

URBAN FORM

Sala Urban Design Studio
January 10, 2017

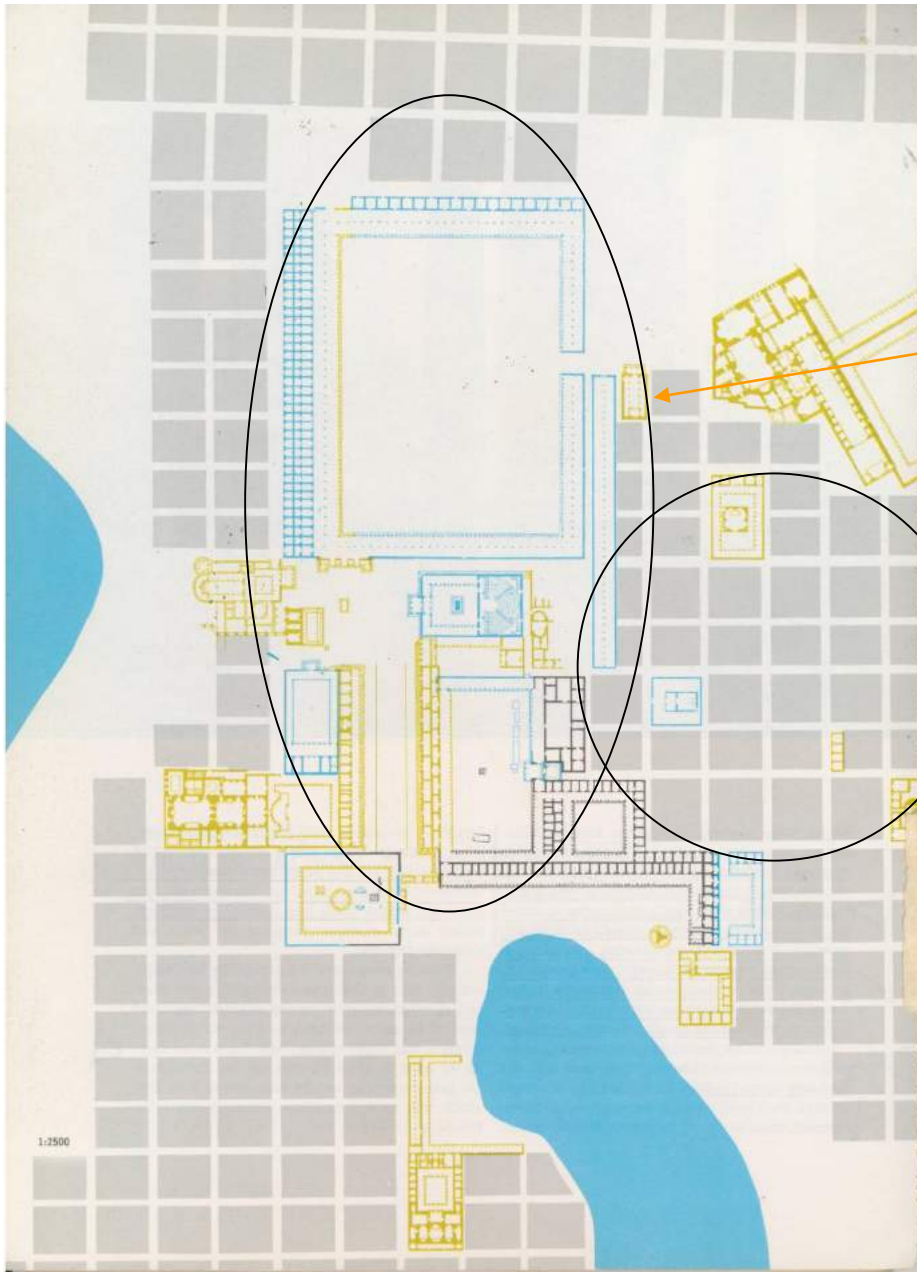
Frank Ducote, principal
Frank Ducote Urban Design

1. Historical overview and the role of precedents
2. Theory and practice
3. Local case studies
4. Qualities of good public places
5. Tools for the design of public places
6. Lessons and discussion

Snapshot historical overview

- Classical antiquity - Greece
- Roman town plans
- Middle ages
- Renaissance and Baroque eras
- Early modern era
- Contemporary times

Classical Antiquity – Greco-Roman



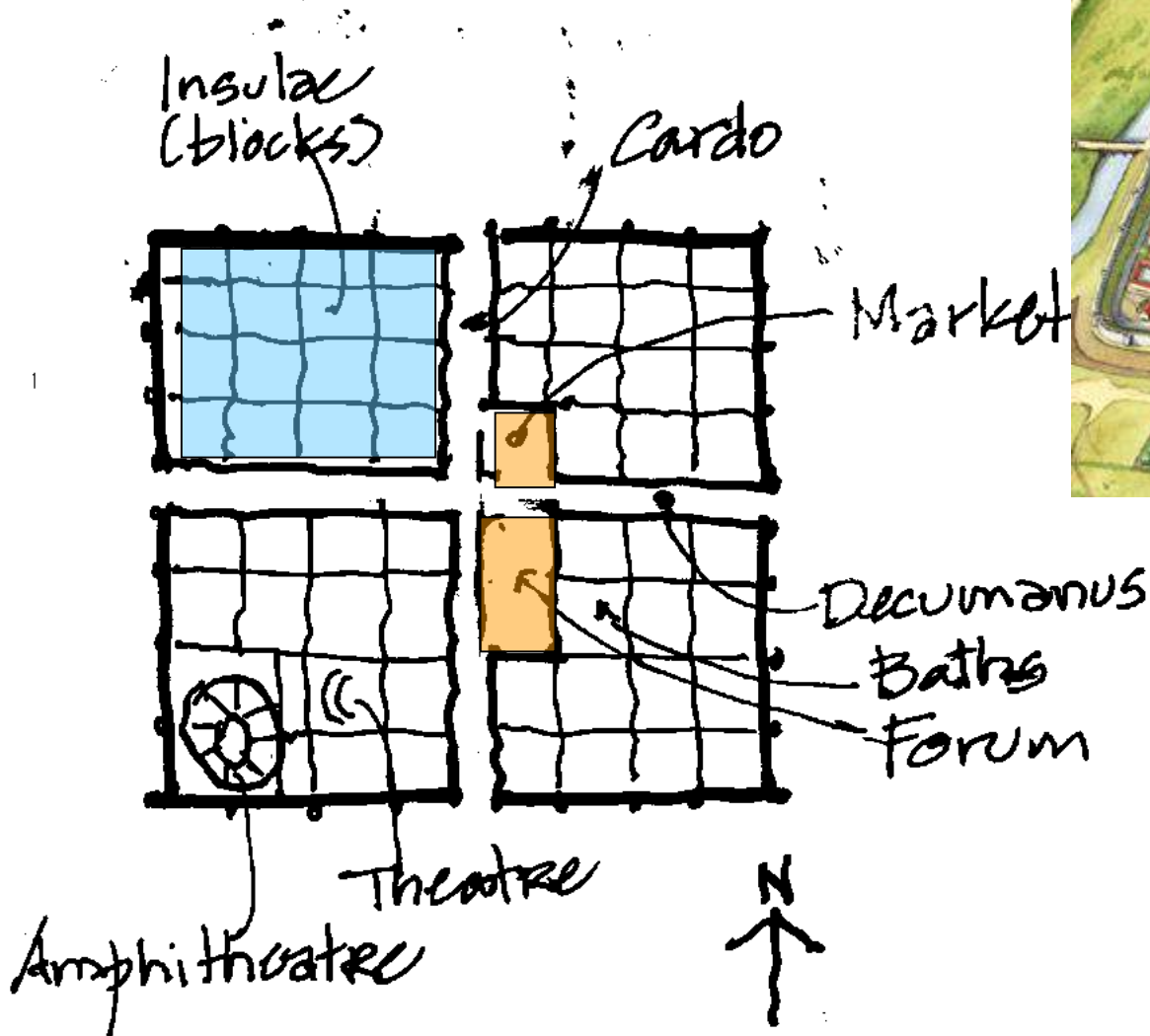
Agoras and courts
started by Hippodamus,
4th c. BC

Completed during the
Roman period, 2nd c. AD

Residential areas

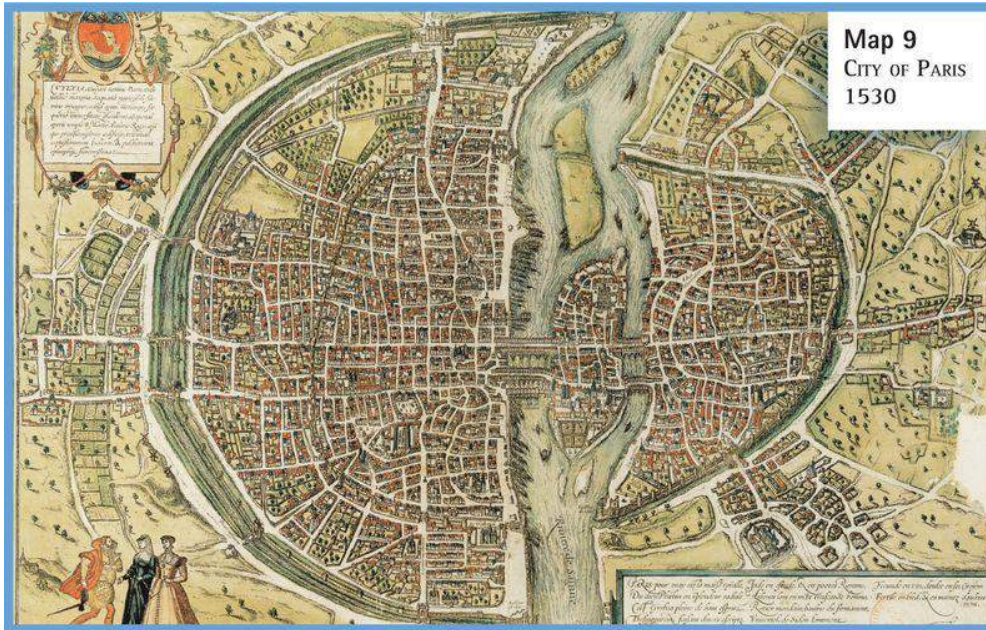
Miletus

Roman Castrum



About a mile square

Middle Ages — compact and fortified towns



Paris, c. 1530

Contrary to popular opinion, the medieval ideal also included well-planned and gridded settlements like **Carcassonne, France**



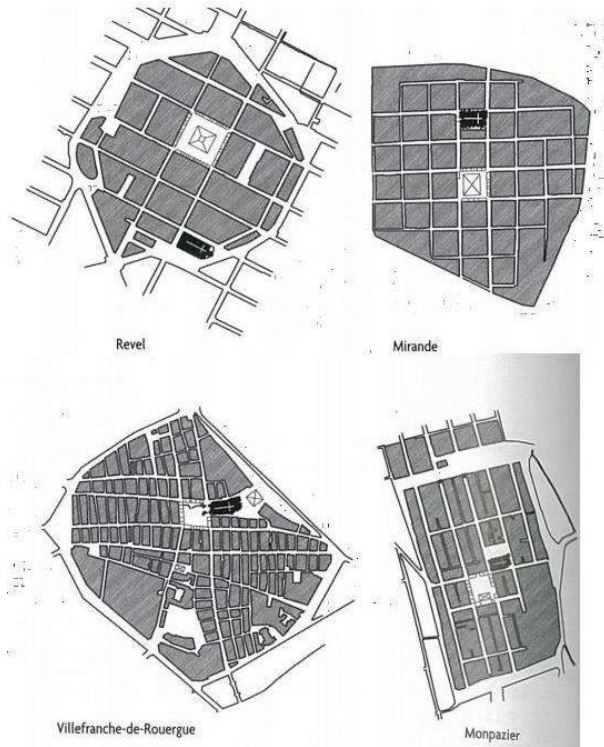
Early Middle Ages – Romanesque style



Later period – Gothic Style

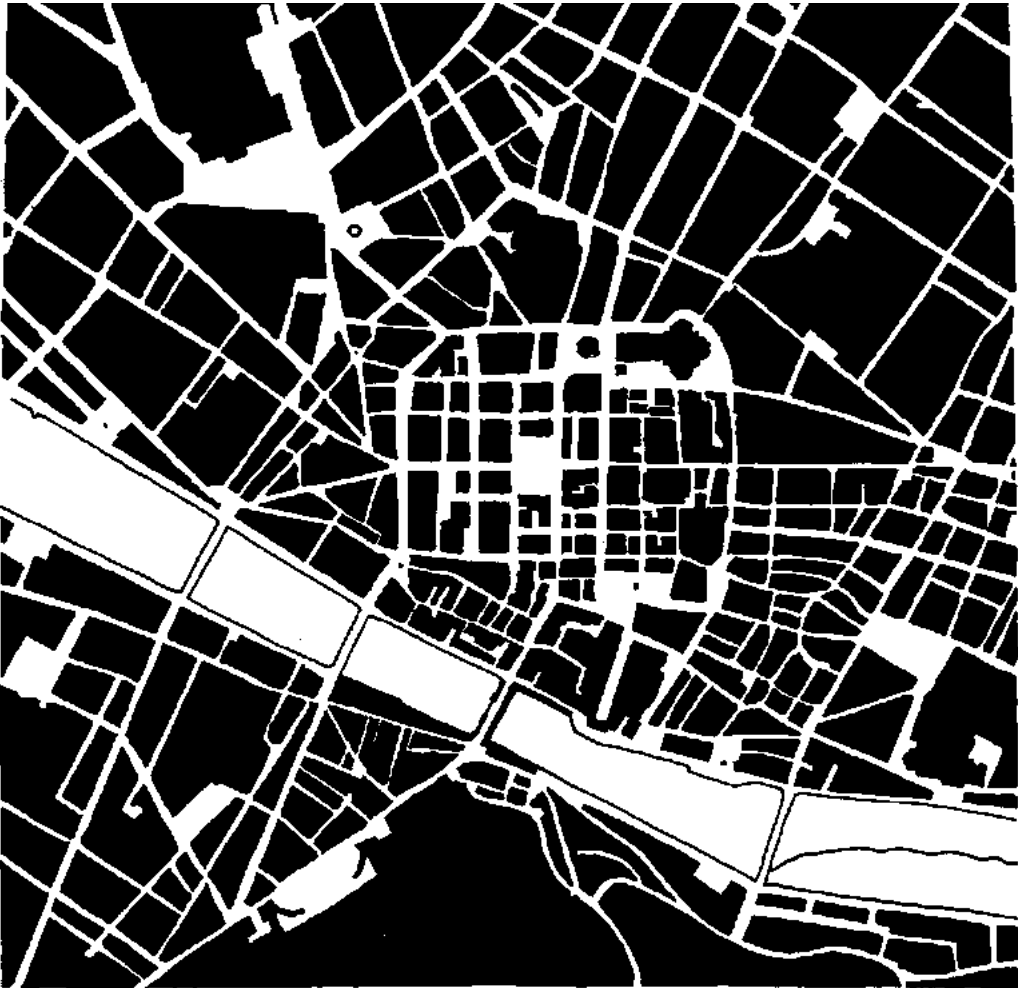


Bastide towns – planned new towns, southern France, 1222 (after Albigensian crusades)



Monpazier

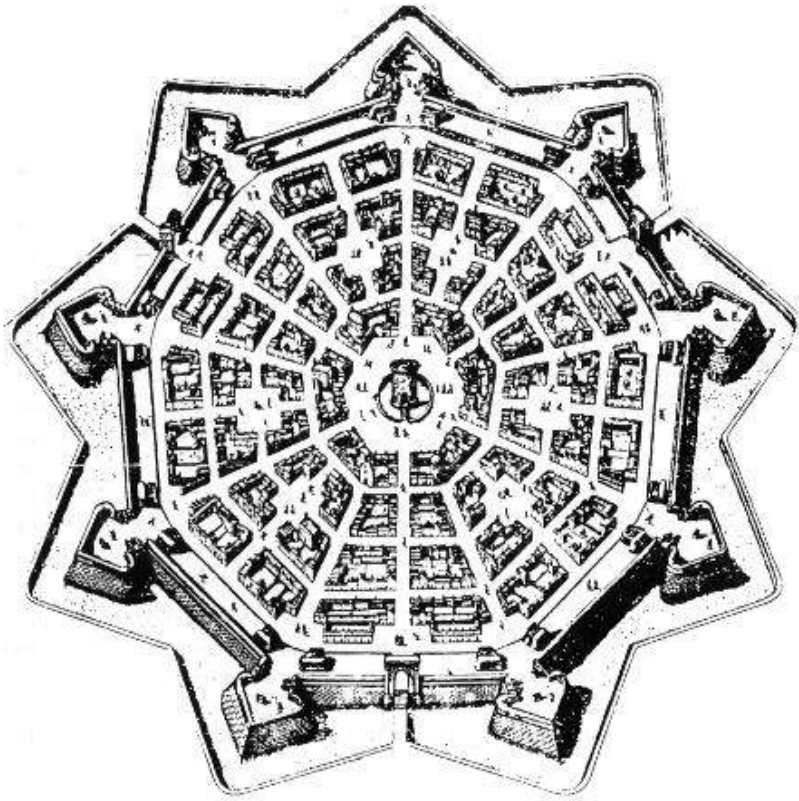
Florence – note remains of fortified Roman town



Source: Allan B. Jacobs,
Great Streets

Ideal cities

Palma Nuova, s. 1593



The figure-ground plan at a site scale

The Irregularities of Old Plazas



Fig. 36.
Siena:
S. Pietro alle
Scale



Fig. 37.
Siena:
S. Vigilio



Fig. 38.
Siena: Via
dell'Abbadia



Fig. 39.
Siena:
S. Maria di
Provenzano

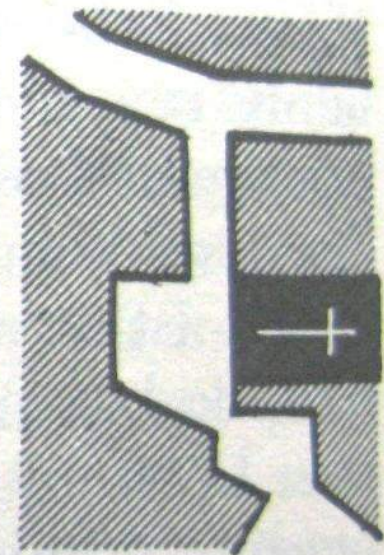


Fig. 40.
Genoa: S. Siro

The plaza's size is related to the size of the adjacent church. Also, the widest side of a medieval plaza is usually oriented to the main point of access for wagons to get to market.

Renaissance and Baroque eras

16th to 18th c.

The role of pomp and spectacle, Papal Rome, Sixtus V, et al.- nodes (piazzas), grand axes, markers (obelisks, statues, fountains) and punctuated and terminated vistas (religious and civic buildings) ;

France - Versailles

New Spain – the Law of the Indies 1573, King Philip II: rules for town planning and governance in the New World

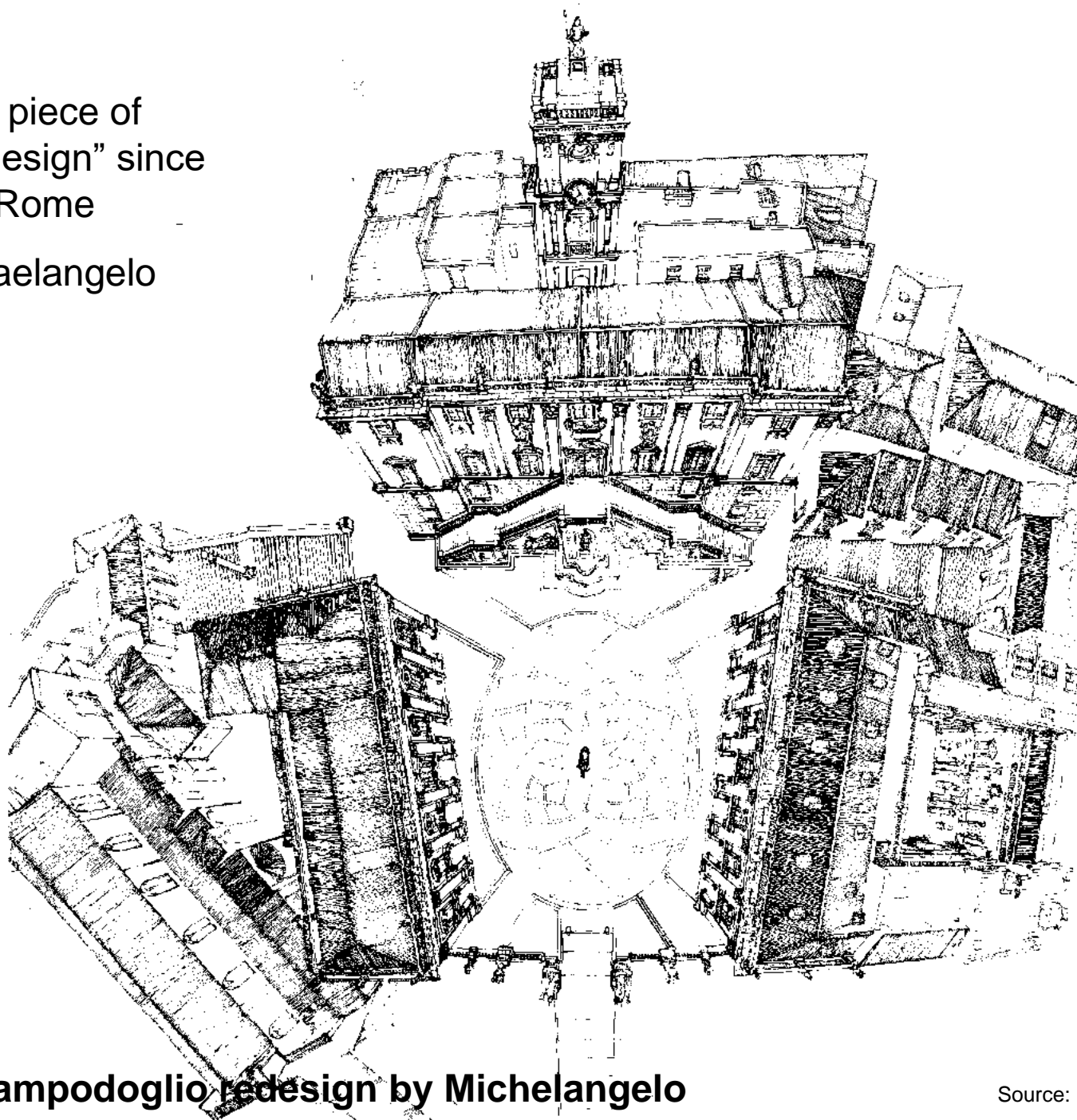
London – Covent Garden by Inigo Jones (1630s); the Great Fire of 1666, Rome-influenced rebuilding proposal by Christopher Wren

New France - New Orleans, Quebec City

The Giambattista Nolli Plan of Rome – 18th c.



