

# Urban Morphology Course

2018/19

Prof. Giuseppe Strappa

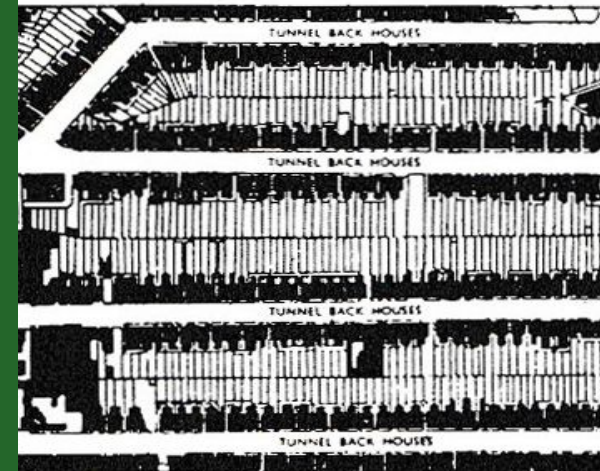
Arch. Anna Rita Donatella Amato,

Arch. Marta Crognale

Arch. Vincenzo Bongiorno,

Arch. Cristian Sammarco

WKCLM



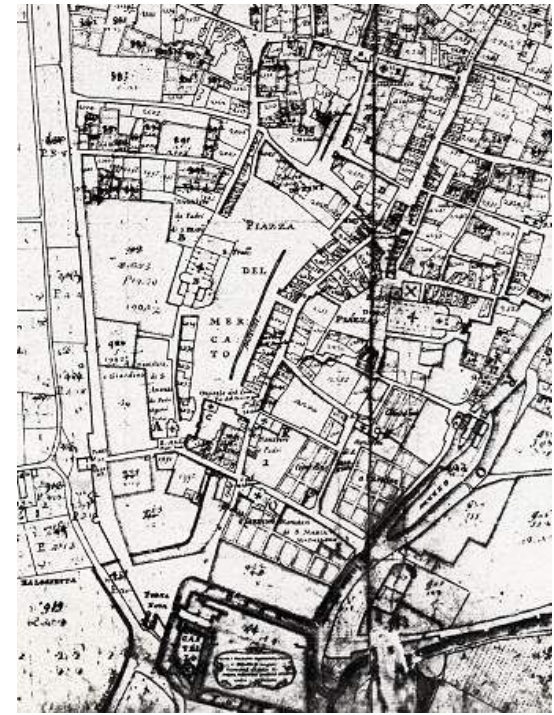
## LECT. 4

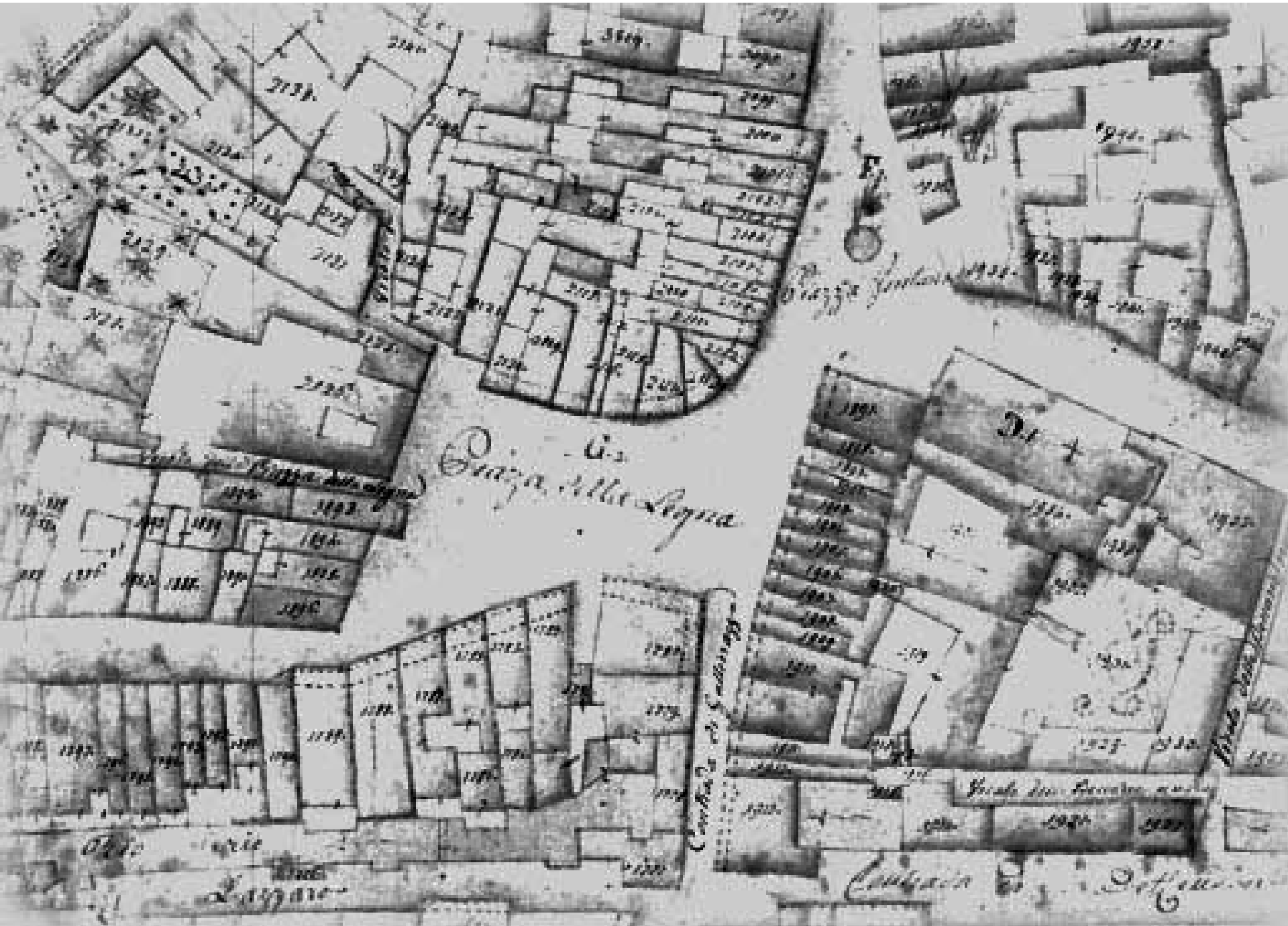
## Urban fabric

# Urban Fabric

We can extend the **notion of type** (intended as a set of structures having same, transmissible characters), to urban fabric. In this sense the *fabric* could be defined as **the sum of the processually determined characters that distinguish the formation of a building aggregate**. In other words, the notion of fabric is to the aggregate, as the notion of type is to the building (CANIGGIA 1979).

A fabric is thus characterized by a law recognizable, iterative and identifiable **synchronically** in a set of aggregates, depending on the various cultural areas, and **diachronically** in successive phases of the transformation process of the aggregates. The formation of the fabric is determined by the forms of **soil properties**: the fractioning in **plots**, as a system of perimeter bounded areas, through their shapes and sizes, “identify” the susceptibility of the spaces to be built.





Piazza della Signa

Via della Pace

Via della Libertà

Via della Pace

Via della Pace

Via della Pace

Via della Pace

Via della Pace

Via della Pace

Via della Pace

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Via della Pace

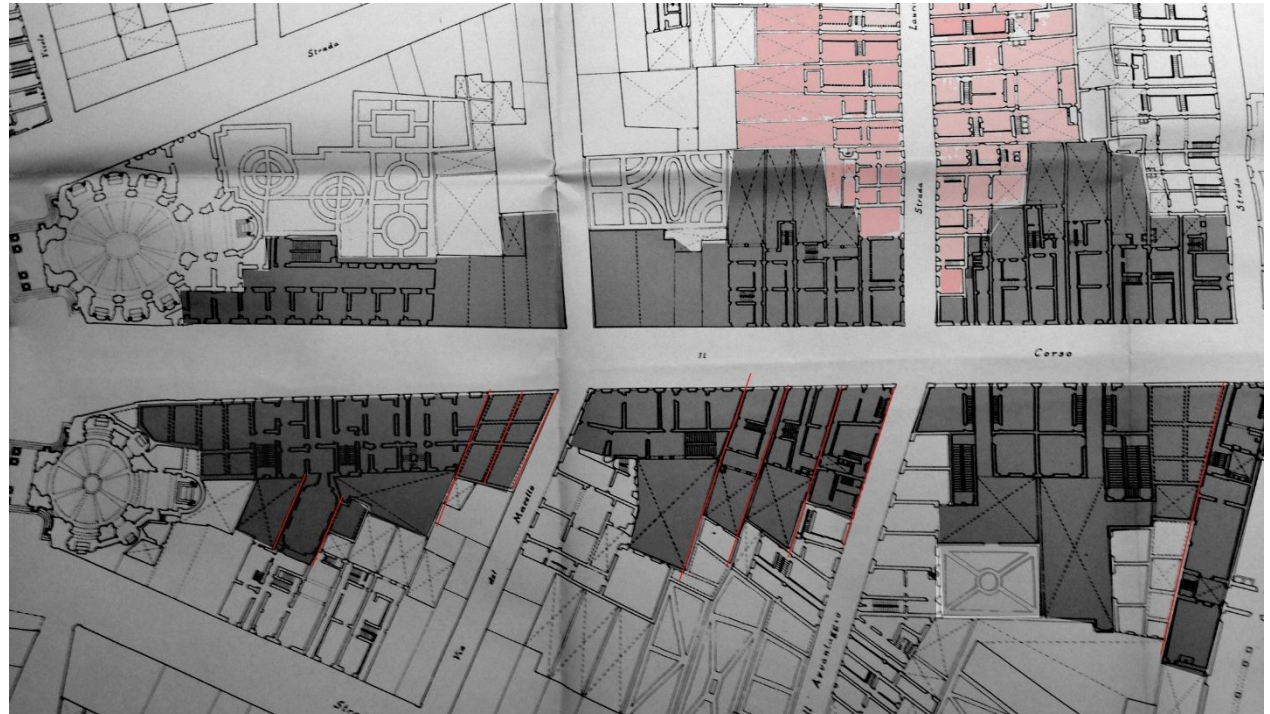
Via della Pace

Via della Pace

Via della Pace

## URBAN FABRIC STRUCTURE

A fabric is basically structured in *routes* and *building* which we will distinguish in *basic* and *special*. Each route is characterized by its own *pertinent strip* formed by the envelope of the built lots served by the same route.



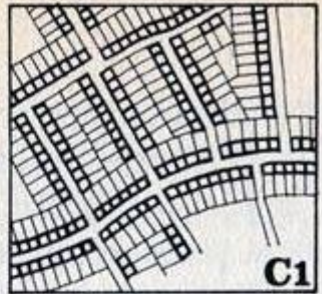
Via del Corso in XVIII century

problems and misunderstandings in translation

Edilizia = Building

Edificio = Building

Proposed: Edilizia = Building + pertinent area



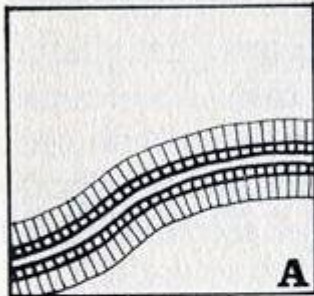
**C1**

Matrix route

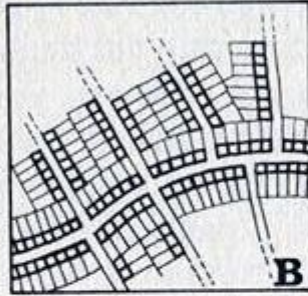
Building route

Connecting route

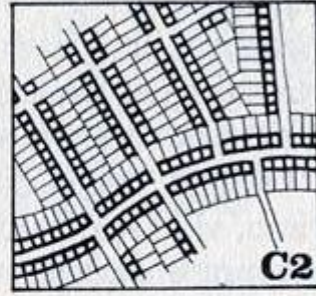
Restructuring route



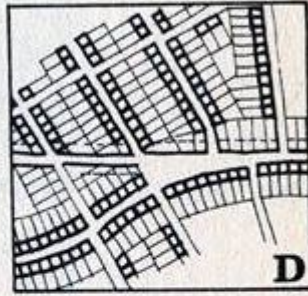
**A**



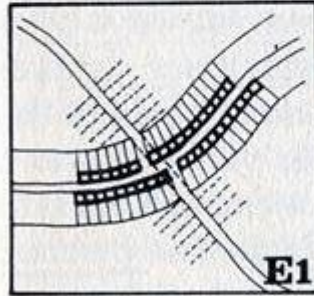
**B**



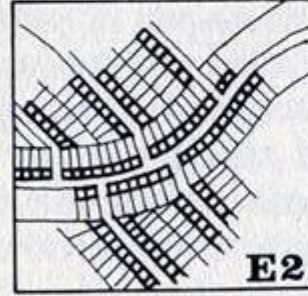
**C2**



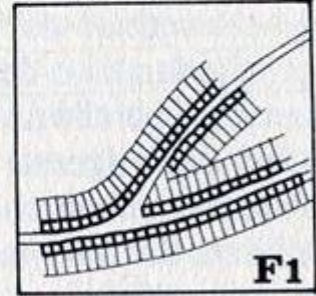
**D**



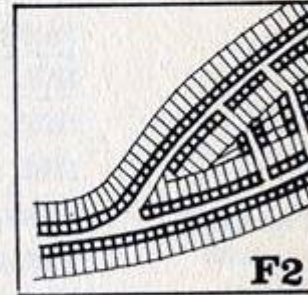
**E1**



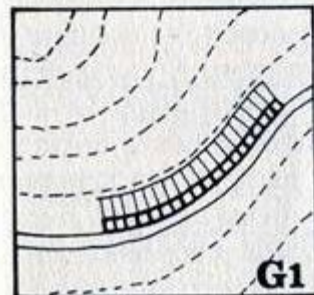
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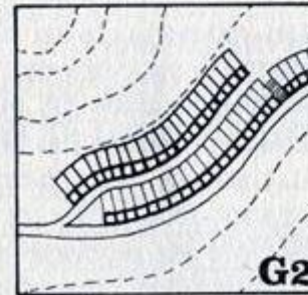
**F1**



