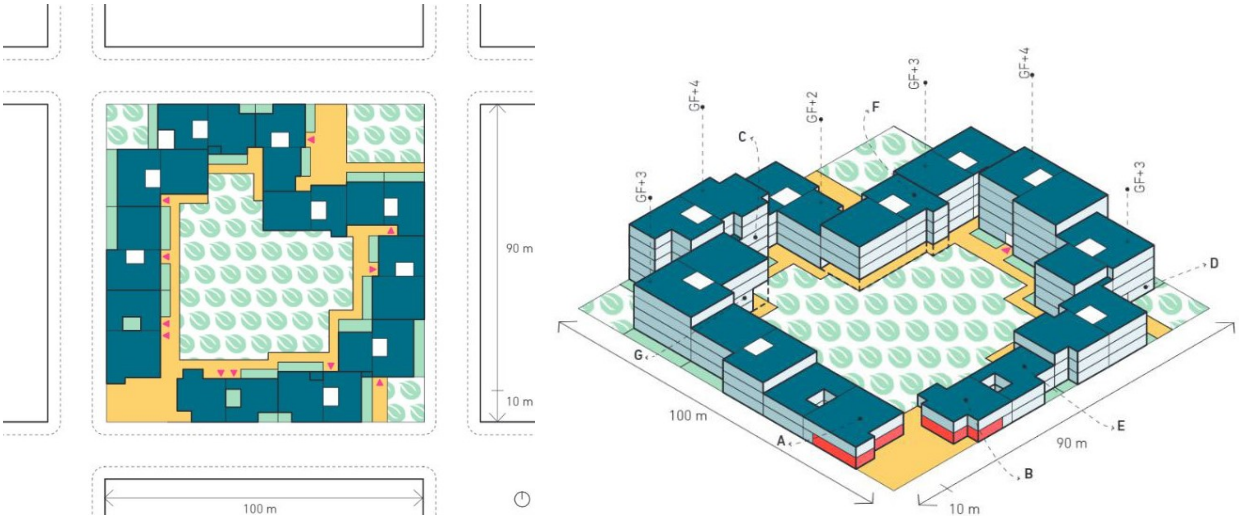
Family Form *Snake*



Based on: Atelier Quintus Miller, Silvia Ponte, Oslo, NO 2018 _Low _ FAR 1.0



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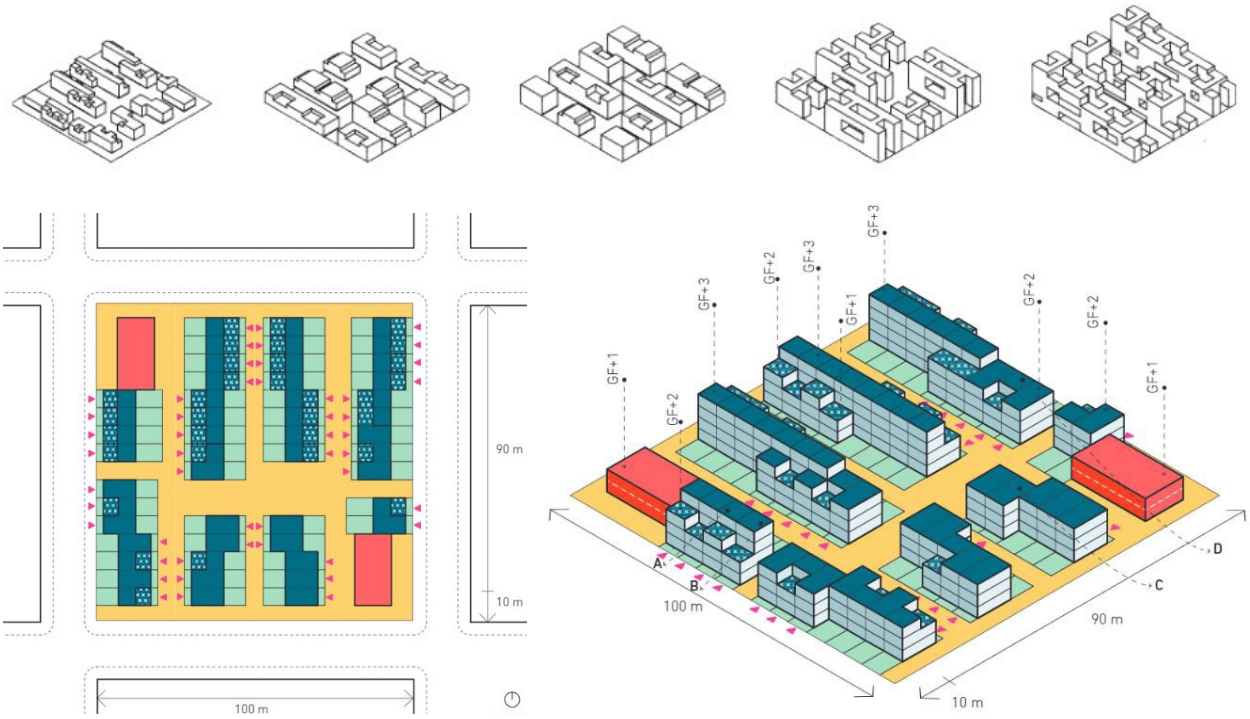
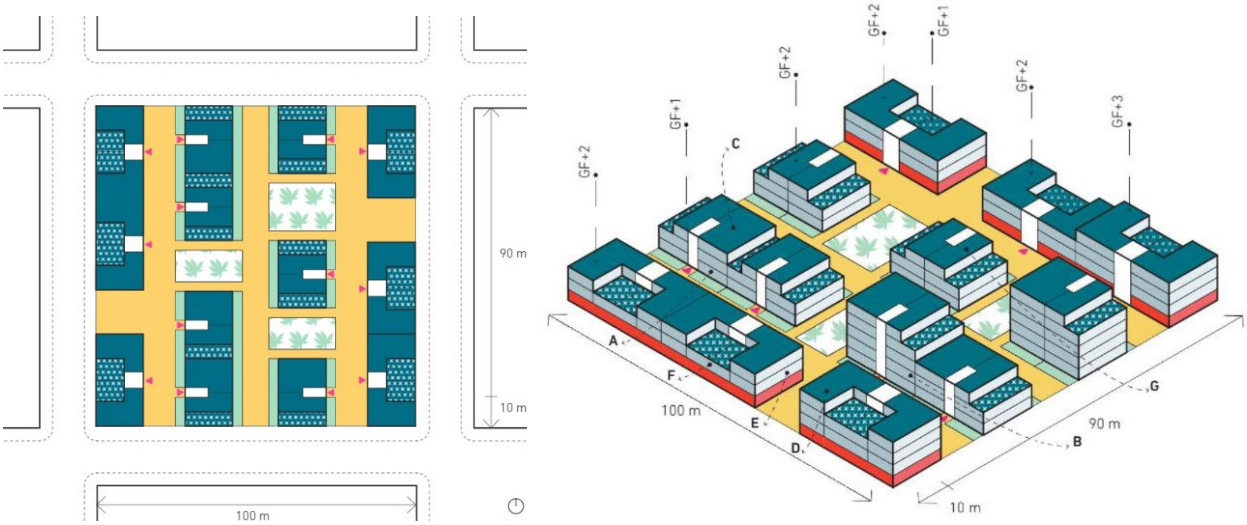
Family Form *Barcode*