The first piece of
“urban design” since
ancient Rome
by Michaelangelo

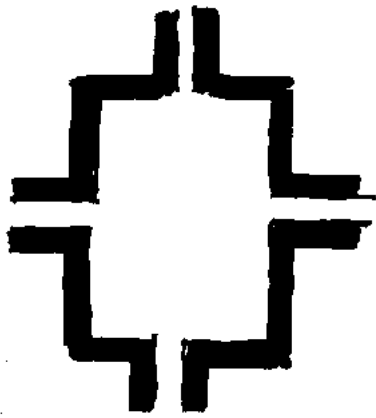


Rome - Campodoglio redesign by Michelangelo

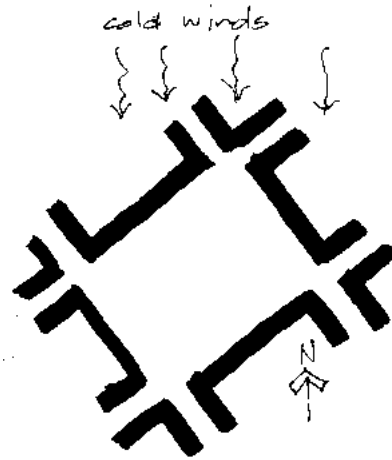
Source:

17th c. The Law of the Indies

planning settlements in New Spain



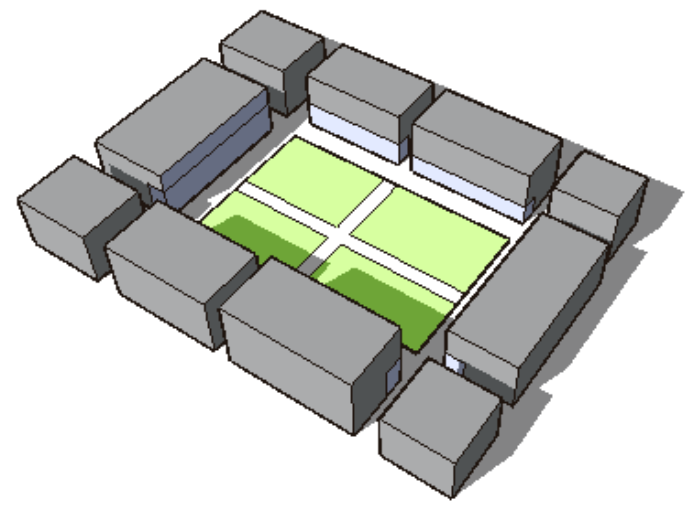
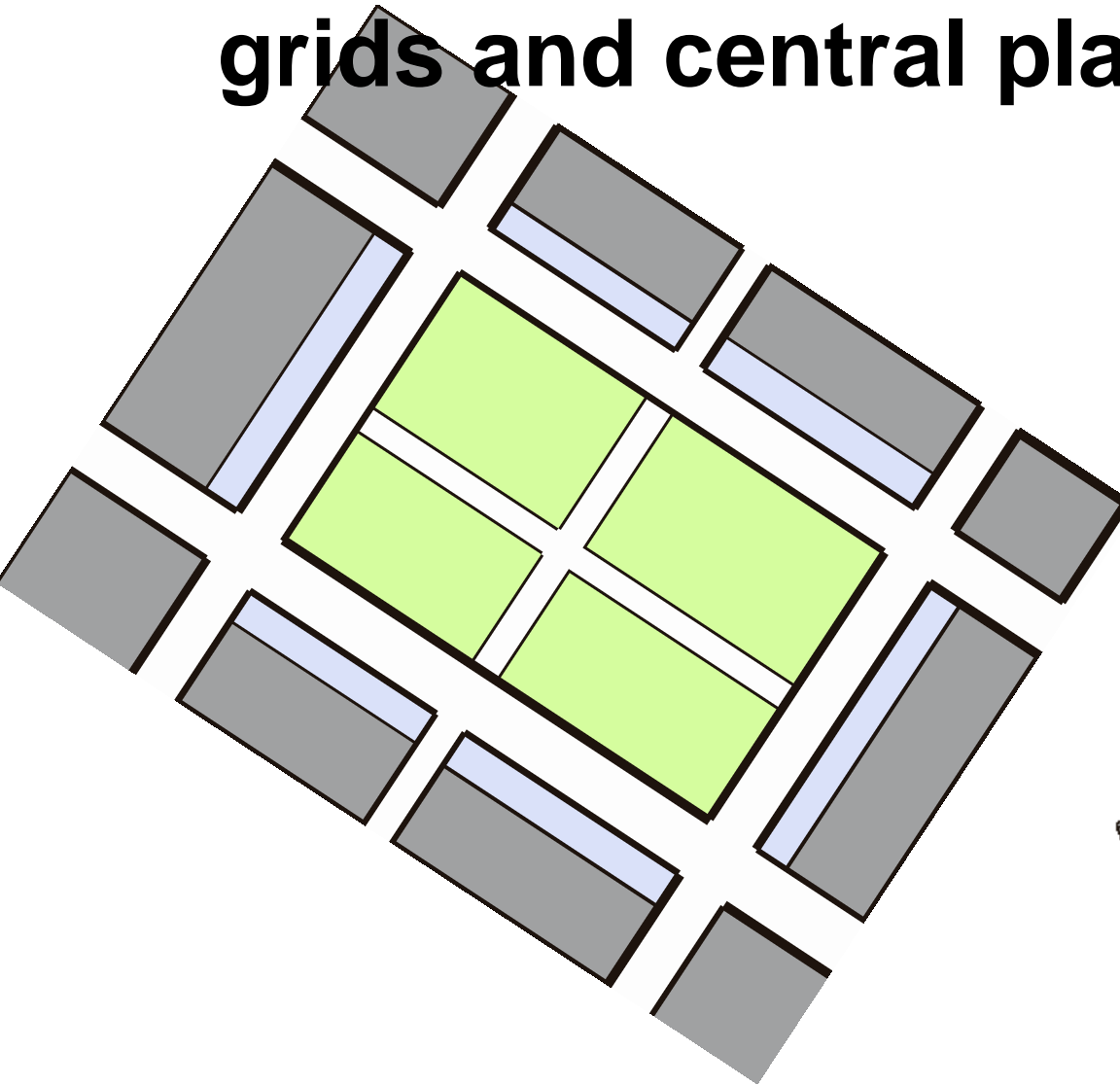
Old World Type



New World Type



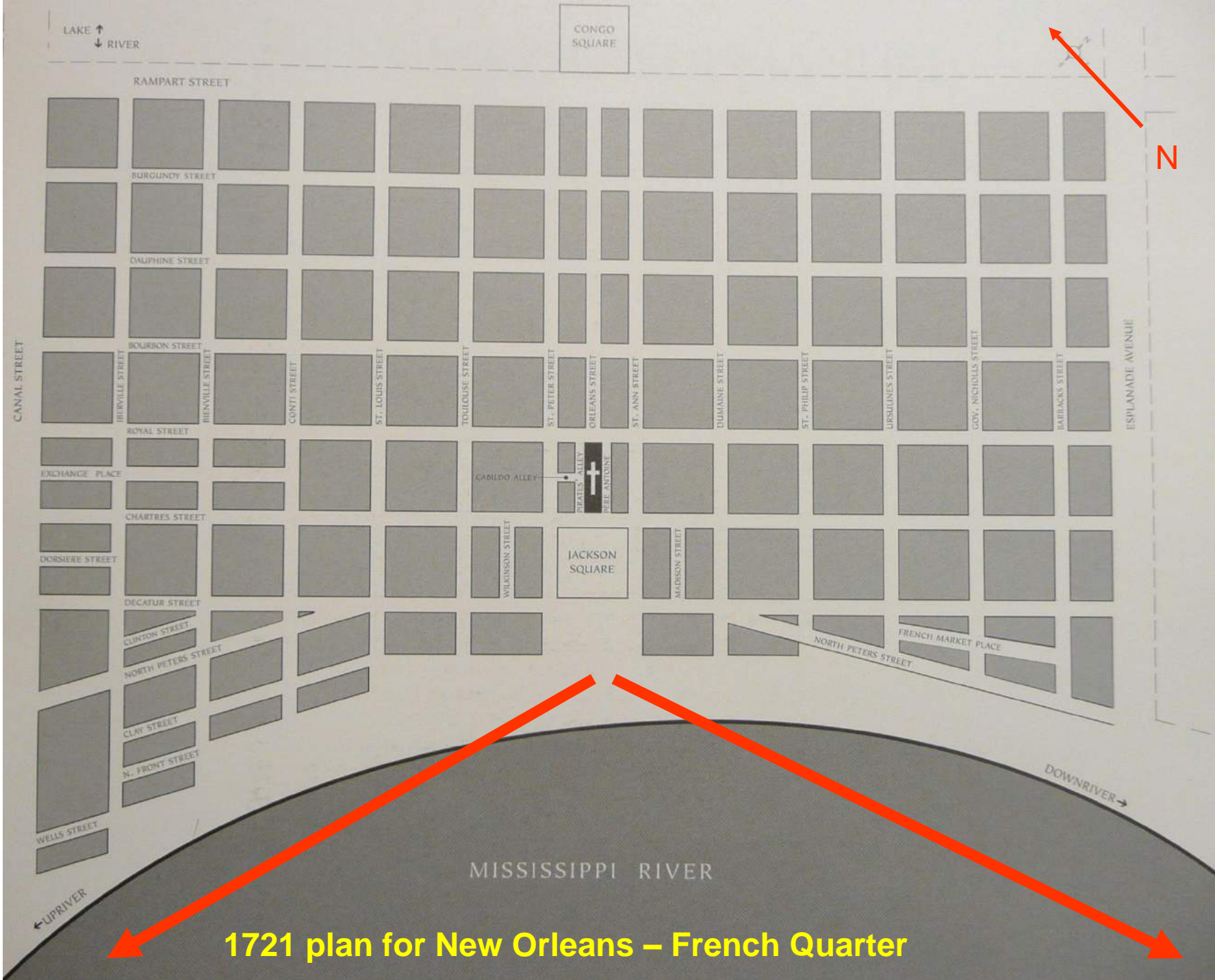
The Law of the Indies – rotated grids and central plazas



Los Angeles – the Law of the Indies



The original Spanish settlement is at an angle to the north-south Jeffersonian grid that later encompassed it



LAKE ↑
↓ RIVER

CONGO
SQUARE

N

CANAL STREET

RAMPART STREET

BURGUNDY STREET

DAUPHINE STREET

BOURBON STREET

ROYAL STREET

EXCHANGE PLACE

CHARTRES STREET

DOISIÈRE STREET

DECATUR STREET

CLINTON STREET

NORTH PETERS STREET

CLAY STREET

N. FRONT STREET

WELLS STREET

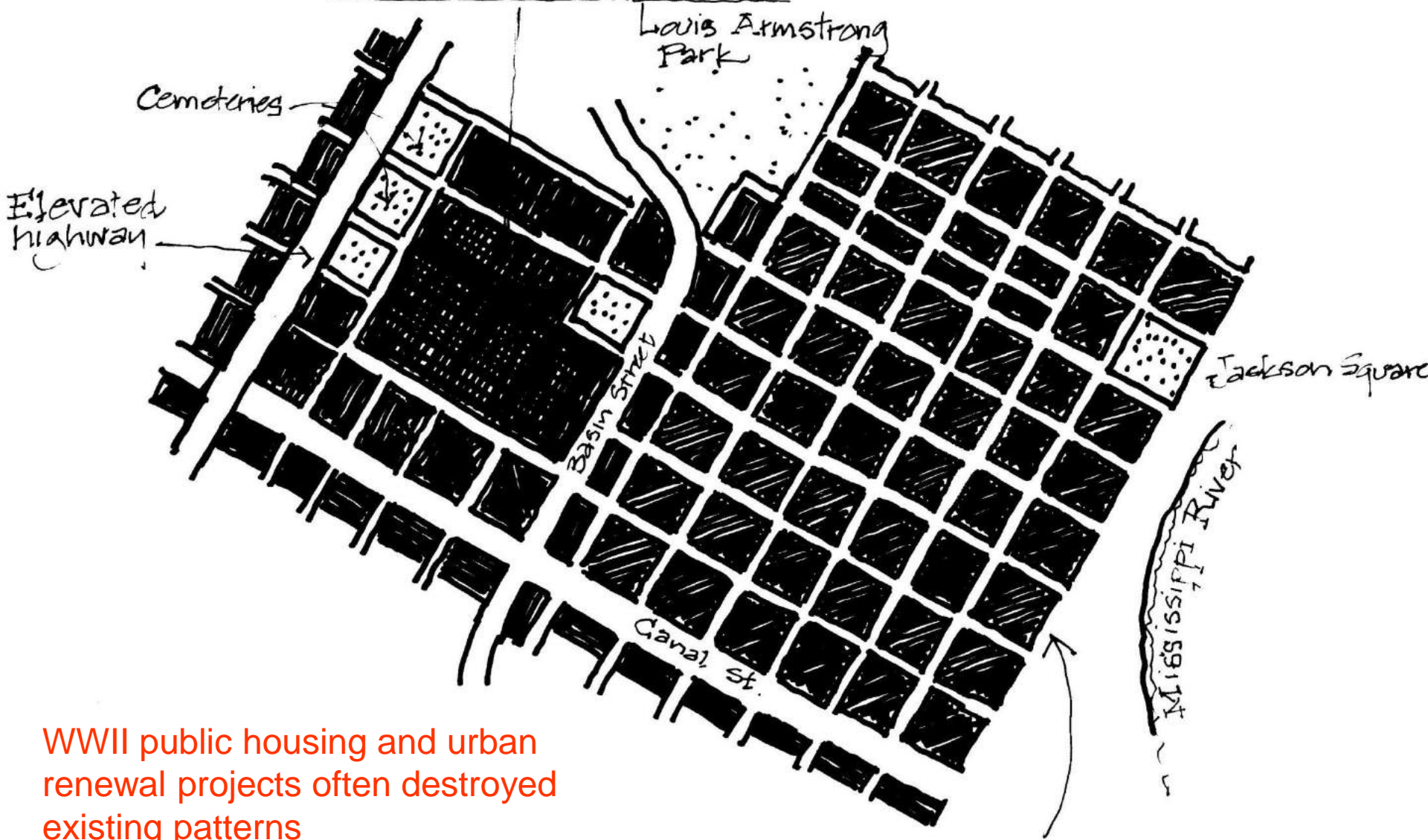
← UPRIVER

MISSISSIPPI RIVER

DOWNRIVER →

1721 plan for New Orleans - French Quarter

IBERVILLE PROJECT



WWII public housing and urban renewal projects often destroyed existing patterns

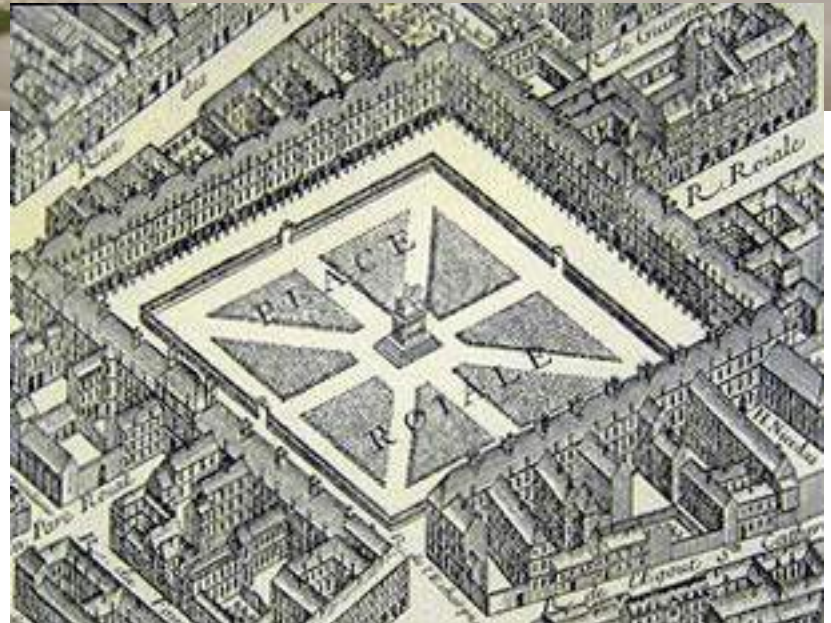
FRENCH QUARTER
Vieux Carré



The renaissance reintroduced classical and formal arrangement of **squares** – usually entered at corners, except axial focus for dominant religious and civic buildings

Paris - Place des Vosges, 1612

- 140m x 140m square layout
- Bilateral symmetry
- Consistent height and house design
- Geometric landscape
- Prototype for future gardens



The grand axis of Paris was established long before Napoleon Bonapart and Baron Haussman expanded the system 1850-1870



Louvre

Tuileries
Gardens

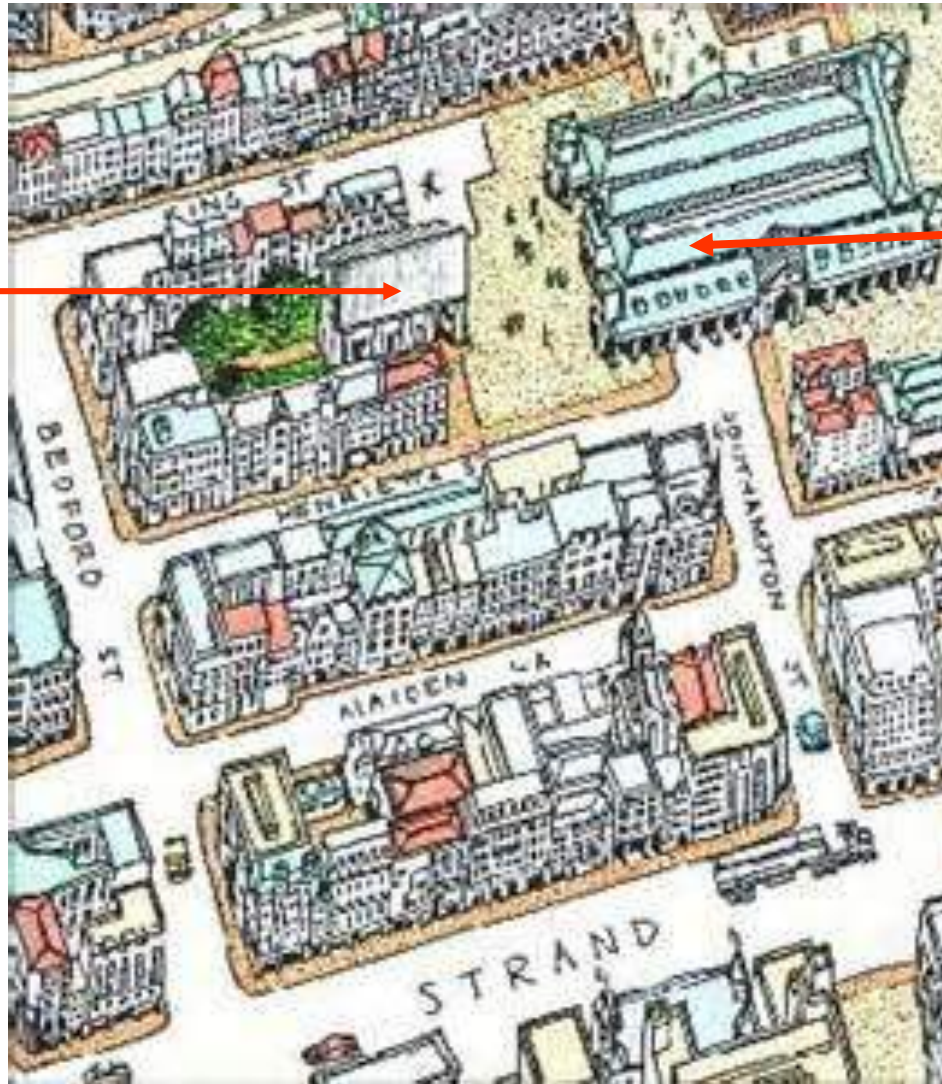
Paris 1740

Axes and terminated vistas



Covent Garden, London's first Italianate square by Inigo Jones ca. 1630s

Church



Market

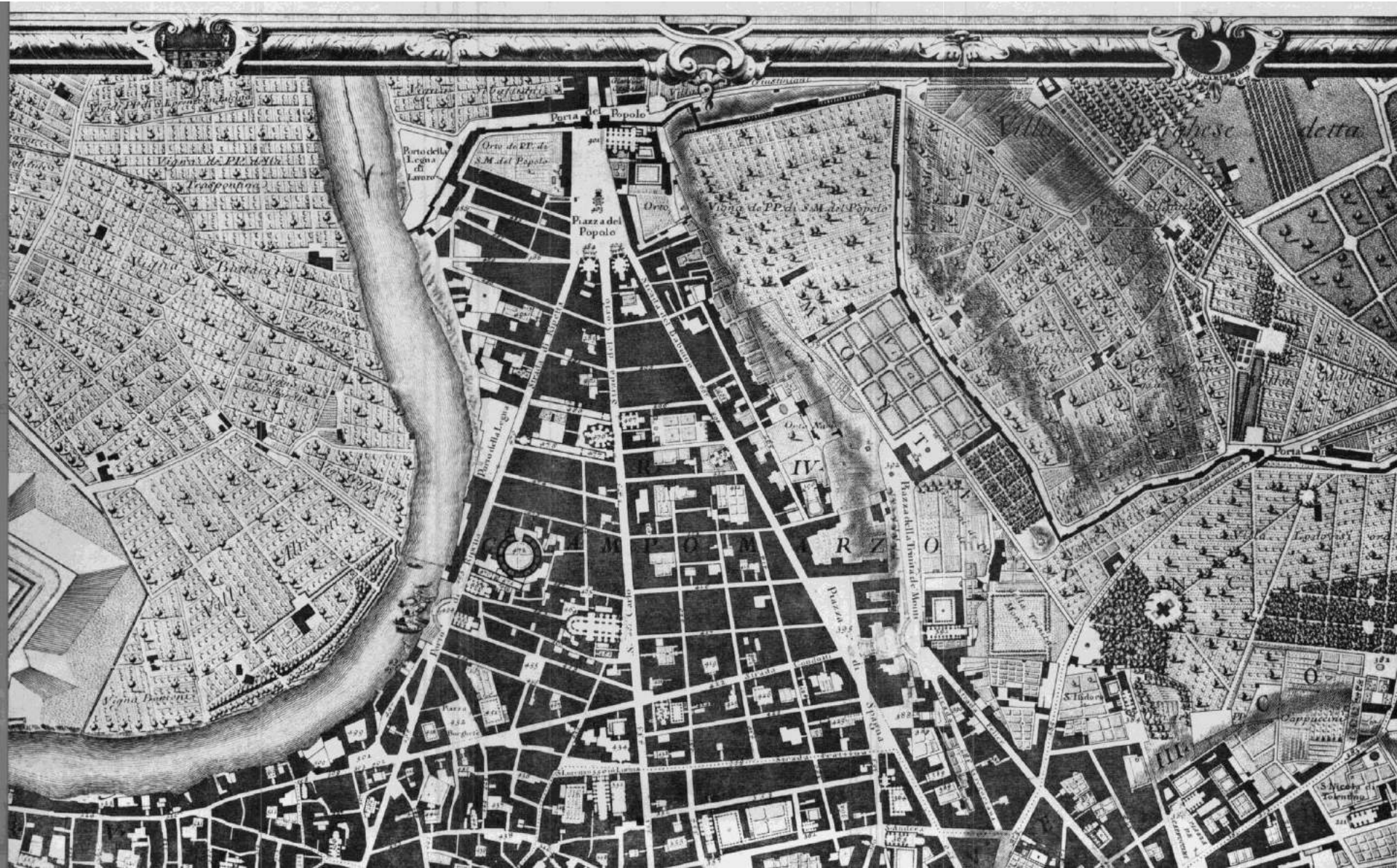
Covent Garden, 1737



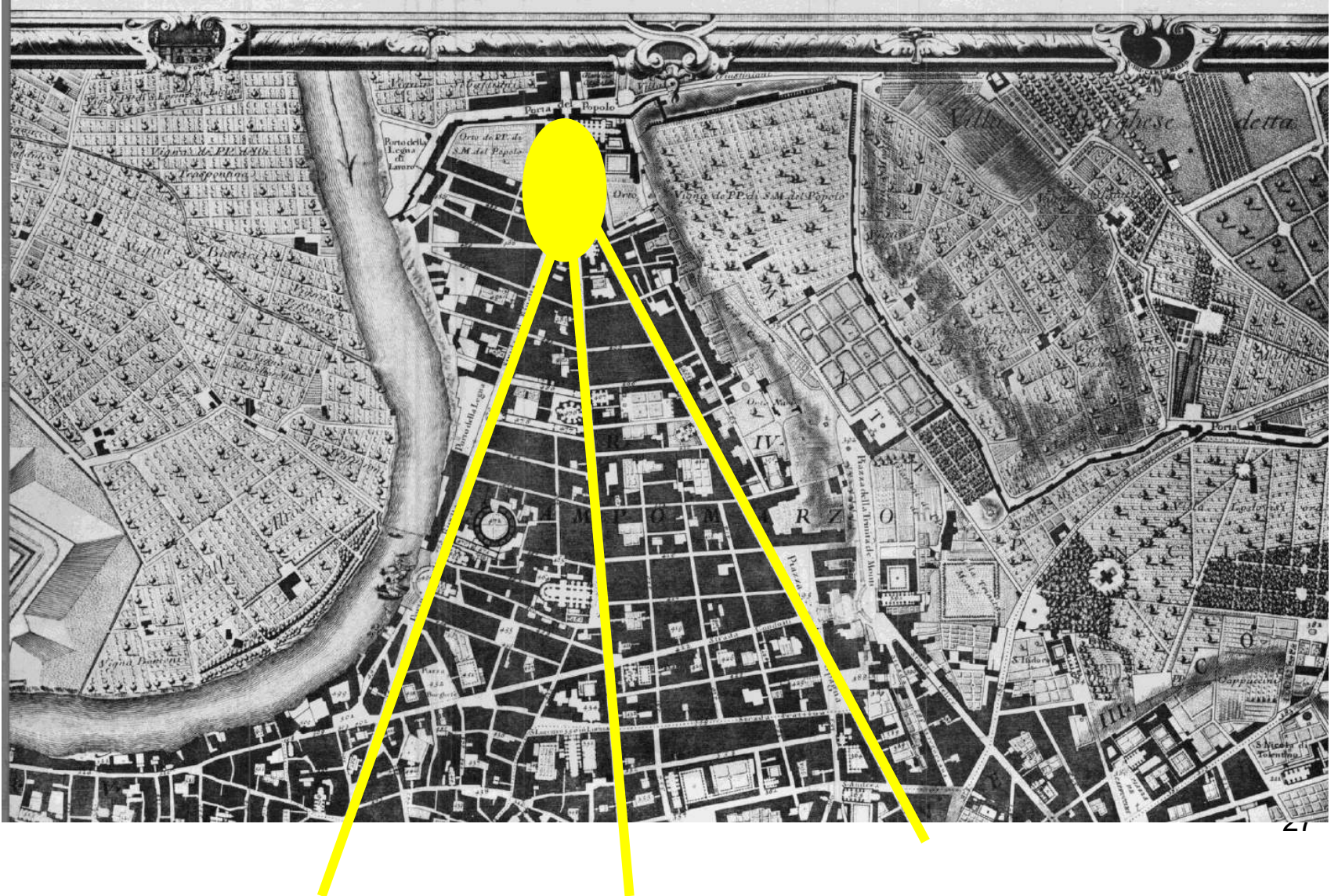
Market today



Rome - Piazza del Popolo

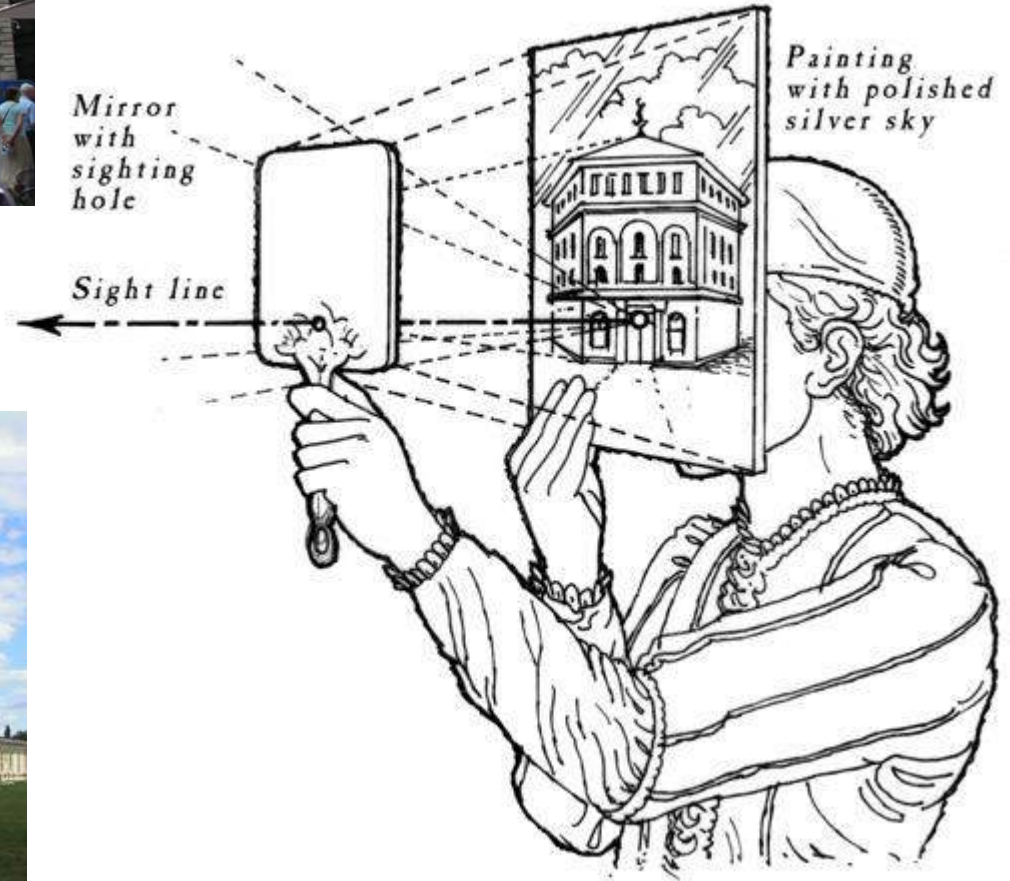


Powerful ideas often have lasting impact
– e.g., the trident or “crow’s foot”





The Renaissance



Italian renaissance architecture took a generally horizontal expression in villas, while the French was expressed more vertically in chateaux like Chambord

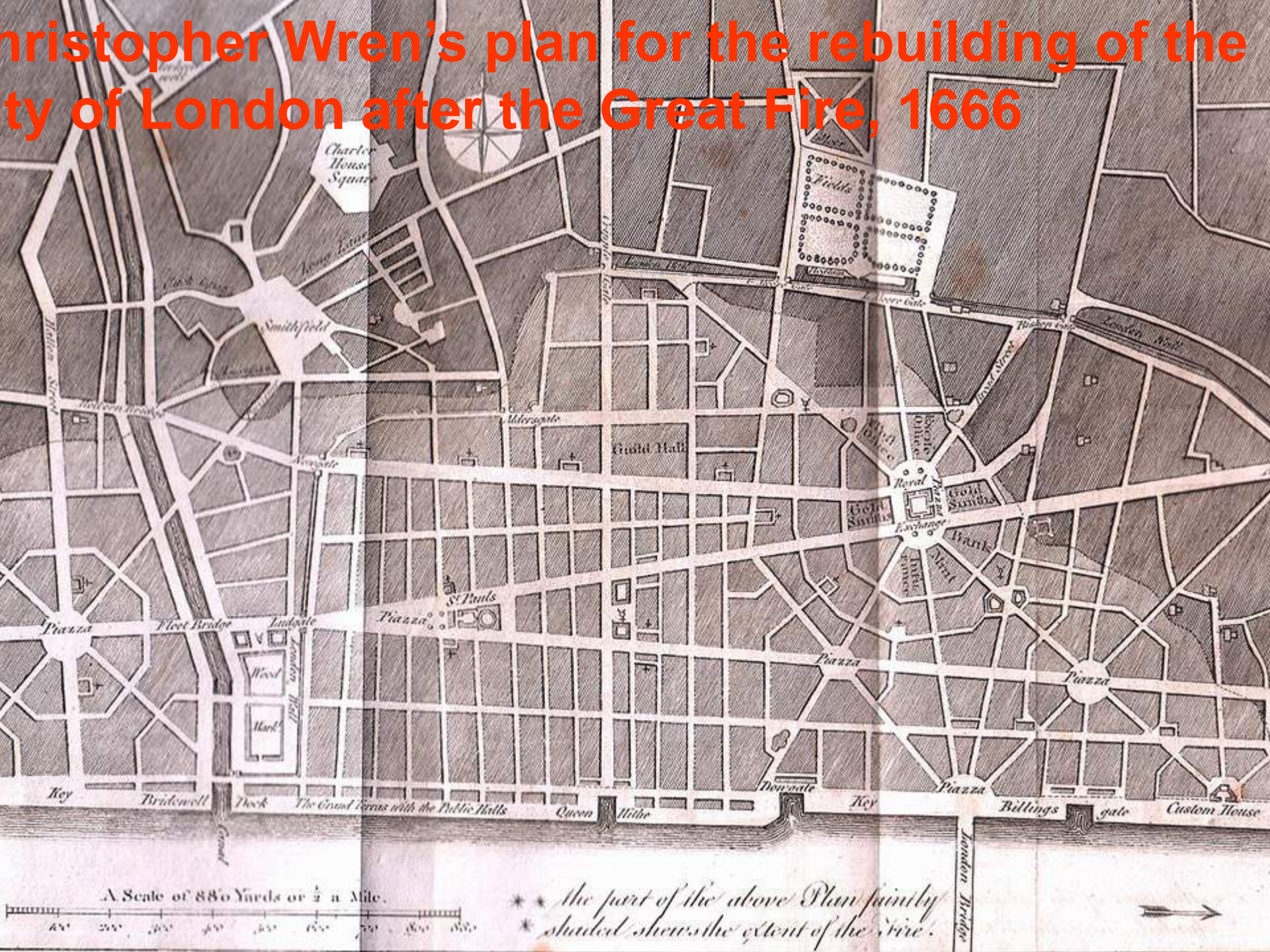


Brunelleschi "invented" perspective



4 centuries
later in NYC

Christopher Wren's plan for the rebuilding of the City of London after the Great Fire, 1666



A Scale of 880 Yards or $\frac{1}{2}$ a Mile.