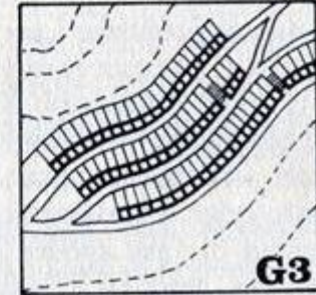
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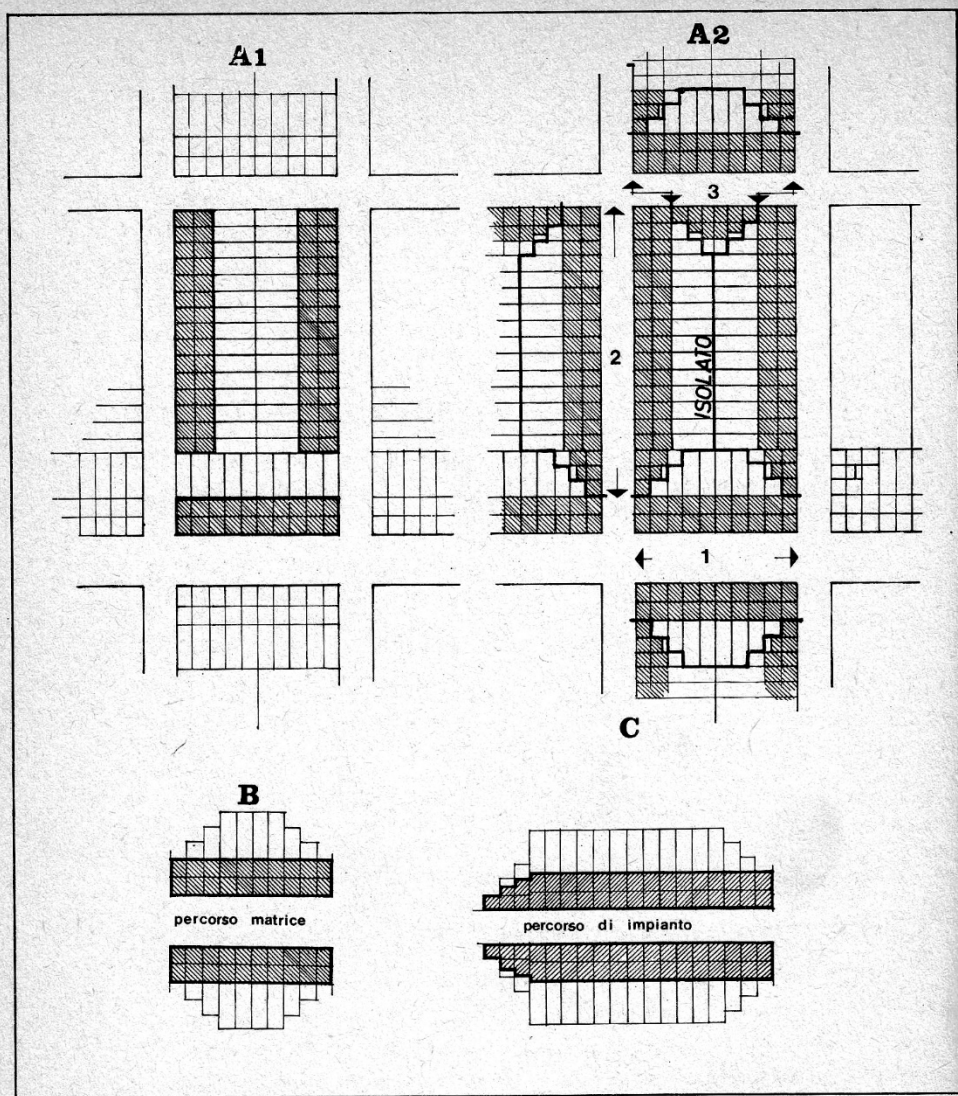
**G1**



**G2**



**G3**

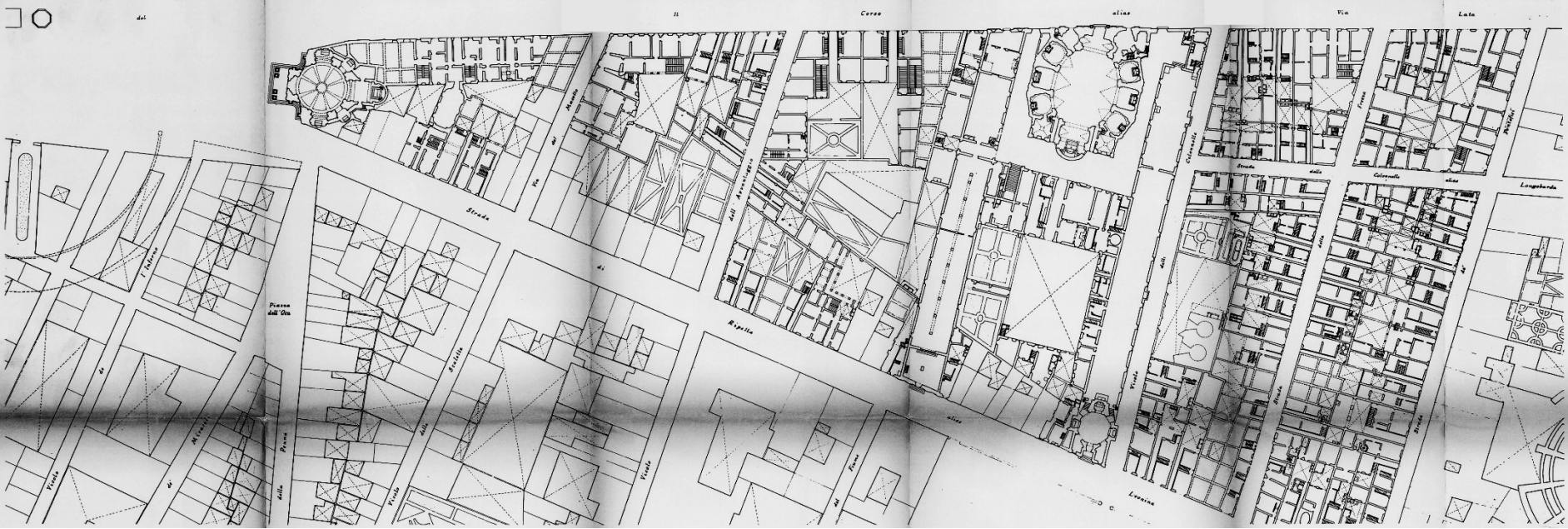
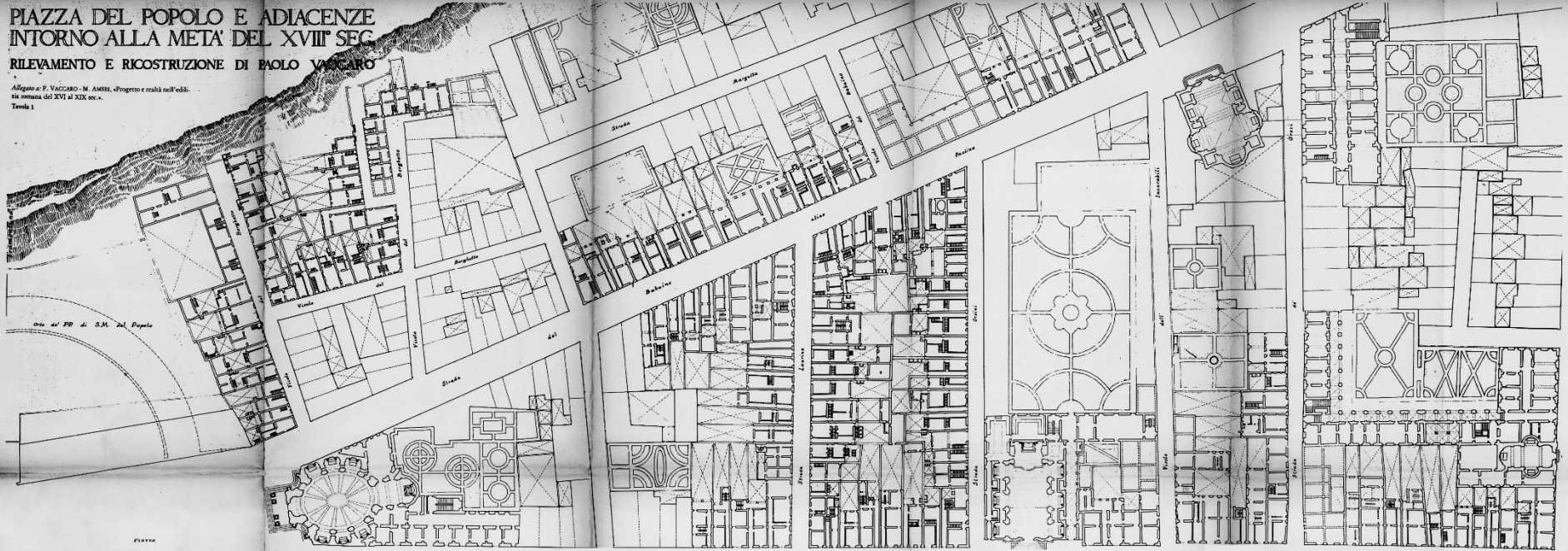


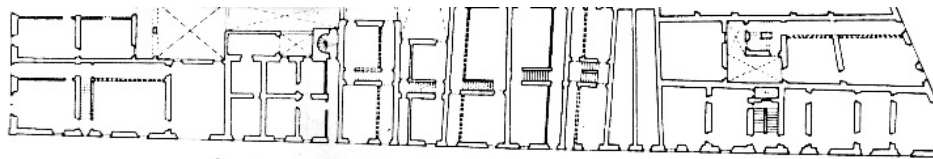
**Tavola 24.** A1: isolato formatosi per progressiva edificazione da percorso matrice, p d'impianto e di collegamento. A2: formazione dei tessuti di intasamento per riutilizzazione delle aree di pertinenza marginali. B e C: comportamento delle fasce di pertinenza di un percorso matrice e di un p. d'impianto edilizio ad intasamento completato (modelli di contrada).

PIAZZA DEL POPOLO E ADIACENZE  
INTORNO ALLA META' DEL XVIII SEC.

RILEVAMENTO E RICOSTRUZIONE DI PAOLO VACCARO

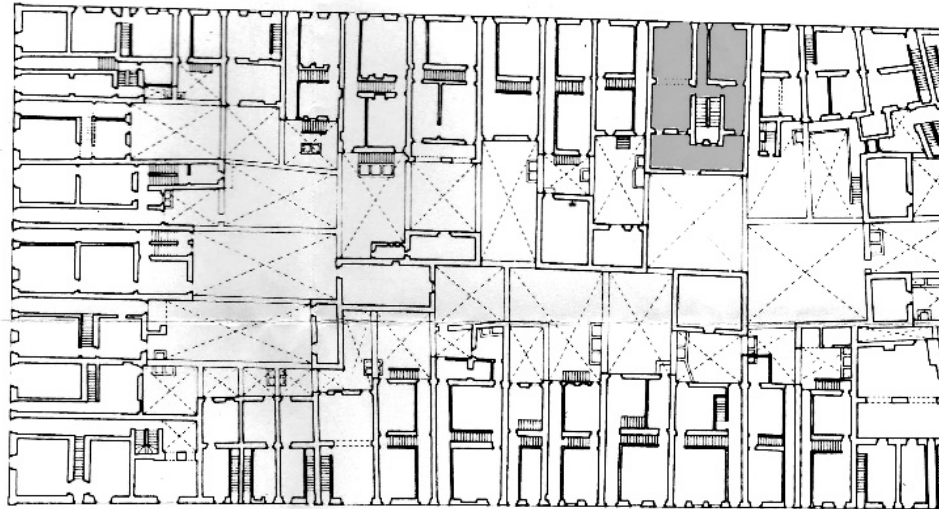
Alligato: F. VACCARO - M. AMERI, «Progetto e realtà nell'edilizia romana del XVI al XIX sec.»  
Tavola I





