



Theories of Architecture

ENAR 329

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Lecture 6

Modernity and Modernism

27th November 2021

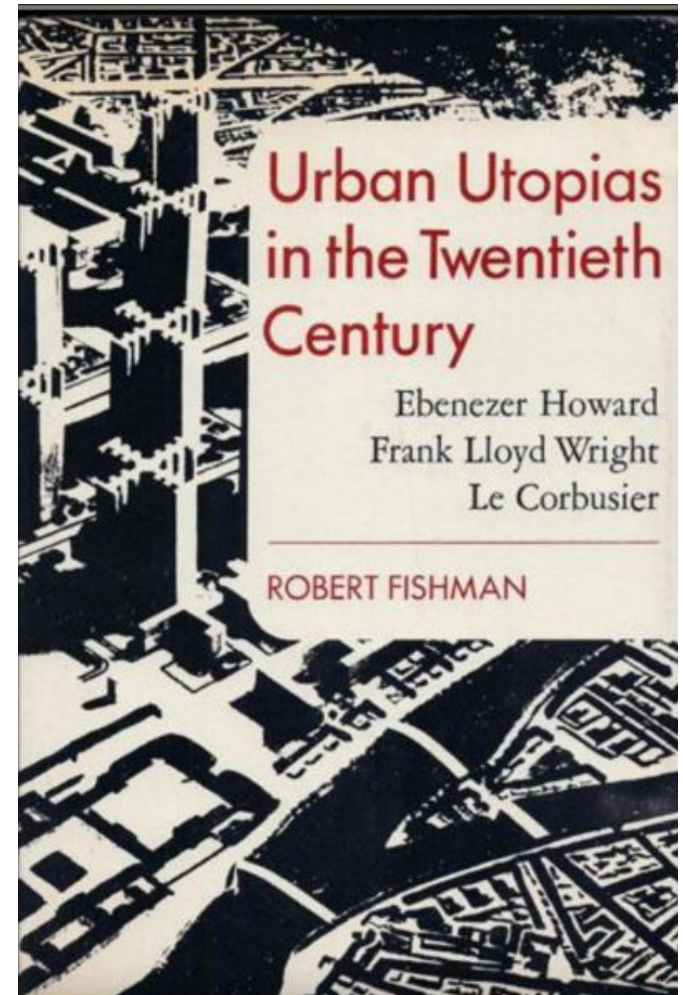
Urban Utopias ; Le Corbusier and Frank Lloyd Wright

What is the ideal City for the twentieth century ,
the city that **best expresses the power and beauty
of modern technology and the most enlightened
ideas of social justice?**

ما هي المدينة المثالية للقرن العشرين ، المدينة التي تعبر بشكل
أفضل عن قوة وجمال التكنولوجيا الحديثة والأفكار الأكثر استنارة
للعدالة الاجتماعية؟

Between 1890 and 1930 Planners ; **Le Corbusier
and Frank Lloyd Wright** tried to answer that
question.

Each Began his work alone , preparing hundreds of
models and drawings specifying every aspect of the
new city, from its general ground floor plan to the
layout of the typical living room.

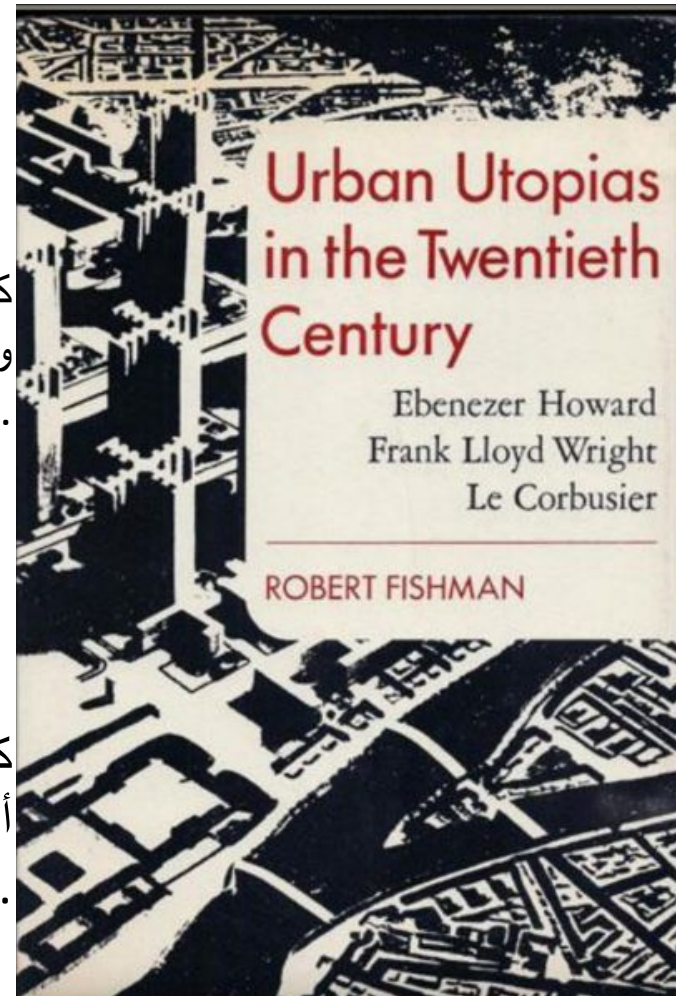


There were detailed plans for factories , office buildings, schools , parks , transportation systems , all innovative designs and all integrated into revolutionary restructuring of urban form.

كانت هناك مخططات تفصيلية للمصانع ومباني المكاتب والمدارس والمنتزهات وأنظمة النقل وجميع التصاميم المبتكرة وجميعها مدمجة في إعادة الهيكلة الثورية للشكل الحضري.

They believed that more than any other goal **their societies needed new kinds of cities** . they were deeply fearful of the consequences for civilization if the old cities , with all the social conflicts and miseries were allowed to persist.

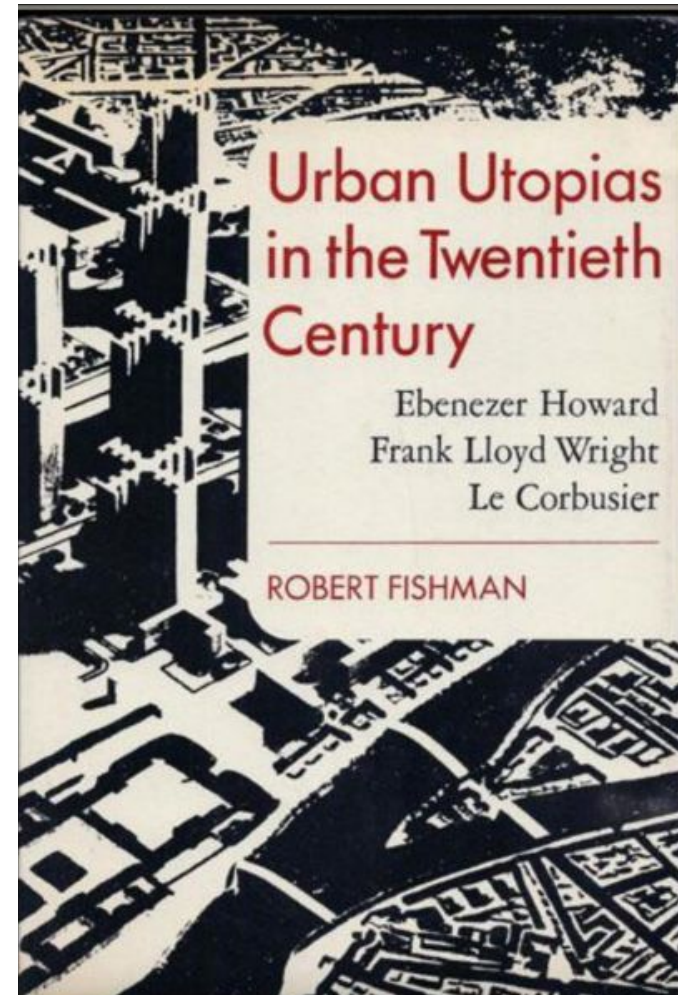
كانوا يعتقدون أن مجتمعاتهم بحاجة إلى أنواع جديدة من المدن أكثر من أي هدف آخر. كانوا خائفين بشدة من عواقب الحضارة إذا سمح للمدن القديمة ، مع كل النزاعات الاجتماعية والبؤس ، بالاستمرار.



They were also inspired by the prospect that a **radical reconstruction of the cities would solve not only the urban crisis of their time , but the social crisis as well.** The very completeness of their ideal cities expressed their convictions that the moment had come for comprehensive programs , and a total rethinking of the principles of urban planning .

لقد امنوا ا من احتمالية أن إعادة الإعمار الجذري للمدن لن تحل ..الأزمة الحضرية في عصرهم فحسب ، بل الأزمة الاجتماعية أيضاً

They rejected gradual improvement . **They did not seek the amelioration تحسين of the old cities , but a wholly transformed urban environment.**



Le Corbusier and The Modern City

THE PACK-DONKEY'S WAY AND MAN'S WAY

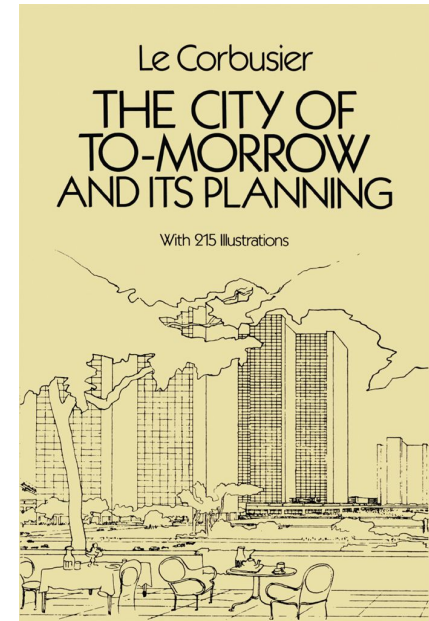
MAN walks in a straight line because he has a goal and knows where he is going ; he has made up his mind to reach some particular place and he goes straight to it.

The pack-donkey meanders along, meditates a little in his scatter-brained and distracted fashion, he zigzags in order to avoid the larger stones, or to ease the climb, or to gain a little shade ; he takes the line of least resistance. But man governs his feelings by his reason ; he keeps his feelings and his instincts in check, subordinating them to the aim he has in view. He rules the brute creation by his intelligence. His intelligence formulates laws which are the product of experience. His experience is born of work; man works in order that he may not perish. In order that production may be possible, a line of conduct is essential, the laws of experience must be obeyed. Man must consider the result in advance. But the pack-donkey thinks of nothing at all, except what will save himself trouble.

يمشي الرجل في خط مستقيم لأنه لديه هدف ويعرف أين إنه ذاهب ؛ لقد اتخذ قراره للوصول إلى مكان معين ويذهب مباشرة إليها. يتعرج حمار القطيع ، يتأمل قلبه

، يجب أن تكون قوانين الخبرة أطاع. يجب على الإنسان أن يفكر في النتيجة مقدمًا. لكن الحمار لا يفكر في أي شيء على الإطلاق ، باستثناء ما سينقذه نفسه مشكلة.

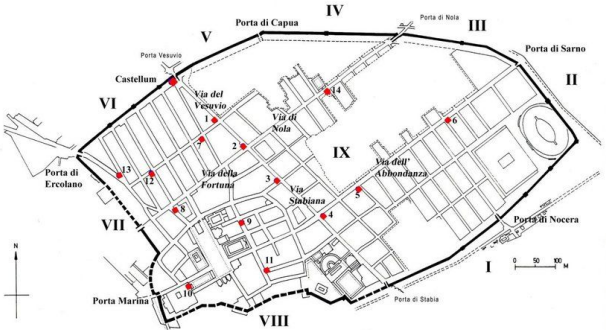
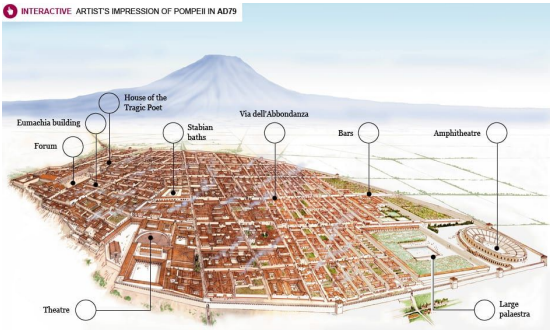
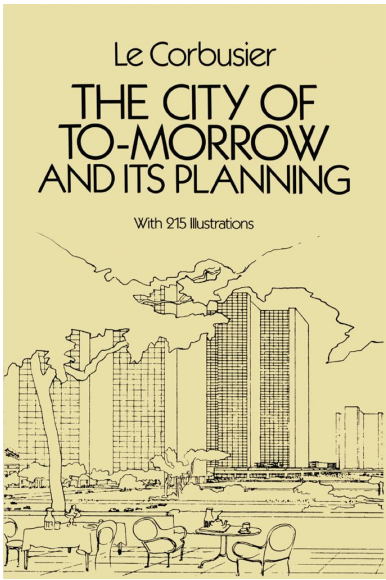
The Pack-Donkey's Way is responsible for the plan of every continental city ; including Paris, unfortunately.



THE PACK-DONKEY’S WAY AND MAN’S WAY

The Romans were great legislators, great colonizers, great administrators. When they arrived at a place, at a cross-roads or at a river bank, they took a square and set out the plan of a rectilinear town, so that it should be clear and well-arranged, easy to police and to clean, a place in which you could find your way about and stroll with comfort—the working town or the pleasure town (Pompeii). The square plan was in conformity with the dignity of the Roman citizen.

كان الرومان مستعمرين عظماء ، وعظماء المسؤولين. عندما وصلوا إلى مكان أو عند مفترق طرق أو عند نهر أخذوا مربعًا ووضعوا مخططًا لمدينة مستقيمة ، بحيث يكون يجب أن يكون واضحًا ومُنظمًا جيدًا ، وسهل السيطرة عليها ، ومكانًا فيه التي But at home, in Rome itself, with their eyes turned towards the Empire, they allowed themselves to be stifled by the Pack-Donkey’s Way. What an ironical situation !



