Laboratorio Architettura e Città
Progettazione urbanistica
A.A. 2019-2020
Francesco Alberti
Collaboratrice al corso: Eleonora Giannini

PROGETTARE LA MOBILITÀ COME SPAZIO PUBBLICO

funzionalismo primitivo
delle infrastrutture standard
(J. A. Acebillo Marin)

Firenze, svincolo “Lotto 0” SGC Firenze-Pisa Livorno

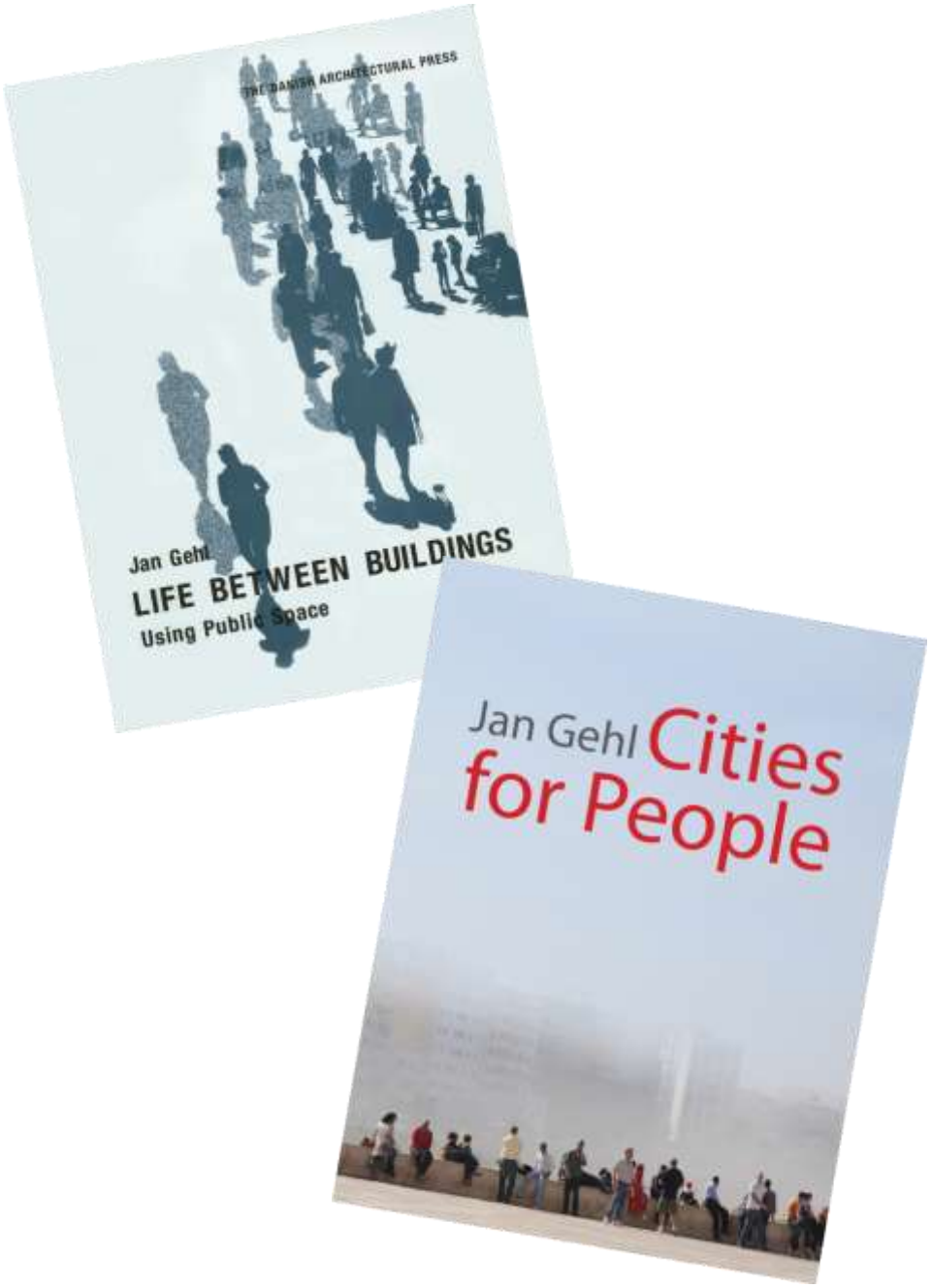
Barcellona, Svincolo e parco della “Trinidad” (1988-1992)

infrastrutture a
rendimento sociale
(J. Busquets)

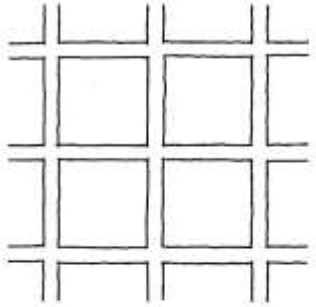
- M. de Solà Morales, **Un'altra tradizione moderna**, «Lotus international» n. 64, 1989

1. Effetti territoriali oltre l'area di intervento
2. Carattere complesso e interdipendente dei contenuti; superamento della monofunzionalità (parco, strada, tipologia, ecc.); mescolanza di usi, utenze, ritmi temporali e orientamenti visivi
3. Scala intermedia, da completarsi in un tempo limite di pochi anni
4. Impegno volontariamente assunto di adottare un'architettura urbana, indipendentemente dall'architettura degli edifici
5. Importante componente pubblica negli investimenti e negli usi collettivi del programma.

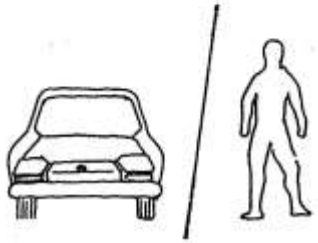
L'intervento nella città consolidata: “traffic calming” e “circulation douce”

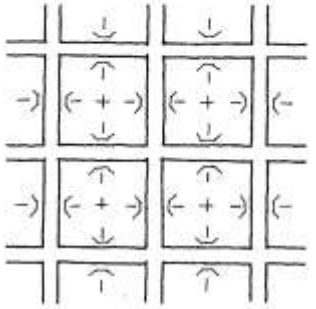


Los Angeles:
Integrazione del traffico in termini di circolazione veloce. Un sistema semplice di strade rettilinee con un basso livello di sicurezza. Le strade sono utilizzate esclusivamente per il traffico veicolare.

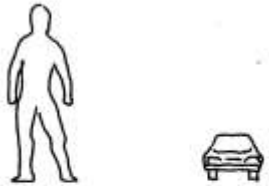


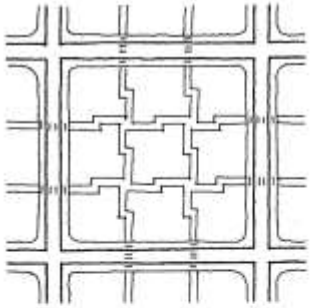
Radburn:
Separazione del traffico introdotta nel 1928 a Radburn, nel New Jersey: un sistema complicato e costoso che prevede molte strade e sentieri paralleli con numerosi sottopassaggi dispendiosi. Indagini condotte nelle zone residenziali rivelano che questo criterio, che in teoria sembrerebbe migliorare il livello di sicurezza stradale, è poco efficace nella realtà, poiché i pedoni preferiscono le strade più corte a quelle più sicure ma più lunghe.



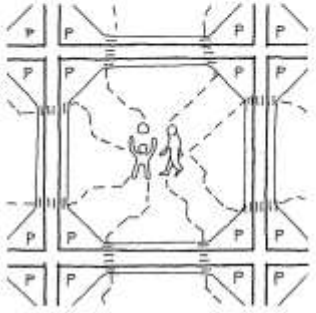


Delft:
Integrazione del traffico in termini di circolazione lenta. Introdotto nel 1969, questo sistema semplice, diretto e sicuro continua a considerare la strada come lo spazio pubblico più importante. Quando le auto devono potere raggiungere un edificio, questo sistema costituisce una soluzione migliore delle precedenti.

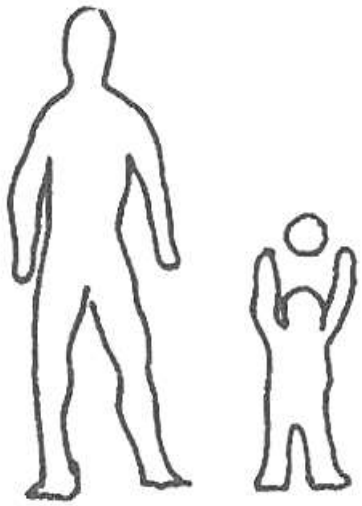


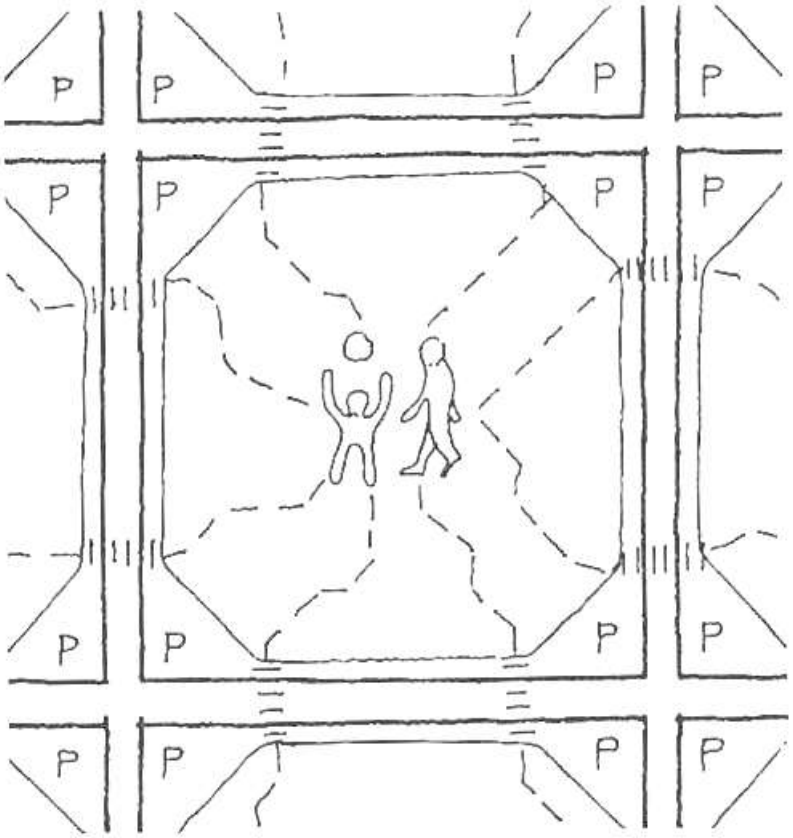


Venezia:
La città pedonale. Il passaggio dal traffico veloce al traffico lento avviene nei dintorni della città o dell'area pedonale. Si tratta di un sistema di traffico semplice e diretto con un alto grado di sicurezza, dove ci si sente protetti più che in qualsiasi altro sistema.

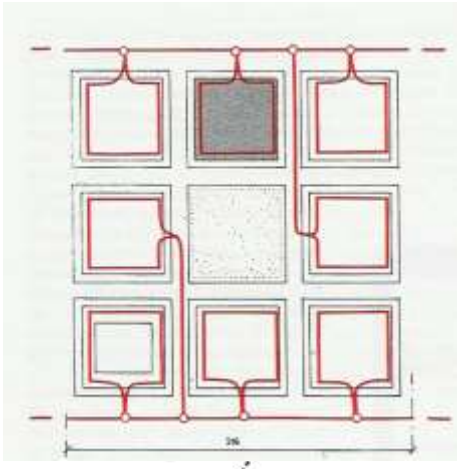


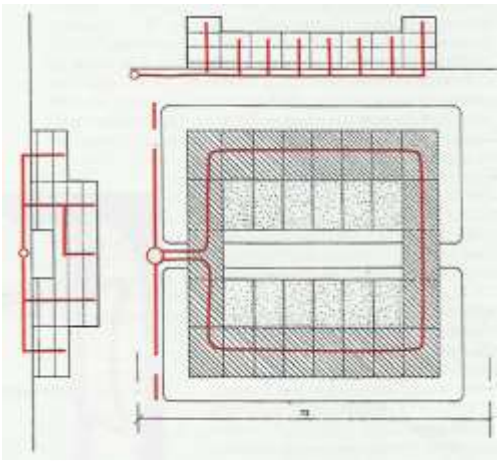
J. Gehl, **Life between buildings**, 1971- 2009; **Cities for people**, 2010

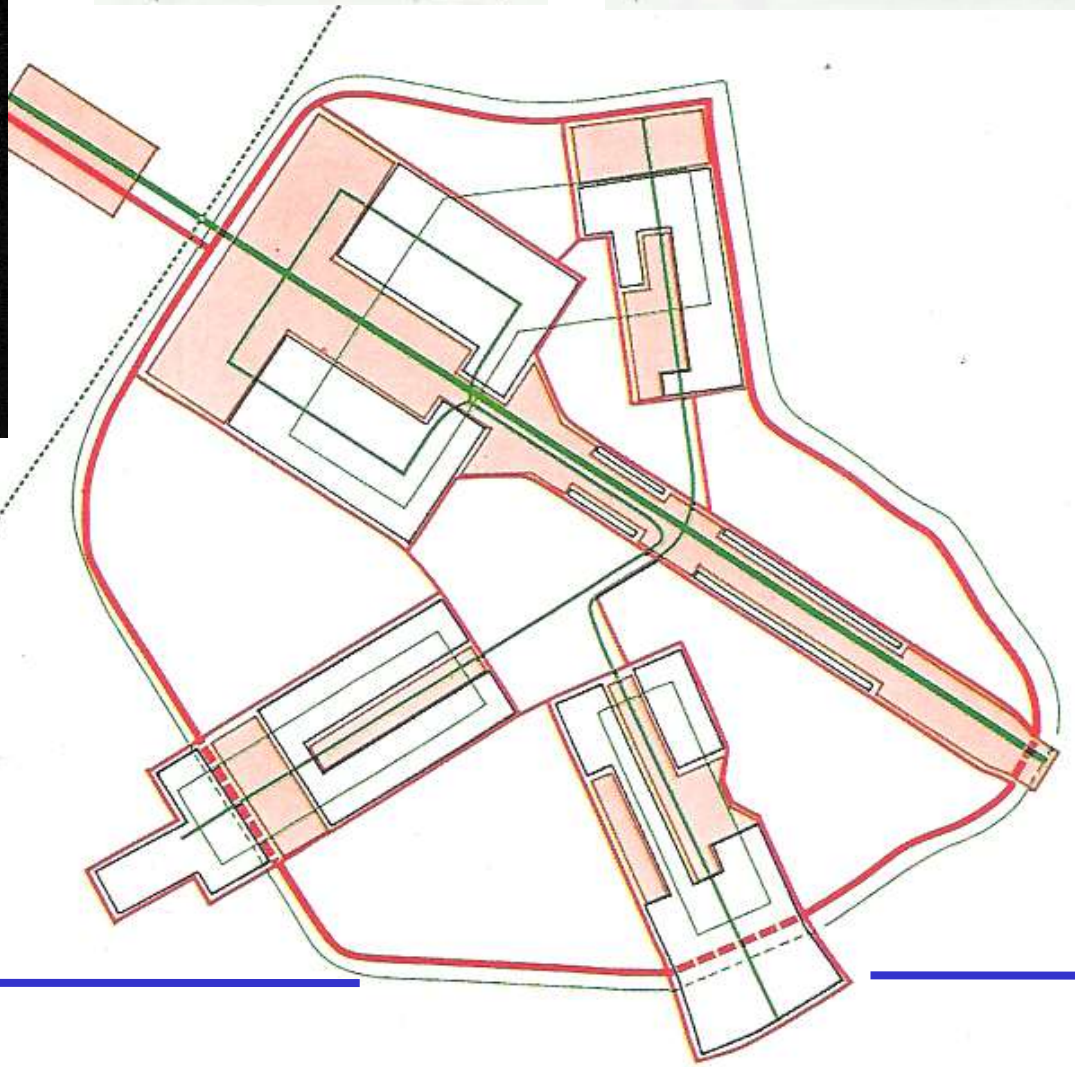




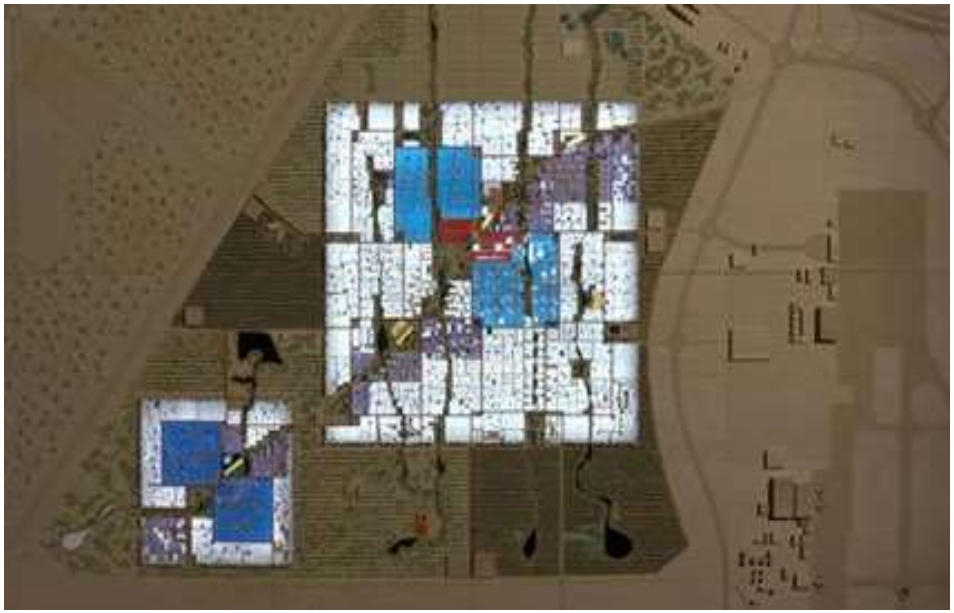
J. Gehl, il paradigma “Venezia” (la città senza auto)

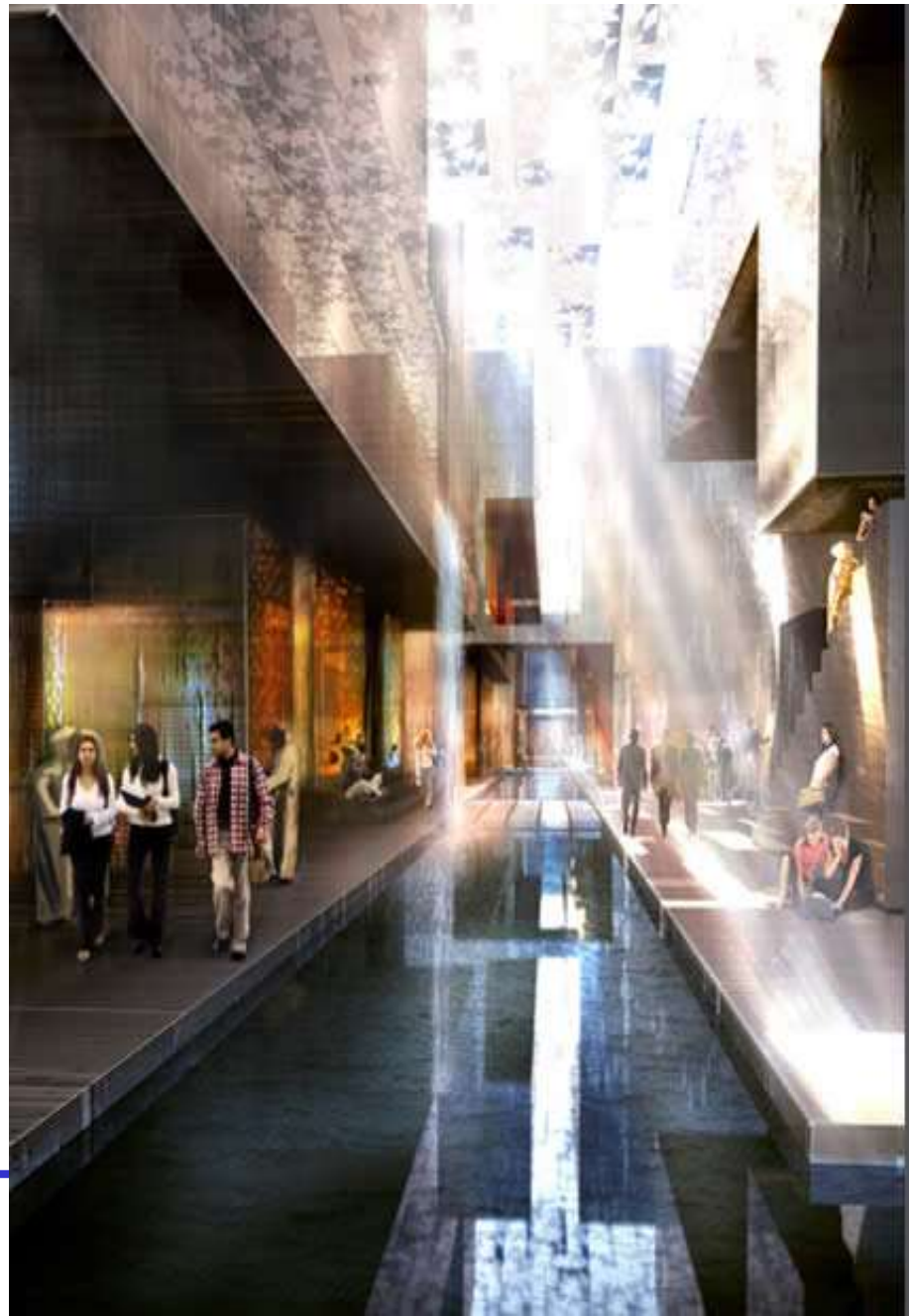






V. Gregotti, “Antichernobyl XXI”, 1994





N. Foster, “Masdar”, 2008

Oslo

Search the entire site

Menu

Car free city life in Oslo

The City Government wants to create a greener and warmer city with room for everyone. A city center with less cars make more room for life in the streets and pleasant meeting areas.

In 2017, the first changes in the city center have taken place to create more room for a city life where pedestrians and cyclists take precedence over private cars.

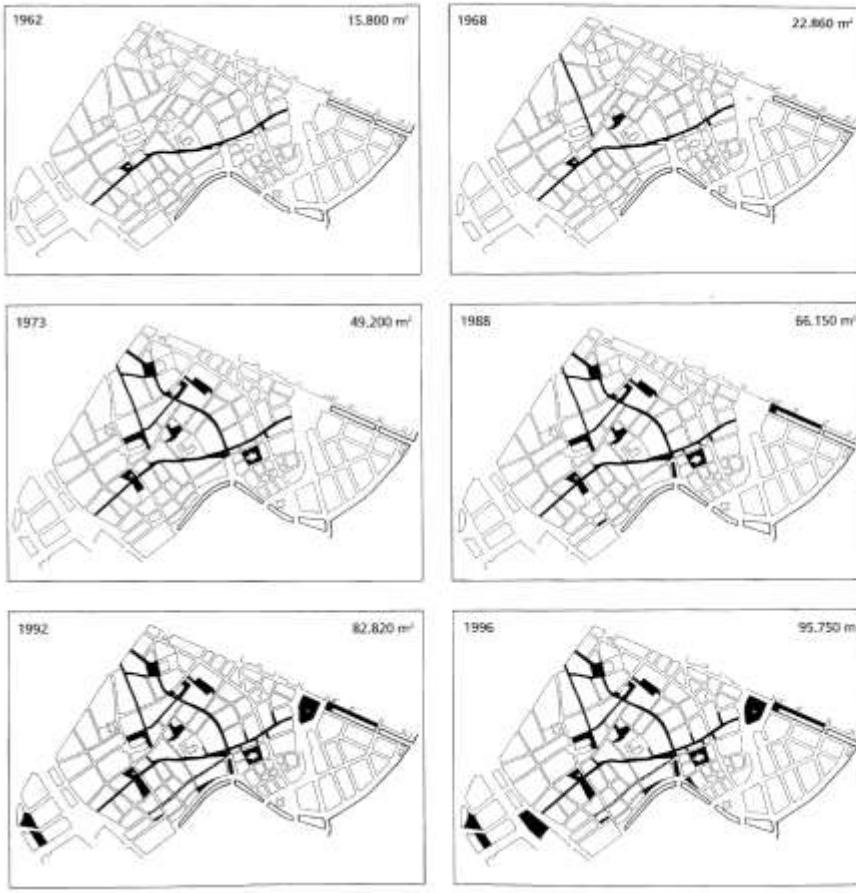
An area of approximately 1.3 km2 will be transformed to a better urban environment during the City Council period 2015-2019.

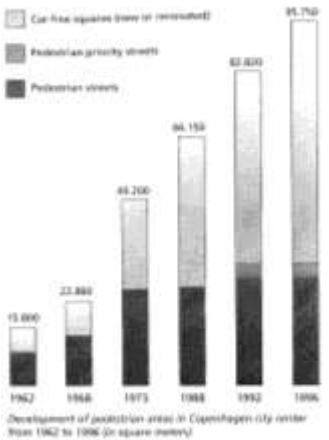
Fotograf: Morten Brakestad

https://www.oslo.kommune.no/politics-and-administration/green-oslo/best-practices/car-free-city/#gref

http://www.rodeo-arkitekter.no/social-science/strategies-for-a-car-free-oslo

DEVELOPMENT OF CAR-FREE STREETS AND SQUARES 1962-1996

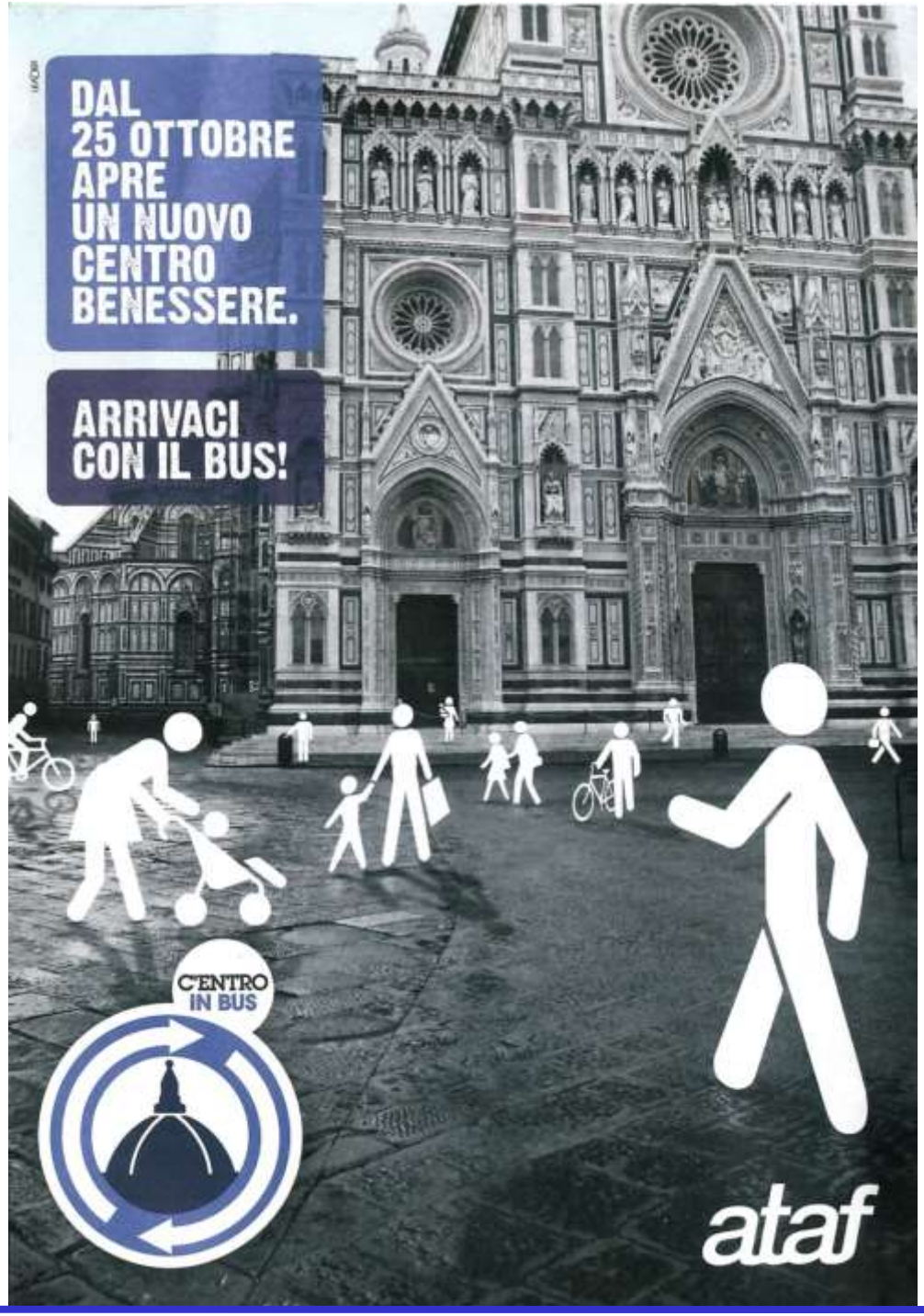




Development of pedestrian areas in Copenhagen city center from 1962 to 1996 (in square meters)

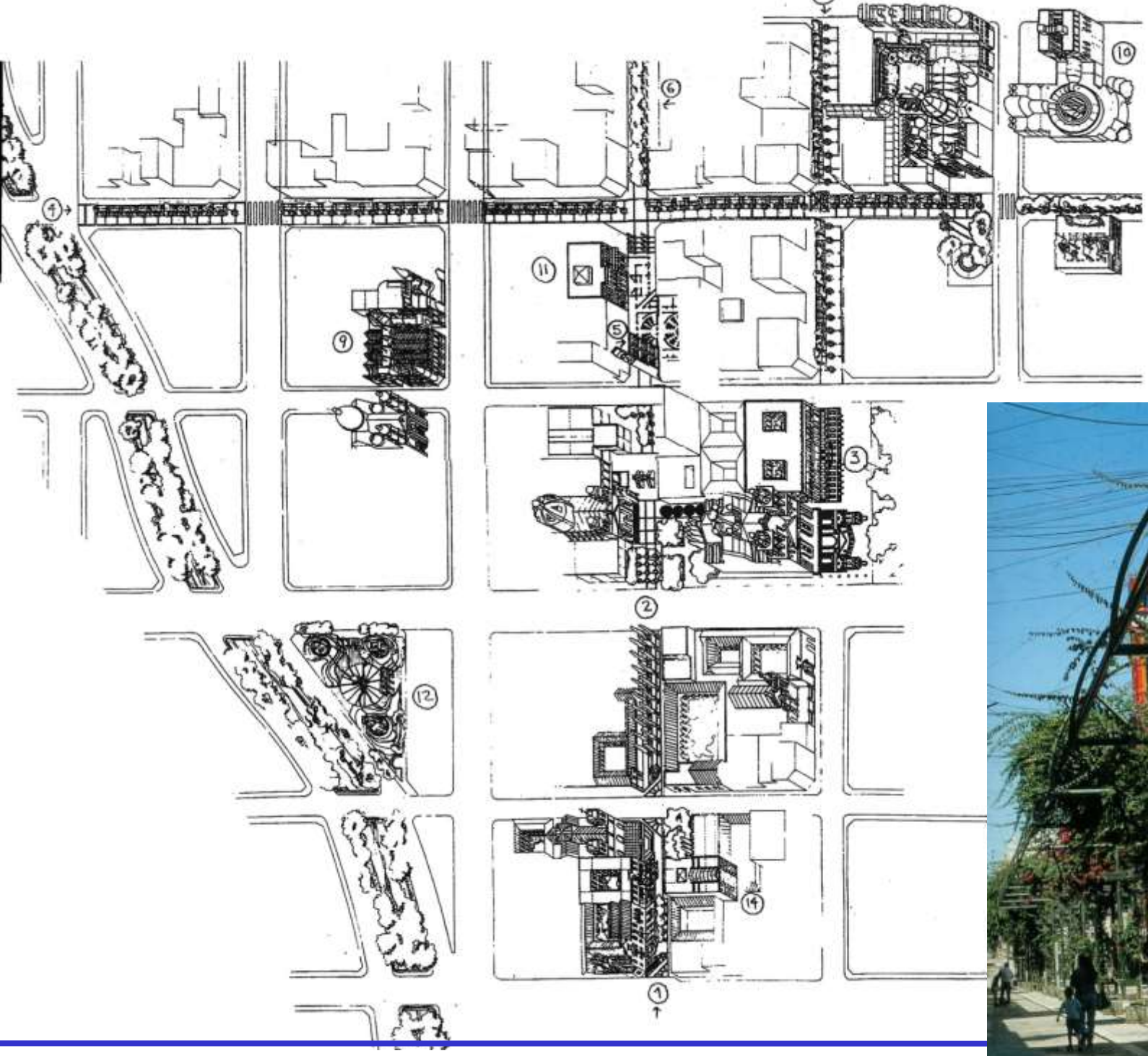
Copenhagen's designation as Cultural Capital of Europe in 1996 finally spurred the transformation of Town Hall Square. The traffic artery that once divided the square has been removed, buses are concentrated at the far end, and a wide, slightly sloped pedestrian area has been created in front of the town hall.

La pedonalizzazione del centro di Copenaghen 1962-1996



Pedonalizzazioni a Firenze (dal 1978)

Pedonalizzazione di Time Square a NYC (dal 2012)



Cordoba (Argentina), 1962-1996 (M. A. Roca)

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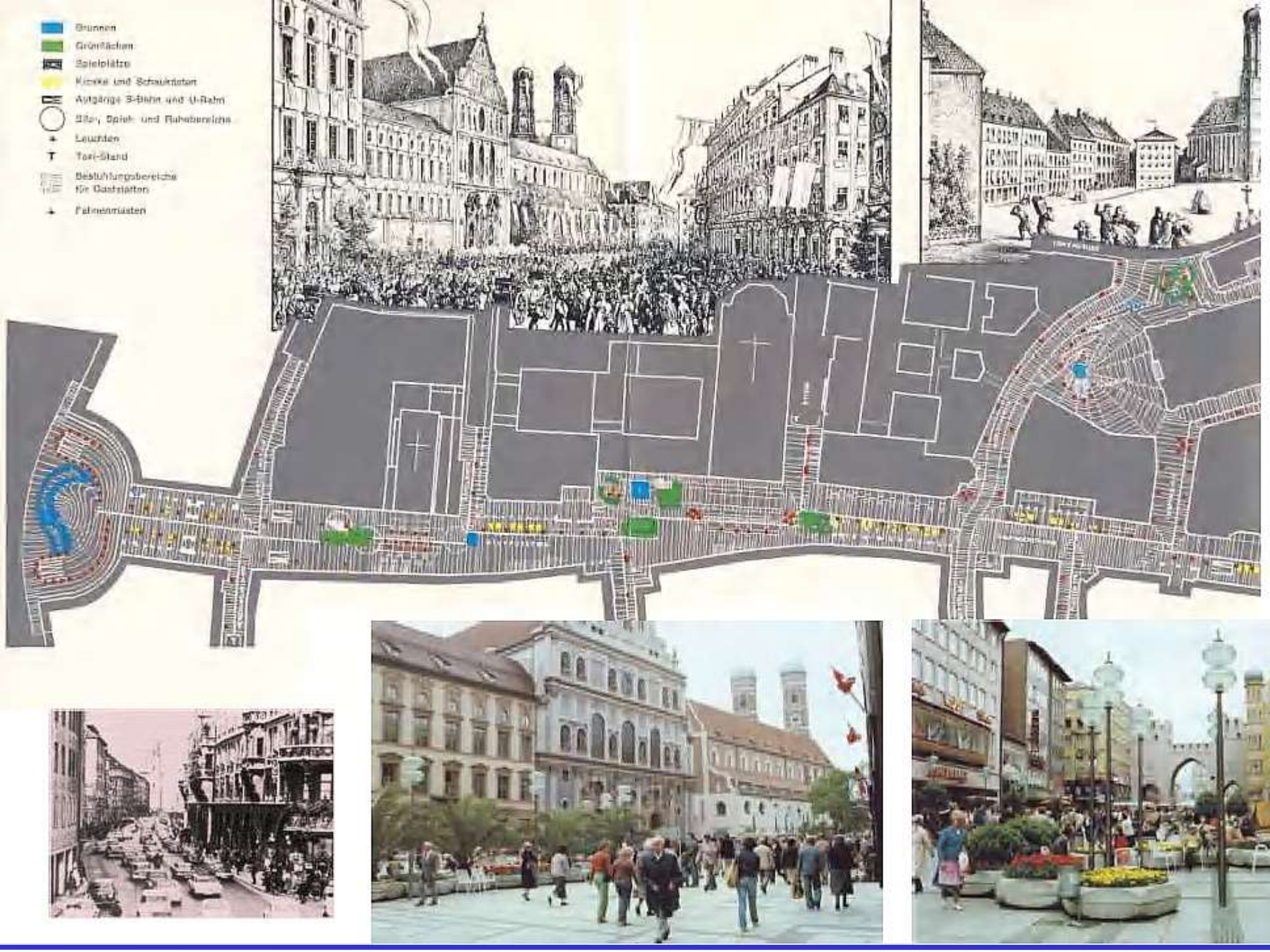

Monaco di Baviera, area centrale pedonalizzata. Progetto: B. Winkler, 1972

Göttingen

Norimberga

Stoccarda

Zone pedonali nelle città tedesche

Continuità dei percorsi pedonali dalla Hauptbahnhof all’Englischer Garten

Continuità dei percorsi pedonali dalla Hauptbahnhof all’Englischer Garten

Sottopassaggio pedonale di accesso all’Englischer Garten

Copenaghen, “Superkilen” (TOPOTEK 1, BIG - Bjarke Ingels Group, Superflex, 2012)

Copenaghen, “Superkilen” (TOPOTEK 1, BIG - Bjarke Ingels Group, Superflex, 2012)

Freeway Park a Seattle (L. Halprin, 1970-1976)

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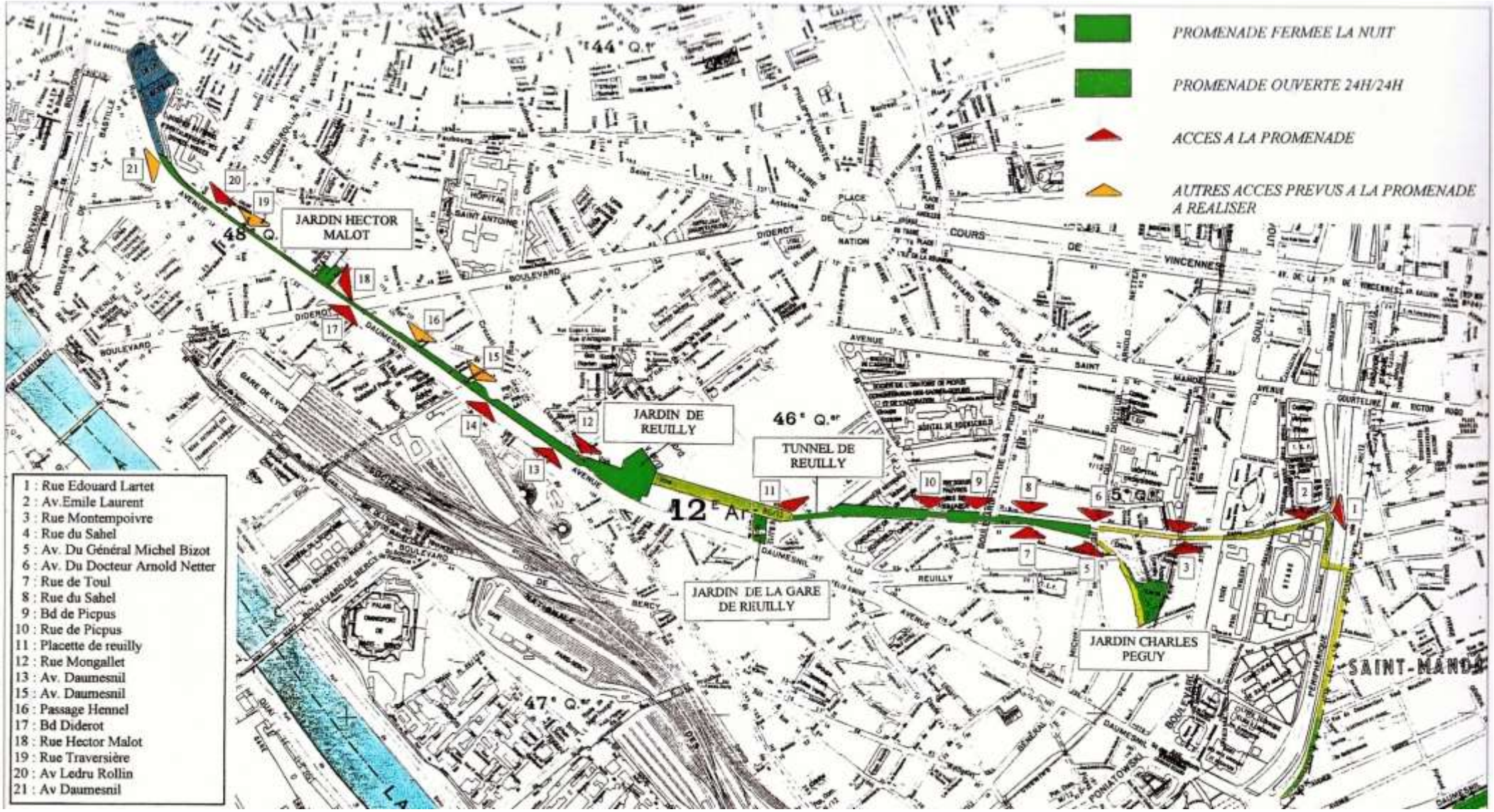
Before sunset – Prima del tramonto, Richard Linklater, 2004



Ph. Mathieux, J. Vergely, Promenade Plantée, Parigi 1988-1998

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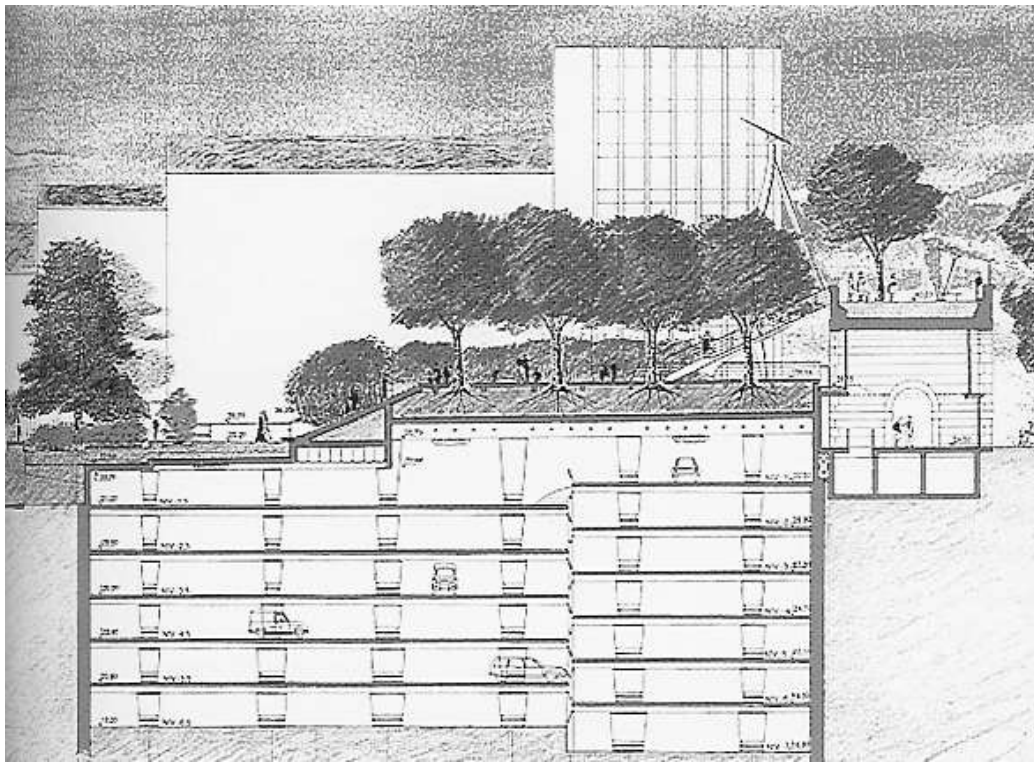

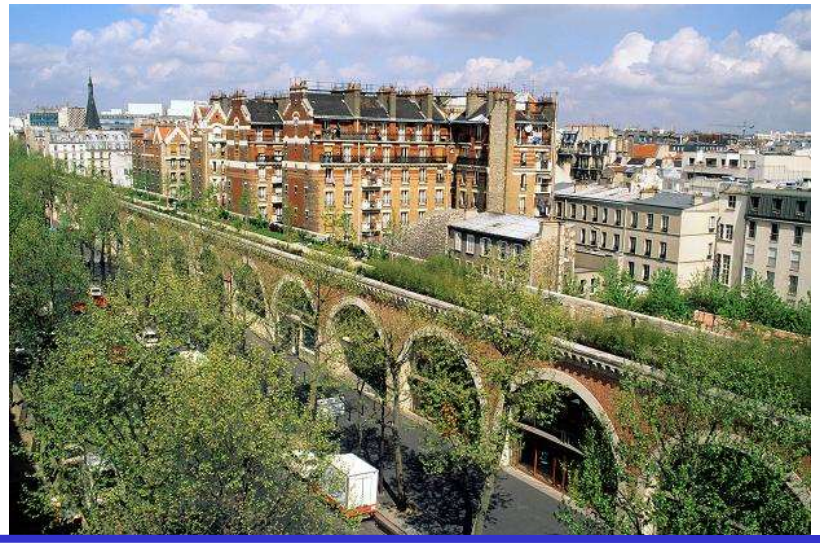

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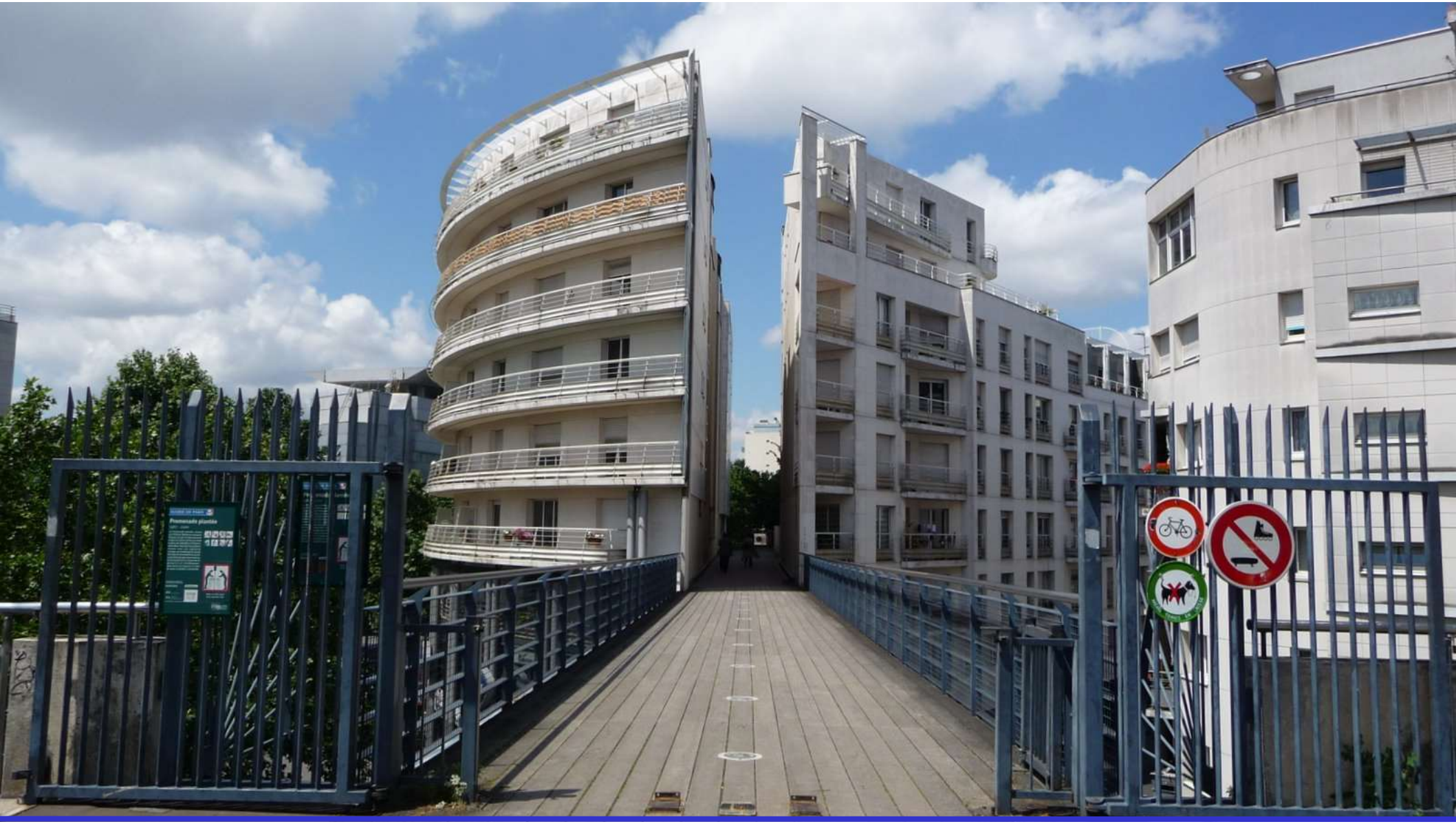

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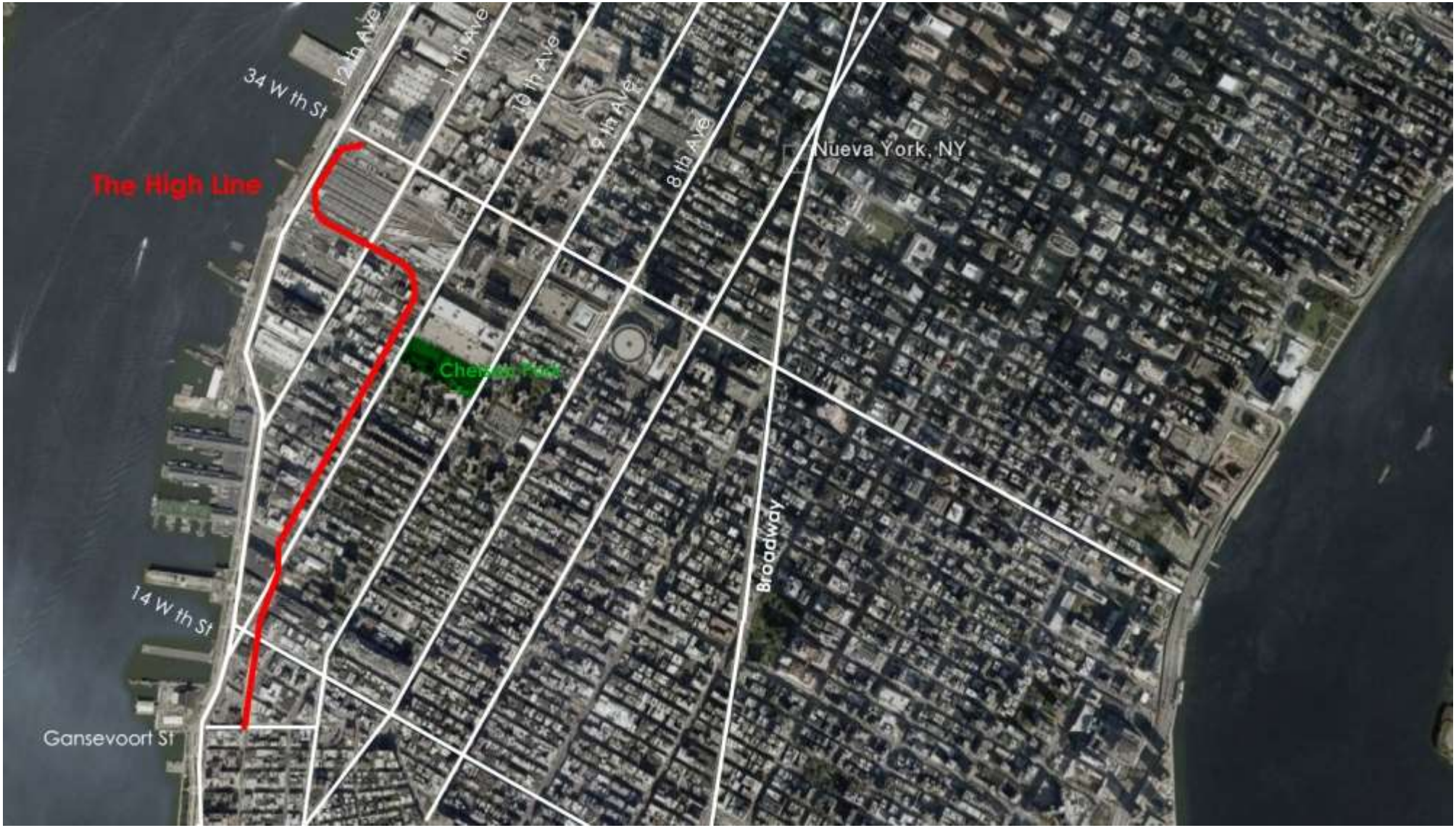
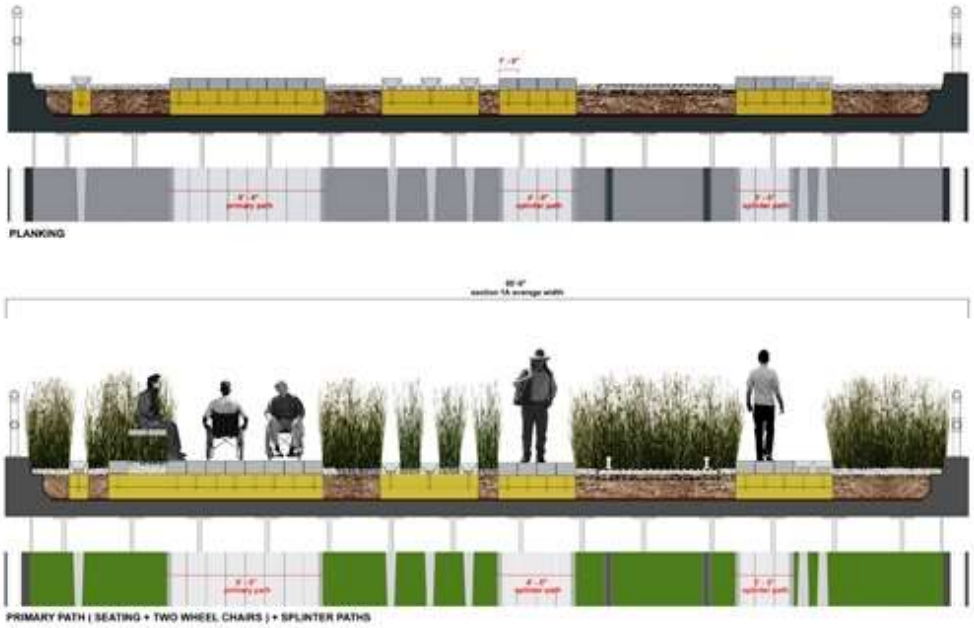