Based on: MVRDV, Waterwijk, Delft-Den Haag, NL 2002 _Low _FAR 1.0



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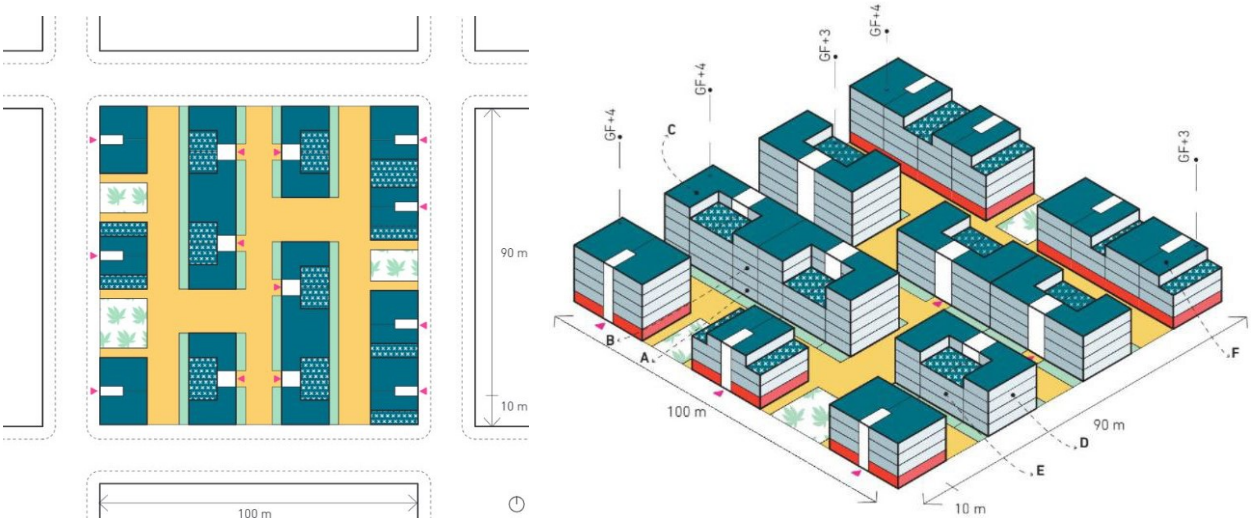
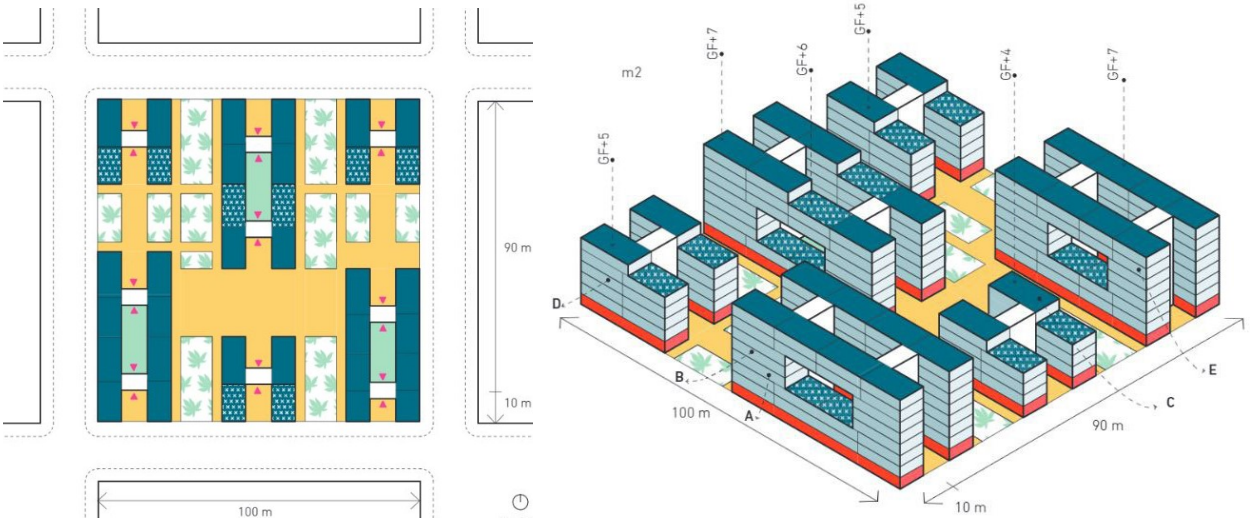
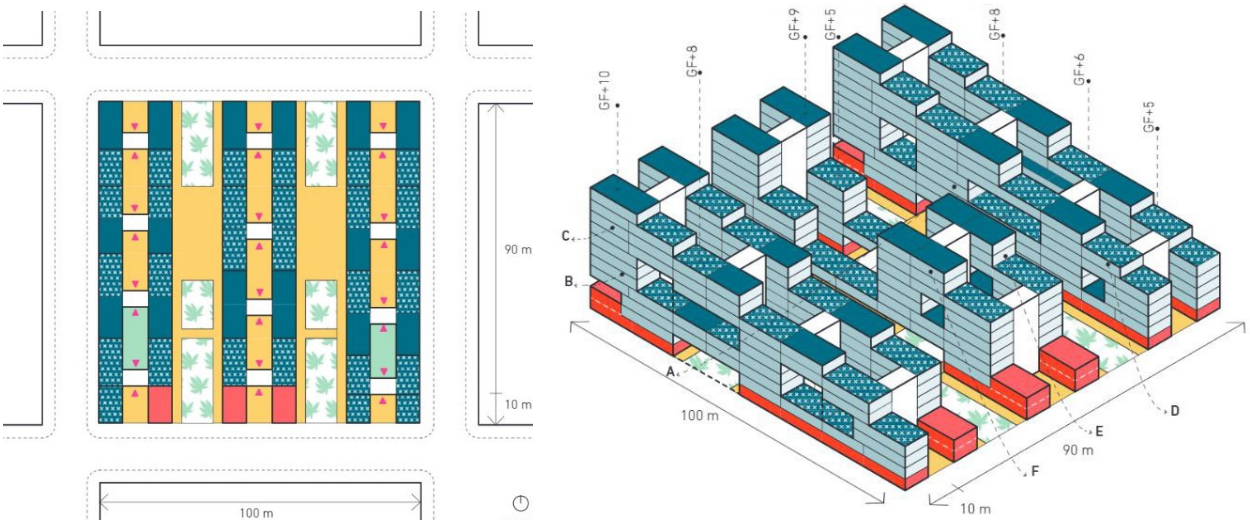


AA Architectur Balzani AG, Visp, CH 2012 / Felber Widmer Kim, Rombach, CH 2007 _Moderate+_FAR 2.0