THE PACK-DONKEY'S WAY AND MAN'S WAY

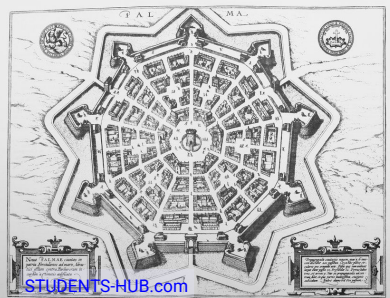
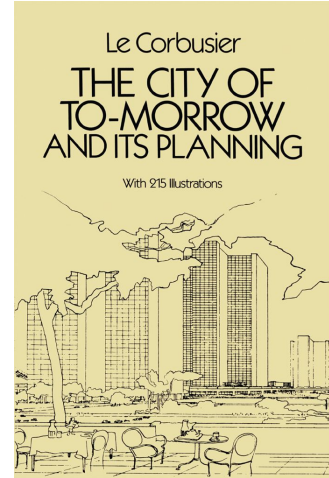
The structure of cities reveals two possibilities ;

a progressive growth, subject to chance, with resultant characteristics of slow accumulation and a gradual rise ; once it has acquired its gravitational pull it becomes a centrifugal force of immense power, bringing the rush and the mob. Such was Rome ; such are now Paris, London or Berlin.

نمو تدريجي ، يخضع للصدف ، مع ما ينتج عن ذلك من خصائص تراكم بطيء وارتفاع تدريجي ؛ بمجرد أن يكتسب جاذبيته يصبح قوة طرد مركزي ذات قوة هائلة ، مما يجلب الاندفاع والغوغاء. كانت هذه روما. هذه هي الآن باريس أو لندن أو برلين

Or on the other hand, the construction of a city as the expression of a preconceived and predetermined plan embodying the then known principles of the science ; such is Pekin and such are the fortified cities of the Renaissance (e.g. Palmanova), or the colonial cities set by the Romans amongst their barbarian subjects.

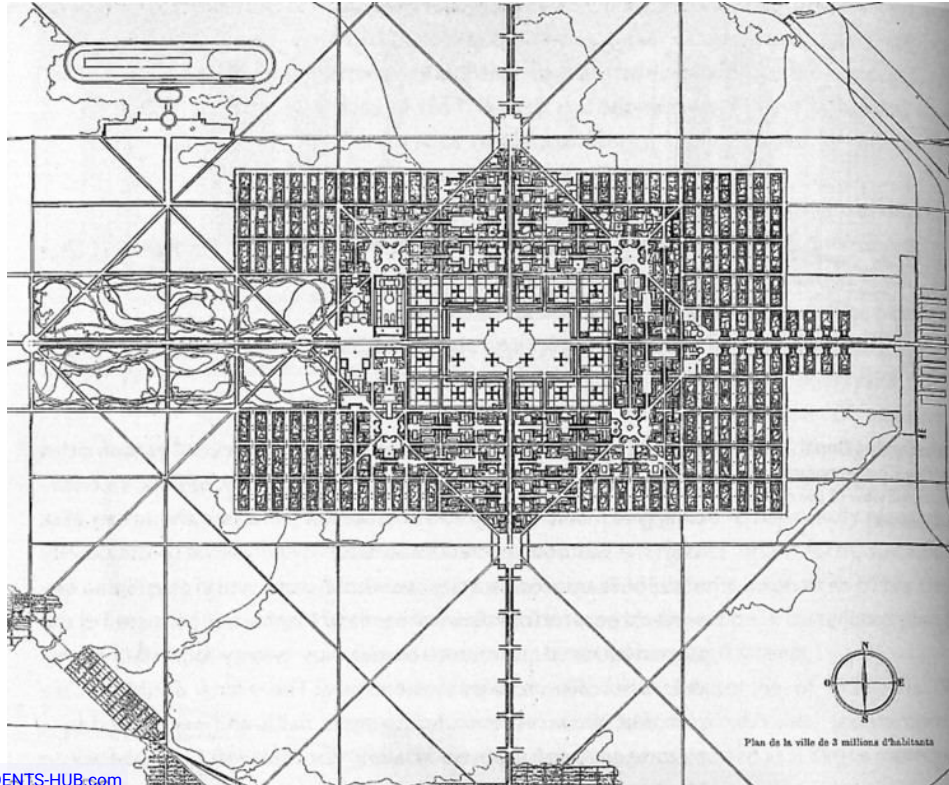
و من ناحية أخرى ، فإن بناء مدينة كتعبير عن خطة مسبقة ومحددة سلفًا تجسد ما كان معروفًا آنذاك مبادئ العلم. هذه هي بيكين وهذه هي المدن المحصنة في عصر النهضة (على سبيل المثال بالمانوفا) ، أو المدن الاستعمارية التي وضعها الرومان بين رعاياهم البربرية.



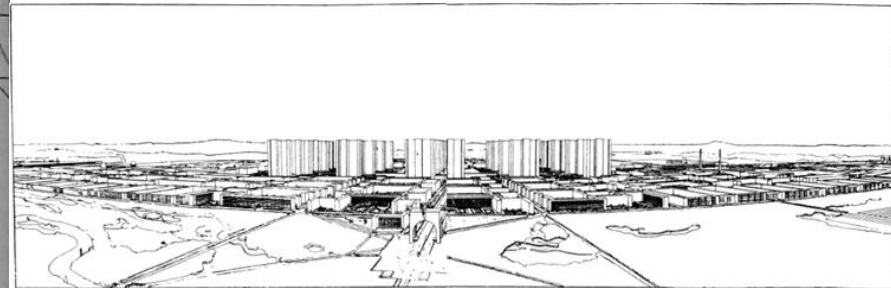
Palmanova

A CONTEMPORARY CITY OF THREE MILLION INHABITANTS

Le Corbusier's first foray into urban planning was the Contemporary City (Ville Contemporaine), a universal concept for a city of 3 million.



The heavy black lines represent the areas built upon. Everything else is either streets or open spaces. Strictly speaking the city is an immense park. Its lay-out furnishes a multitude of architectural aspects of infinitely varying forms.



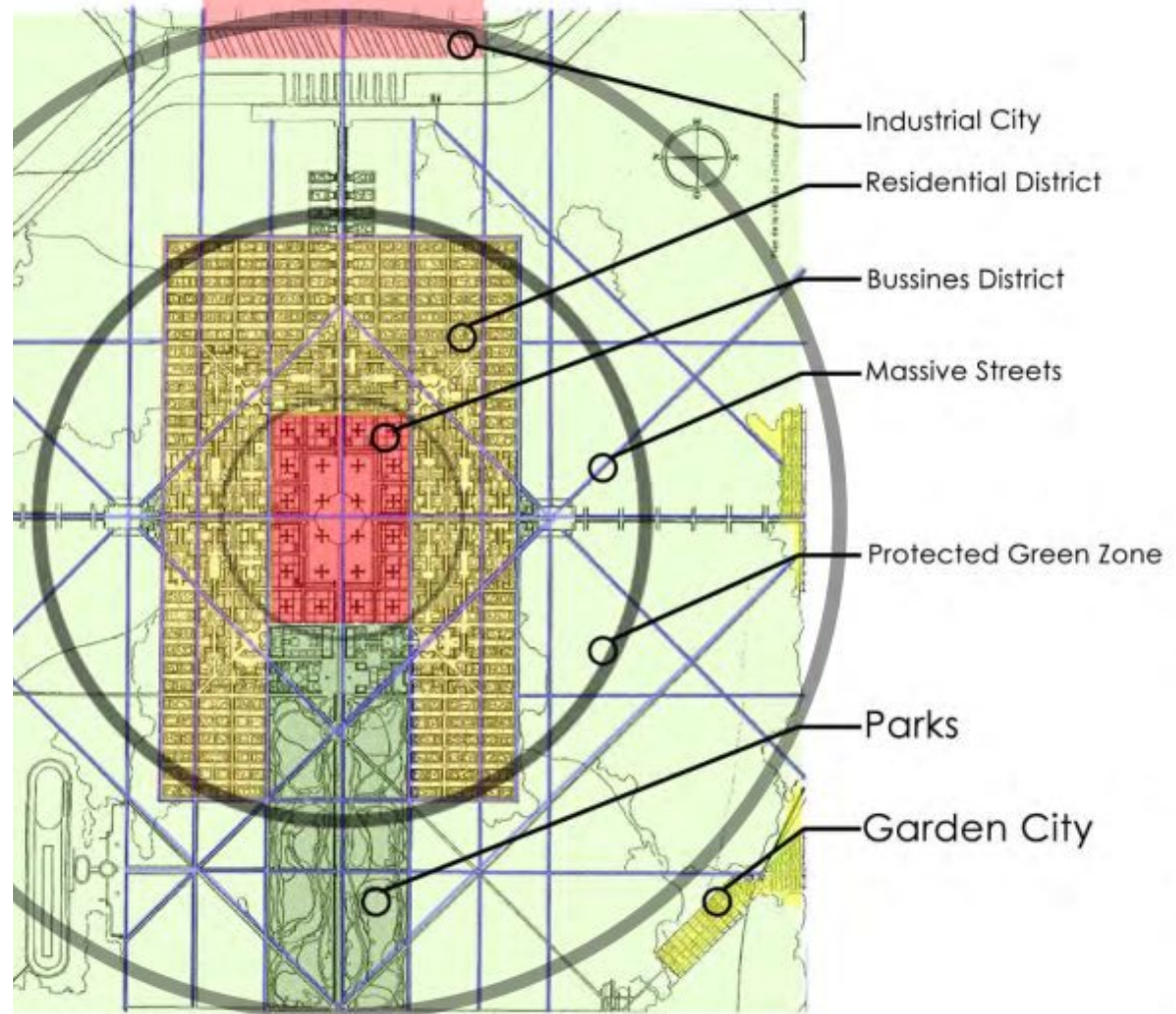


The Plan of the City

1. We must de-congest the centres of our cities.
2. We must augment their density.
3. We must increase the means for getting about.
4. We must increase parks and open spaces.

1. **The City**, as a business and residential centre.
2. **The Industrial City** in relation to the Garden Cities
3. **The Garden City** and the daily transport of the workers.

Our first requirement will be **an organ that is compact, rapid, lively and concentrated** : this is the City with its well-organized centre. Our second requirement will be another organ, supple, extensive and elastic ; this is the Garden City on the periphery. Lying between these two organs, we must require the legal establishment of that absolute necessity, a protective zone which allows of extension, a reserved zone of woods and fields, a fresh-air reserve.



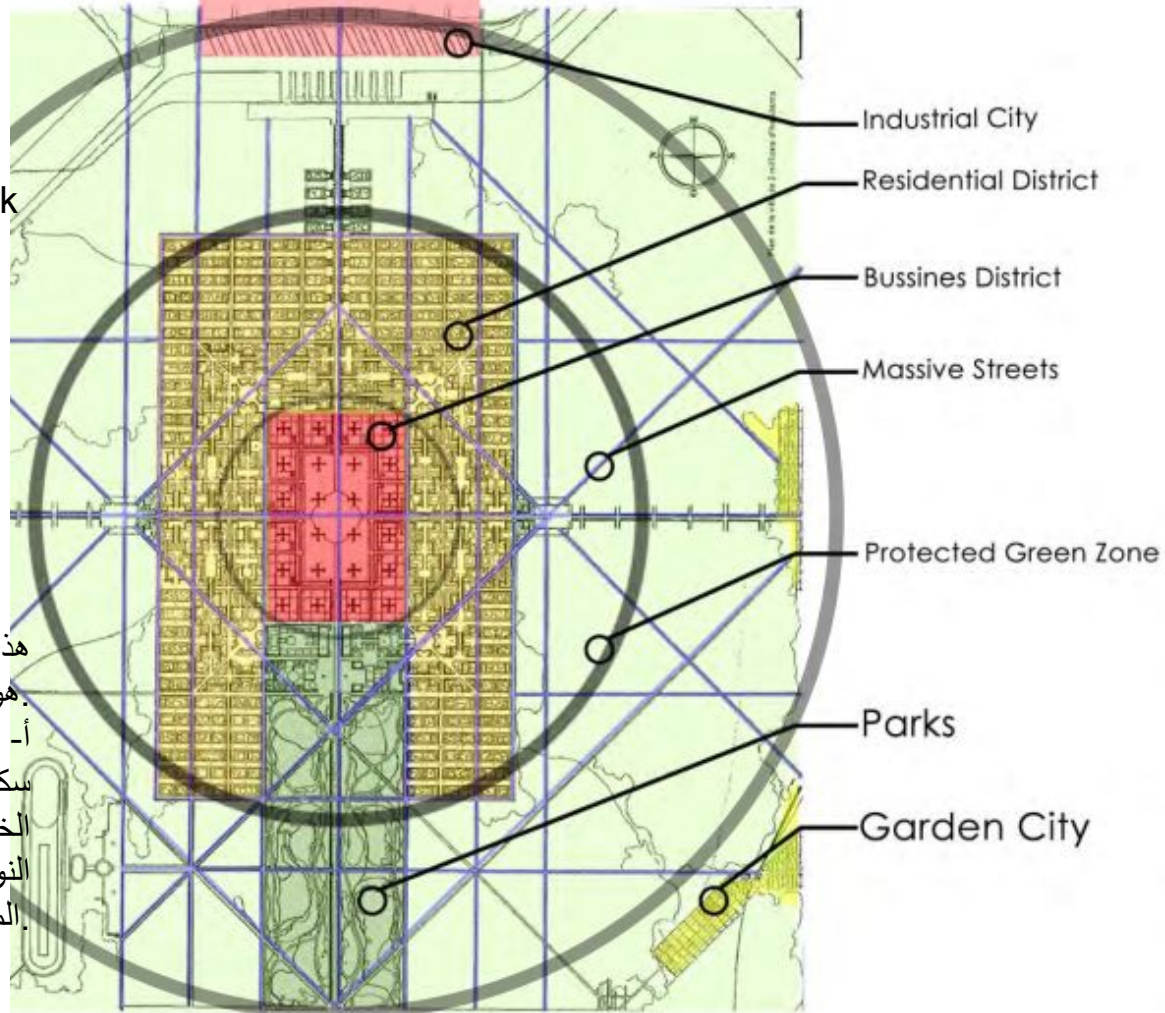
POPULATION.

This consists of the citizens proper ; of suburban dwellers ; and of those of a mixed kind.

(a) **Citizens are of the city** : those who work and live in it.

(b) **Suburban dwellers** are those who work in the outer industrial zone and who do not come into the city : they live in garden cities.

(c) **The mixed sort** are those who work in the business parts of the city but bring up their families in garden cities.



هذا يتكون من المواطنين الحقيقيين ؛ سكان الضواحي. ومن هؤلاء من نوع مختلط.

أ- المواطنون من المدينة: الذين يعملون فيها ويسكنون فيها. (ب) سكان الضواحي هم أولئك الذين يعملون في المنطقة الصناعية الخارجية والذين لم يأتوا إلى المدينة يسكنون حدائق المدن. (ج) النوع المختلط هم أولئك الذين يعملون في الأجزاء التجارية من المدينة لكنهم يربون عائلاتهم في مدن الحدائق.