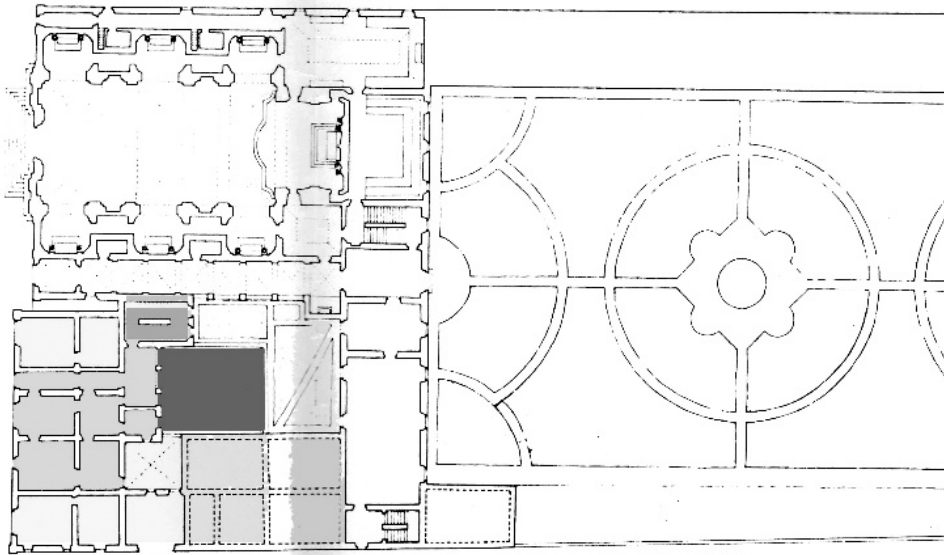
Strada

Laurina



Strada

Orsini



Vicolo

dell'





Diads of terms opposed and complementary

	<b>BASE BUILDING</b>	<b>SPECIAL BUILDING</b>
<b>ROUTES</b>	<b>BASE URBAN FABRIC</b>	<b>SPECIAL URBAN FABRIC</b>
<b>POLES</b>	<b>POLE FABRIC</b> formed by base building	<b>POLE FABRIC</b> formed by special building

**MURATORI:**  
PERCORSI  
TESSUTI  
NODI  
ORGANISMI

# TISSUE URBAIN

## DYADES DES TERMES OPPOSÉS ET COMPLÉMENTAIRES

- PARCOURS PA
- PÔLES PO
  
- BÂTI DE BASE BB (bâti que propre á la résidence d'une ou de plusieurs familles)
- BÂTI SPÉCIALISÉ BS (bâti dérivé de bâti de base pour la spécialisation)

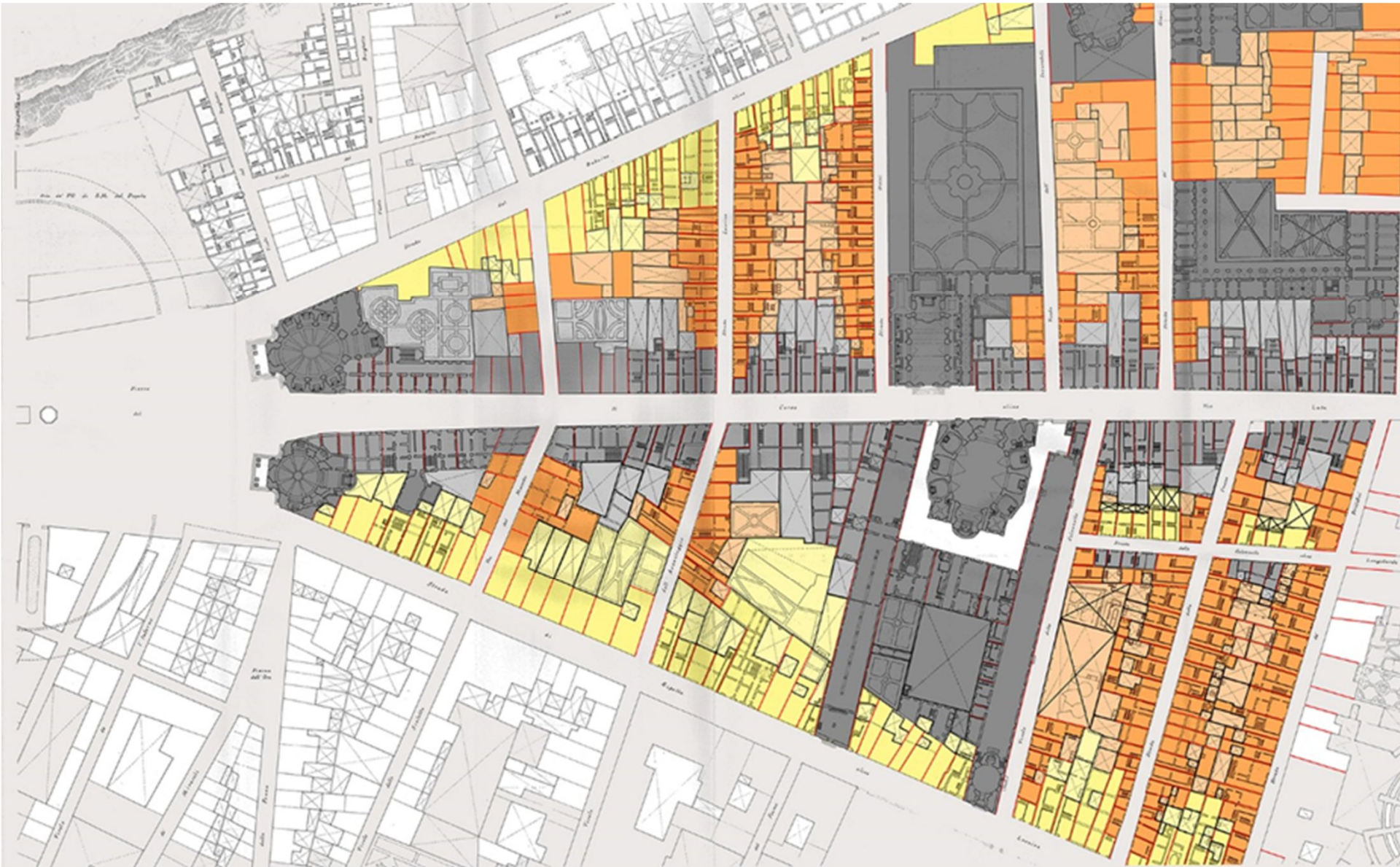
## TYPES DE TISSUS

- PA/BB TISSUE DE BASE
- PA/BS TISSUE SPÉCIALISÉ
- PO/BB TISSU POLAIRE FORMÉ PAR BÂTI DE BASE
- PO/BS TISSU POLAIRE FORMÉ PAR BÂTI SPÉCIALISÉ

**Matrix route** is the original route that exists before the construction takes place. The notion of the matrix route derives from the obvious consideration that the first phase of structuring the territory is its crossing.

**Building routes** are chronologically successive and hierarchically subordinate to the matrix route. They are traced in the function of the construction in depth.





Tridente in XVIII century

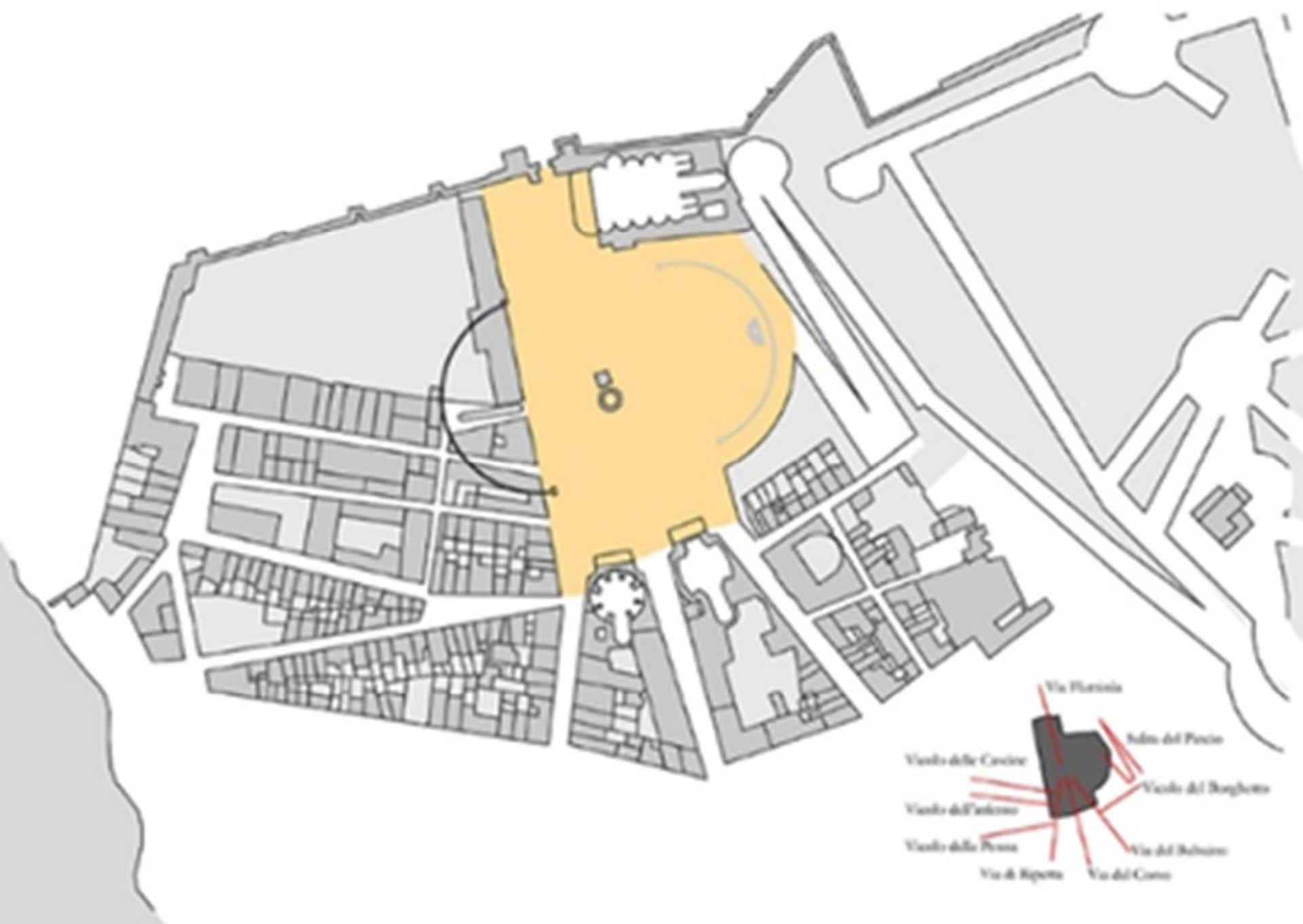
**Node** is the singular point of a continuum determined by the intersection of two continuums or by the "gemmation" of one continuum with another.

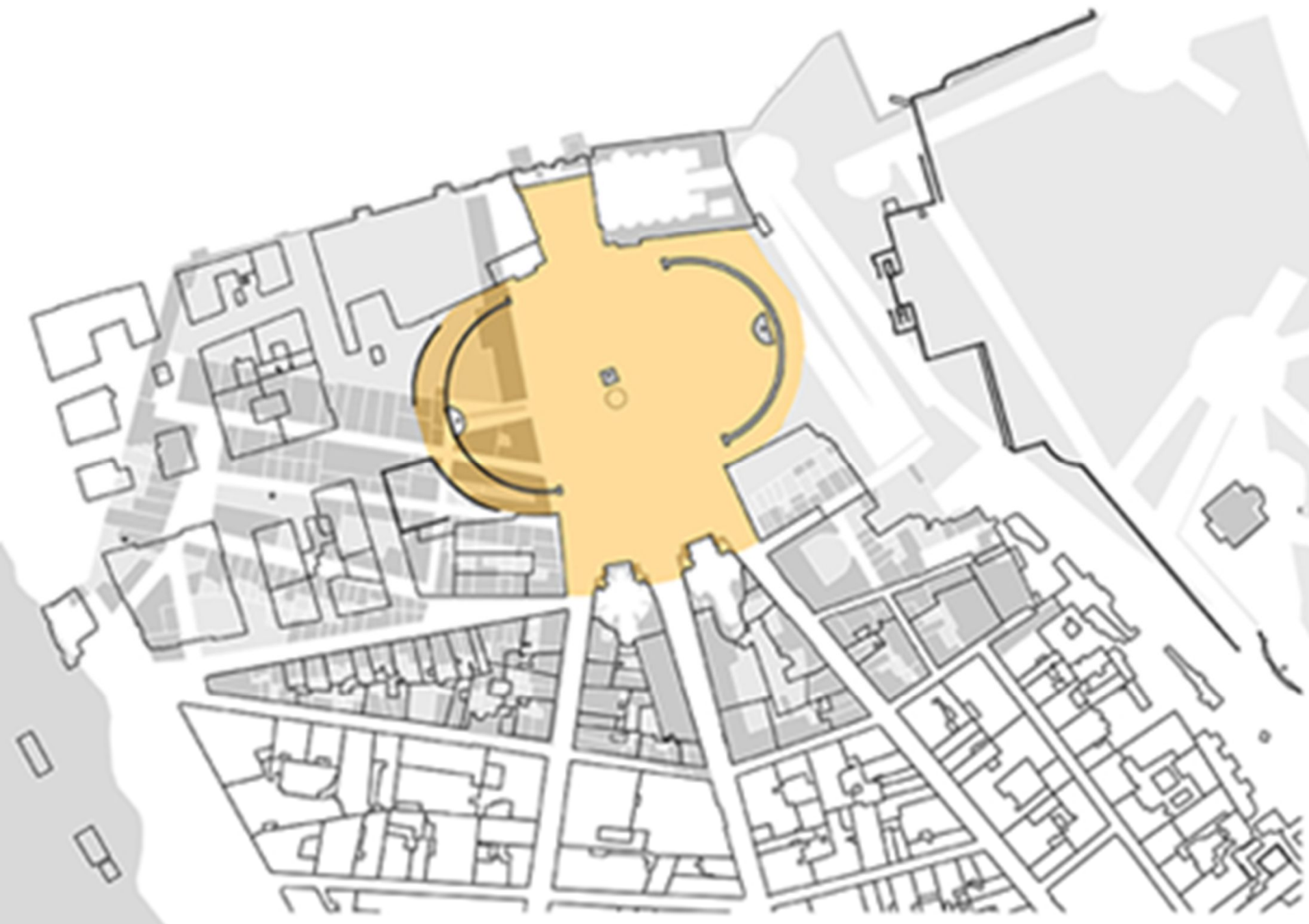
Each component of a structure, connecting with each other, determines a **nodality** (quality of forming a node) of different grades in relation to the congruence between the components and its scale.