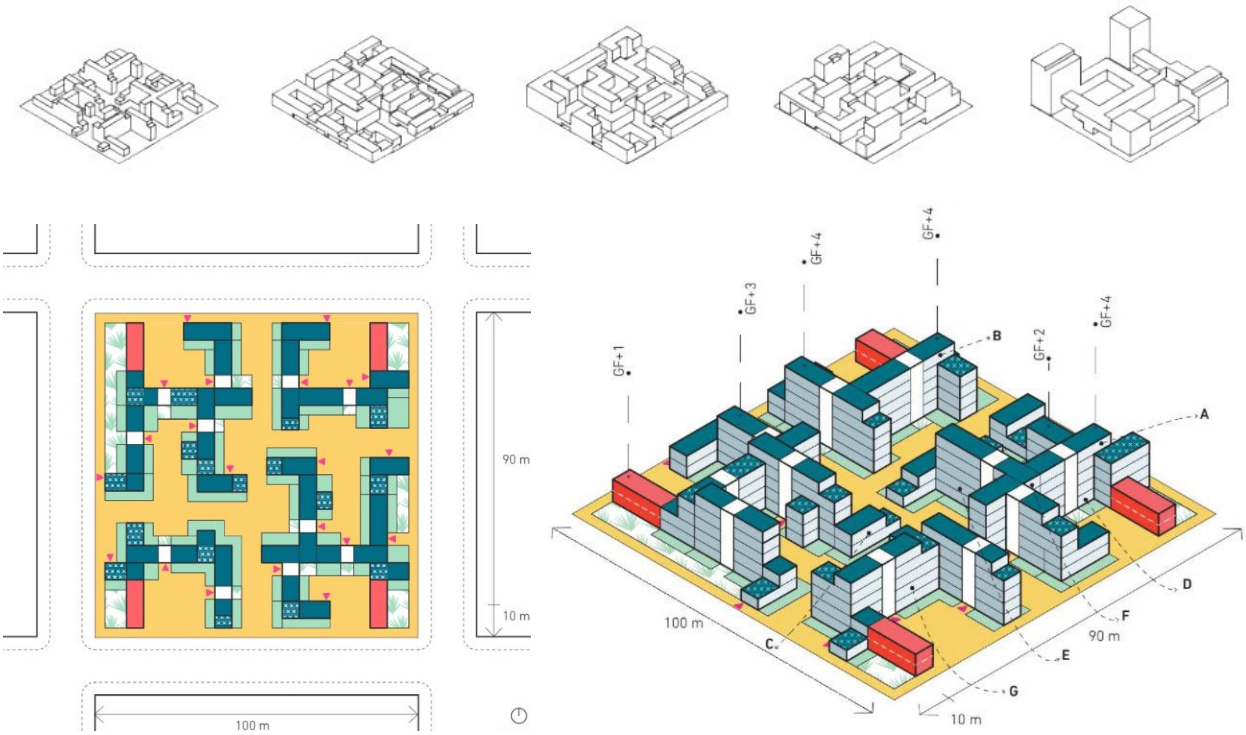


Based on: Ercilla, Campo, Mangado, Lakua, Vitoria-Gasteiz, ES 2002 _ Intense _FAR 2.5

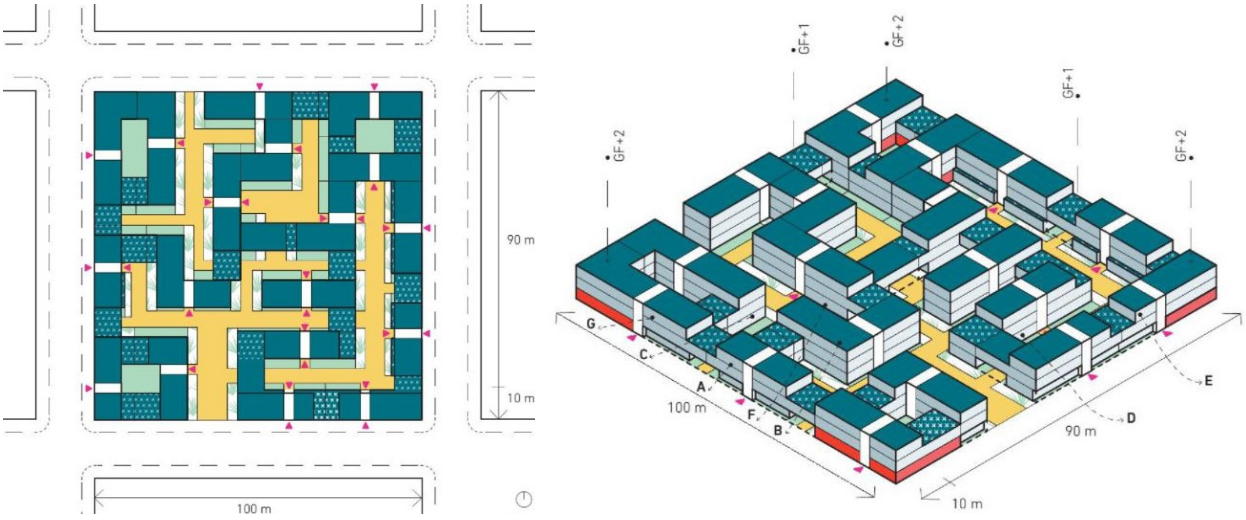


Based on: Ercilla, Campo, Mangado, Lakua, Vitoria-Gasteiz, ES 2002 _ Intense+ _FAR 3.0