Diller Scofidio+Renfro e James Corner Field Operations, High Line Park, New York, 2002-2009



Diller Scofidio+Renfro e James Corner Field Operations, High Line Park, New York, 2002-2009

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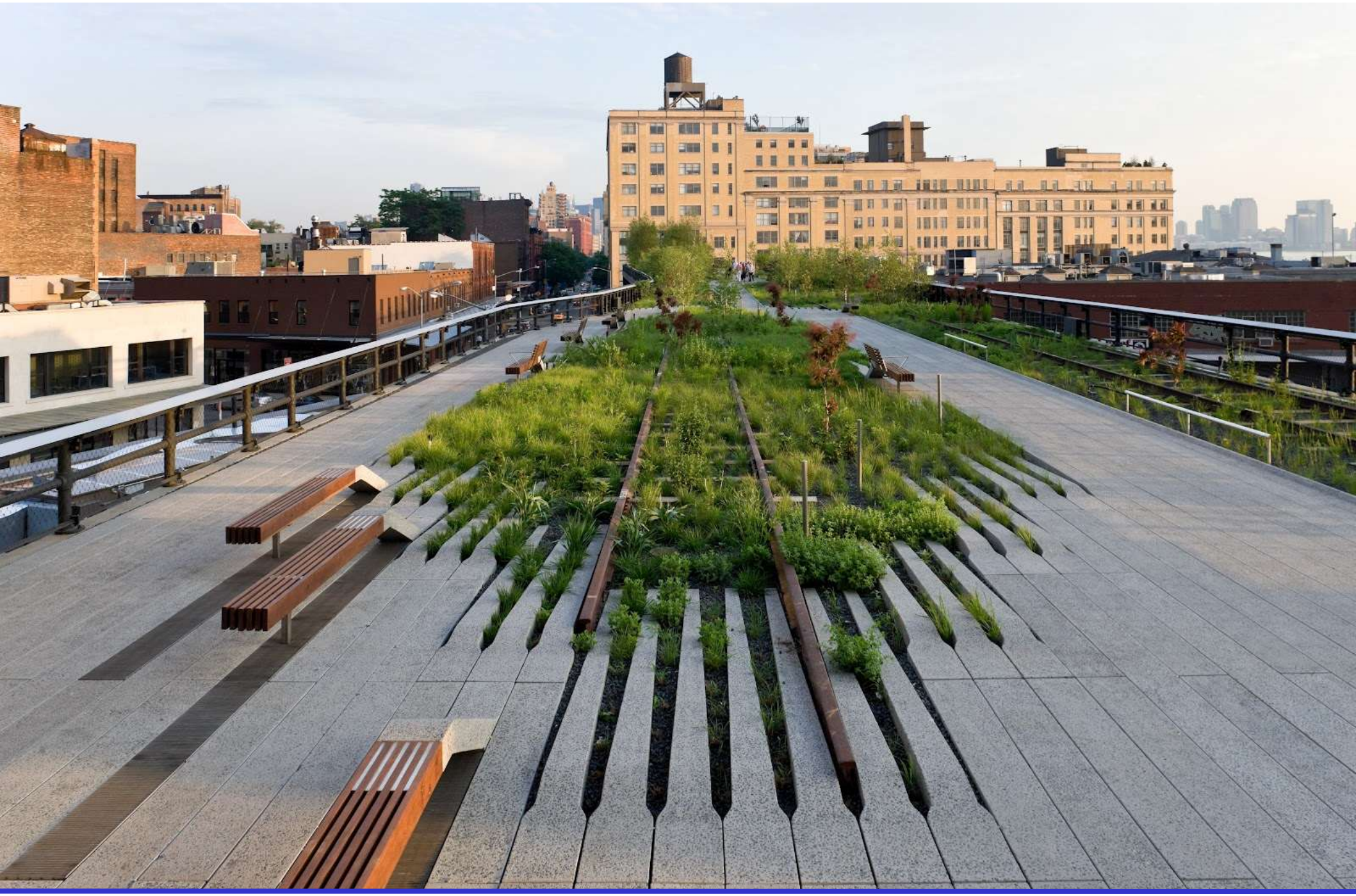

Diller Scofidio+Renfro e James Corner Field Operations, High Line Park, New York, 2002-2009

WALKABILITY

The Walkable City
Stockolm City Plan

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WALKABILITY

The Walkable City
Stockolm City Plan

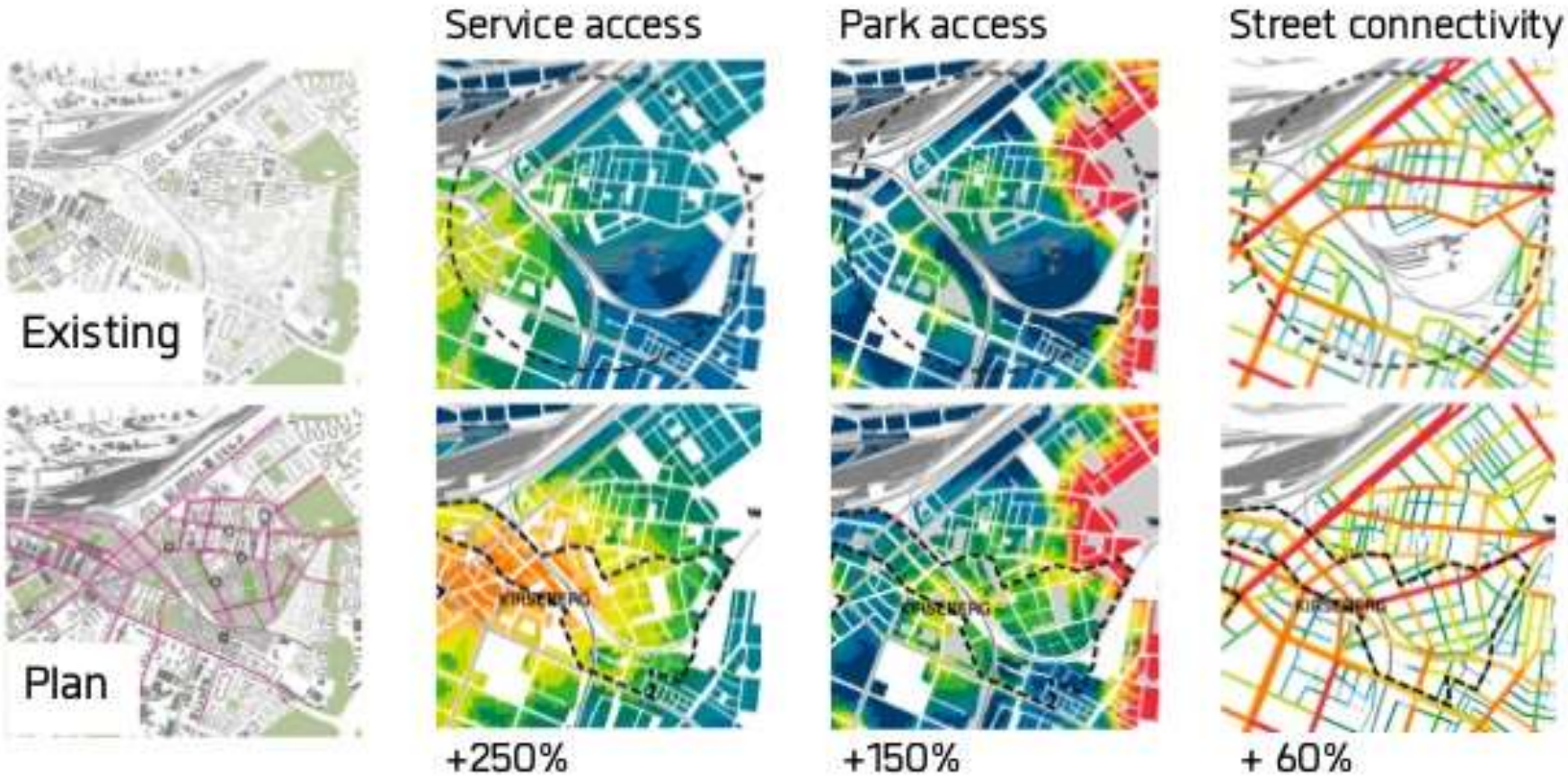
1. **Rafforzare il centro di Stoccolma**

2. **modello policentrico**

3. **connettività nella città e nella regione**

4. **ambiente urbano sicuro e dinamico**

Testing walkability in new plans



Stoccolma, Sergels torg. © Ilaria Massini

WALKABILITY

Walkability for Health

È uno strumento metodologico messo a punto dal gruppo di ricerca Architecture for Health, della TU Berlin per valutare in maniera interscalare quali ambienti urbani all'interno di un quartiere possano facilitare o meno lo sviluppo di

- una rete di trasporto attivo (**walkability e bikeability**),
- lo svolgimento dell'attività fisica (**active environment**)
- la diffusione di punti vendita di prodotti per una sana alimentazione (**food environment**)
- e l'incontro sociale (**social environment**)

WALKABILITY

Walkability for Health

Il metodo Walkability for Health analizza lo spazio urbano su tre livelli:

- **Scala vasta (***Macro urban factors*): densità delle strade, l'offerta di trasporti e la configurazione della rete urbana
- **Scala intermedia** (*Meso-level Patterns*): analizza i segmenti di strada e le intersezioni stradali così da poter determinare il grado di continuità fra un punto e l'altro del percorso.
- **Scala del quartiere** (*Micro Design Variables):* caratteristiche fisiche della porzione urbana analizzata, i punti di interesse presenti lungo il percorso e gli elementi in grado di incidere sull'accessibilità, la sicurezza e il comfort ambientale

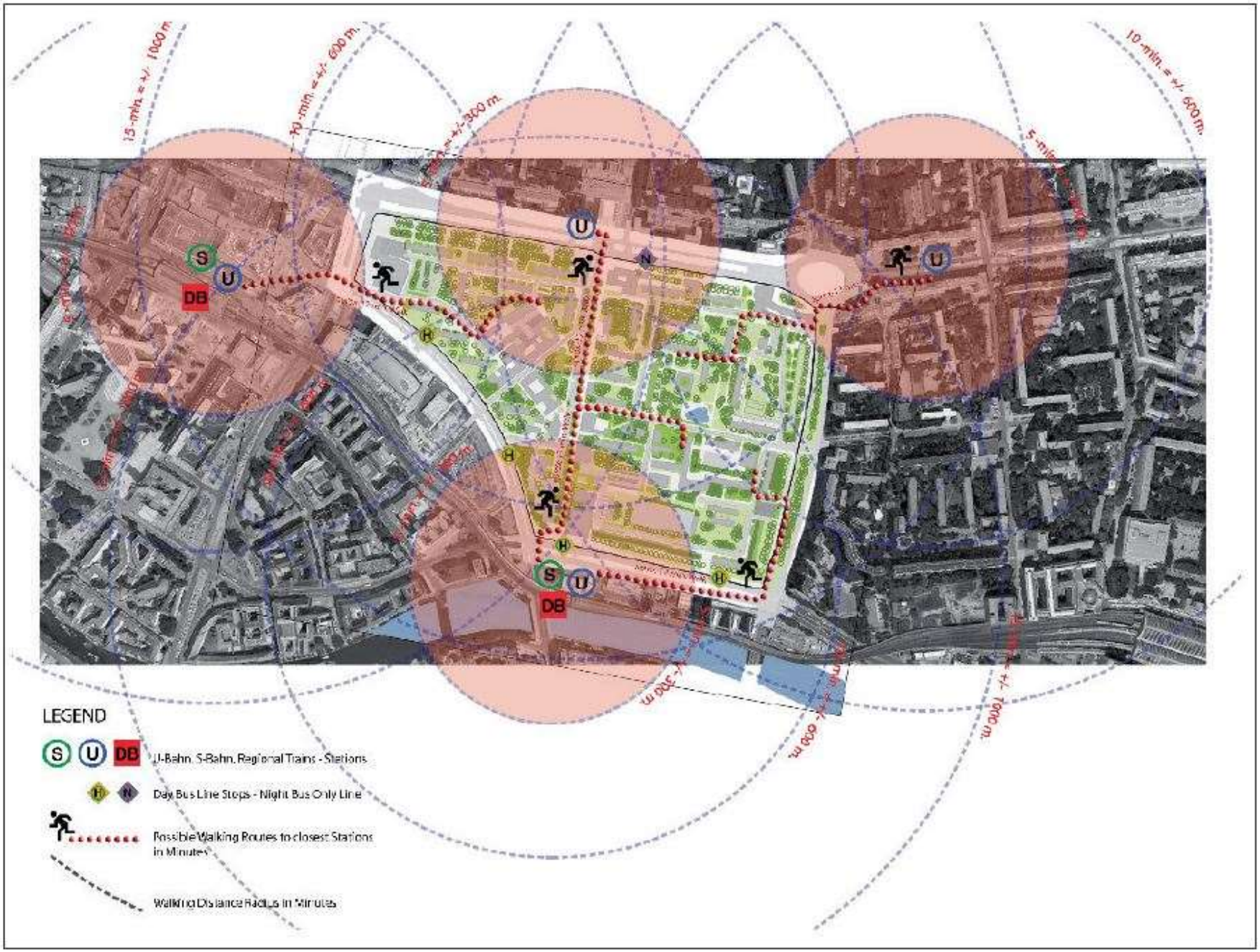


Figure 1 Circular Buffer Approach Diagram

A. Valera Sosa; C. Nickl-Weller, **Understanding walkability and walking rates in Berlin: an urban form and street pattern comparison,** 2017

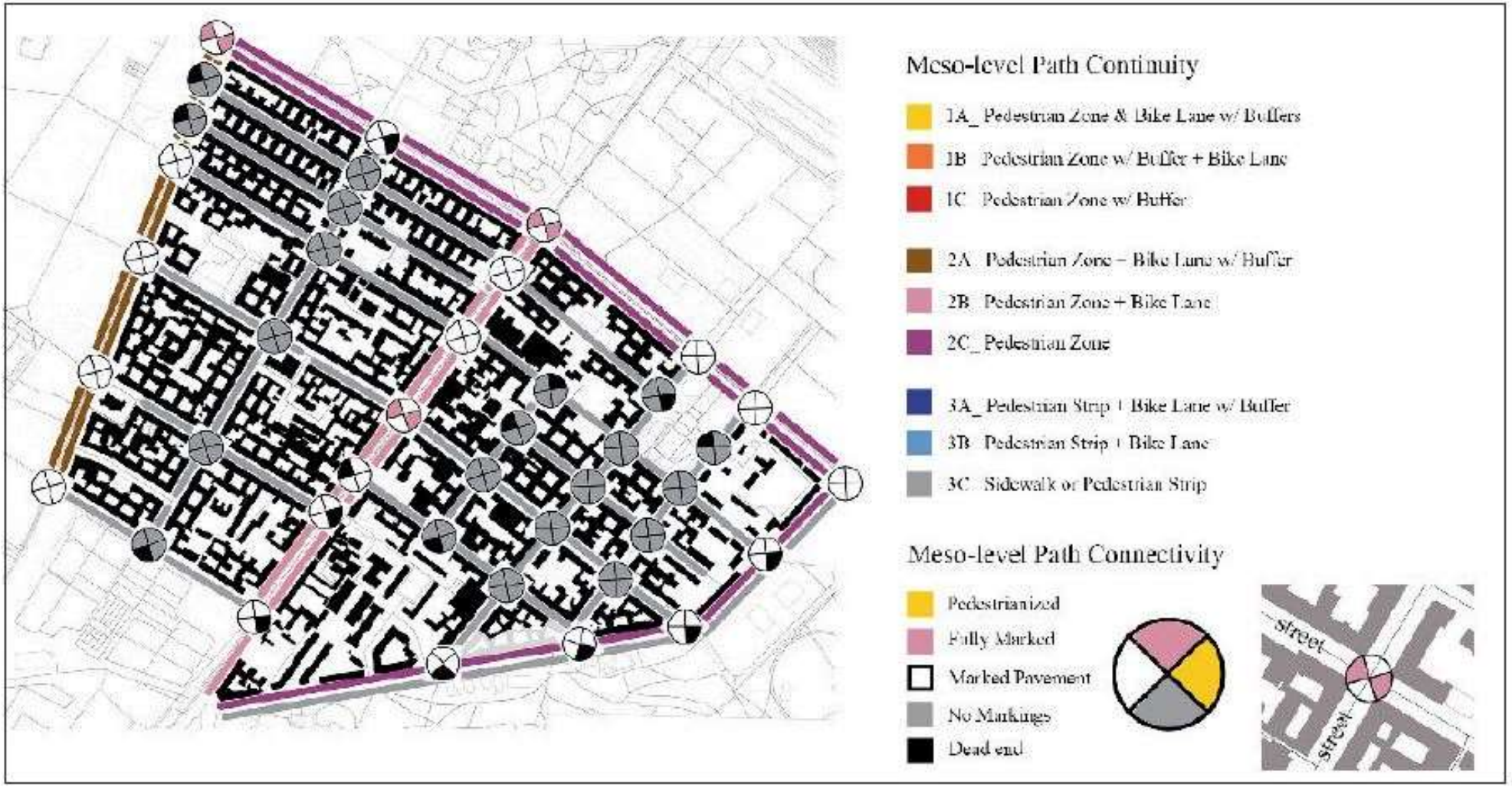


Figure 3 Path Continuity and Connectivity Diagram

A. Valera Sosa; C. Nickl-Weller, **Understanding walkability and walking rates in Berlin: an urban form and street pattern comparison,** 2017

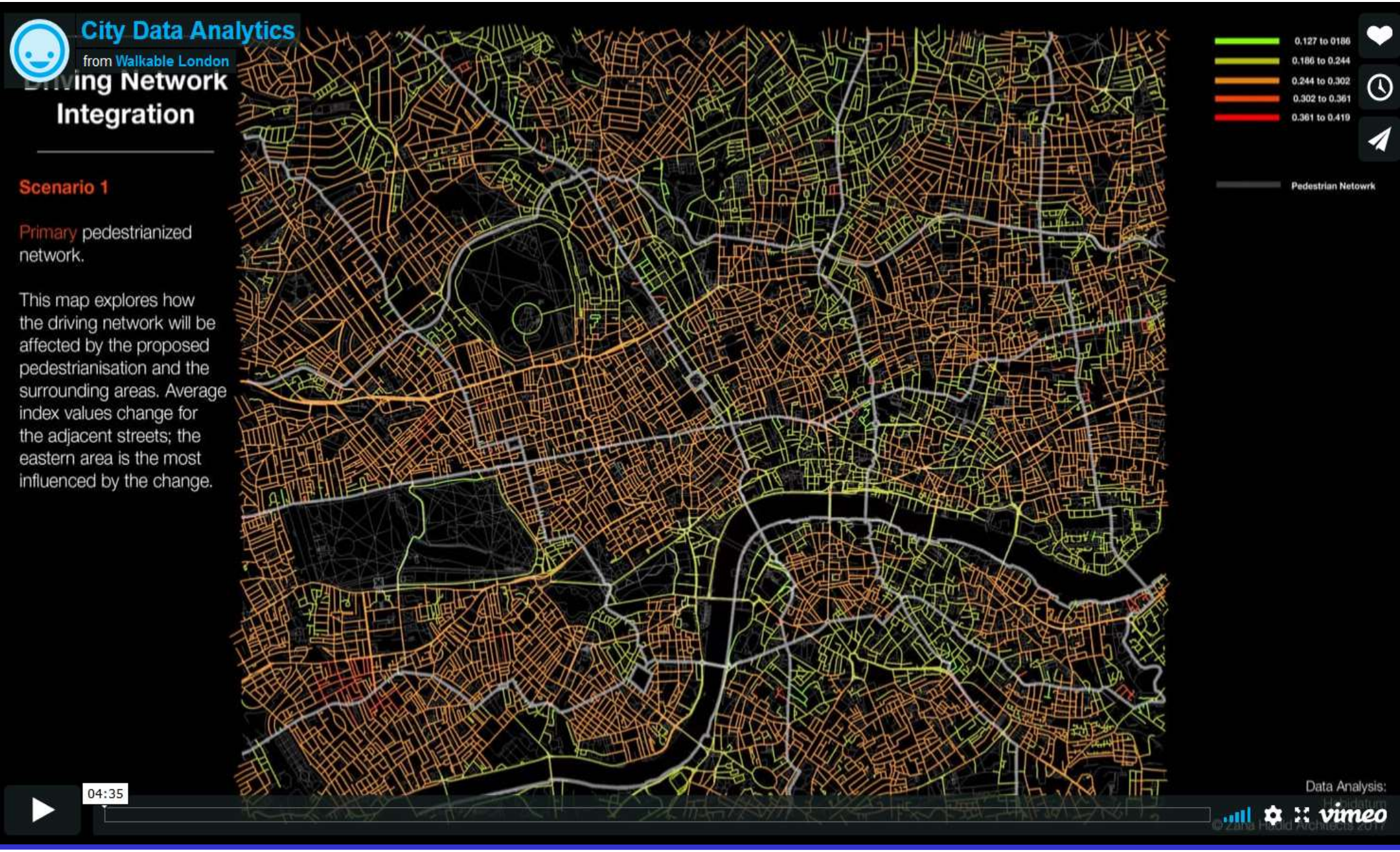
WALKABILITY

Walkable London

La strategia **Walkable London** individua intere aree della città di Londra da rendere completamente pedonali nel prossimo futuro, considerando lo spostamento a piedi come una componente della mobilità urbana complementare al trasporto pubblico su ferro e su gomma (lo spostamento in bicicletta viene invece indicato come alternativo al sistema piedi+TPL).

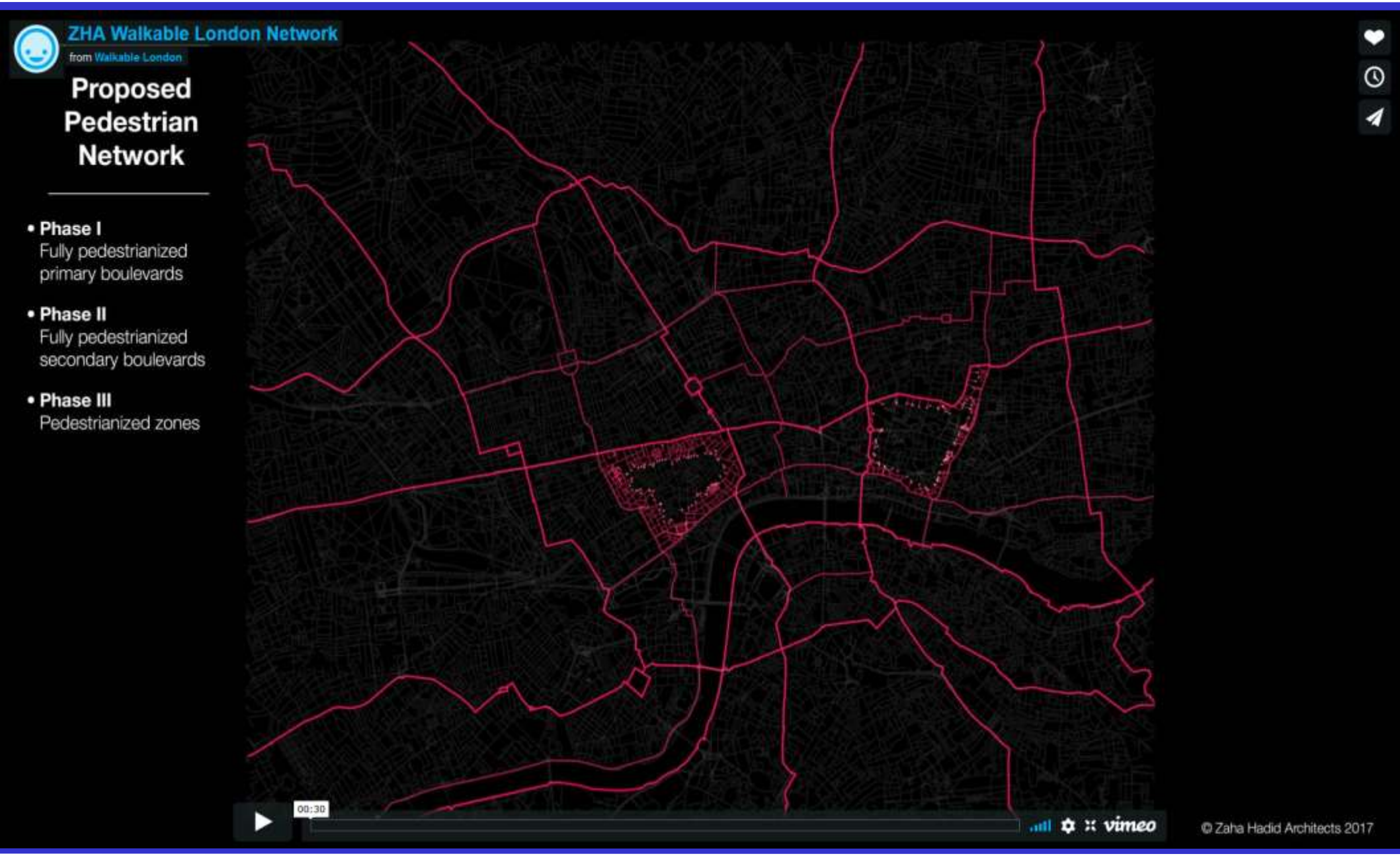
Lo studio è articolato in 2 fasi:

1. **analisi preliminare dello stato attuale** di strade e aree pedonali del territorio di Londra (esistenti o in corso di approvazione/realizzazione) e valutazione dei rispettivi elementi di **criticità e potenzialità**;
2. **strategia di pedonalizzazione, suddivisa in tre step**: pedonalizzazione completa delle arterie principali, pedonalizzazione completa delle arterie secondarie, formazione di aree pedonali estese.



Walkable London: a proposal by Zaha Hadid Architects: City Data Analytics

Walkability cities: la strategia Walkable London - Zaha Hadid Architects



Walkable London:a proposal by Zaha Hadid Architects: Proposed pedestrian network

Walkable London: a proposal by Zaha Hadid Architects: a Vision for London, Upper street

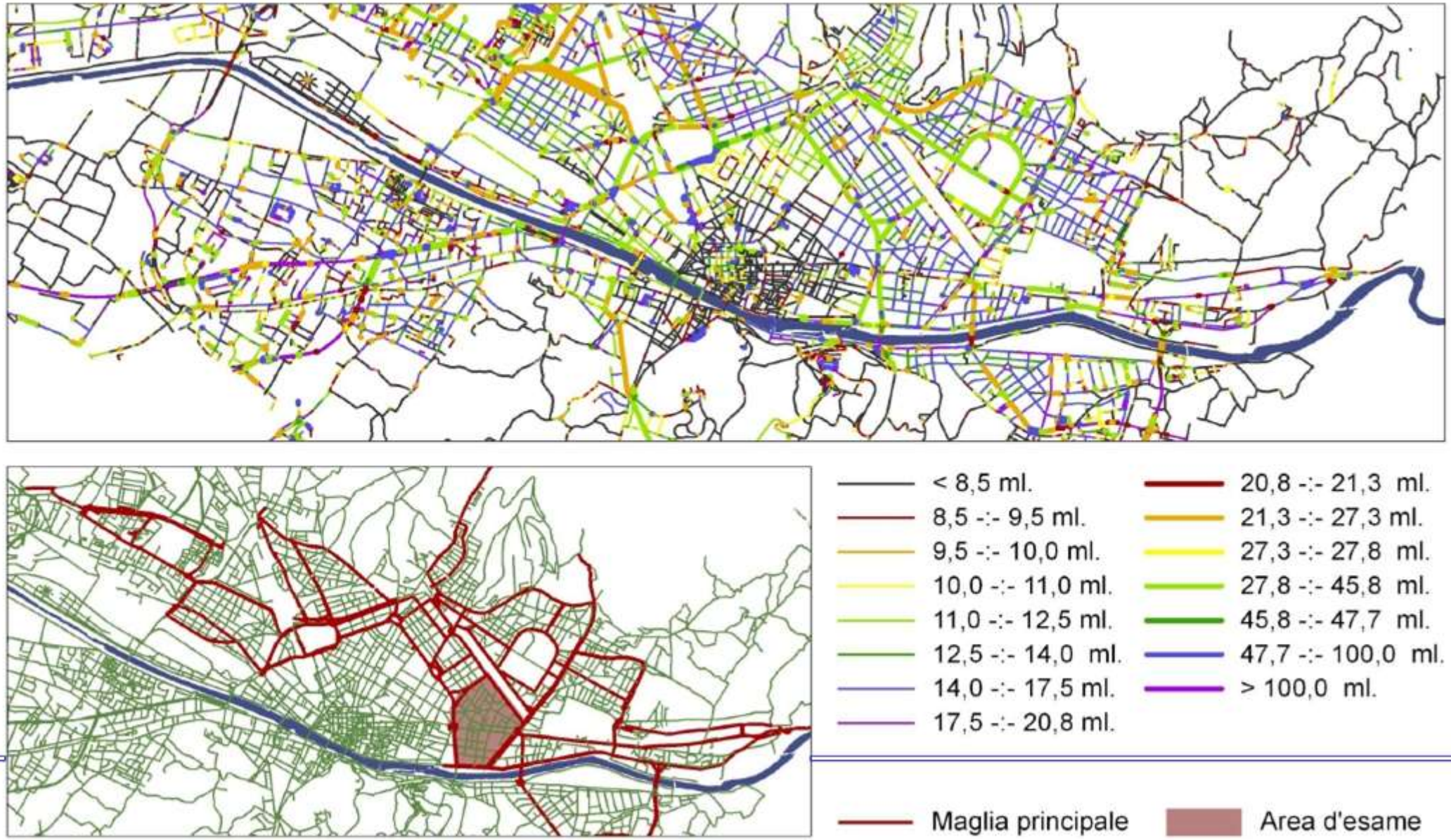
WALKABILITY

Sicurezza e connettività delle reti pedonali

Lo studio, applicato al territorio comunale di Firenze, è articolato in 2 fasi:

1. **Mappatura delle sezioni stradali in tutta l'area urbanizzata** e loro classificazione sulla base delle sezioni tipo previste dalle norme italiane per ogni tipologia di percorso (corsie stradali, piste ciclabili, corsie TPL, marciapiedi, ecc…)

2. Proposta di riassetto della viabilità all'interno di un'area residenziale campione finalizzata a definire una **gerarchia di percorsi e aree pedonali** o "a priorità pedonale" per connettere fra loro i principali luoghi d'aggregazione, le attrezzature pubbliche e commerciali di quartiere, le fermate del TPL.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8,5 -:- 9,5 ml.
9,5 -:- 10,0 ml.
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11,0 -:- 12,5 ml.
12,5 -:- 14,0 ml.
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17,5 -:- 20,8 ml.
20,8 -:- 21,3 ml.
21,3 -:- 27,3 ml.
27,3 -:- 27,8 ml.
27,8 -:- 45,8 ml.
45,8 -:- 47,7 ml.
47,7 -:- 100,0 ml.
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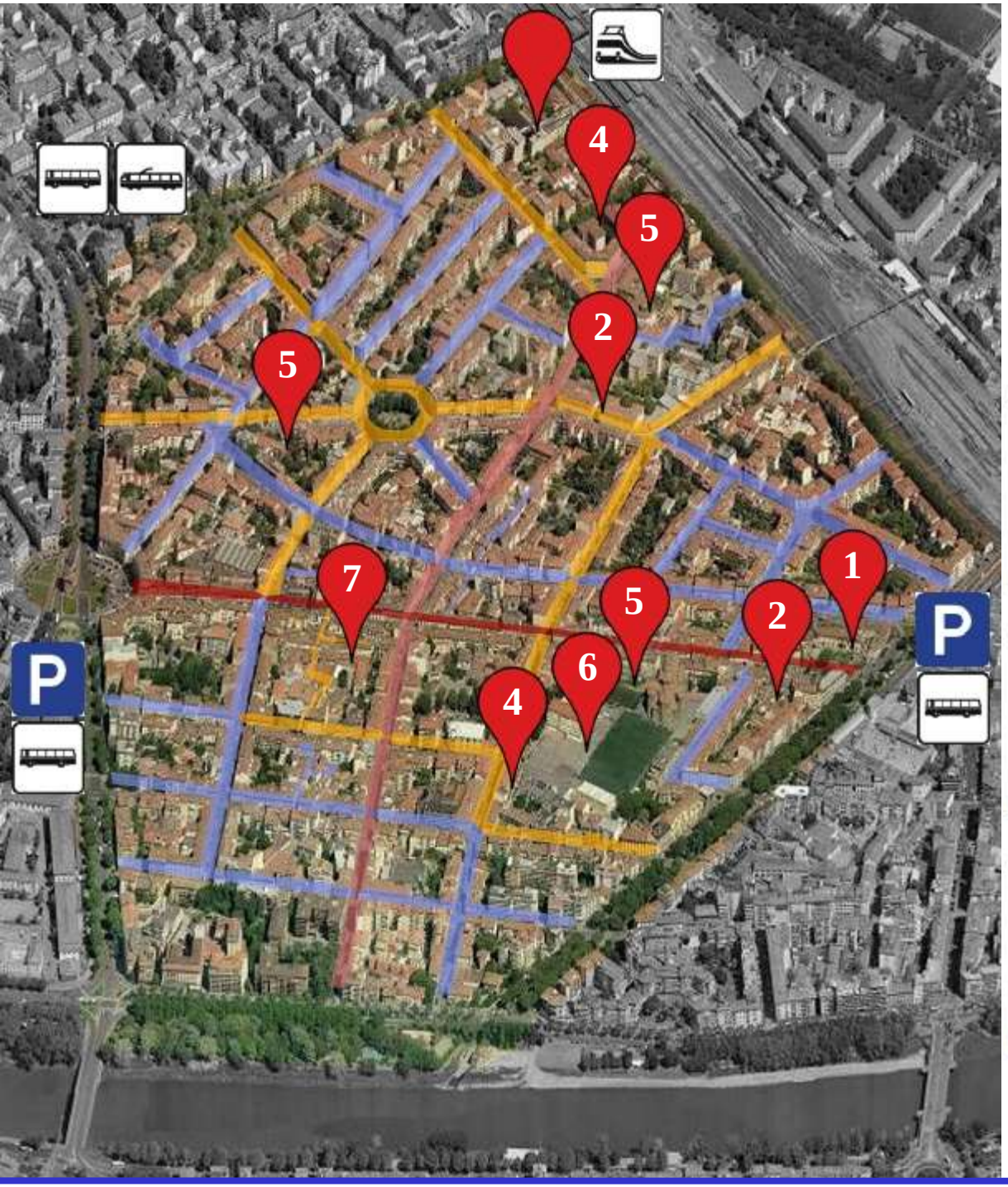
Maglia principale
Area d'esame



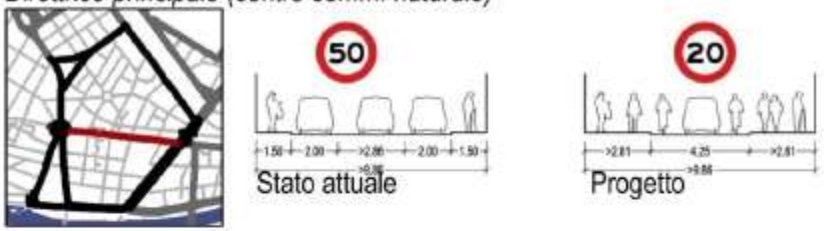
Attrezzature pubbliche

1. Sede di circoscrizione
2. Scuola elementare
3. Scuola media
4. Scuola superiore
5. Chiesa/Centro parrocchiale
6. Area sportiva
7. Centro sociale

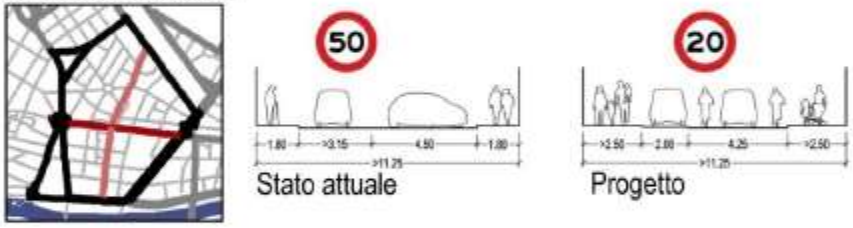
Rifunzionalizzazione della rete viaria interna all'isola ambientale campione

Strade a priorità pedonale

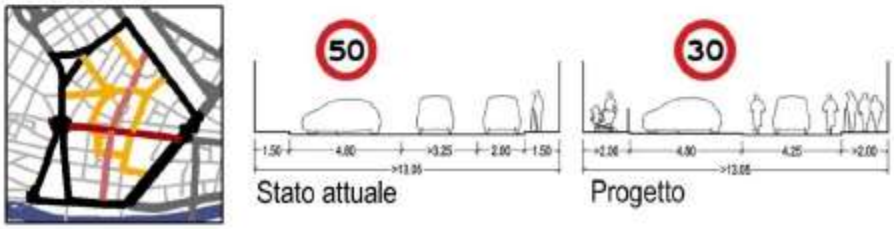
Direttrice principale (centro comm. naturale)

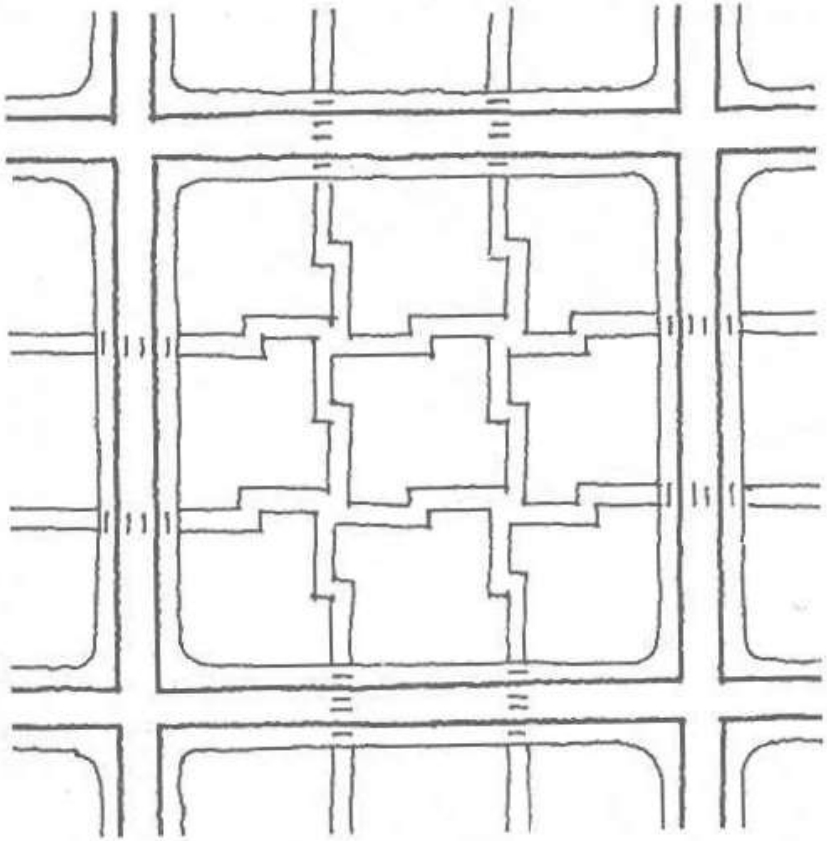


Direttrice secondaria



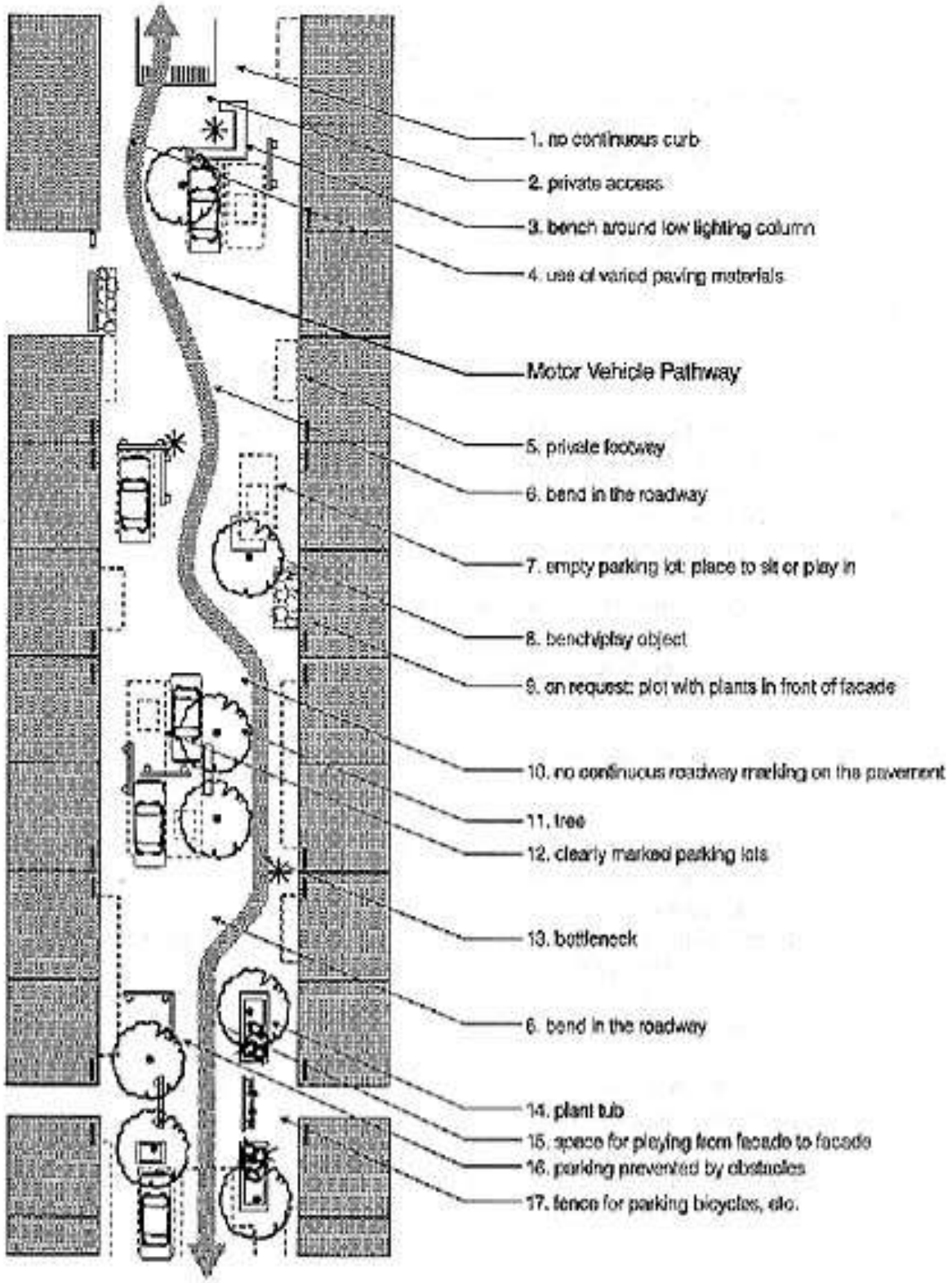
Raccordi



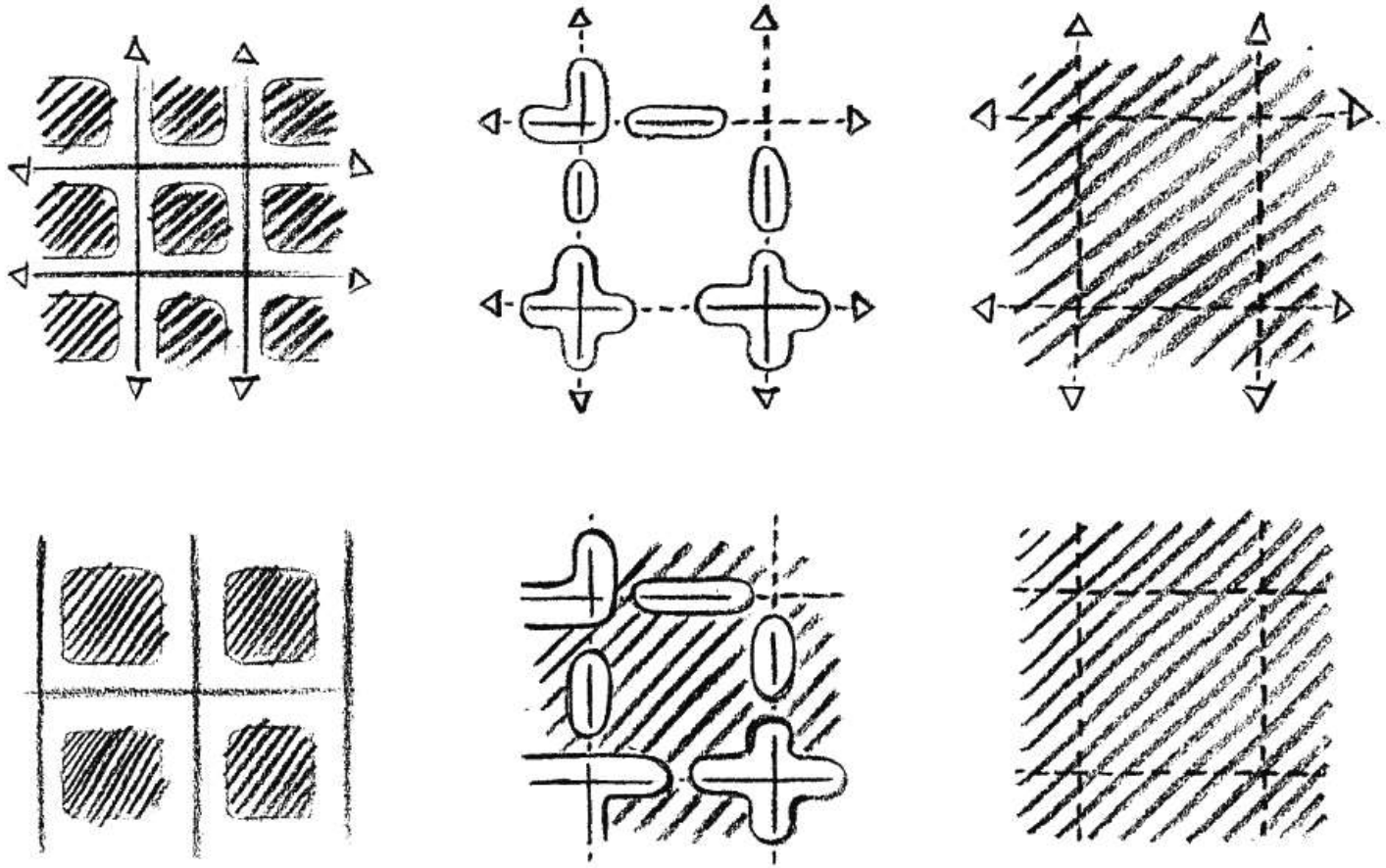


J. Gehl, il paradigma “Delft” (“woonerf” e “zone 30”: la città a misura di pedone)

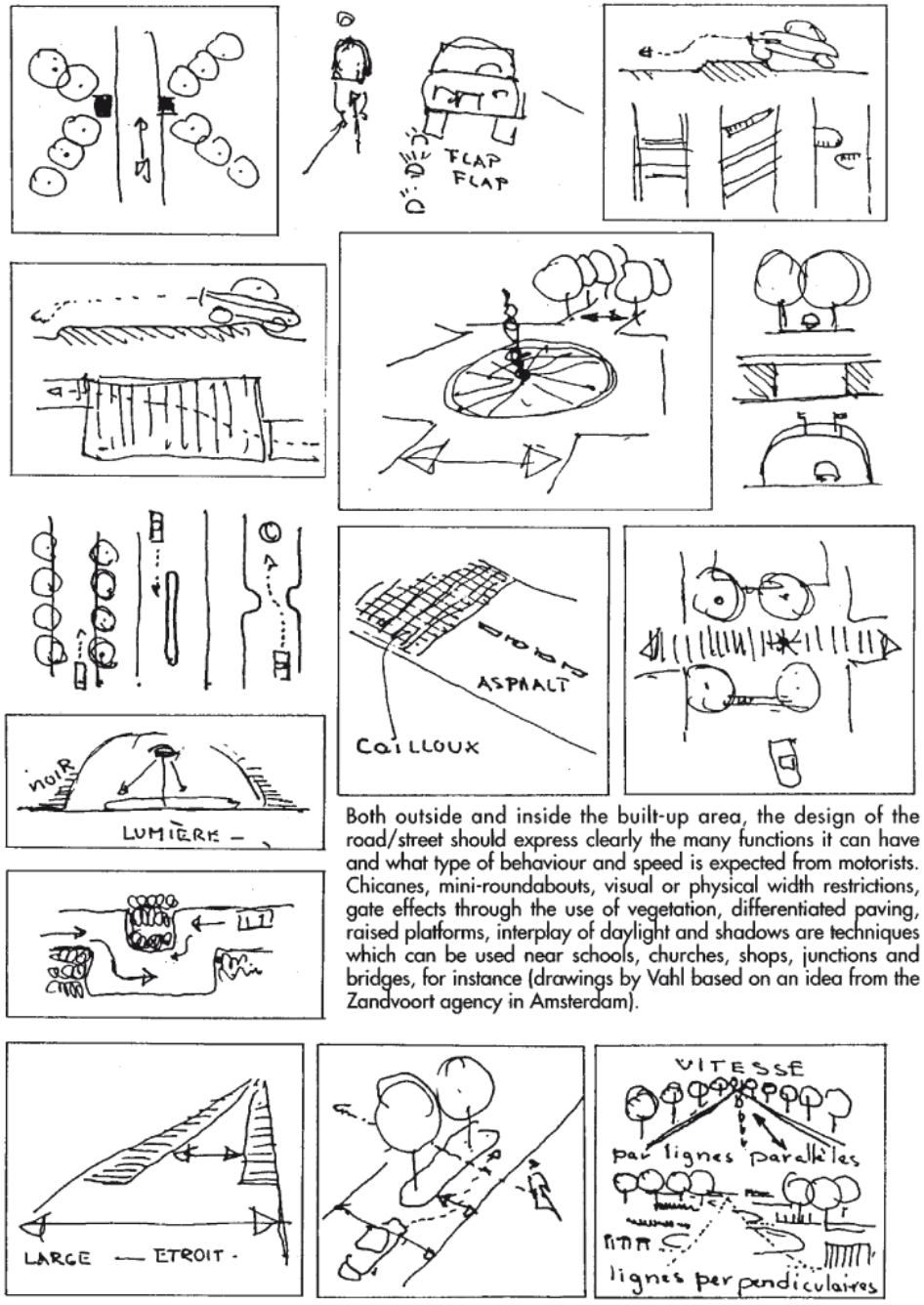
Delft, woonerf



I principi del woonerf



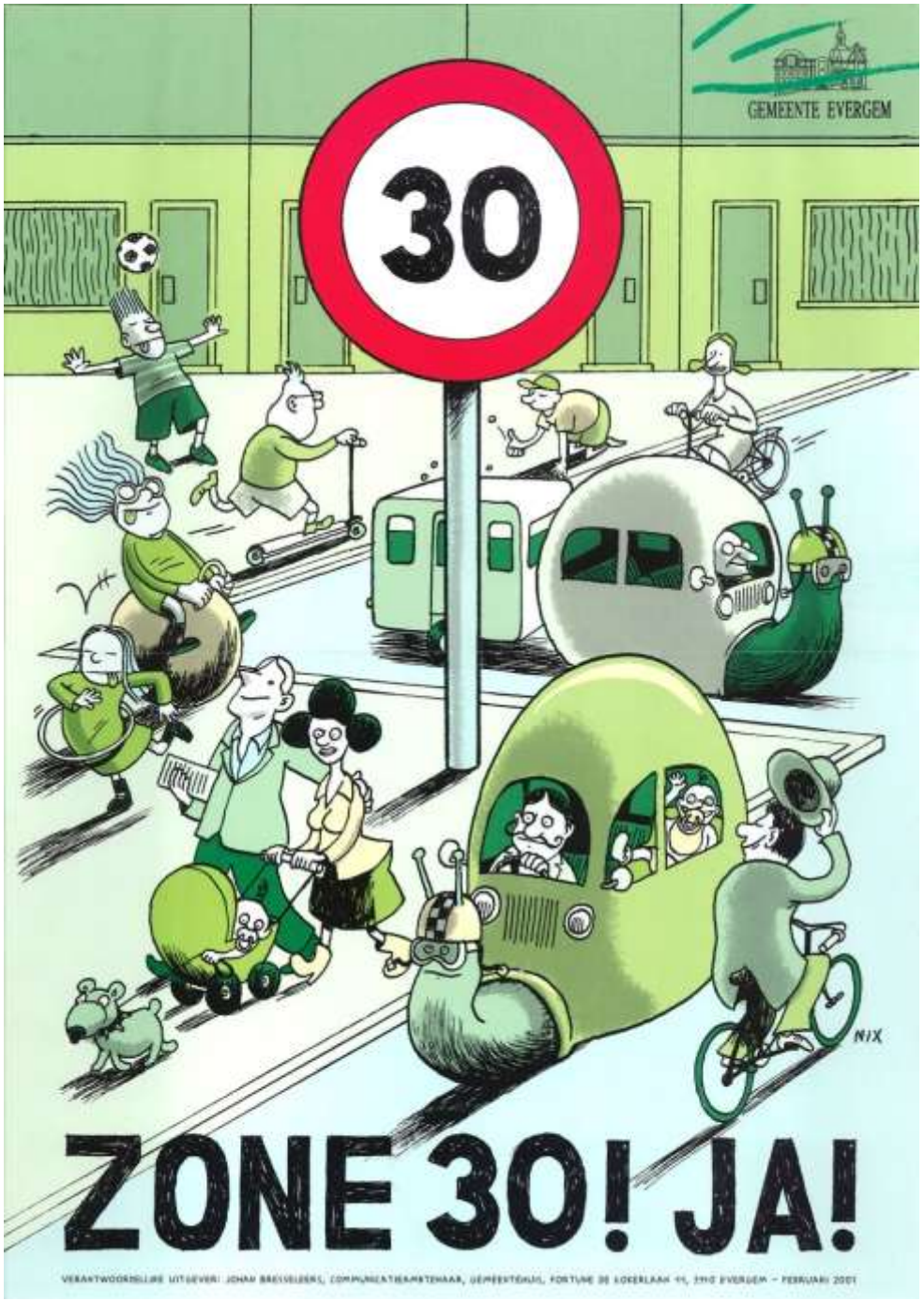
J. Vahl, dal modello “Radburn” al modello “Delft”

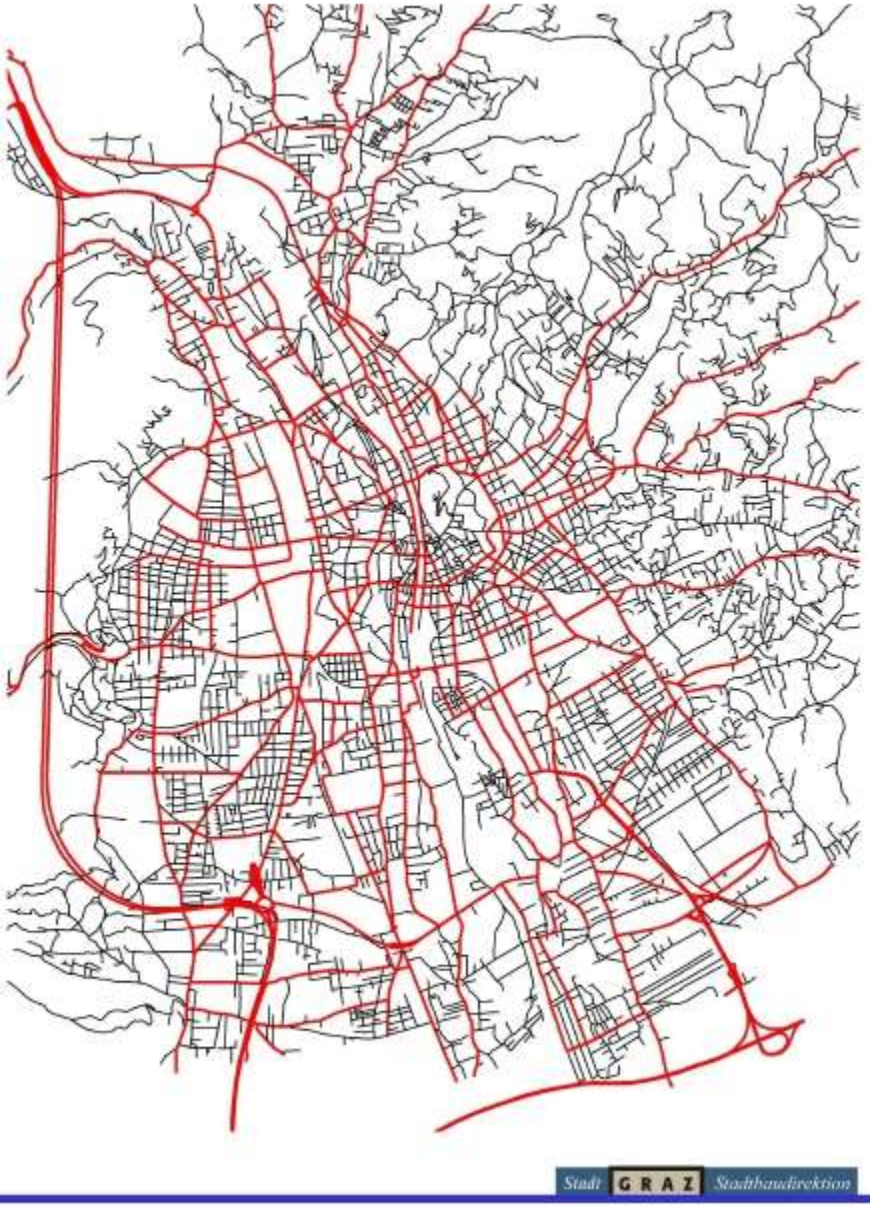


Both outside and inside the built-up area, the design of the road/street should express clearly the many functions it can have and what type of behaviour and speed is expected from motorists. Chicanes, mini-roundabouts, visual or physical width restrictions, gate effects through the use of vegetation, differentiated paving, raised platforms, interplay of daylight and shadows are techniques which can be used near schools, churches, shops, junctions and bridges, for instance (drawings by Vahl based on an idea from the Zandvoort agency in Amsterdam).