* * the part of the above Plan faintly shaded shows the extent of the Fire.

Washington, D.C. – a unique combination of Jeffersonian grid and Washington's radials

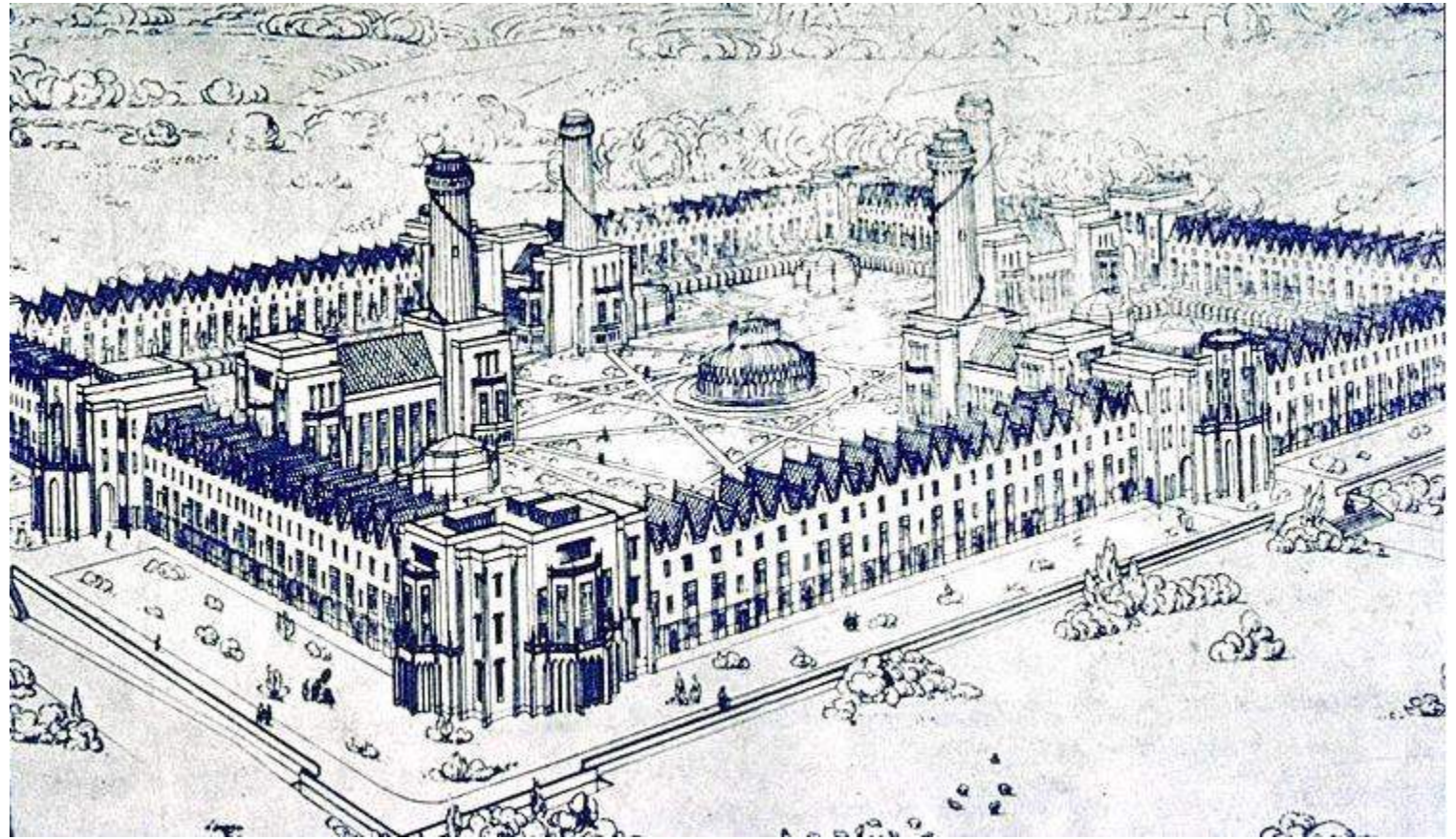


South Capital District Plan — 2025 Implementation



South Capital District — 2050 Vision Plan

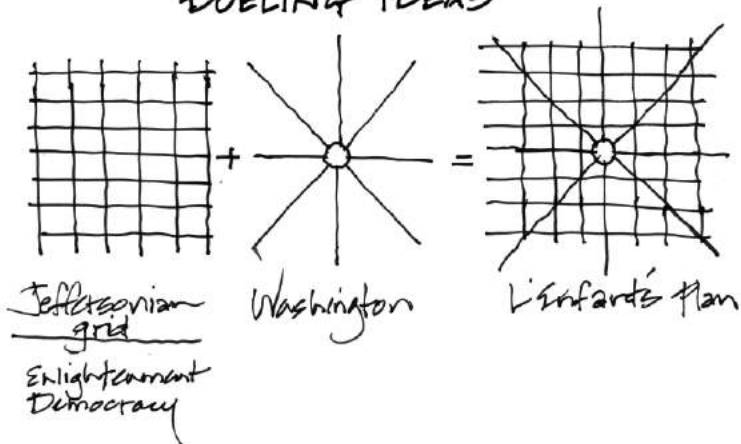
The Proposed Plans indicate the recovery of the intentions of the L'Enfant Plan restoring lost streets, reconnecting neighborhoods and restoring civic spaces.



Washington, D.C. Why is it so unusual?



DUELING IDEAS

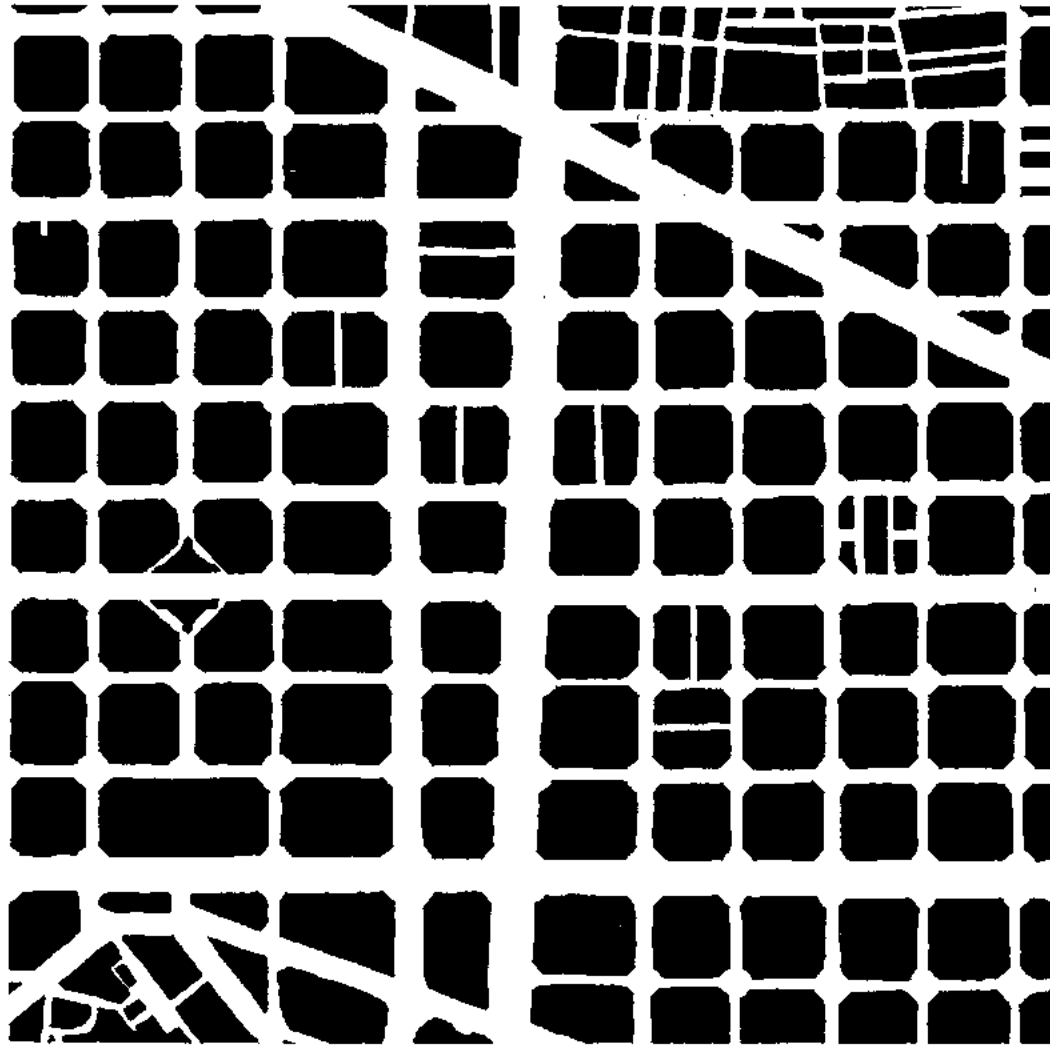


Charles Ellicott's revised plan

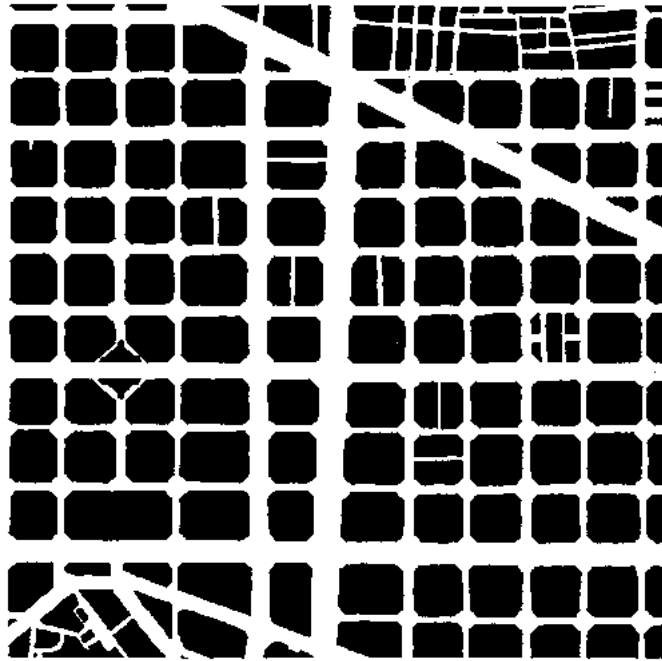
Fabric and object – Barcelona

Ildefons Cerda's extension 1850's





Square mile figure-ground plans by Allan B. Jacobs,
from Great Streets



Eixample Extension



Gotic Quarter

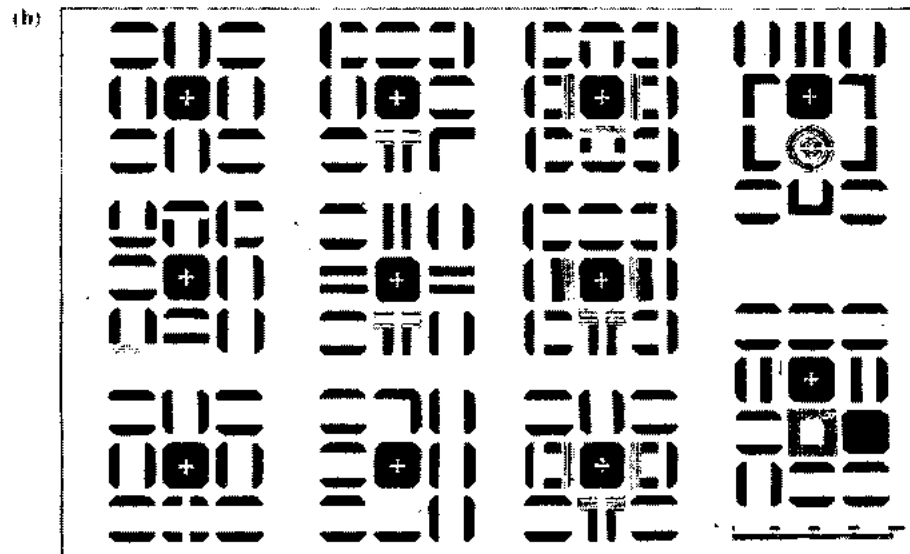
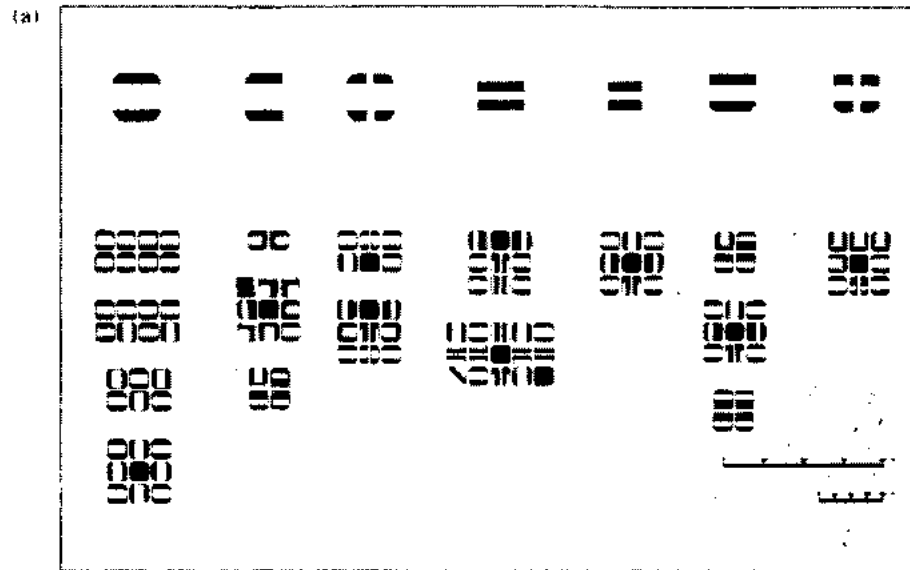
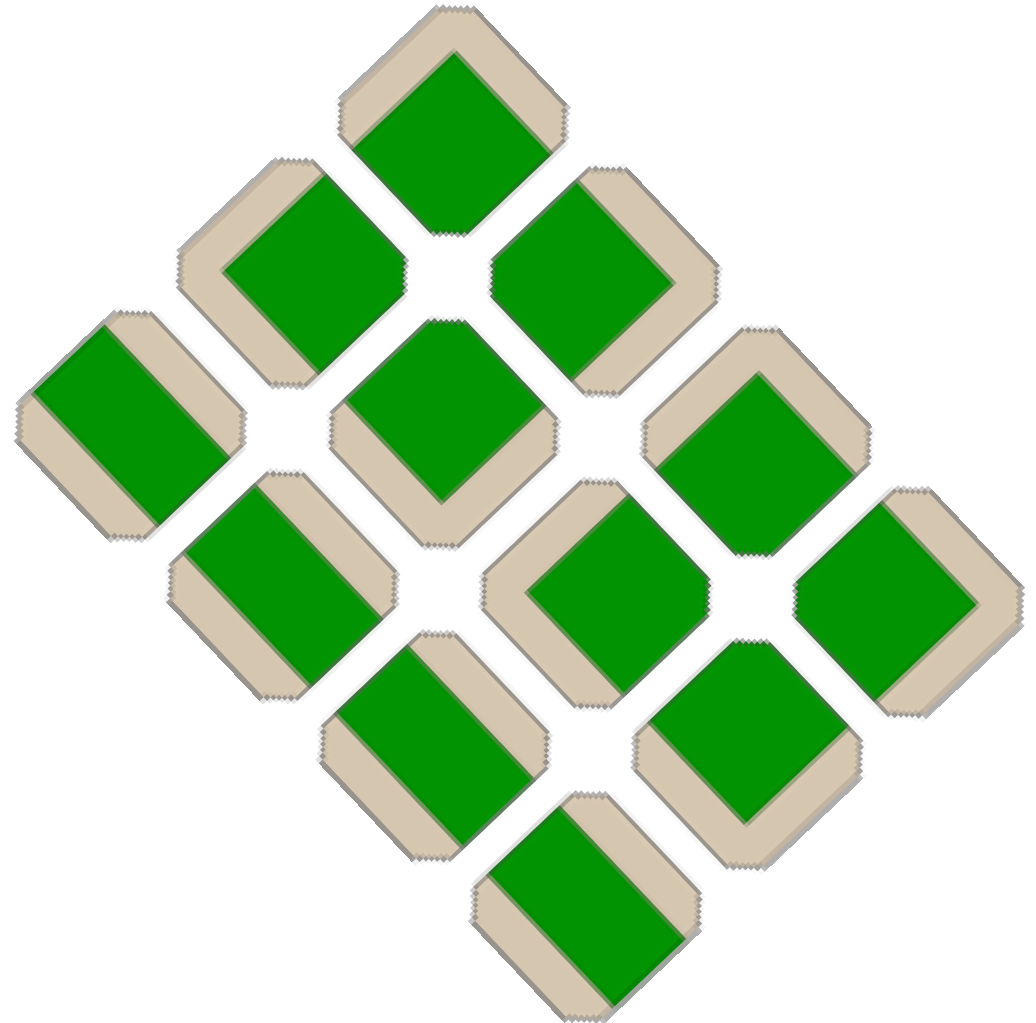
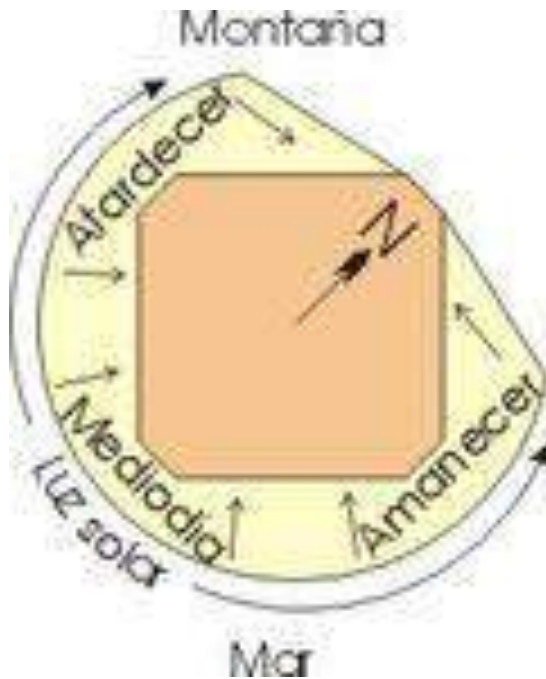
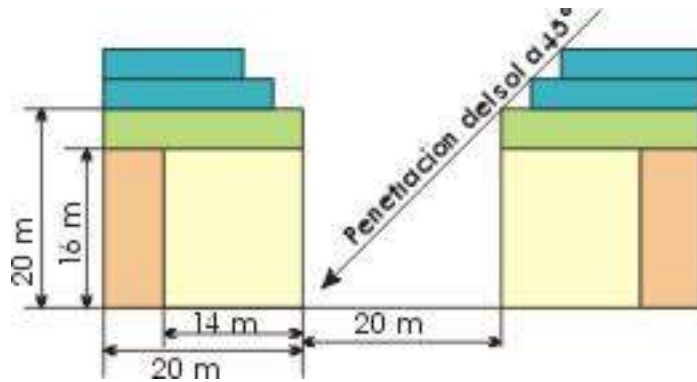


Figure 8.8 *Barcelona*. Example from Cerdá's plan for (a) parallel rows of buildings, and (b) different forms of neighbourhood units. [From Lotus international, No. 23, 1979]

Barcelona Eixample District: Response to solar orientation, linked open spaces, access to light and air