**Pole** is the "sublimation" of the term "node", in general determined by the presence of more continuums, not so intersecting, as ending or starting from a point. The distinction between node and pole depends, it should be noted, on the reading scale. The pole (from the Latin *polus*, pivot) thus indicates the place of convergence or origin of the routes, resulting in a progressive specialization of the fabric.

We can define as **polarity** the character of an organism to present complementary properties (attraction, orientation) in opposite parts of the urban organism and **polarization**, the act of attracting and orientating in a direction.











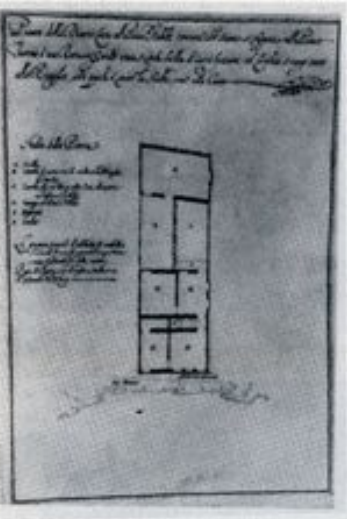
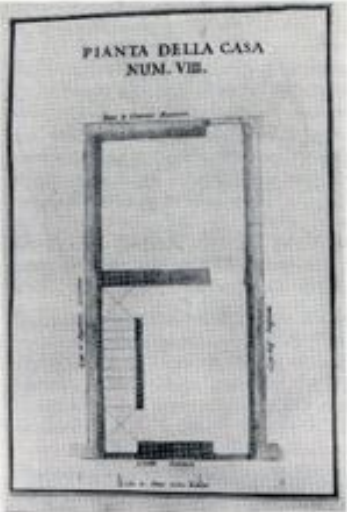
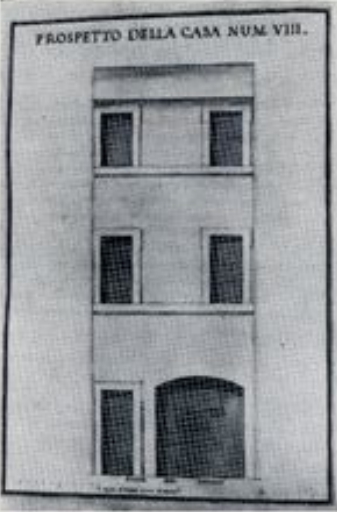
**EDILIZIA** (building) The type of housing unit that is the origin of much of the forming processes of European cities, developed mostly from XIII to XIV centuries, is above all the **row house**, a single-family building with direct access from the route that has in common with the other unities two walls.



21

Ceres

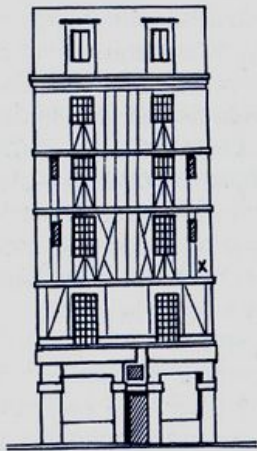




"BOTTEGA" AND "ATRIUM" ROW HOUSES

The row house building is structured on an organic form of land use that has recognizable characters. The construction takes place through a rectangular plot overlooking the route on the short side, as the form of the plot meets economic criteria: the most valuable part of the soil is in fact the part that looks out onto the street, the one on which the entrances will be located, the shops, the facades of the houses.

From XVII to mid-XIX century (starting from the fully organic Baroque period, the *in linea* multifamily house (derived by the recasting of the row units) is increasingly used as the bearing type and will remain the main type of dwelling until the XXI century.



a Rue Volta, distr. III



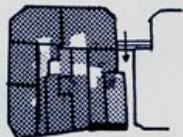
b Rue Tournefort, distr. V



c Rue François-Miron, distr. IV



d Rue Saint-Victor, distr. V



Número de plantas  
 1  
 2 à 4  
 5 y más



20 m.



Case a schiera a L'Isle de la Cité

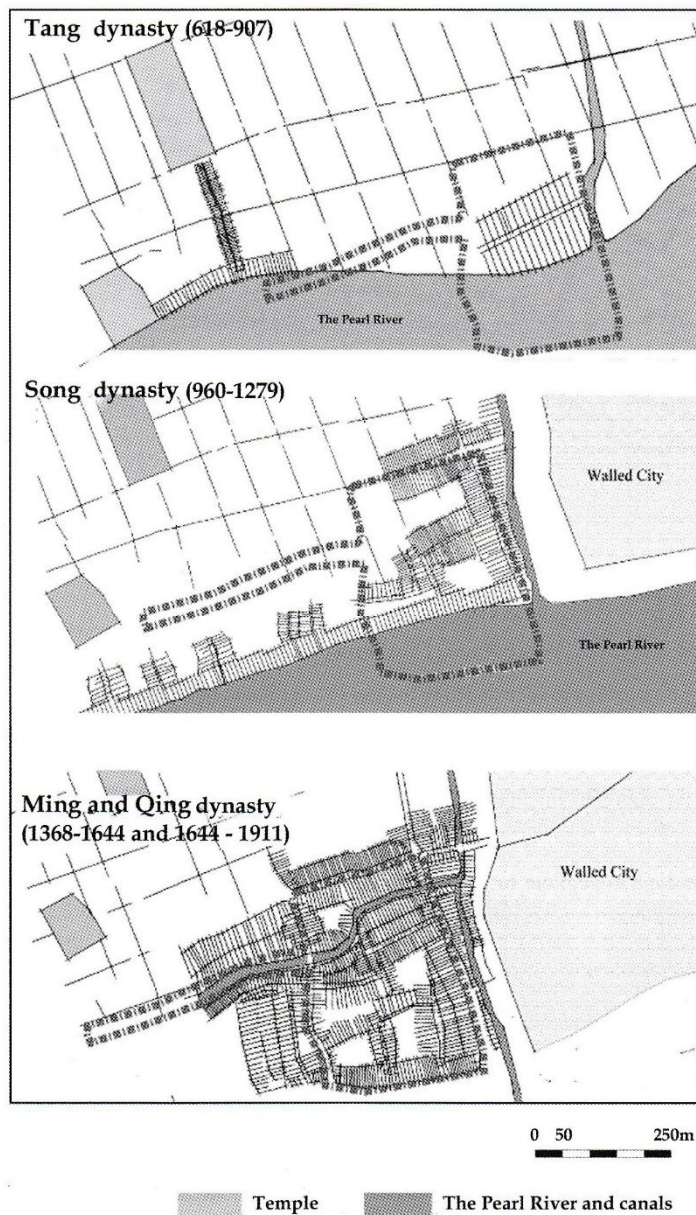


Figure 2. Theoretical reconstruction of early settlement patterns in the Guangfunan area.

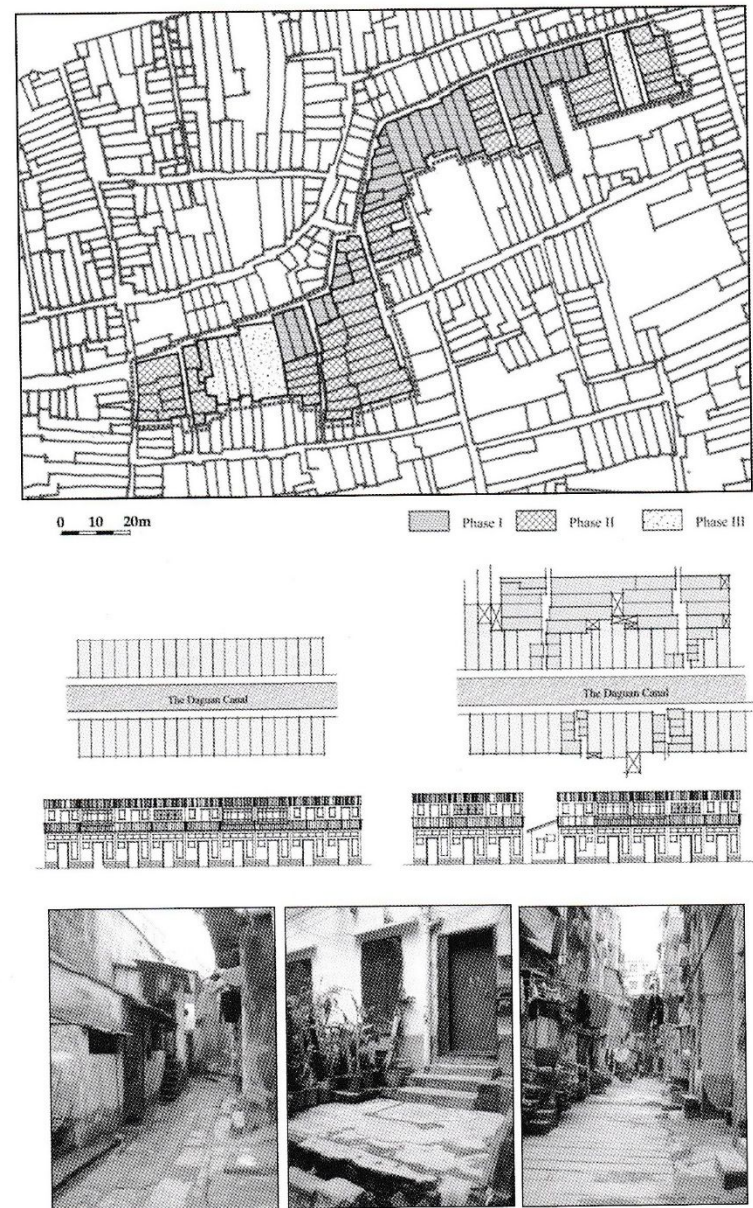


Figure 4. Theoretical reconstruction of the formation and transformation phases of urban tissue in the Former Canal Banks Region (FCBR). Based on field survey, 2011.



E 42



- PAVILIONI TEMATICI E MONUMENTI CONGRUI
- PAVILIONI VEDI VEDI VEDI INTERNAZIONALI
- PAVILIONI VEDI VEDI
- PAVILIONI SPECIALI
- PAVILIONI PER IL PAVILIONE ITALIANO
- PAVILIONI PER IL PAVILIONE ITALIANO
- PAVILIONI PER IL PAVILIONE ITALIANO
- PAVILIONI PER IL PAVILIONE ITALIANO
- PAVILIONI PER IL PAVILIONE ITALIANO
- PAVILIONI PER IL PAVILIONE ITALIANO