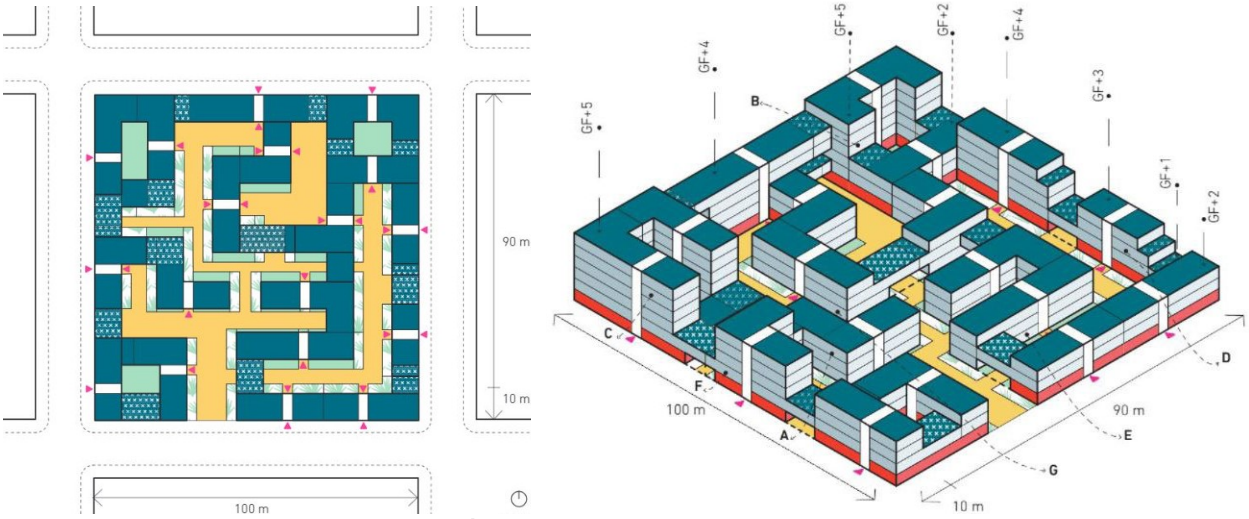
Family Form *Labyrinth*



Based on: Studio Cadena, The Long House, Marfa, US 2015 _Low _FAR 1.0



Based on: Barozzi Veiga, Santa Clara, Ùbeda, ES 2004_Moderate _FAR 1.5