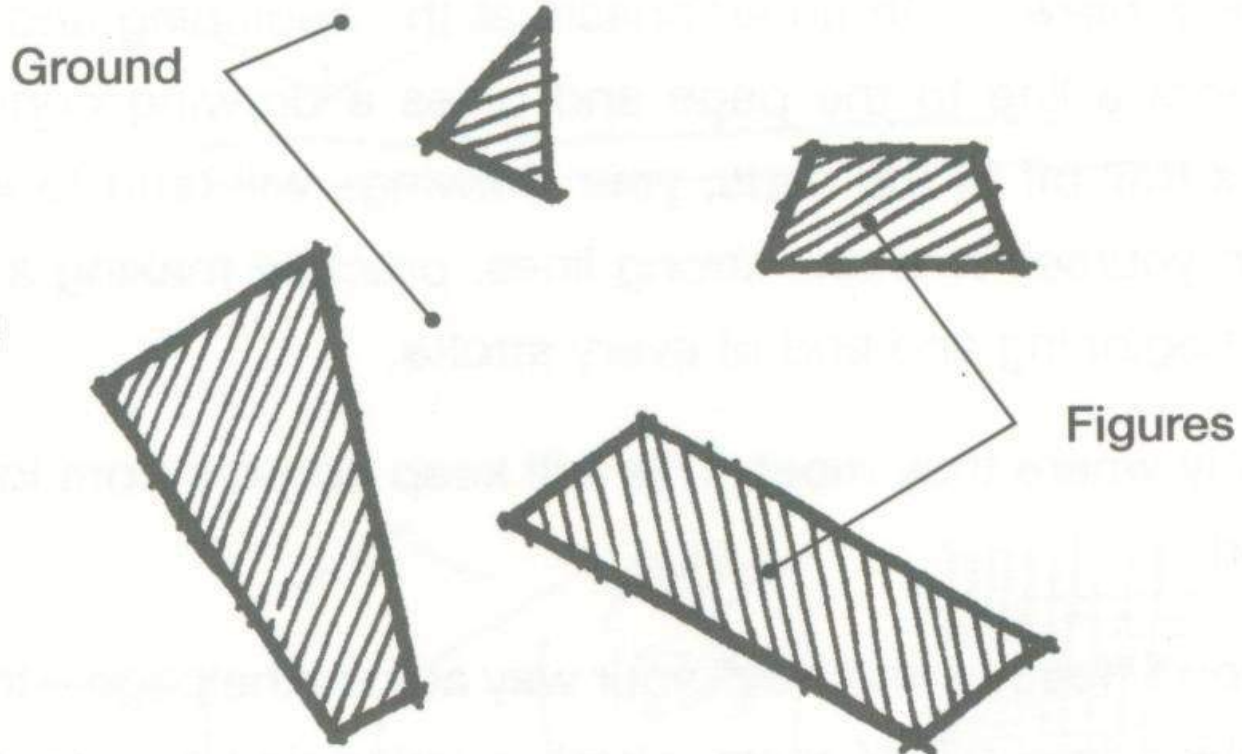




The Rambla Raval – a new space based on a unique local linear precedent

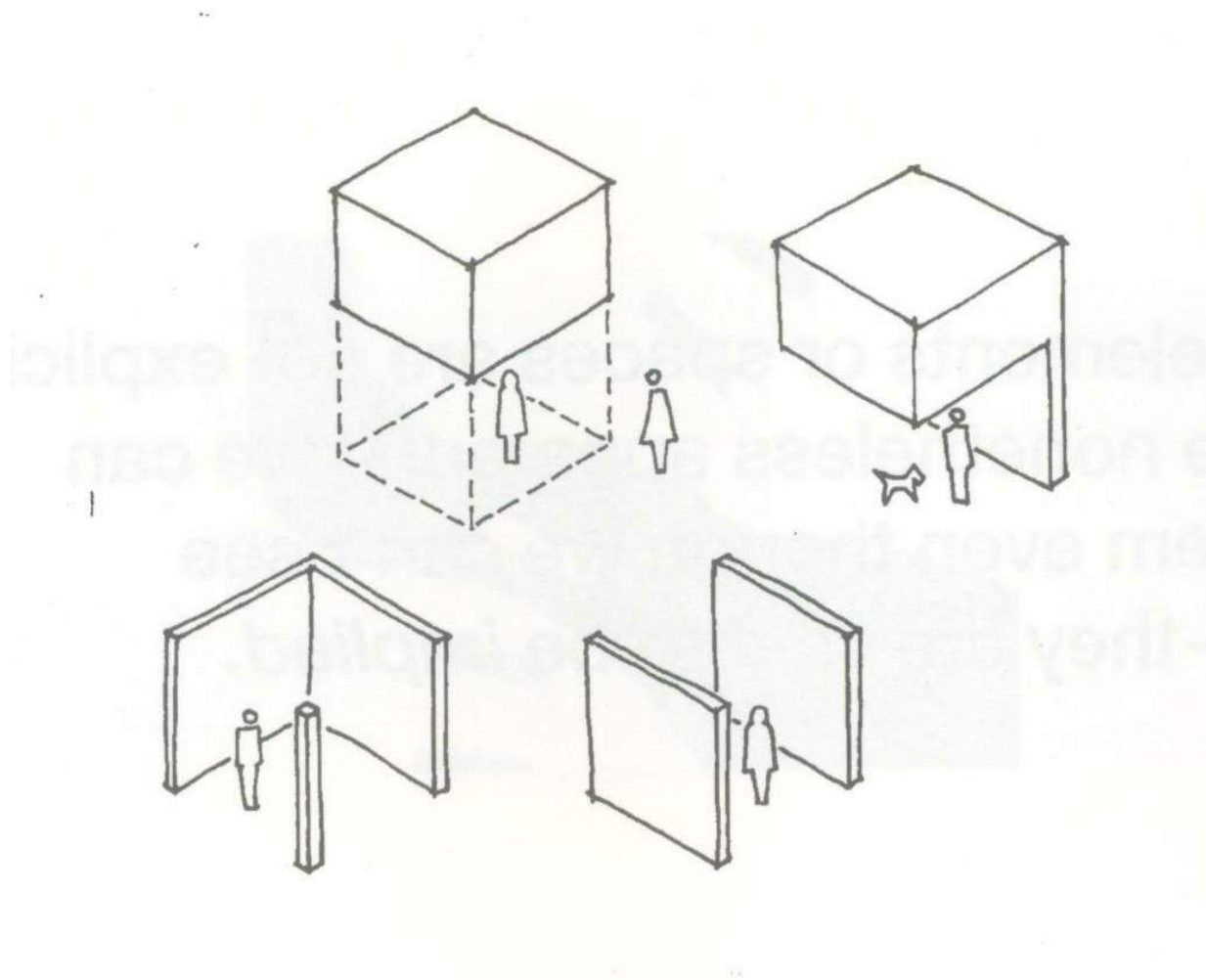
Theory and practice

Figure ground theory



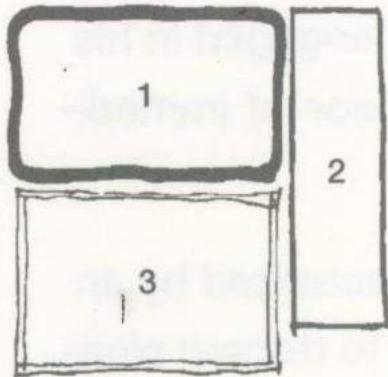
source: 101 things I learned in Architecture School, by Matthew Frederick)

Solid-void theory



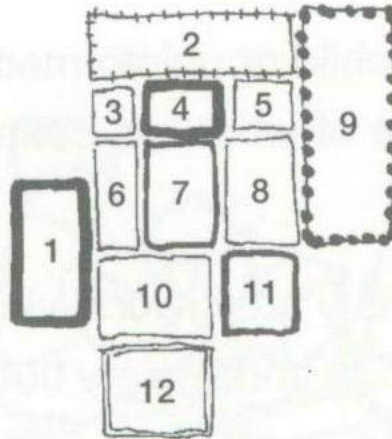
Economy of means

- Think of these as colours



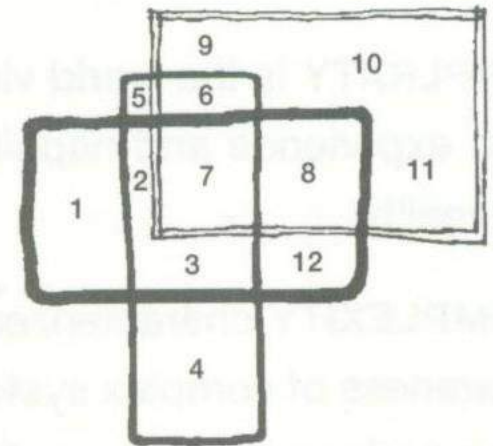
Simplicity

3 elements used to
create 3 spaces



**Complexity created through
excessive agglomeration**

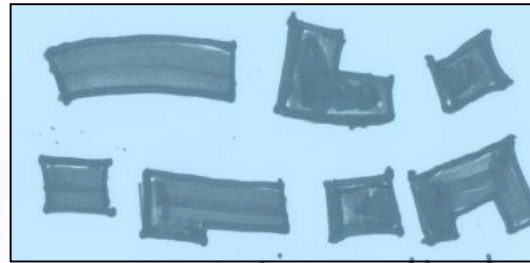
12 elements required to
create 12 spaces



**Complexity created through
informed simplicity**

3 elements combined to
create 12 spaces

Buildings that define space rather than occupy it

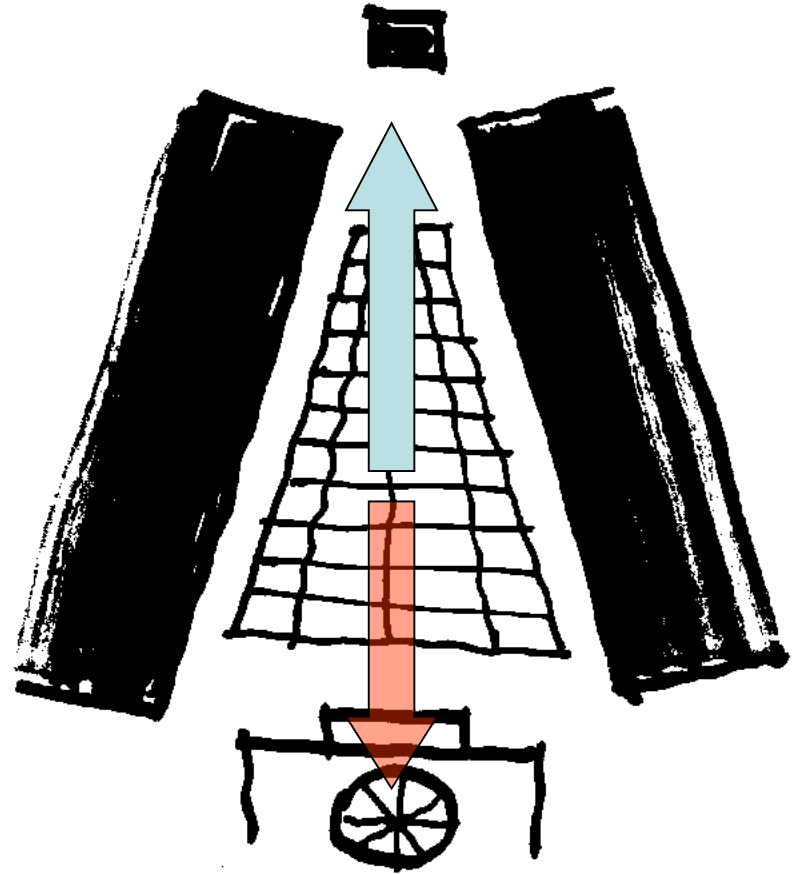
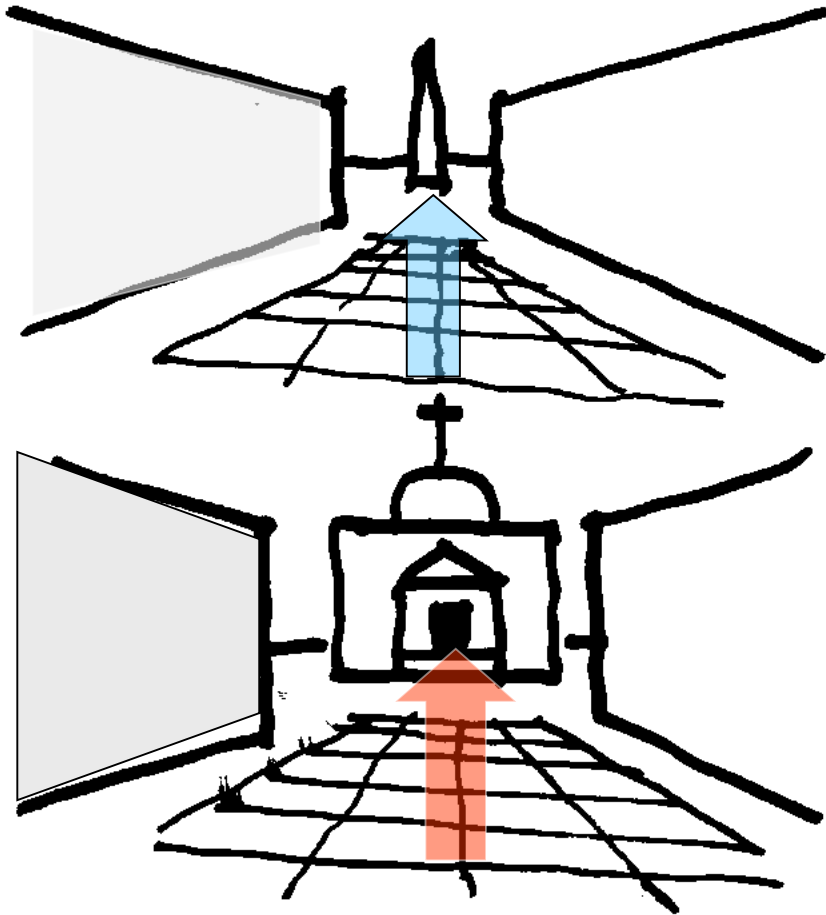


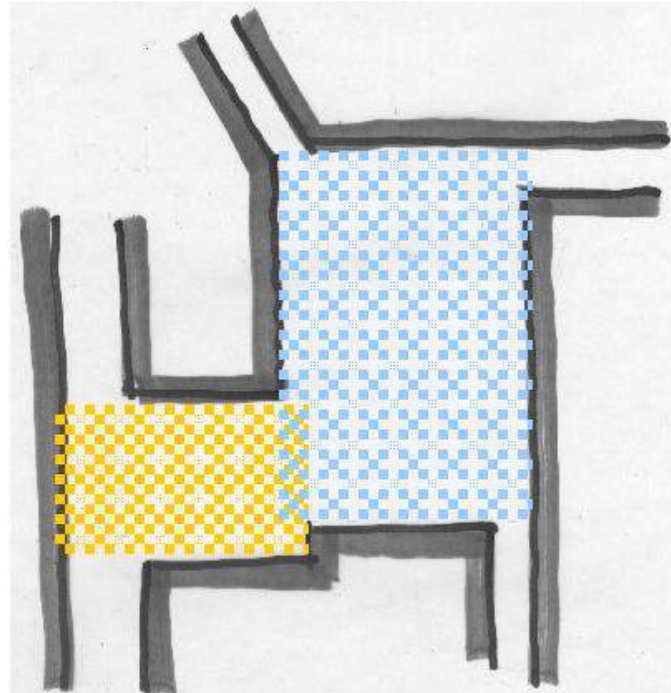
Buildings that
define space
(fabric)



Buildings that
occupy space
(objects)

Forced perspective





**Overlapping
spaces**

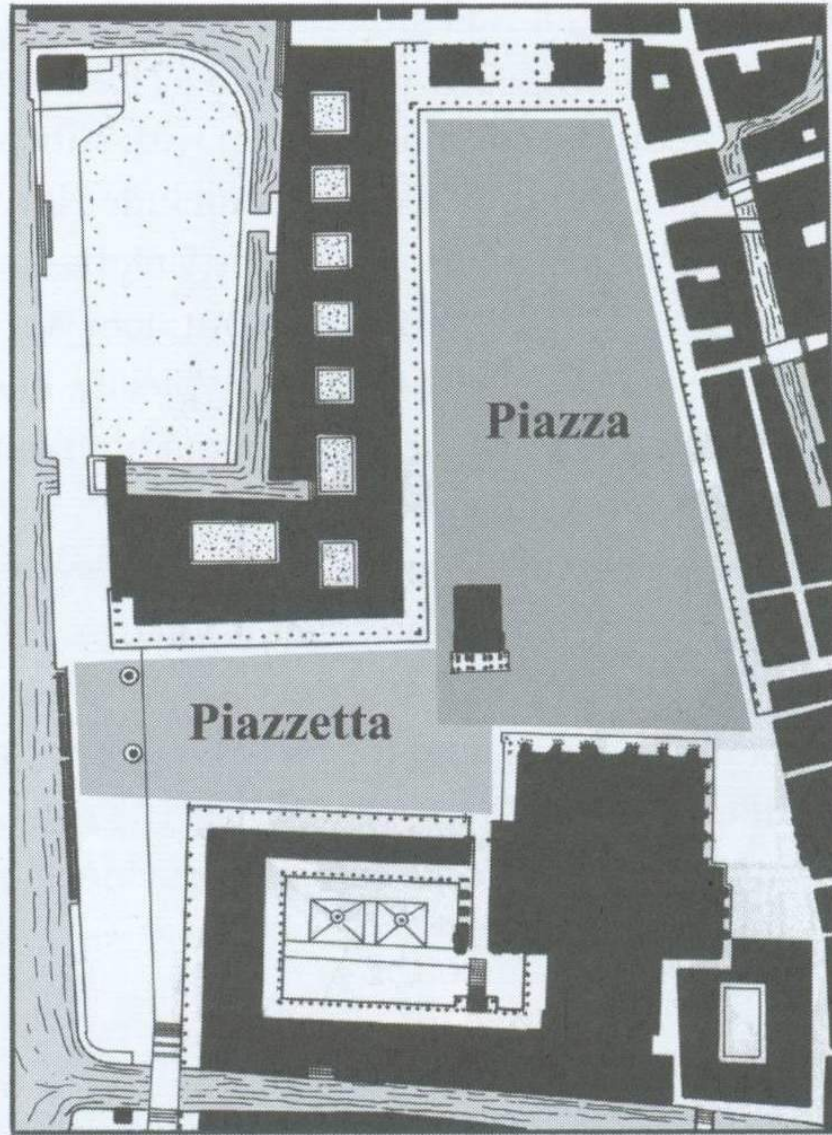
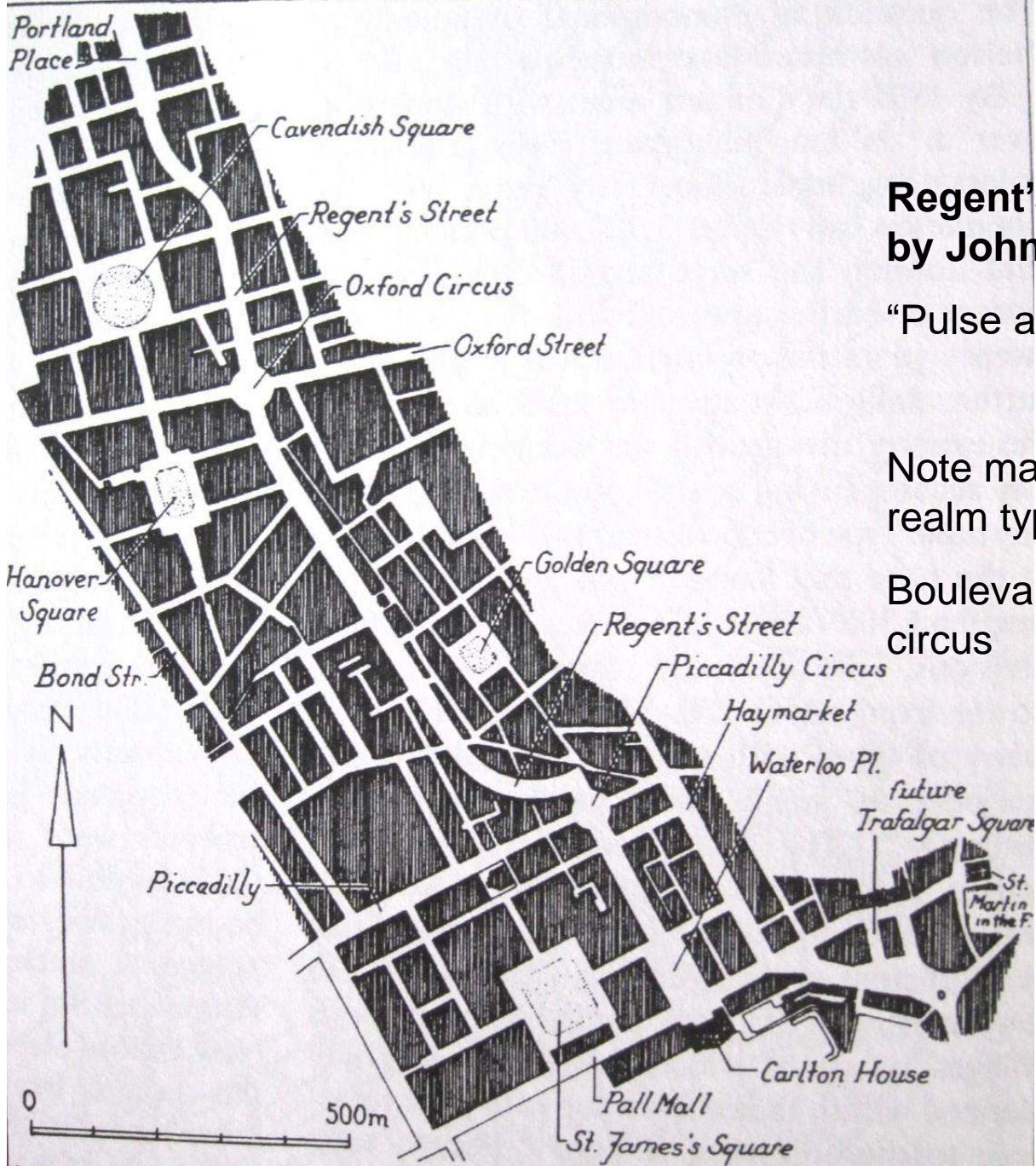


Figure 3.2. *Piazza San Marco in Venice, Italy, illustrating the overlapping rooms that form the ensemble.*





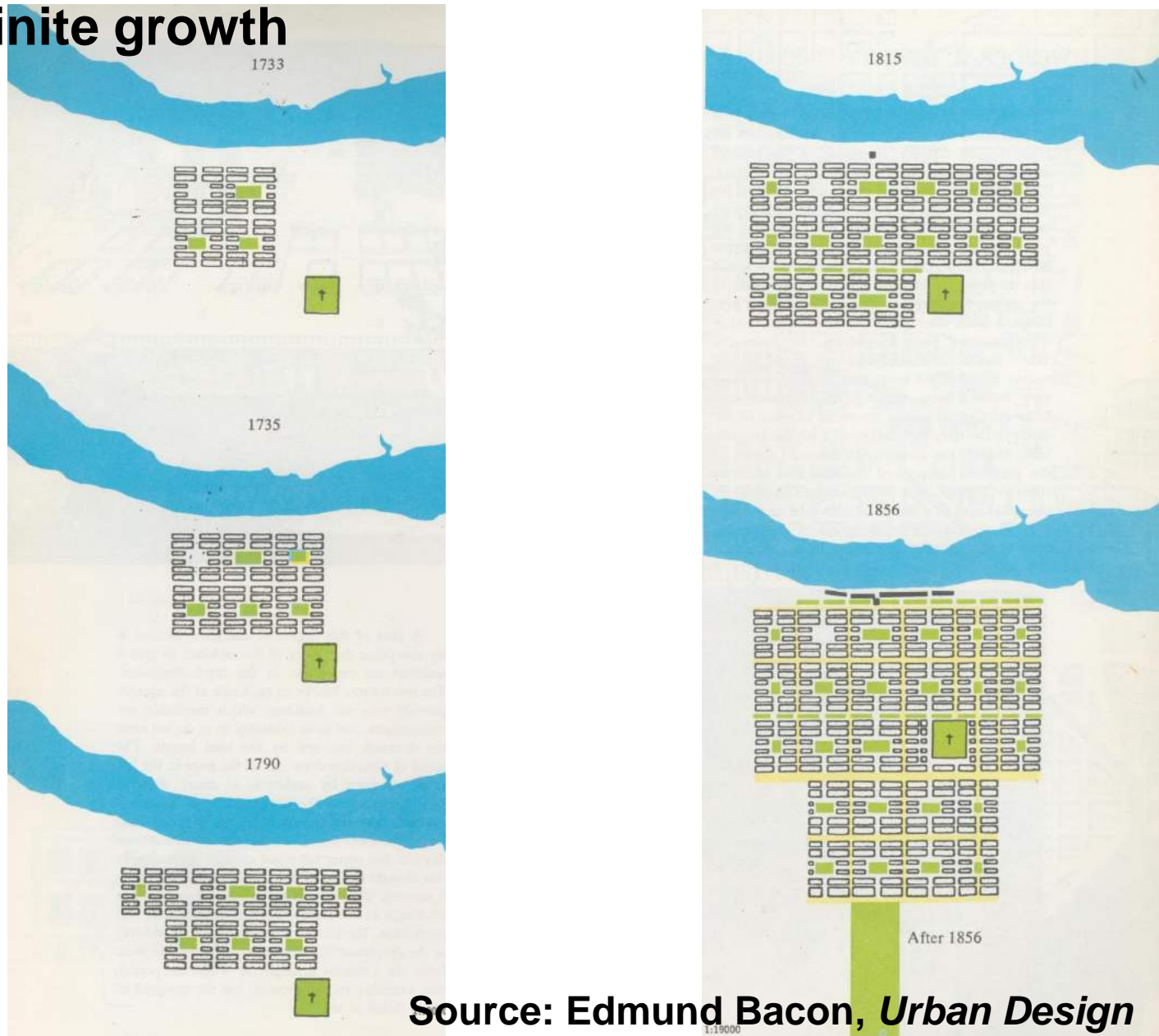
Regent's Street, London by John Nash, 1812

"Pulse and punctuation"

Note many types of public realm typologies:

Boulevard, square, place, circus

Savannah, Georgia – a pattern for incremental and finite growth



Source: Edmund Bacon, *Urban Design*



Bremerhaven –Note fine-grained perimeter blocks and consistent streetwall height – linear village green, high degree of permeability

Qualities of good public places

Human (thermal) comfort

- Opportunity for direct sun when it's cool
- Opportunity for shade when it's hot
- Cooling breeze when it's humid
- Out of the wind
- Out of the rain

Walkability: “Community takes place on foot”

(Jonathan Barnett)



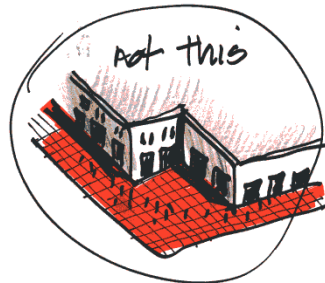
...and on bikes



Active edges and simple centres

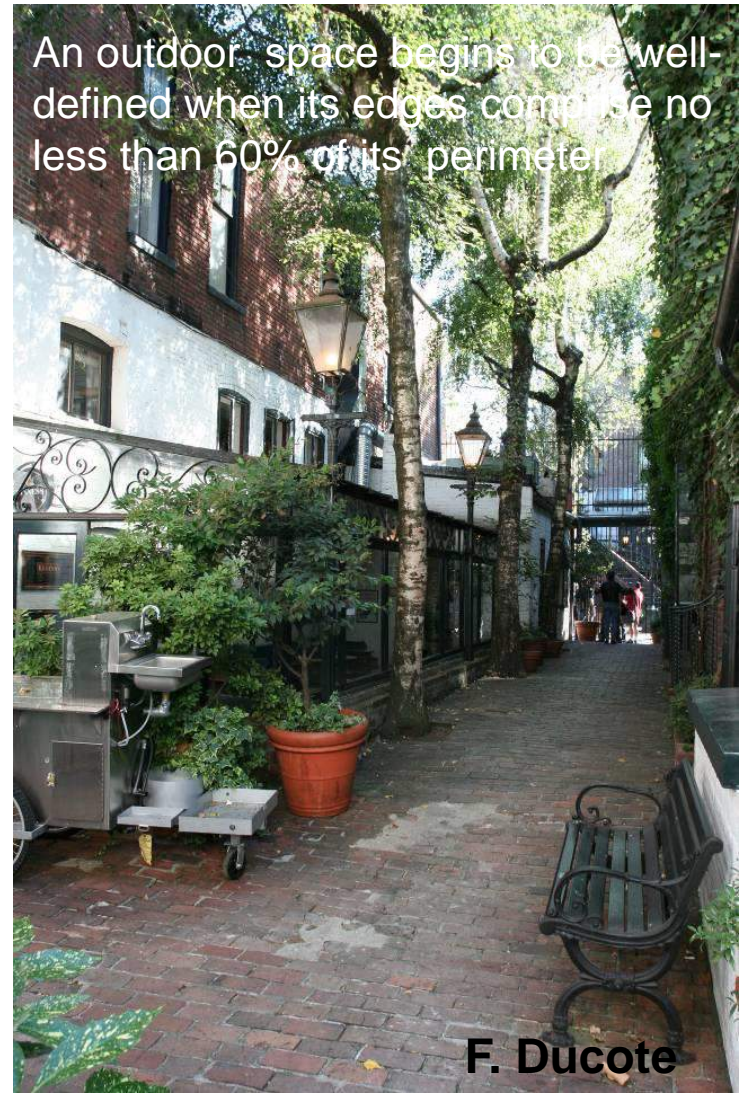


Definition and sense of enclosure: Outdoor rooms at a variety of scales and purposes – from intimate to grand



F. Ducote

*A public space is better
when it is defined like
an outdoor room.*



F. Ducote

Definition and enclosure – often the ratio width to building height 2:1 and approaches 1:1



Places to stroll, sit, eat and people watch

Good public places always offer choices for rest, thermal comfort and people watching