# ESPOSIZIONE UNIVERSALE DI ROMA

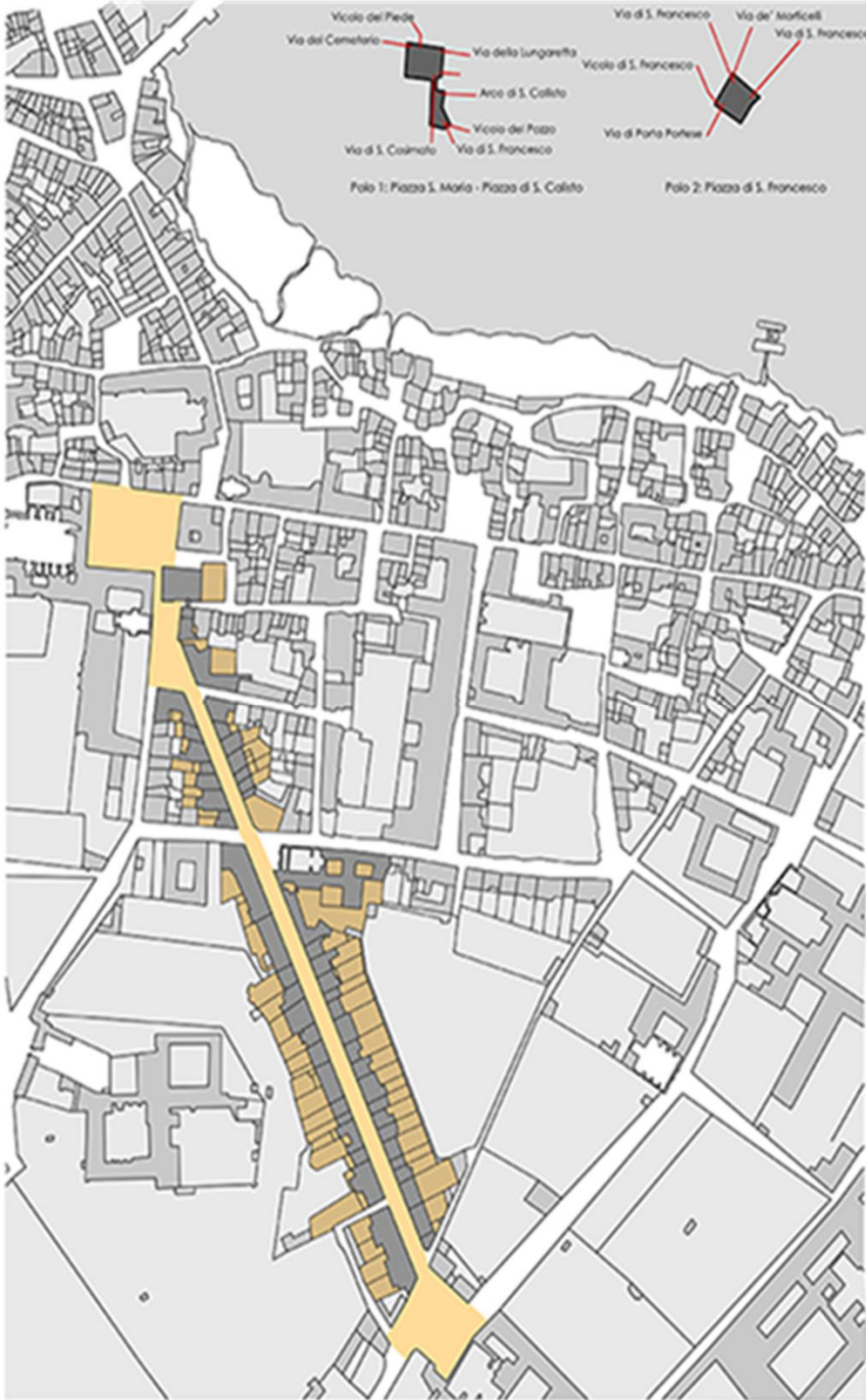
PLANIMETRIA GENERALE

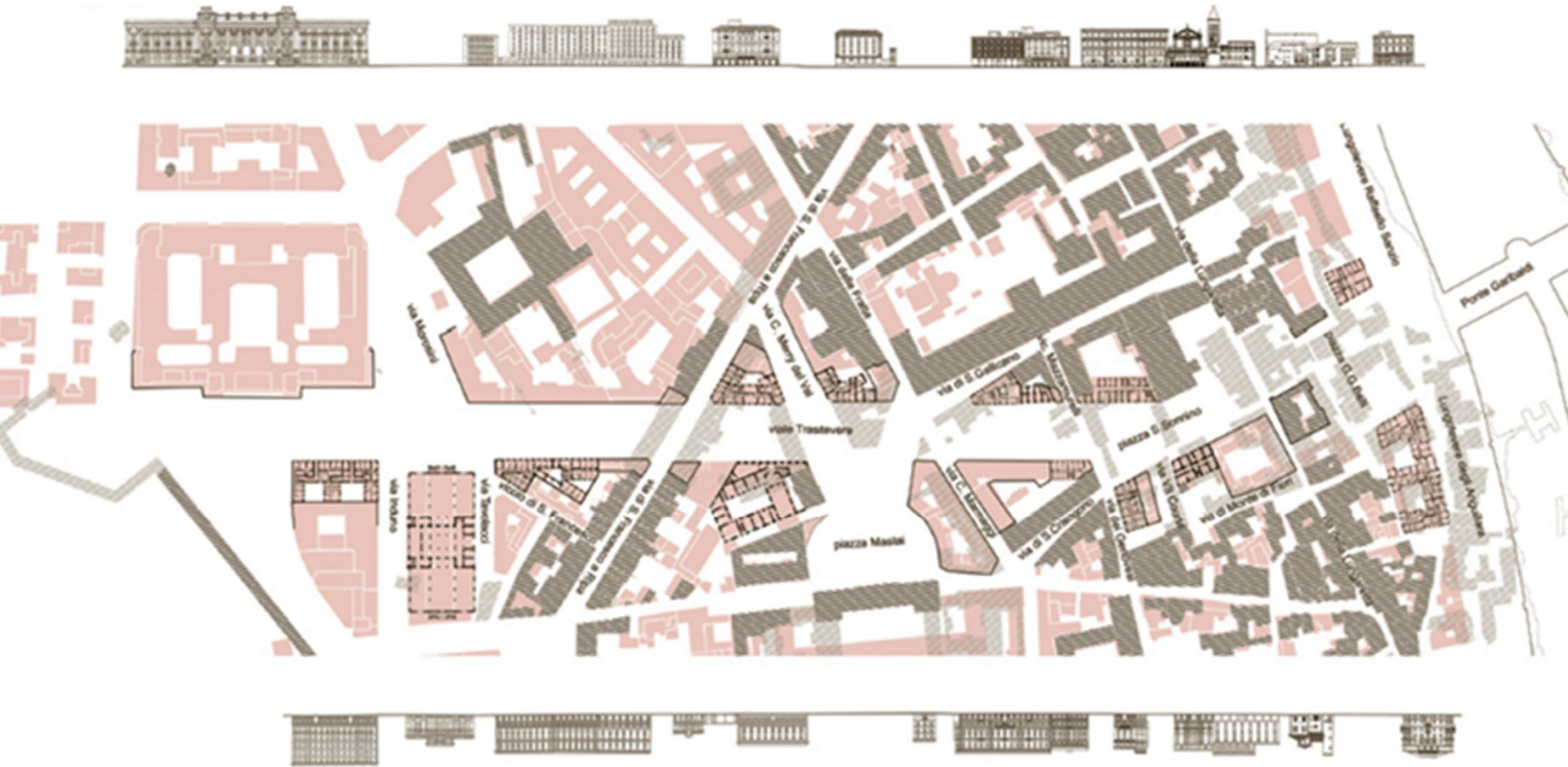






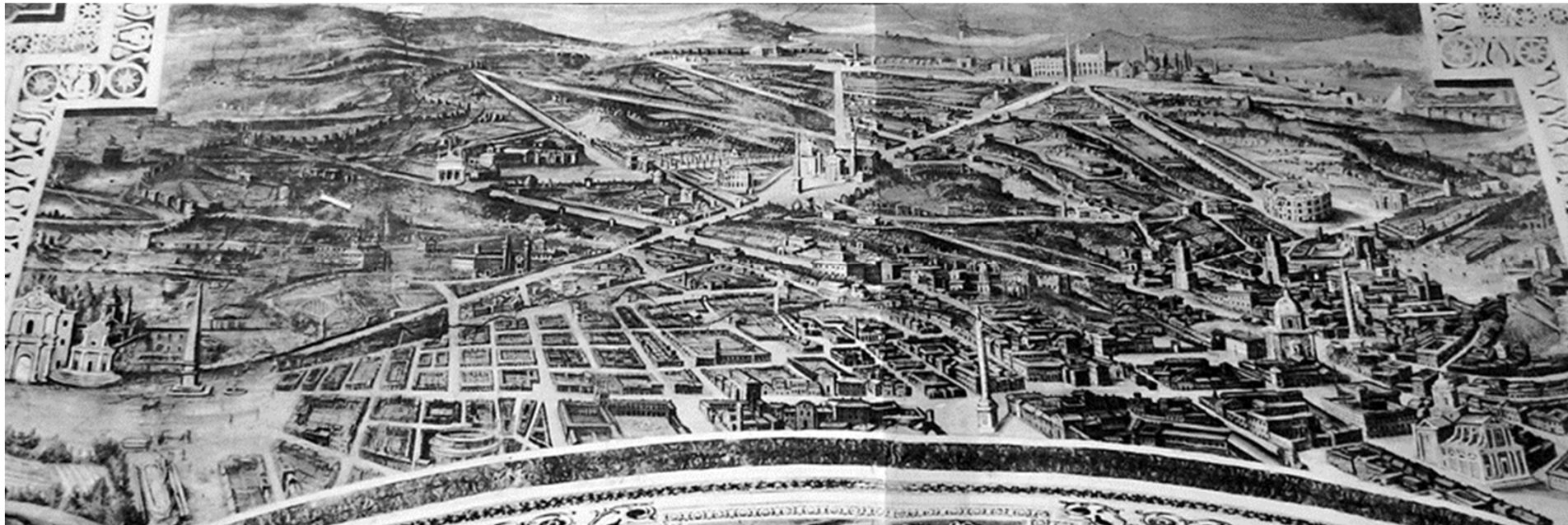
# RESTRUCTURING ROUTES



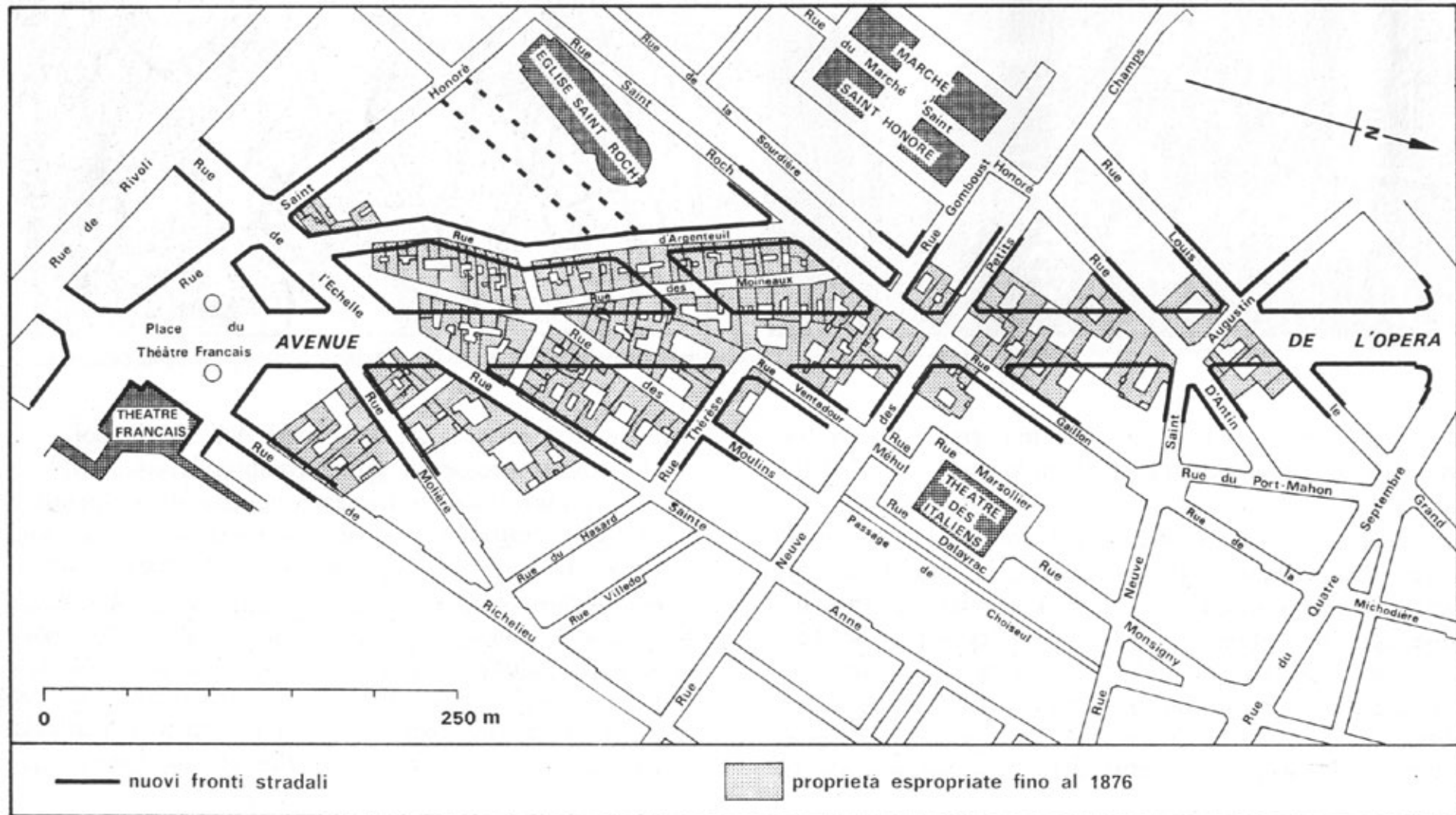


Restructuring routes intervene at the end of the forming process, in mature aggregates where new poles are formed creating new connection requirements. These are therefore "traumatic" routes that characterize the transformation of modern cities, overlapping with the existing organism, considered obsolete, on the basis of a new notion of fabric. Their study is crucial to understanding the transition to modernity in many European cities.