J. Vahl, studi di “traffic calming” per Culemborg


COFFEE
NOW PLAYING
WHERE THE SIDEWALK ENDS
ICE CREAM
CAUTION-PEDESTRIANS AND CHILDREN IN ROADWAY


GEMEENTE EVERGEM
30
NIX
ZONE 30! JA!



Rete stradale ~ 1056 km

Autostrade ~ 55 km

Strade principali (50 km/h)
~ 194 km

Altre strade (30 km/h) ~ 800 km

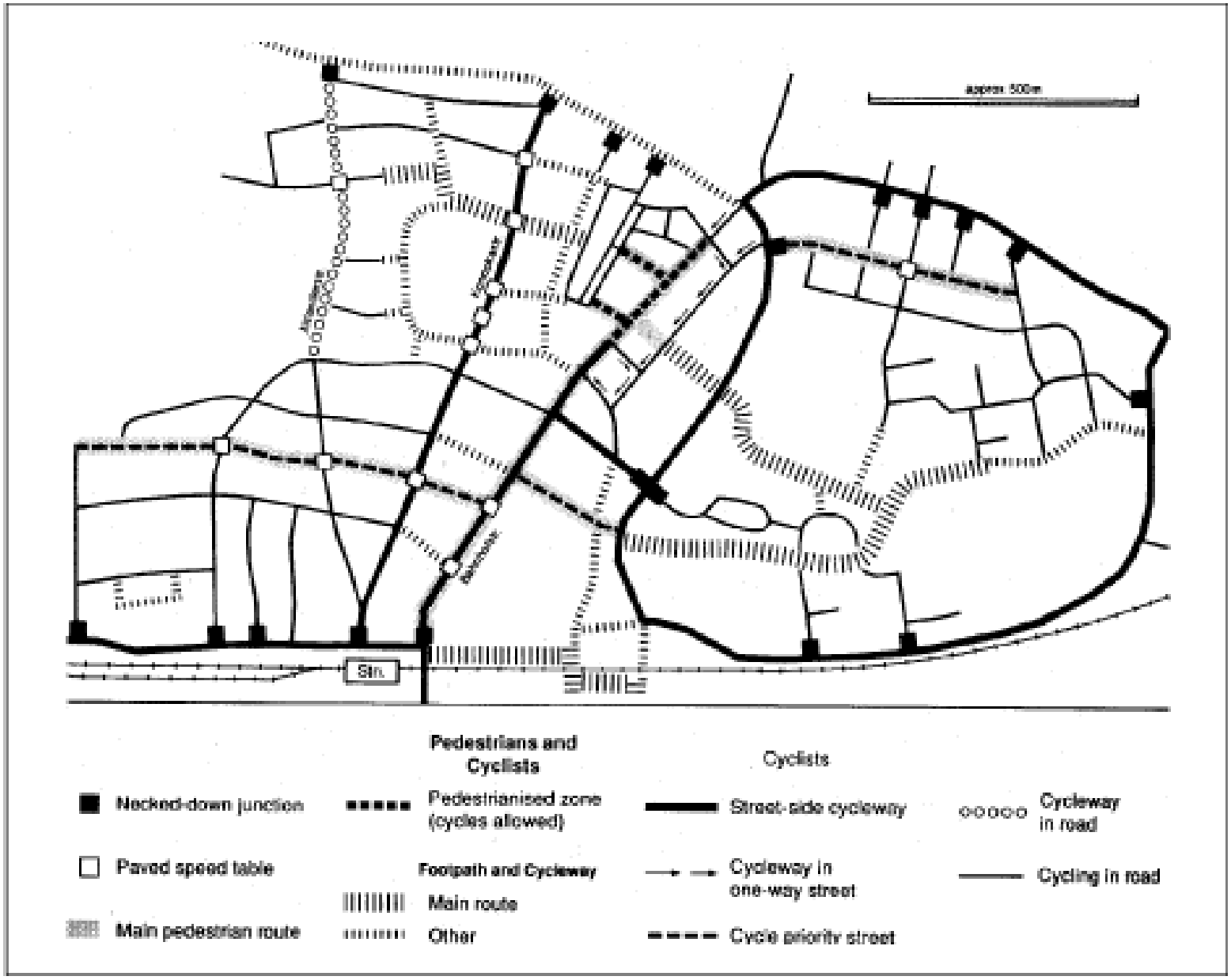
Rete del trasporto pubblico
~ 294 km

Tram ~ 49 km

Bus ~ 343 km

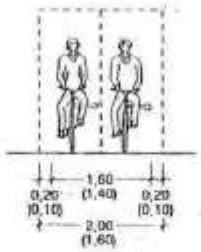
Rete ciclabile ~ 116 km

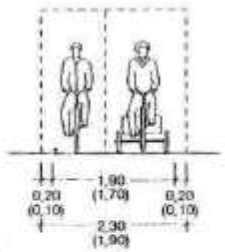
"Soft mobility" a Graz (A)

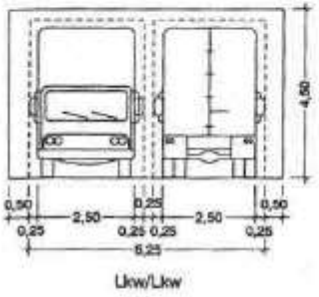


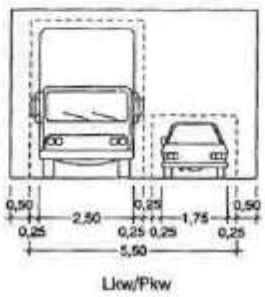
Schema della mobilità elementare in una Zona 30, Buxtehude

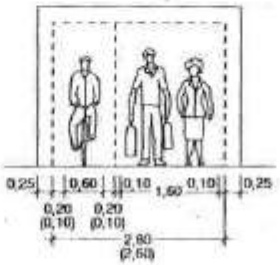
Monaco, Wohnstrasse

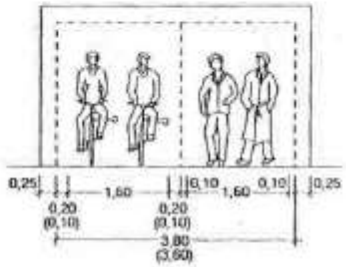


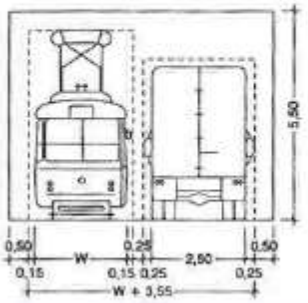


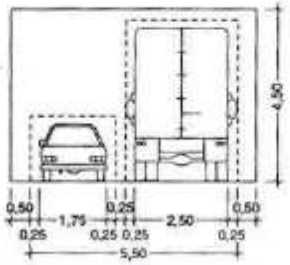


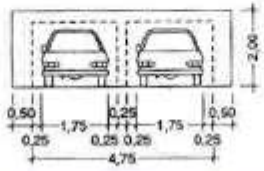


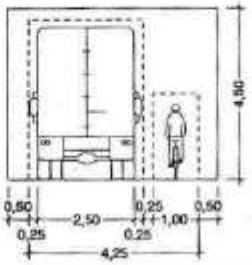


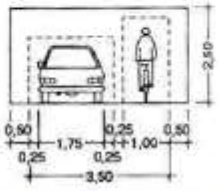












Moderazione del traffico e convivenza fra diversi utenti della strada in Germania

Statut de la zone ou de la voie	 aire piétonne	 zone de rencontre	 zone 30	 Agglomération	 section 70
Vitesse maximale	Allure du pas	20 km/h	30 km/h	50 km/h	70 km/h
Équilibre vie locale fonction circulatoire					

CERTU, articolazione tipologica delle strade in ragione del rapporto fra pedoni e autoveicoli

Code de la rue

Zone de rencontre

Sens unique limité (Double-sens cyclable)

Grenoble (F)

La zone de rencontre

Définition :
La zone de rencontre se définit sur le plan réglementaire comme une zone à priorité piétonne. Ouverte à tous les modes de circulation, les piétons peuvent s'y déplacer sur toute la largeur de la voirie en bénéficiant de la priorité sur l'ensemble des véhicules (à l'exception des tramways). Pour assurer cette cohabitation de tous les usagers, la vitesse des véhicules y est limitée à 20 km/h. De plus, sauf situation exceptionnelle, toutes les chaussées y sont à double-sens pour les cyclistes. Le stationnement des véhicules n'y est autorisé que sur les emplacements matérialisés à cet effet.

Situations types :
La zone de rencontre peut s'appliquer à différentes situations, qui ne réclameront pas le même type ni la même échelle d'aménagement.

Objectifs fondamentaux :
La zone de rencontre correspond à des espaces publics où l'on souhaite favoriser les activités urbaines et la mixité des usages sans pour autant s'affranchir du trafic motorisé. L'objectif est de permettre la cohabitation des piétons avec les véhicules à faible vitesse. Ce mode de fonctionnement repose sur le respect du principe de prudence (art. R. 412-6 du Code de la route) : l'usager le plus protégé doit faire preuve d'une attention accrue à l'égard de l'usager plus vulnérable. À 20 km/h, les conflits se gèrent non pas par un rapport de force, mais par une relation de convivialité au bénéfice du piéton et des personnes à mobilité réduite.

Dans les rues résidentielles, lorsque le quartier est peu perméable aux déplacements du reste de l'agglomération, la zone de rencontre permet d'aménager des espaces publics plus conviviaux.

La zone de rencontre dans les quartiers historiques permet de maintenir une desserte automobile et des possibilités de stationnement tout en privilégiant la déambulation du piéton.

La zone de rencontre permet d'organiser la cohabitation sur des espaces publics complexes : places générant des flux piétons multiples, traversées par des véhicules motorisés et des transports publics.

Les lieux de correspondance (centre d'échange, grand parvis de gare, etc.) génèrent une forte affluence piétonne et une complexité de cheminements qui les prédisposent à être gérés par une zone de rencontre.

Lorsqu'une aire piétonne doit être interrompue pour laisser passer le transit des véhicules motorisés, la zone de rencontre permet d'accorder clairement la priorité aux piétons.

La zone de rencontre est adaptée aux rues commerçantes où l'on cherche à concilier fréquentation piétonne et circulation des véhicules motorisés

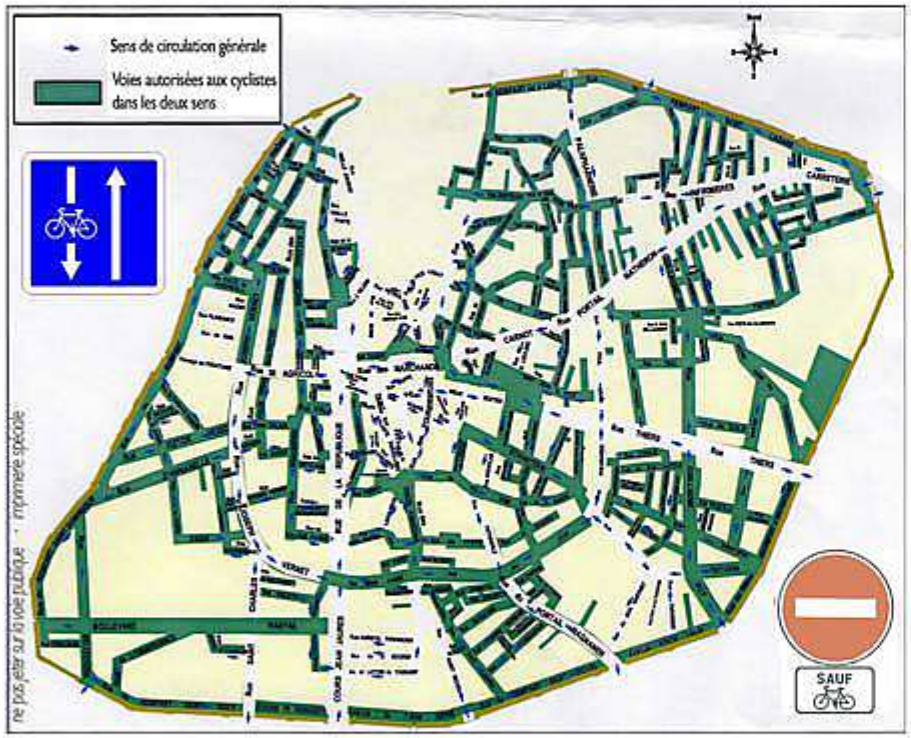
La zone de rencontre peut s'appliquer aux rues trop étroites pour disposer de trottoirs assez larges pour respecter les règles d'accessibilité.

A l'intérieur de zones 30, la zone de rencontre peut s'appliquer à des lieux de conflits entre piétons et autres usagers et où l'on souhaite accorder la priorité aux piétons

1ER JUILLET 2010 : L'INTRA-MUROS D'AVIGNON DEVIENT UNE

ZONE DE RENCONTRE

les principes d'une zone de rencontre:
- vitesse limitée à 20 km/h pour tous les usagers
- priorité absolue aux usagers les plus vulnérables: piétons, puis cyclistes
- mise en place de doubles sens cyclables



pour favoriser l'habitat, le commerce, le tourisme,
pour un nouvel esprit de convivialité sur la chaussée,
pour une circulation apaisée et un meilleur cadre de vie,
pour une vraie mixité piétons, cyclistes, véhicules motorisés,

PARTAGEONS LA VILLE...

Avignon à vélo association loi 1901
avignonavelo@laposte.net http://avignonavelo.free.fr

PARTAGEONS LA VILLE

LES DROITS ET LES DEVOIRS DE CHAQUE USAGER EN ZONE DE RENCONTRE :

PIÉTONS :



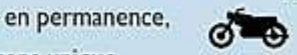
- Vous êtes prioritaires,
- Vous pouvez circuler sur la chaussée sans y stationner,
- Dans les rues à sens unique, faites attention aux cyclistes arrivant à contre-sens de la circulation.

CYCLISTES :

- Votre vitesse est limitée à 20 km/h et vous devez céder la priorité aux piétons en permanence,
- Vous pouvez prendre à contre-sens les rues à sens unique (en roulant à droite) sauf si la signalisation l'interdit (absence de la mention «sauf vélos» sous le panneau sens interdit).

VÉHICULES MOTORISÉS :



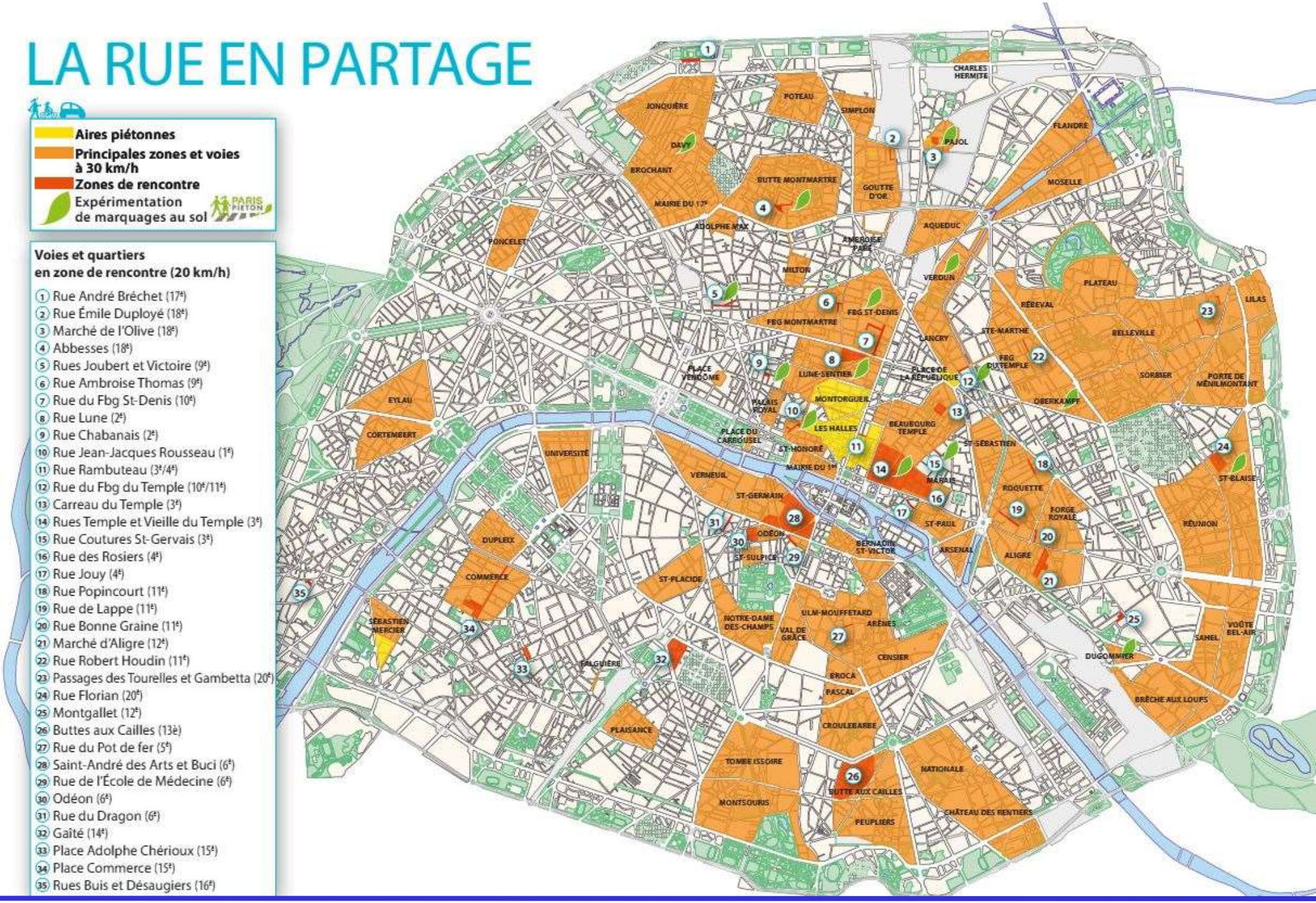




- Votre vitesse est limitée à 20 km/h et vous devez céder la priorité aux piétons en permanence,
- Faites preuve de prudence dans les rues en sens unique car vous pouvez rencontrer des cyclistes arrivant à contre- sens,
- Respectez une distance latérale minimum de 1 mètre pour doubler un cycliste (règle applicable dans toute agglomération),
- Patientez derrière le cycliste dans une rue étroite et doublez lorsque la rue s'élargit,
- Stationnez UNIQUEMENT dans les emplacements aménagés et indiqués.

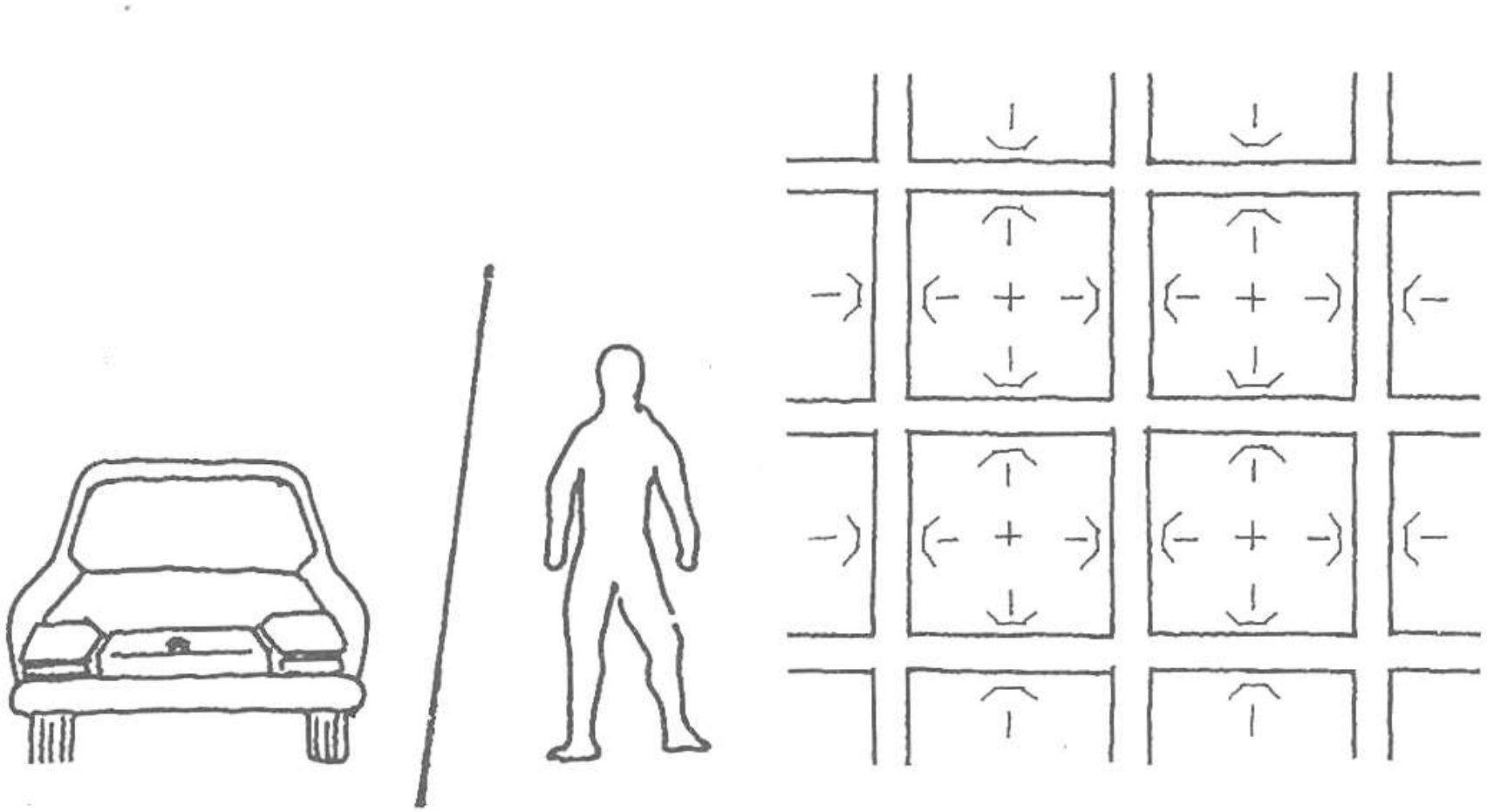
RESTONS COURTOIS ET RESPECTUEUX DES AUTRES

Le regole della "Zone de rencontre" ad Avignone

LA RUE EN PARTAGE

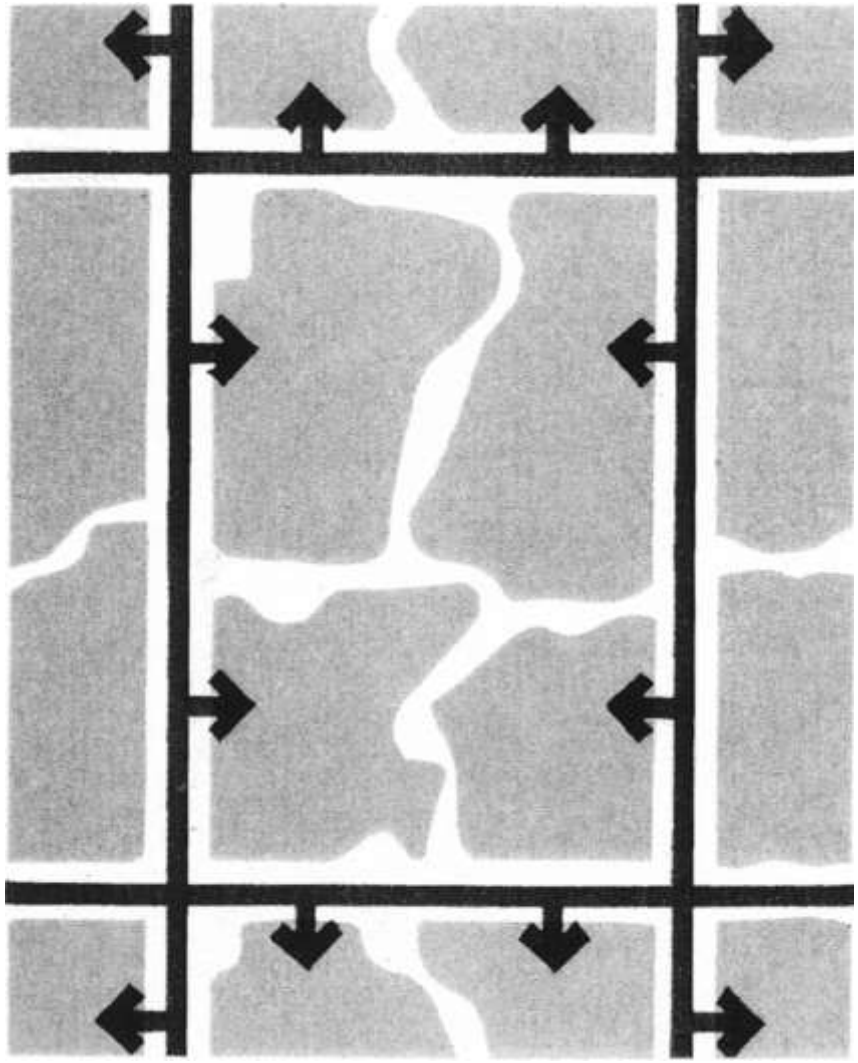


Zone 30 e “Zones de rencontre” a Parigi

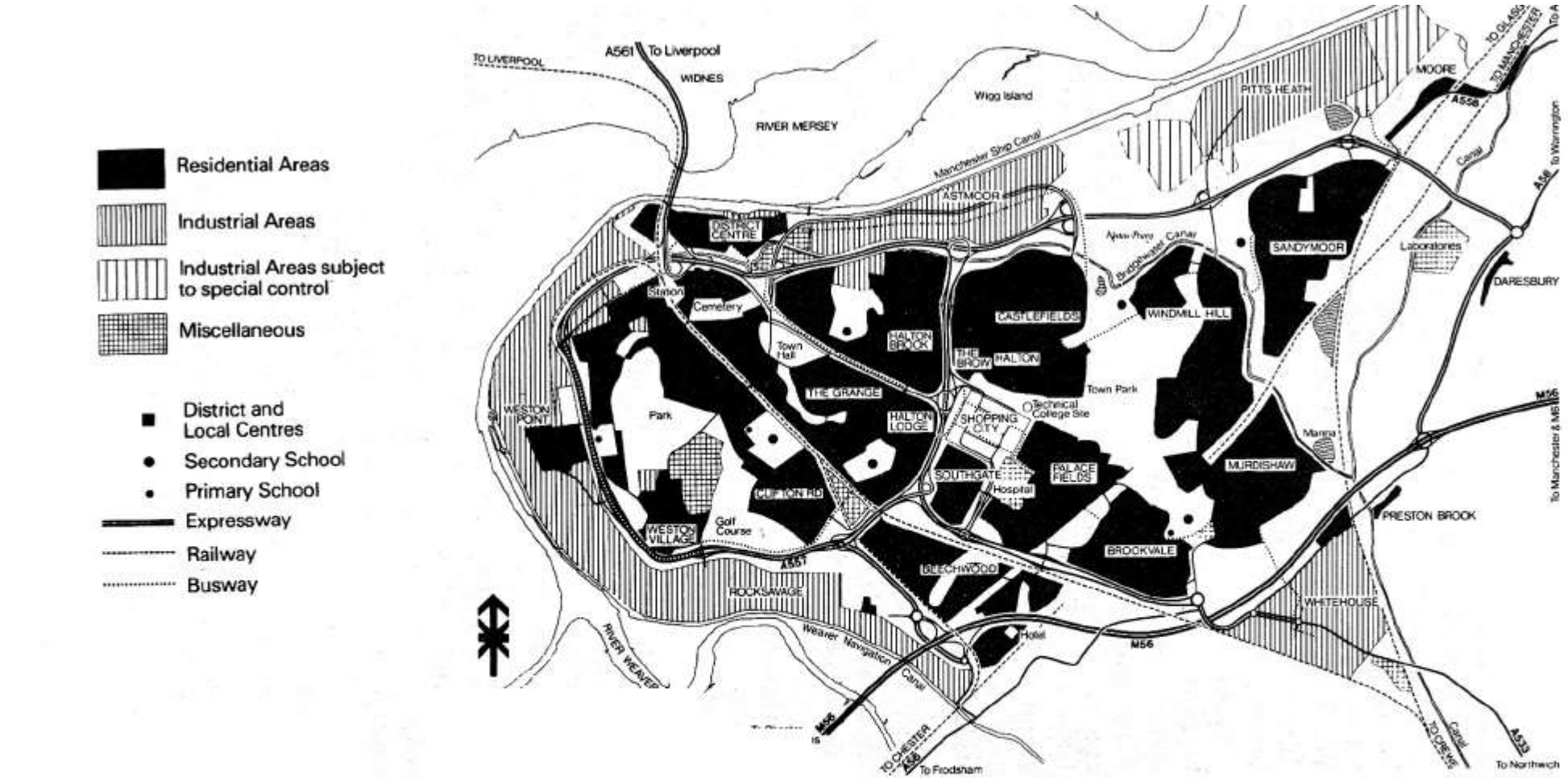


J. Gehl: il paradigma “Radburn” (“Aree ambientali”: accessibilità e qualità urbana)

Environmental area

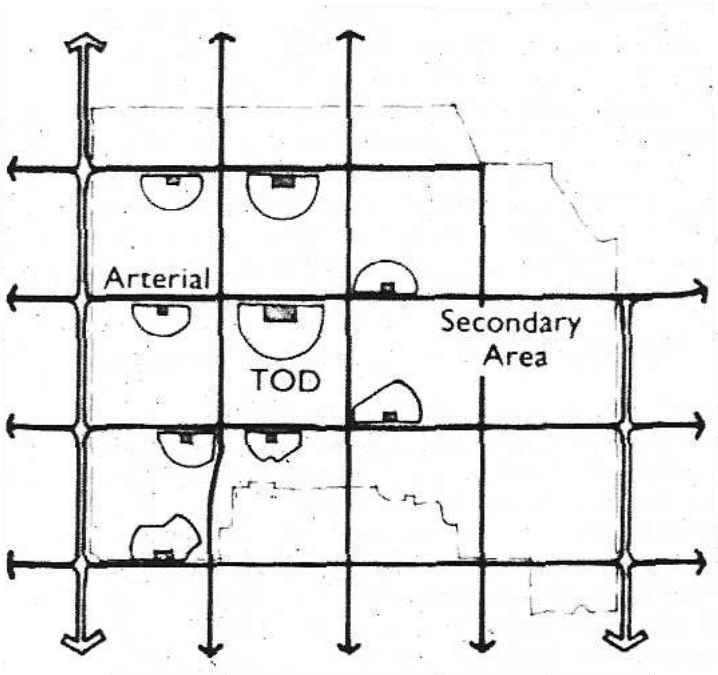


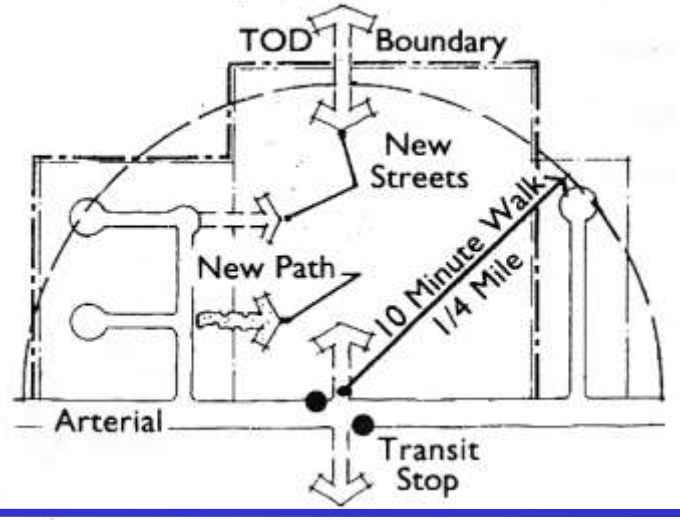
C. Stein, Radburn, NY, 1929

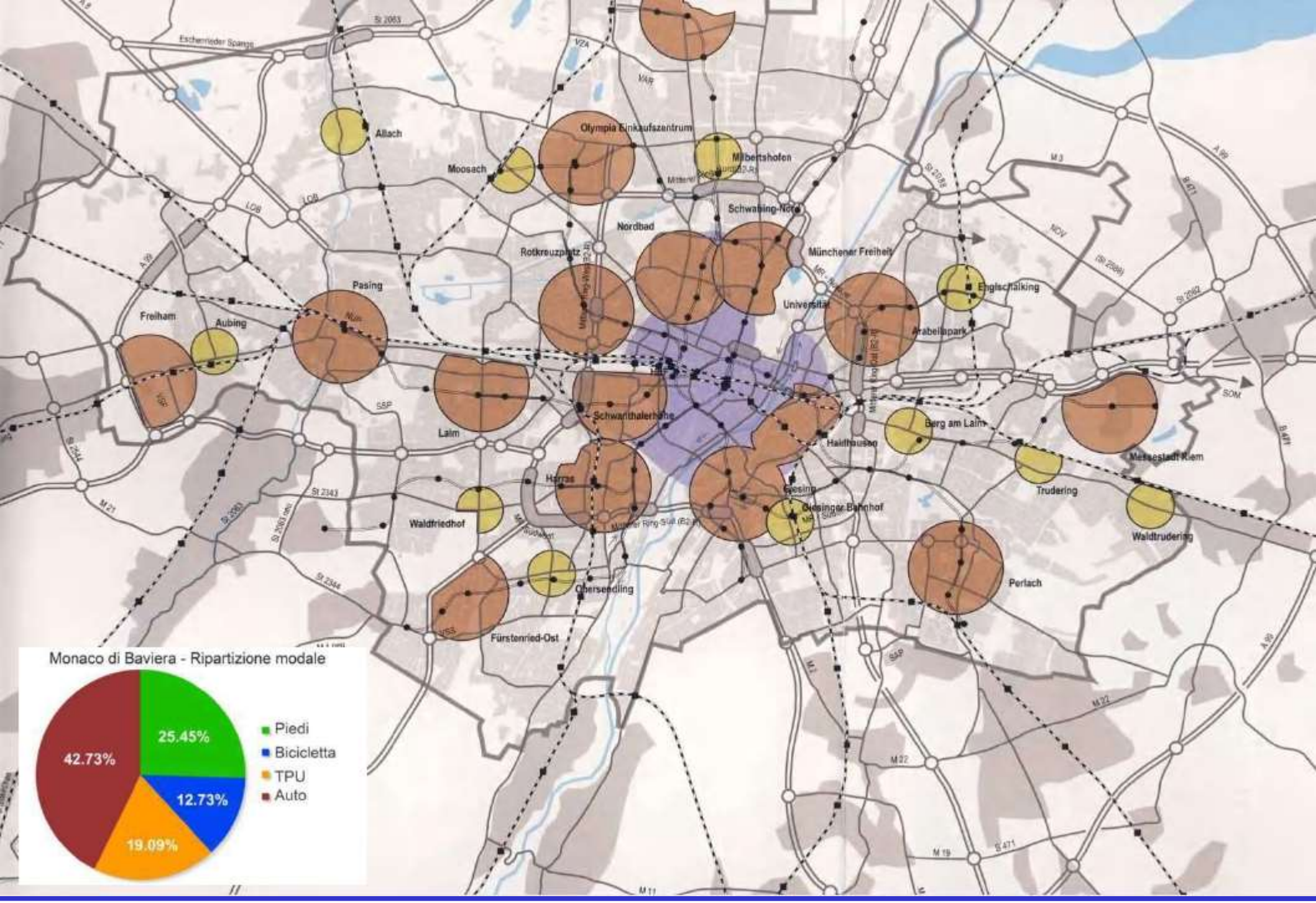


Runcorn New Town, 1964

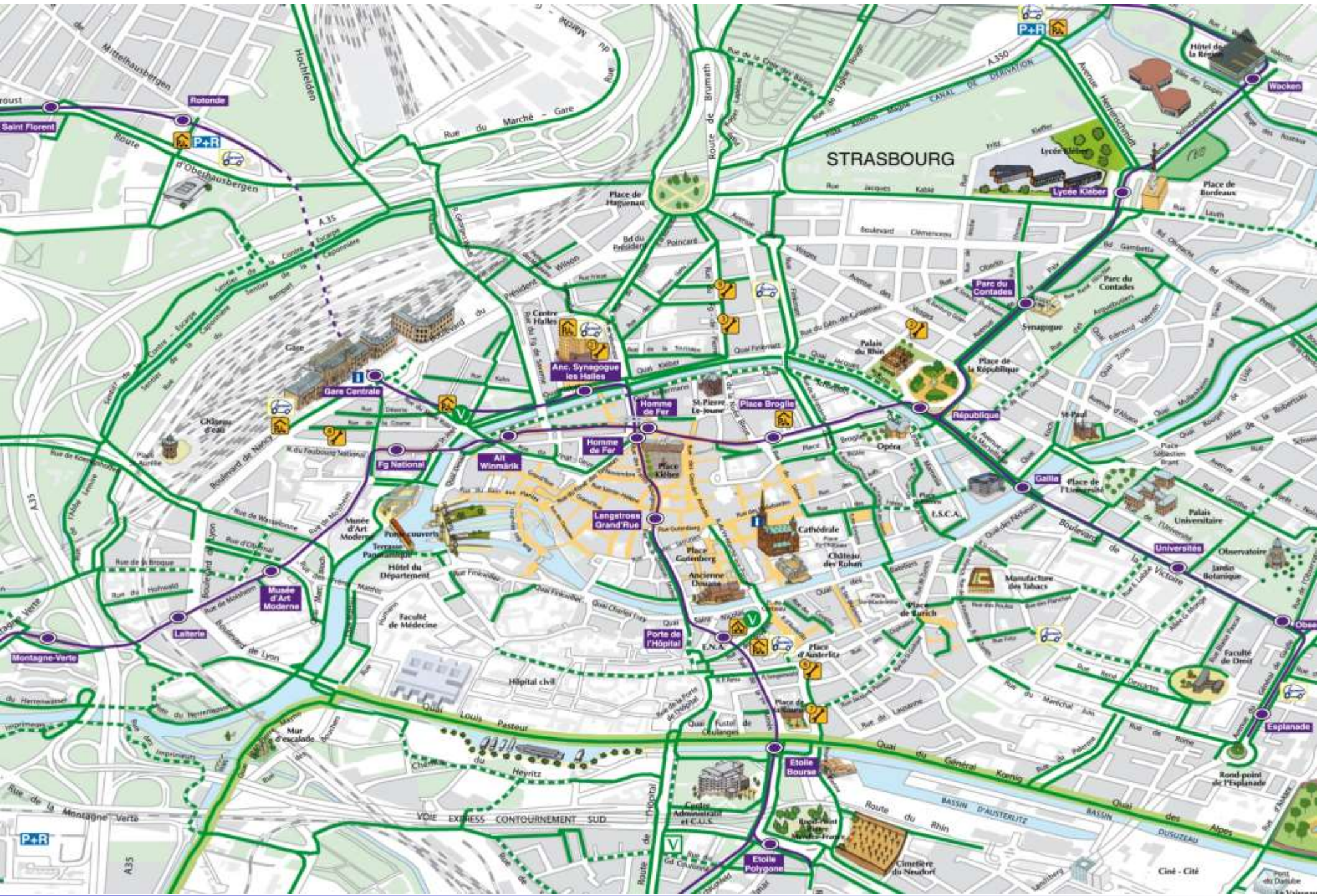
TOD
(Transit oriented developement)







Monaco di Baviera, centralità urbane con aree pedonali servite dal trasporto pubblico



Strasburgo, sistema dell'accessibilità

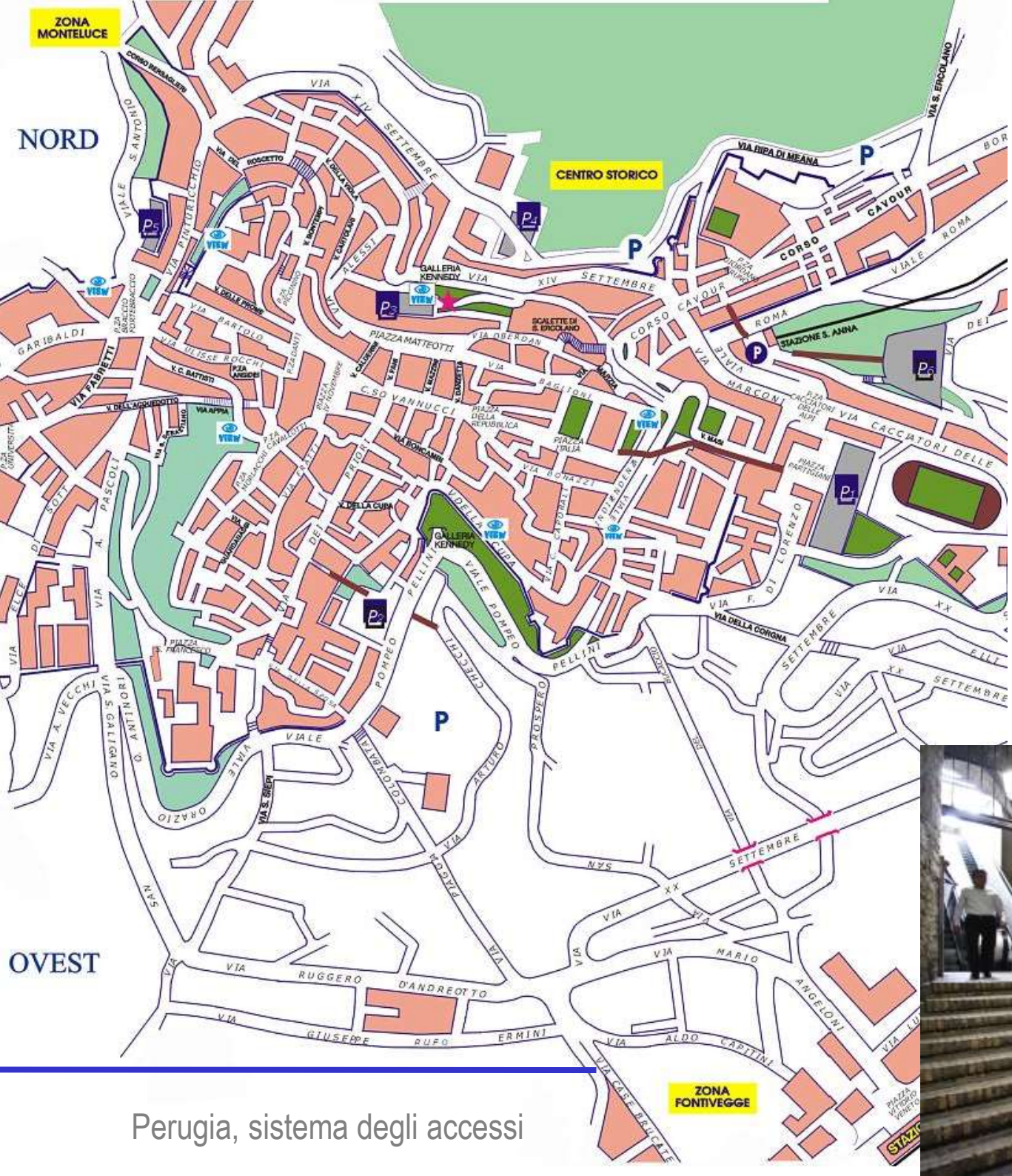
G. Clapot, Place de l'Homme de Fer, Stasburgo