Present conditions leading to the crisis which is only just beginning.



The existing congestion in the centre must be eliminated.



A CONTEMPORARY CITY OF THREE MILLION INHABITANTS

DENSITY OF POPULATION.

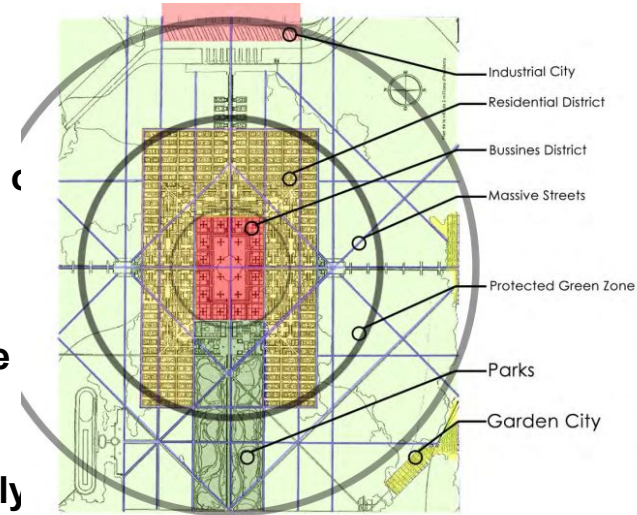
The more dense the population of a city is the less are the distances that have to be covered.

The moral, therefore, is that we must increase the density of the centres of our cities, where business affairs are carried

LUNGS.

The towns of to-day can only increase in density at the expense of the open spaces which are the lungs of a city.

We must increase the open spaces and diminish the distances to be covered. Therefore the centre of the city must be constructed vertically



A CONTEMPORARY CITY OF THREE MILLION INHABITANTS

TRAFFIC.

Traffic can be classified more easily than other things.

If we classify traffic we get :

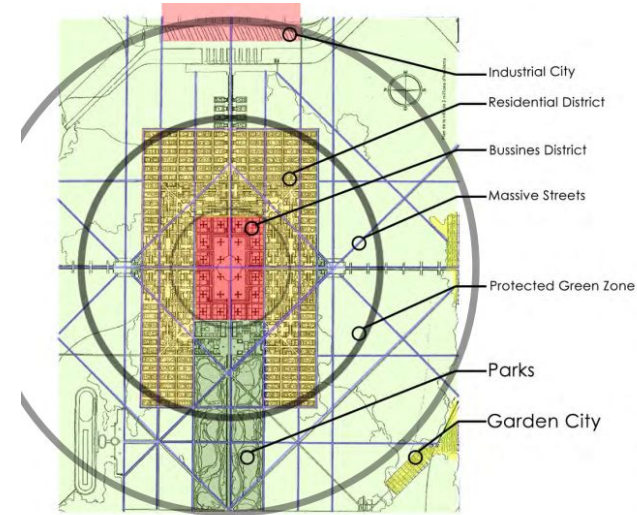
- (a) Heavy goods traffic.
- (b) Lighter goods traffic, i.e. vans, etc., which make short journeys in all directions.
- (c) Fast traffic, which covers a large section of the town.

Three kinds of roads are needed, and in superimposed storeys :

(a) **Below-ground** there would be the street for heavy traffic. This storey of the houses would consist merely of concrete piles, and between them large open spaces which would form a sort of clearing-house where heavy goods traffic could load and unload.

(b) **At the ground floor level** of the buildings there would be the complicated and delicate network of the ordinary streets taking traffic in every desired direction.

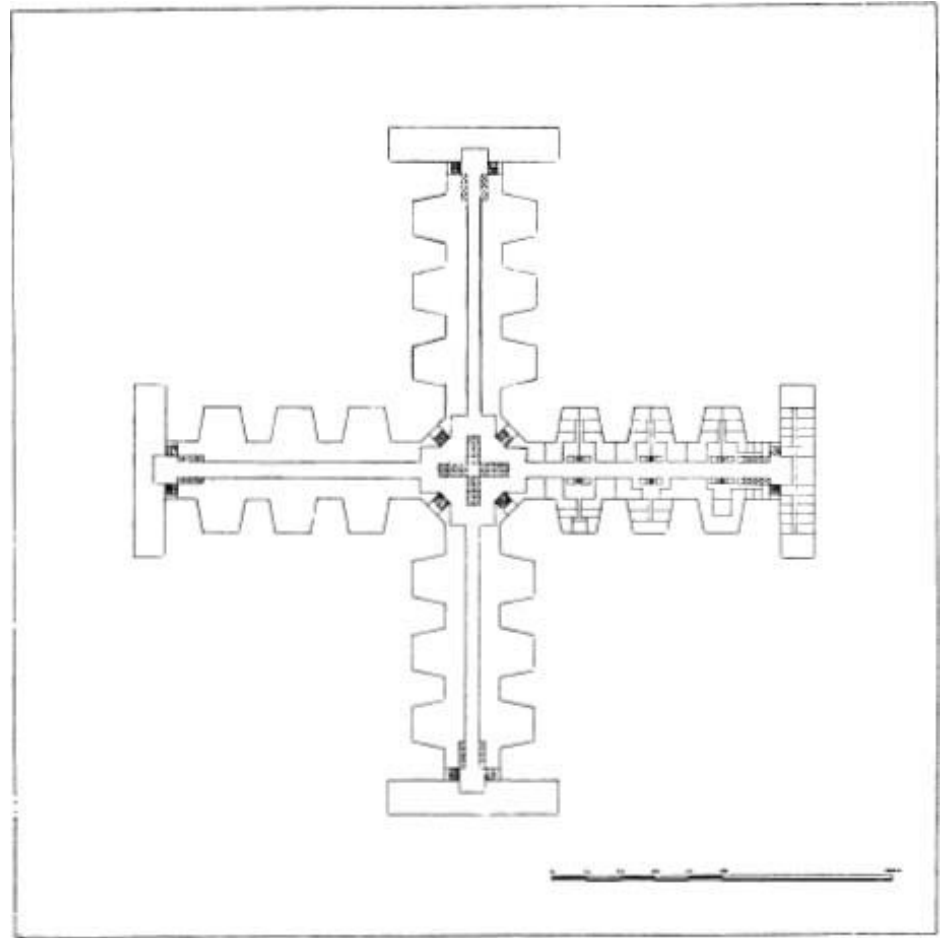
(c) **Running north and south, and east and west, and forming the two great axes of the city**, there would be great arterial شرياني عظيم roads for fast one-way traffic built on immense reinforced concrete bridges 120 to 180 yards in width and approached every half-mile or so by subsidiary roads from ground level.

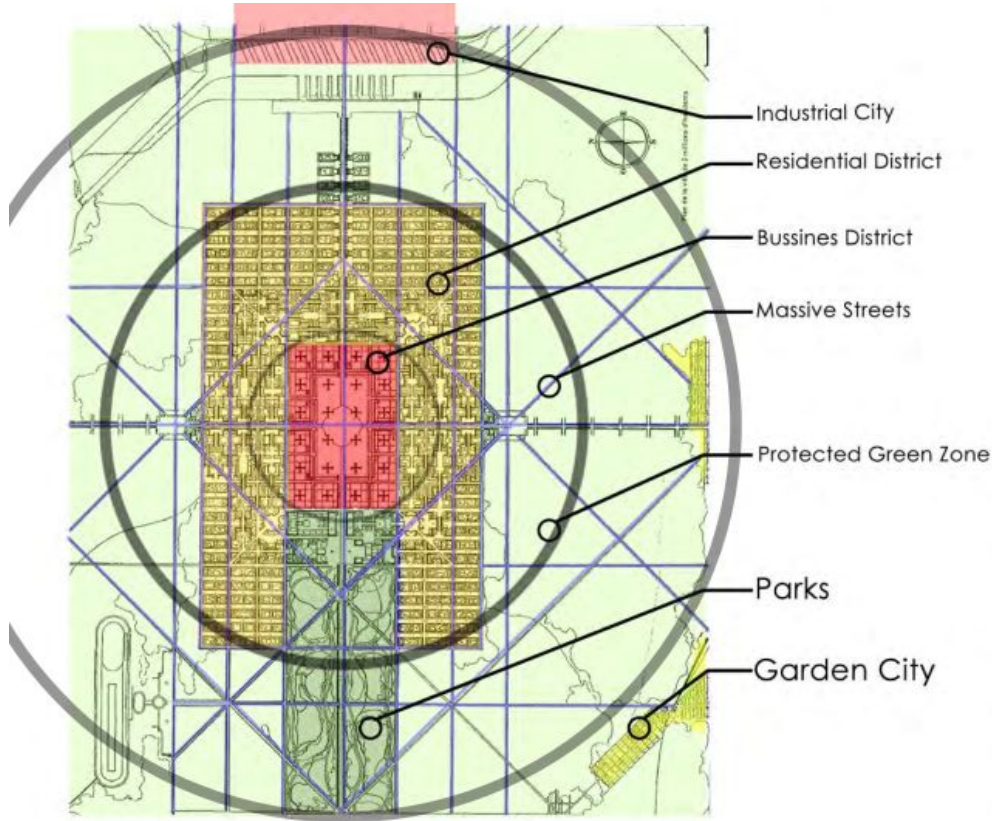


PLAN OF ONE OF THE FLOORS OF A SKY-SCRAPER

It is in the form of a cross, thus doing away with an internal court and giving a maximum stability. The façades are deeply serrated مسنن and form real traps for light.

There are five groups of lifts and stairways. The right wing suggests one manner of dividing up for offices. The capacity of a sky-scraper 460 feet long is 30,000 employees,





The Contemporary City was Le Corbusier's vision for a future efficient city for both the working class and higher classes.

The Inner Ring: the inner ring consists of the Main business district and the main Station that connects the main streets running N, S, E, W.

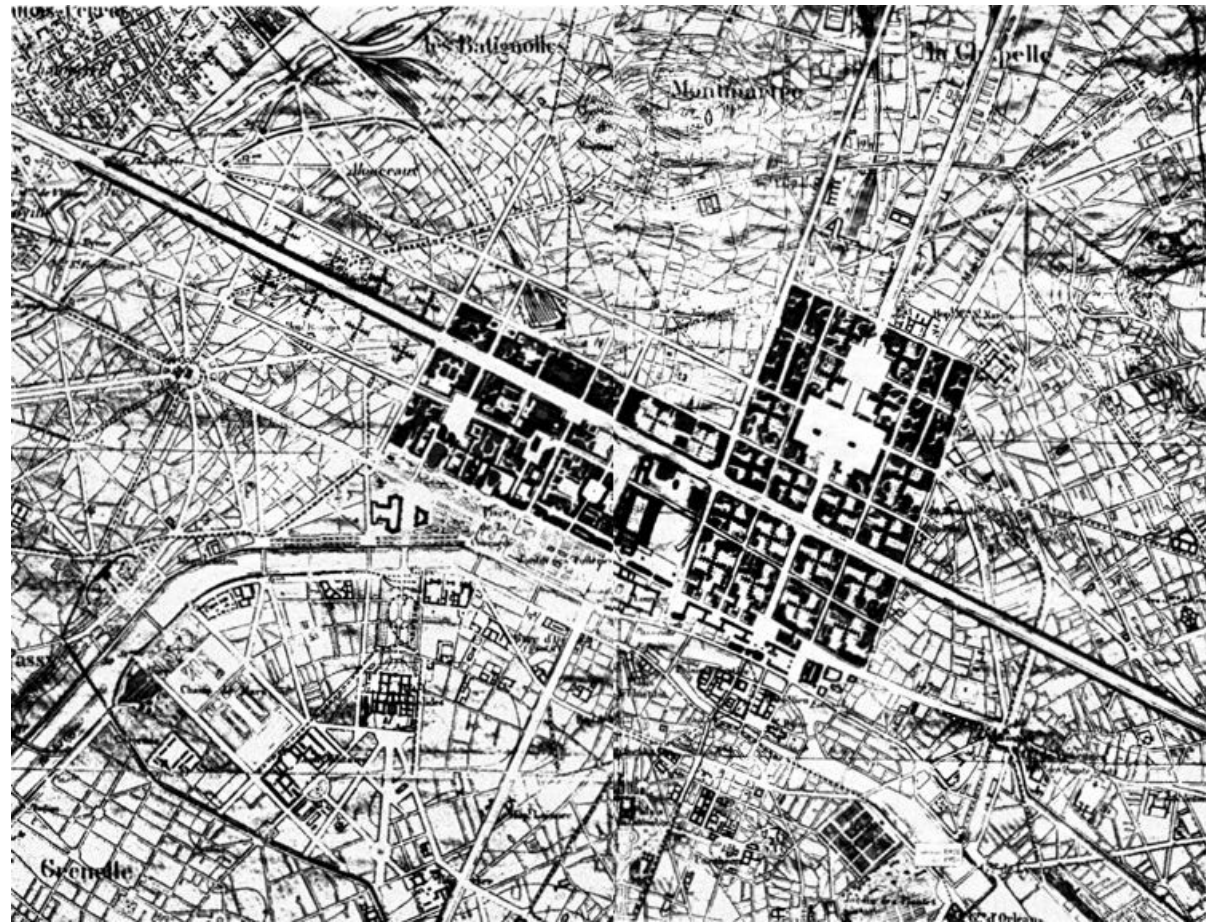
The middle ring: it's where most of the city's population lives, also wide green spaces are located between the residential complex to allow the city to breathe and allow for more light.

The Outer ring: it breaks down to 3 types of spaces:
 1- Industrial city located away from the core of the main city.
 2- green zone for crops and natural habitat to be at.
 3- Garden city: where farmers and people who don't work in the main city to live in.

The step from the theoretical model to the precise case of Paris

The Plan Voisin is a solution for the center of Paris, drawn between 1922 and 1925 by Le Corbusier.

The plan for seems to be a direct transposition of the diagram of Contemporary City for three million drawn in 1922.