Many places to sit and linger, continued



Portland has justly earned a reputation for a commitment to its public realm



Portland – Director Park



Opportunities for public celebration



... and protest



Public spaces should be adaptable to changing uses



Every day informal use



Special events and celebrations

From the beginning, the public realm has always been a place for transactions, most notably social interaction and food – the marketplace



Approachable public art and water contribute, as do trees



Rambla Raval, Barcelona



False Creek North, Vancouver

Examples in the Lower Mainland



Suter Brook, Port Moody

Onni Developments

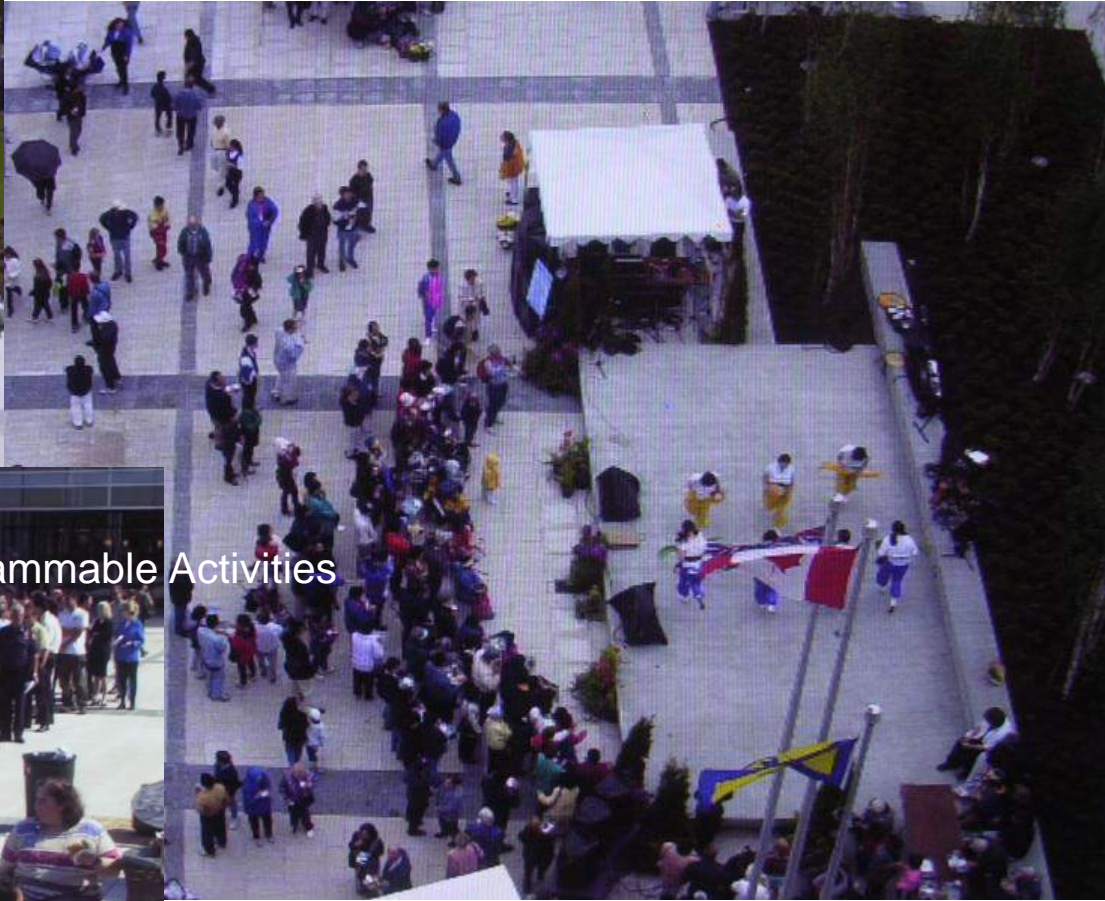


Coquitlam Centre - Green and High Street



Richmond City Hall

by HBBH Architects, plaza by
PFS Landscape Architects and Planners

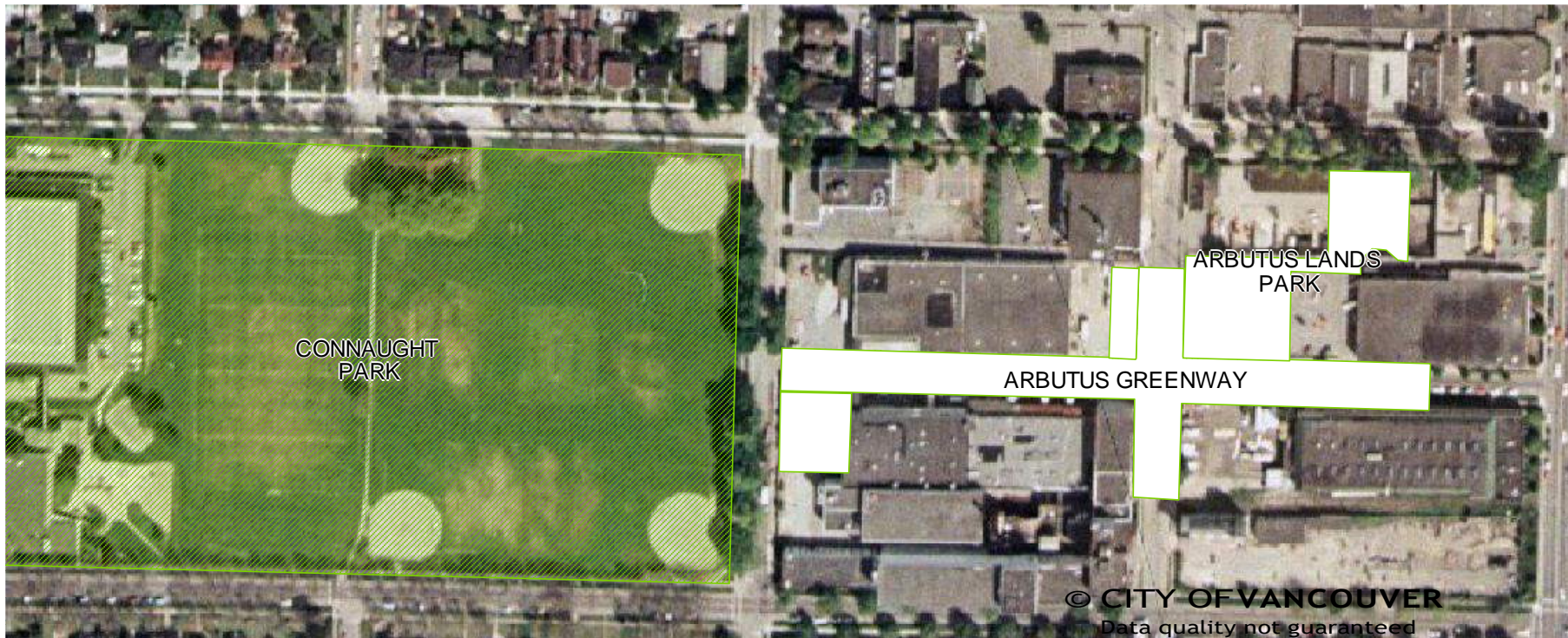


Programmable Activities

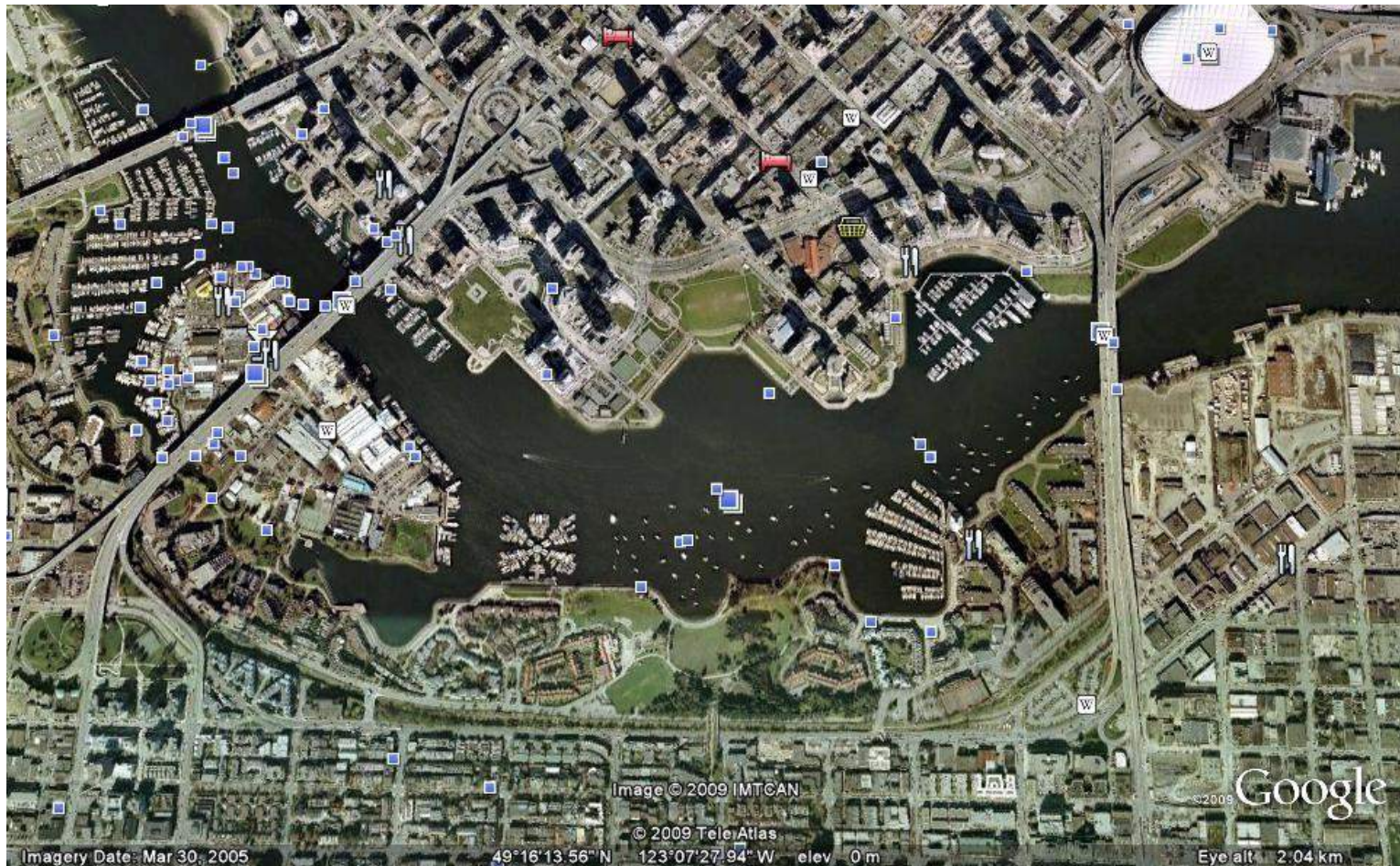
Artificial landform in a flat context provides terraces and overlook



Arbutus Walk open space system



False Creek has always been a laboratory for new ideas in post-industrial planning and place making