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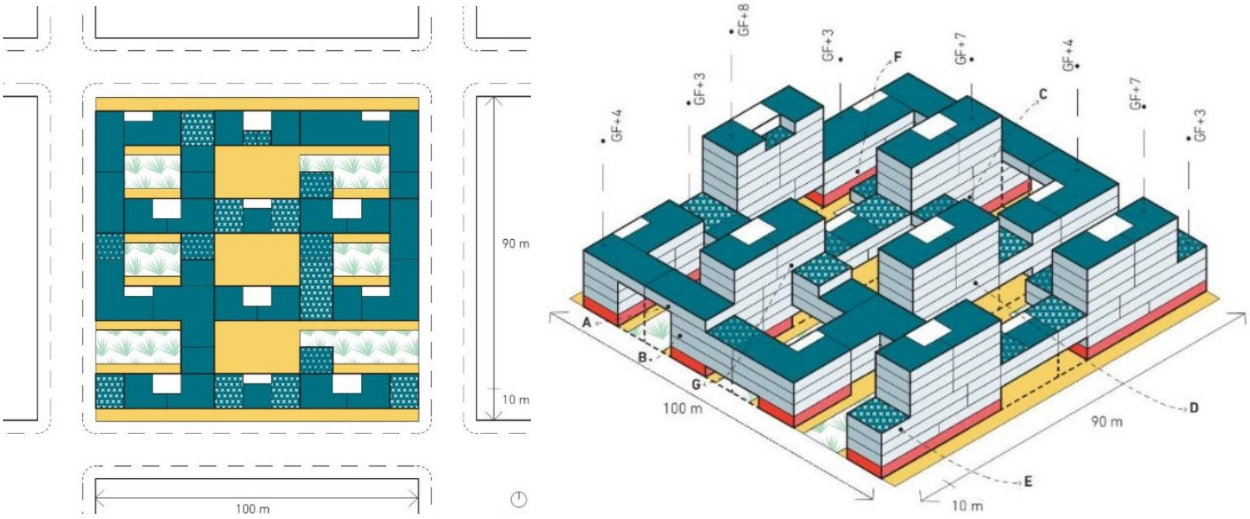
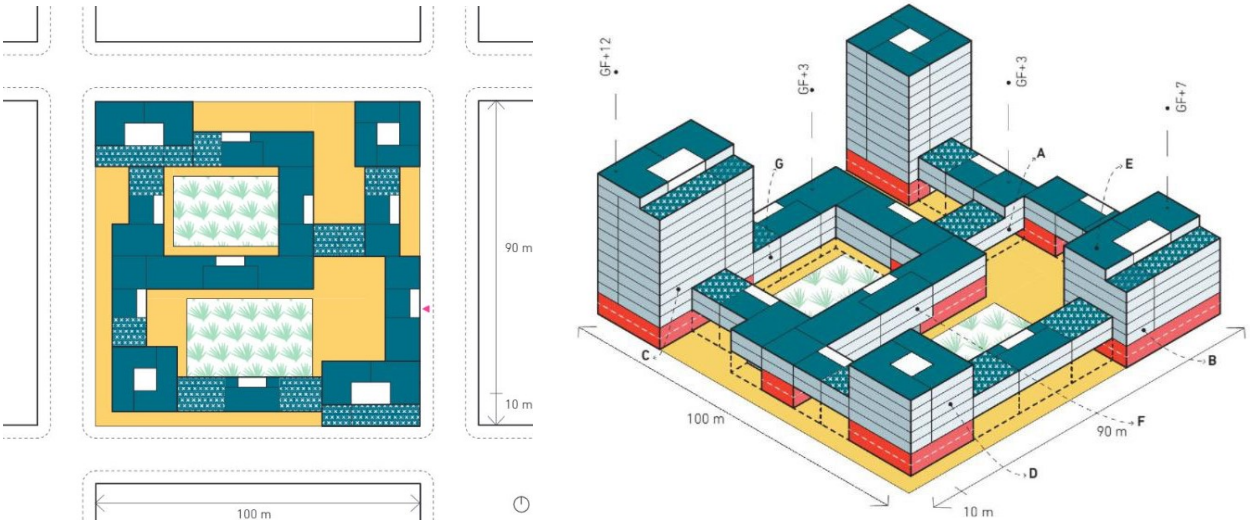
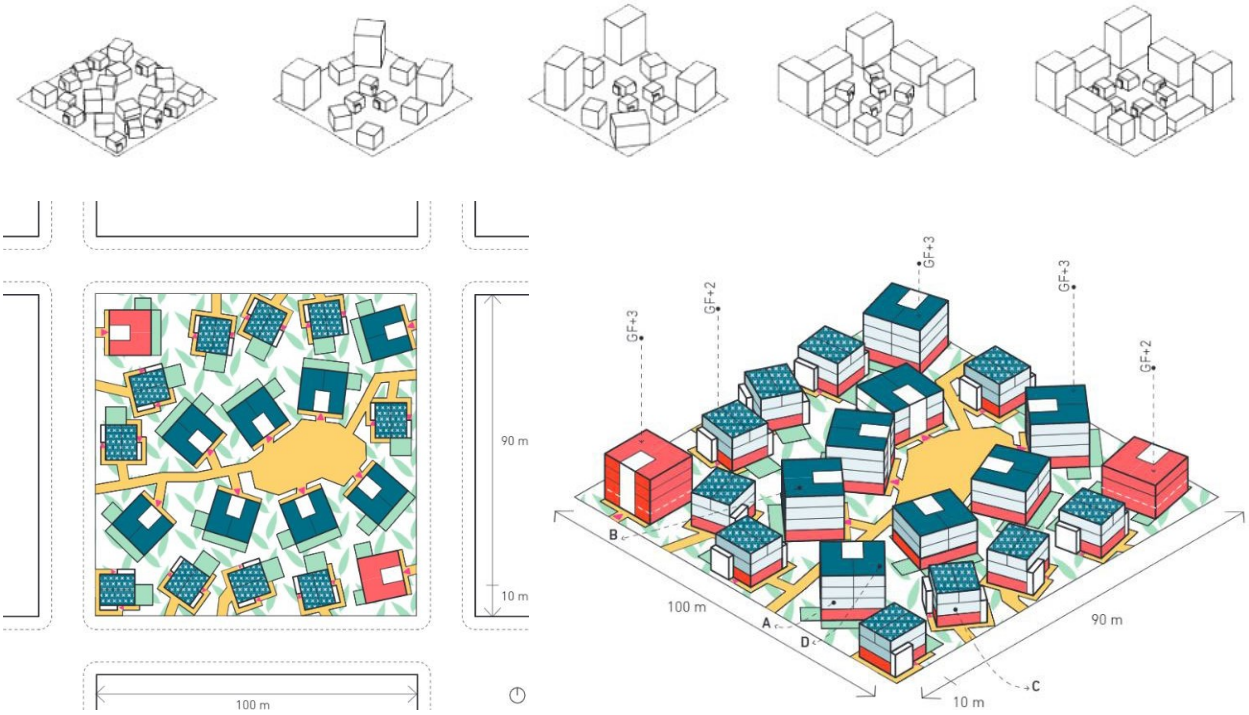