The reconstruction routes take on an exemplary function also in the formation of modern Rome, with the structure designed by Sisto V in late XVI century, centered on the main pole of Santa Maria Maggiore connected directly to the basilicas of Santa Maria Maggiore, Santa Croce in Gerusalemme and Trinità dei Monti Church. From the new urban pole the Panisperna route is also generated to connect Piazza Venezia, indicating the new urban roles.







## Operational application

1. Overall survey of the block; comparisons with the historical cadasters
2. Recognition of base and special building
3. Drawing of the pertinent strip
4. Recognition of the nodes and antinodes, of the poles and of the anti-poles in the urban fabric

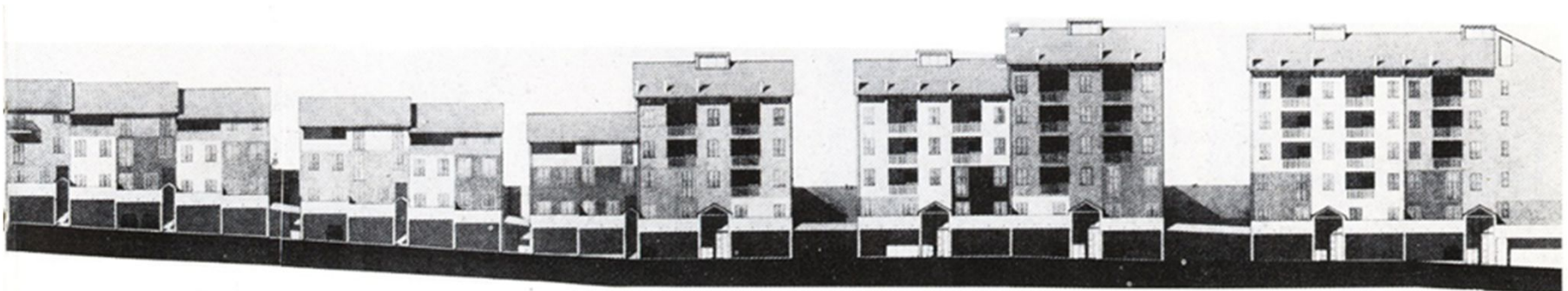


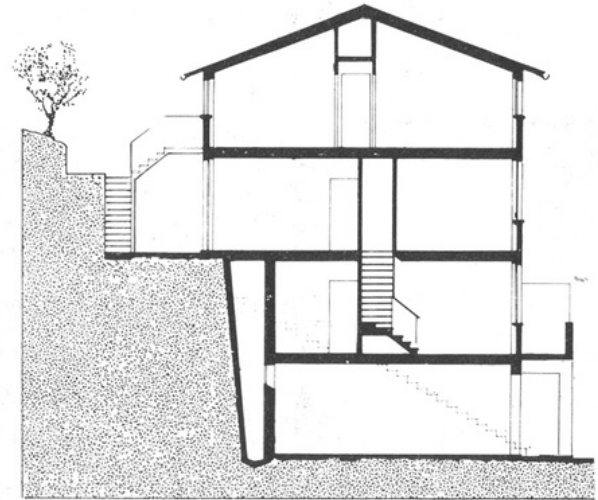
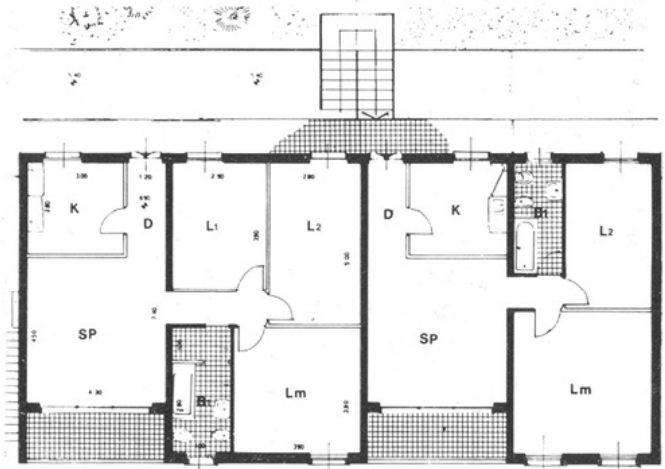
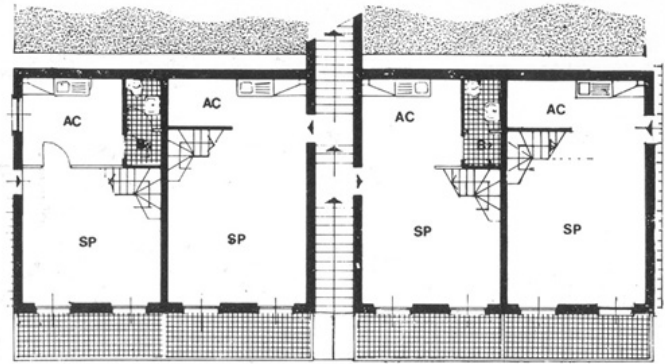
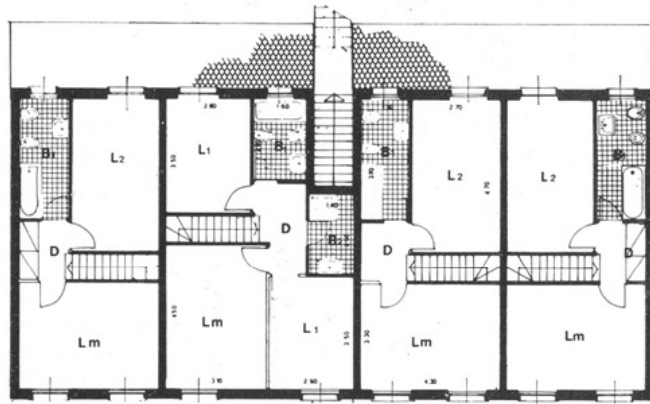
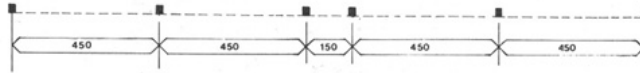
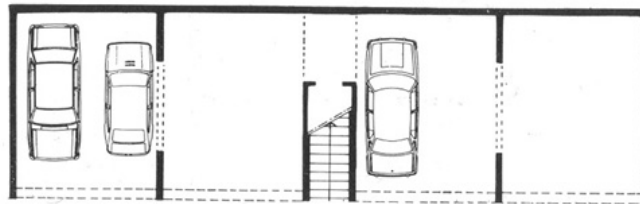
# FABRIC DESIGN





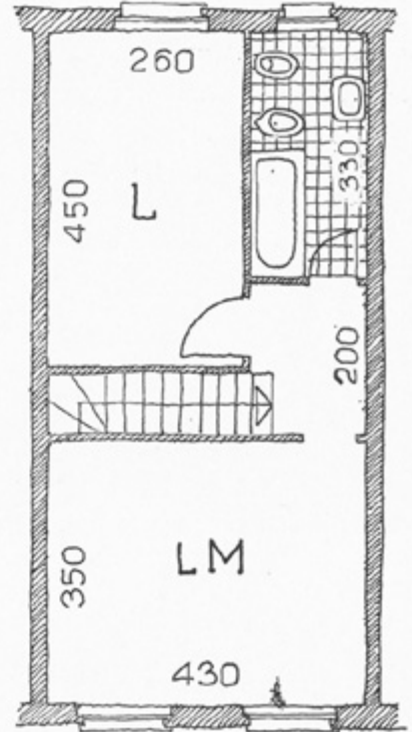
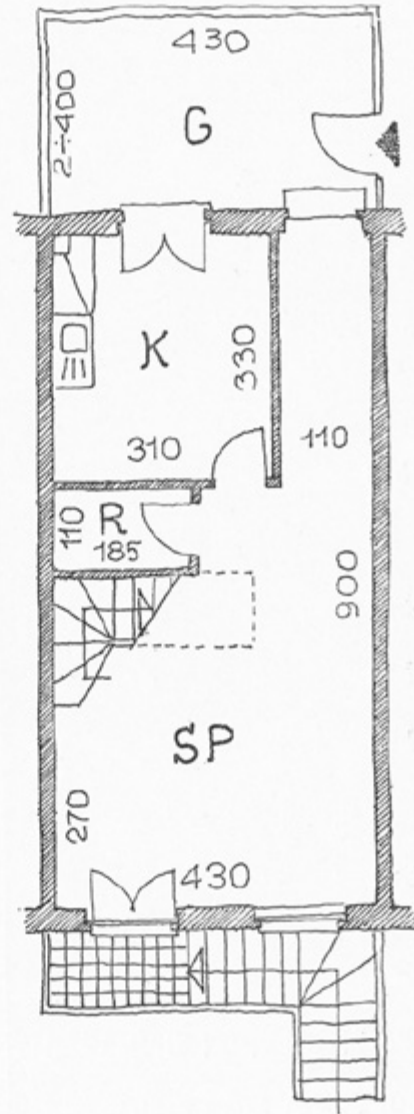
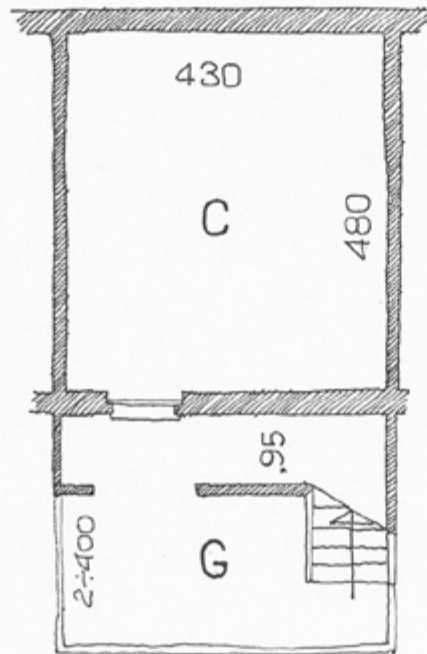
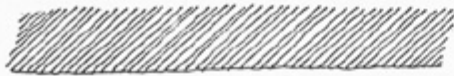
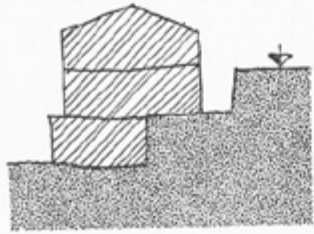
G. Caniggia  
Quinto quarter in Genoa