Perugia, scale mobili

Spoleto, scale mobili
e tapis roulant

Lerida (E), ascensore

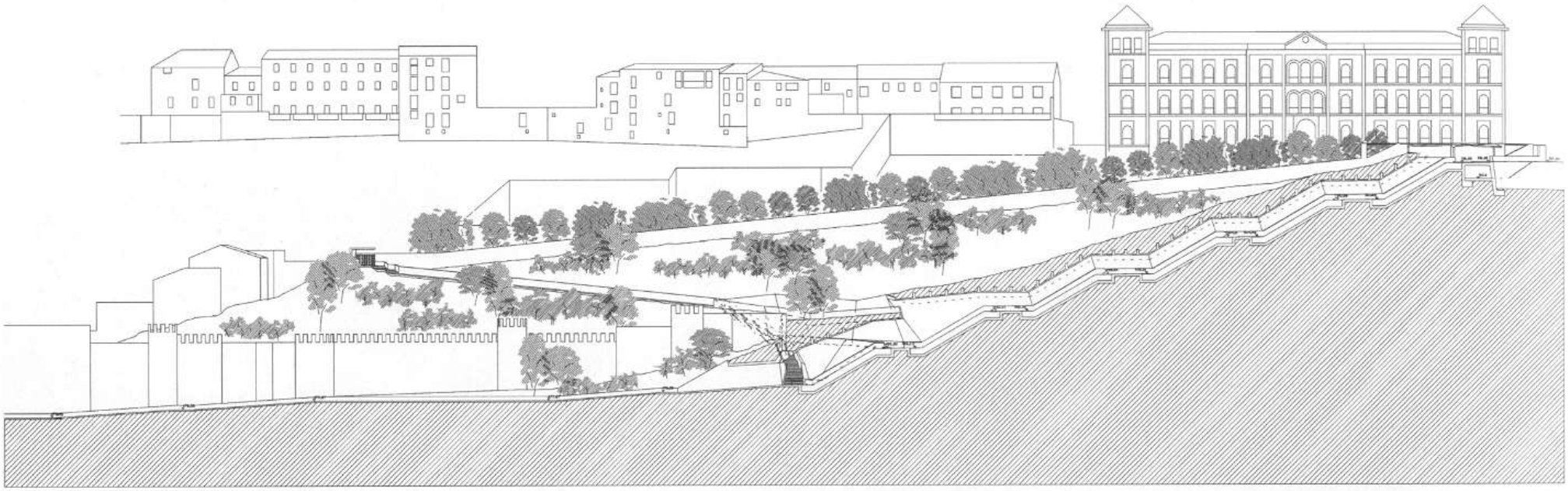
Perugia, Spoleto, Lerida



Perugia, sistema degli accessi

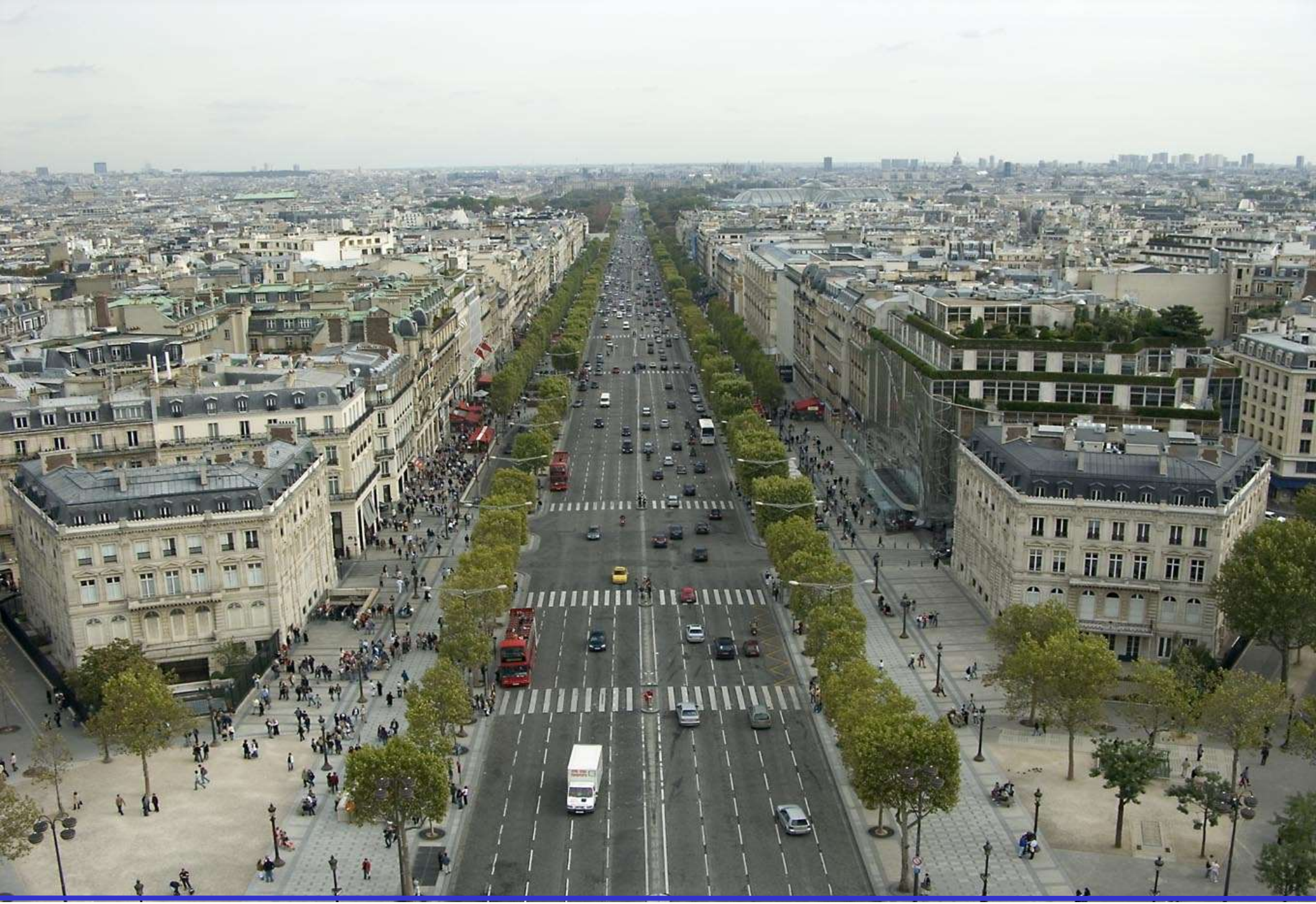
Perugia, sistema degli accessi

J.A. Martinez Lapeña, E. Torres Tur, Percorso meccanizzato, Toledo 1997-2000



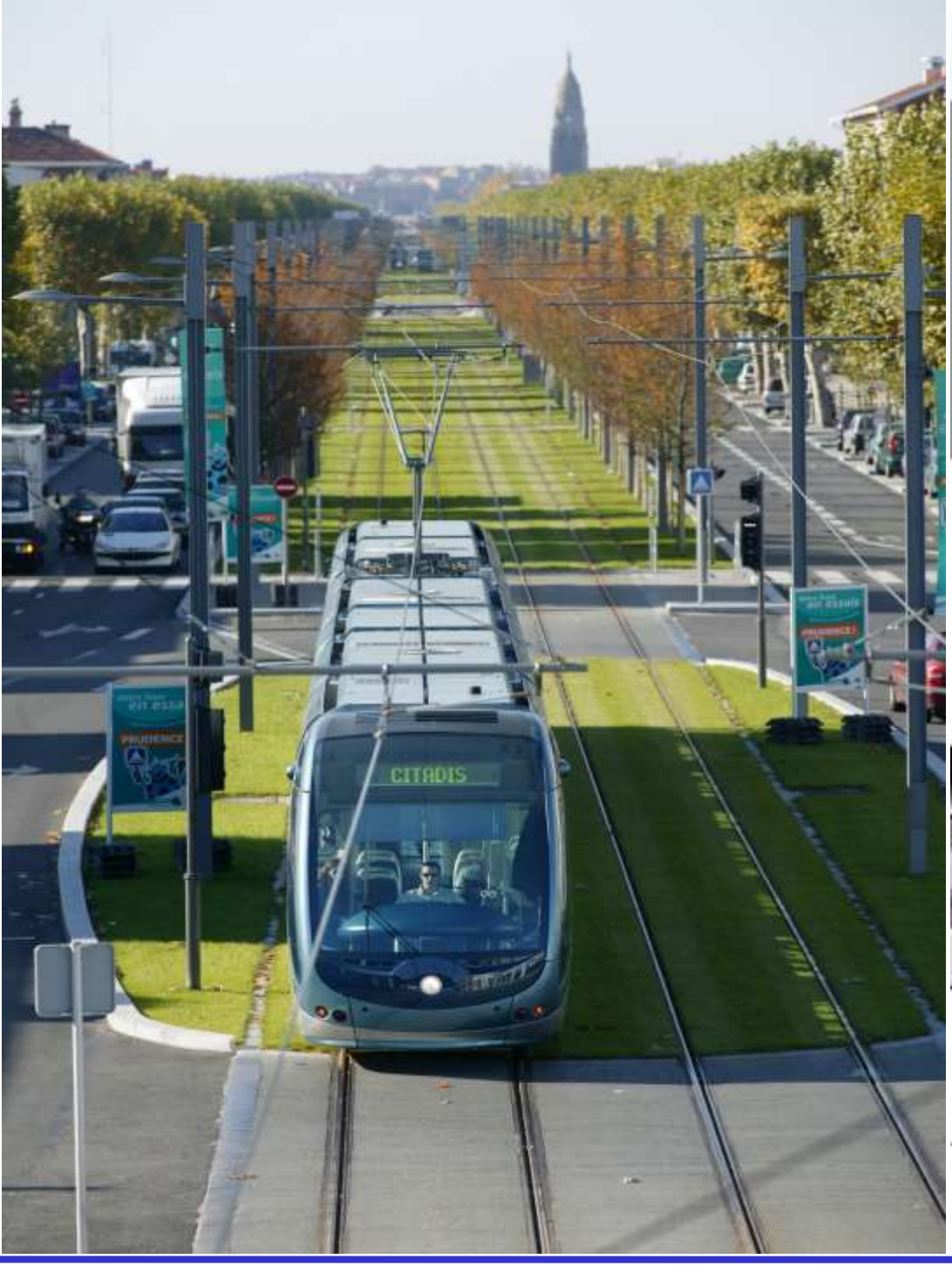
J.A. Martinez Lapeña, E. Torres Tur, Percorso meccanizzato, Toledo 1997-2000

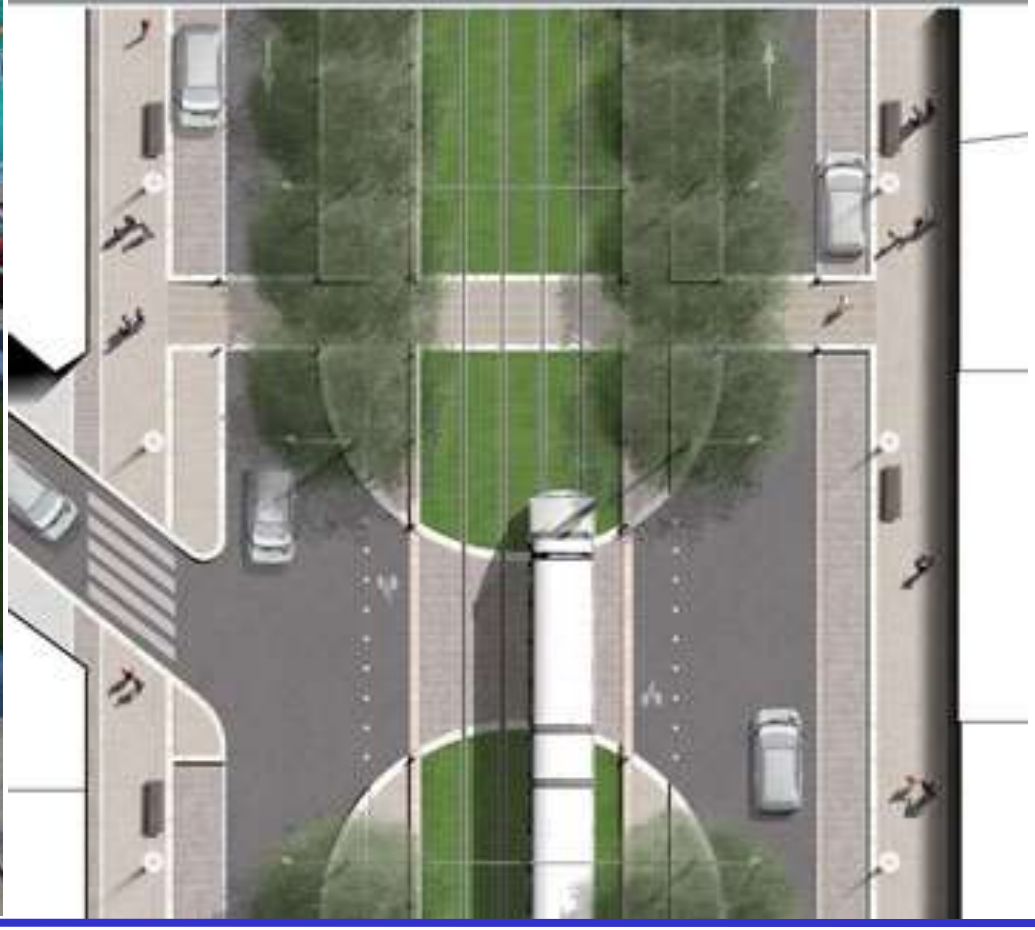
Arterie urbane
a “rendimento sociale”:
boulevards e rondas



B. Huet, riqualificazione urbana degli Champs Elysées, 1989-1993

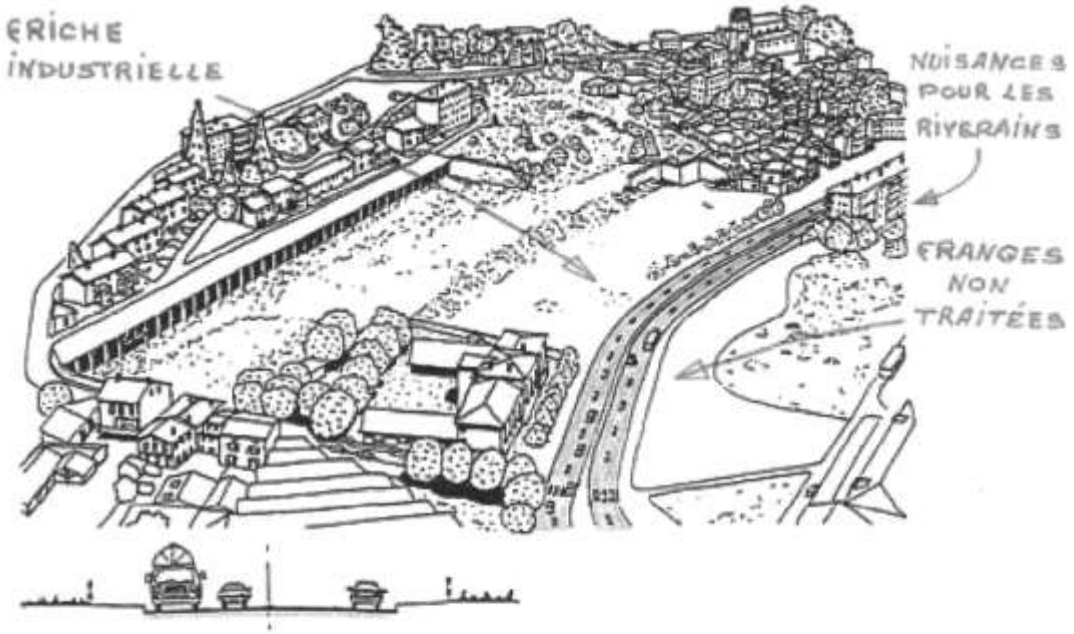
B. Huet, riqualificazione urbana degli Champs Elysées, 1989-1993



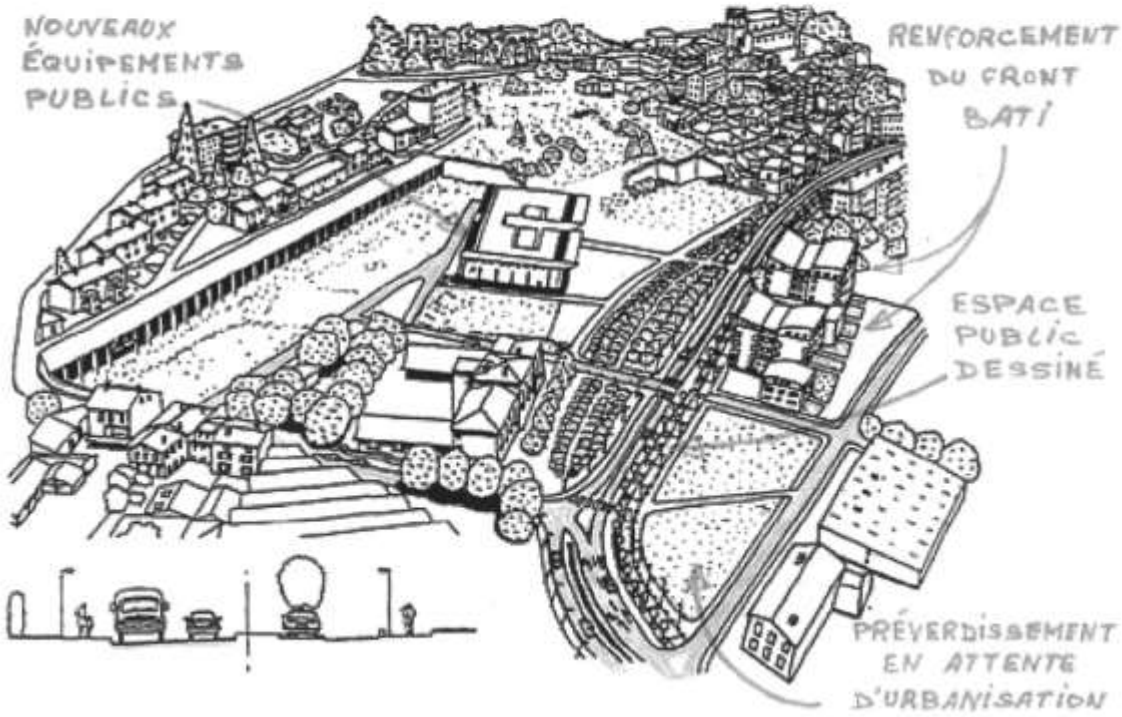


Nuovi boulevard a Bordeaux e Le Mans

PRIMA

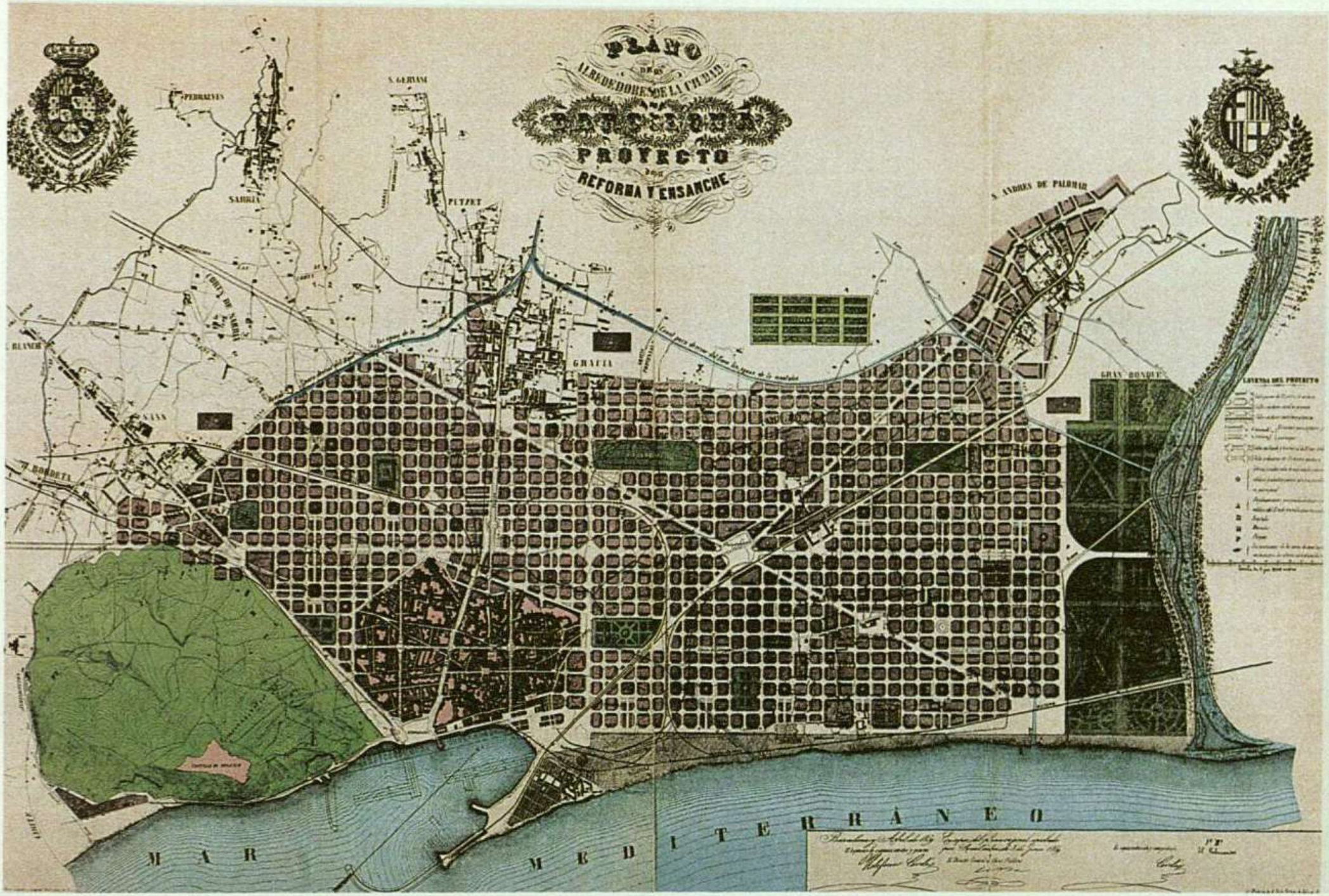


DOPO

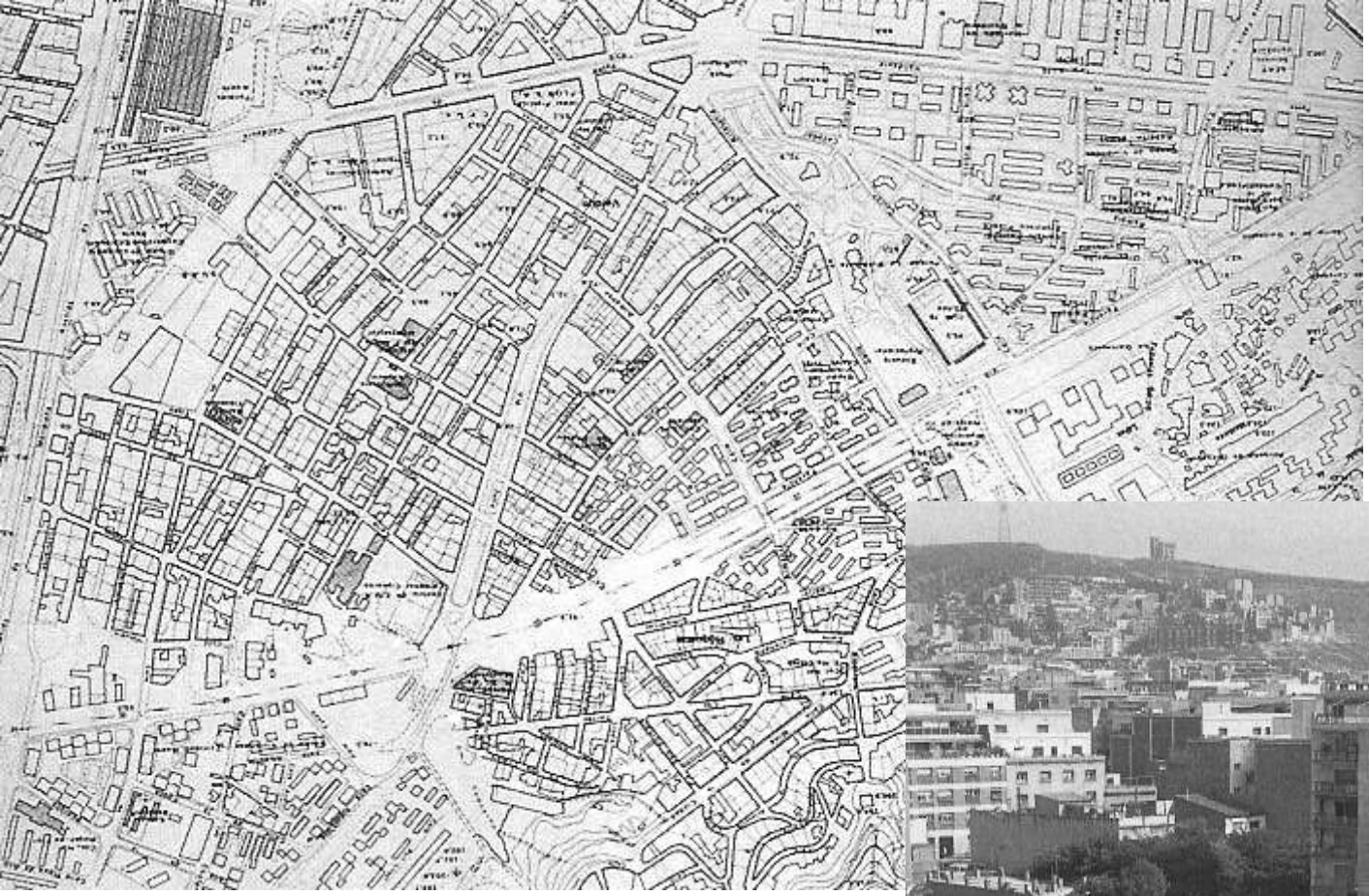


CERTU, **Les boulevards urbains**, 1998

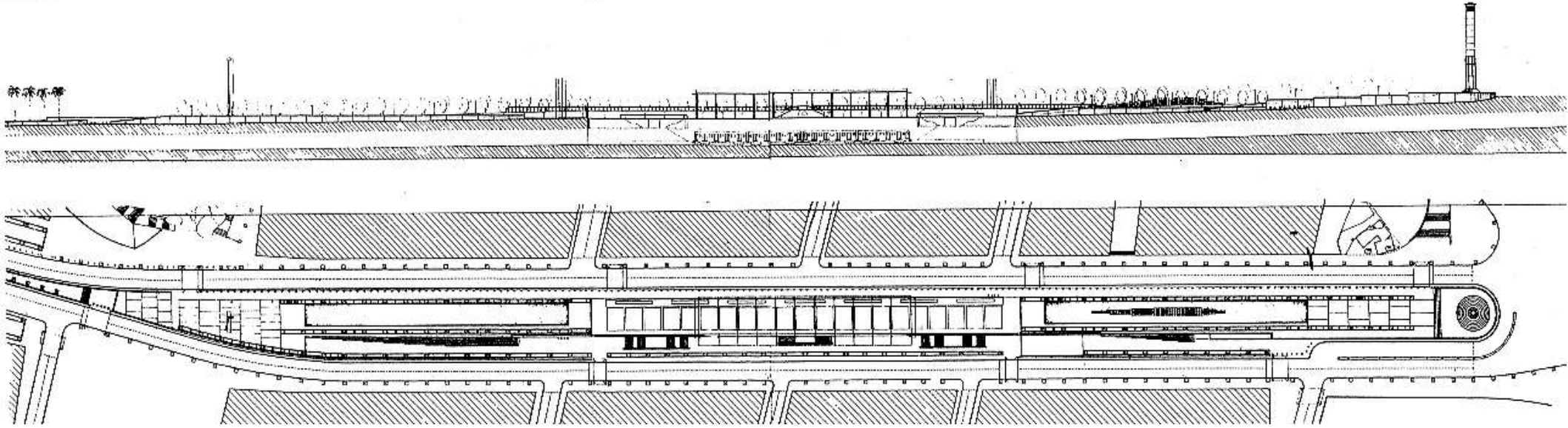
Barcellona



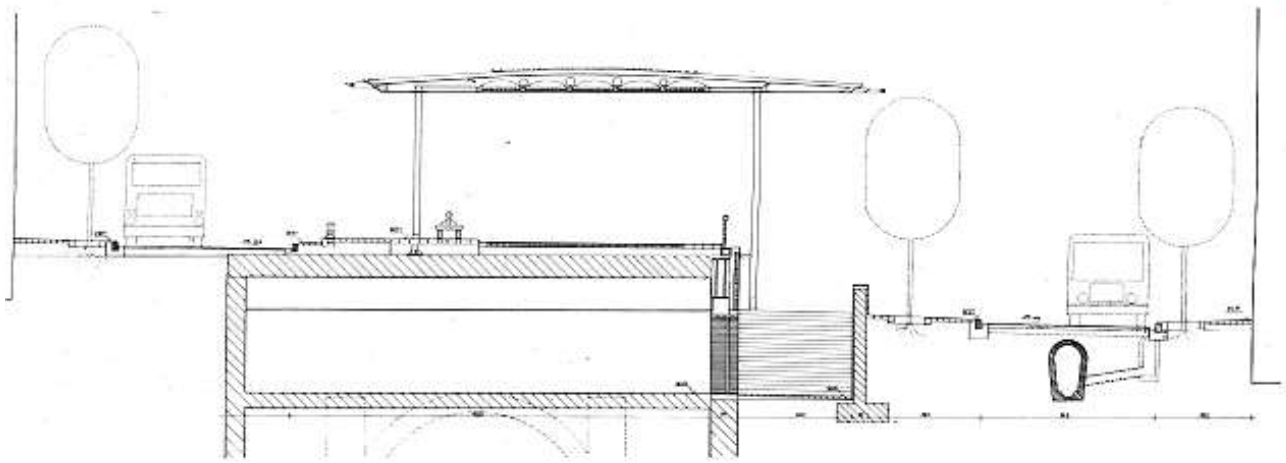
I. Cerdà, Piano di Barcellona (1855-1863)

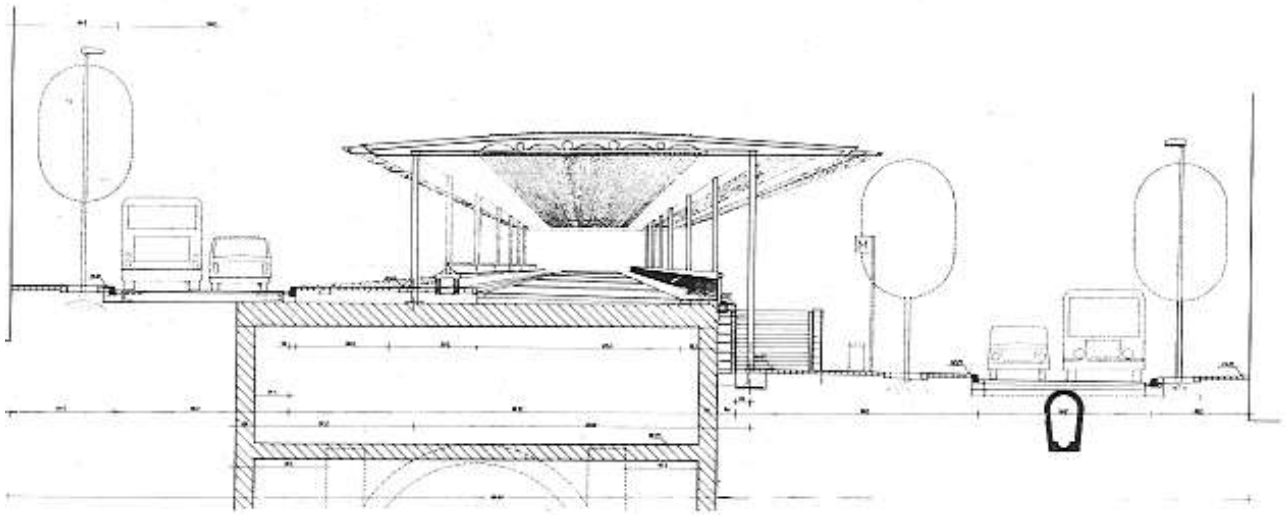


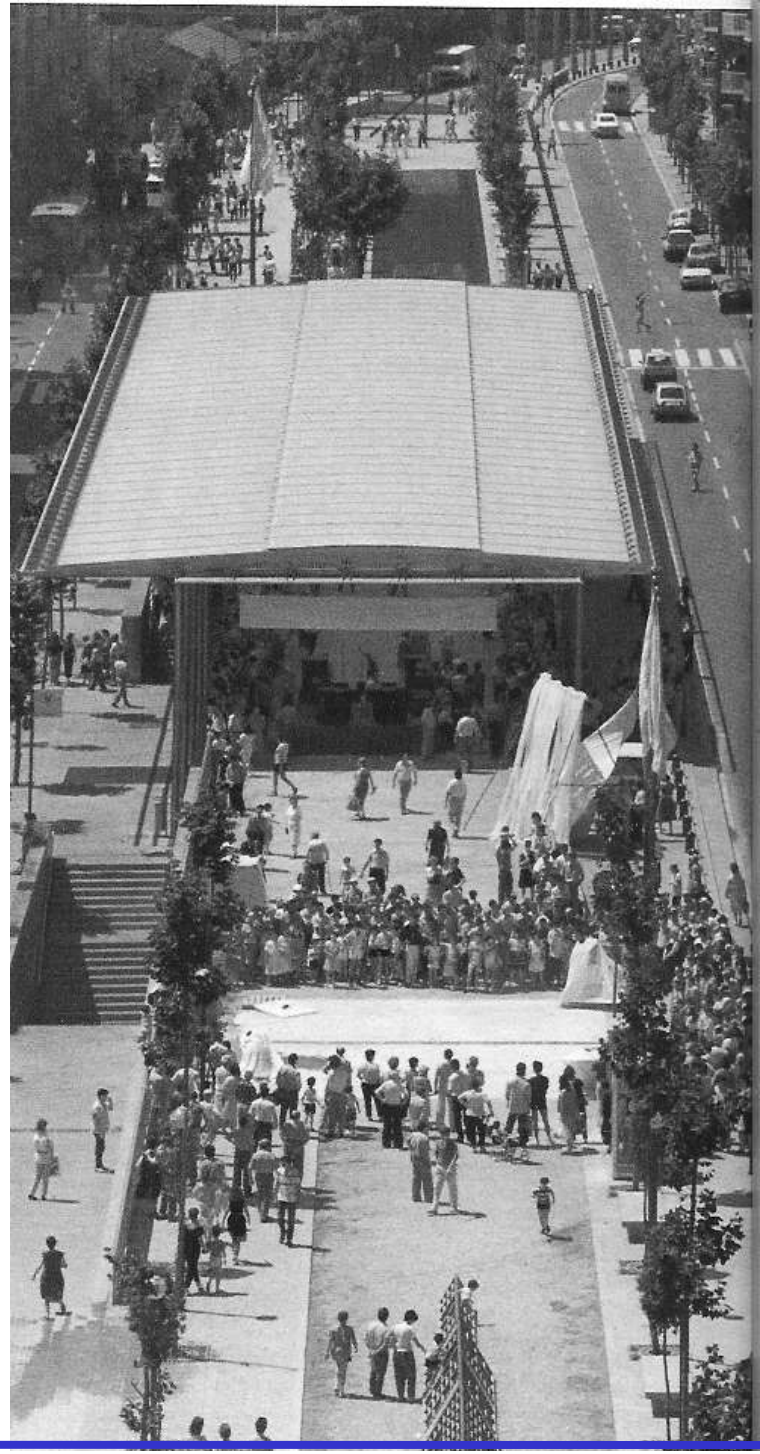
Barcellona, Via Julia, 1980



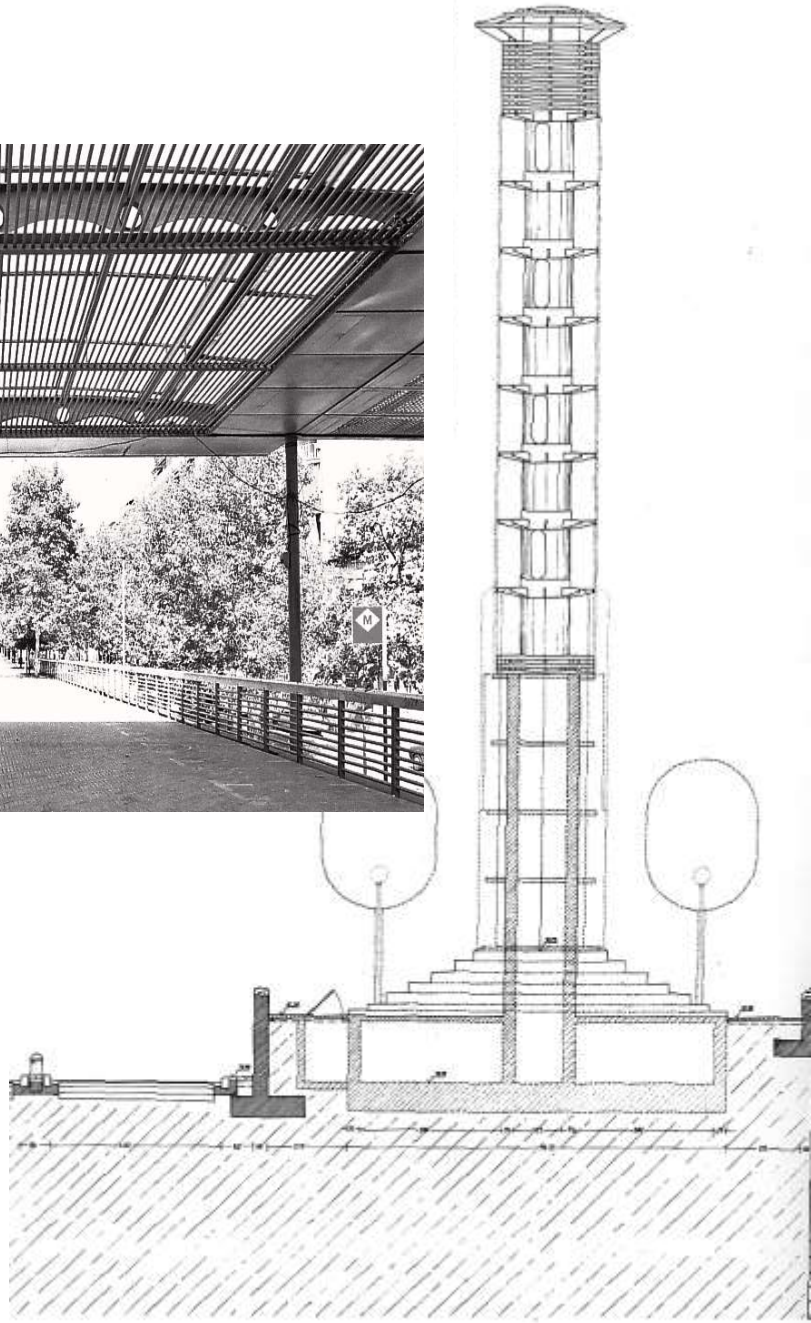
B. de Sola, P. Barragan, J. M. Jùlia, Via Julia, Barcellona 1982-1986







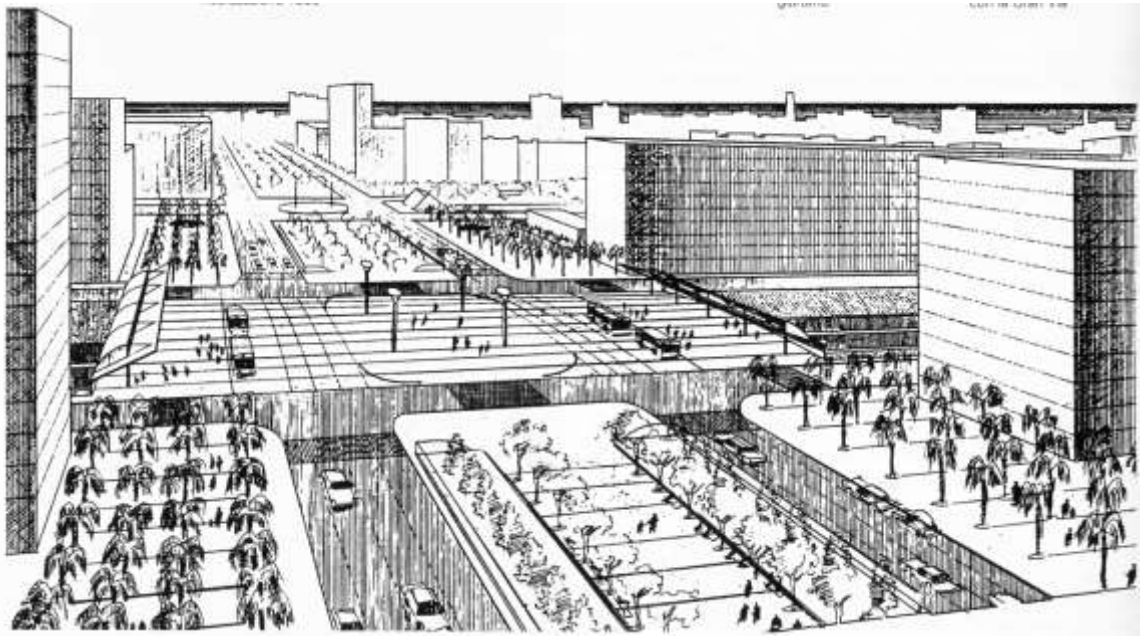
B. de Sola, P. Barragan, J. M. Jùlia, Via Julia, Barcellona 1982-1986

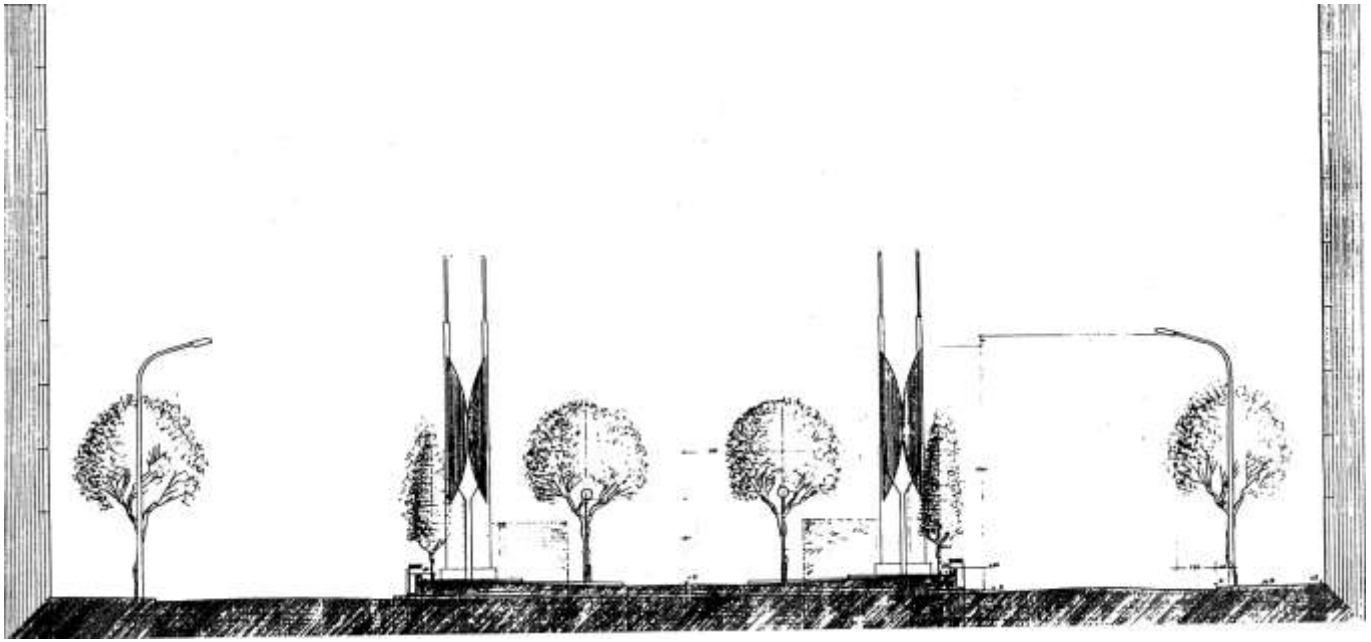


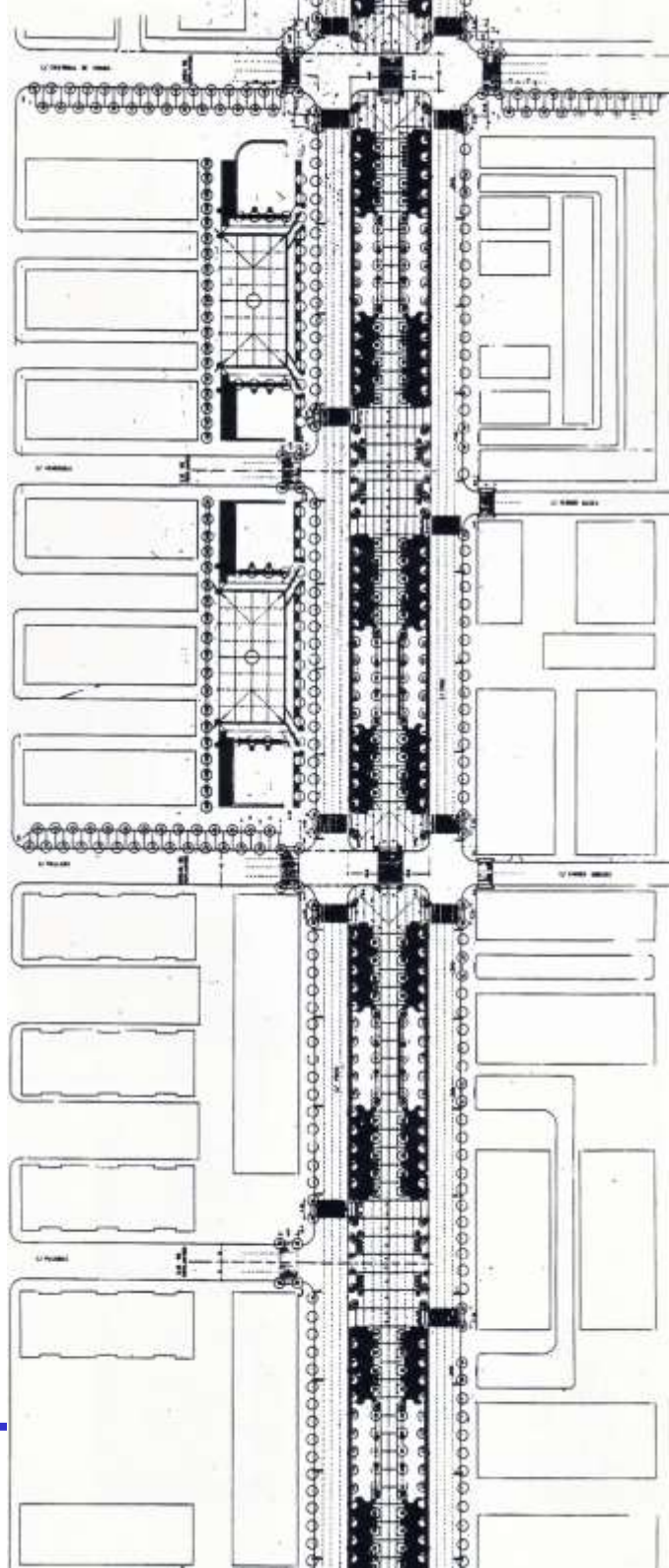
B. de Sola, P. Barragan, J. M. Jùlia, Via Julia, Barcellona 1982-1986

Barcellona, Via Julia

Barcellona, Carrer Prim







J. San José Marqués, Carrer Prim, Barcellona 1983-1990

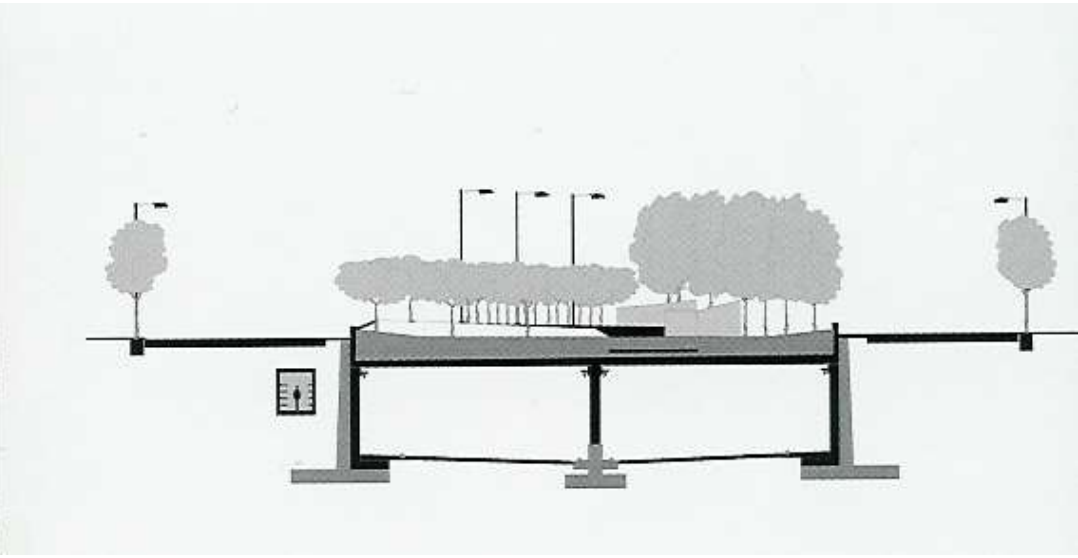
J. San José Marqués, Carrer Prim, Barcellona 1983-1990

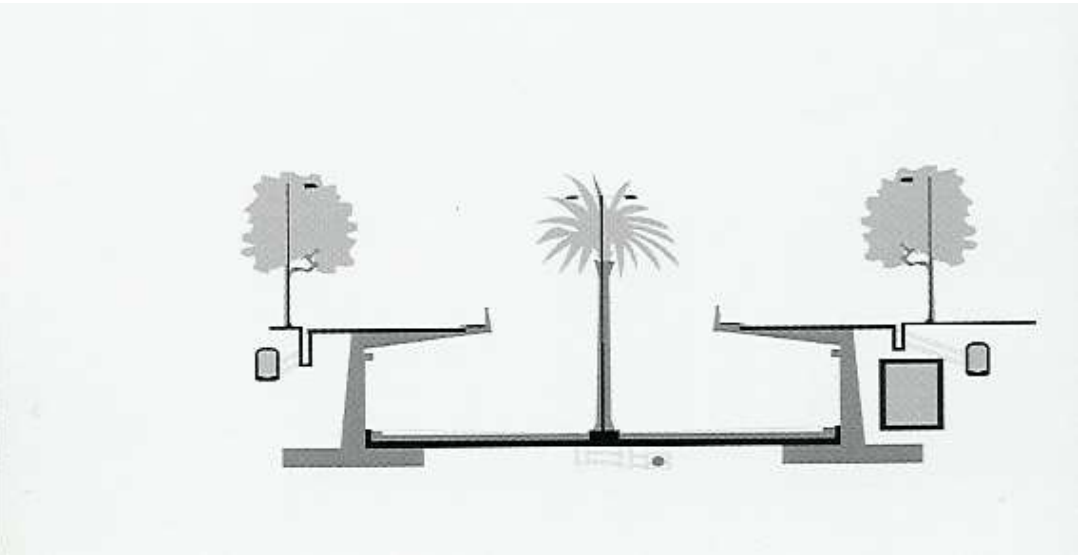
“Charte de Serrià”, Barcellona, maggio 1984

1. Definizione delle strade come “strumento di programmazione dei più importanti spazi pubblici della città”
2. Riferimento alle ai buoni esempi del passato, remoto e prossimo
3. Importanza delle condizioni fisiche del contesto
4. Multifunzionalità delle strade di scorrimento
5. Innalzamento della qualità delle strade esistenti
6. Integrazione fra scelte urbanistiche e politiche di riduzione del traffico
7. Promozione della multimodalità

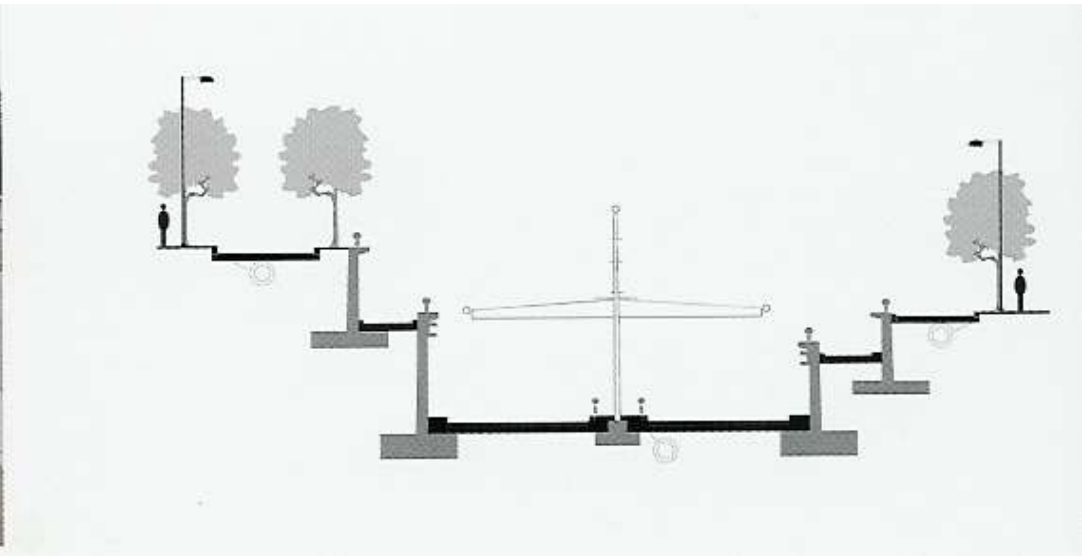
M. Ribas Piera, Via Parc, Barcellona

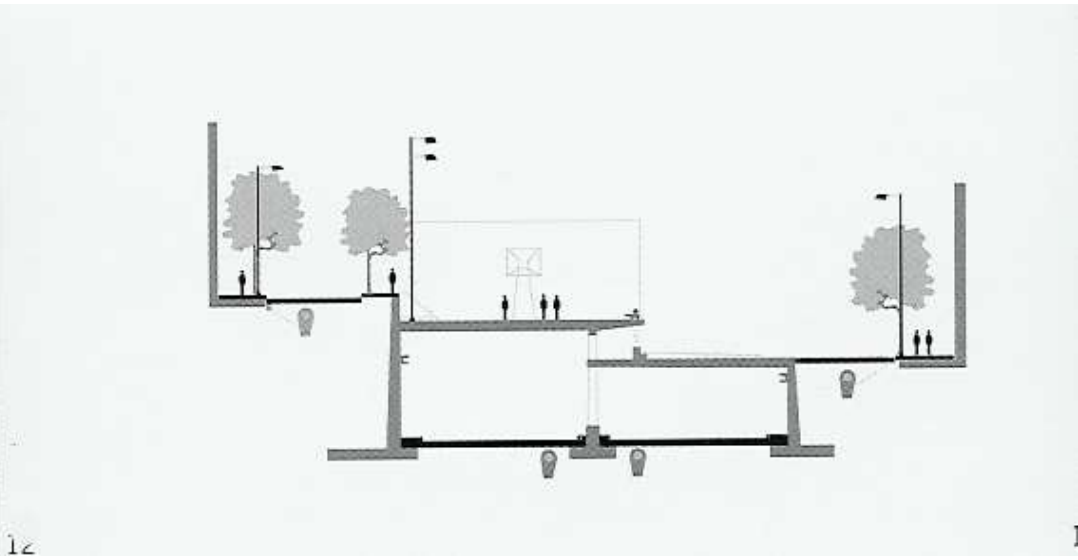
Barcellona, il sistema dei “cinturoni”