Based on: YKH_LAB, Nine Dragons, Suizhong, CN 2011_ Intense _FAR 2.5



YKH_LAB, Nine Dragons, Suizhong, CN 2011/ XDGA, Chassé Terrain, Breda, NL 2001_Intense+_FAR 3.0

Family Form *Dice*



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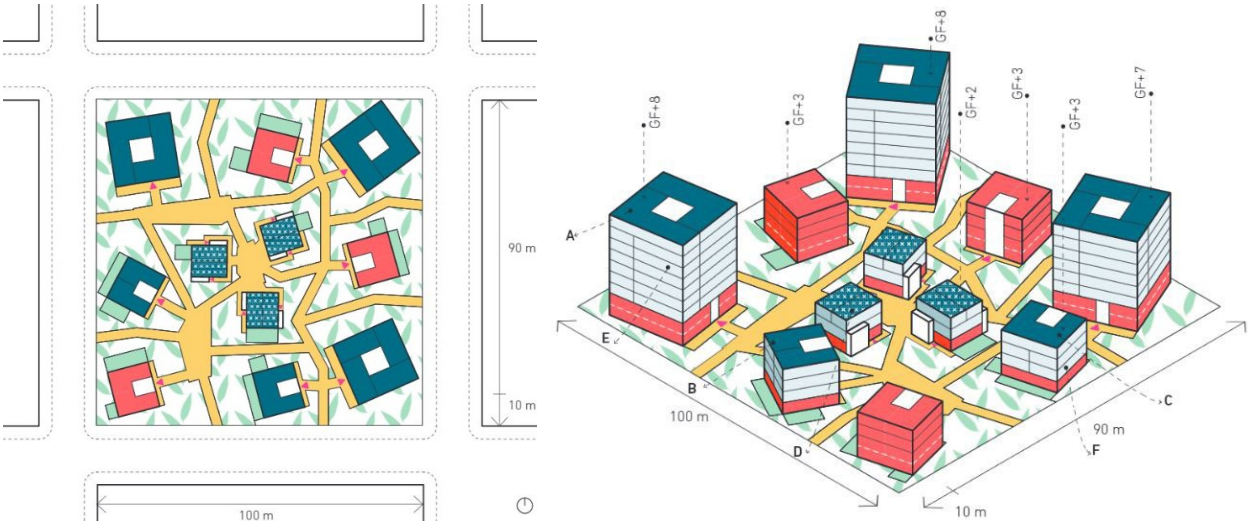