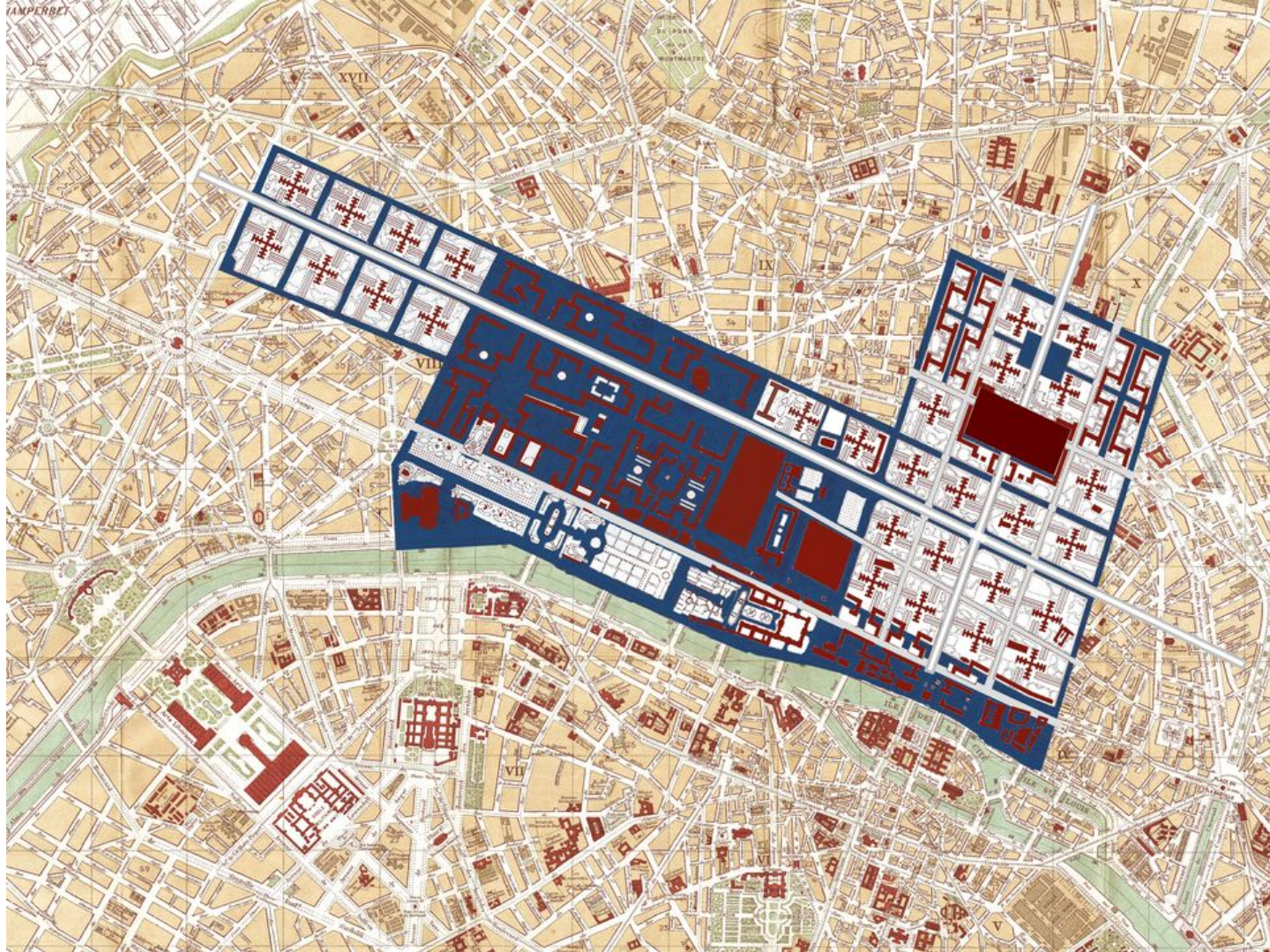


The “Voisin Plan” for Paris is the result of combining two new essential elements :

- **a commercial city**
- **and a residential city.**



Its 18 uniform
700-foot-high towers
would have entailed the
demolition of most of
historic Paris north of
the Seine but save for
a few monuments.

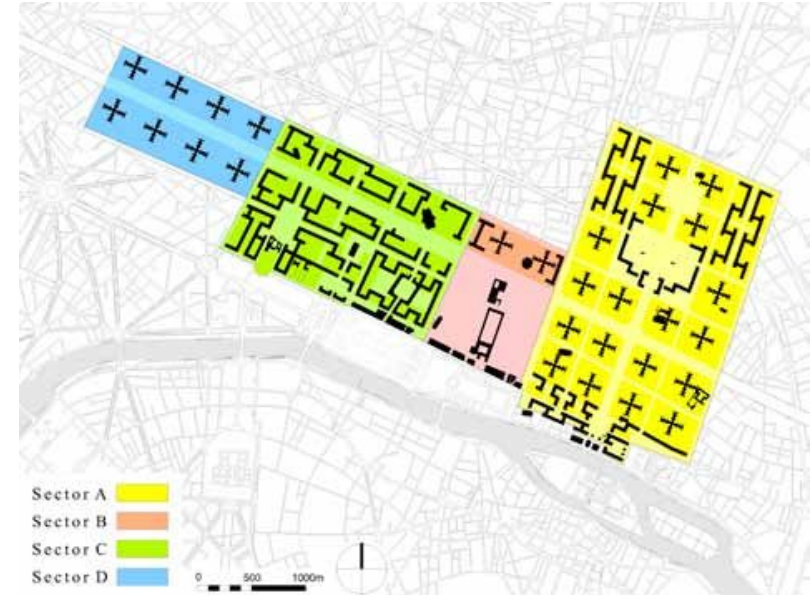


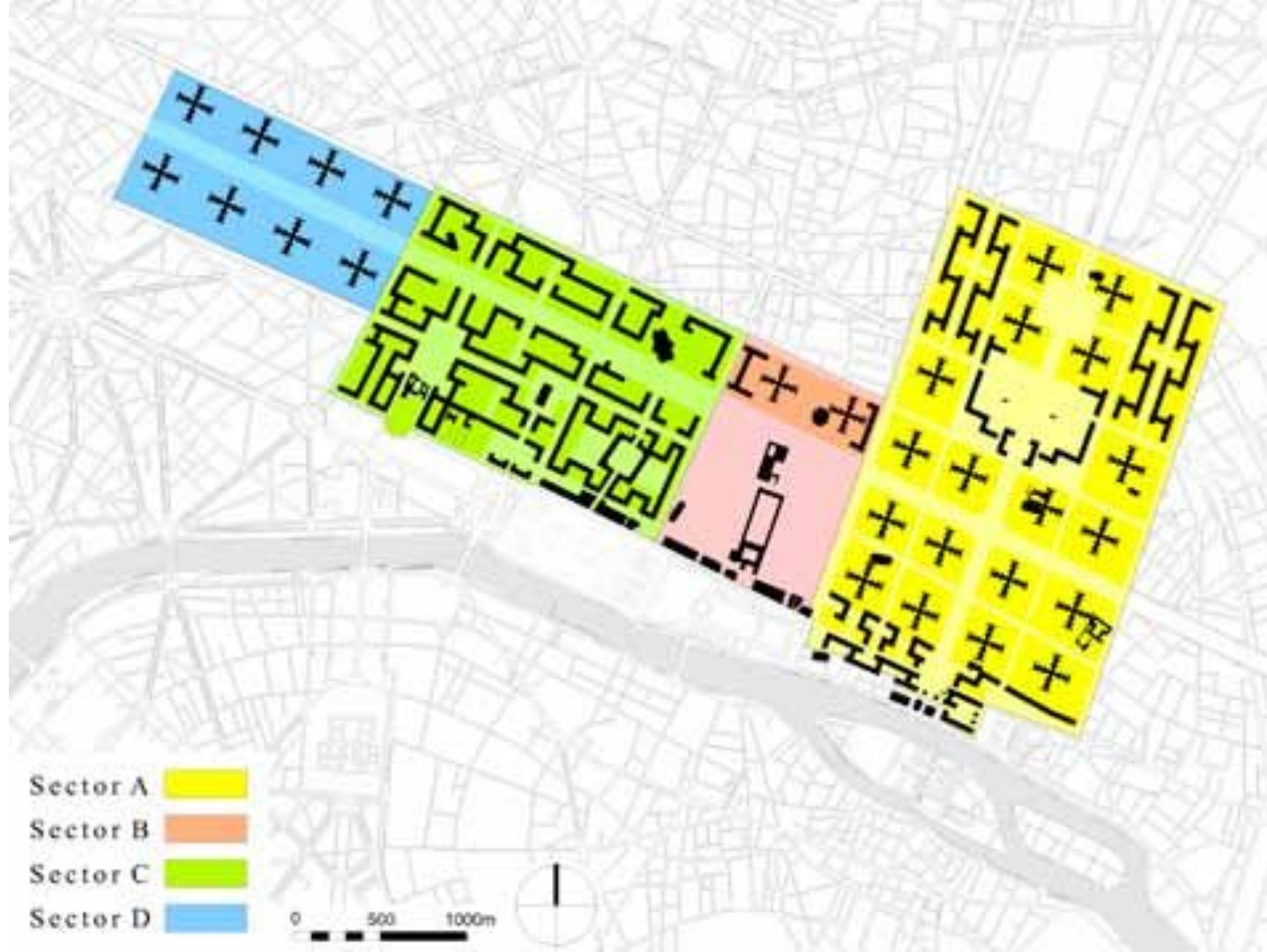
Implementing the model will follow a pattern according to which must, in the first place, define two main sectors: the business center and a residential zone. Between the two, he suggests a central underground station. This intermediate point is located in the Palais Royal zone and from there the entire plan spreads out.

The business center (Sector A), There, eighteen (18) cruciform skyscrapers stand out in the midst of a series of buildings

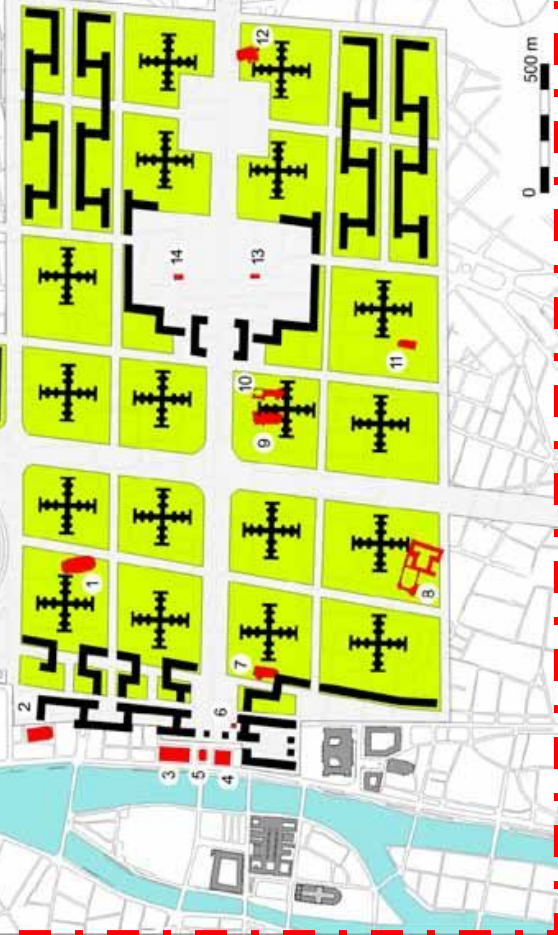
The residential zone (Sector C) These are almost entirely inhabited by buildings.

The central station (Sector B) ends with two cruciform skyscrapers. but, there is a fourth area (Sector D) drawn in different documents that goes from the western limit of the residential area to Wagram avenue where he locates again eight (8) new cruciform towers .The four zones are intertwined by a really prominent road axis that is lost within the limits of the floor plan crossing the city from east to west.

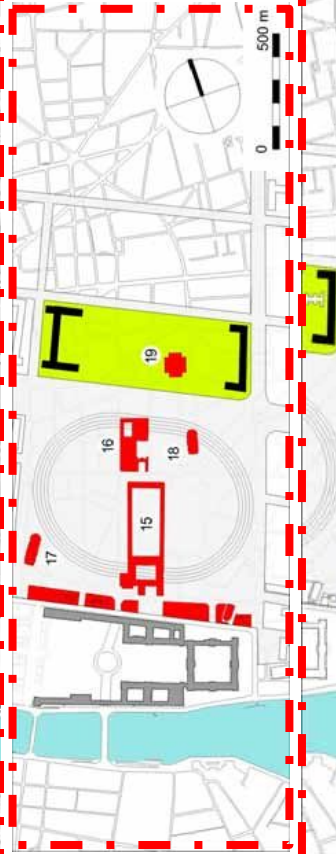




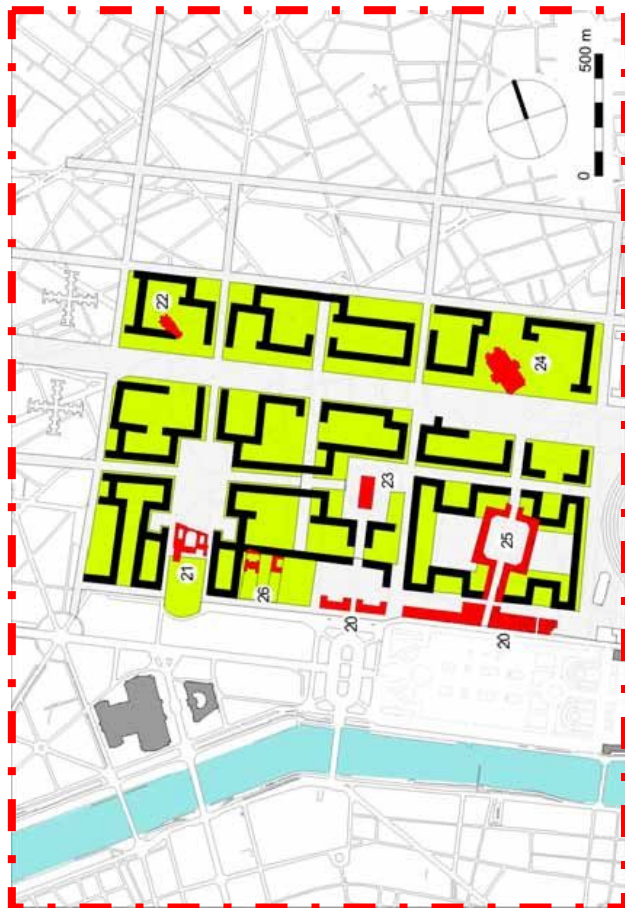
Sector a (Business Center)