Barcellona, Ronda del Dalt

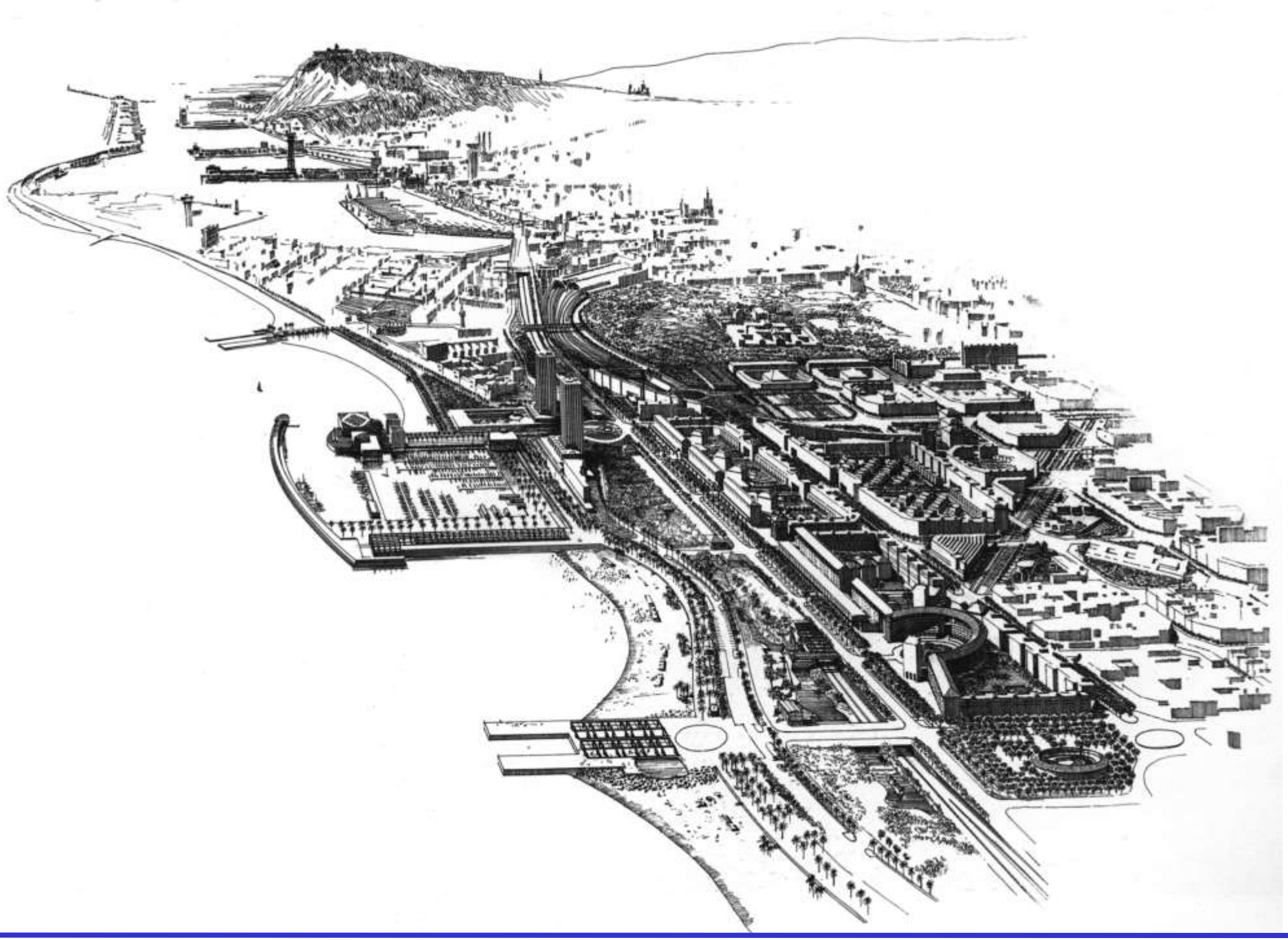




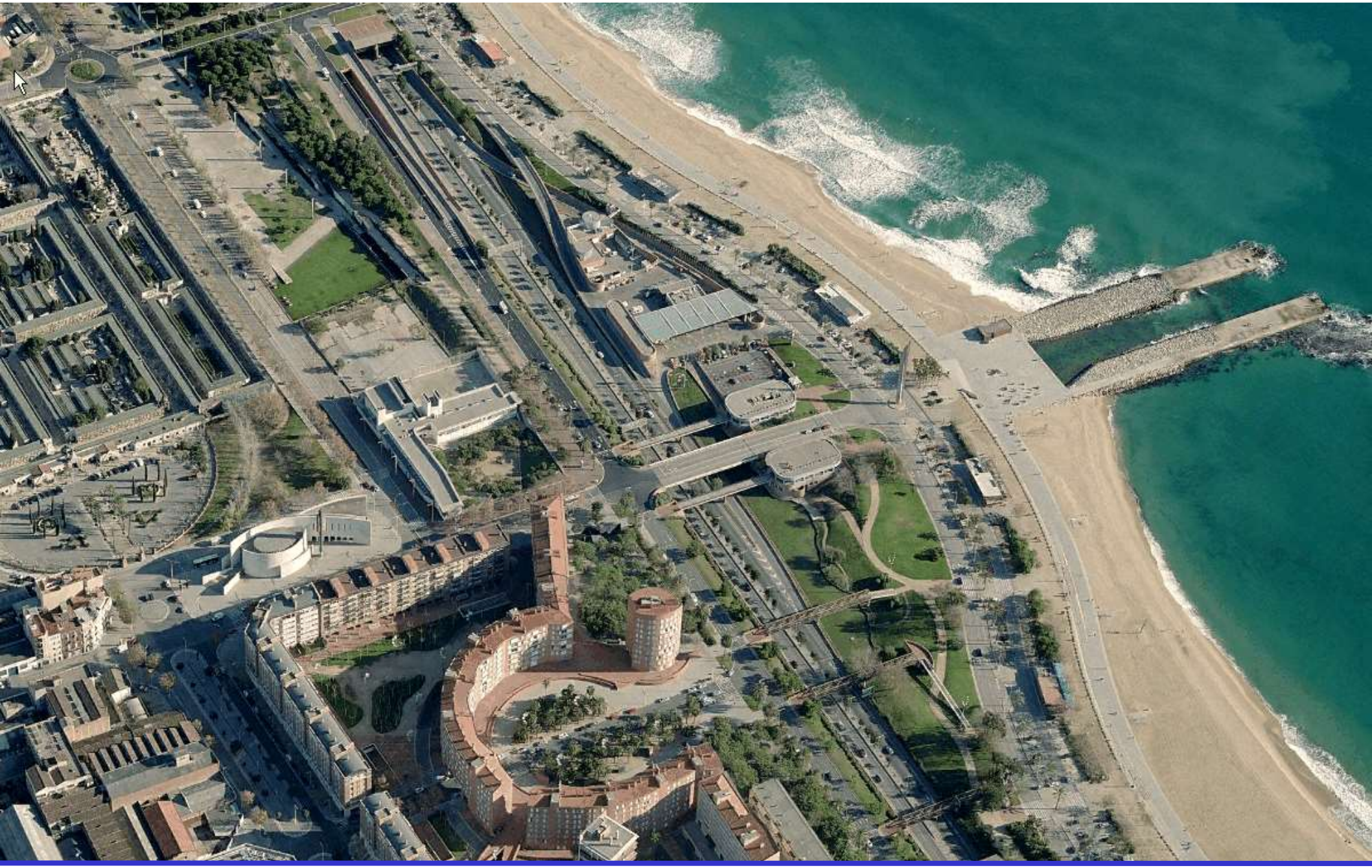
Barcellona, Ronda del Dalt

Barcellona, Ronda del Dalt

B. de Sola, F. Ruiz, B. Ochoa, Nodo di Collserola, 1991



Barcellona, Ronda Litoral

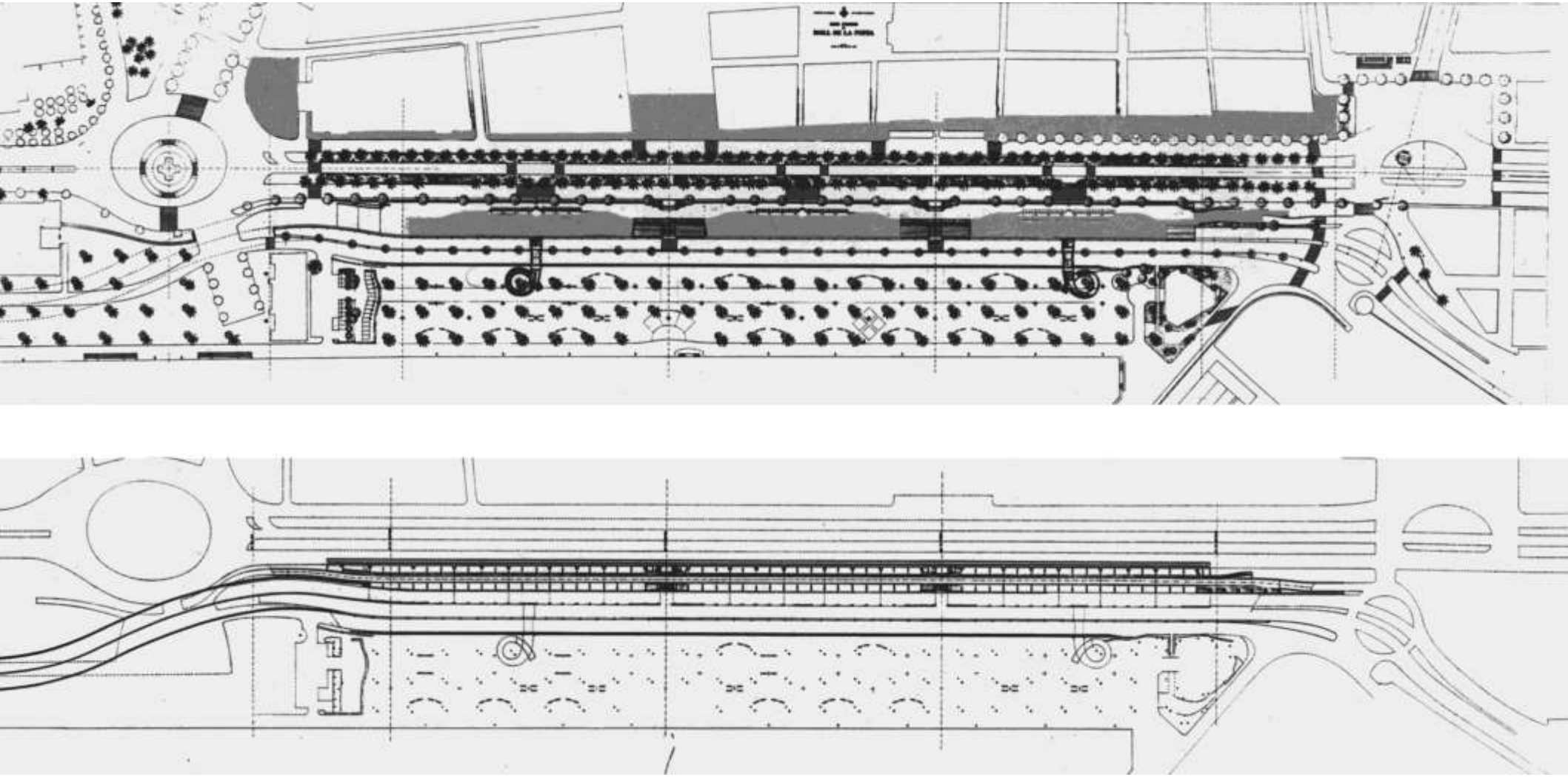


Barcellona, Ronda Litoral

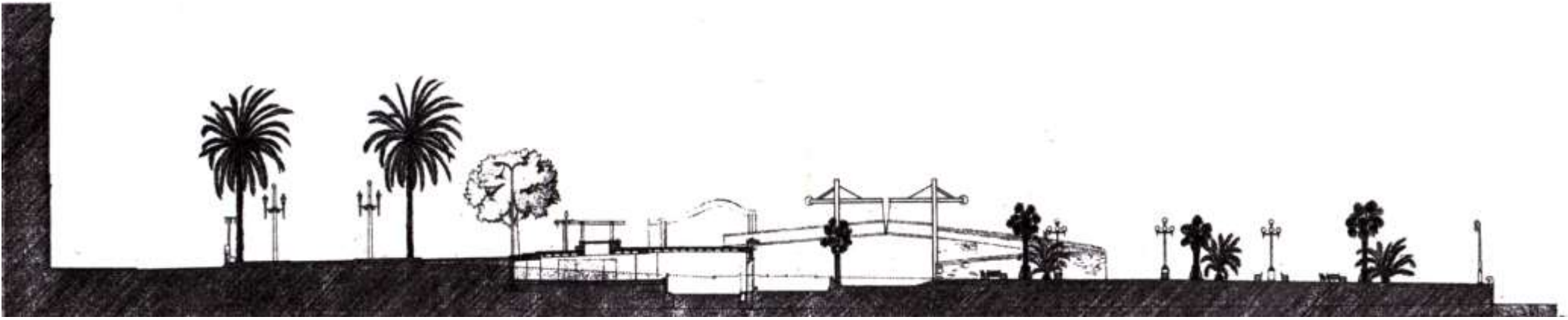
Barcellona, Ronda Litoral

Barcellona, Ronda Litoral

Barcellona, Moll de la Fusta

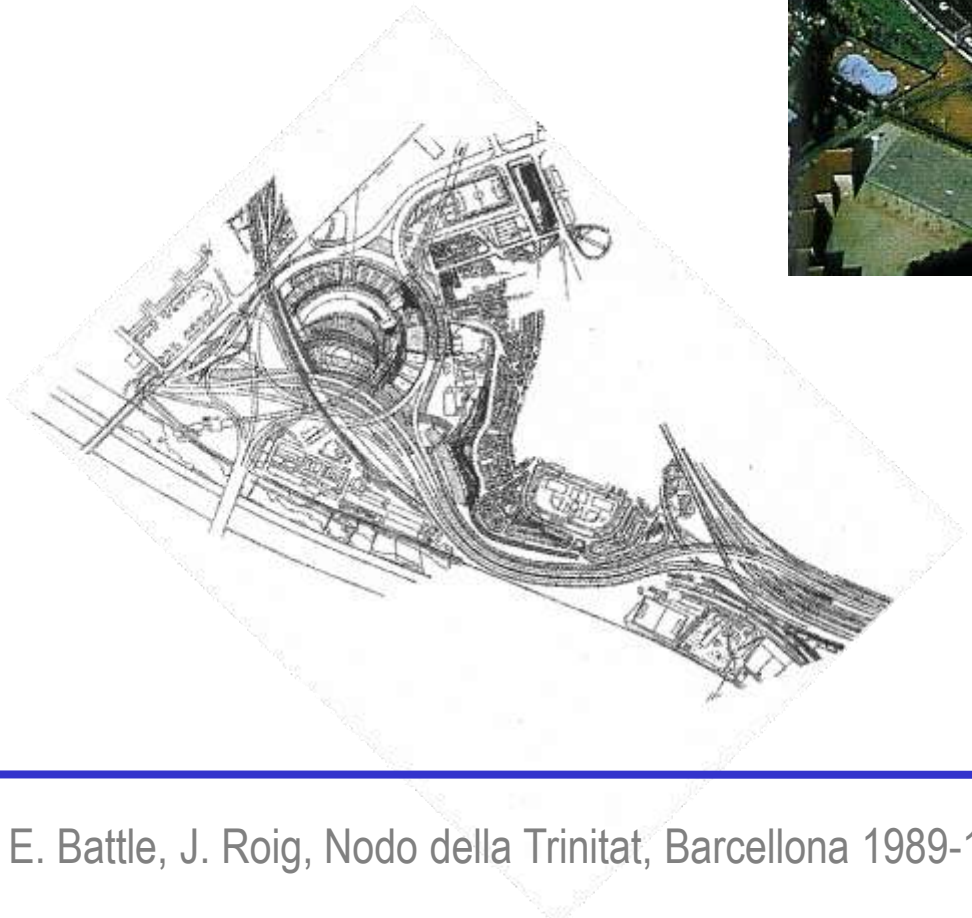


M. de Solà Morales, Moll de la Fusta, 1985-1987

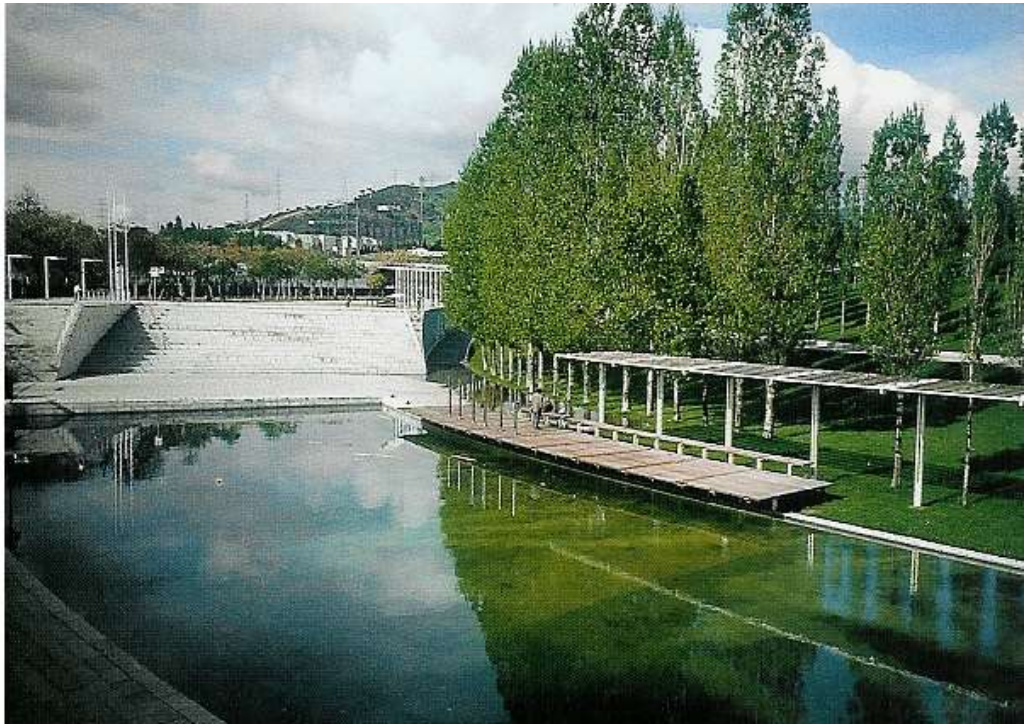


M. de Solà Morales, Moll de la Fusta, 1985-1987

M. de Solà Morales, Moll de la Fusta, 1985-1987



E. Battle, J. Roig, Nodo della Trinitat, Barcellona 1989-1992

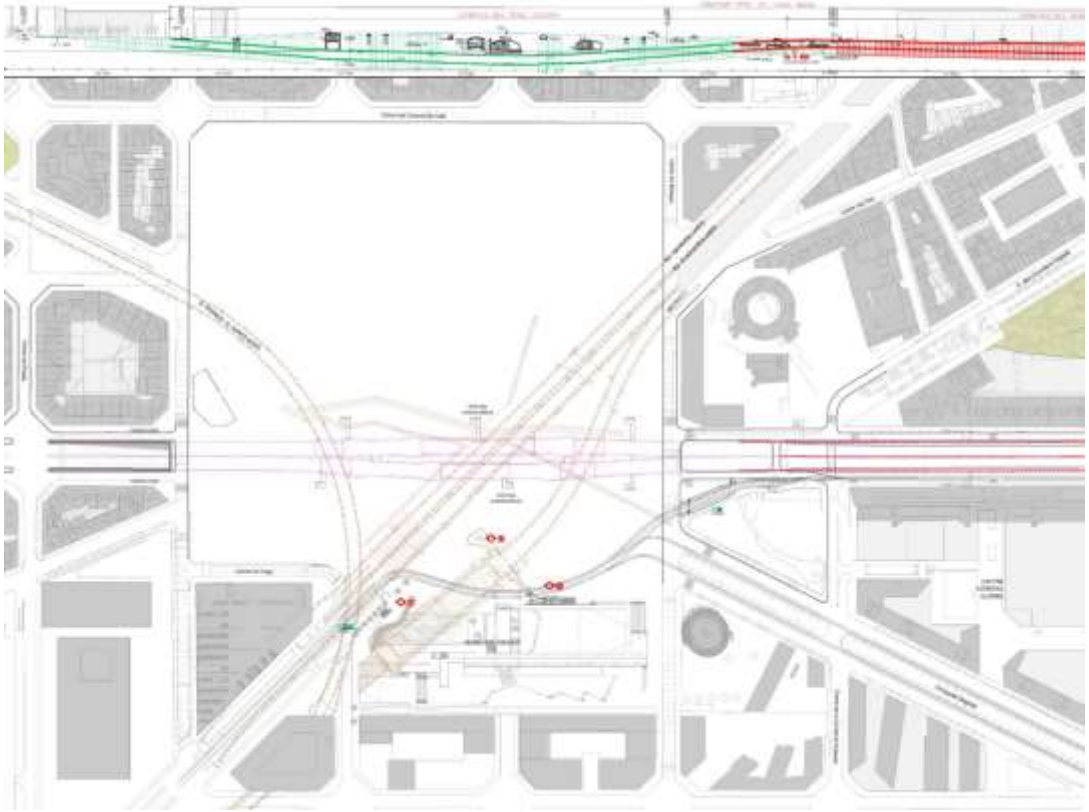


E. Battle, J. Roig, Nodo della Trinitat, Barcellona 1989-1992

E. Battle, J. Roig, Nodo della Trinitat, Barcellona 1989-1992

A. Arriola, Plaça de les Glóries Catalanes, Barcellona, 1992

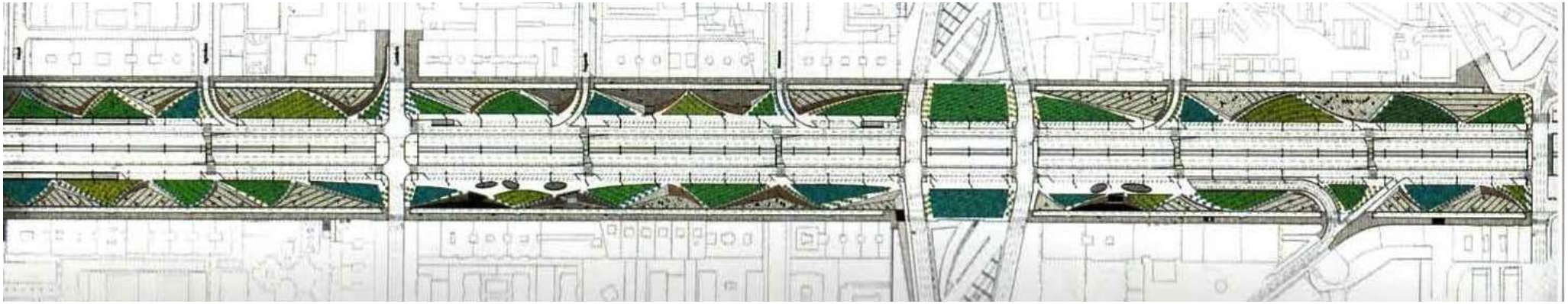
Plaça de les Glóries Catalanes, Barcellona

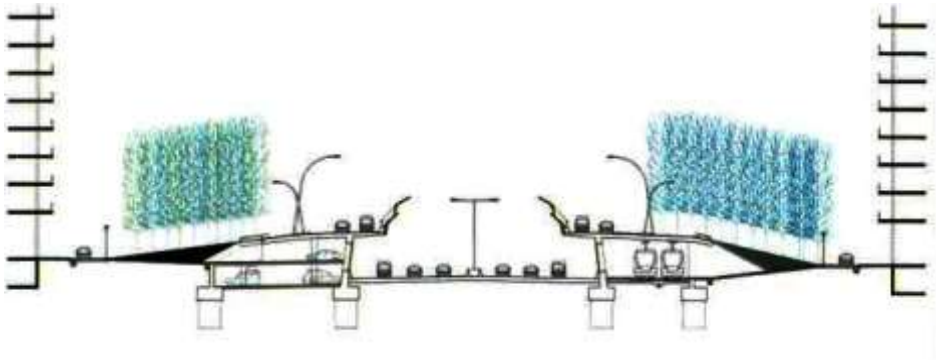


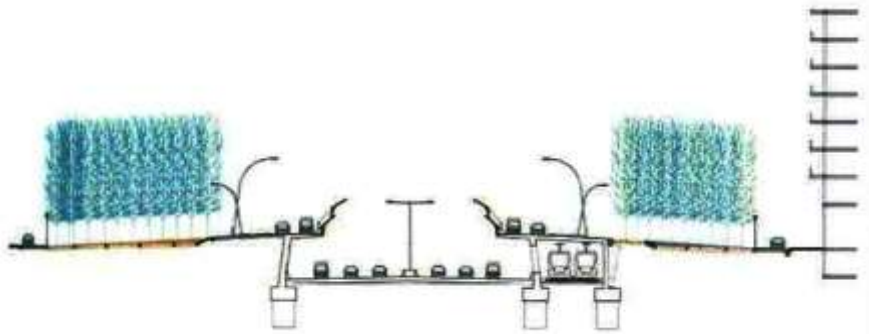
Progetto d'interramento della viabilità

UTE Agence Ter & Ana Coello de Llobet, Plaça de les Glóries Catalanes, Barcellona 2013

Barcellona, Gran Via





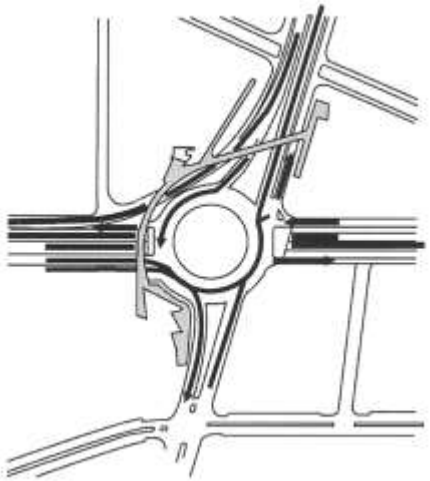


A. Arriola, C. Fiol, Gran Via, Barcellona 2002-2005

A. Arriola, C. Fiol, Gran Via, Barcellona 2002-2005

A. Arriola, C. Fiol, Gran Via, Barcellona 2002-2005

Barcellona, Plaza Cerdà e Ronda del Mig



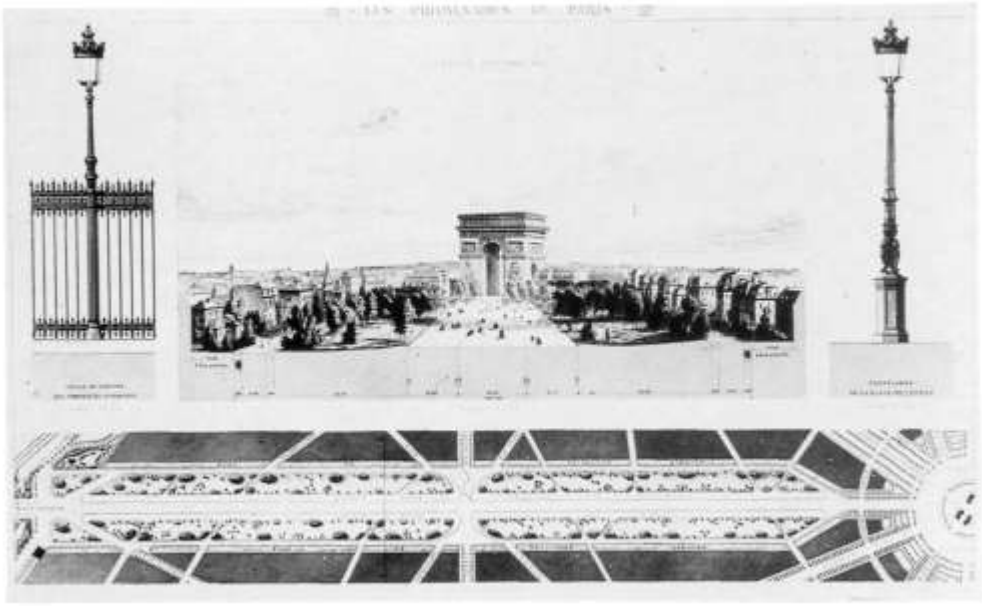
B. de Sola, Plaza Cerdà e Ronda del Mig, Barcellona 1997-2000

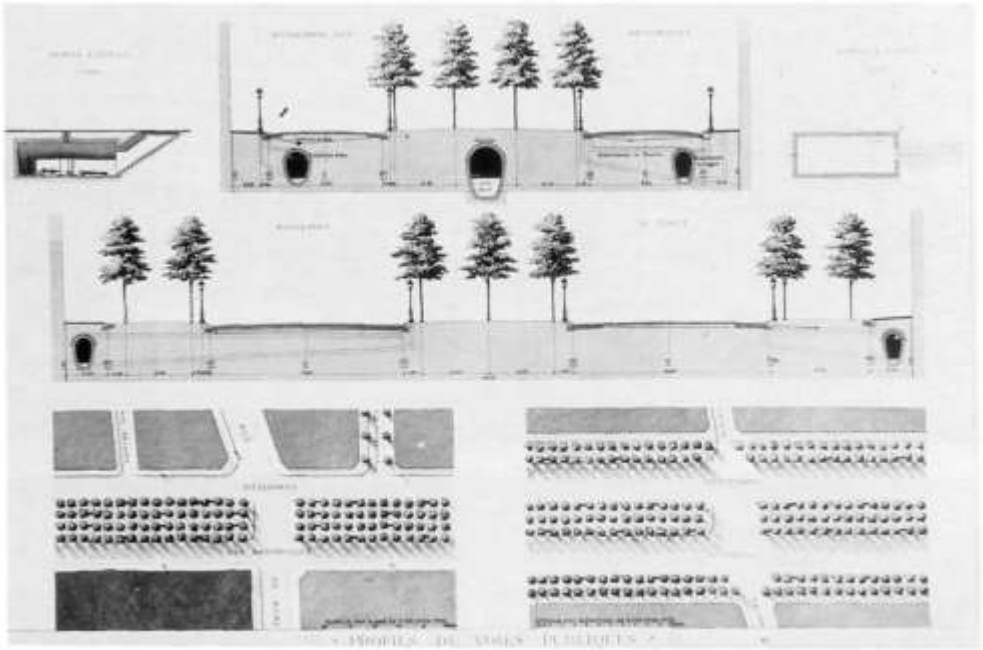
Il faut tuer...
la coupe type!

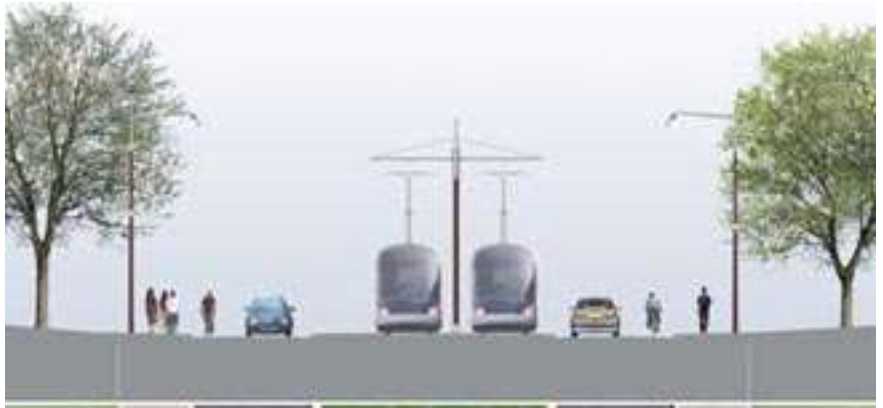
- SPAZIO TECNICO
- SPAZIO AD USO SOCIALE

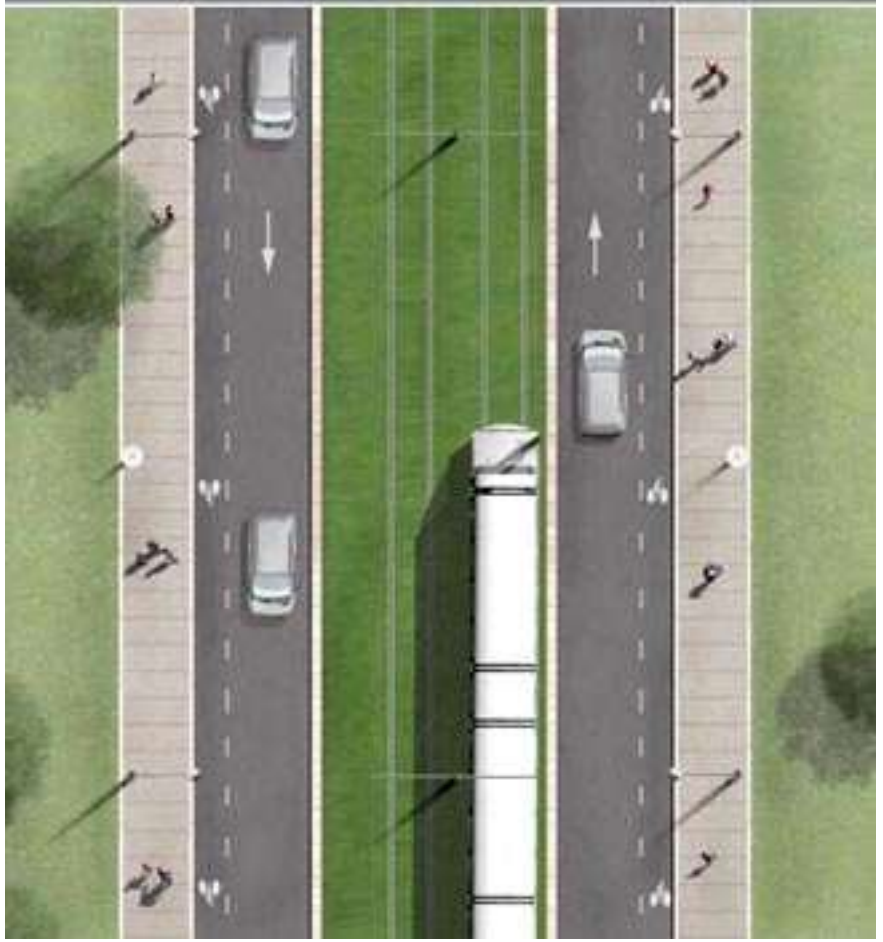
- RIPARTIZIONE ORIZZONTALE
- RIPARTIZIONE VERTICALE
- SEZIONI COMPLESSE

- RIPARTIZIONE ORIZZONTALE
- RIPARTIZIONE VERTICALE
- SEZIONI COMPLESSE

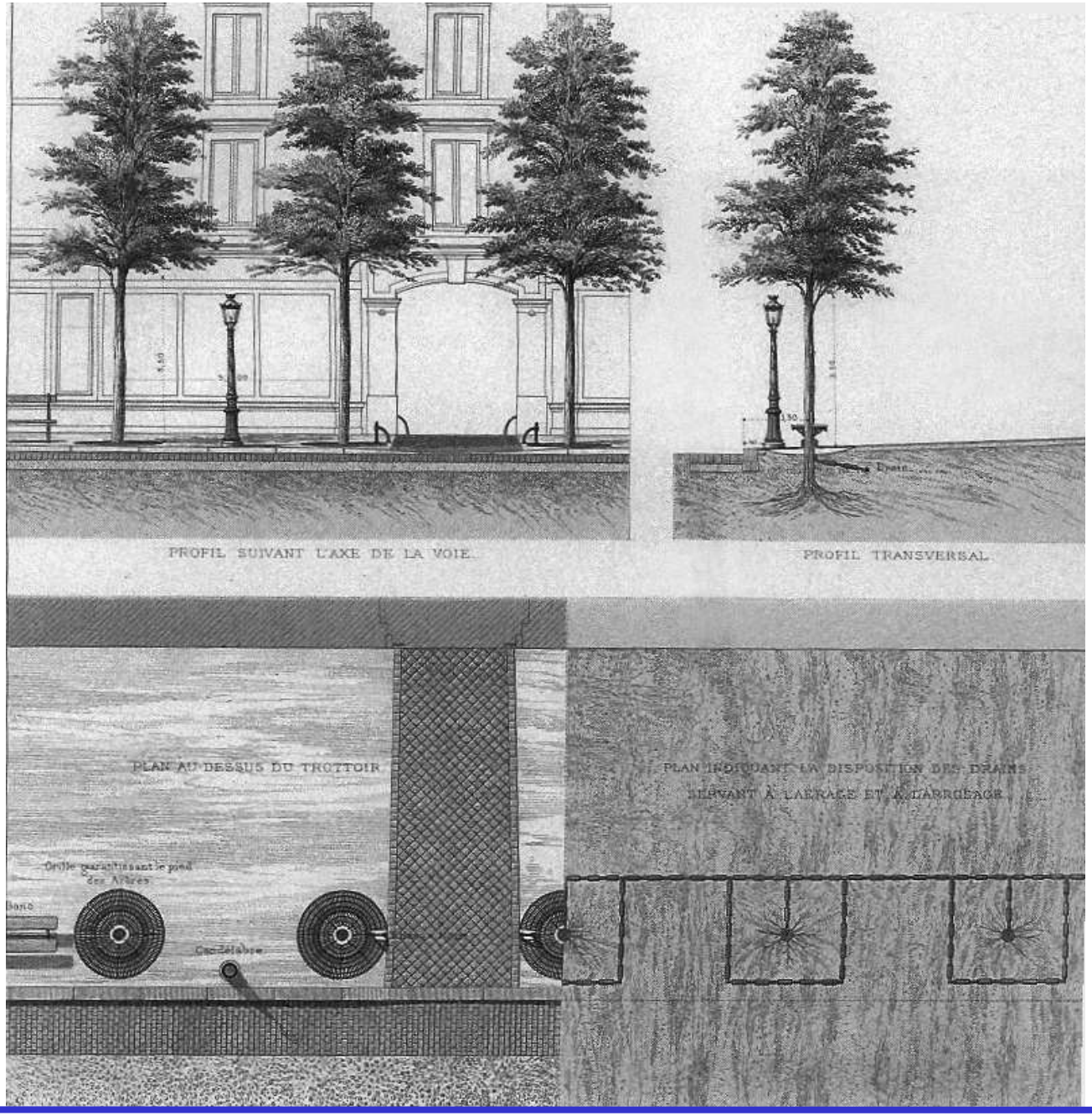


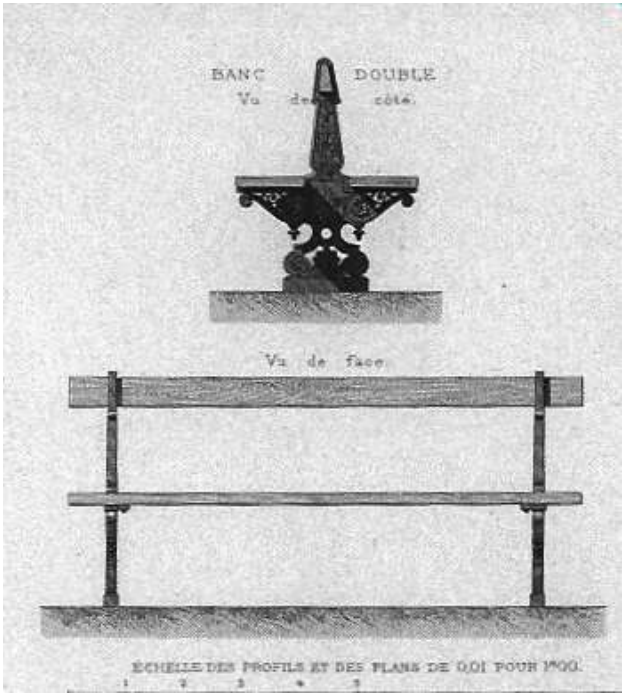


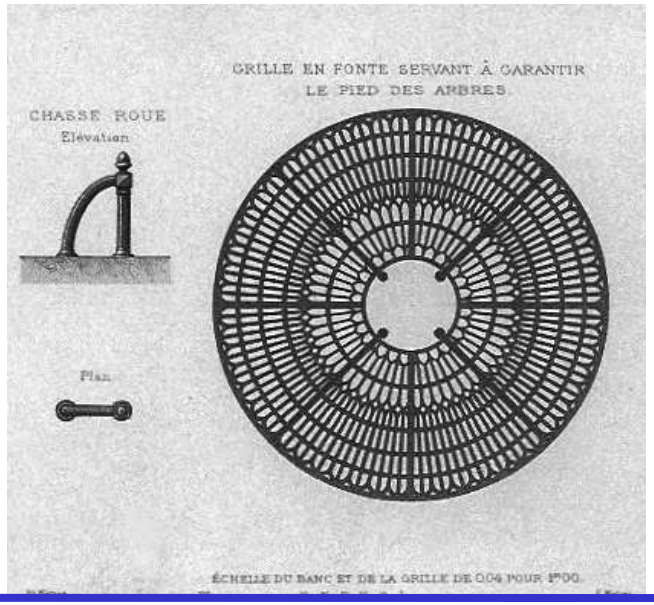




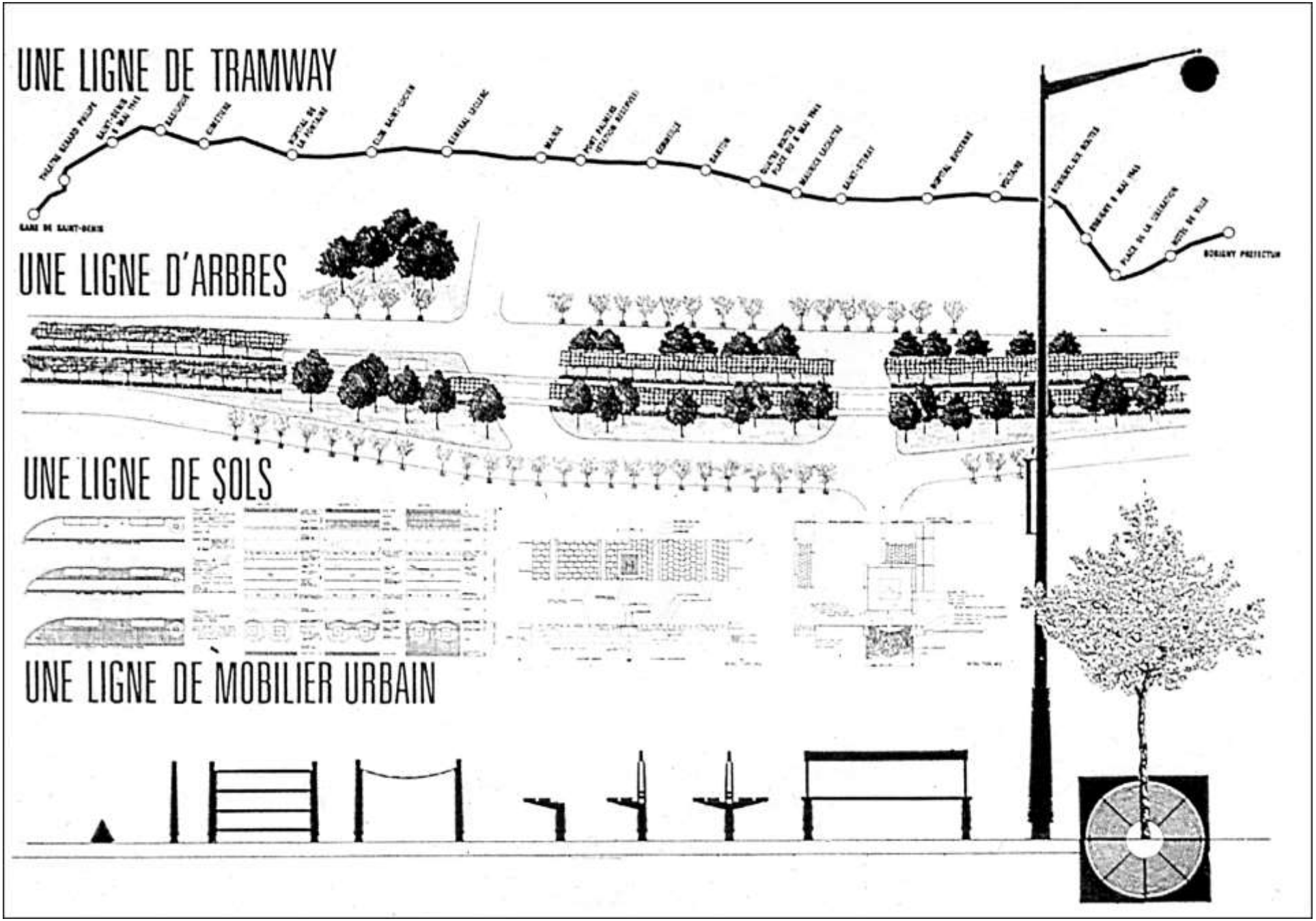
Ripartizione orizzontale







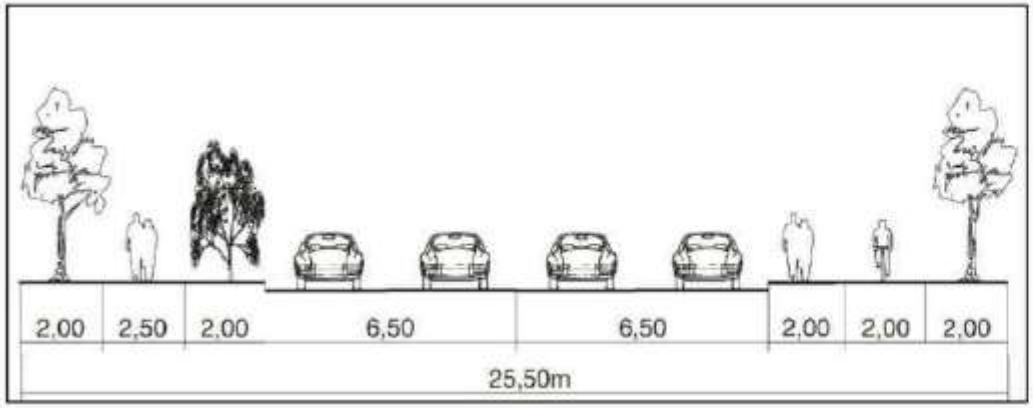
"Mobilier urbain": Parigi, 1867-1873 (A. Alphand)

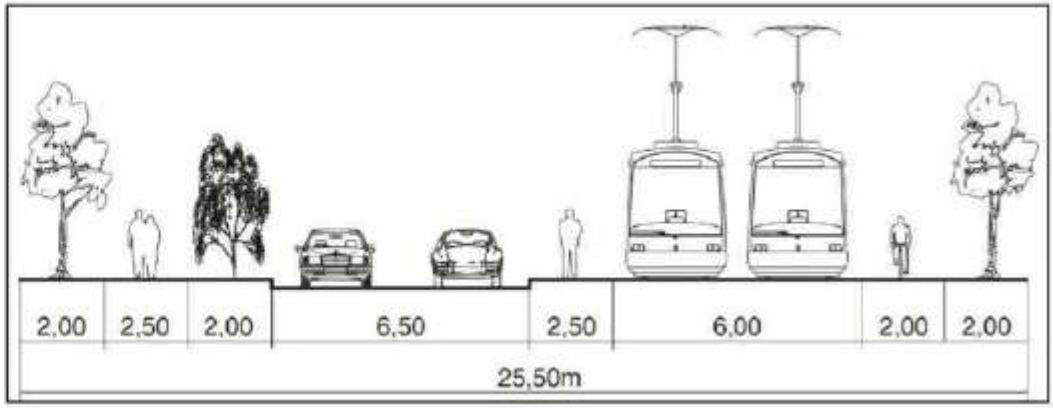


"Mobilier urbain": Parigi, 1993 (A. Chemetoff)

prima

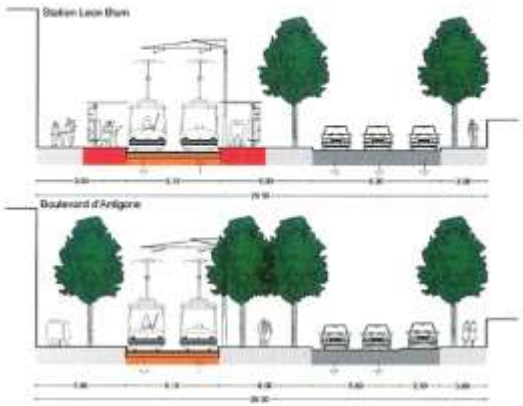
dopo





Strasburgo: sistemazioni urbanistiche lungo le linee della tranvia

ALBUM DES COUPES

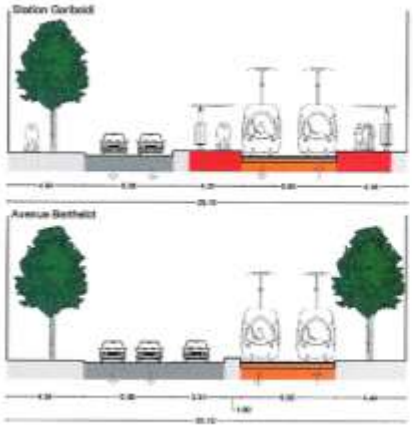


à gauche

Montpellier.
Voie de 30 m, boulevard tracé par Ricardo Bofill pour accueillir 2 fois 2 voies de part et d'autre d'un terre-plein. Le tramway s'est installé sur l'une des deux voies. L'implantation des stations a contraint à couper les arbres.

à droite

Nantes.
Voie de 20 m, implantation axiale, station axiale. L'effet «boa» se fait au détriment des arbres et du stationnement.

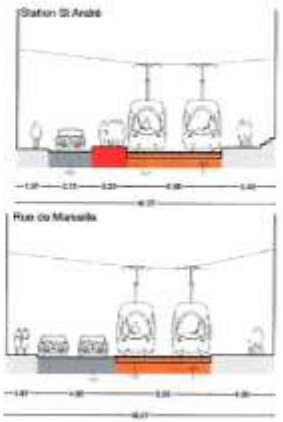


à gauche

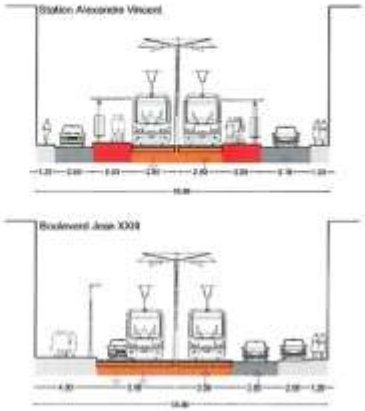
Lyon.
Voie de 25 m, insertion latérale, deux files dans le même sens. Le terre-plein central accueille stationnement et station. Côté trottoir, rétrécissement important au droit de la station.

à droite

Lyon.
Voie de 16 m, implantation latérale laissant passer une file de circulation avec une bande pour le stationnement de courte durée. Pas d'abri, le porche de l'église devant lequel se fait l'arrêt en tient lieu.



© François Lasnay

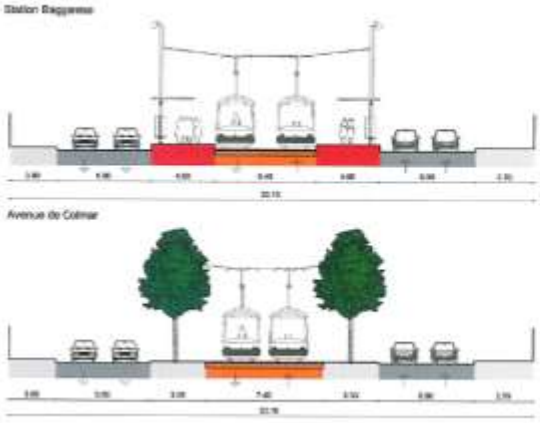


à gauche

Nantes.
Voie de 19 m, site semi banalisé sur le boulevard dans le sens entrant. Cette file automobile emprunte la plate-forme.

à droite

Nantes.
Voie de 16 m, une seule file dans chaque sens. La station est banalisée, l'automobile est autorisée à utiliser la plate-forme au droit de la station.

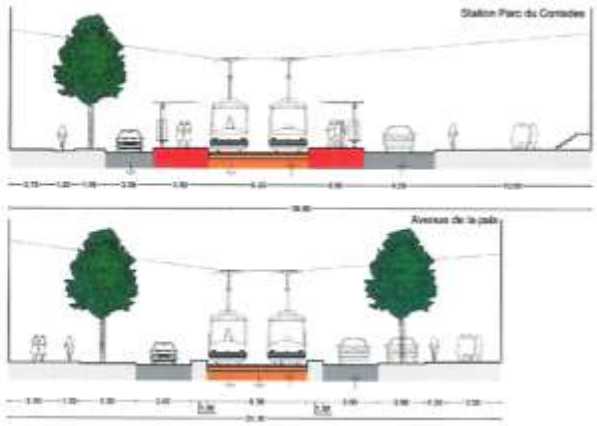


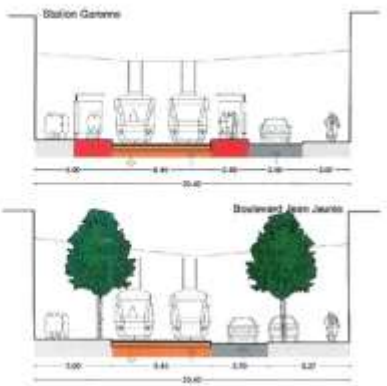
à gauche

Strasbourg.
Voie de 33 m, implantation axiale bordée de deux files d'arbres, 2 fois 2 files sur une chaussée de 6 m. Au droit des stations, les lignes d'arbres sont interrompues.

à droite

Strasbourg.
Voie de 37 m, tracé ancien planté latéralement, implantation axiale sur un tapis de gazon. La circulation latérale est réduite à une voie dans chaque sens. Piste cyclable sur trottoir.