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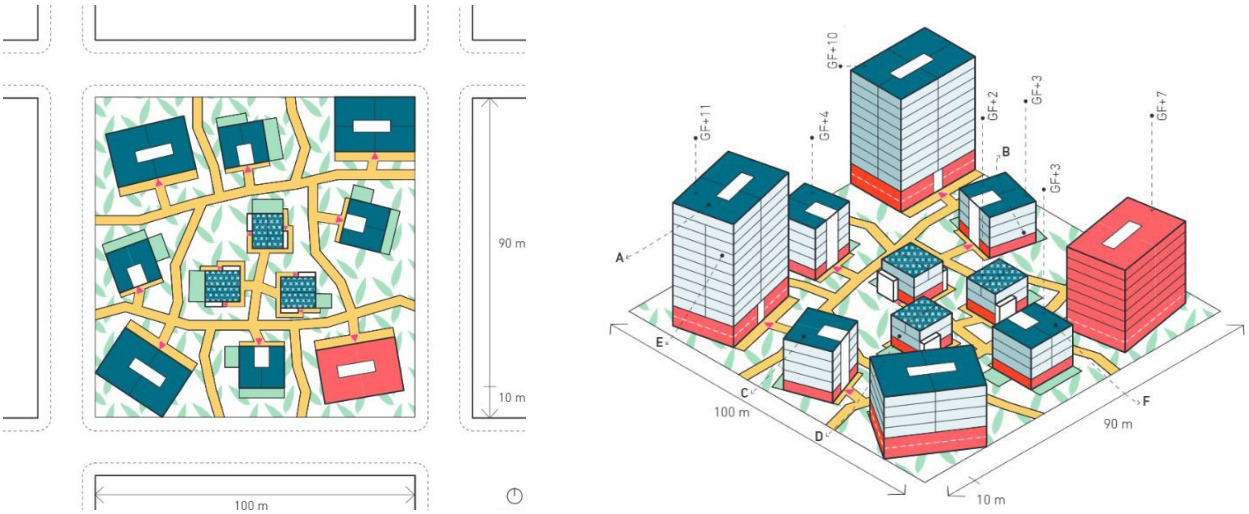

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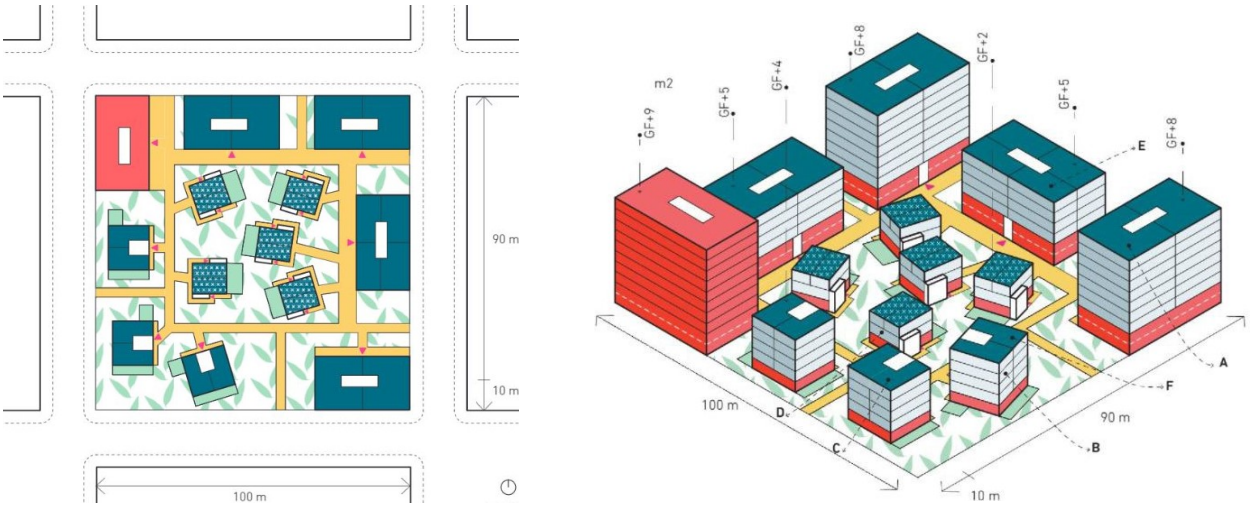

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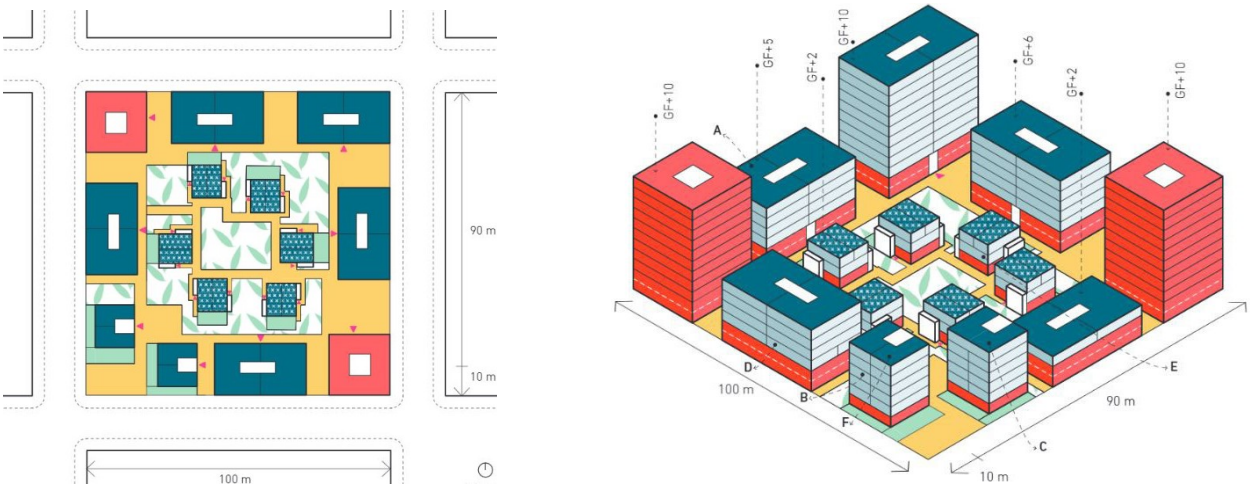