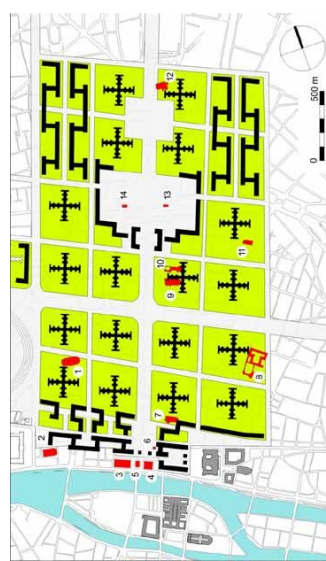
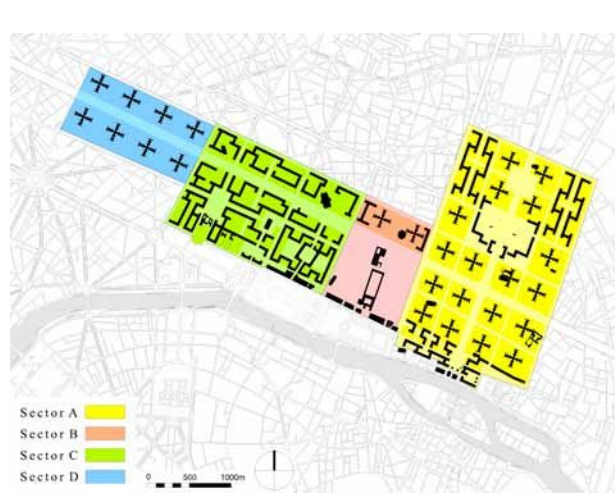


Sector B (Central Station)



Sector C (residential area)



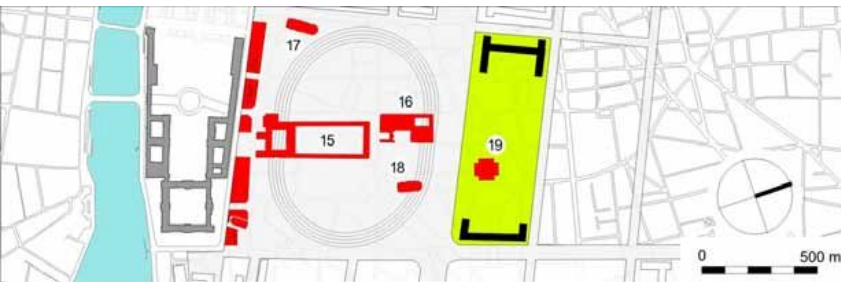


Sector a (Business Ce

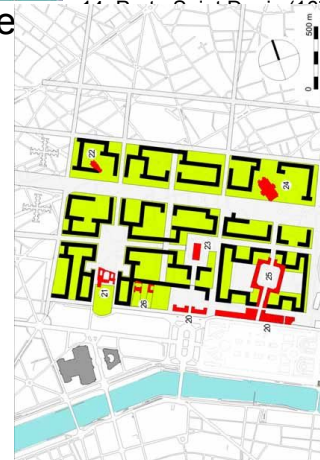
- Sector A (Business Center)
1. Church of Saint-Eustache (1532–1632);
 2. C h u r c h o f S a i n t - G e r m a i n - l'Auxerrois (15th-century);
 3. Théâtre du Châtelet (1860–1862);
 4. Théâtre de la Ville (1860–1862);
 5. Fontaine du Palmier (1806);
 6. Saint-Jacques Tower (1509–1525);
 7. Church of Saint Merri (1500–1550);
 8. The Hôtel de Soubise – Museum of National Archives (1375);
 9. Church of Sa int-Nicolas des Champs (1420–1668);
 10. Priory of Saint-Martin-des-Champs (1135–1862);
 11. Church of Sainte-Élisabeth-deHongrie (1628–1646);
 12. Church of Saint-Laurent (1429–1870);
 13. Porte Saint-Martin (1674);
 14. Saint-Sauveur (1672);

- Sector B (Central Station)
15. The Palais-Royal (1633–1639) with theatres;
 16. Sainte-Geneviève Library (1838–1850) – Richelieu quadrilateral;
 17. Church of Saint Roch (1722);
 18. Basilic a of Notre-Dame des Victoires (1629–1740);
 19. Brongniart Palace (The Paris Bourse) (1808–1829);

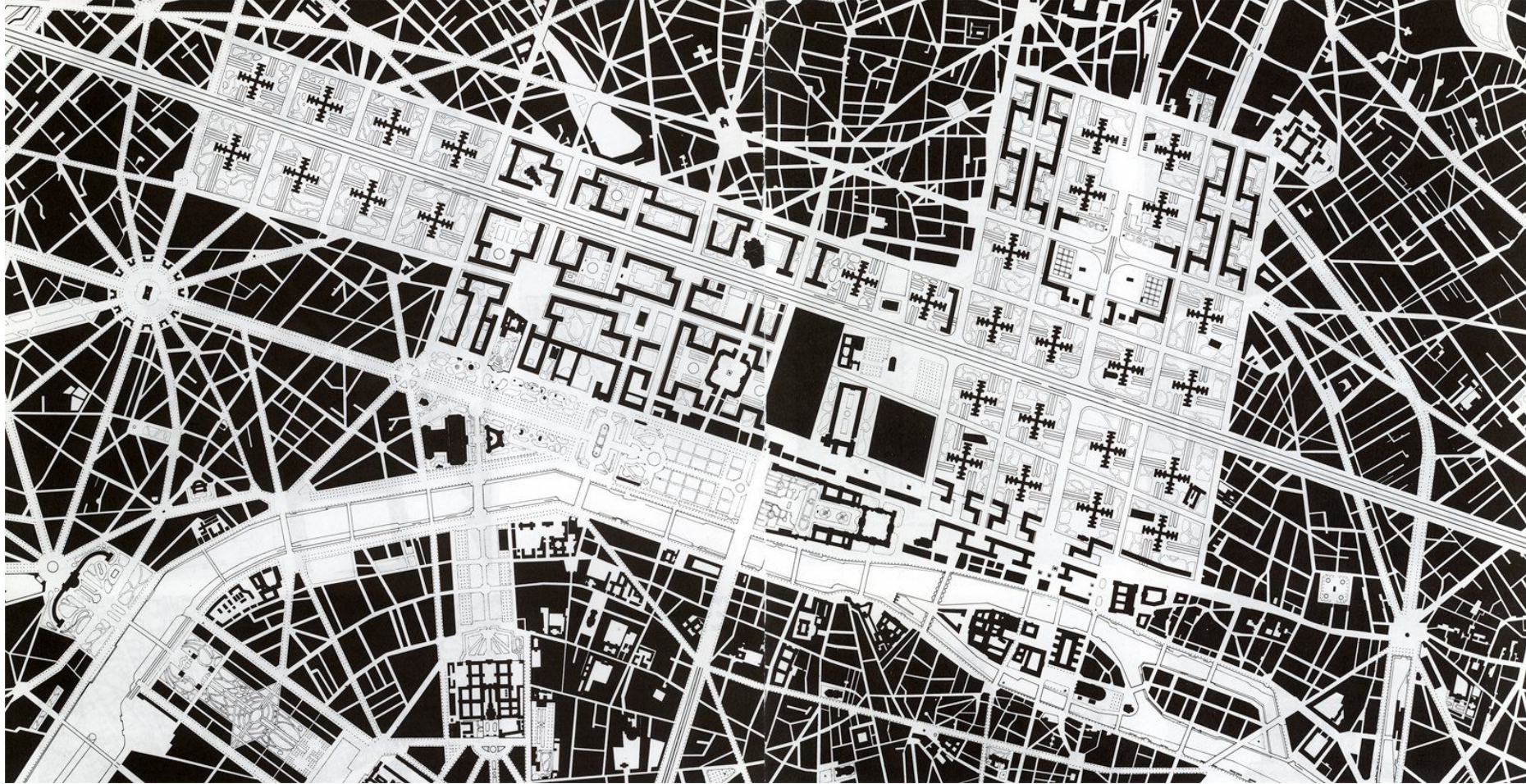
- Sector C (residential area)
20. Buildings that make up the front of Rivoli street;
 21. The Élysée Palace (1718–1722);
 22. Church of Saint Augustine (1868);
 23. La Madeleine Church (1828) ;
 24. The Palais Garnier (1861–1875);
 25. Place Vendôme (1699), Castiglione street and rue de la Paix;
 26. United States and UK embassies



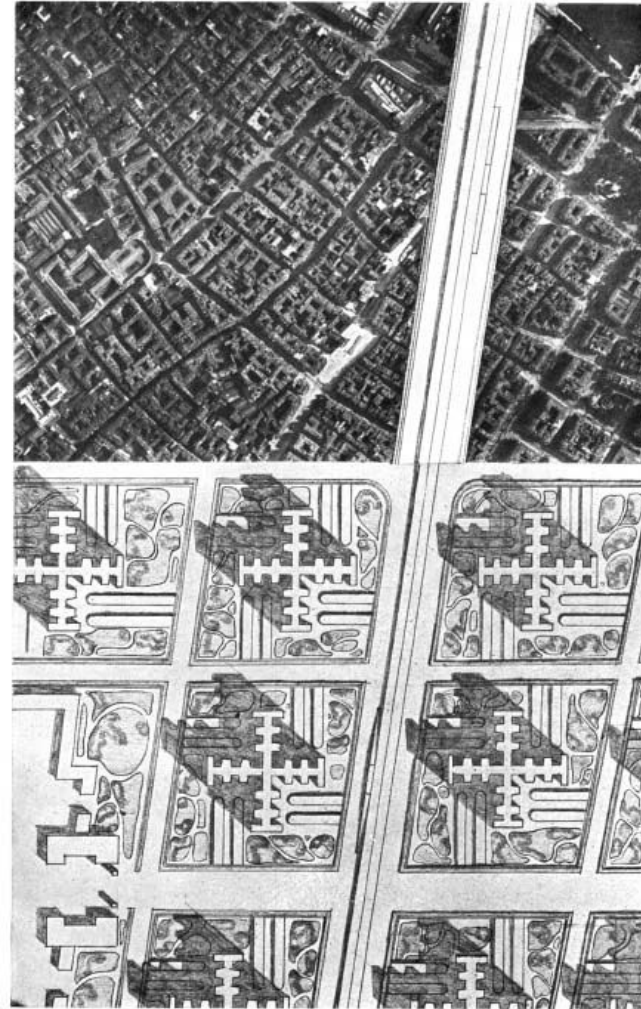
Sector B (Central Station)



Sector C (residential area)



Here is the solution proposed by the “Voisin” Scheme. Here are the districts which it is proposed to demolish and those which it is suggested should be built in their place. Both plans are to the same scale.



There were 3 important principles behind Corbusier's influence on modern urban space:

- The linear and nodal building as a large scale urban element – a principle applied physically to define districts or social units
- The vertical separation of movement systems – an outcome of Le Corbusier's fascination with highways and the city of the future
- The opening up of urban space to allow for freeing landscape, sun and light.



Le Corbusier and The Modern City

The Story of Chandigarh, India

Chandigarh is a city and a union territory in India that serves as the capital of both neighboring states of Haryana and Punjab.

- Chandigarh was one of the early planned cities in post-independence India and is internationally known for its architecture and urban design.



CITY OF DREAMS (MODERN HISTORY)

Amidst the partition of the British Indian Empire in 1947, the city of Lahore was taken into the newly formed Dominion of Pakistan. This meant that a new capital city for the Punjab & Haryana States needed to be established and Prime Minister Nehru, wanting to create a new metropolis “unfettered by past traditions”, took a rather bold and visionary step by sourcing an architect from the west to take on this mammoth task.

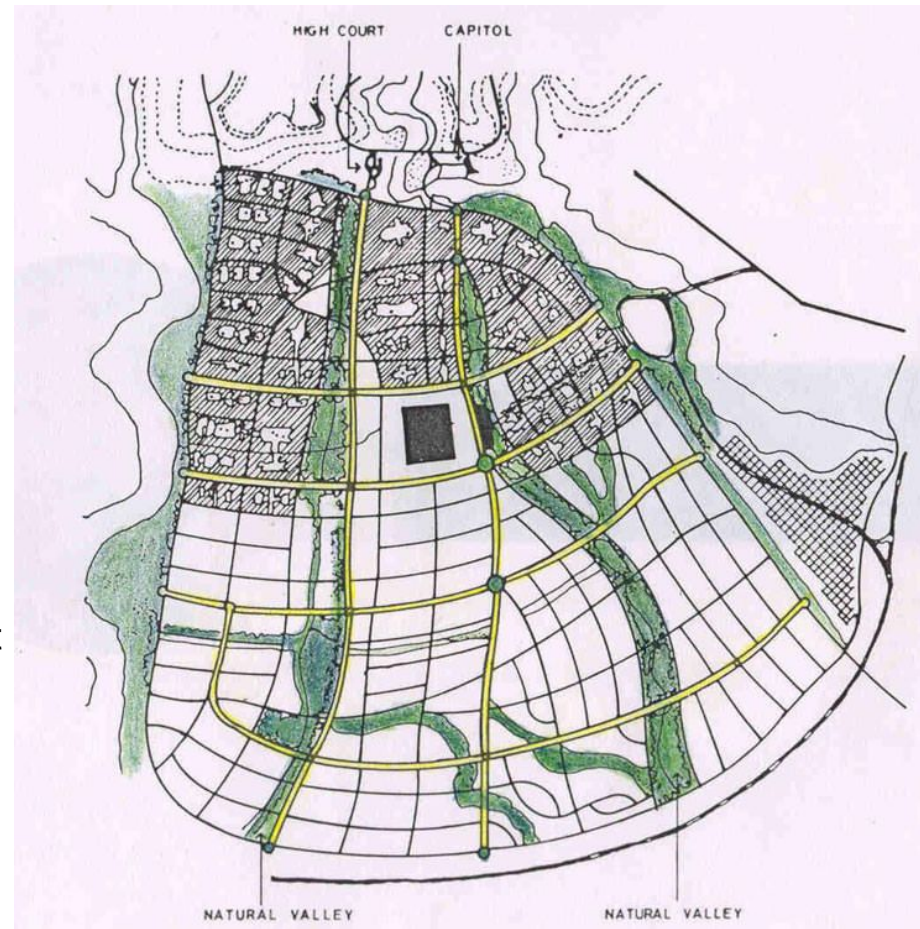


DESIGN TEAM

Bereft of Lahore, the Punjabi government elected to build a new capital city in a plain situated along an existing railroad track 270 kilometers (167.8 miles) north of New Delhi.