Granville Island



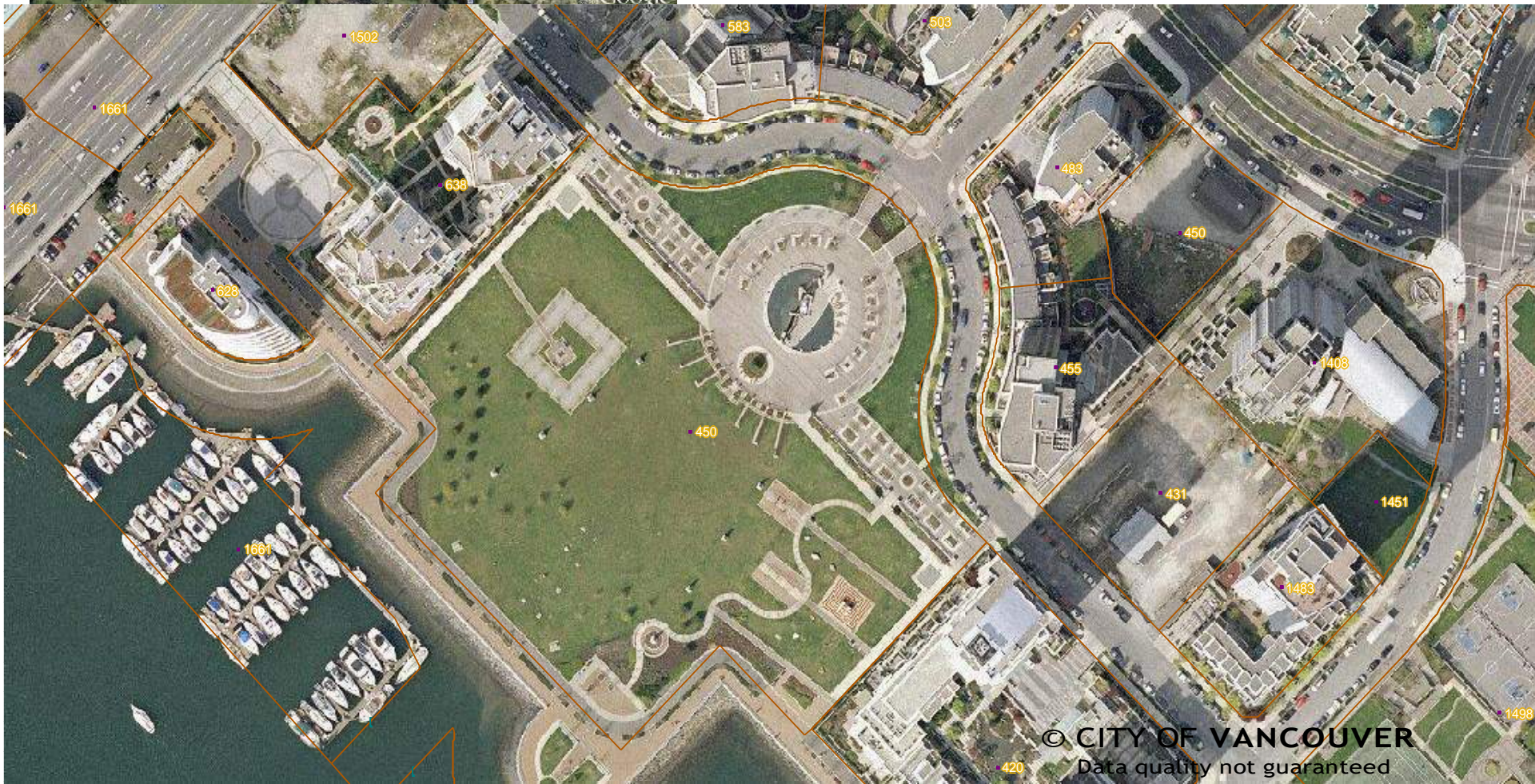


South False Creek – based on Medieval enclaves, early 1970s



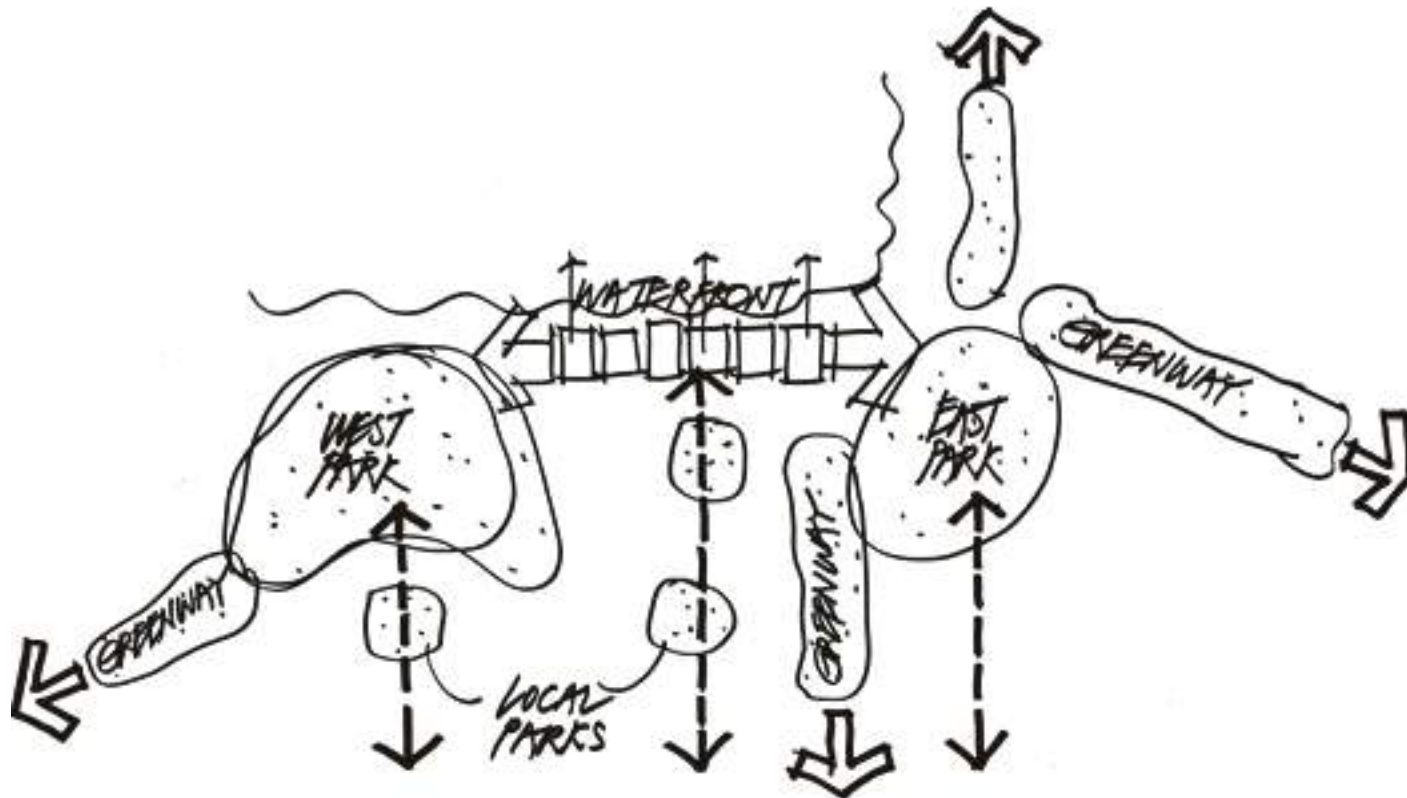
Bath, England

Andy Livingston Park



Southeast False Creek (Olympic Village) Conceptual open space diagram

Plan and guidelines by Norm Hotson of Dialog







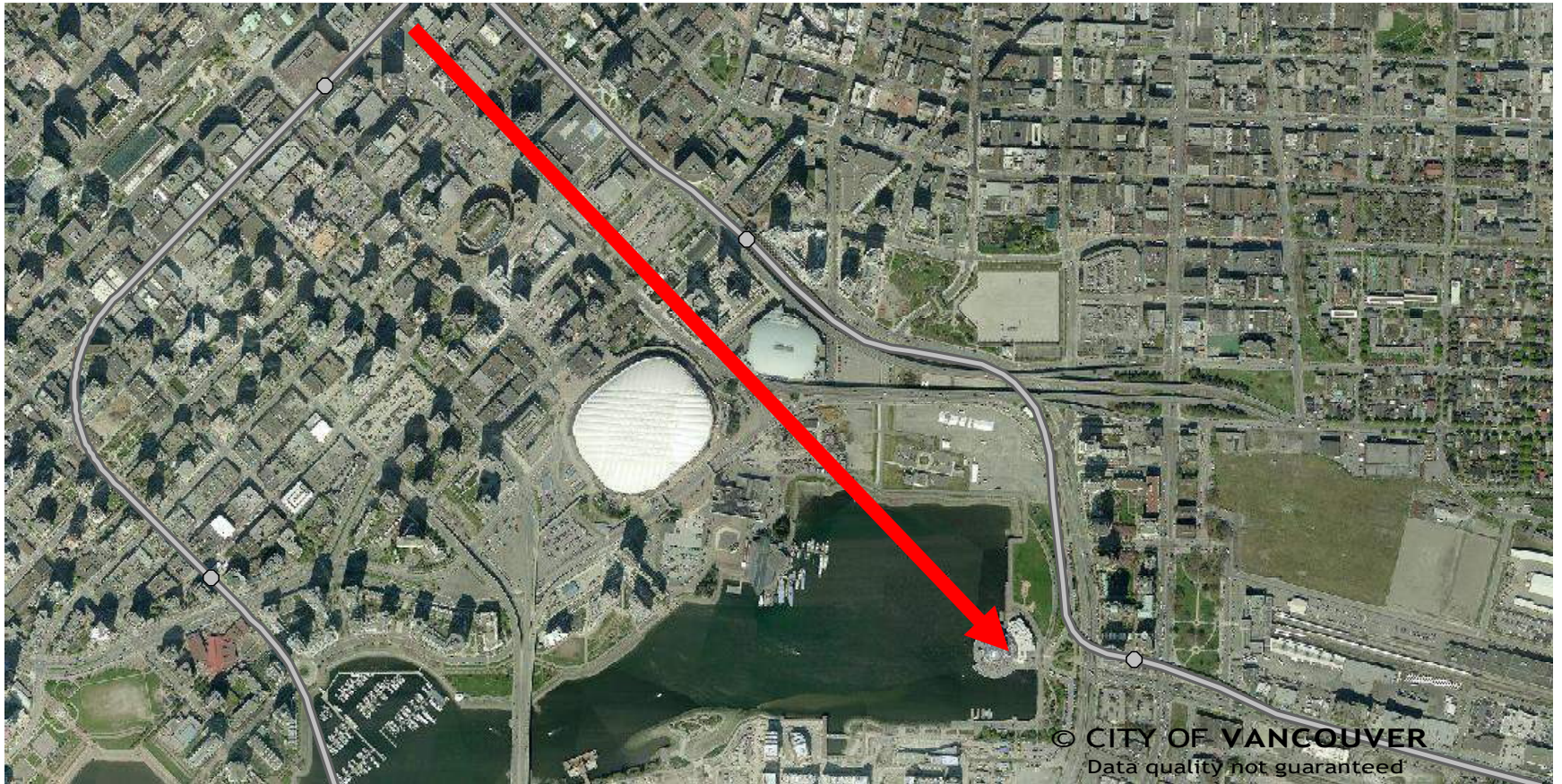
Northeast False Creek



© CITY OF VANCOUVER
Data quality not guaranteed

The Expo 86 “golf ball” placed to terminate the Georgia Street vista

Baroque neoclassicism by Bruno Freschi



Northeast False Creek study

Sketch plan by Scot Hein, City of Vancouver

Note reinforcement of Georgia Street axis with Campodoglio Piazza

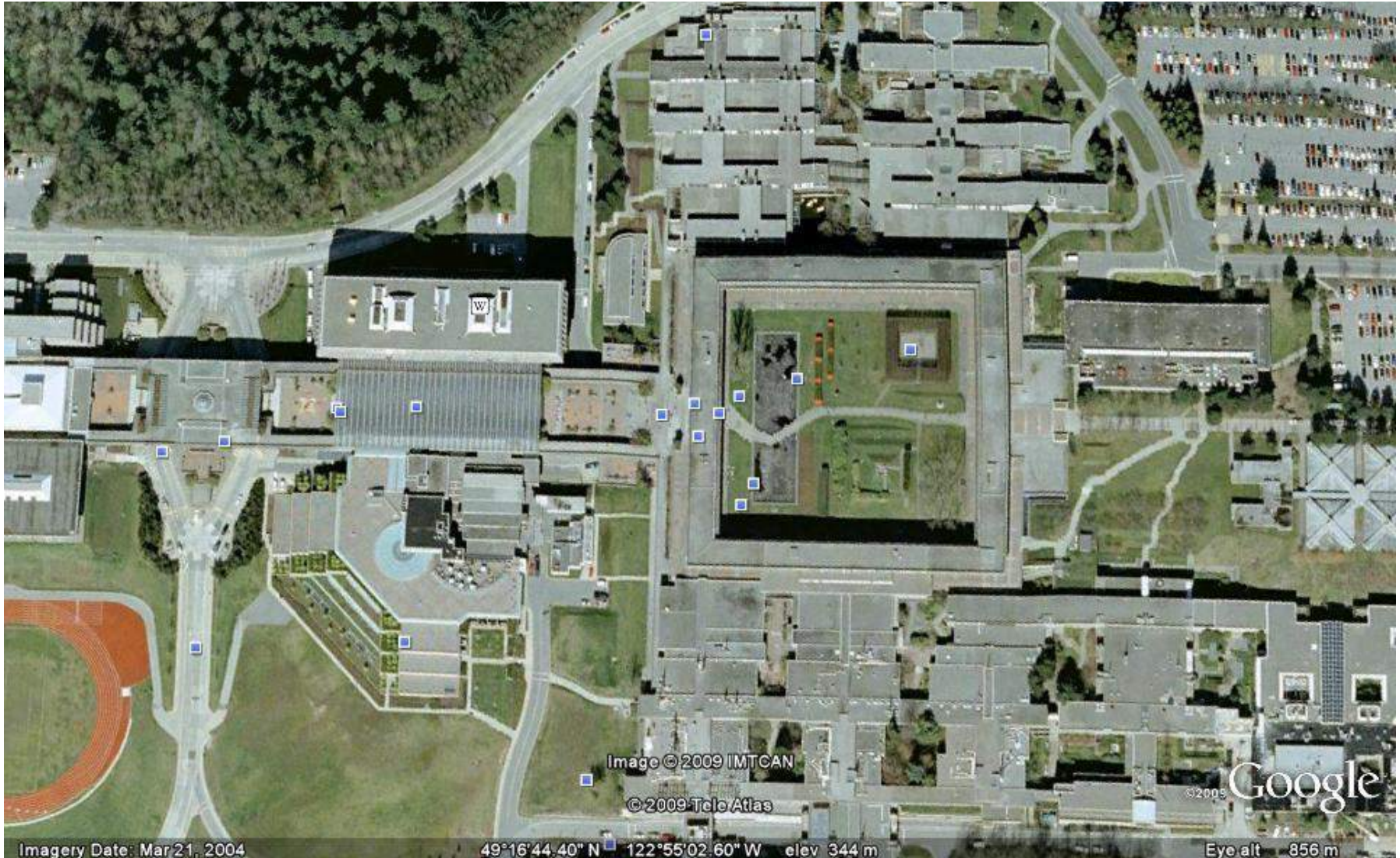


Pre-Columbian settlements – axes & quadrangles



Simon Fraser University ca 1965 – axes & quadrangles

by Erickson & Massey

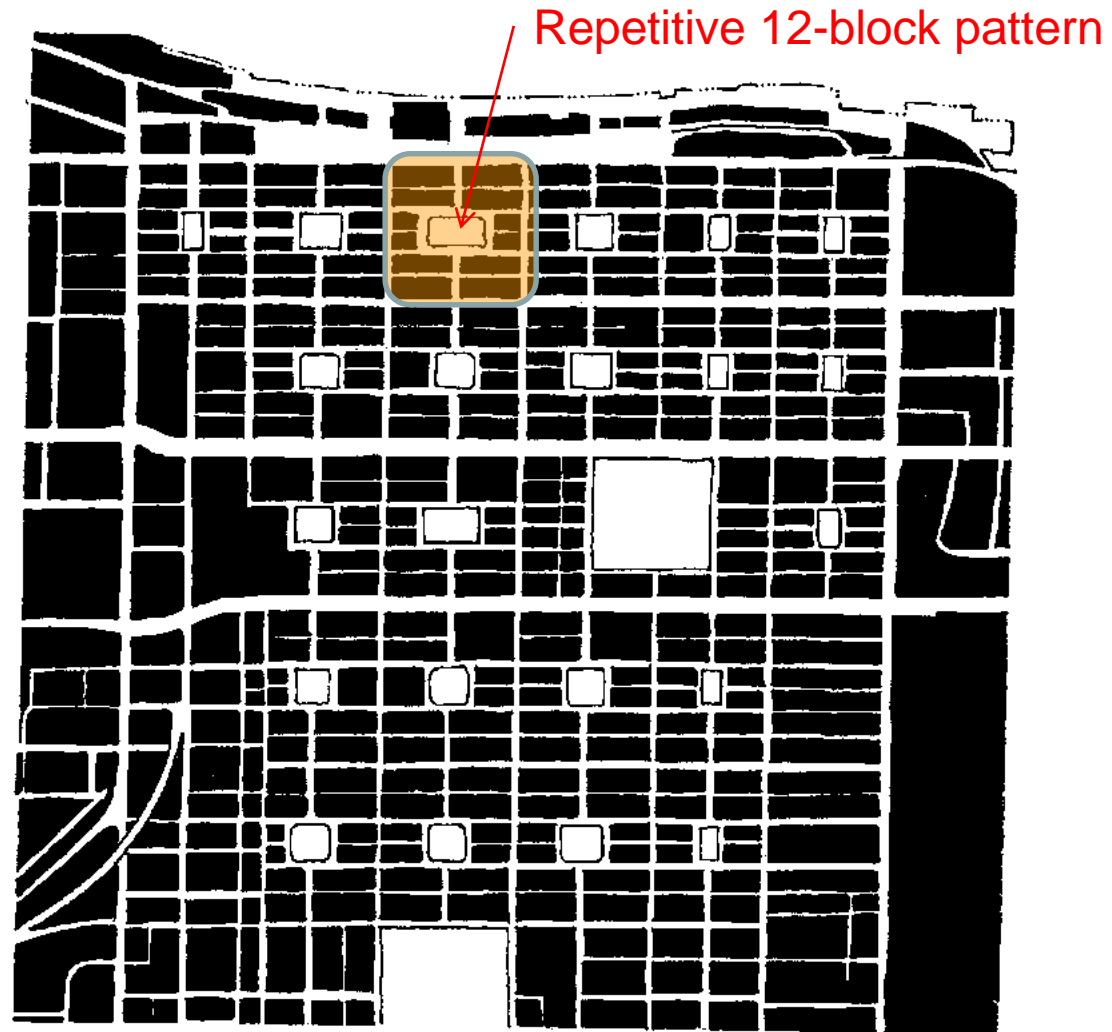


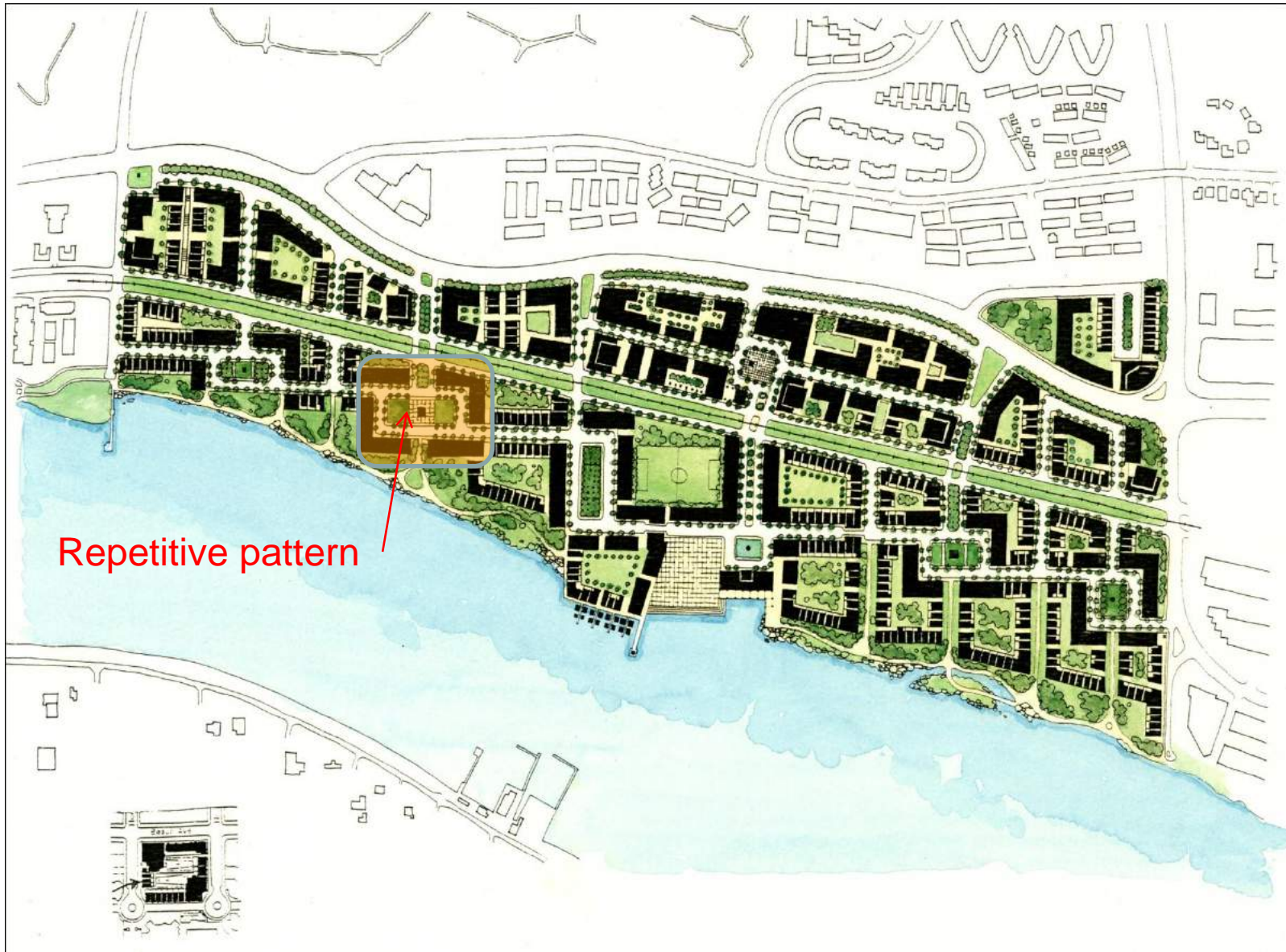
Imagery Date: Mar 21, 2004

49°16'44.40" N 122°55'02.60" W elev 344 m

Eye alt 856 m

Savannah, Georgia figure-ground plan

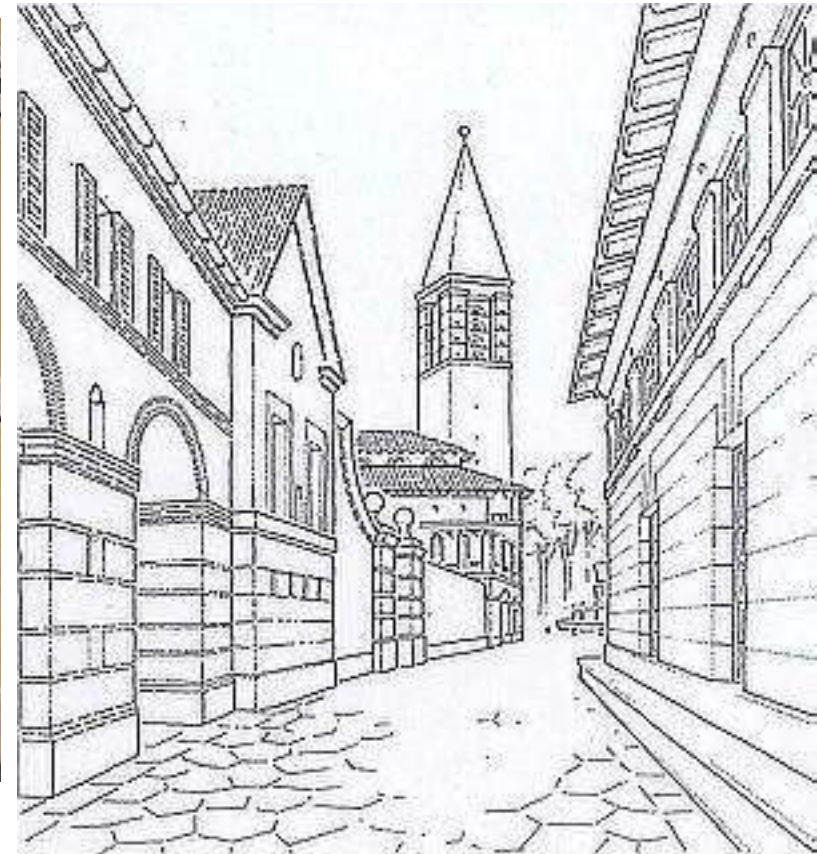




East Fraserlands

concept by DPZ for Parklane Homes

Leon Krier – leading theorist among contemporary traditionalists, classicists and anti-modernists



Could the same outcome be achieved with contemporary expression?



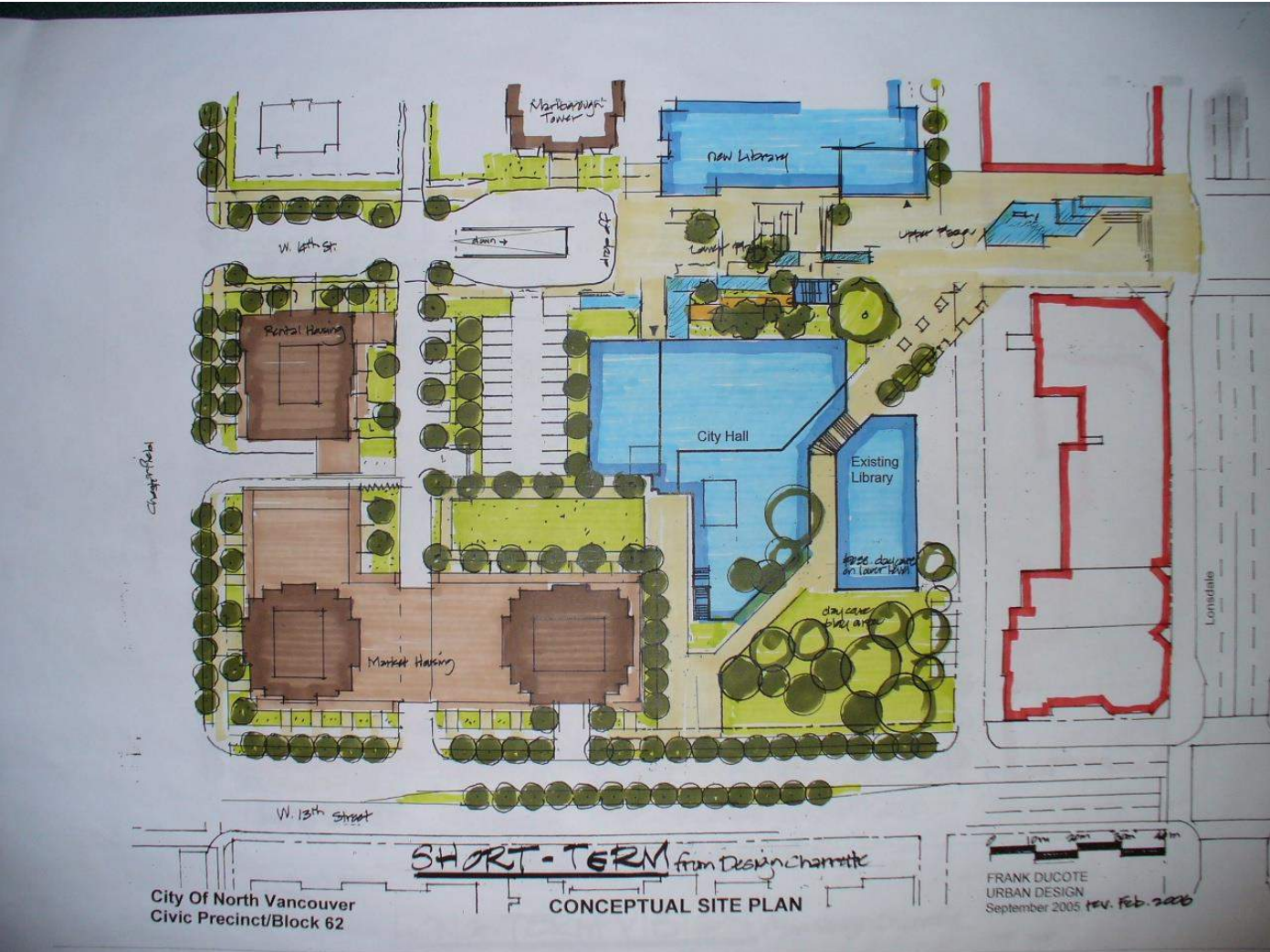
The new Lynn Valley Library by Gregory Henriquez achieves that desirable sense of enclosure and comfortable human scale

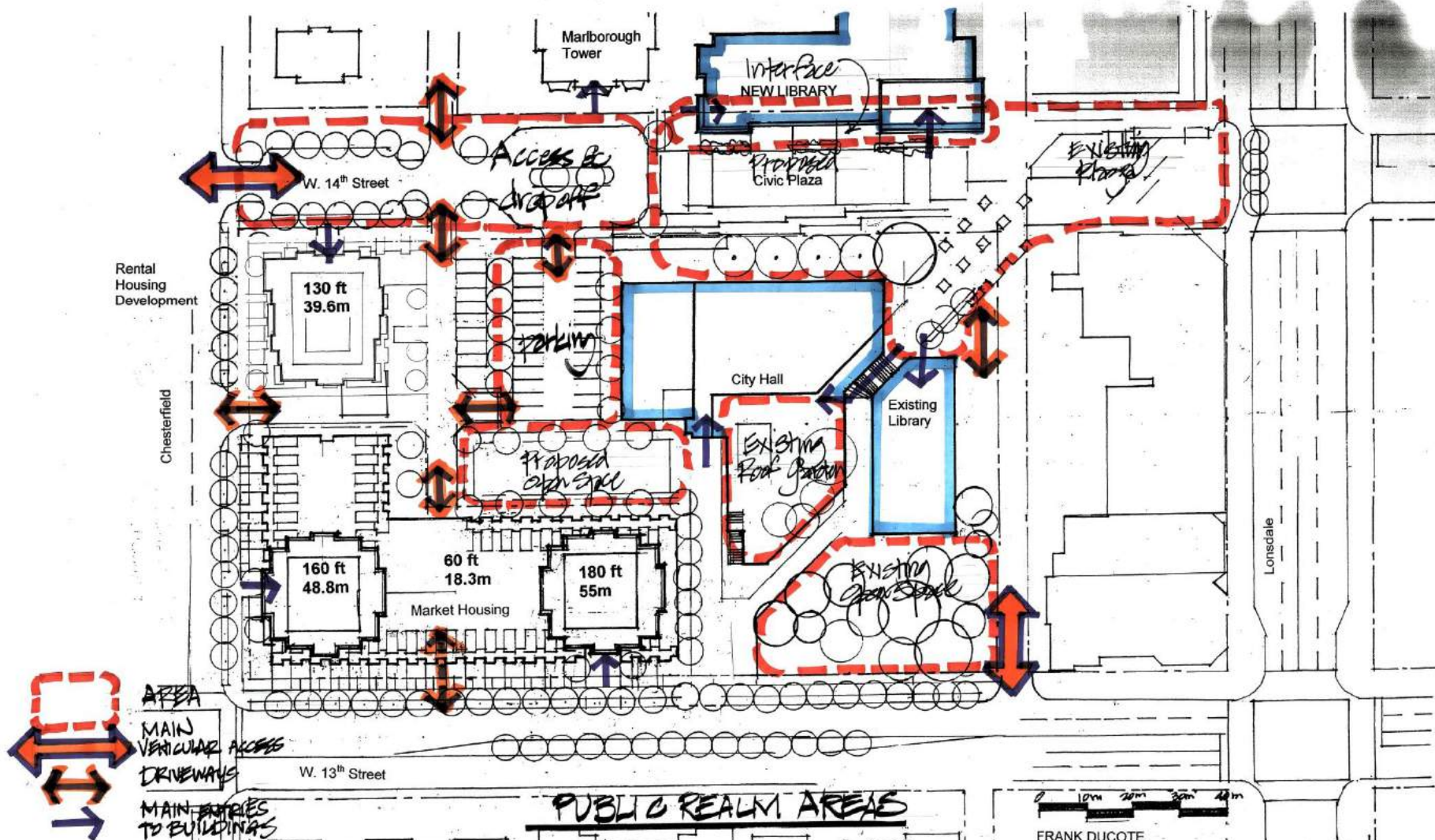
City of North Vancouver "Civic Heart"



THE MASTER PLAN – short term

by Frank Ducote Urban Design



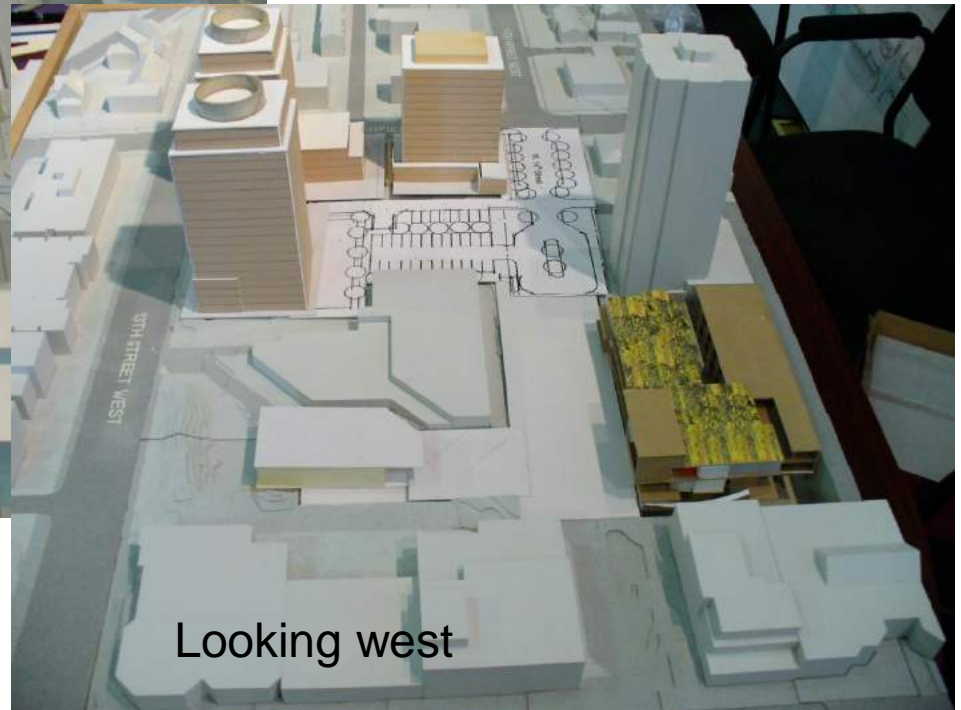


City Of North Vancouver
Civic Precinct/Block 62

CONCEPTUAL SITE PLAN

FRANK DUCOTE
URBAN DESIGN
September 2005

Study model





Library by Diamond & Schmidt



Library plaza, design by PFS Landscape Architects

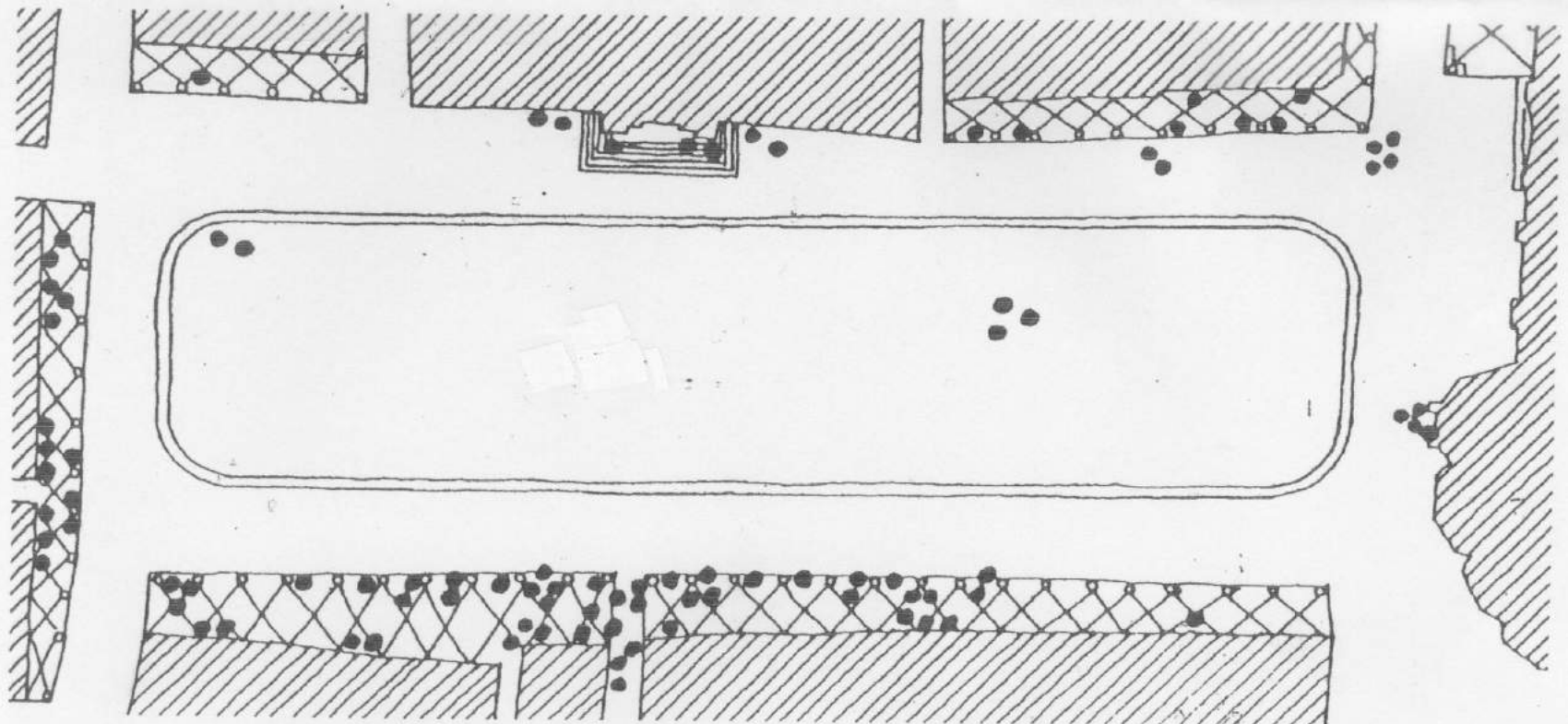
Jan Gehl talks about two kinds of uses of public space

- The necessary and the optional
- Necessary activities have declined over time (civic engagement, markets, ceremonies, religious festivals, etc.)
- While optional activities have tended to increase, i.e., sightseeing and tourism, but not everywhere
- In traditional eras public places didn't have to be programmed, since they served a wide variety of necessary functions
- Today, successful places are successful because people choose to visit them

Tools for observation and design thinking

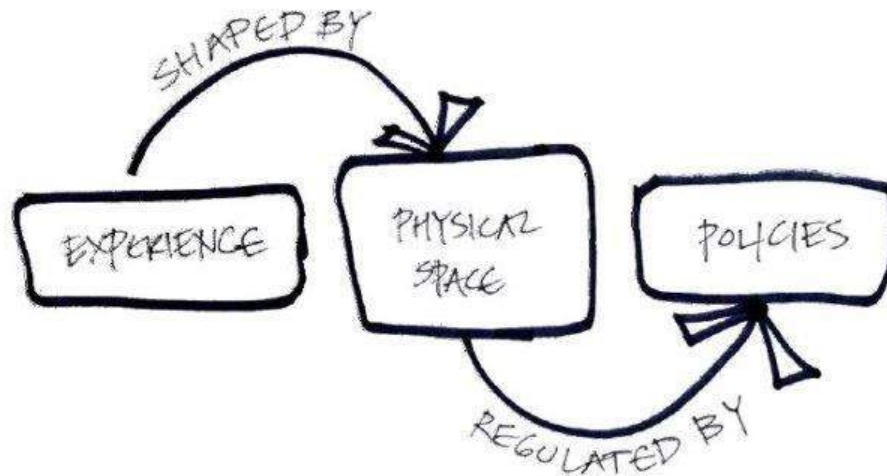
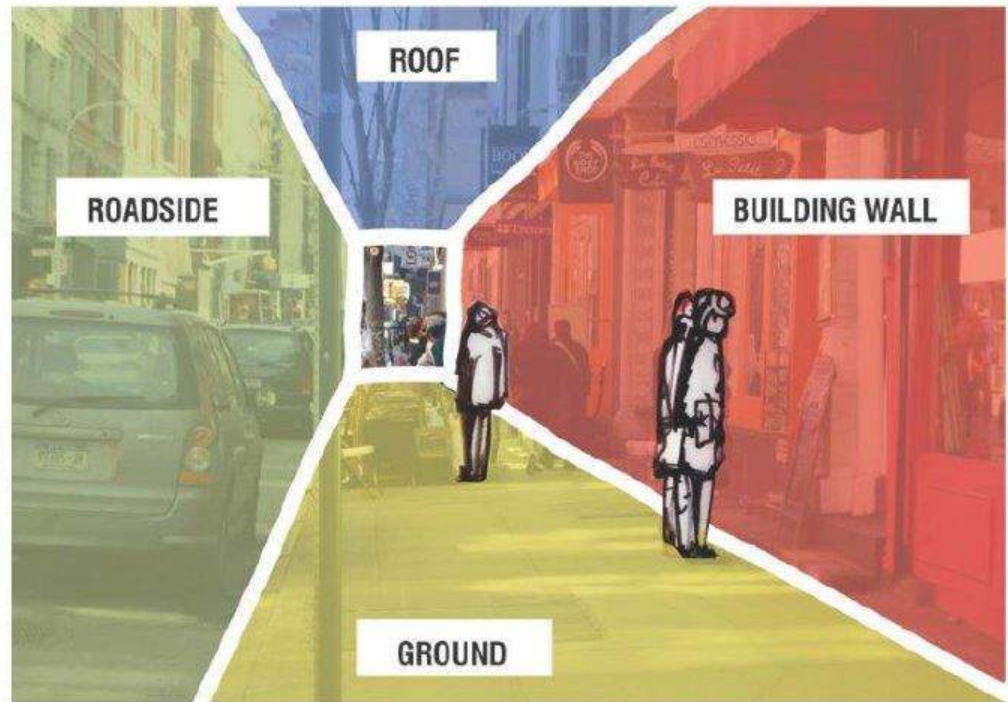
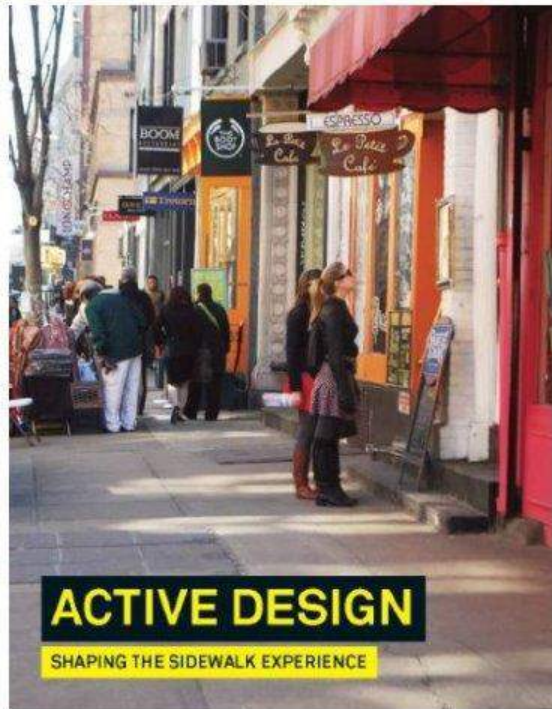