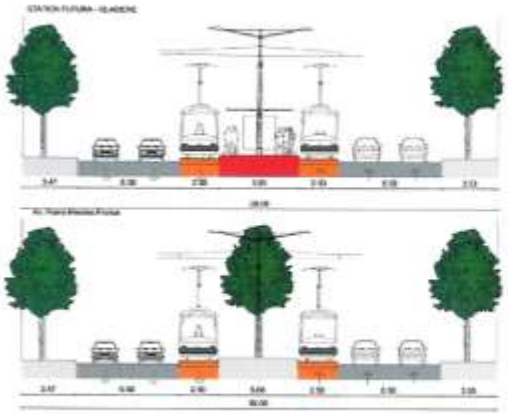


à gauche

Nancy.
Voie de 20 m, implantation latérale avec une file de circulation automobile et stationnement sur les trottoirs. La présence de la station réduit les trottoirs.

à droite

Nancy.
Voie de 17 m et axe principal de la ville. Rue entièrement piétonnisée avec implantation axiale.

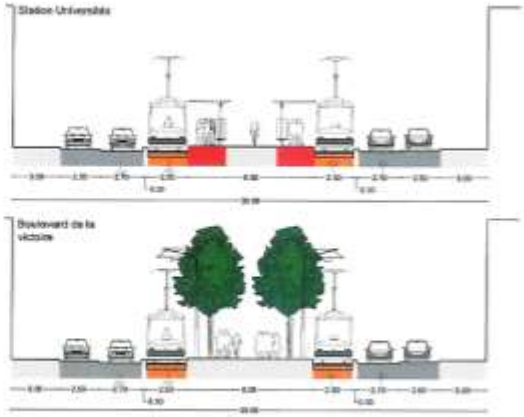


à gauche

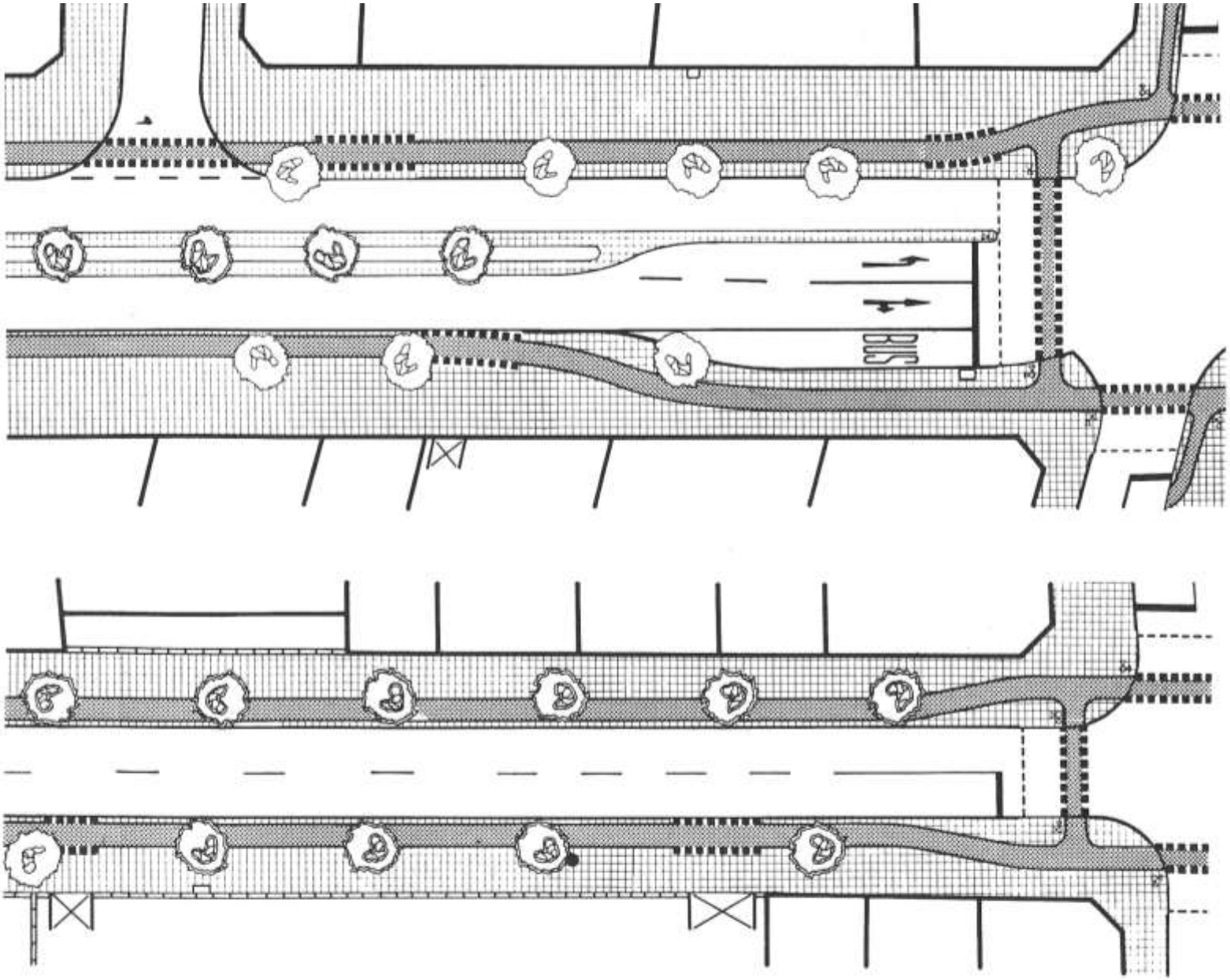
Strasbourg.
Voie de 30 m, implantation et station axiale. Un alignement d'arbres sur le terre-plein central et deux files dans chaque sens.

à droite

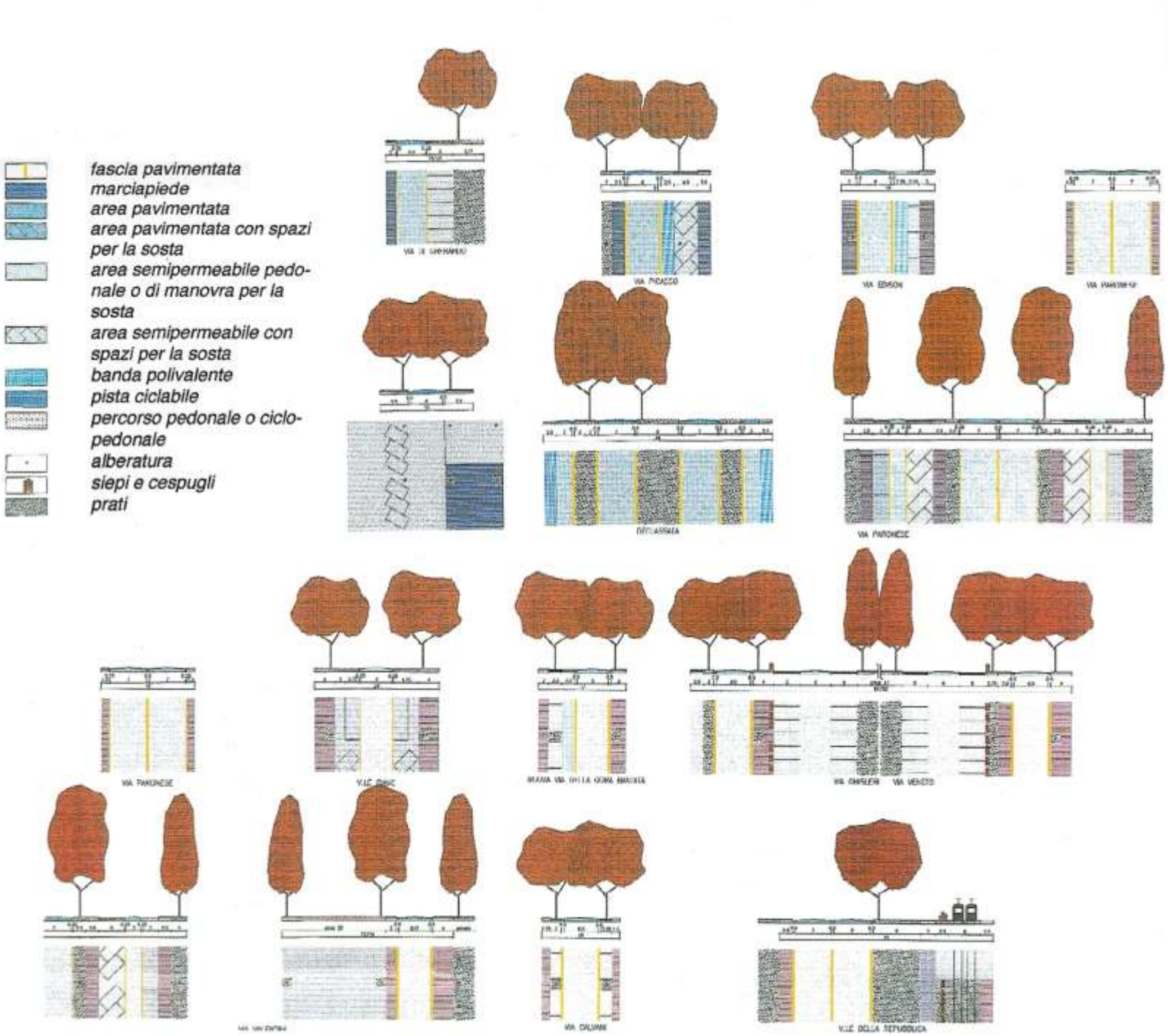
Strasbourg.
Voie de 30 m, implantation axiale de part et d'autre d'une promenade centrale existante plantée d'une double rangée d'arbres. La circulation latérale est réduite à une file dans chaque sens et le stationnement est latéral.



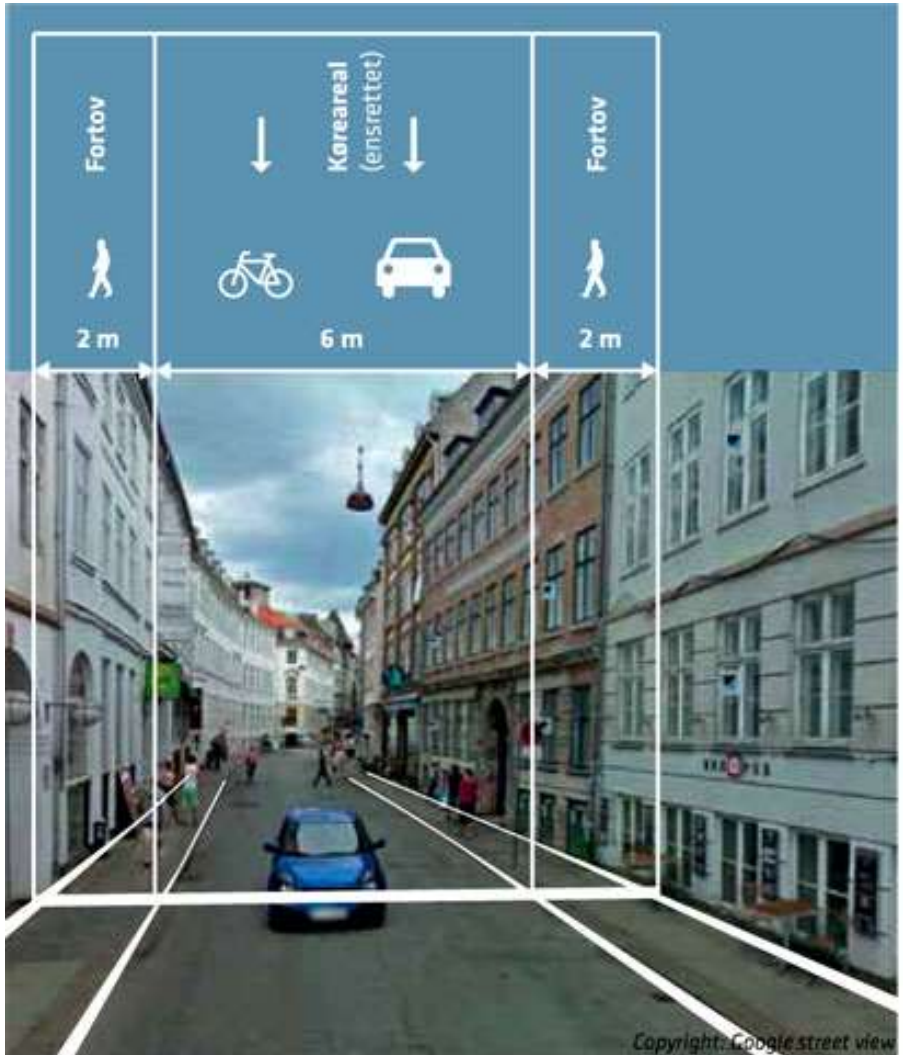
Confronto tra sezioni stradali di progetti tranviari in Francia

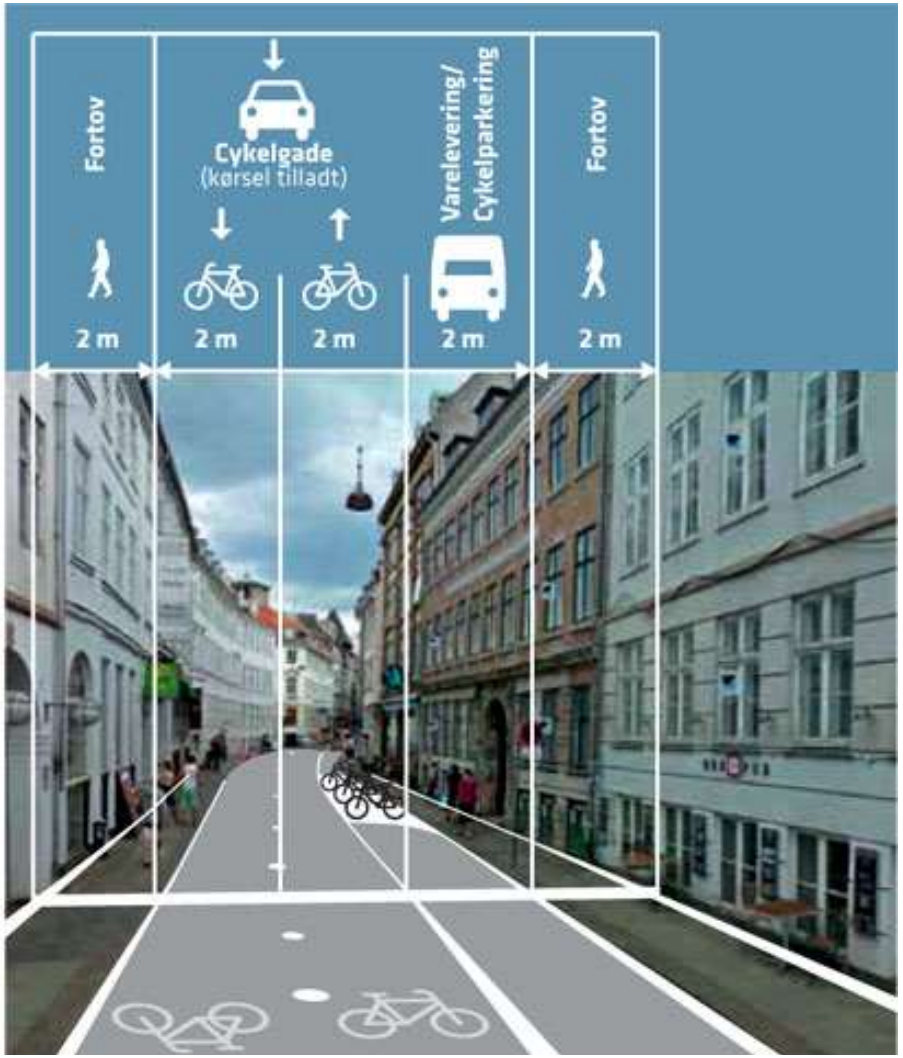


Germania, Linee guida statali per l'inserimento urbano delle arterie stradali, 1984

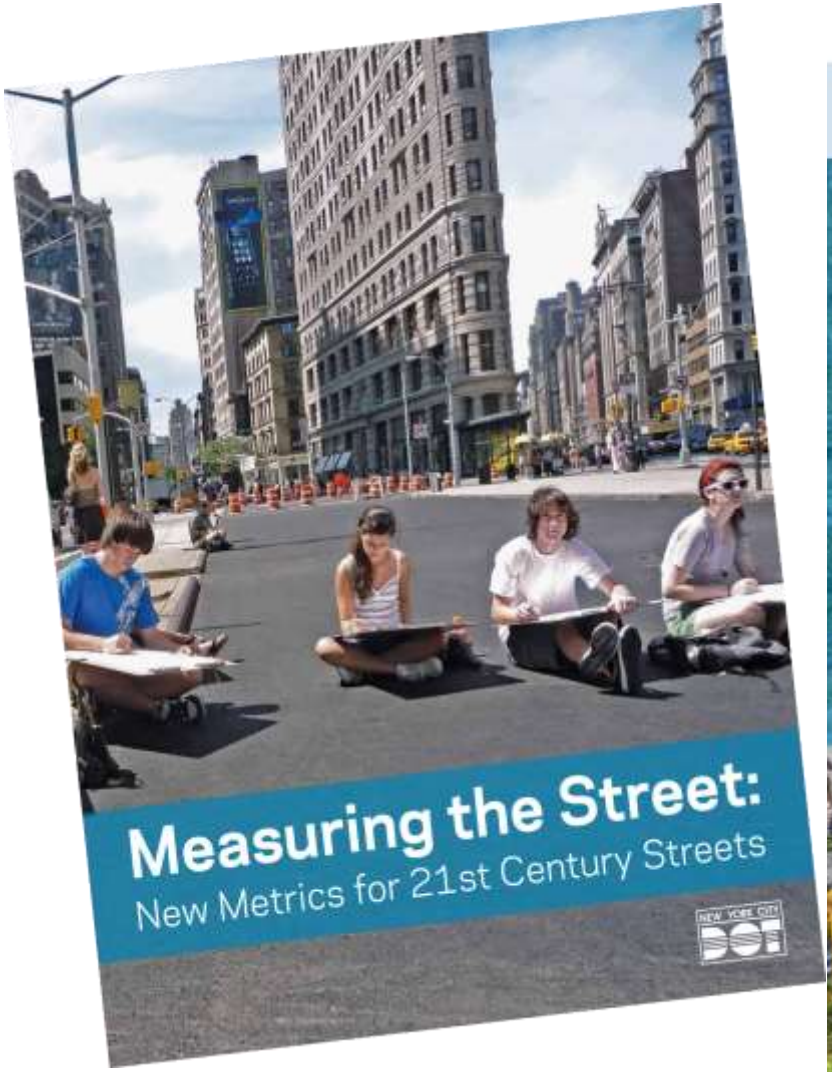


Prato, PRG 1995, Abaco delle sistemazioni stradali





Copenhagen, studi di viabilità a priorità ciclistica, 2013



Designing safer streets

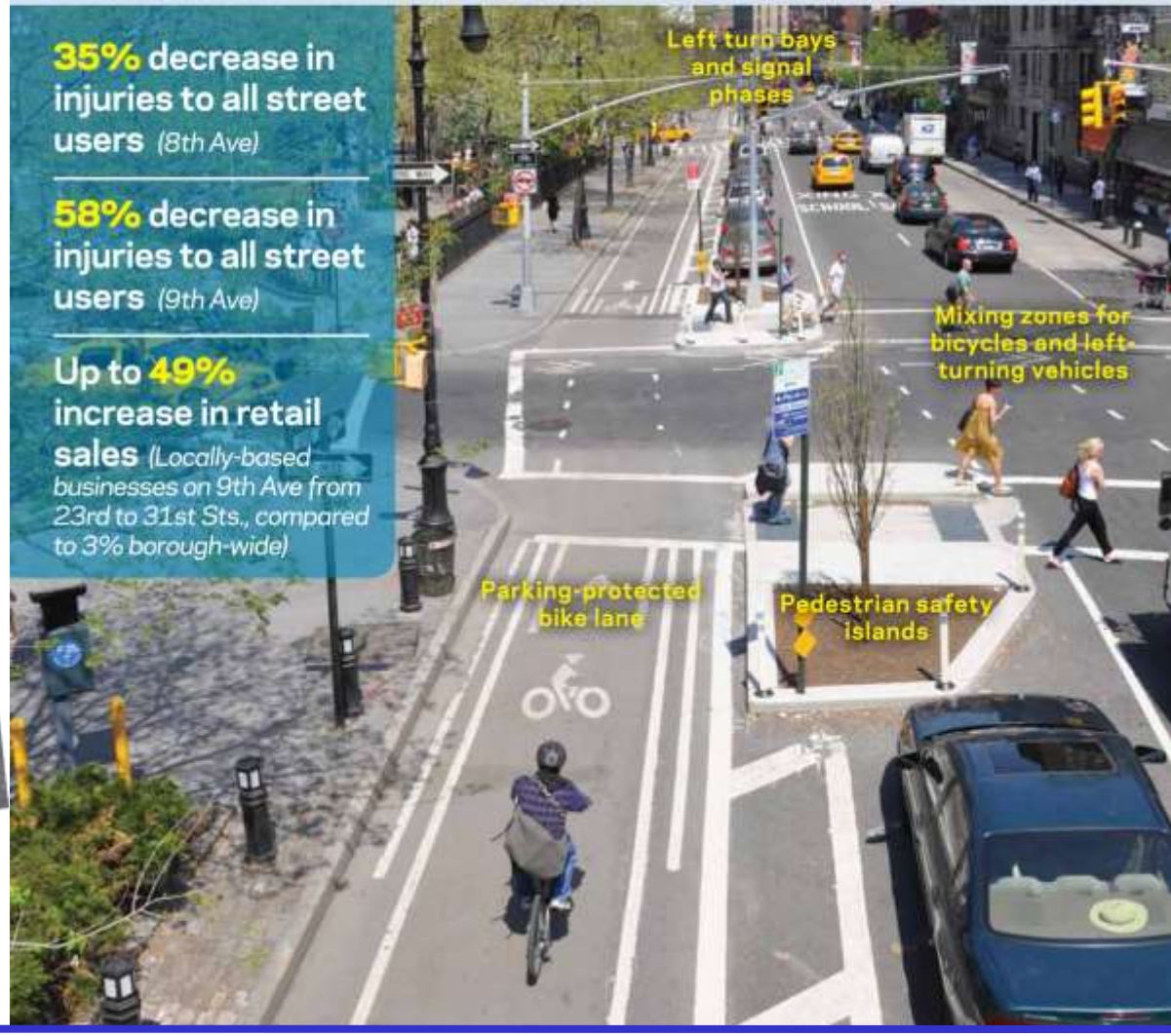
Safe and attractive options for all users

First protected bicycle lane in the US:
8th and 9th Avenues (Manhattan)

35% decrease in injuries to all street users *(8th Ave)*

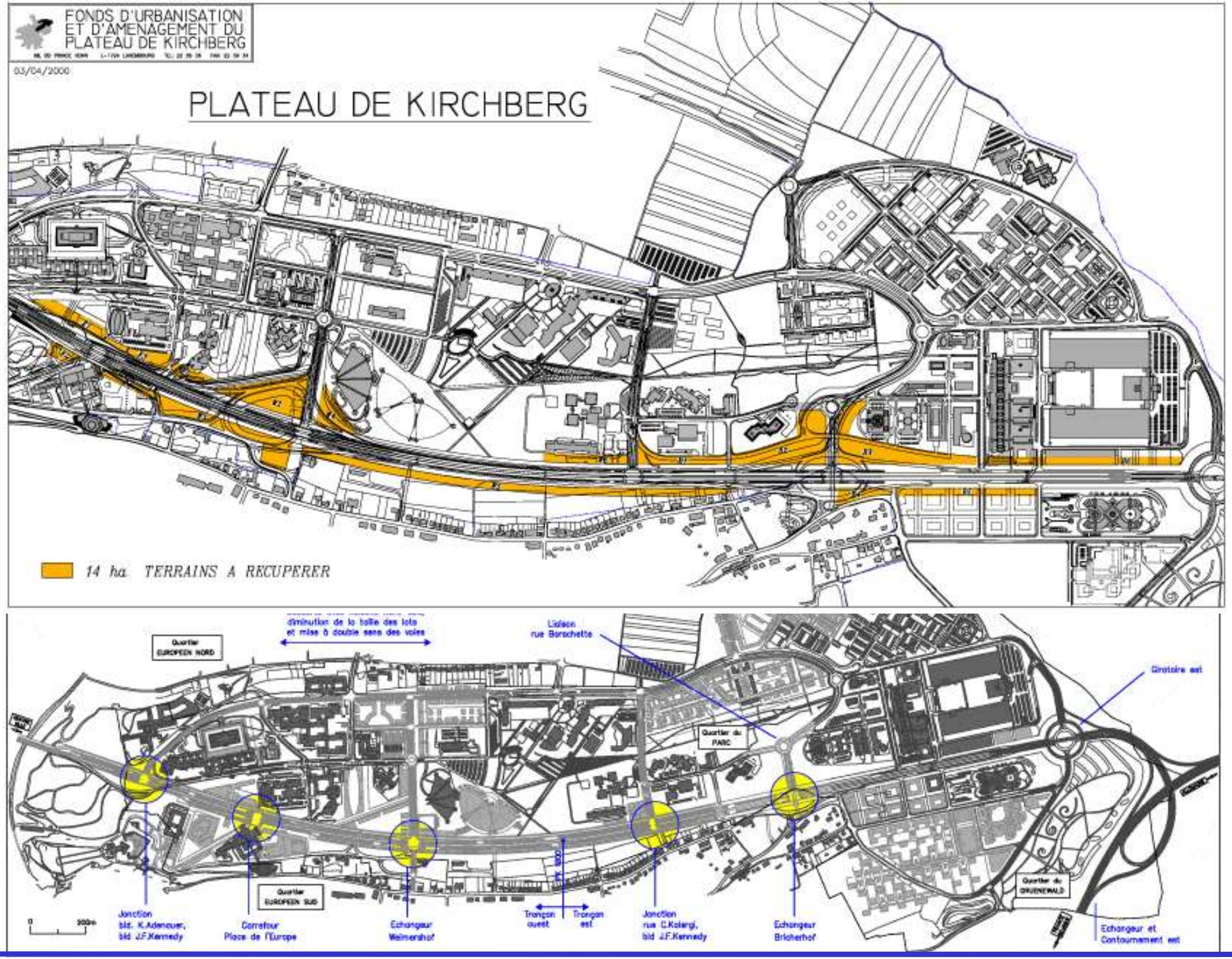
58% decrease in injuries to all street users *(9th Ave)*

Up to **49%** increase in retail sales *(Locally-based businesses on 9th Ave from 23rd to 31st Sts., compared to 3% borough-wide)*

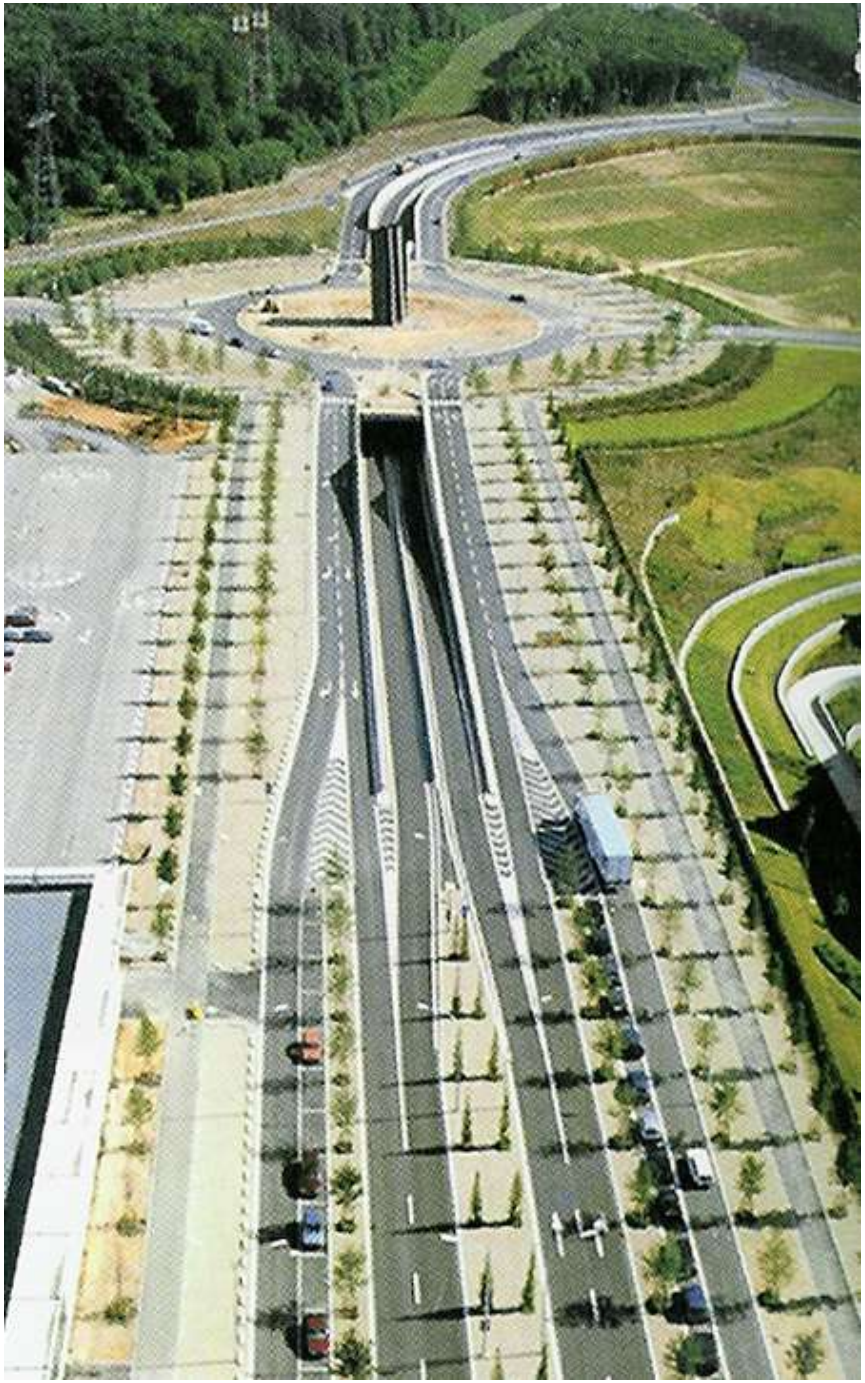


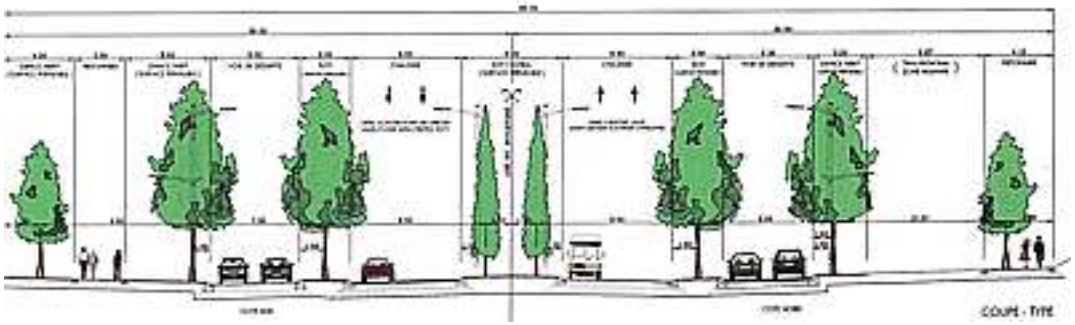
New York, “Measuring the street”, 2012

http://www.nyc.gov/html/dot/downloads/pdf/2012-10-measuring-the-street.pdf



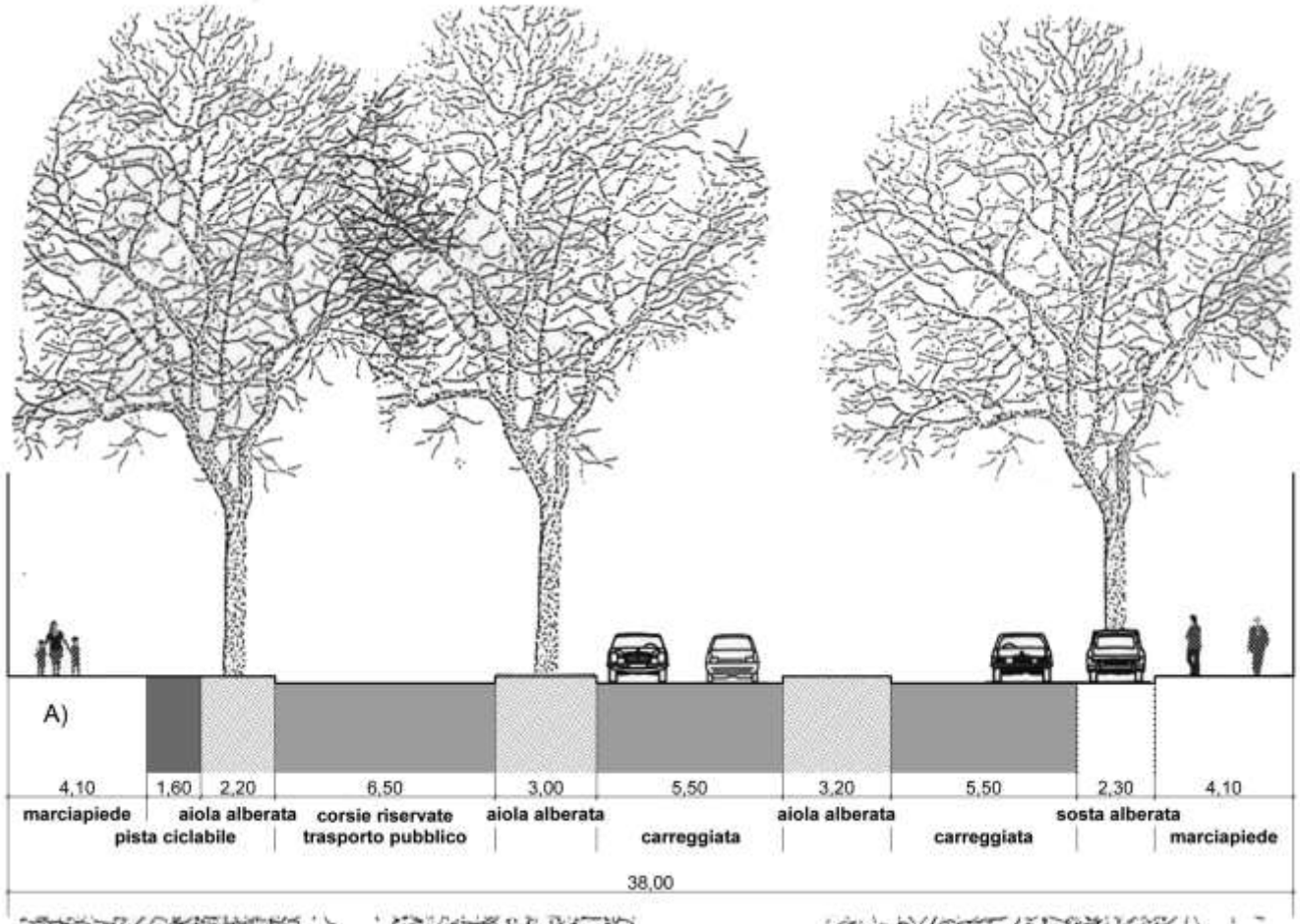
Latz und Partners, Ristrutturazione di Avenue J. F. Kennedy, Lussemburgo, 1994-1999

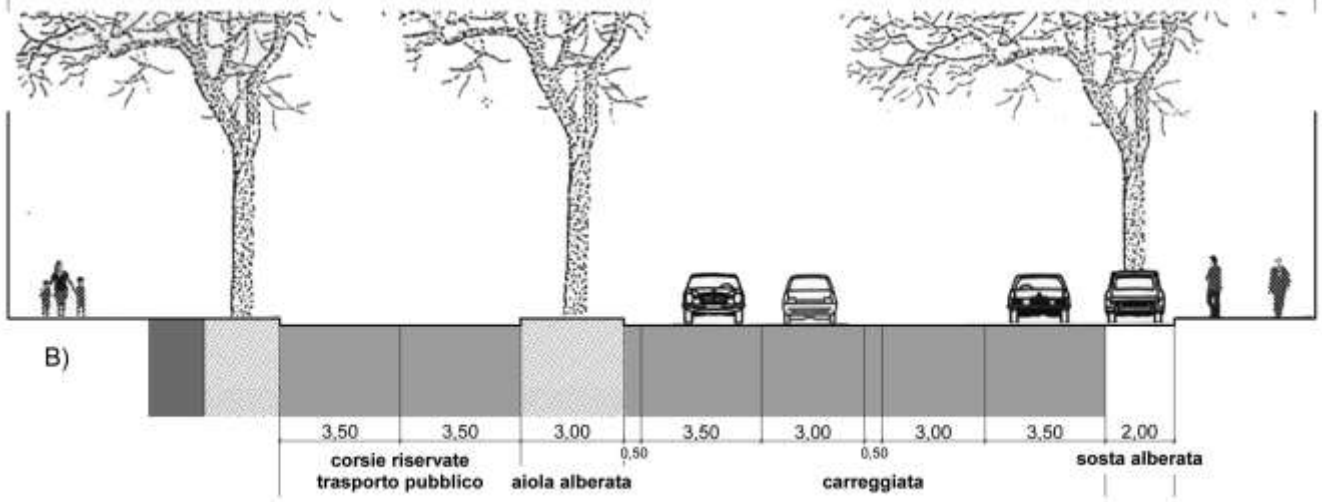




Latz und Partners, Ristrutturazione di Avenue J. F. Kennedy, Lussemburgo, 1994-1999

Latz und Partners, Ristrutturazione di Avenue J. F. Kennedy, Lussemburgo, 1994-1999





A) Sezione reale

B) Sezione virtuale, con applicazione dei parametri dimensionali in vigore in Italia

Lione, Boulevard Thiers, 1992

Sovigliana, Vinci, Via P. Togliatti, (Social Design, 1990-2010)

PARAMETRI DIMENSIONALI

Tipo	Ambito territoriale		Limite di velocità km/h	N. min. corsie per senso di marcia	Largh. min.corsia m	Largh. min. spartitraffico m	Largh. min. banchina sx m	Largh. min. banchina dx m	Largh. min. margine int. m	Largh. min. margine lat. m	Fasciadi rispetto m	Distanze min.alberi / siepi >1m/ siepi≤ 1m m	Distanza min. recinzioni m
A-Autostrada	extraurbano	Strada princ. Strada serv. (ev.)	130 90	2 1	3,75 3,50	2,60 -	0,70 0,50	2,50 1,25	4,00 -	6,10 -	60 (30 in aree edificabili)	6/3/1	5
	urbano	Strada princ. Strada serv. (ev.)	130 50	2 1	3,75 3,00	1,80 -	0,70 0,50	2,50 0,50	3,20 -	5,30 -	30	-	3
B-Extraurbana principale	extraurbano	Strada princ. Strada serv. (ev.)	110 90	2 1	3,75 3,50	2,50 2,00	0,50 0,50	1,75 1,25	3,50 -	4,25 -	40 (20 in aree edificabili)	6/3/1	5
C-Extraurbana secondaria	extraurbano	C1 C2	90 90	1 1	3,75 3,50	- -	- -	1,50 1,25	- -	- -	30 (10 in aree edificabili)	6/3/1	3
D-Urbana di scorrimento	urbano	Strada princ. Strada serv. (ev.)	70 50	2 1	3,25* 2,75*	1,80 -	0,50 0,50	1,00 0,50	2,80	3,30 -	20	-	2
E-Urbana di quartiere	urbano		50	1	3,00*	-	-	0,50	-	-	-	-	-
F-Locali	extraurbano urbano		≤ 50	1	3,00* (1x) / 2,75* (2x)	-	-	0,50	0,50 (striscia)	-	20 (10 vicinali) -	6/3/1 -	3 -

* Dimensione minima corsie per TPL e mezzi pesanti: 3,50 m
Dimensione minima corsia di manovra in presenza di fasce di parcheggio: 3,50 m (stalli longitudinali) / 6 m (stalli ortogonali)

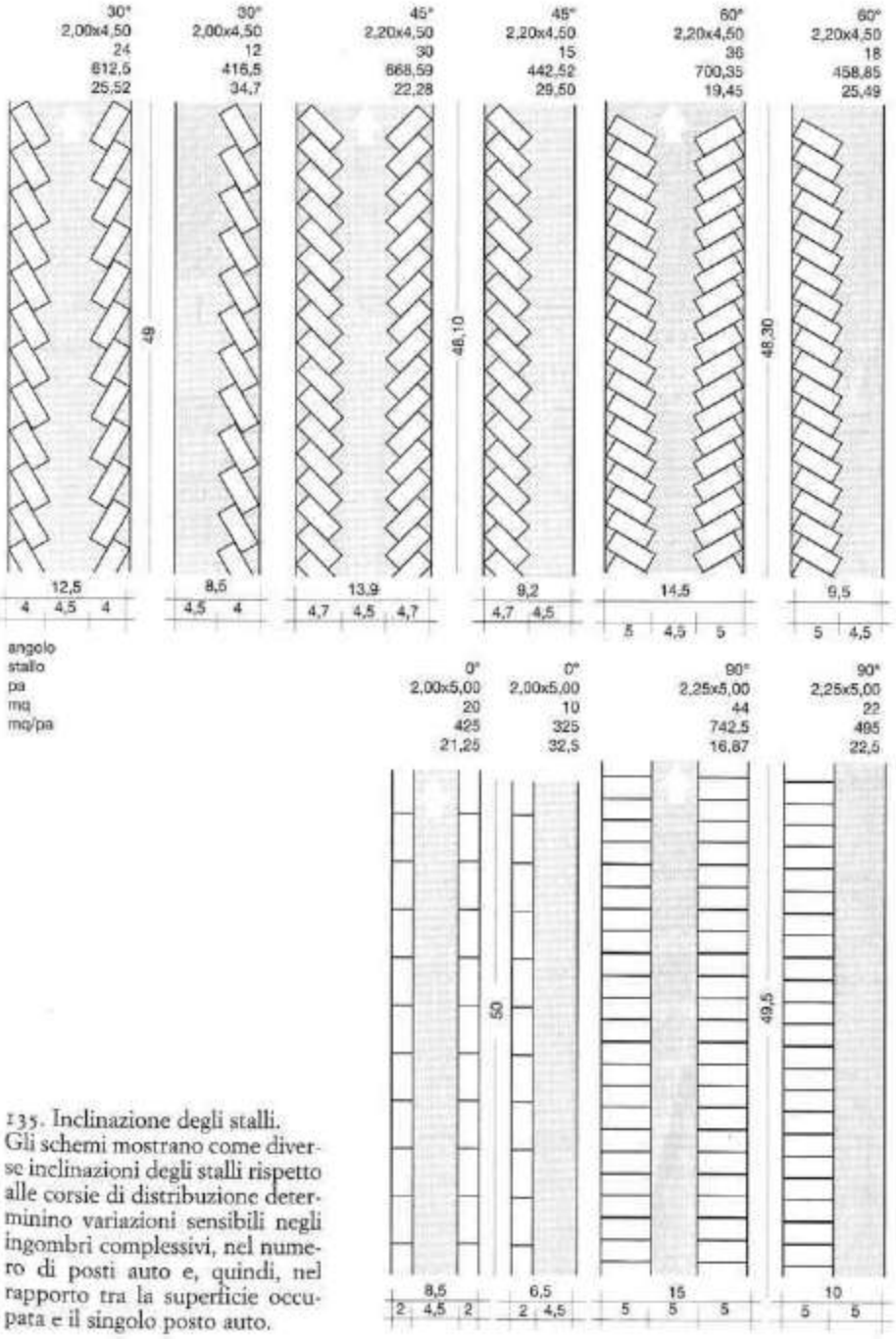
Parcheggi. Dimensione posti auto:
- longitudinali: 2x5 m
- a 45° : 2,30 x 4,80 m (fascia)
- ortogonali: 2,30 x 5 m

Piste ciclabili (in sede propria o riservata):
- senso unico: 1,50 m
- doppio senso: 2,50 m
- spartitraffico: 0,50 m

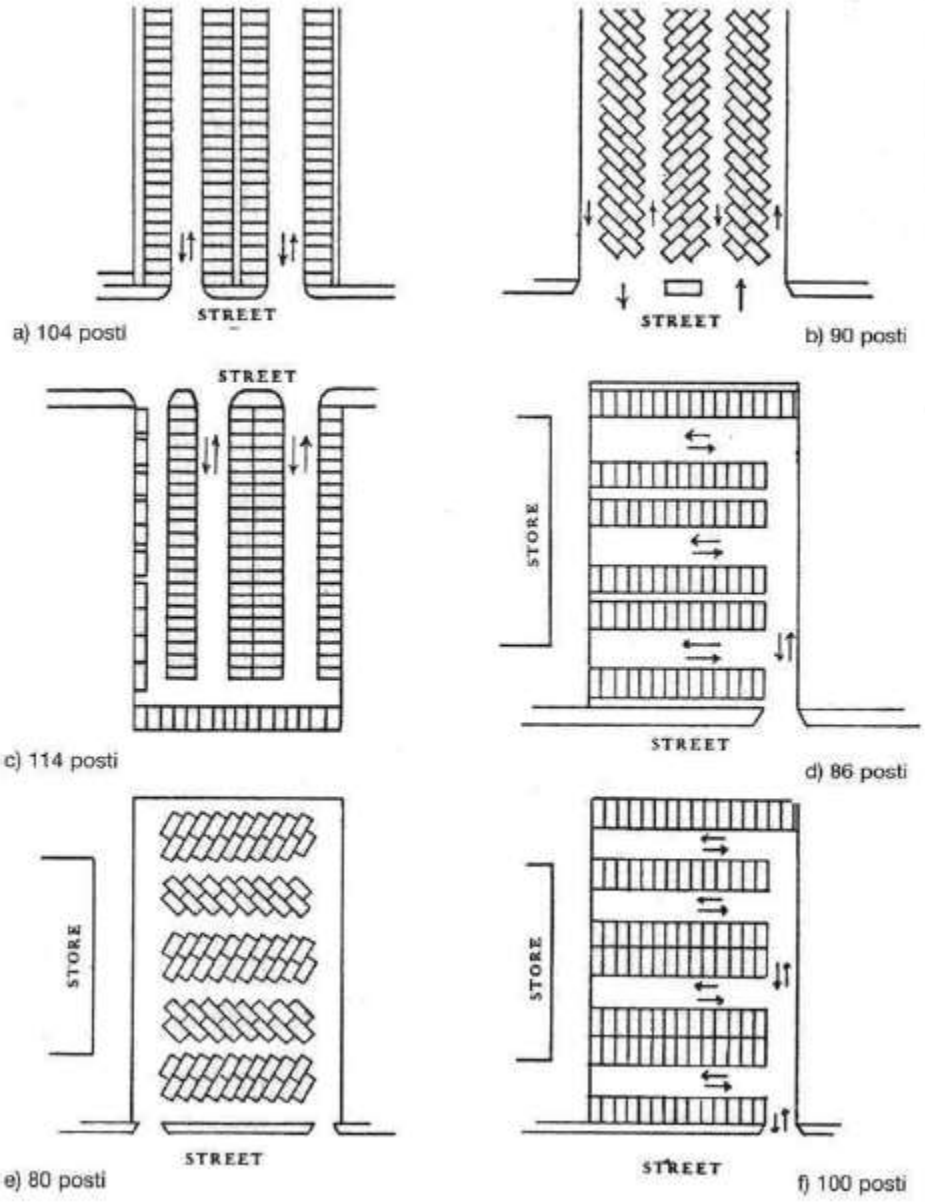
Rotatorie urbane:
- minirotatorie: diametro m. 14-24
- rotatorie compatte: diametro m. 24-30

Marciapiedi (strade D-E-F): larghezza min. 1,50 m (passaggio libero min. 0,90 m)

Altezza libera (gallerie o cavalcavia):5 m

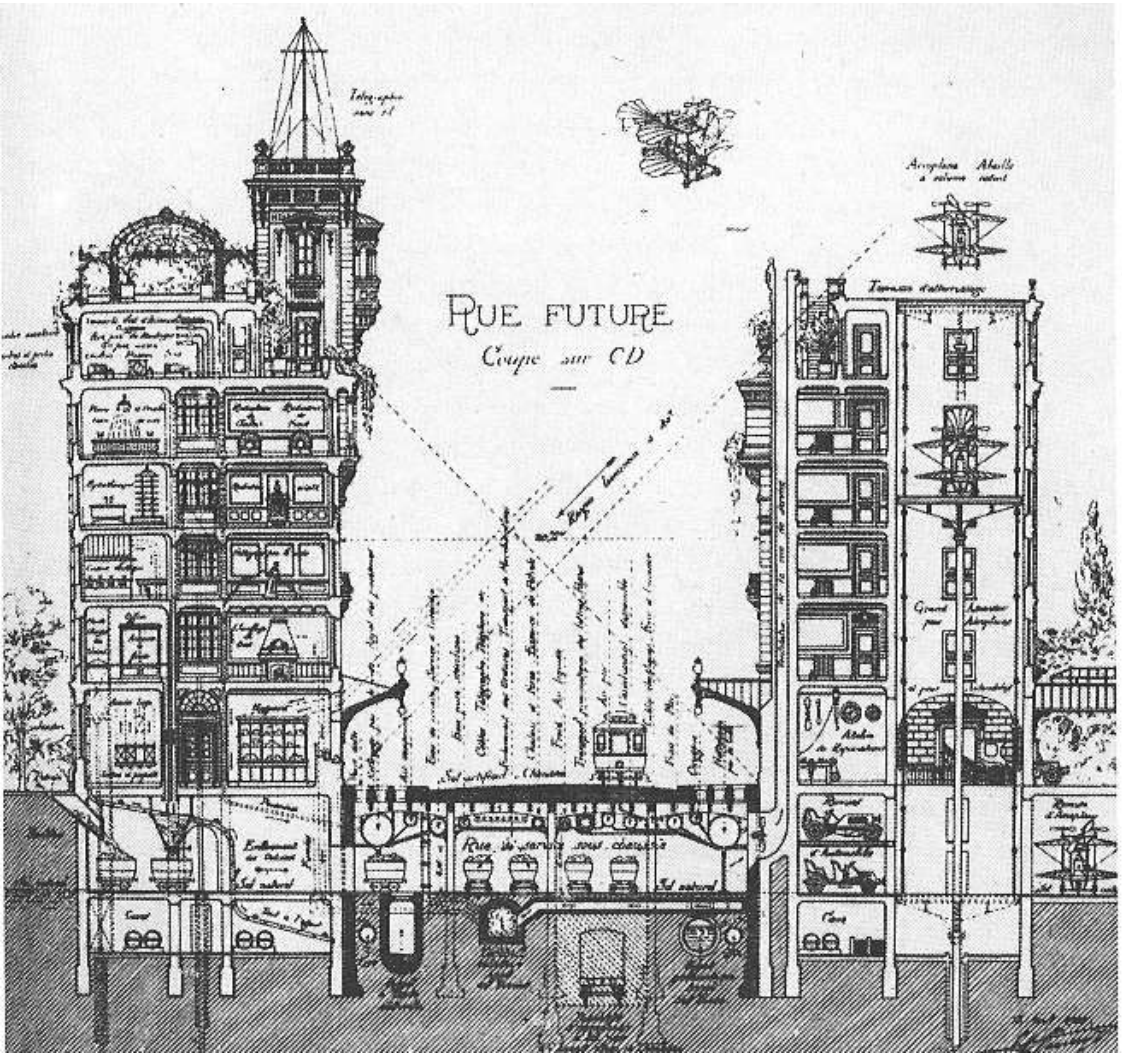


135. Inclinazione degli stalli. Gli schemi mostrano come diverse inclinazioni degli stalli rispetto alle corsie di distribuzione determinino variazioni sensibili negli ingombri complessivi, nel numero di posti auto e, quindi, nel rapporto tra la superficie occupata e il singolo posto auto.