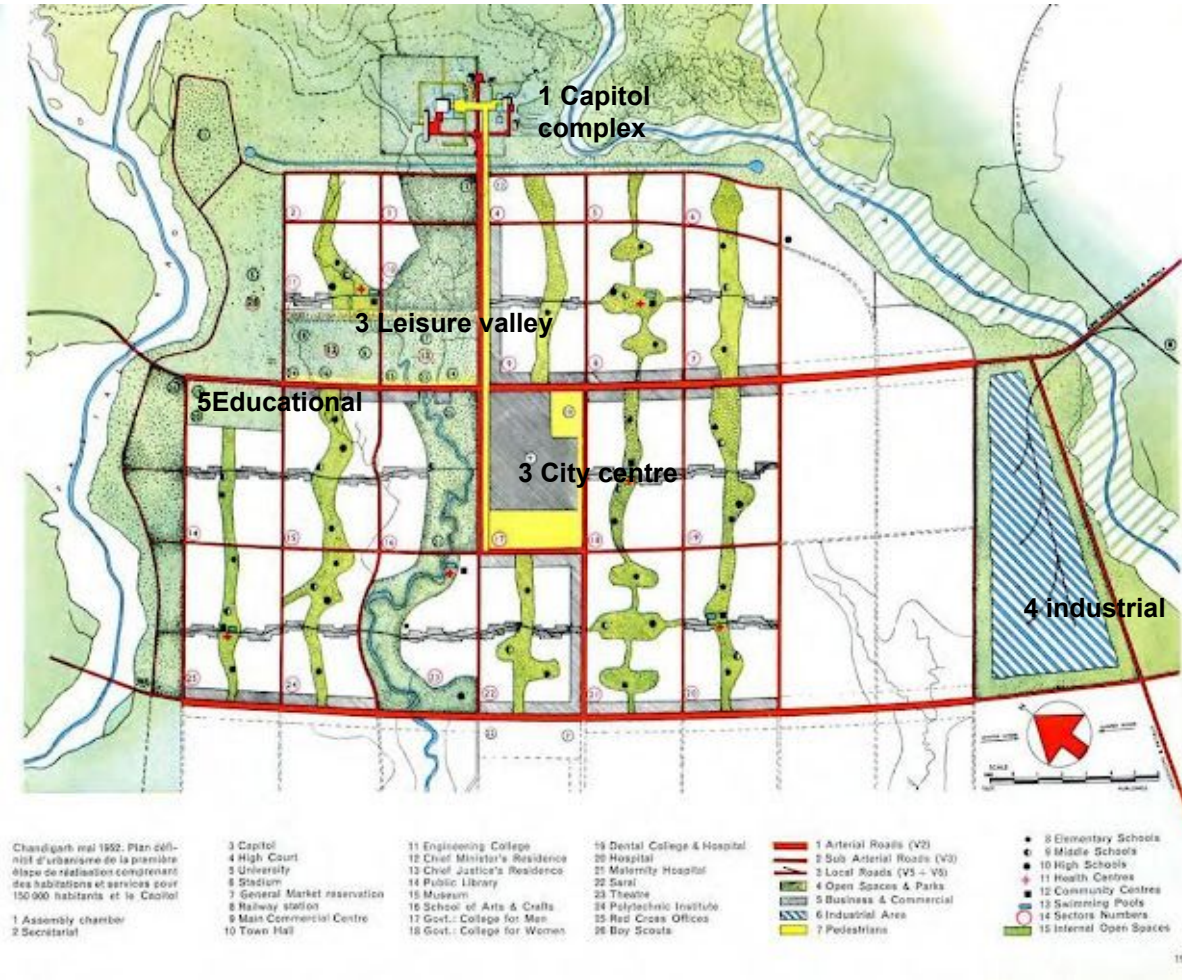
Jawaharlal Nehru, the first Prime Minister of India, was determined that this new city should project an image of modernity and progress, a mandate which was put to the American architect Albert Mayer and his collaborator Matthew Nowicki.

Over the next year, the pair began to develop a plan but, when Nowicki died unexpectedly in an accident in August 1950, Mayer withdrew from the project.



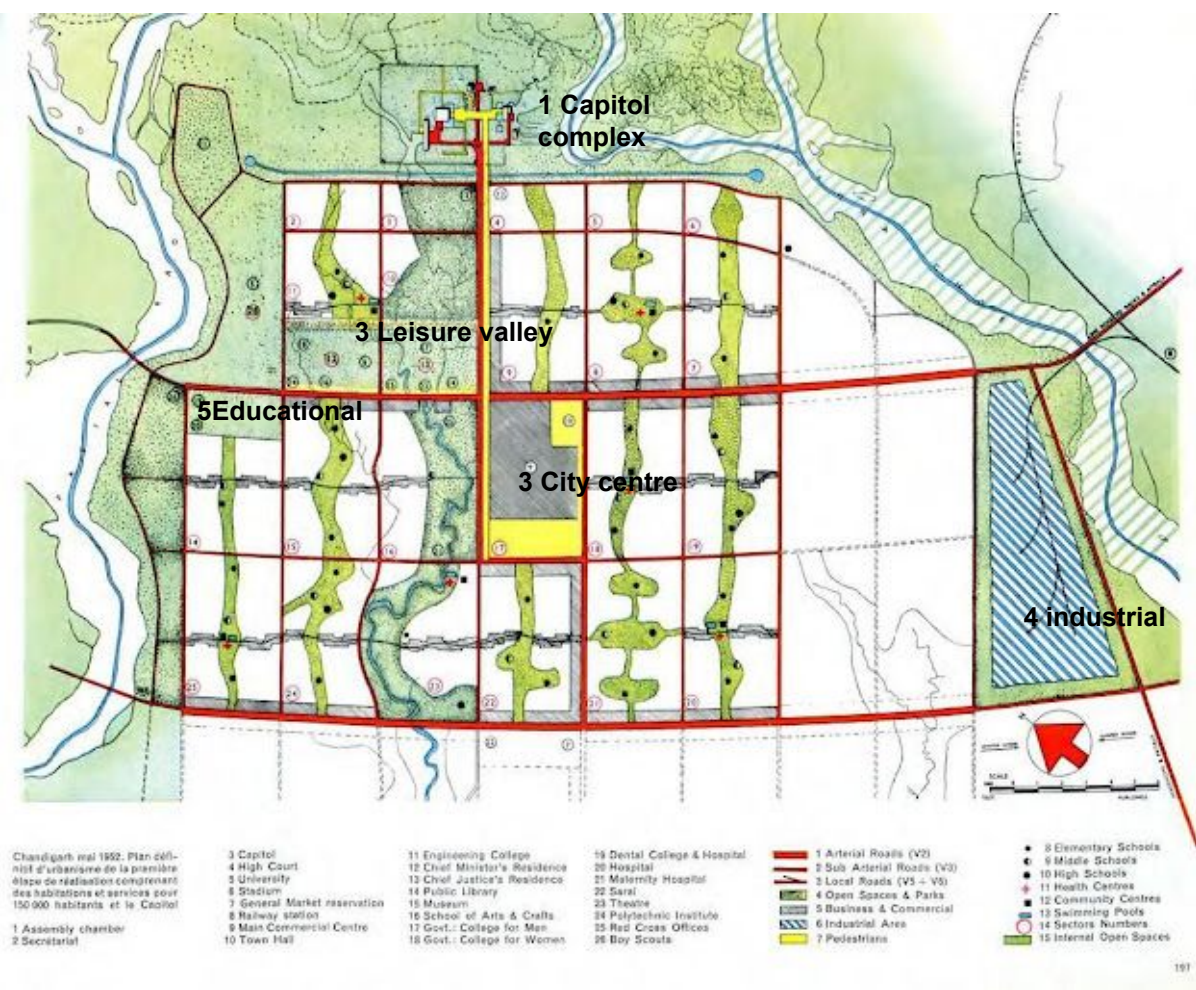
Le Corbusier conceived the master plan of Chandigarh as analogous to human body, with a clearly defined

- Head (the Capitol Complex, Sector 1),
- Heart (the City Centre Sector-17),
- Lungs (the leisure valley, innumerable open spaces and sector greens),
- Intellect فکر (the cultural and educational institutions),
- Circulatory system (the network of roads, the 7Vs) and
- Viscera (the Industrial Area).



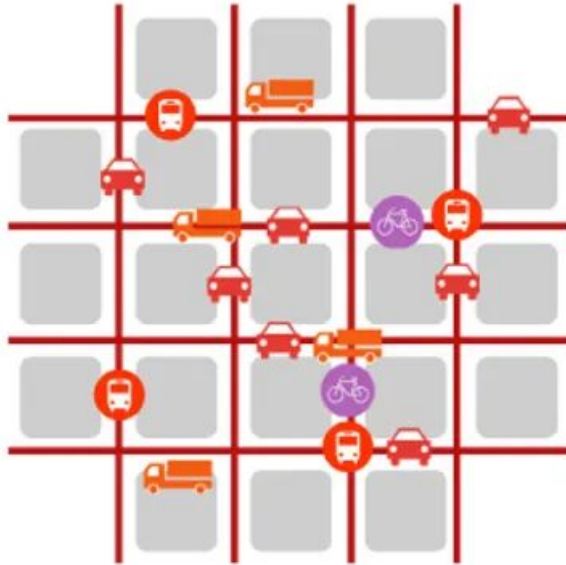
The concept of the city is based on four major functions: living, working, care of the body and spirit and circulation.

- **Residential sector** constitute the living part
- The Capitol Complex, city centre, Educational Zone and the Industrial Area constitute **the working part**.
- The Leisure Valley, Gardens, Sector Greens and Open Courtyards etc. **are for the care of body and spirit**.
- **The circulation system** comprises of 7 different types of roads.



SUPERBLOCKS MODEL

Current Model



Superblocks Model



PUBLIC TRANSPORT NETWORK



BICYCLES MAIN NETWORK (BIKE LANE)



BICYCLES SIGNPOSTS (REVERSE DIRECTION)



FREE PASSAGE OF BICYCLES



PRIVATE VEHICLE PASSING



RESIDENTS VEHICLES



URBAN SERVICES AND EMERGENCY



DUM CARRIERS



DUM PROXIMITY AREA



ACCESS CONTROL



BASIC TRAFFIC NETWORK

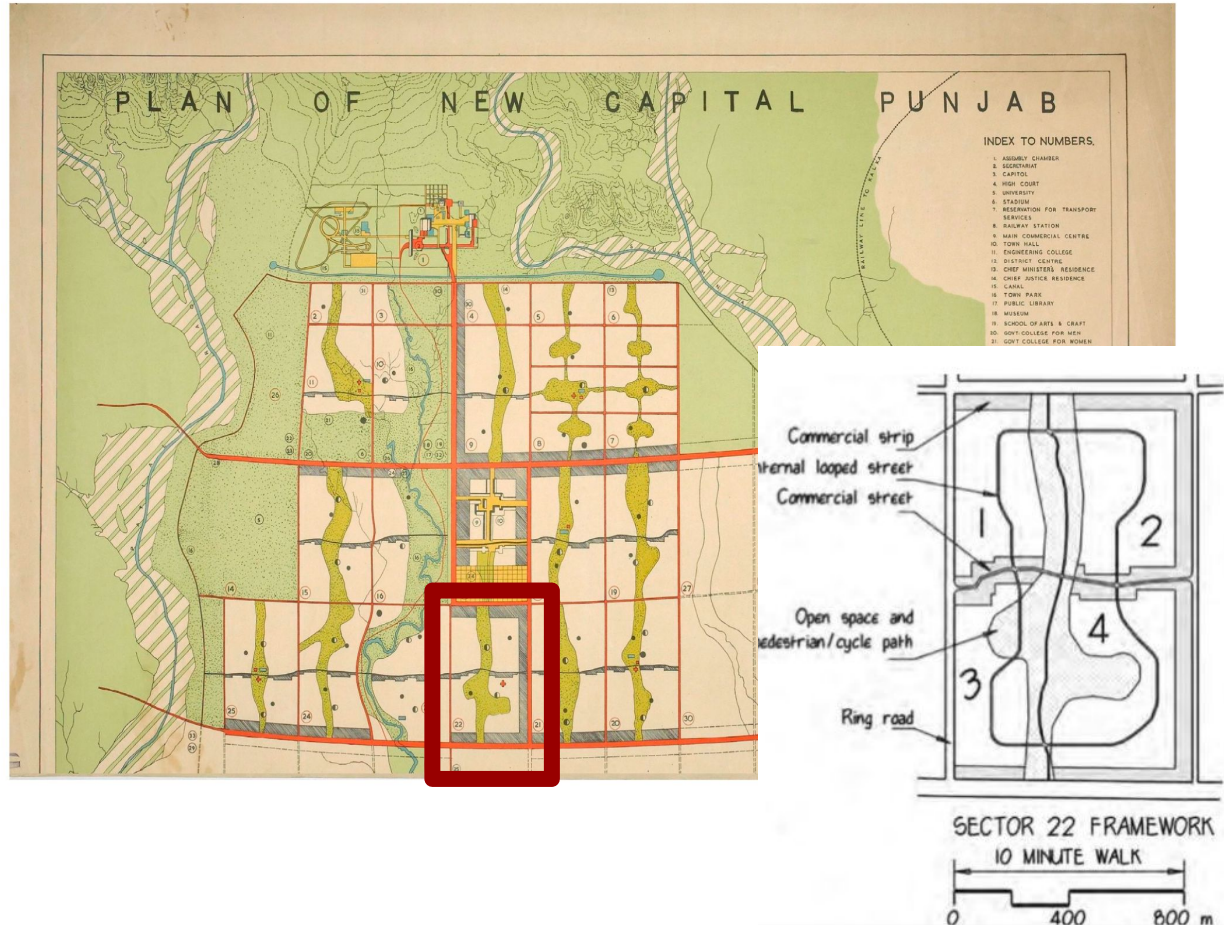


SINGLE PLATFORM (PEDESTRIANS PRIORITY)

PLANNING OF A TYPICAL SECTOR

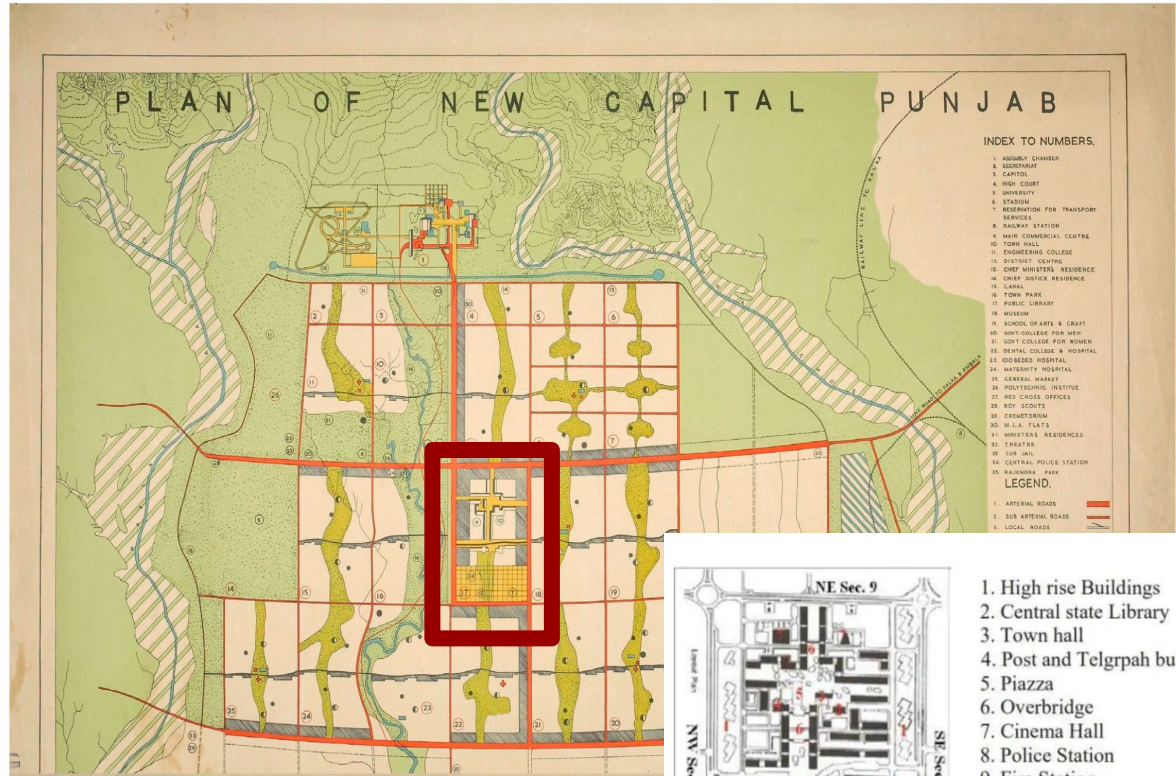
It is clear that each residential sector was envisaged as a relatively self-contained urban village, consisting of four neighborhood-sized quarters (24 ha) each bordering on a green strip with pedestrian paths running north-south, and a market street east-west.