Based on: Kazunari Sakamoto, Weissenfeld, Munich, DE 2016 / Chassé Terrain, Breda, NL 2001 _Intense+_FAR 3.0

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10 Glossary of terminology on urban morphology

Based on the glossary of *Morfologia urbana e tipologia edilizia;* Zaffagnini, M., Gaiani, A., Marzot, N. (1995), *Morfologia urbana e tipologia edilizia*, Pitagora Editrice S.r.l, Bologna

Aggregate: the most generic term possible indicating a set of buildings structured over time based on a system of formative and progressive mutation laws.

Elementary cell: it is that quadrangular room with an irreducible surface between 25-35 square meters, which cannot be simplified, since it is the most elementary unitary organization of the “necessary and sufficient” factors to constitute architecture and to produce construction.

Urban Block: it is the smallest urban part surrounded by roads. As an element of mediation of the urban community organization to the single private unit, the block constitutes the largest organized entity of individual properties. Its physionomy depends on distinct factors, as the dimensions derive from the road texture system, while the building typology and the different internal division are related to the type of morphological choice adopted.

Urban morphology: is the study of the shapes of the city.

Elementary settlement nucleus or basic settlement organism: it is that type consisting of a basic fabric examined in its relative organicity, formed by a path and two pertinence bands built as a base fabric, by a dimension delimited by a center and two peripheries if viewed according to the direction of the path, from one axis (the path) and two boundaries when viewed from the transverse direction.

Urban nucleus: complex with a wider range of influence, including the areas of influence of several proto-urban nuclei and the areas pertaining to several settlements.

Elementary urban nucleus: nucleus formed in several blocks around a matrix path, obtained from the cohesion of several basic fabrics.

Proto-urban nucleus: complex of residential buildings and intended for productive activities, which can be related to a range of influence including not only its territory, but also that of a series of surrounding settlements.

Settlement organism: means that set of residences not equipped with a set of services.

Basic urban organism: means a set of residences to which a system of manufacturing and commercial activities has been added and to which a system of services can be added.

Basic urban fabrics: urban fabrics formed by basic construction, that is, residential construction.

Urban fabric in an open series: it is that structure that marks the transition from the isolated house to the aggregation through the identification of parallel bands of domus each accompanied by a path, mainly oriented east-west. This allows for the maintenance of the original meaning of the type, isoriented, with the front access and the built towards the bottom.

Closed series urban fabric: it is that structure that marks the transition from the aggregate to the proto-urban core (or even to the central areas of the already large aggregates) through a path that serves the two domus bands facing it; the paths are located in the east-west direction, but also north-south, and the consolidation of the settlement causes the birth of the two "synchronic variants" consisting of the lateral or frontal construction, depending on the need for obedience to the solar orientation in whichever orientation is the secondary path.

Specialized urban fabrics: urban fabrics formed by specialized construction.

Urban fabric: it is the concept of the coexistence of several buildings. It is briefly summarized neither more nor less of the building type: it is therefore possible to transfer to the term fabric the characteristics of both the building type and the type in its most general meaning.

Type: comes from the Greek *typos*, which means: imprint, model. It means: species, class or group, which is distinguished by some particular characteristic; shape-form, structure, style or characters common to - distinctive of - particular species, classes or groups.

Architectural type: it represents a model of autonomous dwelling, finished in itself, without the need or generally the possibility of having direct connections with others and sometimes not even through the boundaries of the respective uncovered areas of relevance (lots).

Basic type: indicates a type of building which, mostly intended for family residences, is the type that conforms, in a specific period and in a place, the majority of the buildings of an aggregate.

The basic type can be assumed as an "elementary matrix" of the typological process, with the caveat that in any case it does not admit that it is actually the "prime term" of the process, as it in turn is the product of previous "doublings", of an earlier process.

Building type: it is the training element of larger-scale systems and organisms through the typological mechanism of its own settlement area, the lot, and therefore of the following expansive attitudes:

- *replicability* in typical-similar buildings (design) designed to allow
- *aggregability* in typical-homogeneous building fabrics (constitution) designed to allow
- *settlement* in typical-unitary building systems (application) designed to allow
- *buildability* in typical-identified building structures (conformation).

Attitude before the building types formed by the quadrangular elementary cell is the aggregative one. Thus the building types are the forming elements of the building aggregative fabric.

Typology: comes from the Greek *typos* and *logos* and means: study of types. Therefore it means: study of species, classes or groups to order them according to the particular characteristics that distinguish them. The purpose of the typology is therefore to elaborate

classifications of types to make their concordances, distinctions and succession recognizable.

Building type: it is the study of building types.

Quarter-district: it consists of a set of blocks with common characteristics, understood as a structural morphological unit, characterized by a certain urban space, a certain social content and its function.