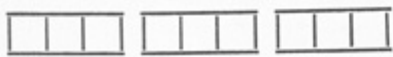


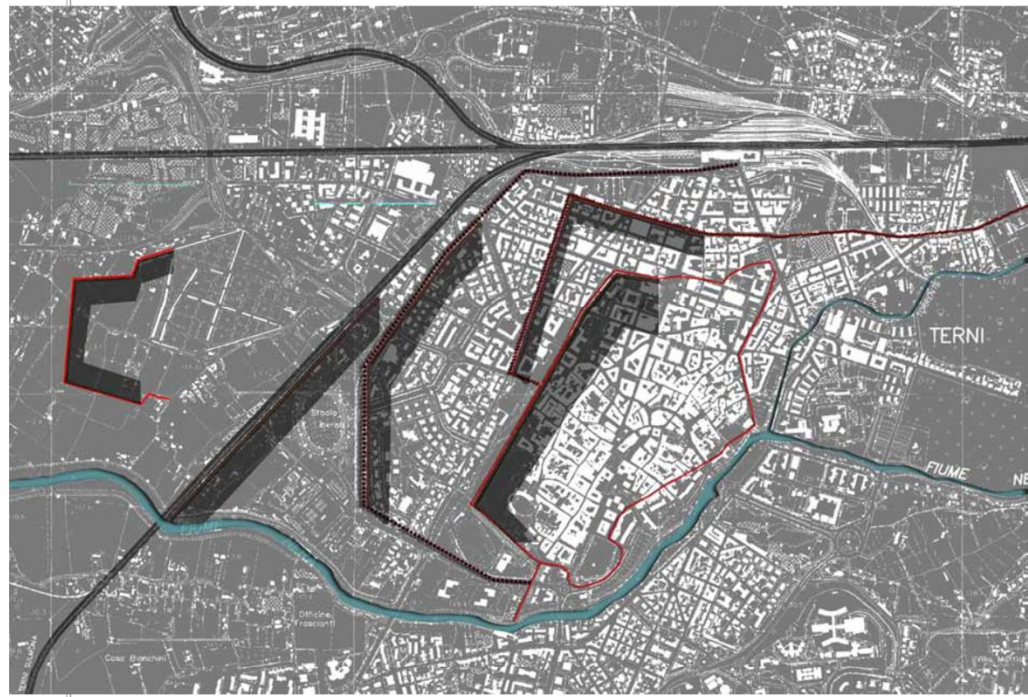
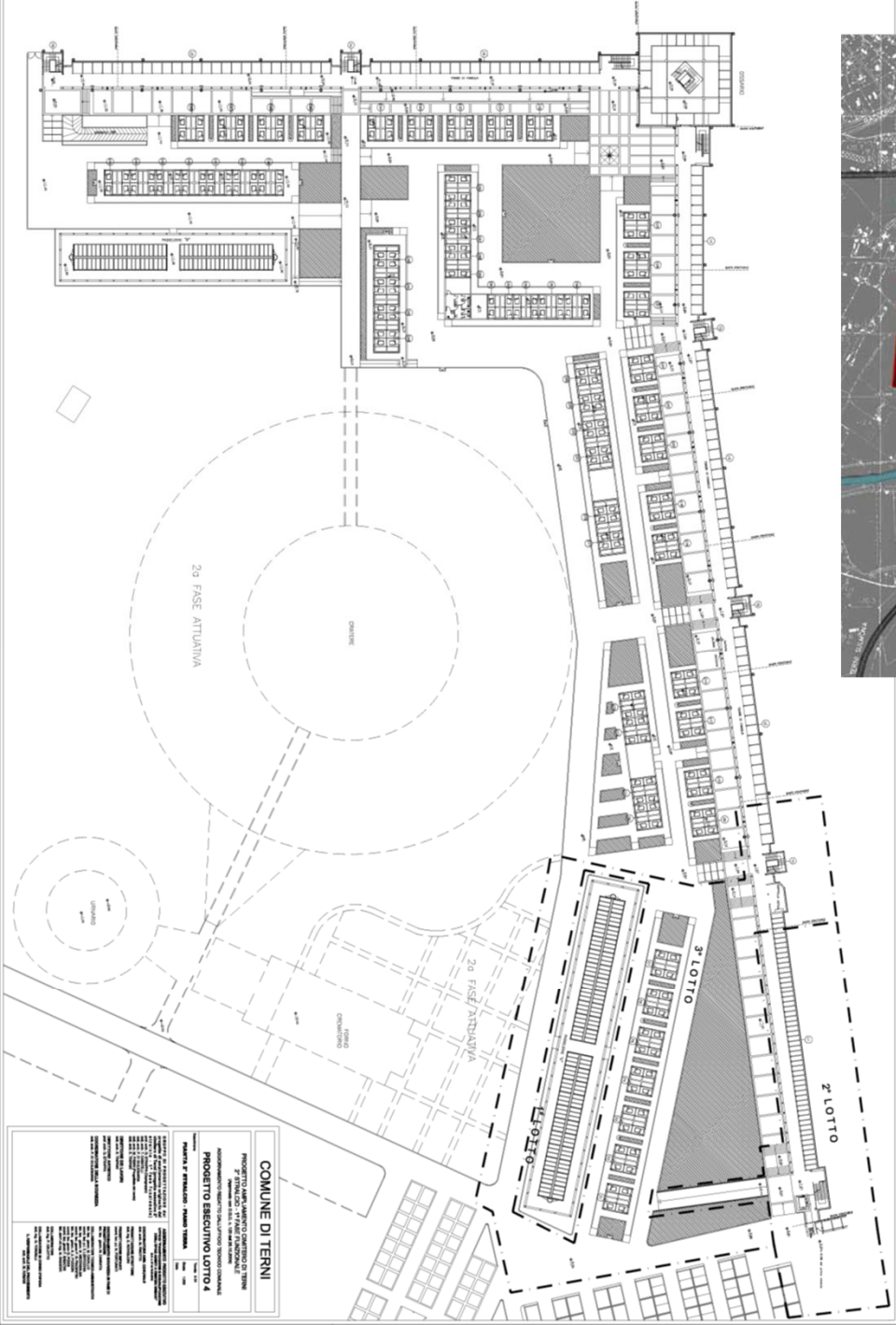




S2, S2a

Casa a schiera singola



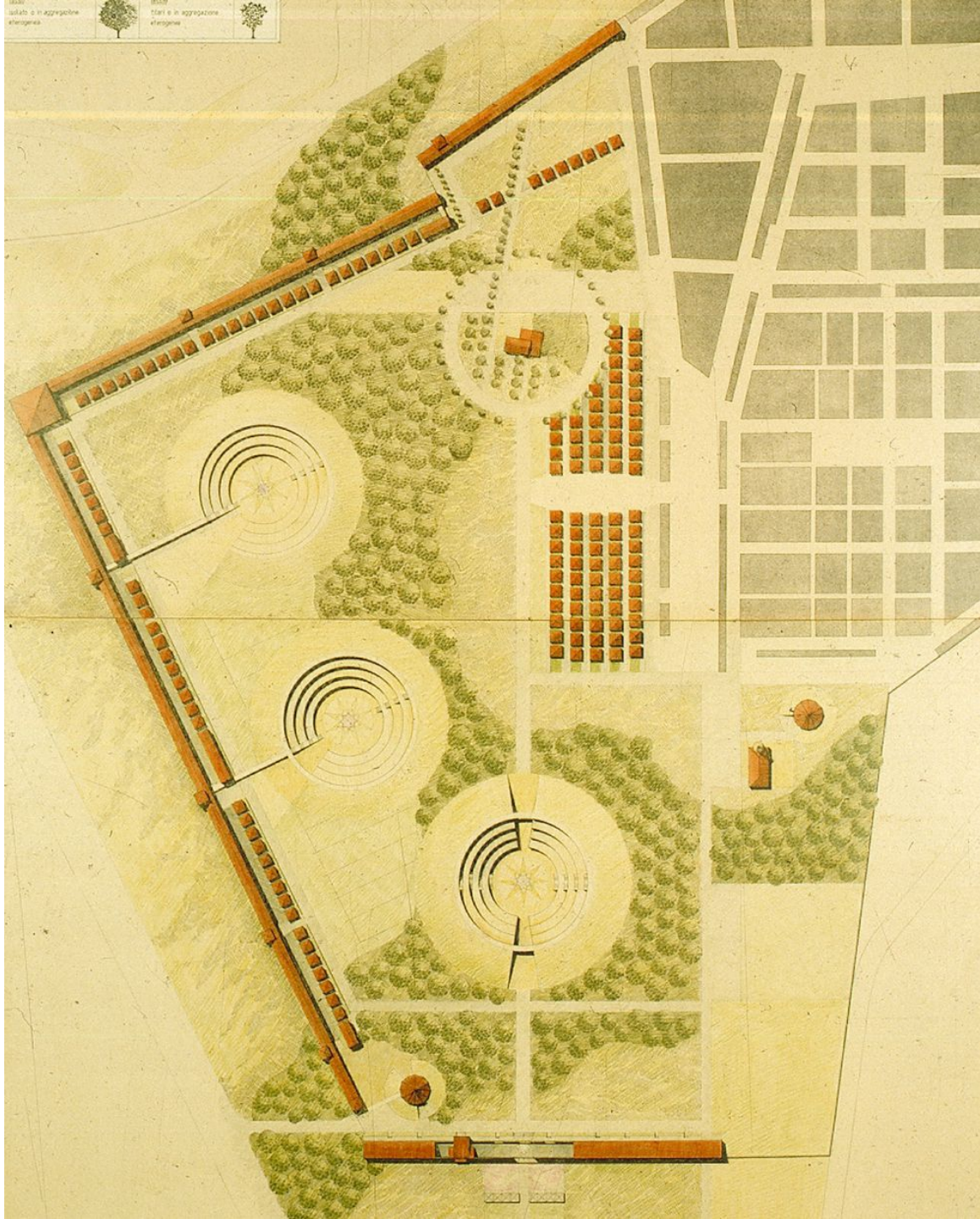


**COMUNE DI TERNI**

PROGETTO SPAZI PUBBLICI CENTRO DI TERNI  
 AMMINISTRATIVE E SERVIZI PUBBLICI  
 PROGETTO ESECUTIVO LOTTO 4  
 SPED. IN A.B. - POSTO IN TERNI

**PROGETTO**  
 ARCHITETTO RESPONSABILE  
 INGEGNERE RESPONSABILE  
 ARCHITETTO COORDINATORE  
 PERITO AGRICOLA RESPONSABILE  
 PERITO AGRICOLA COORDINATORE  
 PERITO AGRICOLA RESPONSABILE  
 PERITO AGRICOLA COORDINATORE  
 PERITO AGRICOLA RESPONSABILE  
 PERITO AGRICOLA COORDINATORE  
 PERITO AGRICOLA RESPONSABILE  
 PERITO AGRICOLA COORDINATORE





Samsara

La buona Terra







- SPECIALIZATION OF URBAN FABRIC
- PASSAGES AND COMMERCIAL TISSUES



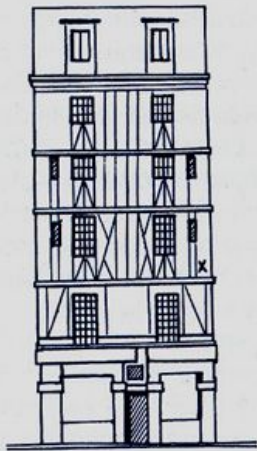


Ponte au Change en 1530 (Hausmann 64)



Ponte au Change en 1650 (Hausmann 65)





a Rue Volta, distr. III



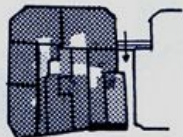
b Rue Tournefort, distr. V



c Rue François-Miron, distr. IV



d Rue Saint-Victor, distr. V



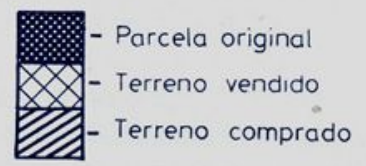
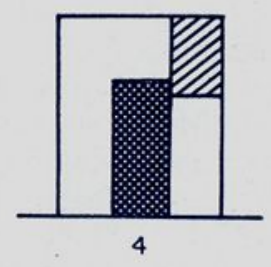
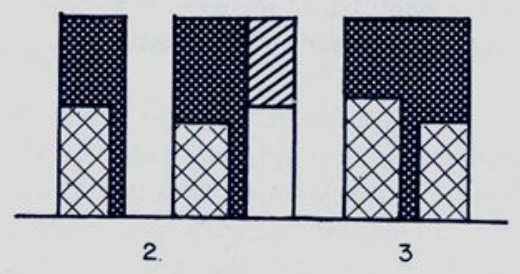
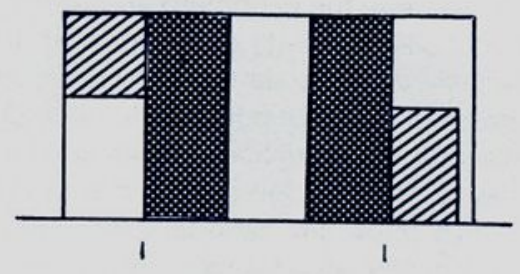
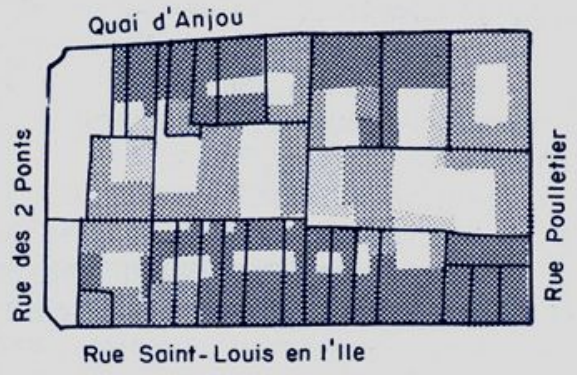
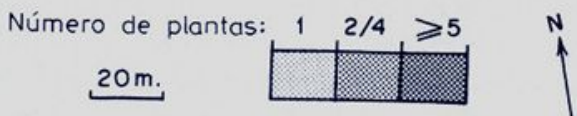
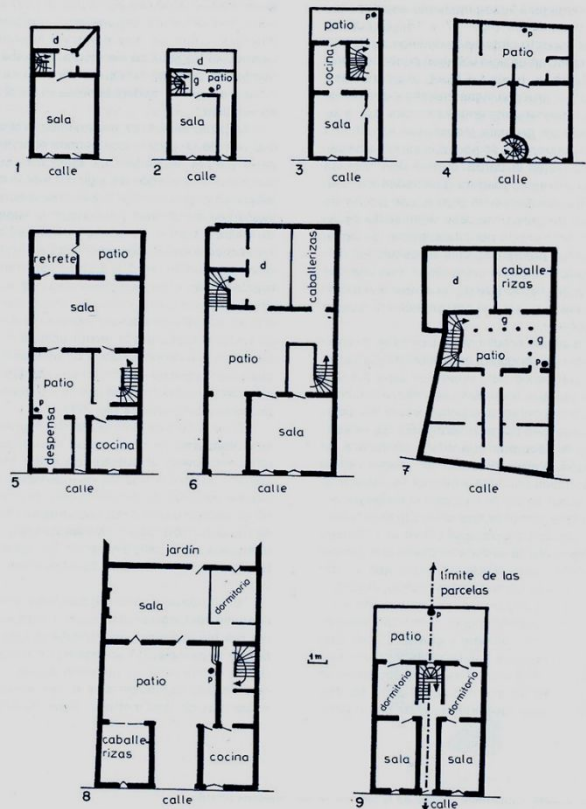
Número de plantas  
 1  
 2 à 4  
 5 y más