- He allocated nearly 30% of the city to parks and recreational areas.
- The sector has four entrance points, two at either end of the market street and two at either end of the green belt, the maximum walking distance.



SECTOR 17 • The sector 17 or the city center

The central sector of the city, sector 17, is the main public congregation area of the city. It houses all major shopping complexes, sports facilities and congregation spaces. • It is one complete sector of approximately 100 hectares and broadly divided into a two zones on the north and south. The Southern zone was developed as a center of district administration, containing the district courts and police headquarters, the fire station and interstate bus terminus, while major commercial and civic functions are carried out in the northern section.



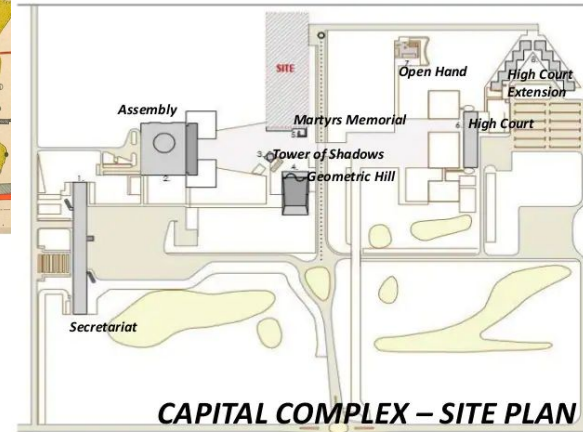
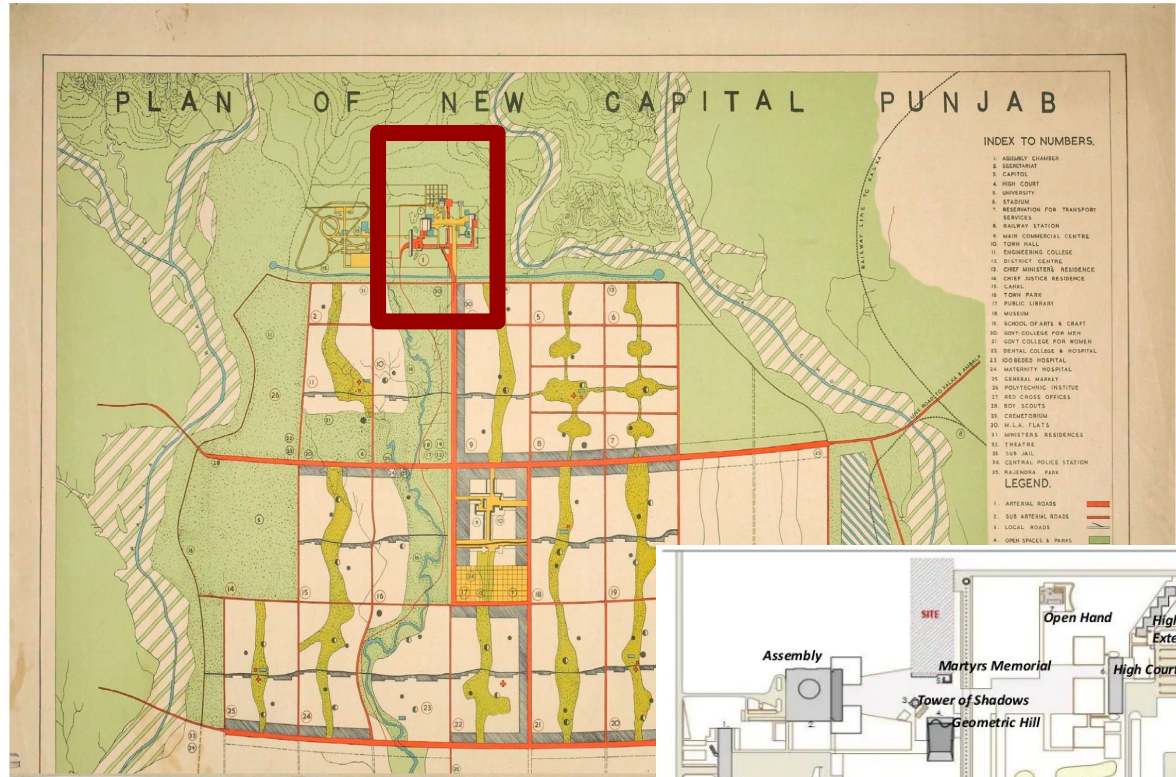
1. High rise Buildings
2. Central state Library
3. Town hall
4. Post and Telgrph building
5. Piazza
6. Overbridge
7. Cinema Hall
8. Police Station
9. Fire Station
10. Parade Ground
11. Foot ball stadium
13. Bus terminus

SECTOR 17

CAPITAL COMPLEX

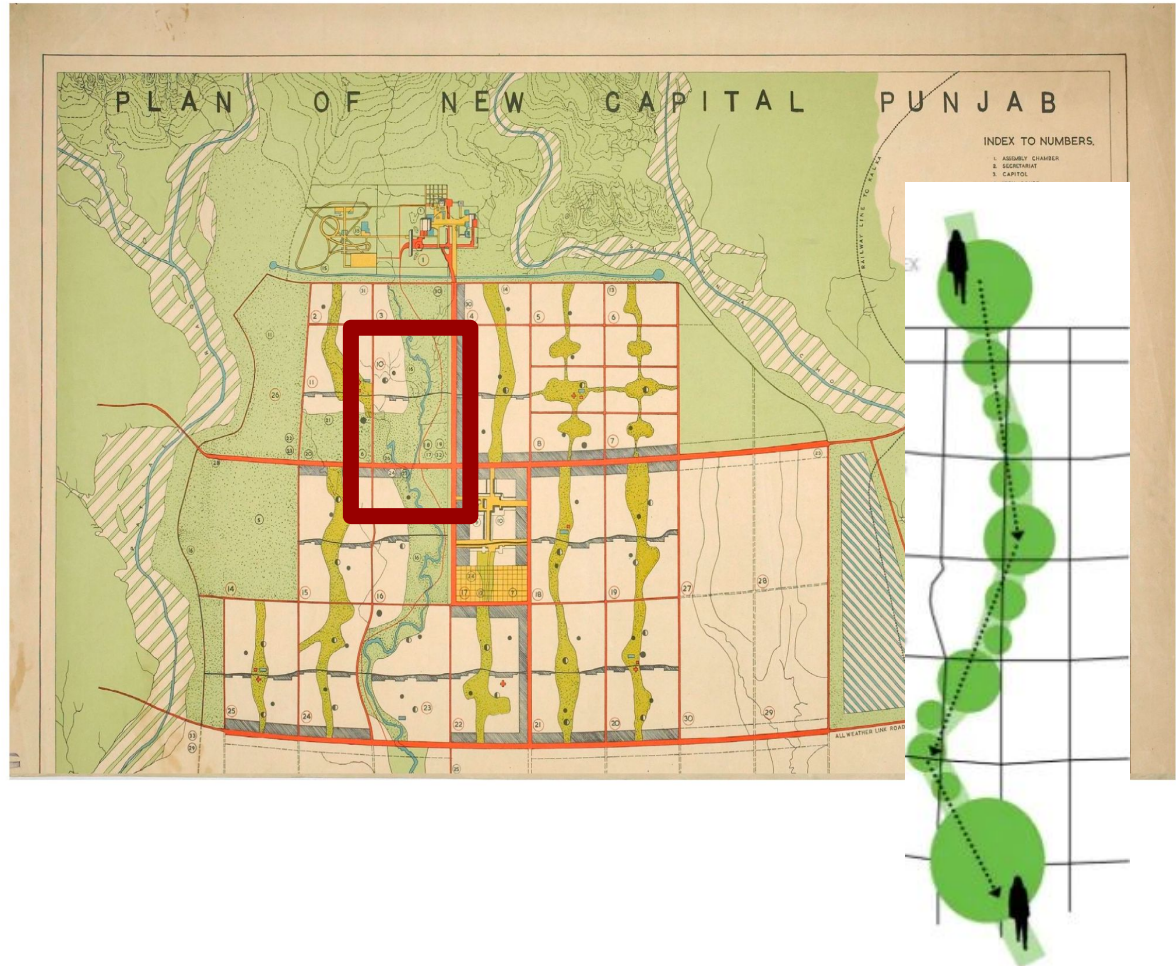
– Sector 1

- Corbusier took upon himself the tasks of designing the buildings of the Capitol and exercising architectural control over the city.
- Chandigarh capitol complex houses the seat of Government.
- The Capital complex comprises three architectural masterpieces, the Secretariat, the High Court and the Legislative Assembly, separated by large piazzas.
- In the heart of the Capital Complex stands the giant metallic sculpture of the Open Hand, the official emblem of Chandigarh, signifying the city's credo of “open to give, Open to receive”.



LEISURE VALLEY

- The city landscape plan of the first phases showing the leisure valley and the swaths of green Spaces that also acts as flood control.
- The Leisure Valley is a continuous 8 km parkland with various theme gardens, extending North-East to South-West along a seasonal riverlet gradient and was conceived by Le Corbusier as the lungs of the city.





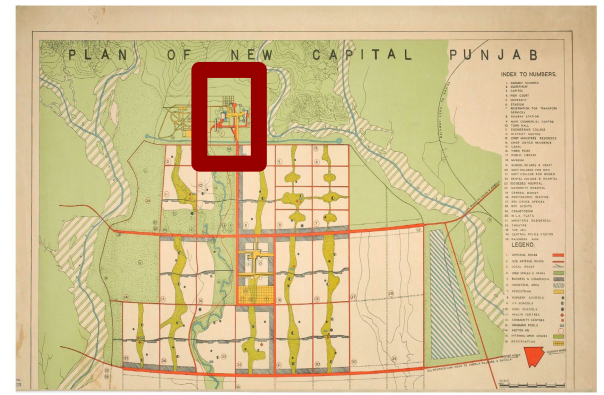
HIGH COURT



SECRETARIAT



ASSEMBLY

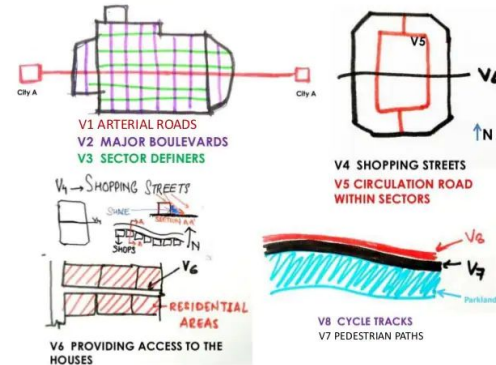
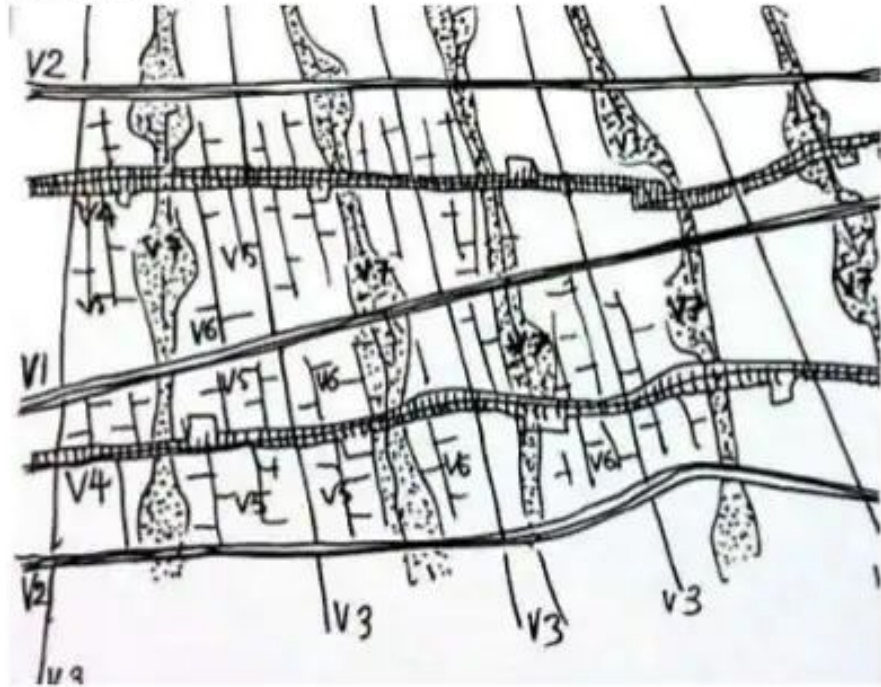


ROADS – Circulation

- The 7Vs establishes a hierarchy of traffic circulation ranging from : arterial roads (V1), major boulevards (V2) sector definers (V3), shopping streets (V4), neighbourhood streets (V5), access lanes (V6) and pedestrian paths and cycle tracks (V7s and V8s).

- Le Corbusier's traffic system followed Mayer's lines but was more elaborate; he called it Les Sept Voies de Circulation, or Seven Vs.

- The 7 Vs act in the town plan as the bloodstream, the lymph system and the respiratory system act in biology.