Observing and mapping human activity



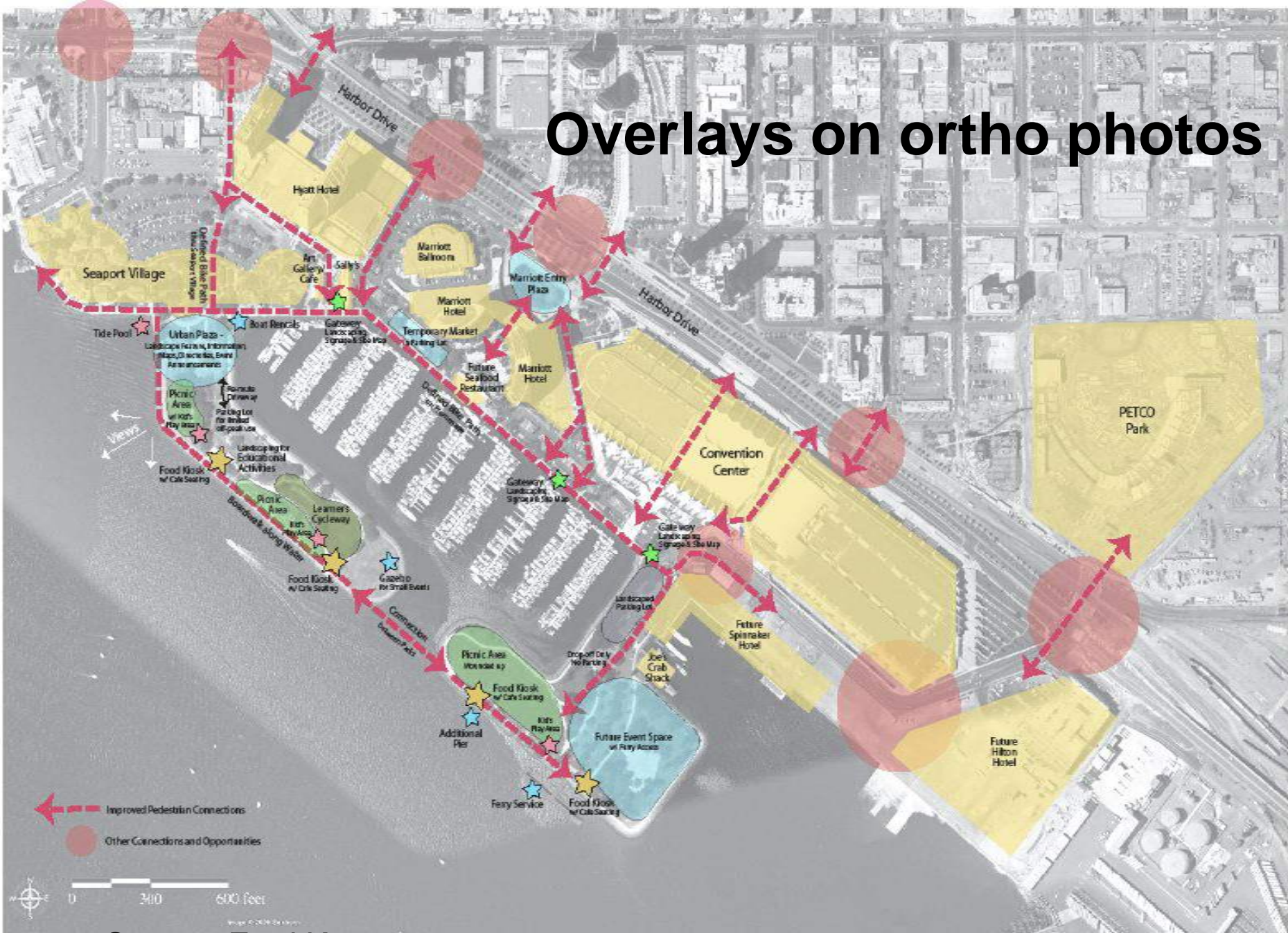
4 Jan Gehl's survey of where people congregate in the city square, Ascoli Piceno, Italy. Almost everyone has chosen a protected spot around the perimeter of the square.

Active Design: Shaping the Sidewalk Experience



Source: NYC

Overlays on ortho photos



Source: Fred Kent, pps.org

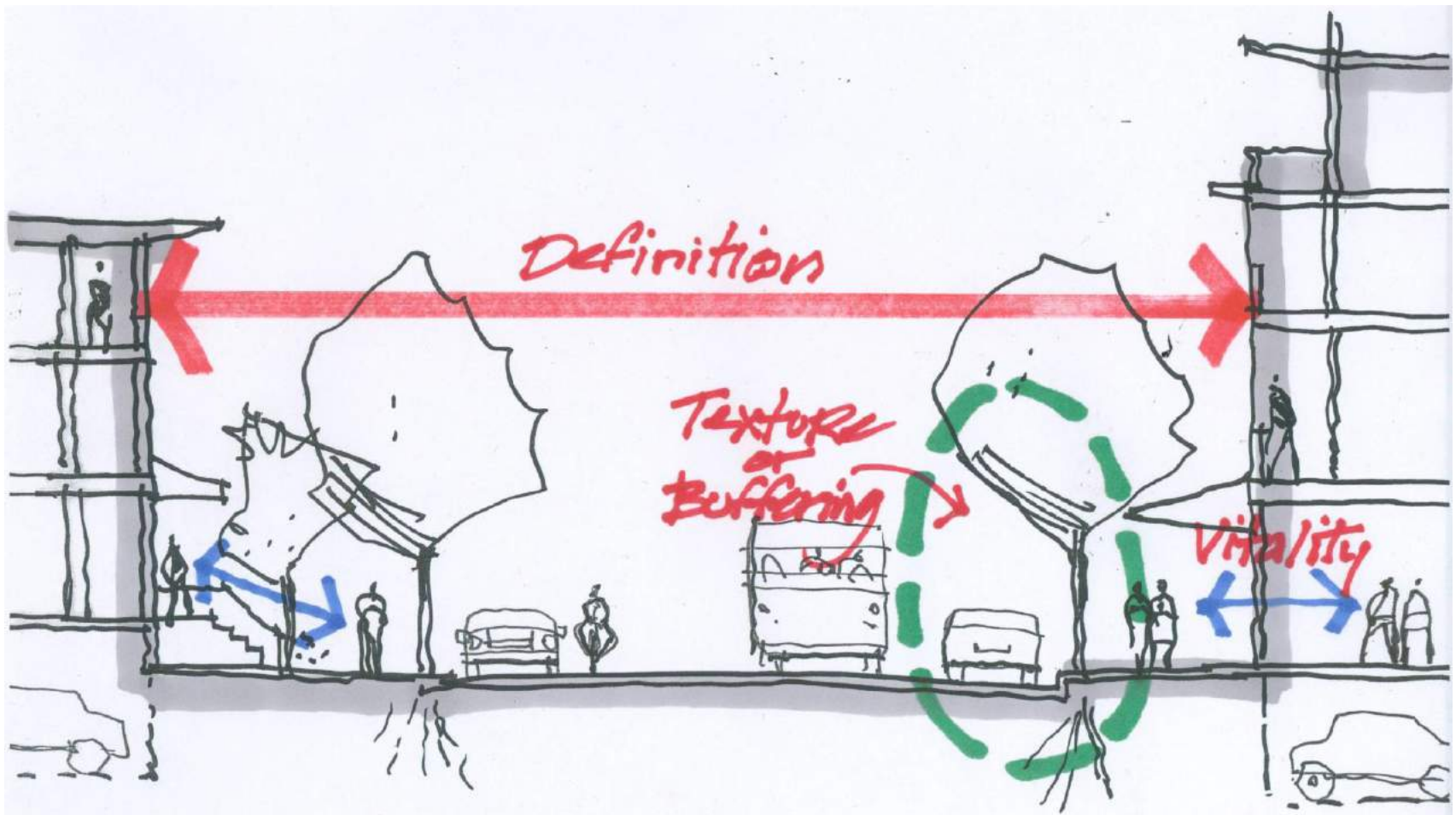
Building quick block models with stakeholders enables consensus