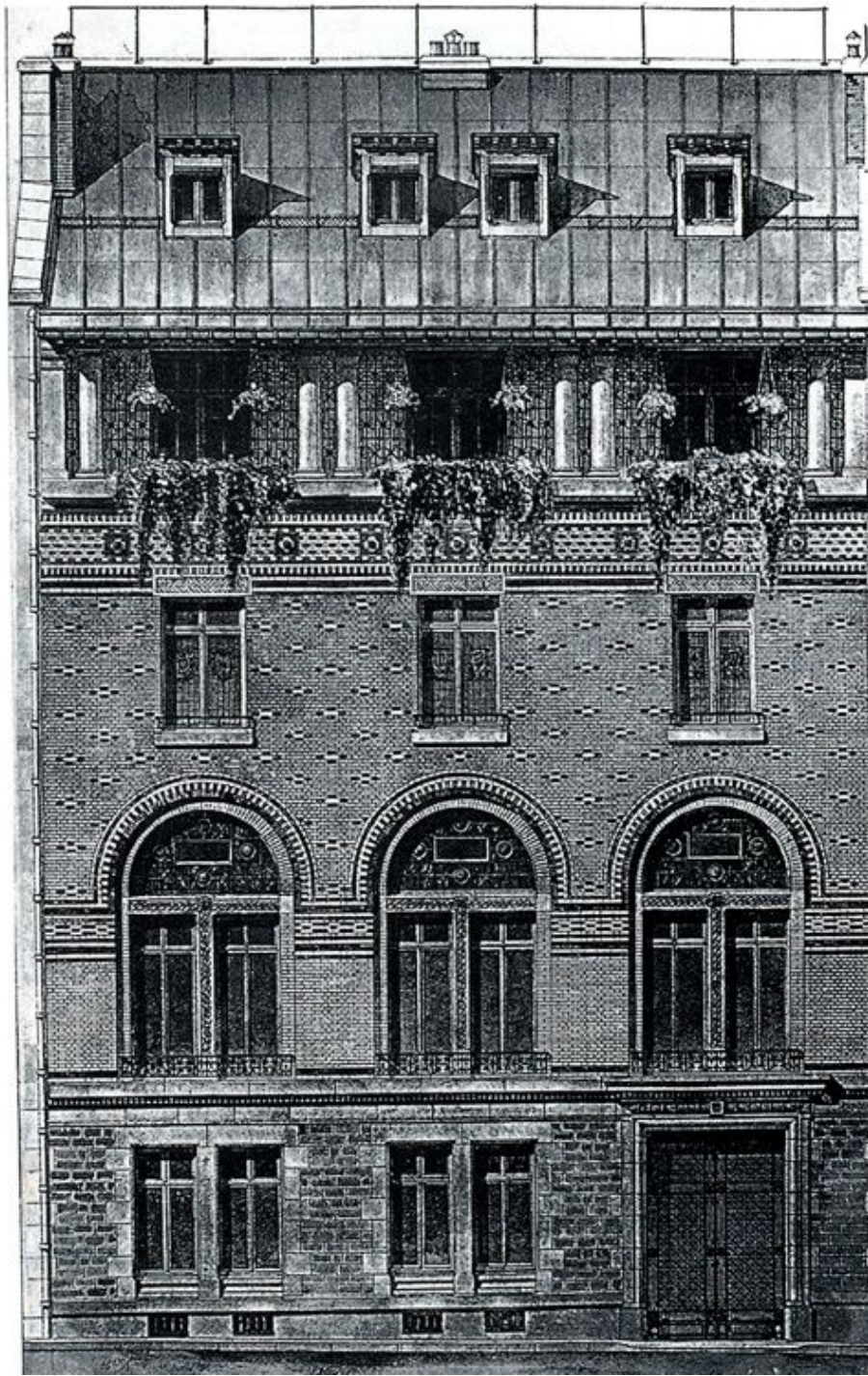
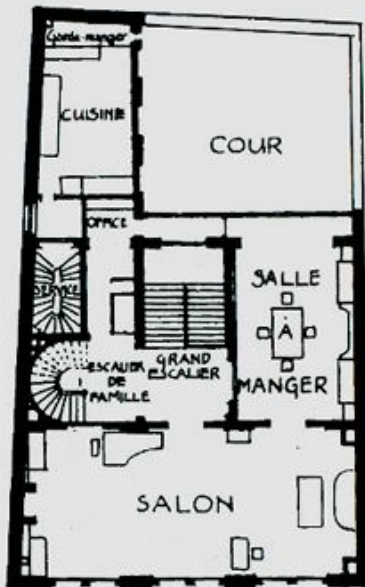
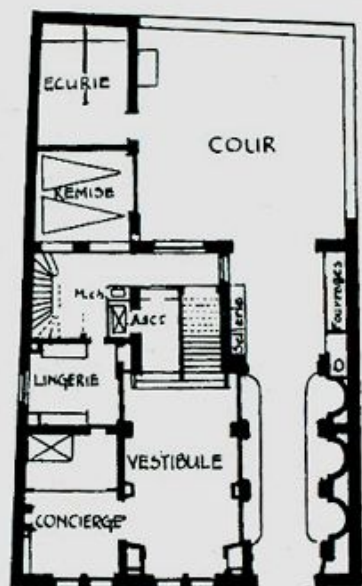
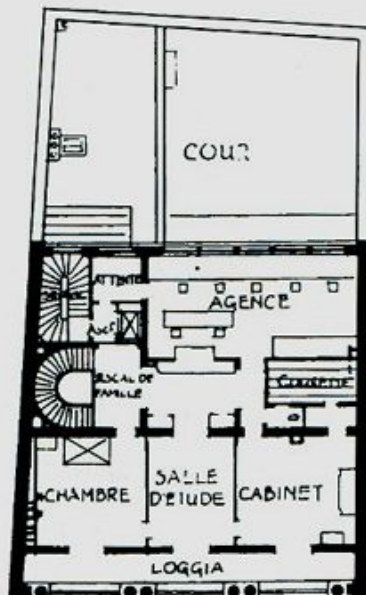
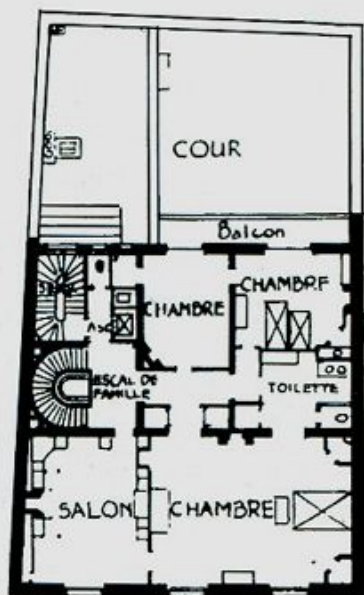


20 m.



Case a schiera a L'Isle de la Cité





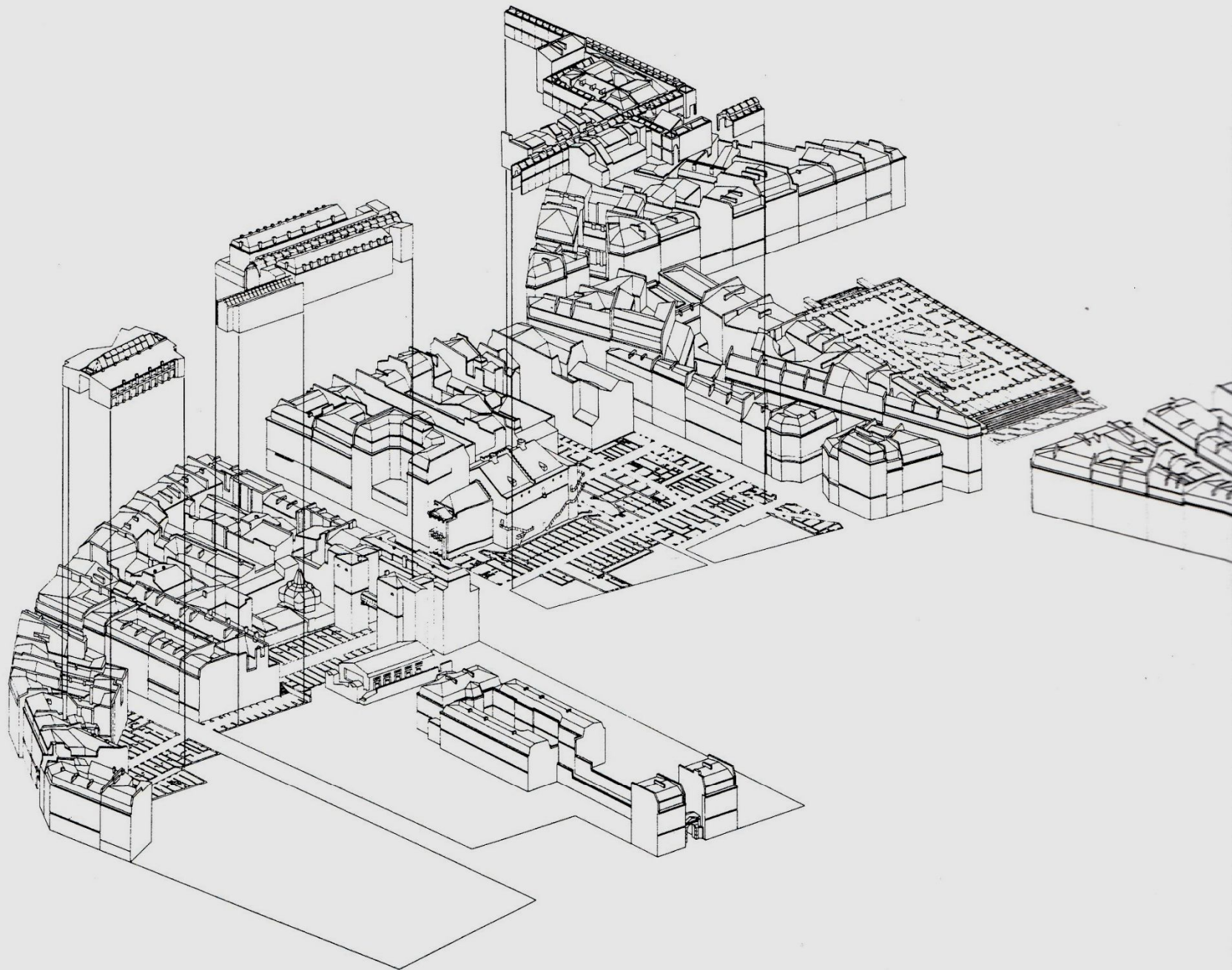
Plans de l'hôtel particulier du 8 rue de Lota,  
R. Bouwens van der Boijen, architecte, 1899.



Passage Verdeau

«Le passage structure ainsi l'espace de l'îlot  
autour d'un axe qui unifie l'ensemble des  
constructions  
nouvelles ou déjà existantes. C'est une rue qui  
pénètre l'îlot, délimitée par des façades  
ordonnées  
et sur lequel se greffent des commerces et des  
logements. L'ambiguïté du statut de l'espace  
du  
passage, à la fois intérieure et extérieur, lui  
permet de jouer sur deux tableaux: être à la  
fois une rue et un salon» in B.Lemoine, op. cit.





Restitution axonométrique des passages des Panoramas, Jouffroy et Verdeau, montrant leur insertion dans le cœur des îlots.

Dans ce luxe déployé prospérait une foule oisive qui imposait son rythme de vie aux passages et les animait au gré de ses activités. « Les passages sont favorables pour les magasins d'objet de luxe qui doivent leur vente à leur étalage. On va s'y promener, on s'y donne rendez-vous, on s'y réfugie quand il pleut ; nécessairement on s'arrête devant les boutiques et l'on achète un objet de fantaisie devant lequel on eût passé sans y faire attention s'il eût été exposé dans la rue. A l'exception des cas où une pluie subite y appelle la foule qui abandonne la rue, les passages ne sont remplis qu'à certaines heures de la journée : de cinq à six heures par les jeunes gens qui s'y réunissent pour aller dîner ; de sept à huit heures par tous ceux qui, après dîner, viennent y fumer leur cigare ou y attendre l'heure du spectacle, et, enfin, de dix à onze par ce grand nombre d'individus qui ne veulent rentrer chez eux que pour se coucher et qui, en sortant des autres lieux publics, viennent attendre là, l'heure de regagner leur gîte »<sup>2</sup>.

Les passages fonctionnaient ainsi comme des salons publics, où la foule pouvait se donner en spectacle à elle-même. Sous la Restauration, à l'époque des passages, la rue était un lieu privilégié de la vie sociale, comme le témoigne cette observation d'une femme de l'époque : « Cette vie extérieure, ce monde en plein vent, ce commerce de regards, de propos, de compliments échangés.

A l'enfilade des salons de réception succédaient le salon familial et la salle à manger où le bourgeois célébrait ses vertus toutes domestiques que sont le confort, l'intimité familiale et la jouissance d'un intérieur microcosmique. Cet espace était essentiellement d'ordre privé<sup>4</sup>.

Entre une rue sans cesse disciplinée et un chemin retranché du domaine public, les lieux ouverts à la fréquentation du public prenaient sans cesse de l'importance : théâtres, jardins, restaurants et cafés, salles de jeux, passages couverts... Héritiers du salon d'hôtel particulier, ils en gardaient l'apparat et le caractère fermé, l'entrée desquels il fallait exhiber les signes convenus de la civilité. Mais ils conservaient aussi de la rue sa familiarité d'accès et son anonymat relatif. On n'y était plus anonyme comme dans un salon, mais seulement reconnu. Ceci est évident en ce qui concerne les théâtres ou les restaurants, par exemple. Mais les passages couverts relevaient aussi de cette double ascendance : ils étaient comme une





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