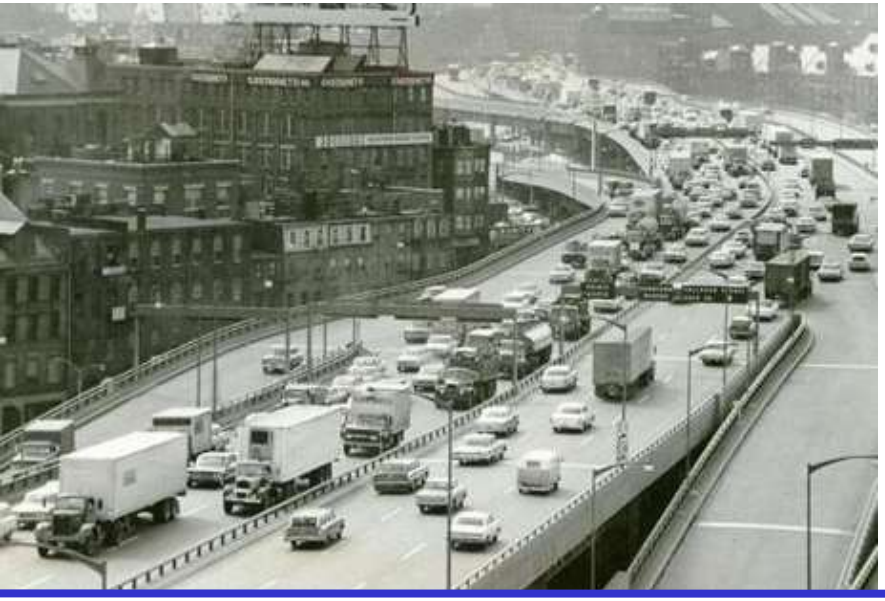


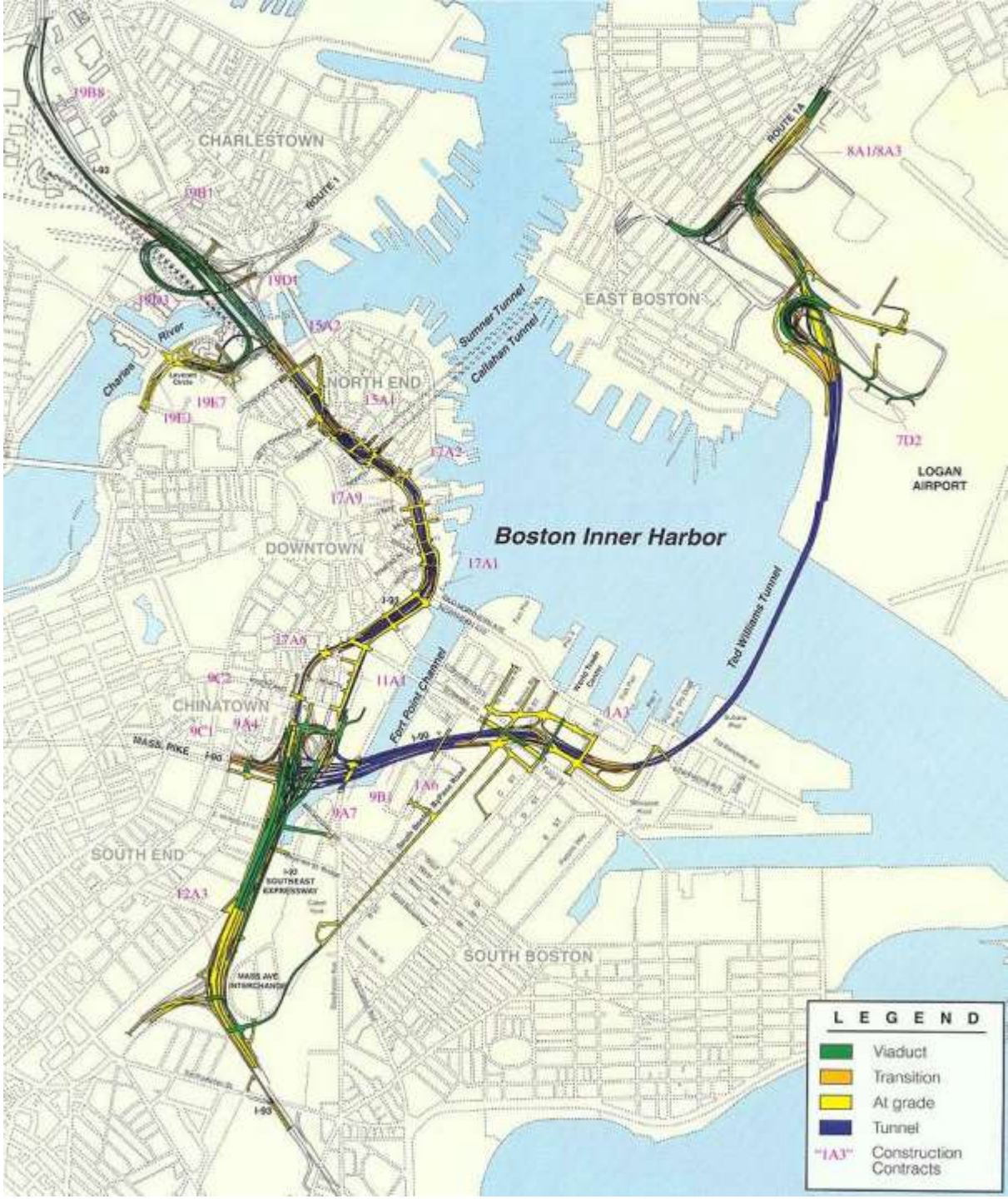
Schemi di parcheggi a raso (da **P. Gabellini**, *Tecniche urbanistiche*, Carocci, Roma, 2001)

- RIPARTIZIONE ORIZZONTALE
- RIPARTIZIONE VERTICALE
- SEZIONI COMPLESSE



Ripartizione verticale





Boston: la trasformazione della Central Artery (1992-2005)

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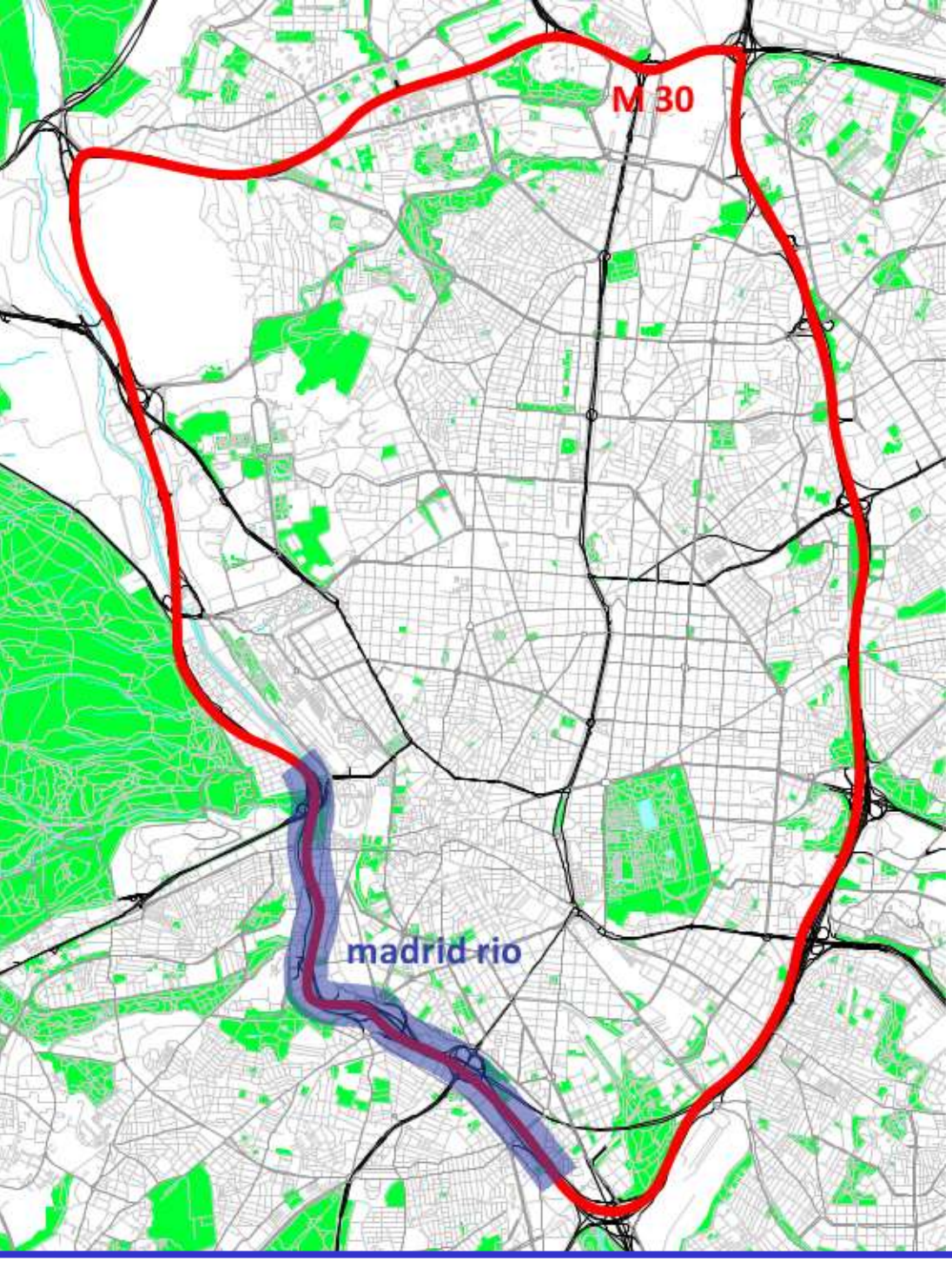
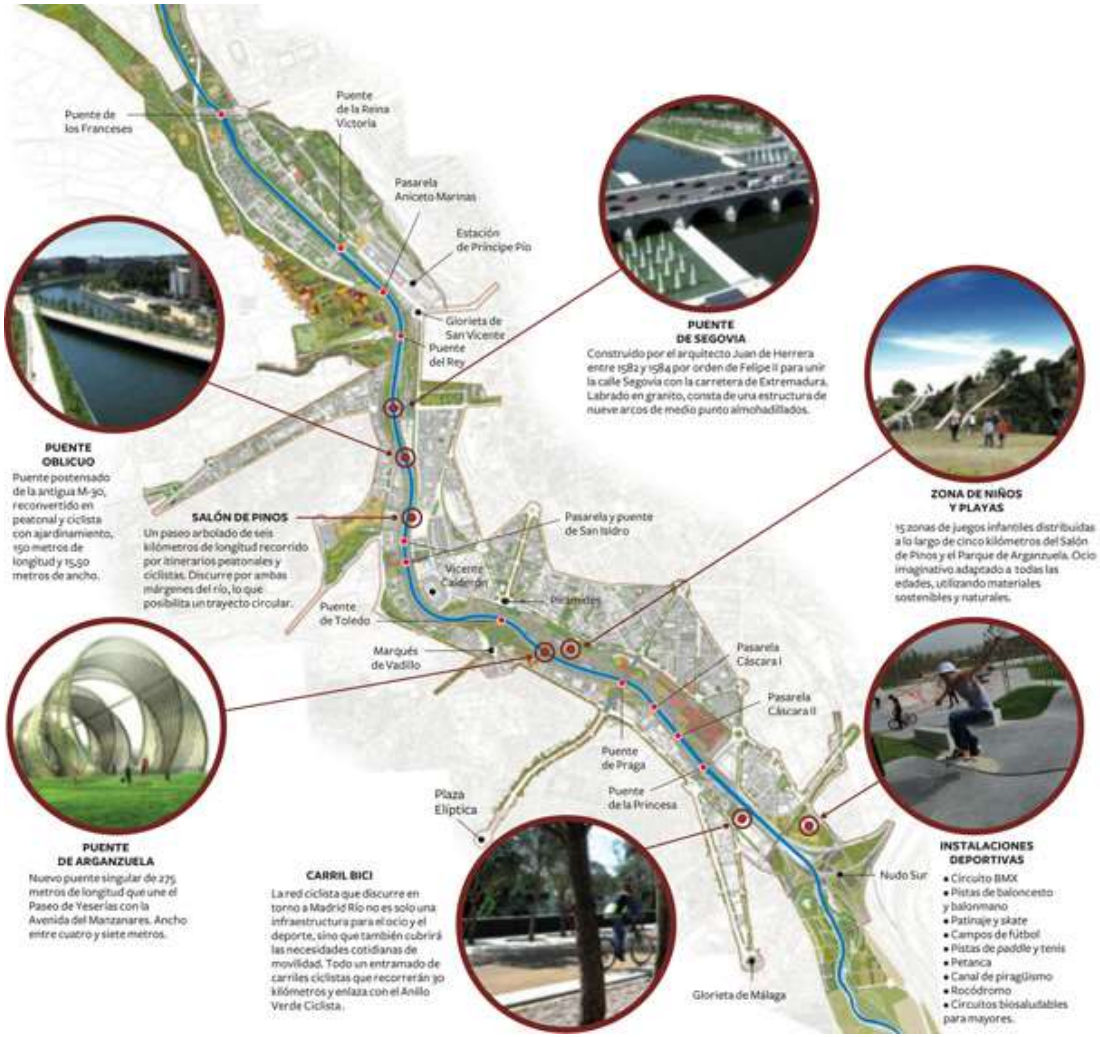
Boston: la trasformazione della Central Artery (1992-2005)

Boston: la trasformazione della Central Artery (1992-2005). “Ventilation buildings”



Madrid: Progetto “Rio” (2005-2011)



Madrid: Progetto “Rio” (2005-2011)

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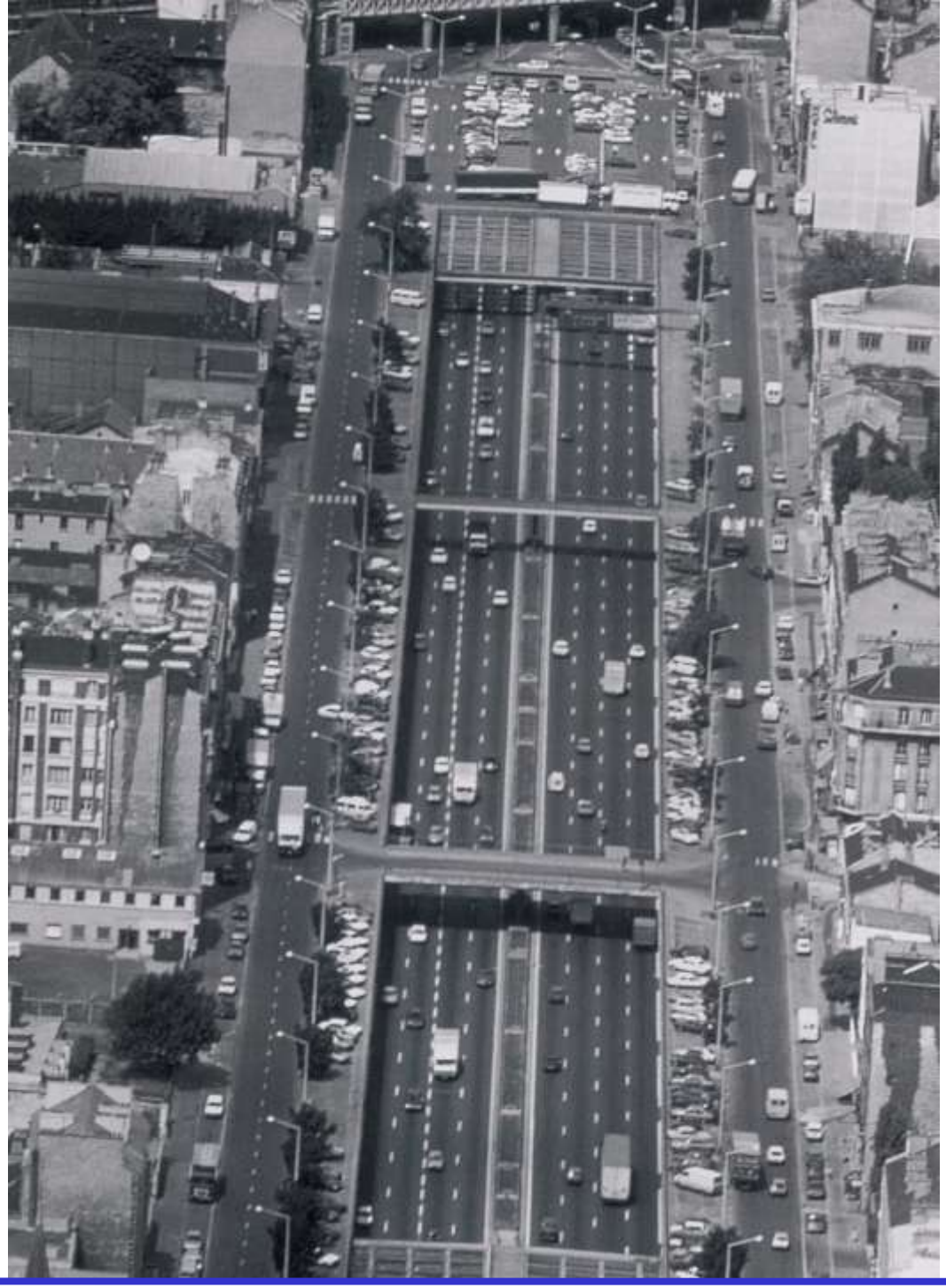
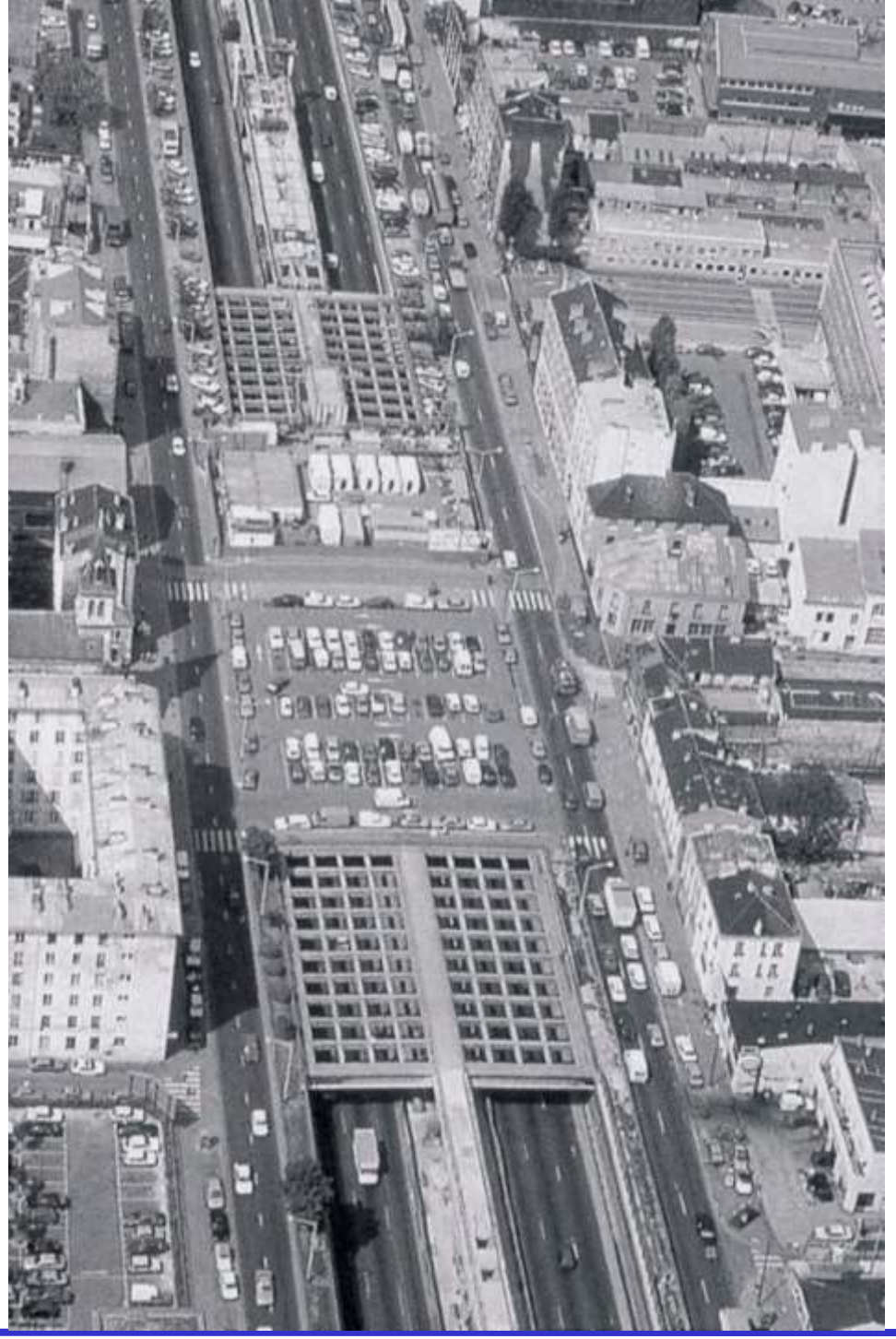
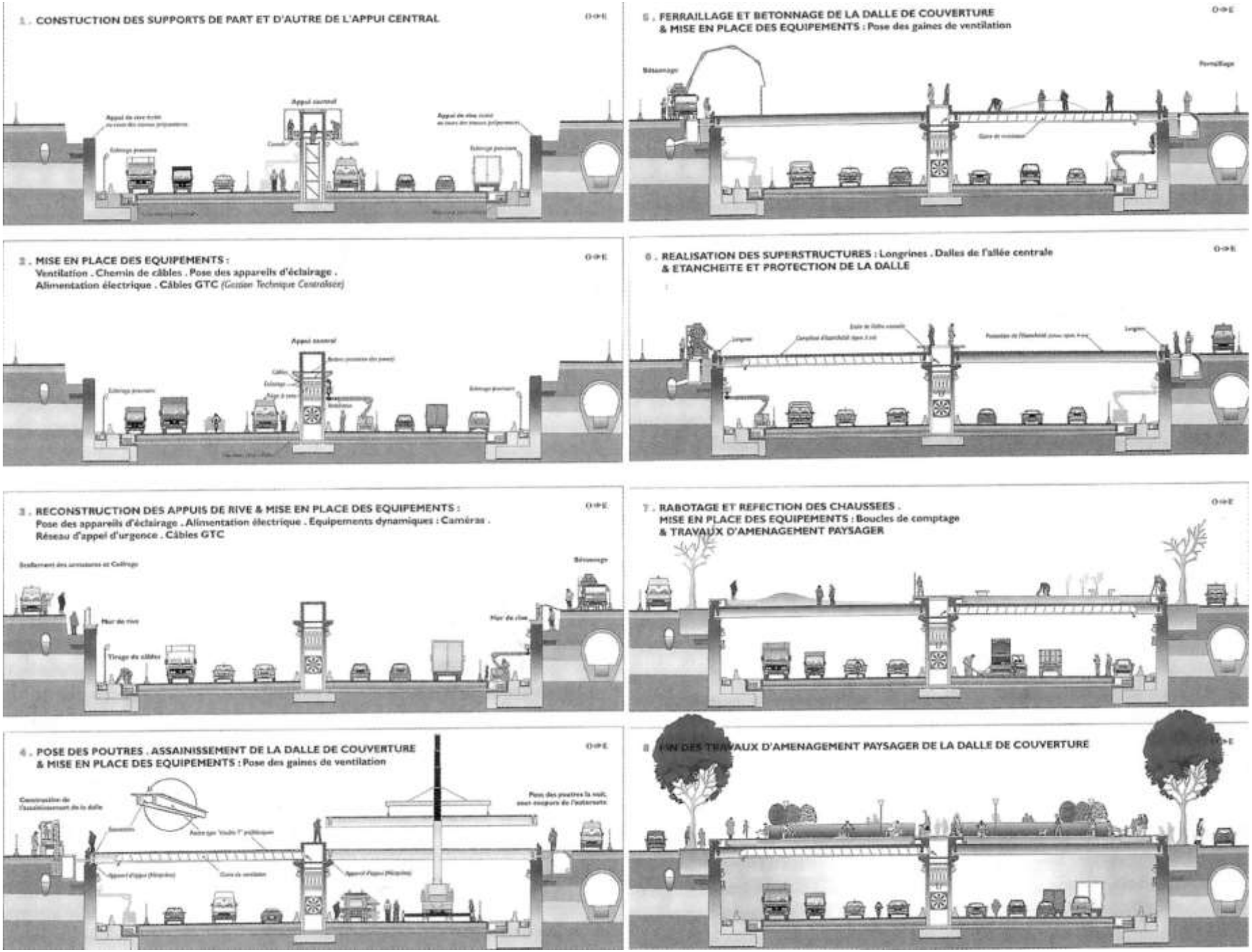
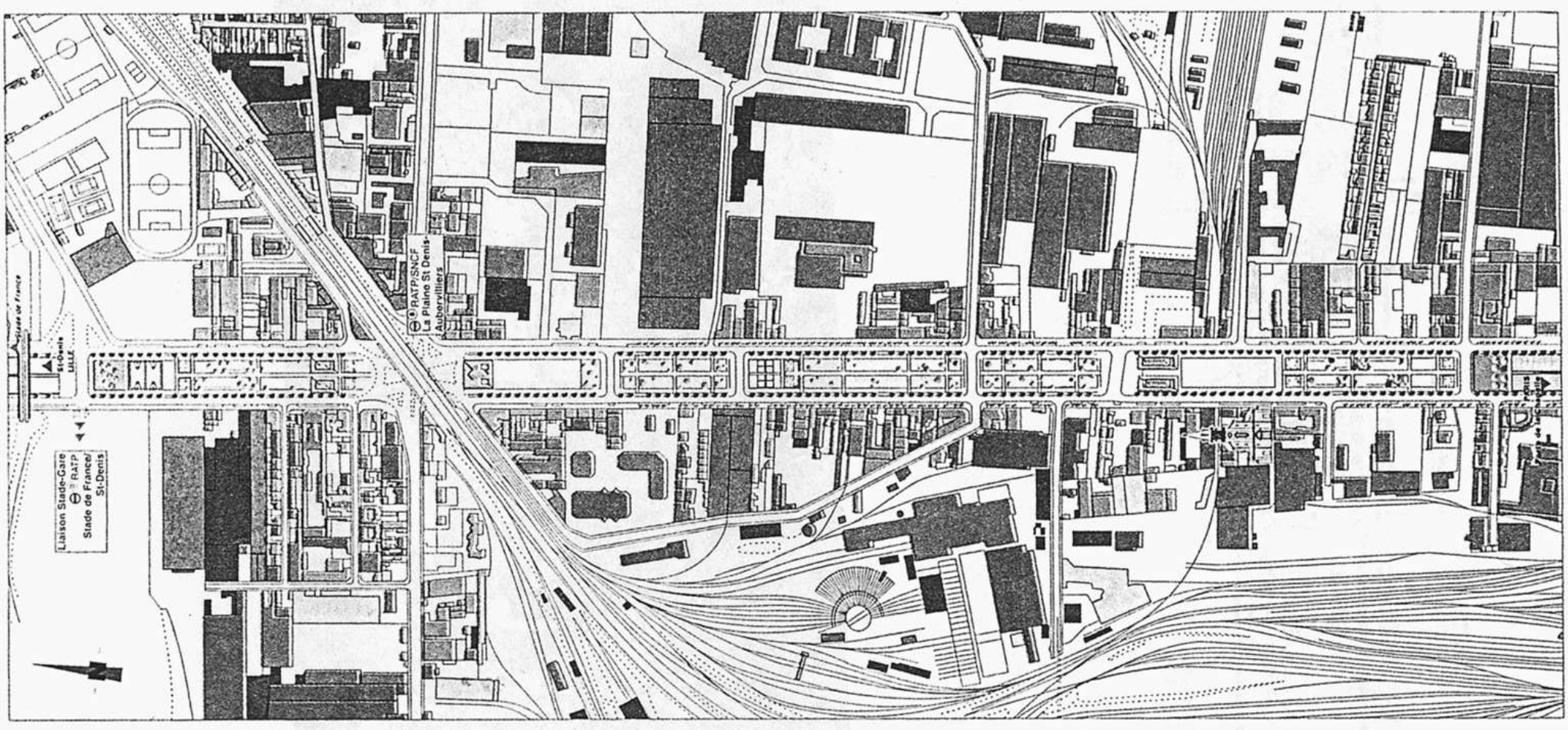




M. Corajoud, Jardins Wilson, St.-Denis, 2000

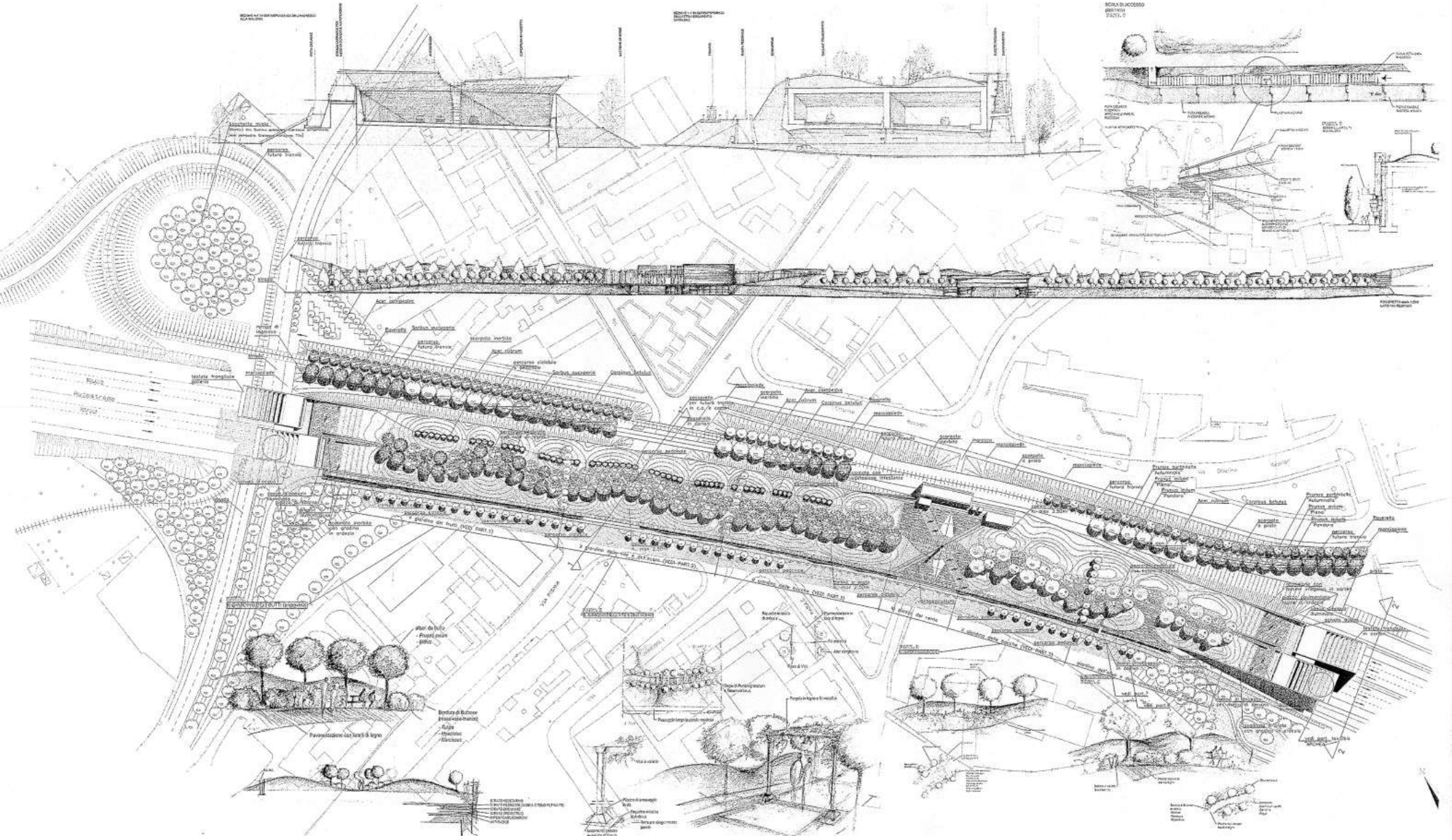


M. Corajoud, Jardins Wilson, St.-Denis, 2000

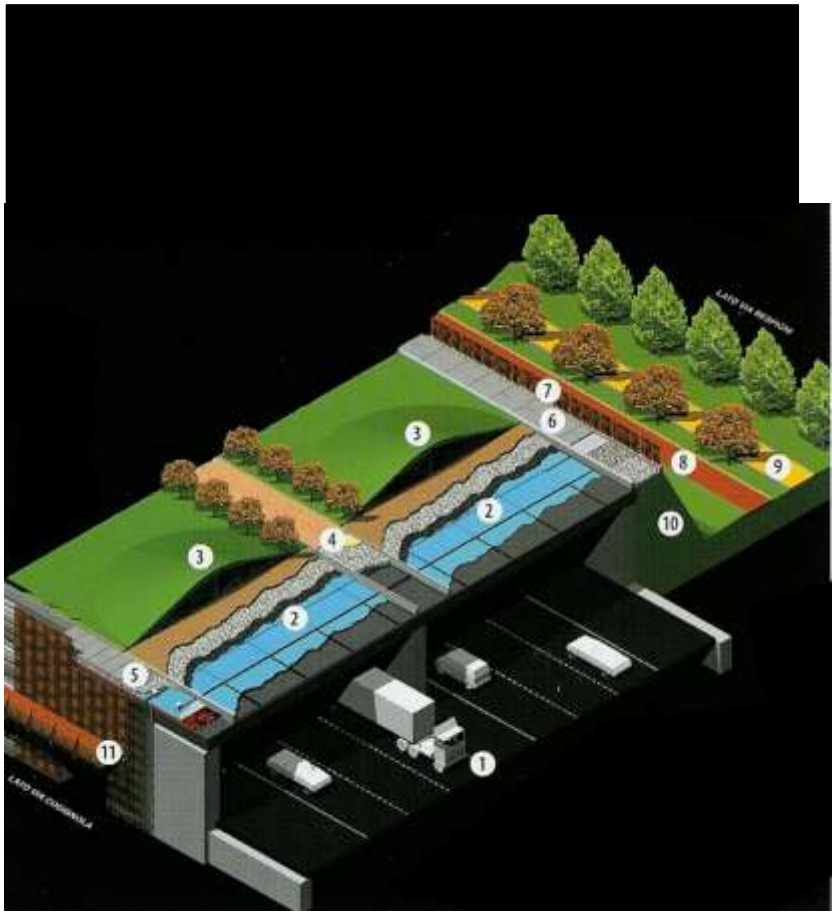


M. Corajoud, Jardins Wilson, St.-Denis, 2000

M. Corajoud, Jardins Wilson, St.-Denis, 2000



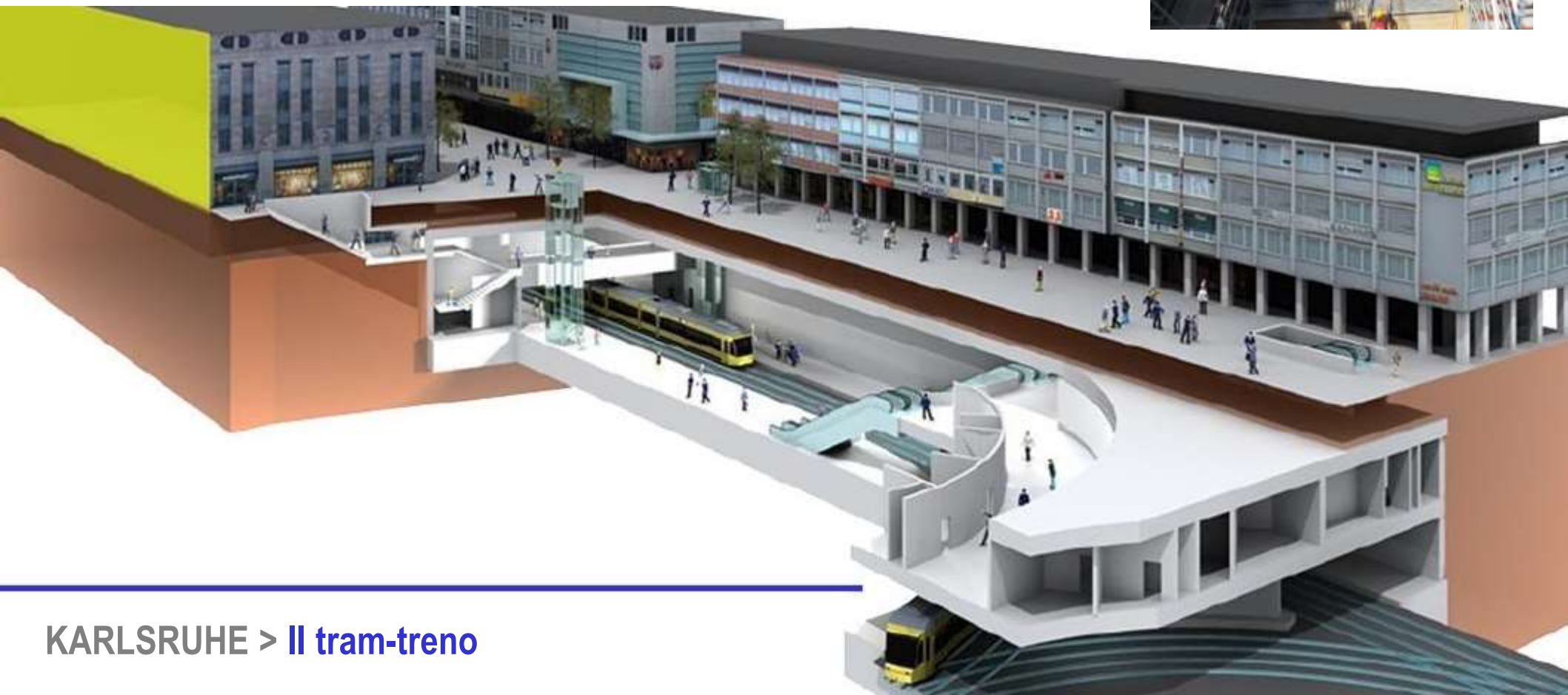
A1, Galleria artificiale di Casellina (Scandicci). Sistemazione paesaggistica (L. Vallerini)



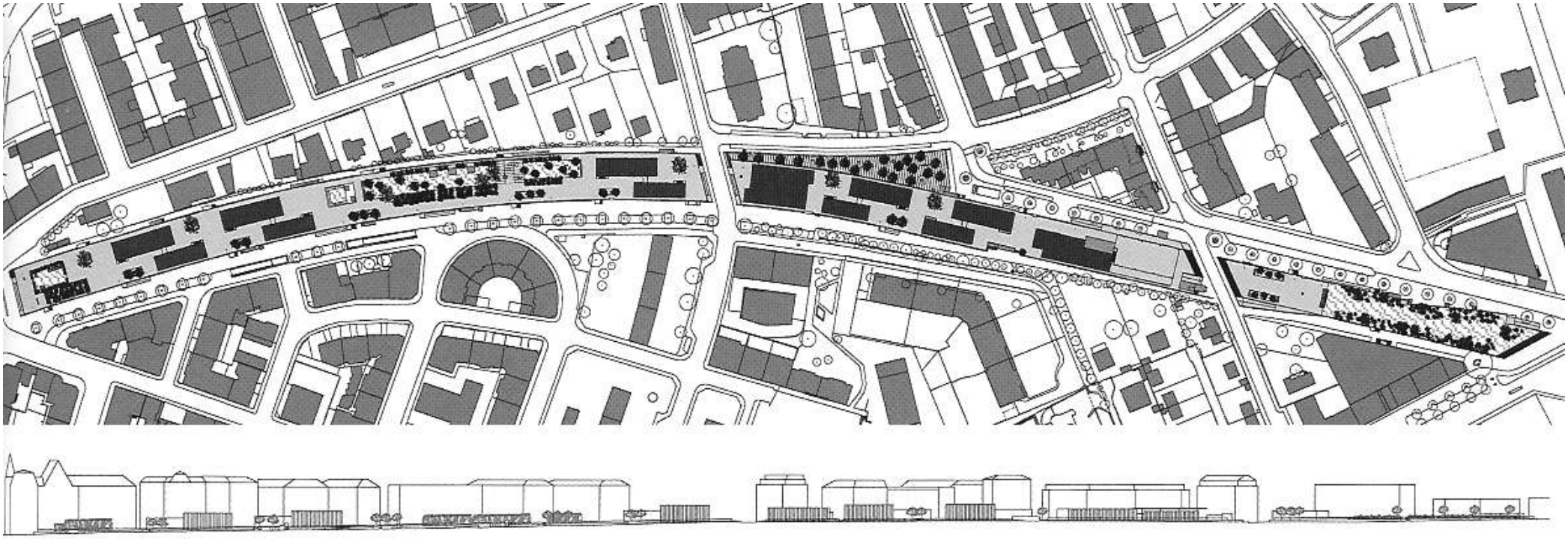
A1, Galleria artificiale di Casellina (Scandicci). Sistemazione paesaggistica (L. Vallerini)

A1, Galleria artificiale di Casellina (Scandicci). Sistemazione paesaggistica (L. Vallerini) – avanzamento lavori

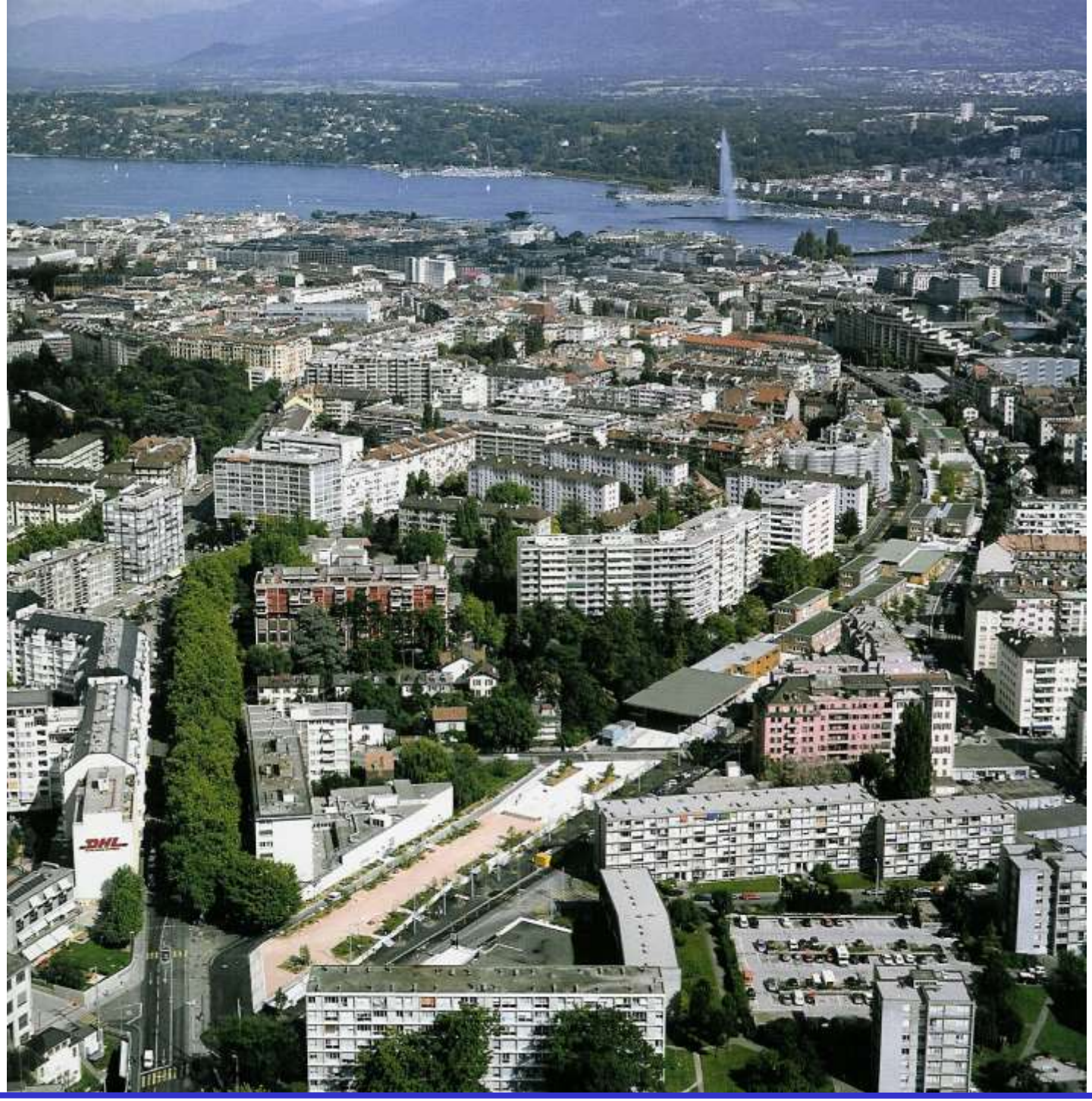
KARLSRUHE > **Il tram-treno**



KARLSRUHE > **Il tram-treno**



P.Bonnet, P. Bosson, A. Vaucher, copertura dei binari CFF, Ginevra, 1991-2001

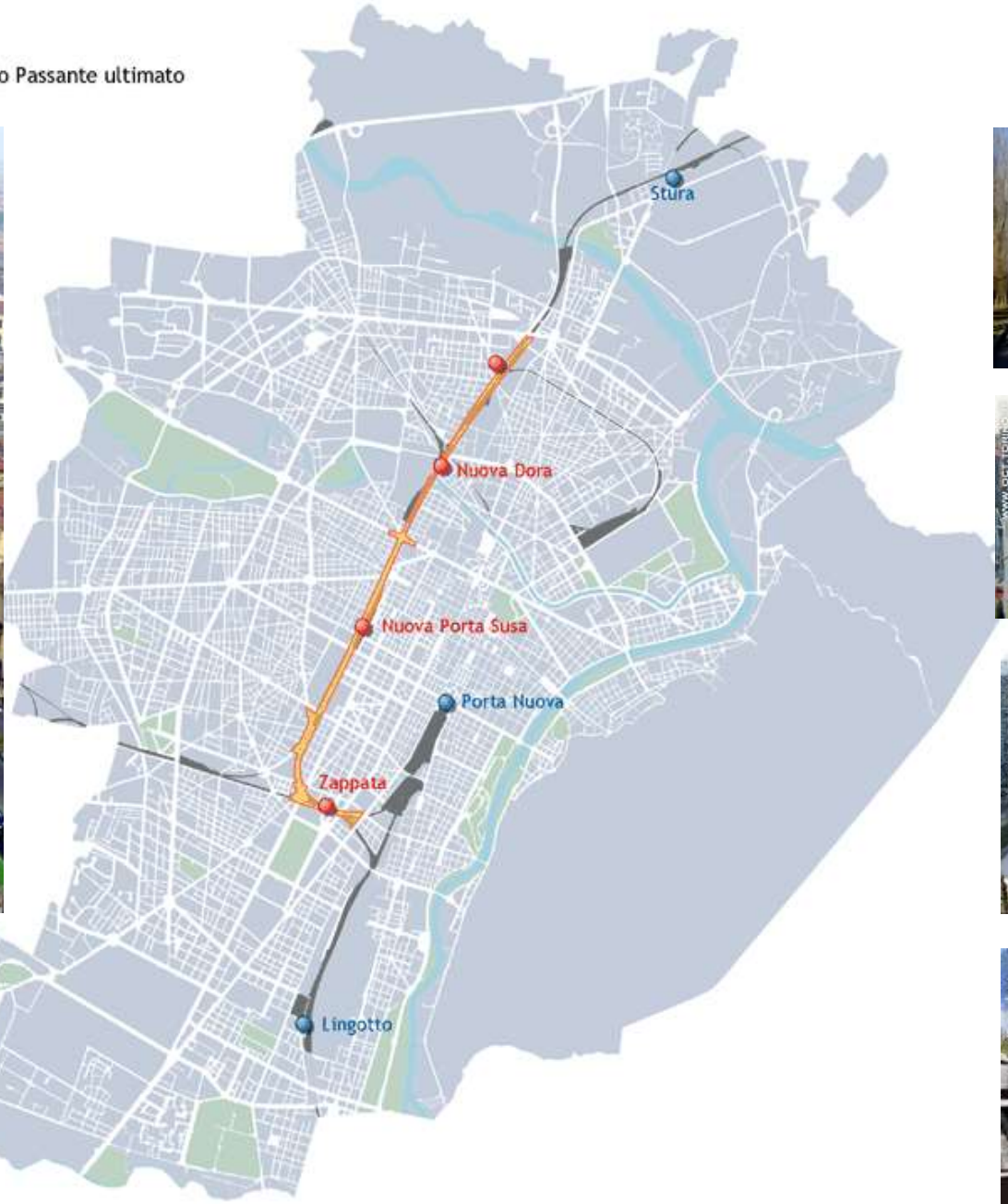


P.Bonnet, P. Bosson, A. Vaucher, copertura dei binari CFF, Ginevra, 1992-2002

P.Bonnet, P. Bosson, A. Vaucher, copertura dei binari CFF, Ginevra, 1992-2002

PASSANTE FERROVIARIO DI TORINO - Aree ferroviarie coperte

Accesso binari a cielo aperto
Accesso binari sotterranei
Aree ferroviarie coperte a progetto Passante ultimato



Torino: il passante ferroviario e la “Spina centrale”

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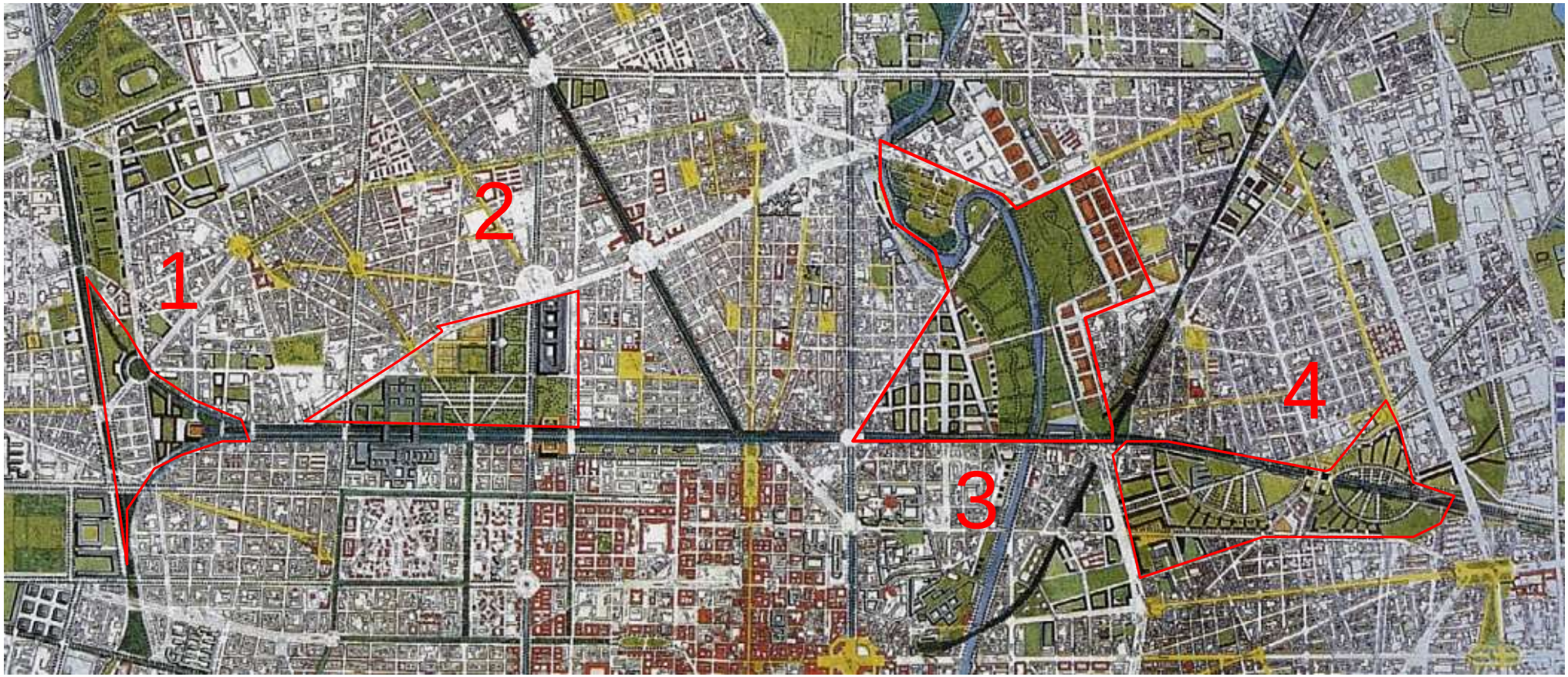


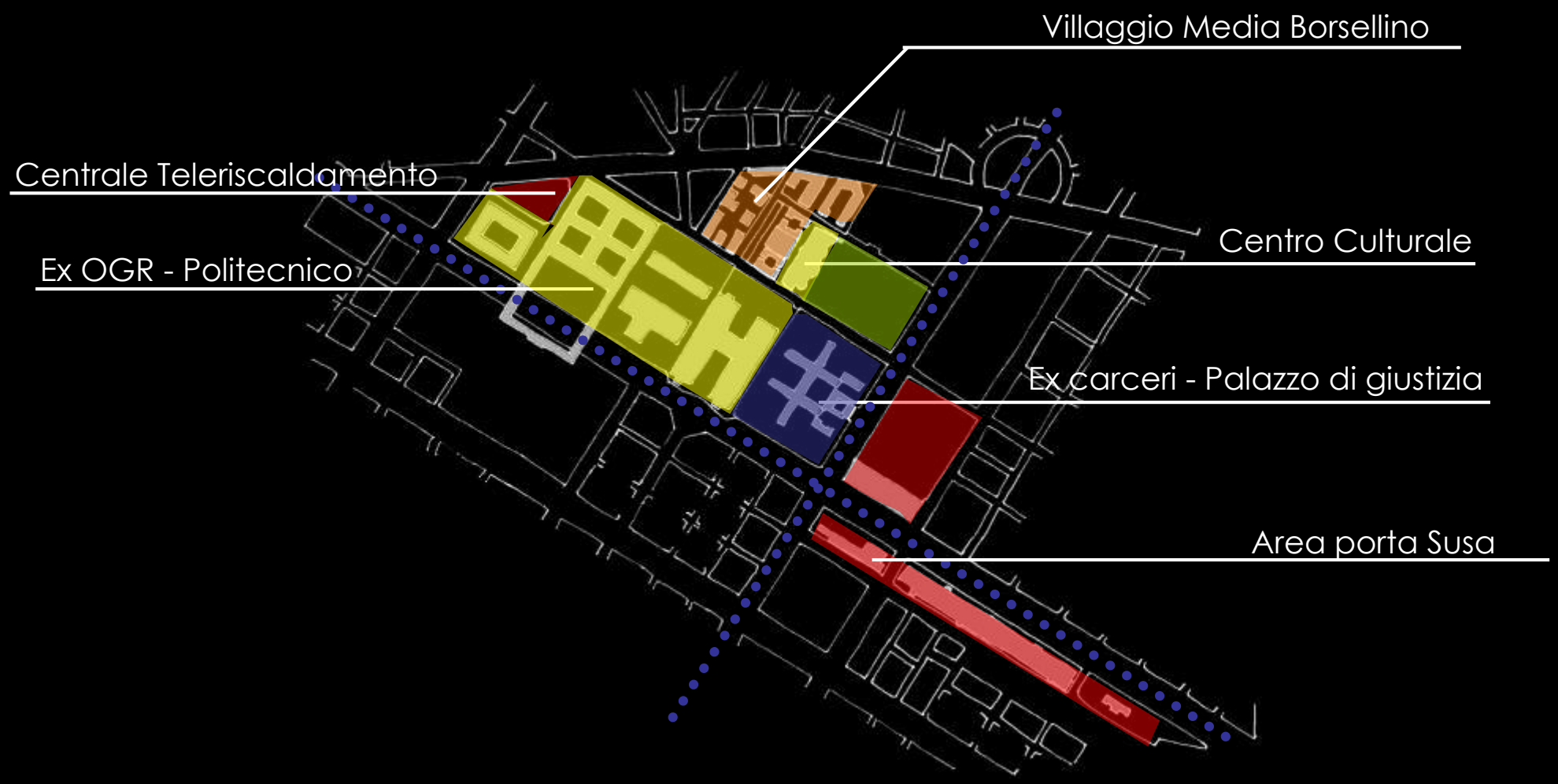
Torino: il passante ferroviario e la “Spina centrale”

SPINA 1 (164.000 m^2)

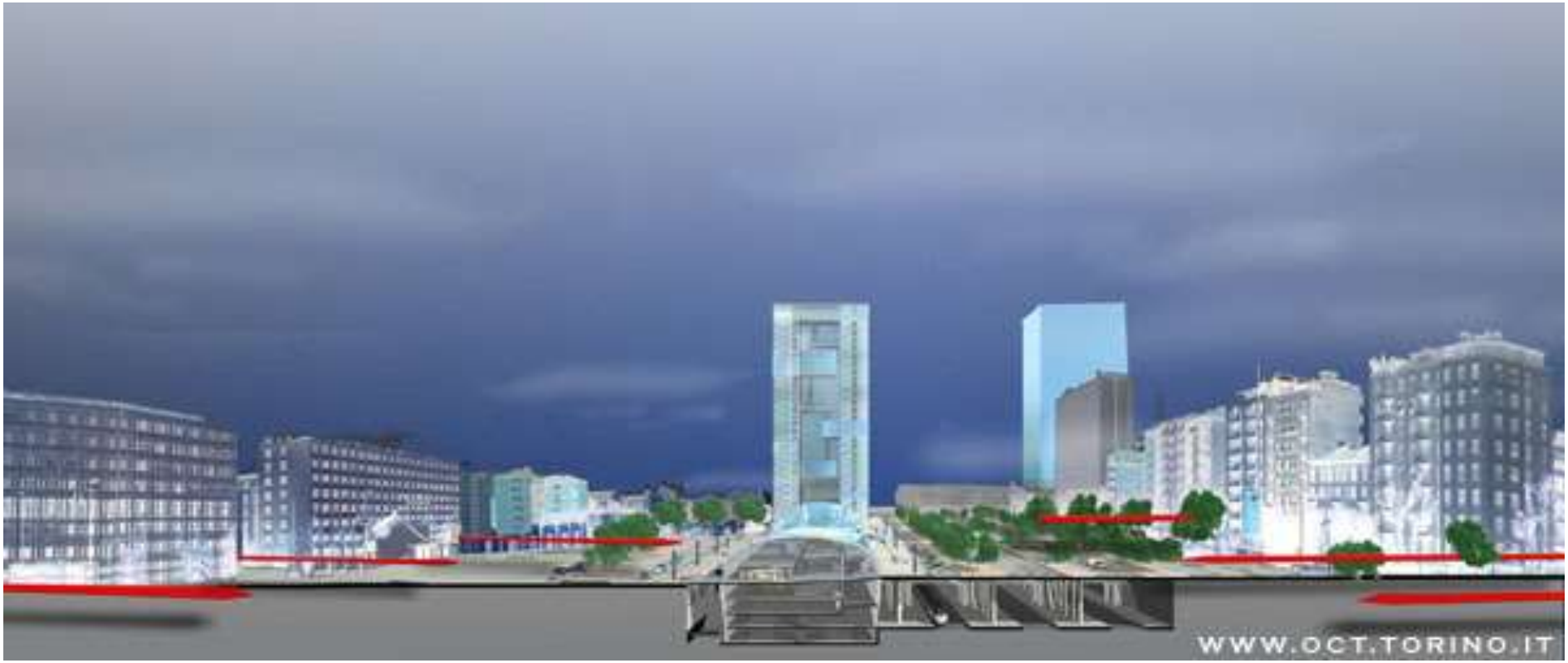
Estremità sud del viale della Spina, su ex area FIAT e Officine Materferro.