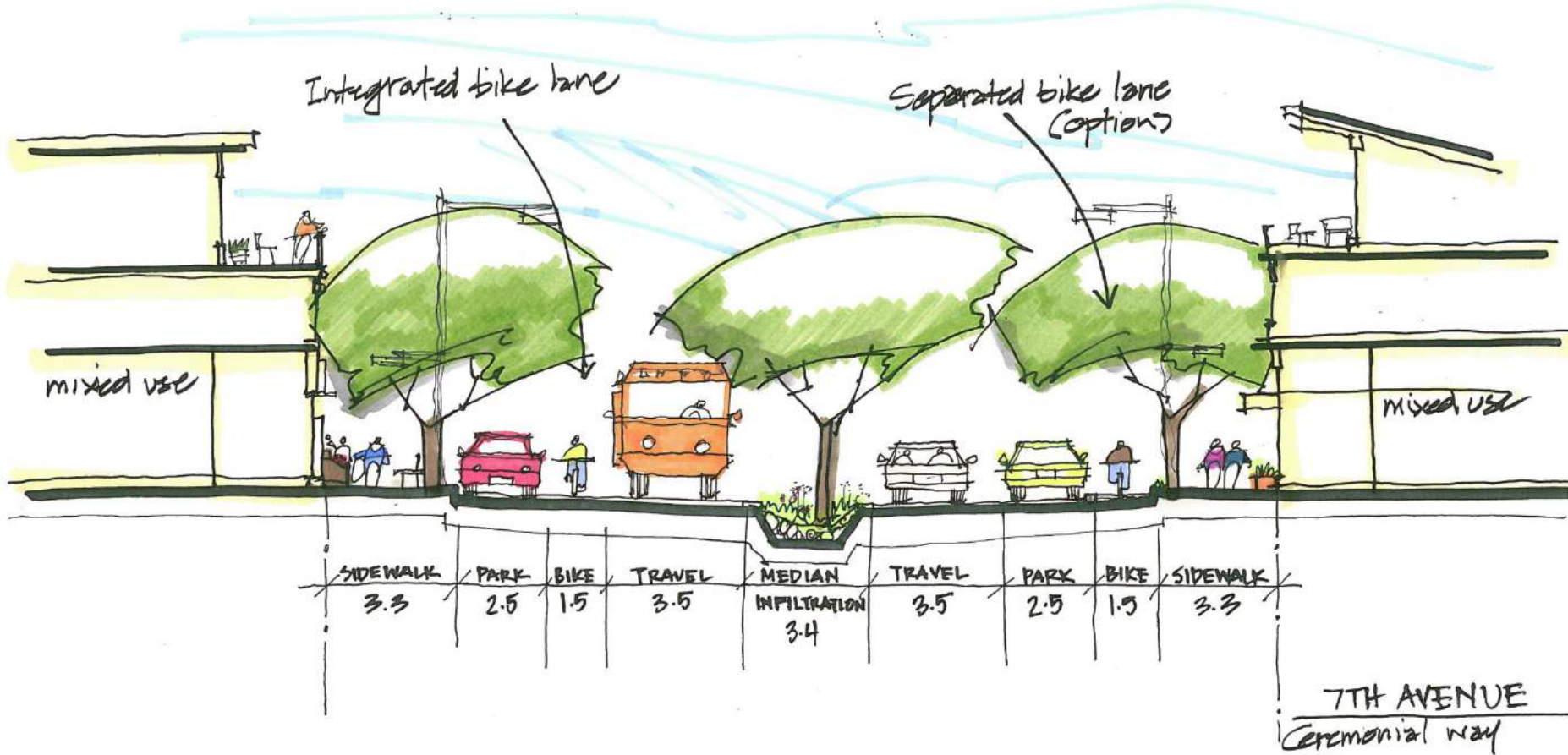
Streetscape



Basic elements of streetscape



The Street Section

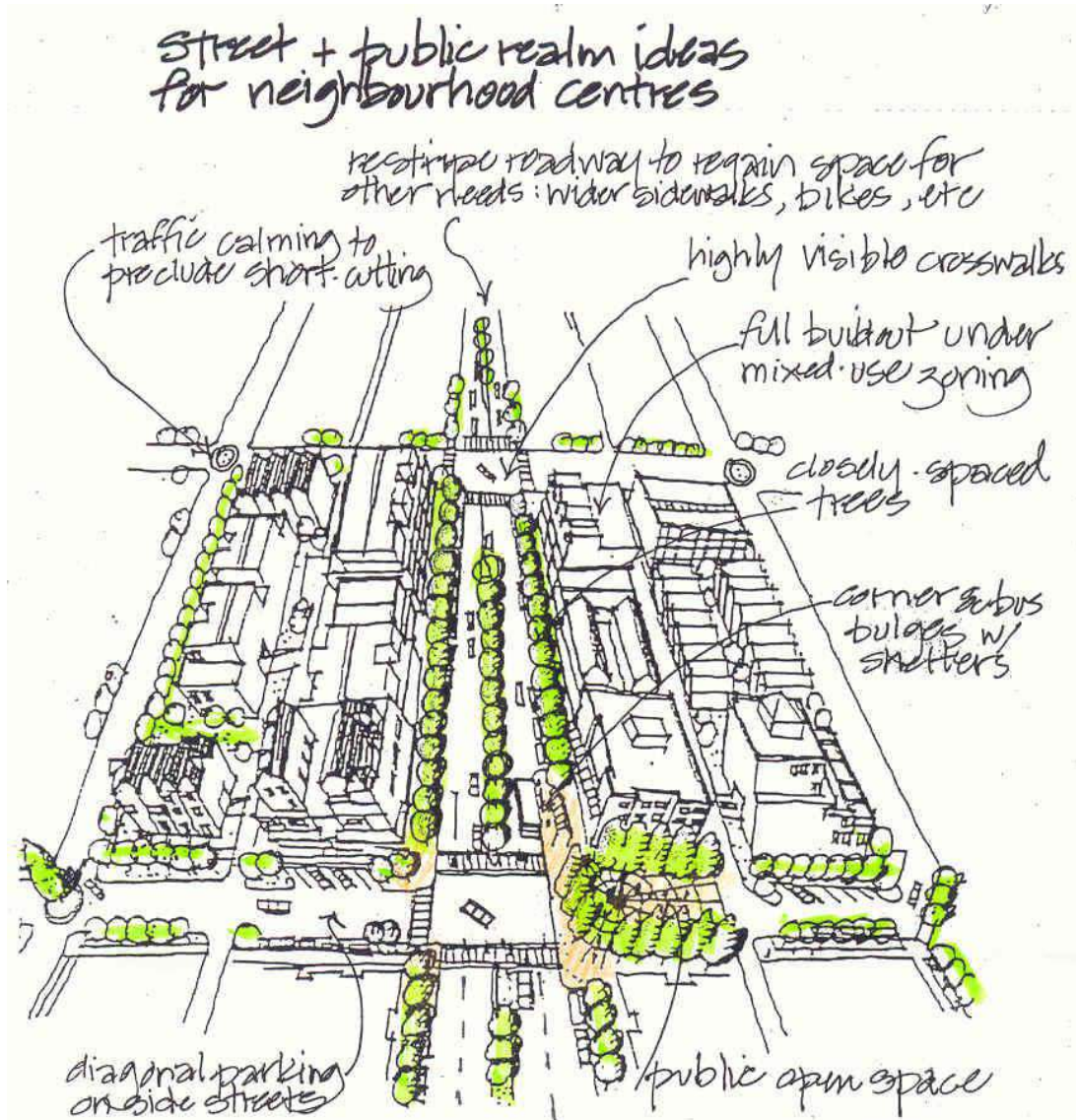


Source: HBLanarc, Prince George Smart Growth on the Ground

A street converted to a greenway – Portland's Pearl District



The birdseye view



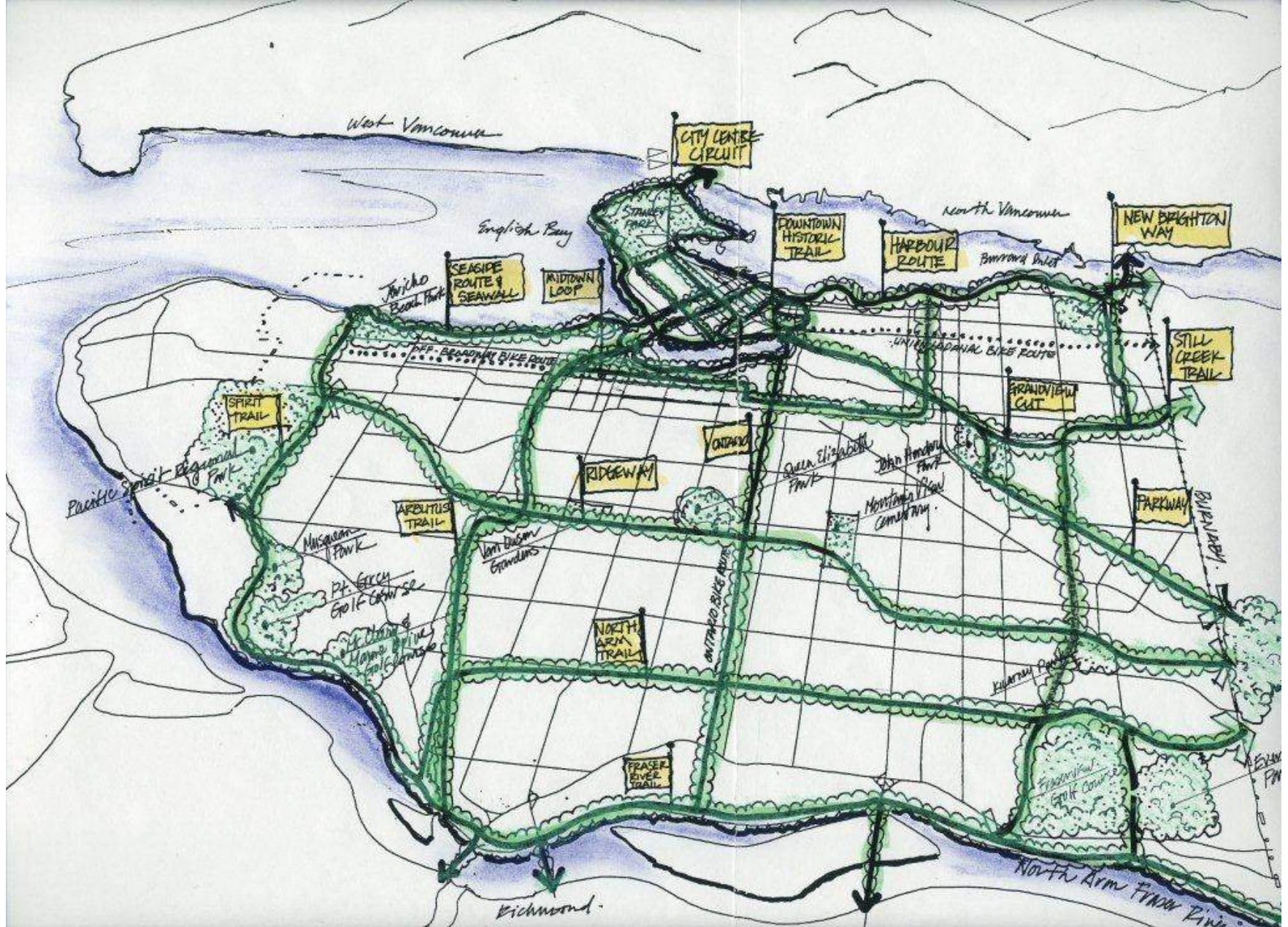
Drawing over a photo of a block model



The urban tree's requirements

Space to grow, protection, growing medium, water and light



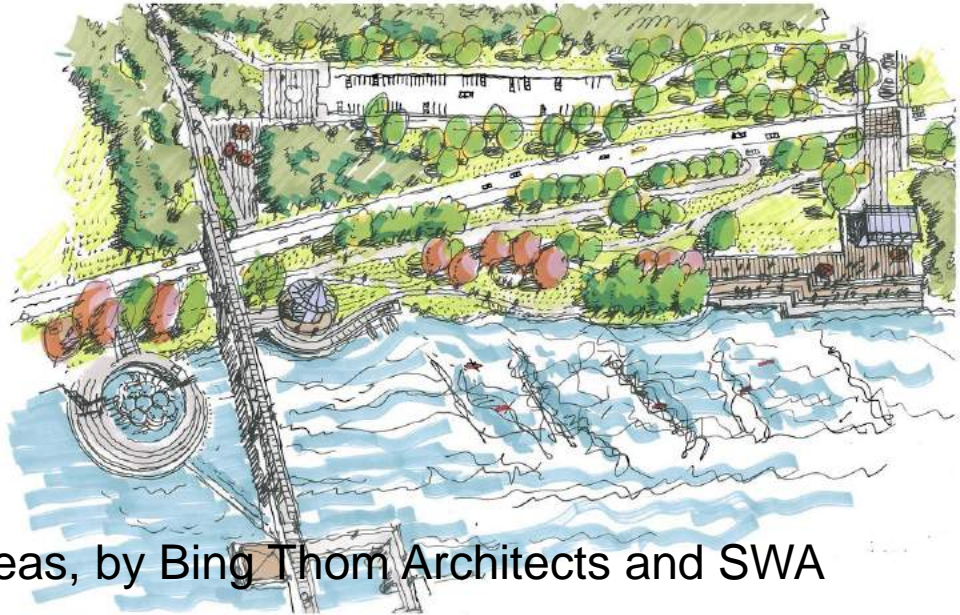


City of Vancouver Greenways concept

by Michel von Hausen

The axo and birdseye views

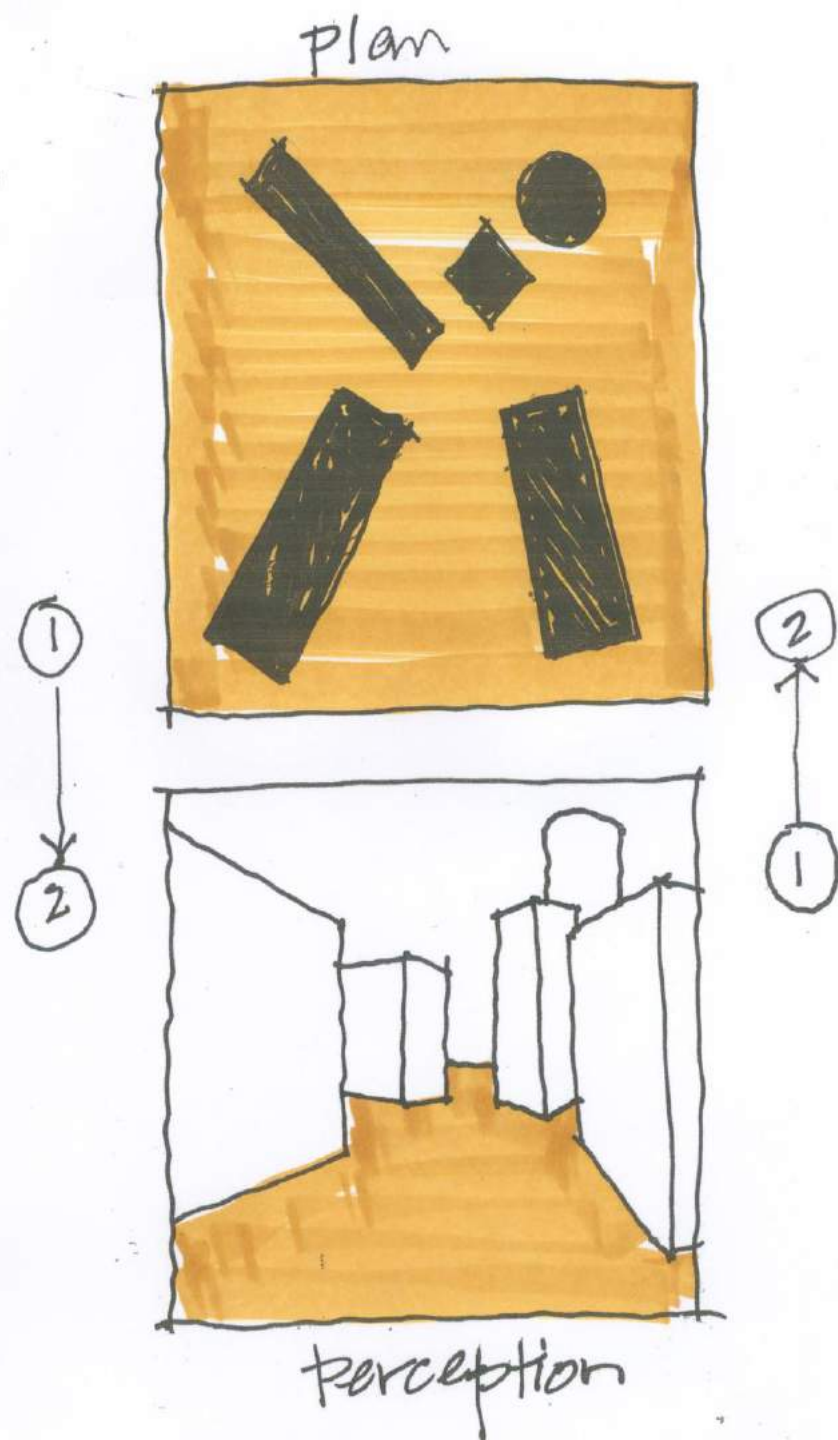




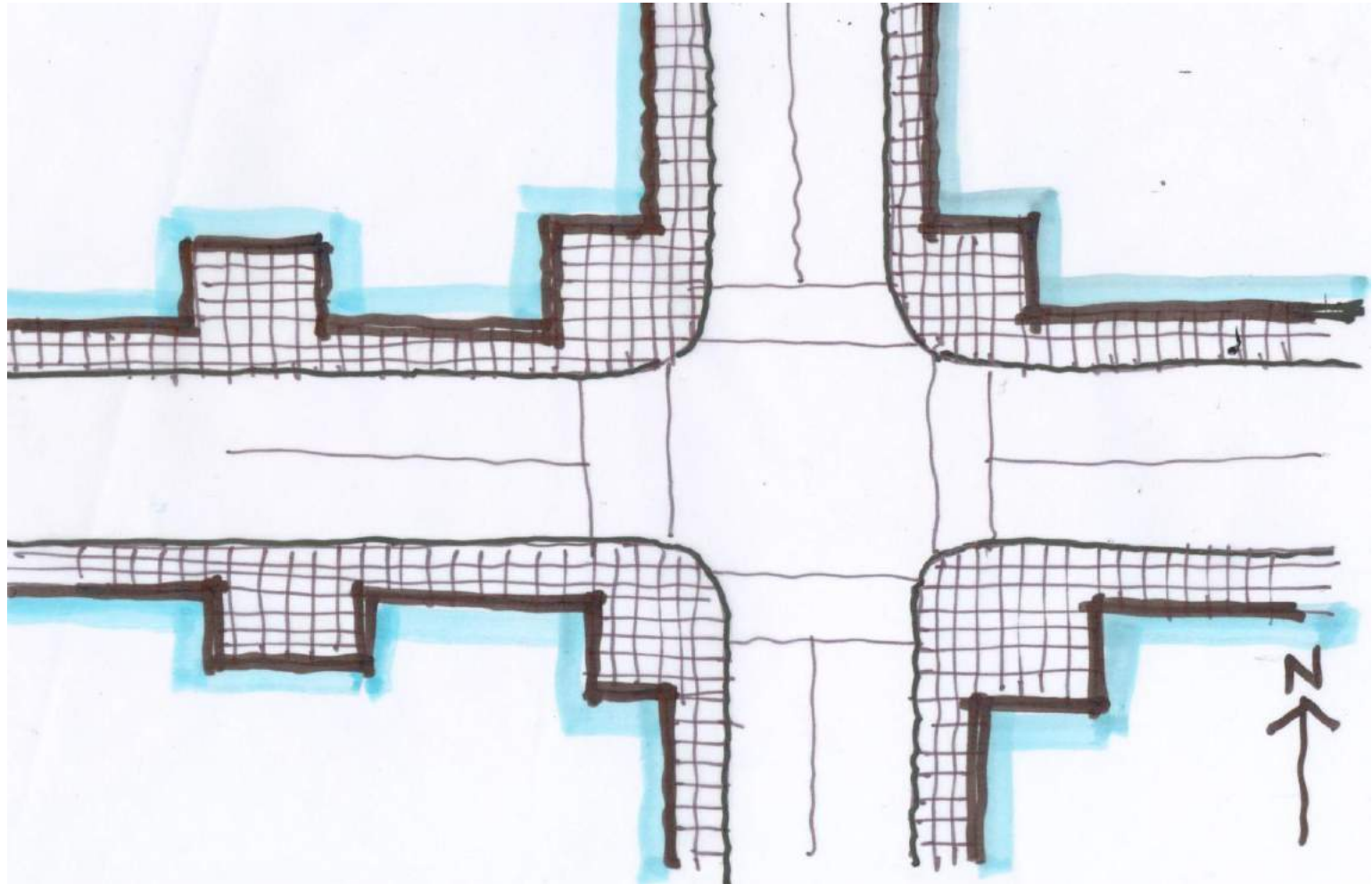
Tulsa - Arkansas River public realm ideas, by Bing Thom Architects and SWA sketches by Frank Ducote (note: these are axo drawings)

**What comes first –
the plan or the
intended perception?**

**Perception first:
Citté, Cullen, Krier**



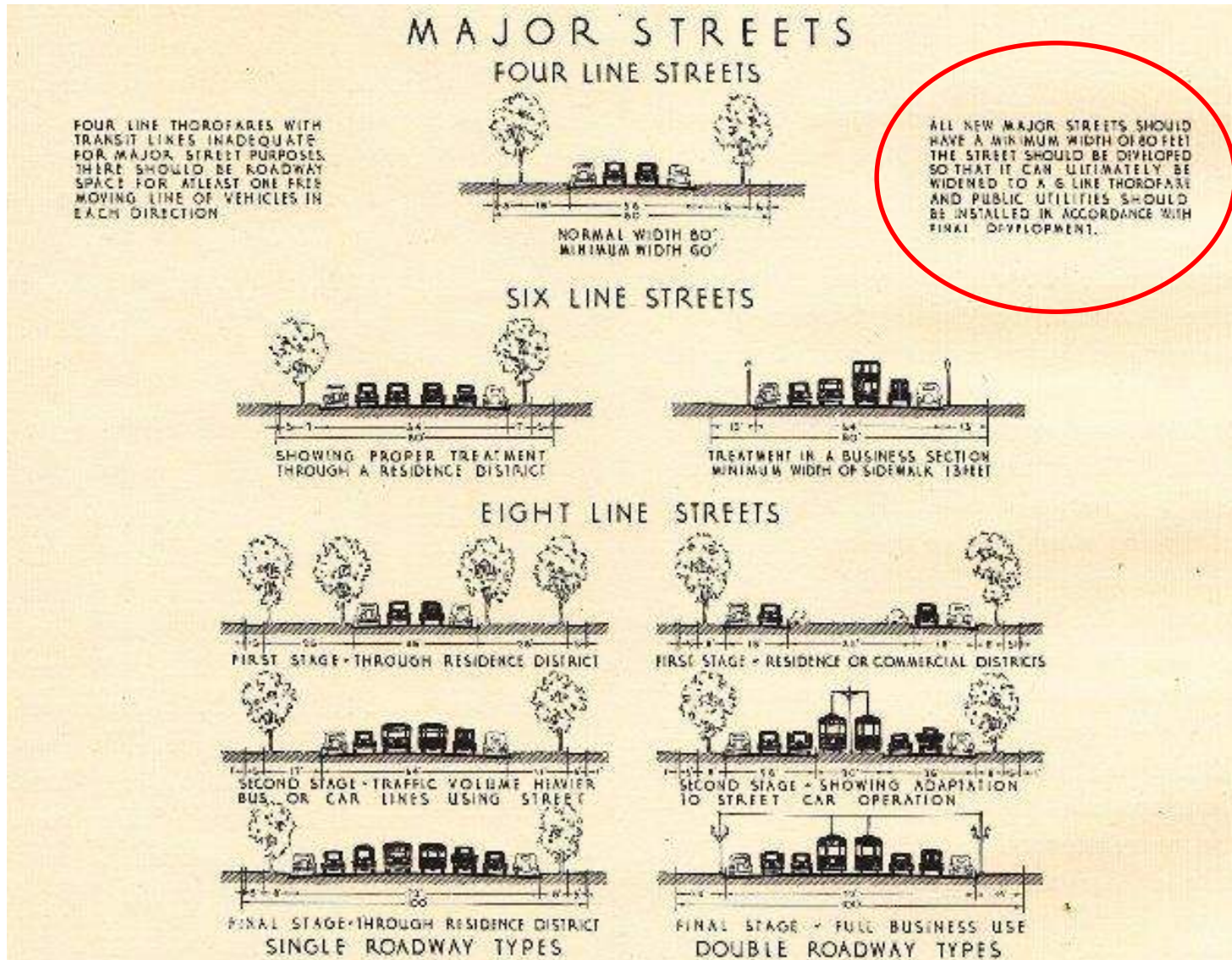
Question: Based on spatial definition and solar orientation, which are the preferable locations for city courts? Why?





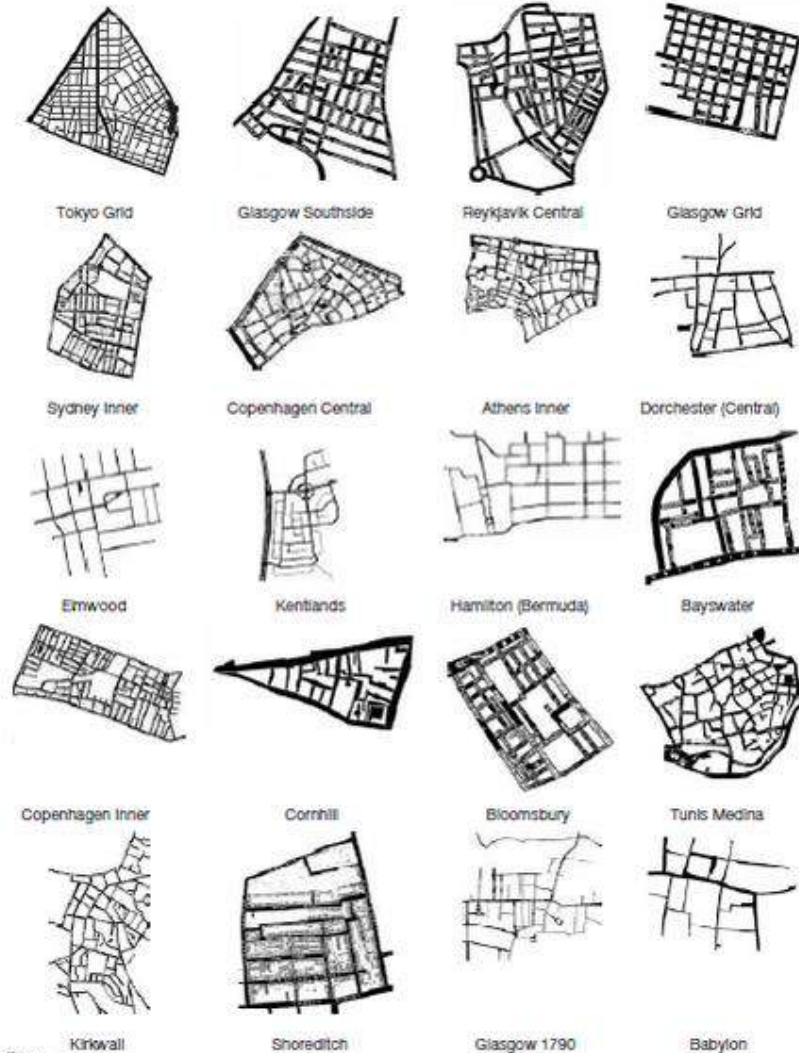
**Capers block - 12m by 12m outdoor room,
well-defined, active edges, sunny, with good
views of sidewalk life**

The legacy of street standards

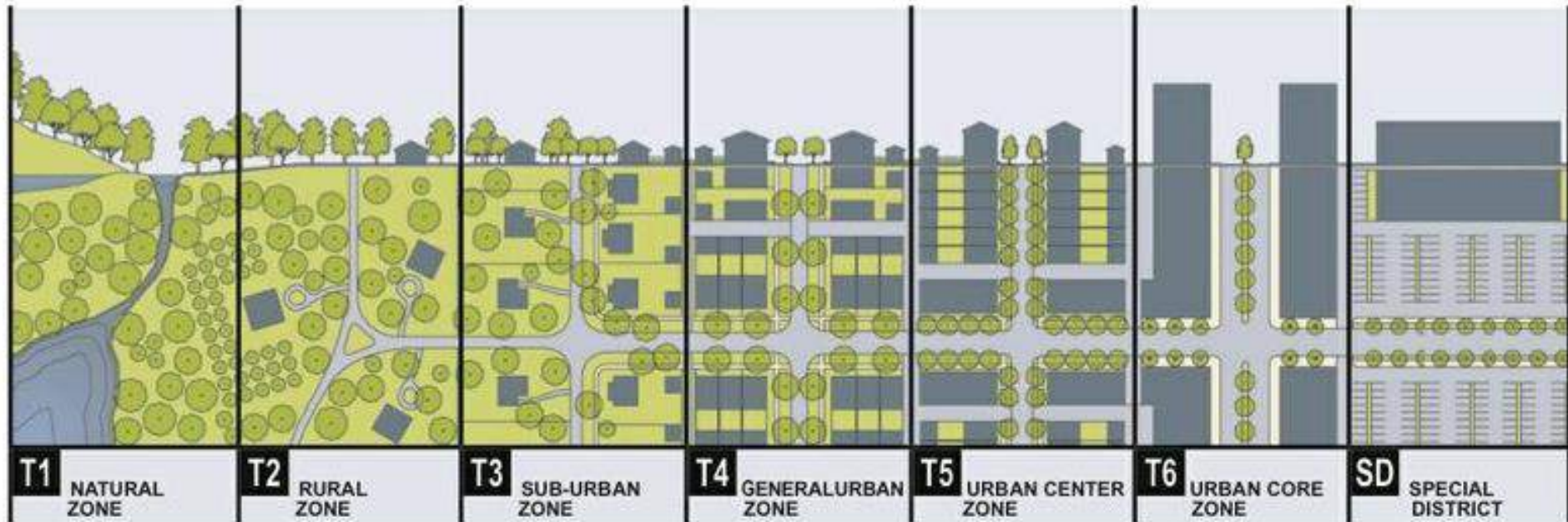


Street patterns vary widely over space and time – but **walkability** depends on a tight network with many intersections per square mile

136 STREETS & PATTERNS



The Transect



Source: Duany/Plater-Zyberk

Transplants and overlays



Source: PFS Landscape Architects and Planners for the District of North Vancouver





Lynn Valley Rd, North Vancouver, BC, Canada

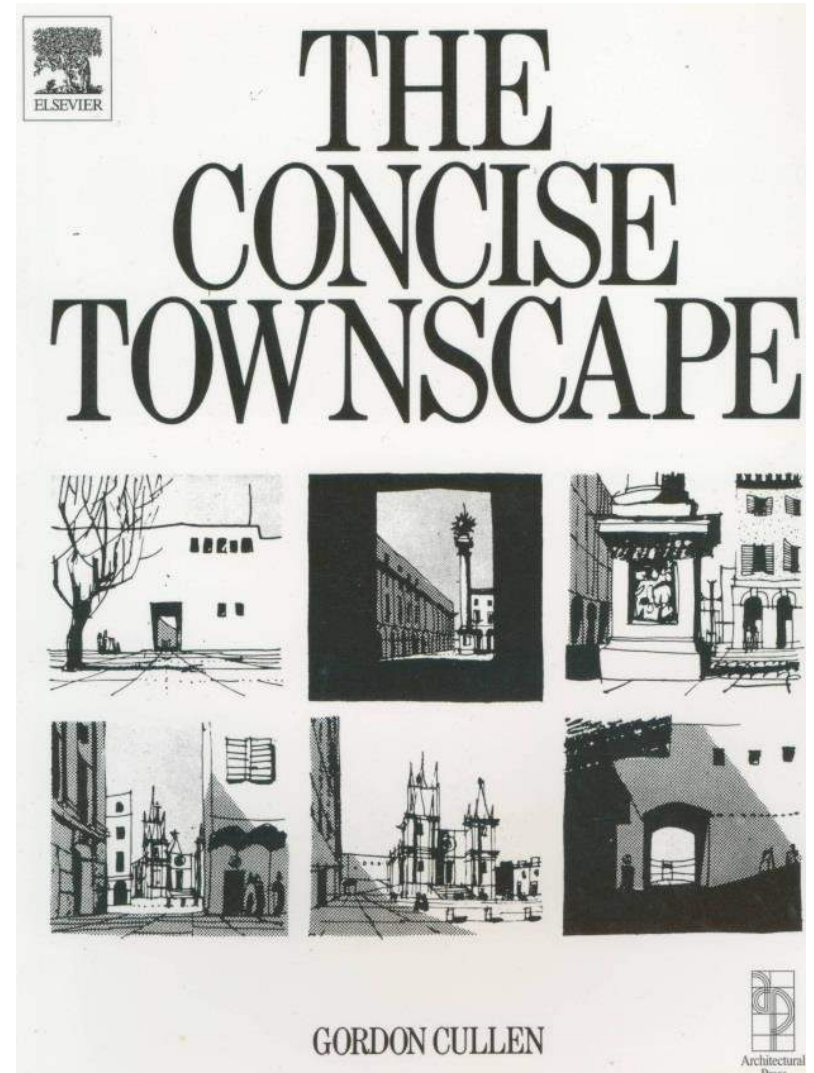
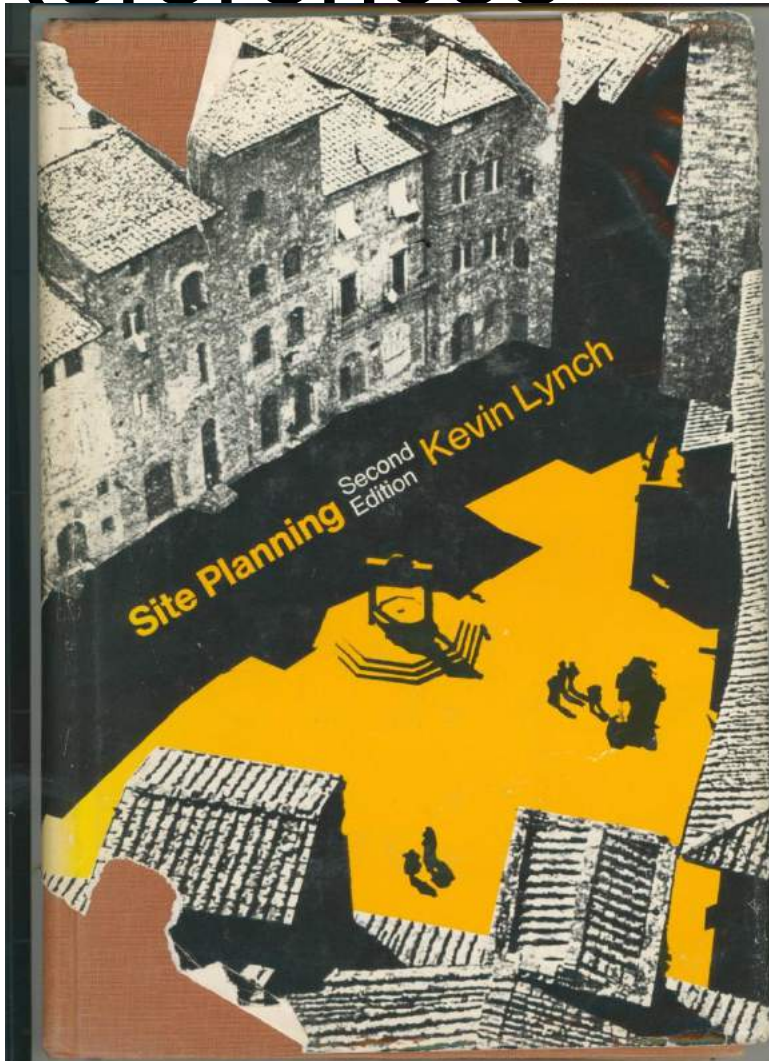
Google

Perspectives



Sketches by Frank Ducote for the District of North Vancouver

References



A New Theory of Urban Design

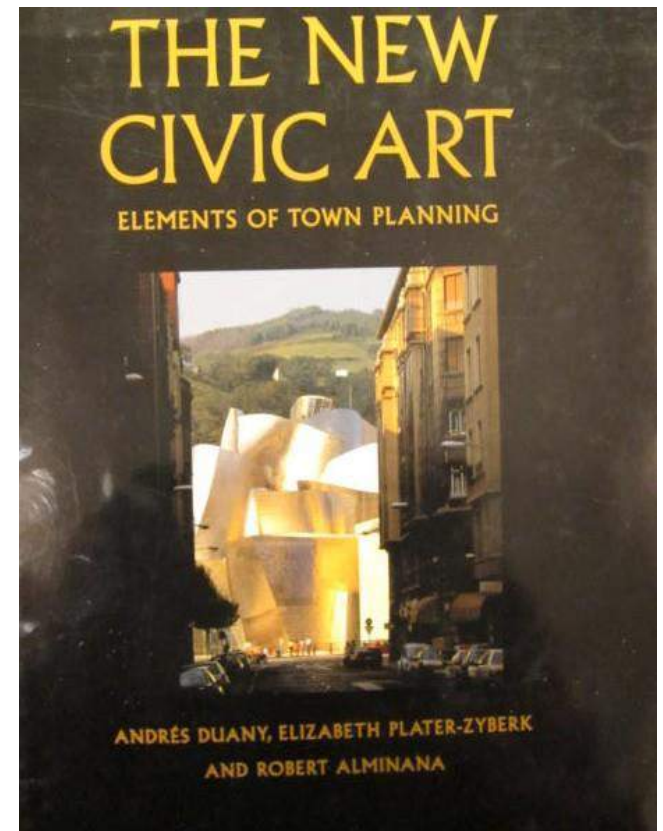
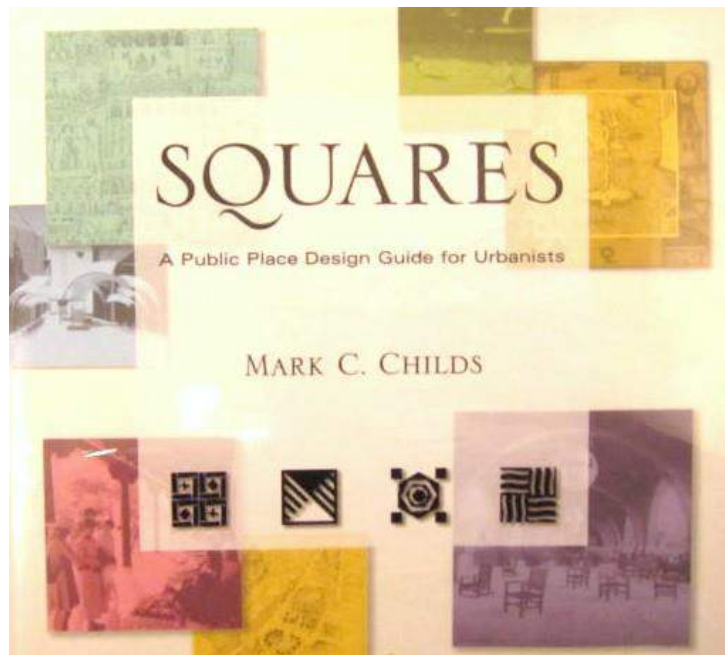
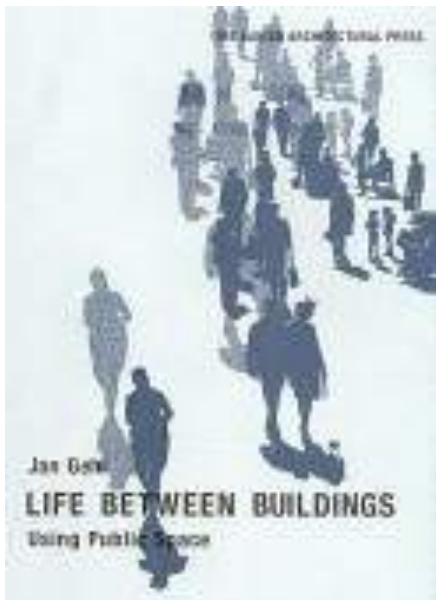


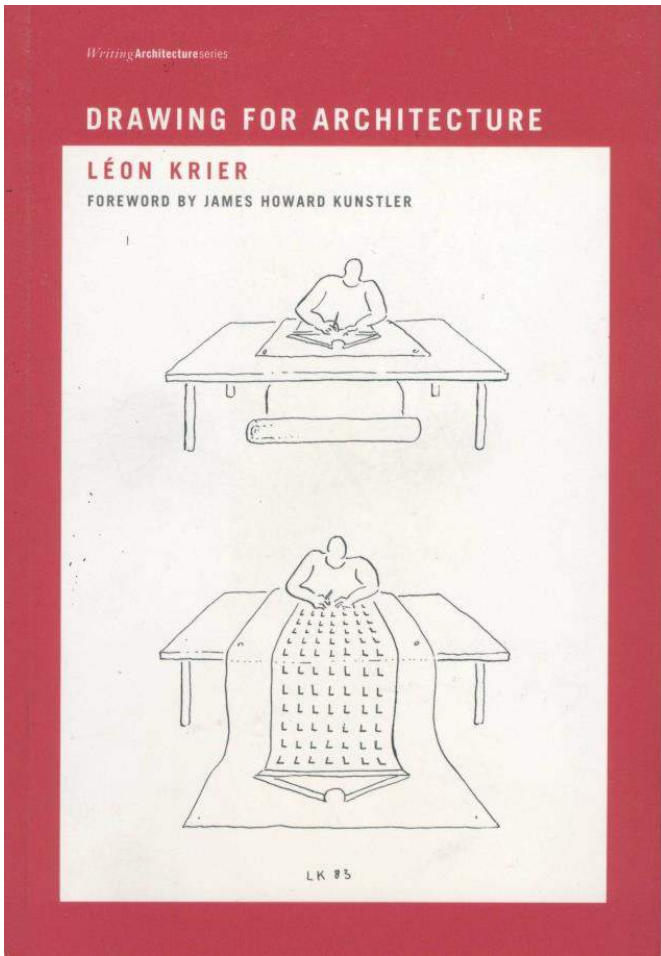
Christopher Alexander · Hajo Neis
Artemis Anninou · Ingrid King

*G*REAT *S*TREETS



ALLAN B. JACOBS





**GRID / STREET / PLACE: Essential
Elements of Sustainable Urban Districts**
Edited by Nathan Cherry

Lessons about good public places

- Good places are timeless and memorable
- Places are designable
- Provide for thermal human comfort
- Connected, fine-grained fabric and movement networks
- Often with a fairly consistent streetwall height
- A palette of generic (background) as well as exceptional buildings (objects or icons)
- Gathering places defined by buildings (sense of enclosure)
- Simple centres, active edges

Lessons, continued

- Vital, interesting streets, places to rest people-watch
- Pride of place for public-serving uses and buildings (landmarks)
- Durable materials, with the best materials for public places
- Architectural detail that is a treat to the eye
- Adaptable buildings and spaces – a fundamental aspect of sustainability
- Accessible public art

How will we know when we get there?



What Makes a Great Place?

- key attributes
- intangibles
- measurements

- Thank you!
- Questions?