SPINA 2 (650.000 m^2)

Ovest della ferrovia, ex Off. Nebbiolo, Westinghouse, OGR



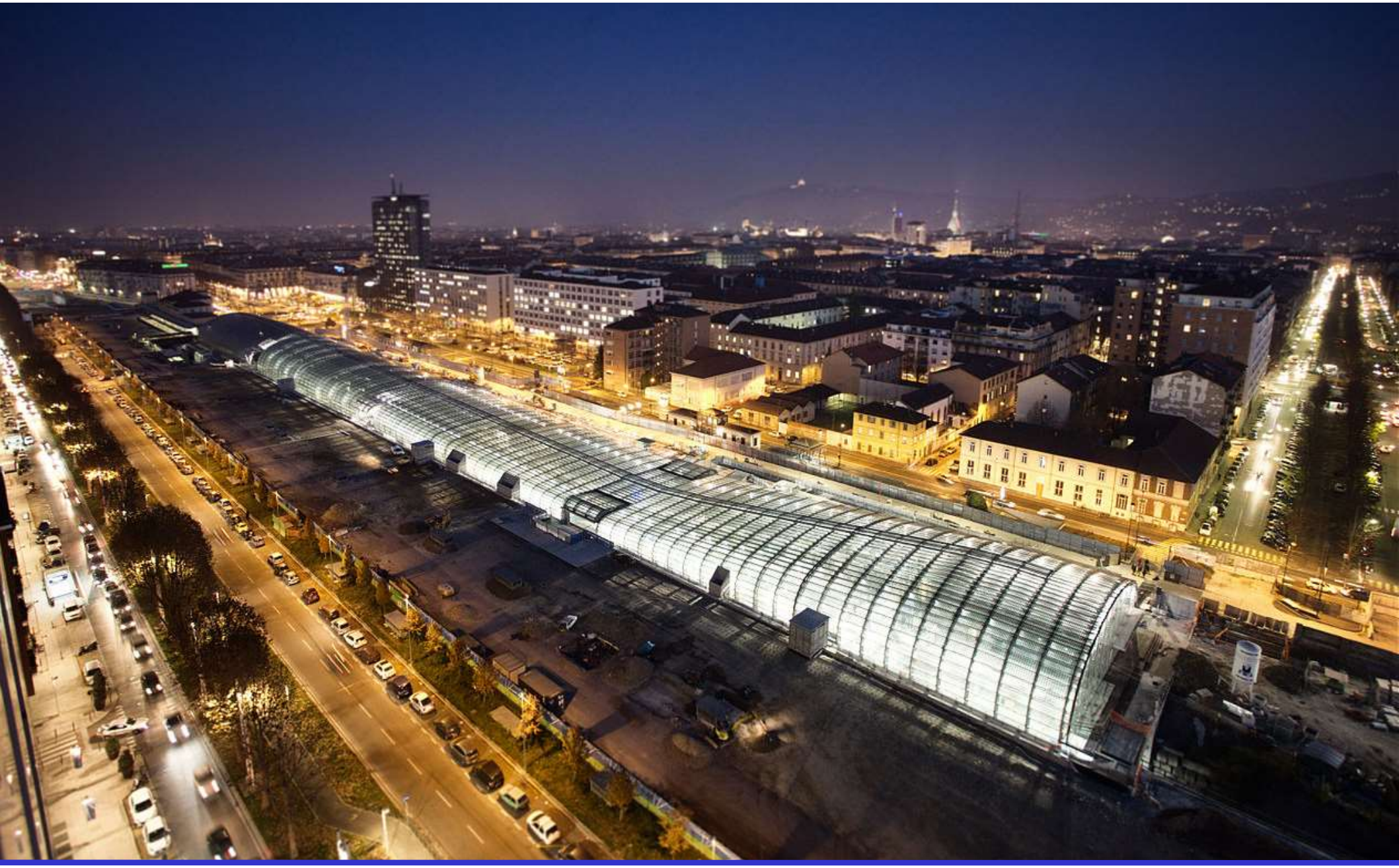
Spina 2 / Nuova Stazione Porta Susa



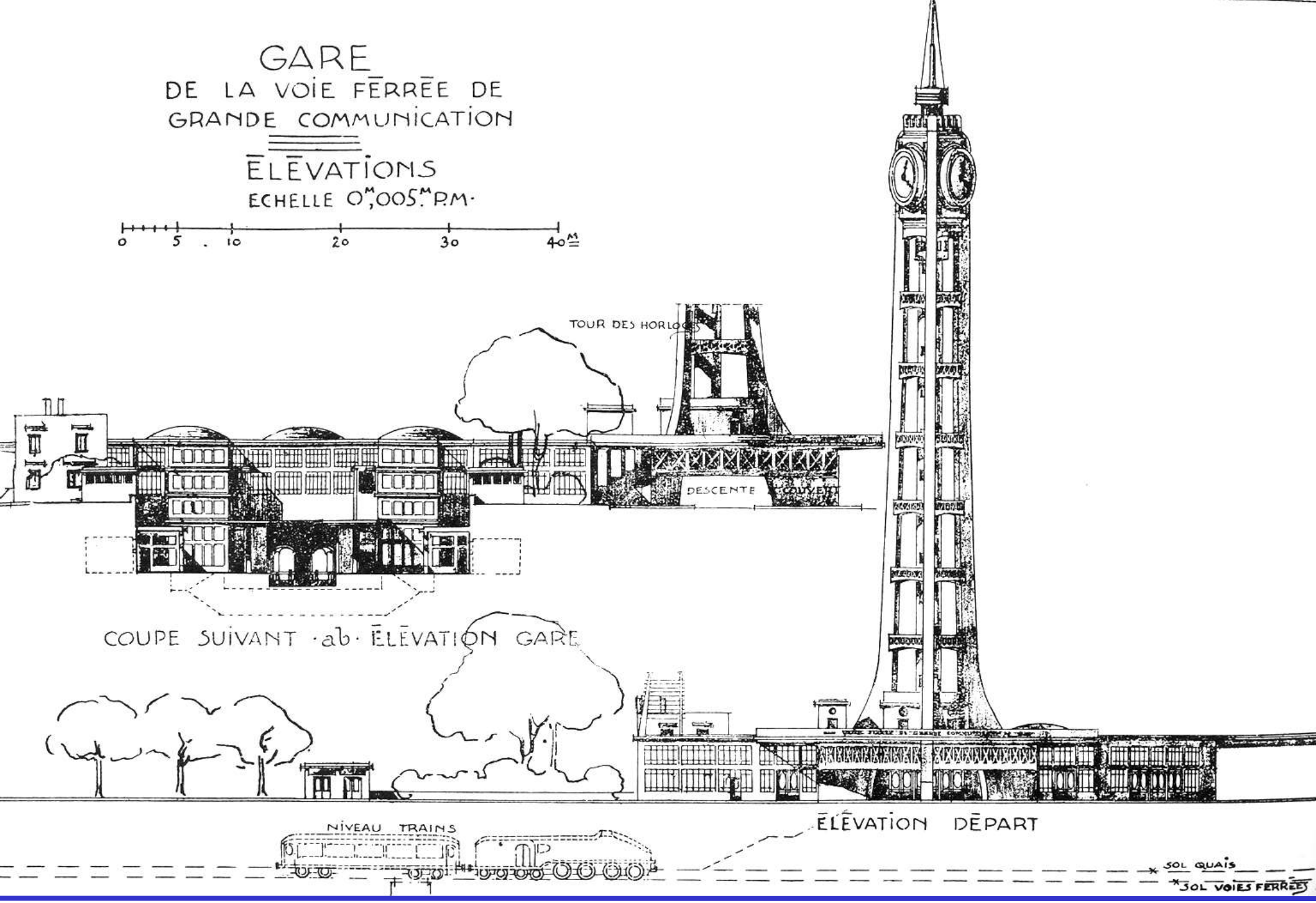
Spina 2 / Nuova Stazione Porta Susa (AREP, Jean-Marie Duthilleul, 2008-2013)

Torino: il passante ferroviario e la “Spina centrale”

Spina 2 / Nuova Stazione Porta Susa (AREP, Jean-Marie Duthilleul, 2008-2013)

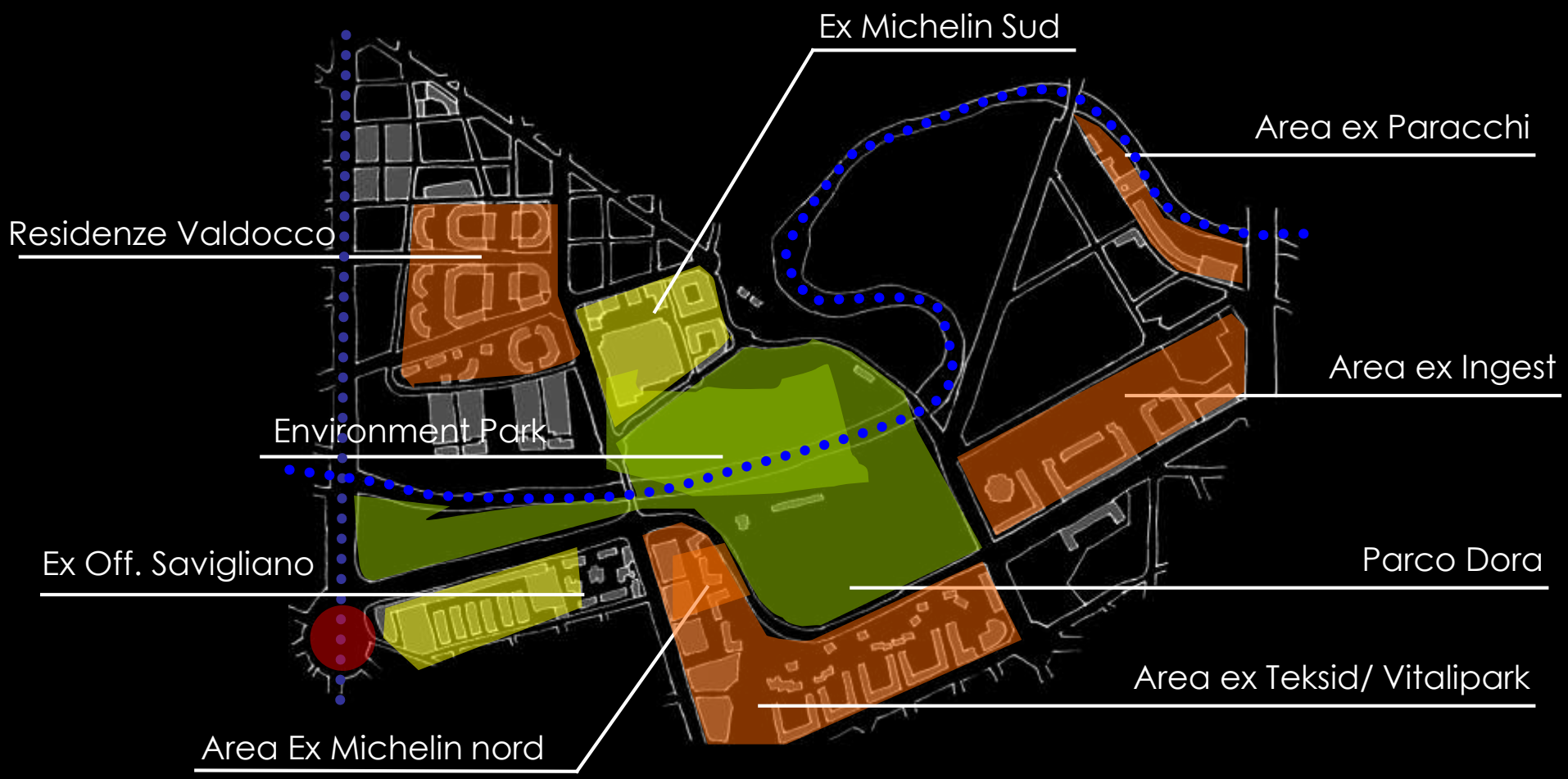


Torino: il passante ferroviario e la “Spina centrale”

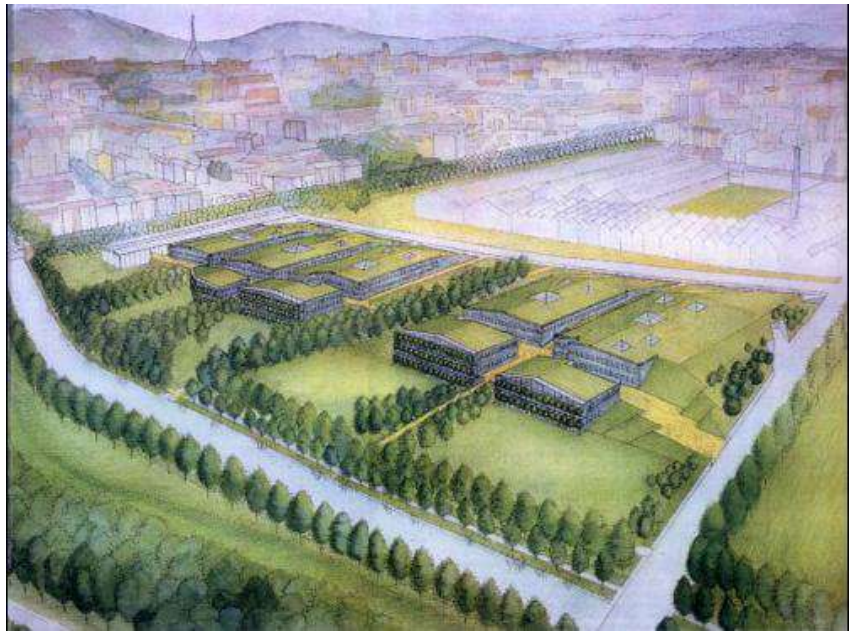


T. Garnier, **Une cité industrielle**, Parigi 1904-1917

SPINA 3 (1.200.000 m^2)



Spina 3 / Environment Park (Camerana, Ambasz, Durbiano)



Torino: il passante ferroviario e la “Spina centrale”

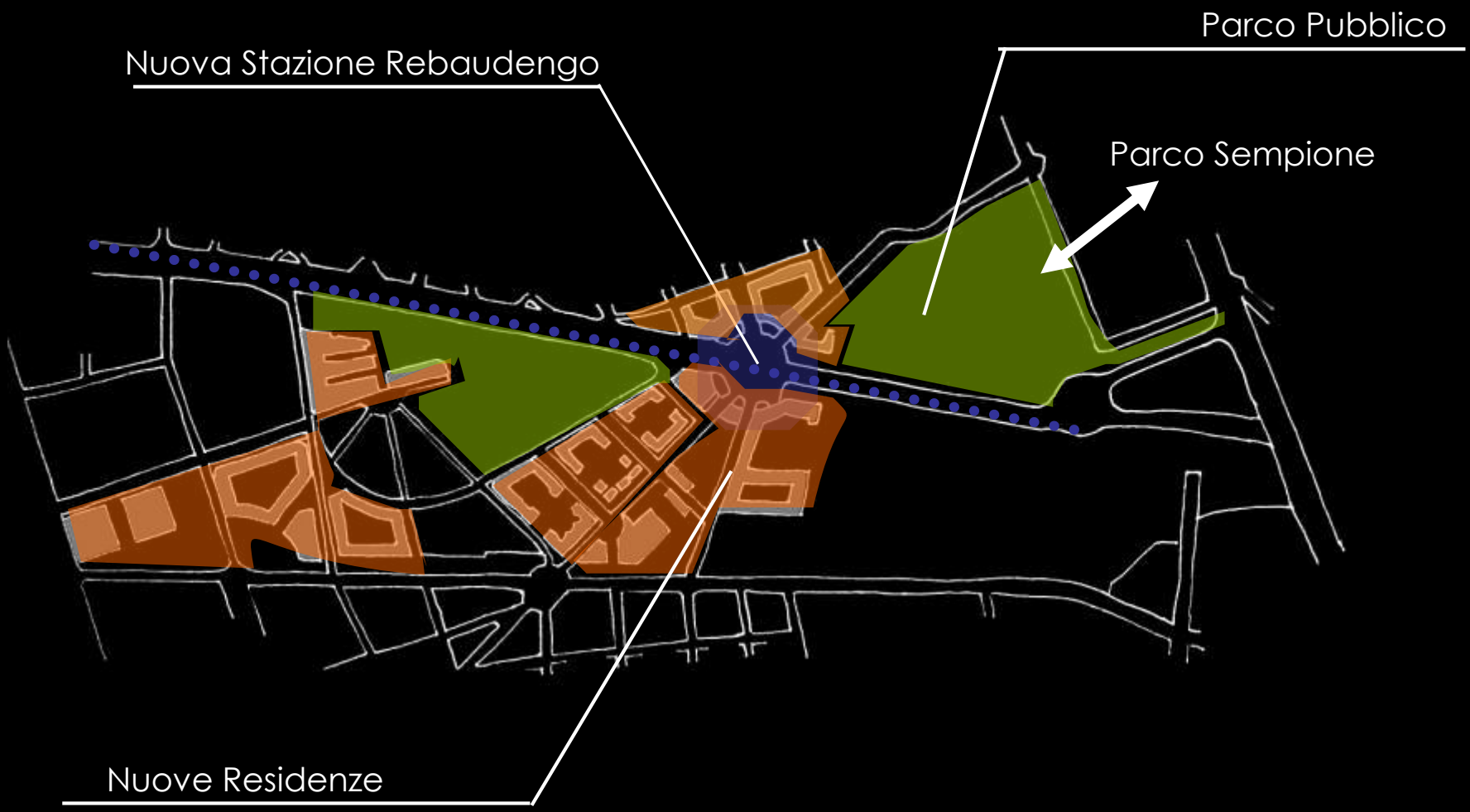
Spina 3 / Parco Dora (Andreas Kipar, 2003)

Spina 3 / Parco Dora (Latz+Partner, 2004-2011)

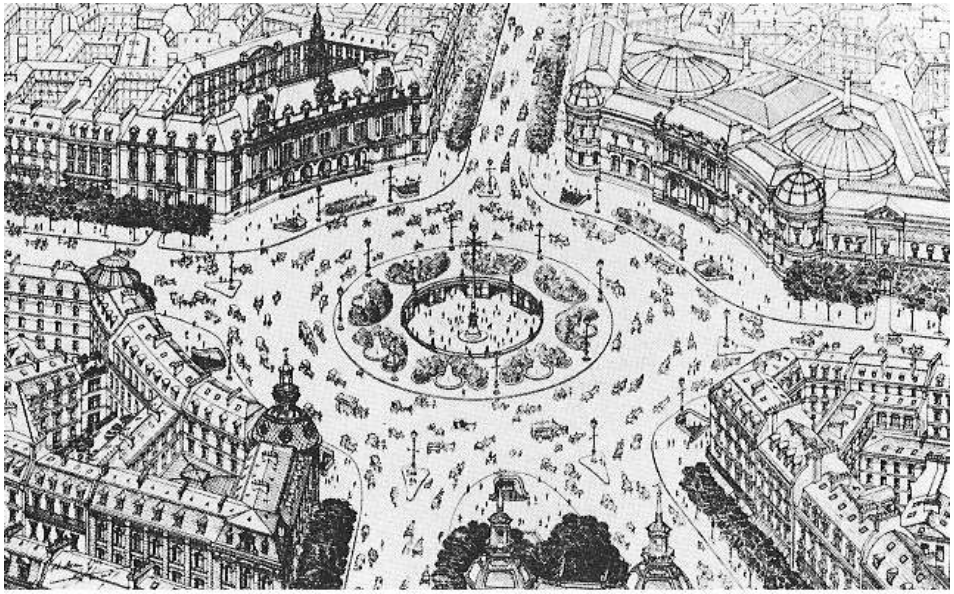
Spina 3 / Parco Dora (Latz+Partner, 2004-2011)

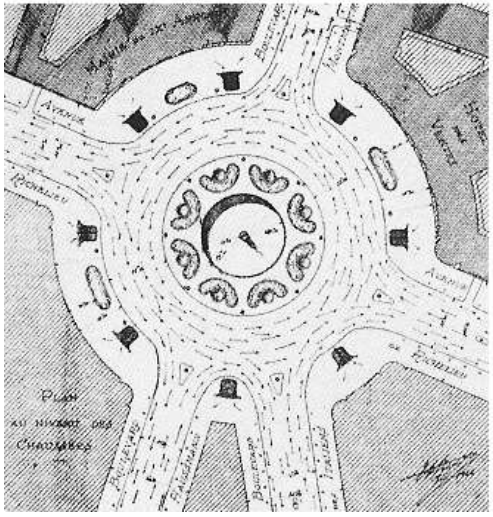
Torino: il passante ferroviario e la “Spina centrale”

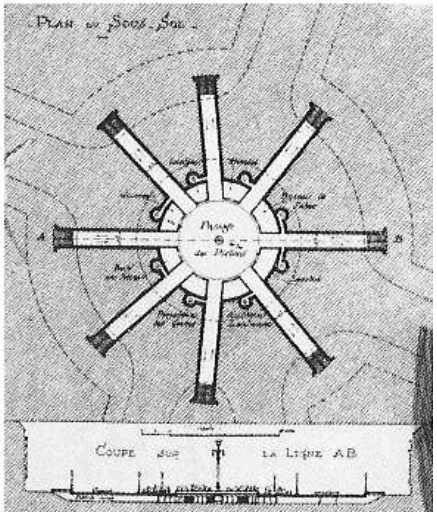
SPINA 4 (395.300 m^2)

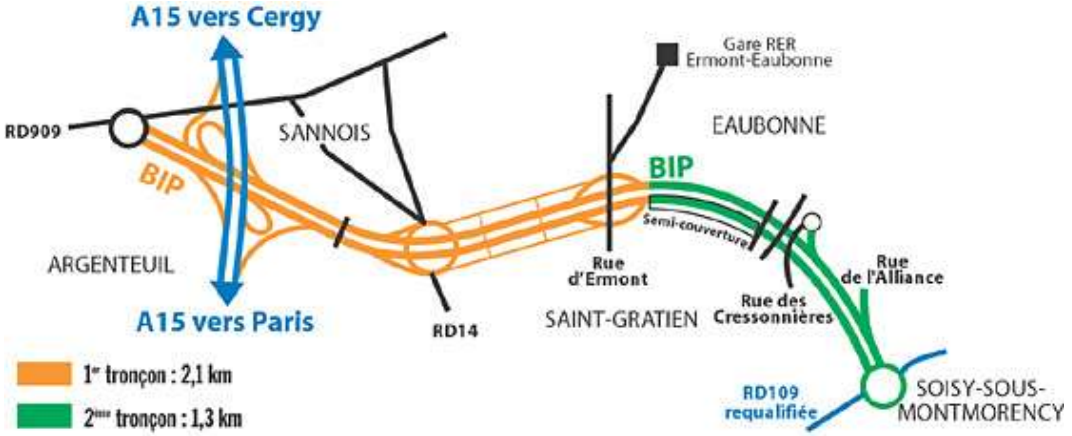


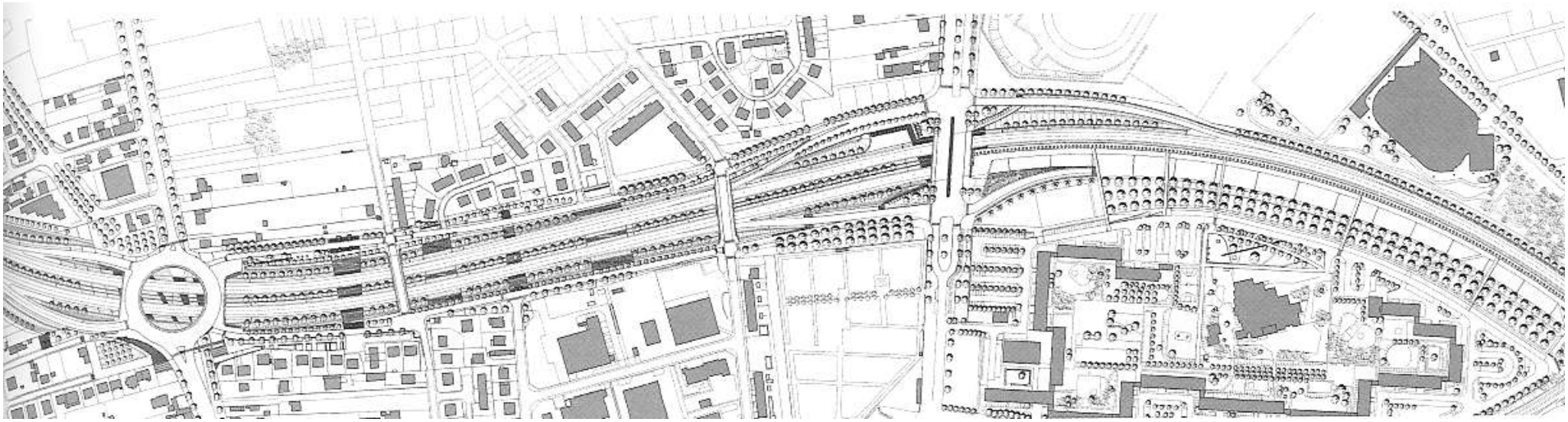
- RIPARTIZIONE ORIZZONTALE
- RIPARTIZIONE VERTICALE
- SEZIONI COMPLESSE



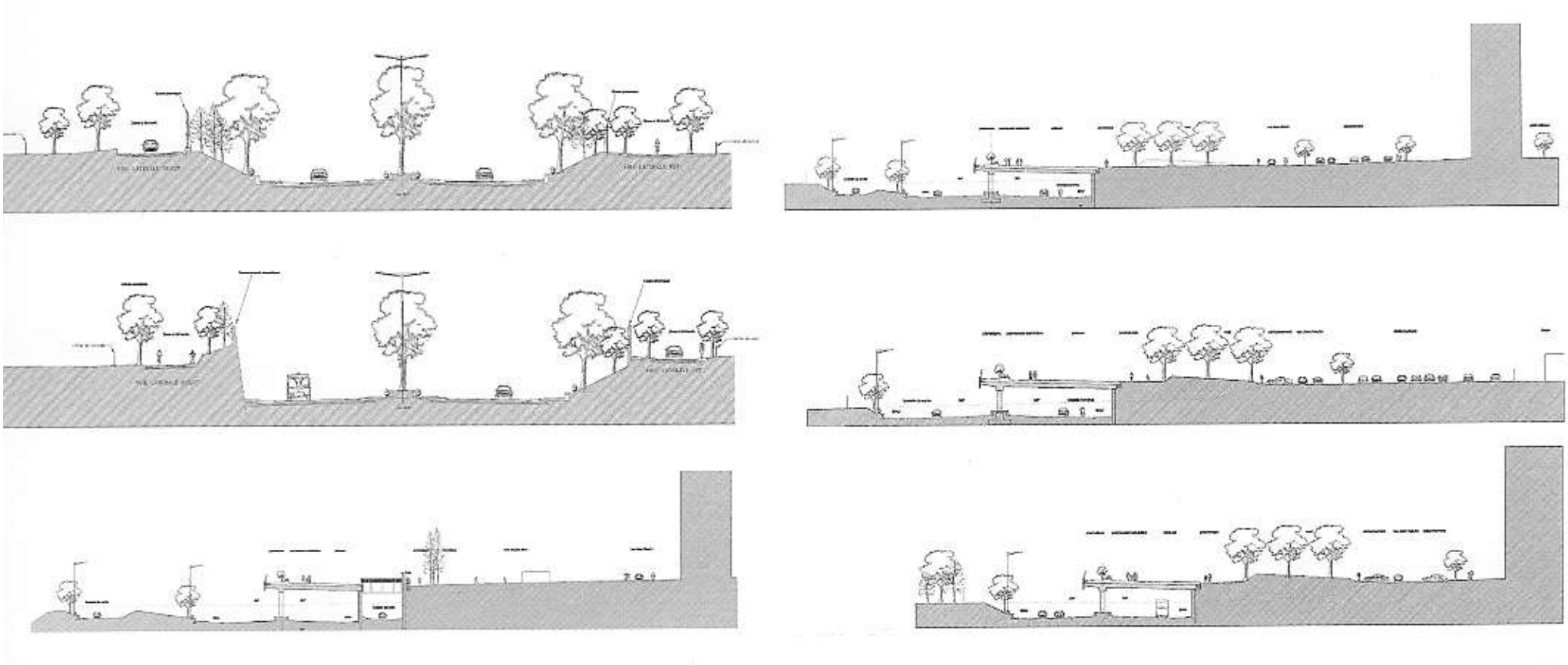

Plan
au niveau des
Chambres


Plan du Sous-Sol
Coupe sur la ligne AB



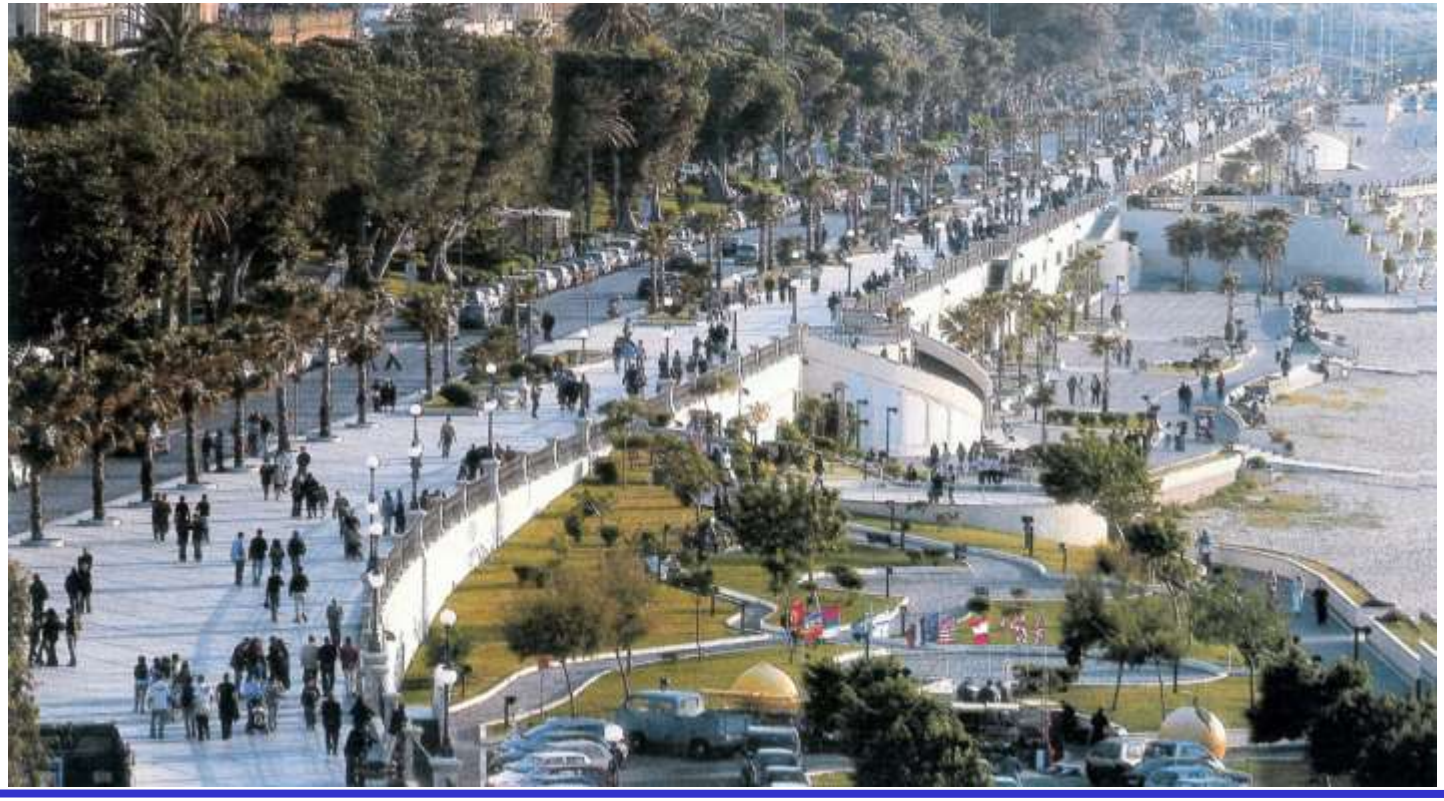


P. Duguet, Boulevard intercommunal du Parisis, Dip. Val-d'Oise 1993-2002



P. Duguet, Boulevard intercommunal du Parisis, Dip. Val-d'Oise 1993-2002

Barcellona, Moll de la Fusta (M. de Solà Morales, 1985)



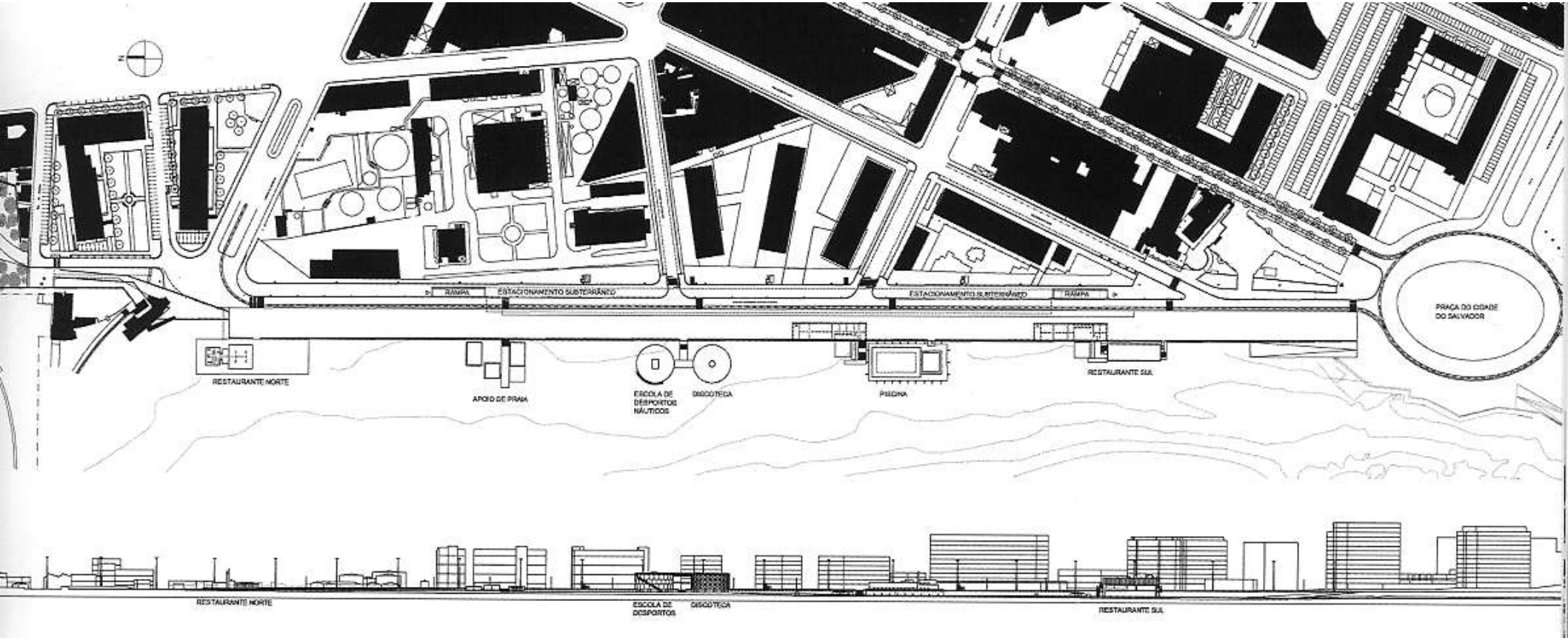
M. Nicoletti, lungomare di Reggio Calabria (1973-1989)

Porto, Parque da Citade (M. de Solà Morales, 2000-2001)

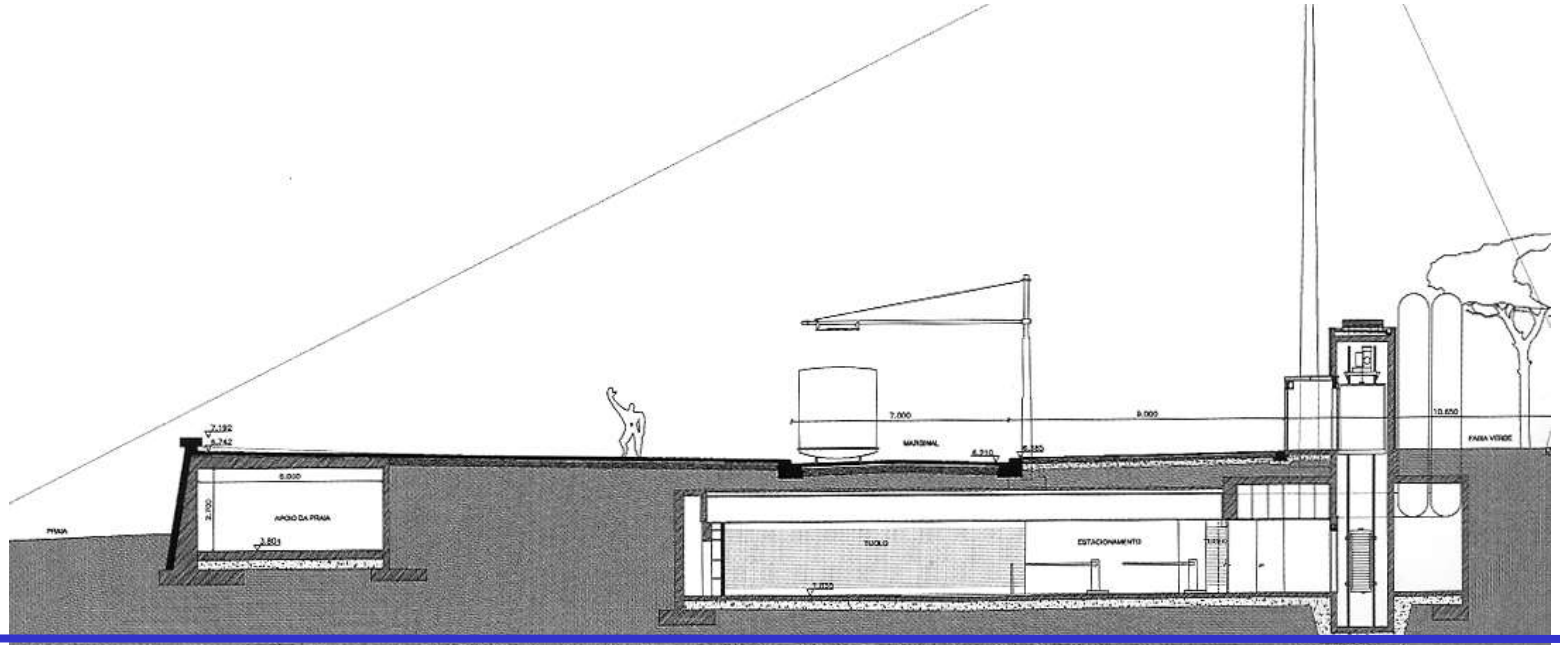
Porto, Parque da Citade (M. de Solà Morales, 2000-2001)

Porto, Parque da Citade (M. de Solà Morales, 2000-2001)

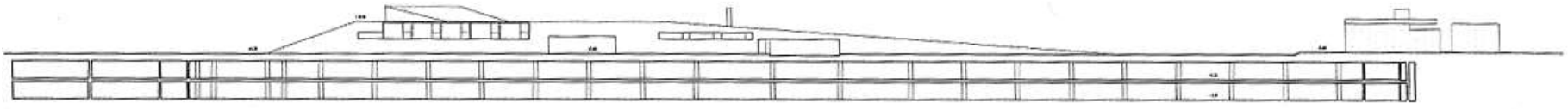
Porto, Parque da Citade (M. de Solà Morales, 2000-2001)



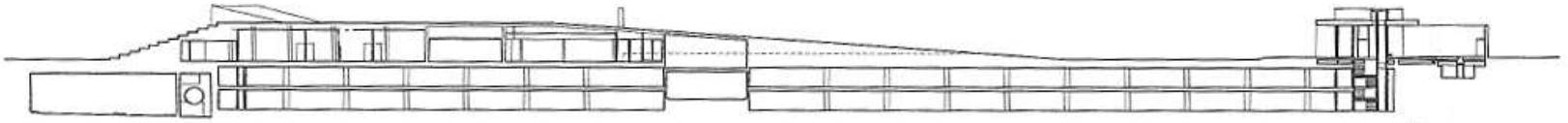
E. Souto de Moura, Lungomare di Matosinhos, 1995-2002



E. Souto de Moura, Lungomare di Matosinhos, 1995-2002



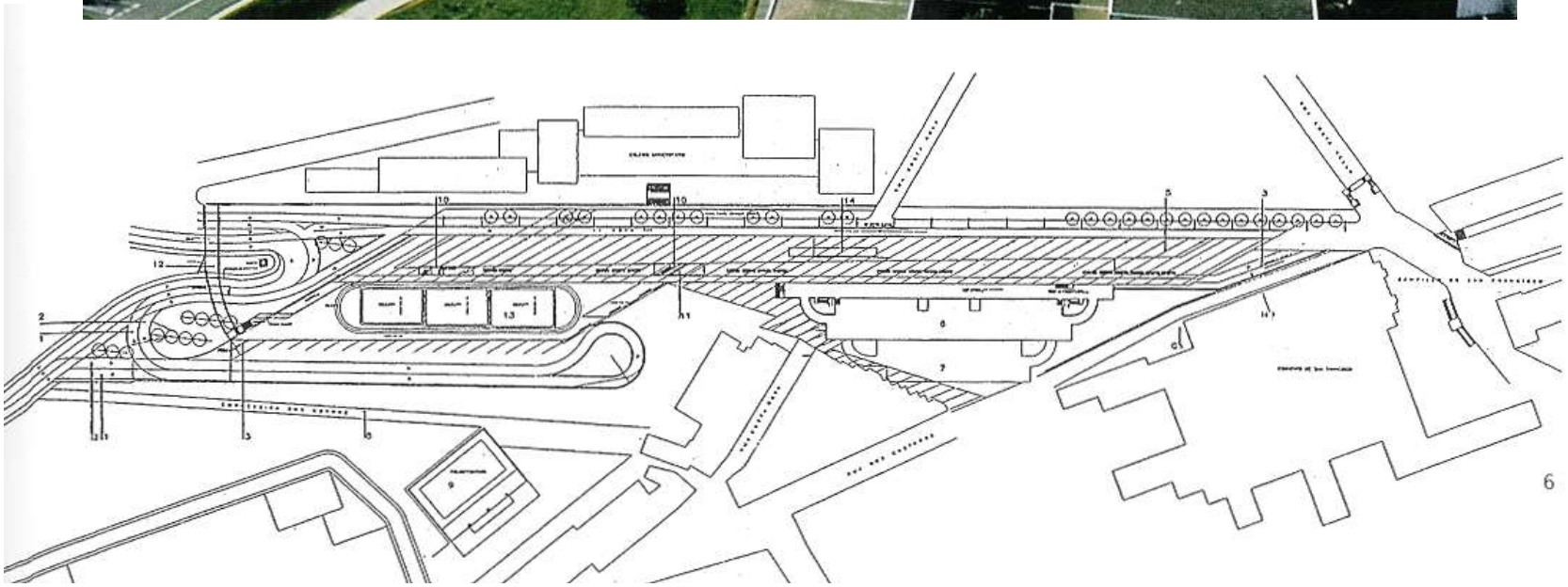
SECCION A



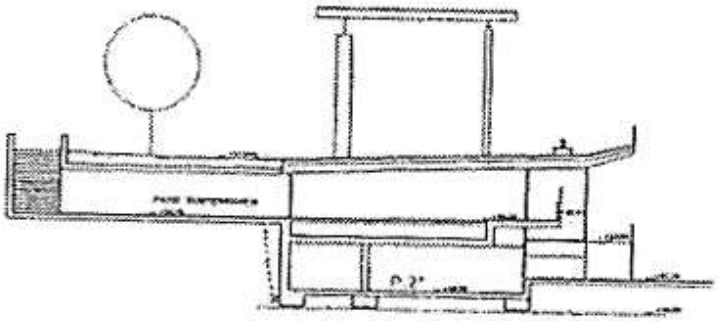
SECCION B

G. Vasquez Consuegra, Lungomare di Vigo, 1999

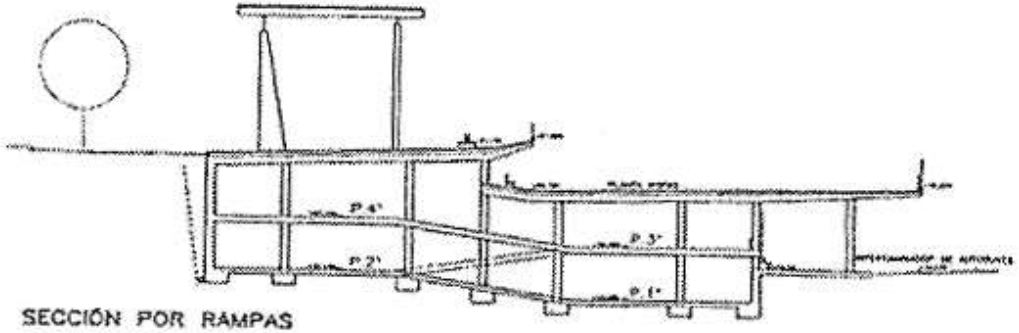
G. Vasquez Consuegra, Lungomare di Vigo, 1999



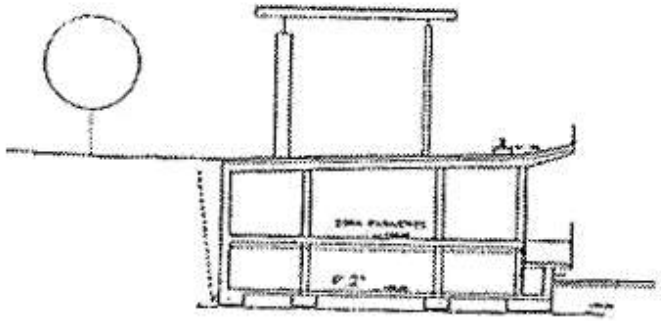
A. Viapiana Veà, Avenida Xoan XIII, Santiago de Campostela, 1995



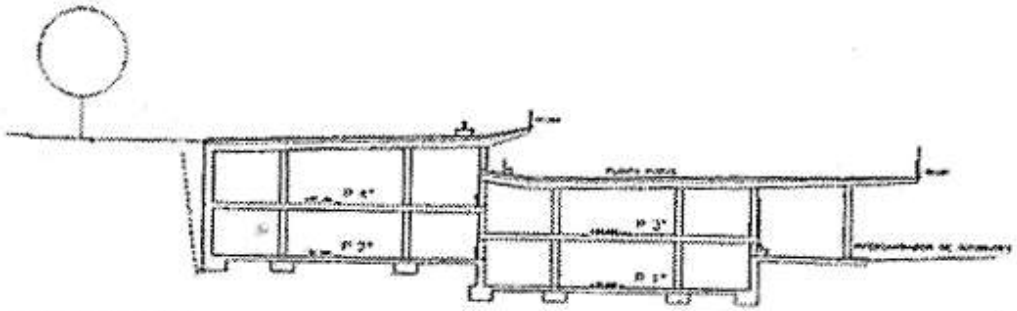
SECCIÓN POR PASO SUBTERRÁNEO



SECCIÓN POR RAMPAS

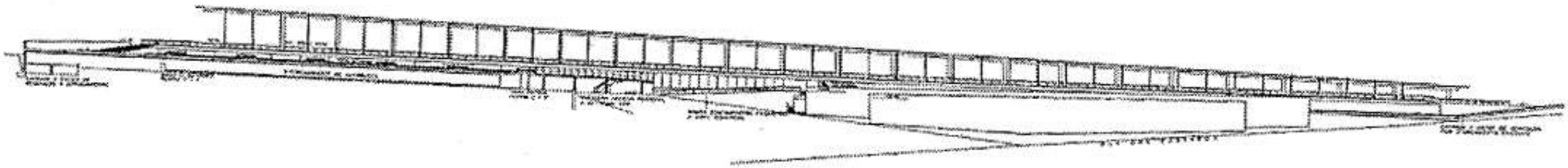


SECCIÓN POR ZONA DE PASAJEROS



SECCIÓN TIPO

A. Viapiana Veà, Avenida Xoan XIII, Santiago de Campostela, 1995



ALZADO Y SECCIÓN LONGITUDINAL

A. Viapiana Veà, Avenida Xoan XIII, Santiago de Campostela, 1995