Roads – The roads of the city are classified into seven categories

No Personal Statue Be Erected – The age of personal statues is gone. No personal statues shall be erected in the city or parks of Chandigarh.

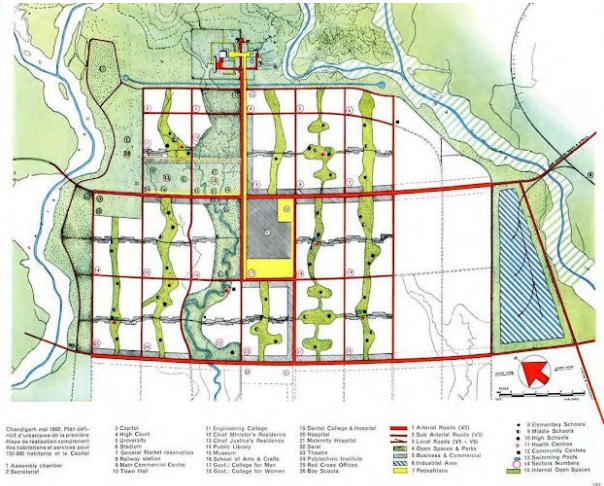
Truthfulness of Building Materials to be Maintained. – The truthfulness of materials of constructions, concrete, bricks and stone shall be maintained in all buildings and constructed or to be constructed.

Areas of special Architectural interest. – Along V-2 central where sky-line heights, character and architecture of buildings as planned shall not be altered. – No building shall be constructed north of the Capitol Complex. –

City Centre – The central plaza in Sector-17 was designated by Le Corbusier as “Pedestrians Paradise”. No vehicular traffic will be permitted in the plaza.

Industrial Area – Only such industries as are powered by electricity would be permitted in the Industrial Areas so that atmosphere is saved from pollution. •

The Lake – There shall be no commercial exploitation of the lake and its environment and its tranquility shall be guaranteed by banning noises.



Assignment 2

Theories of Architecture

From your understanding of **the city of Chandigarh**, Write a paper explaining the following:

- Very very Brief Description of the project
- How is the project today? Is it still habitable by people?
- Discuss 1-2 researchers opinions about the project ?
- What makes the project modernist (from architectural and urban perspective)?
- Why was it successful or wasn't successful in your opinion? Add 2 sketches when providing your argument
- **References and Citation !**
-

Between 1000-1500 words. Choose a clear layout of your A4 and be clear when expressing your opinion. **What not to do: Don't merely summarize.**

Submission : Please Submit a Printed Physical copy to class and send a soft copy on the 11th of December.

Don't forget to write your name and student no. on the front page!

Late Submission will not be Accepted

Frank Lloyd Wright and An Urban Utopia

As early as the 1920s, Frank Lloyd Wright began to regard his architectural work as an integral part of a larger concept which he called Broadacre City. **This new democratic city**, as envisioned by Wright, would take advantage of modern technology and communications to **decentralize the old city and create an environment in which the individual would flourish**



ORIGIN OF BROADACRE CITY Because of technological advancements, Wright came to believe that the large, centralized city would soon become obsolete and people would return to their rural roots. Wright despised the city, both physically and metaphorically. 1932

..توصل رايت إلى الاعتقاد بأن المدينة المركزية الكبيرة ستصبح عفا عليها الزمن قريباً وسيعود الناس إلى جذورهم الريفية

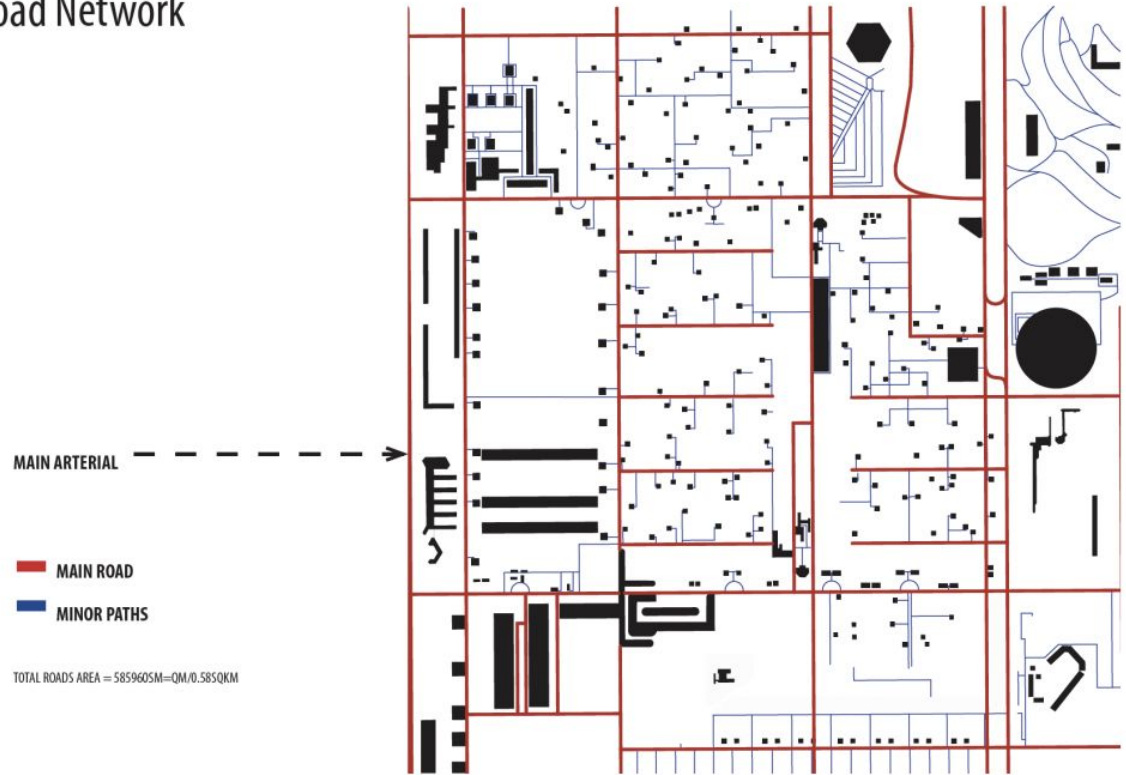


Broadacre City

was the antithesis of a city a, shaped through Wright's particular vision. نقيض المدينة

It was both a planning statement and a socio-political scheme by which each U.S. family would be given a one acre (4,046.86 m²) plot of land from the federal lands reserves, and a Wright-conceived community would be built anew from this. There is a train station and a few office and apartment buildings in Broadacre City, but the apartment dwellers are expected to be a small minority. All important transport is done by automobile and the pedestrian can exist safely only within the confines of the one acre (4,046.86 m²) plots where most of the population dwells.

Road Network



Density



1 CERDA BLOCK 100 m x 100 m = 1000 people

1 CERDA BLOCK 2.5 acres = 1000 people



Family of 2

50m



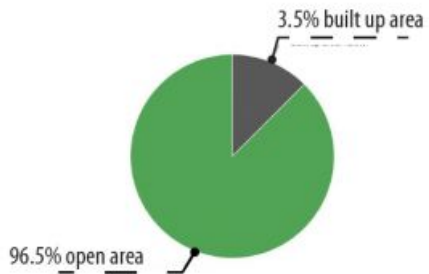
Small farm of 3800 sqm

1 family house of 200sqm

1 acre
4000sqm

1 cerda block/ 2.5 acres = 5 people

200 cerda block/500acre = 1000 people



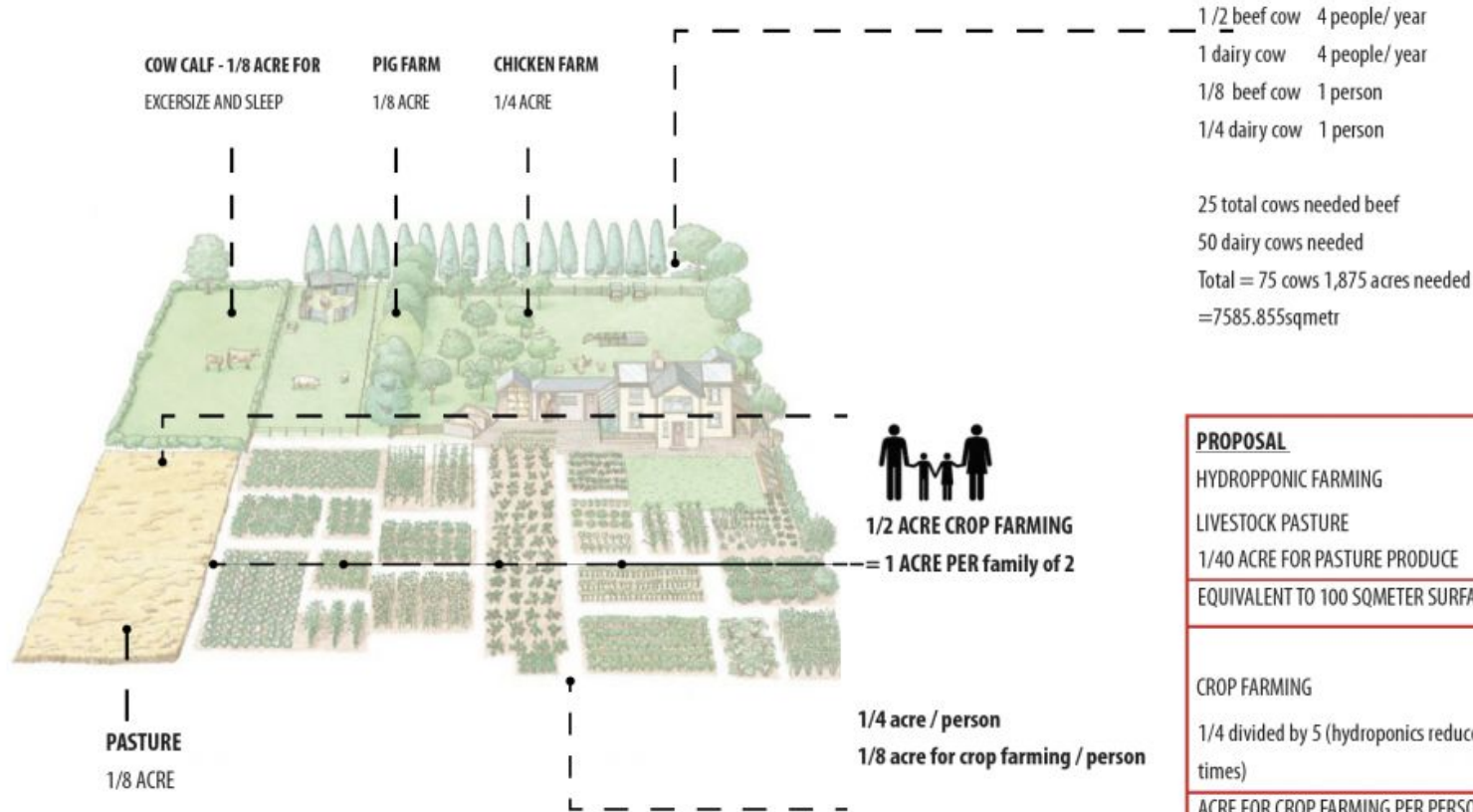
2 Miles
3.2km

3.2km



4 sqmle / 10 sqkm for a community of 1400 families

Typical 1 Acre Farm layout



PROPOSAL

HYDROPONIC FARMING

LIVESTOCK PASTURE

1/40 ACRE FOR PASTURE PRODUCE

EQUIVALENT TO 100 SQMETER SURFACE AREA

CROP FARMING

1/4 divided by 5 (hydroponics reduce area by times)

ACRE FOR CROP FARMING PER PERSON

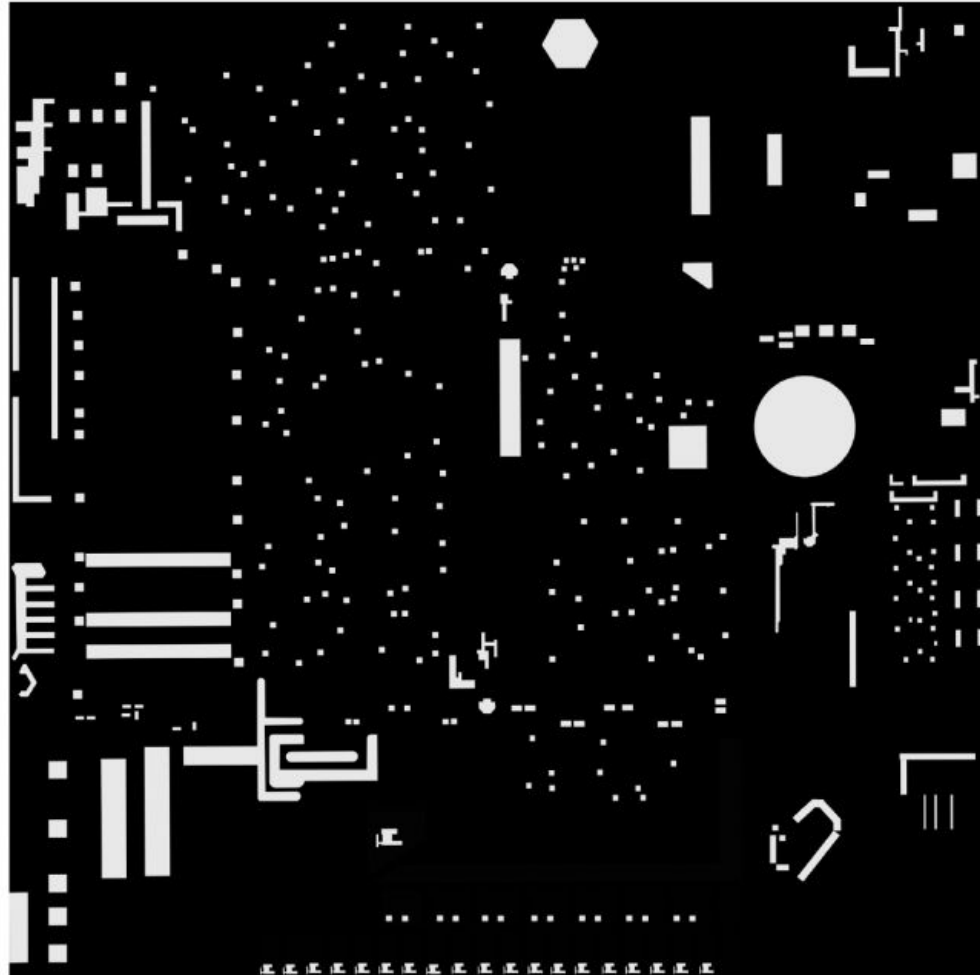
100 sqm

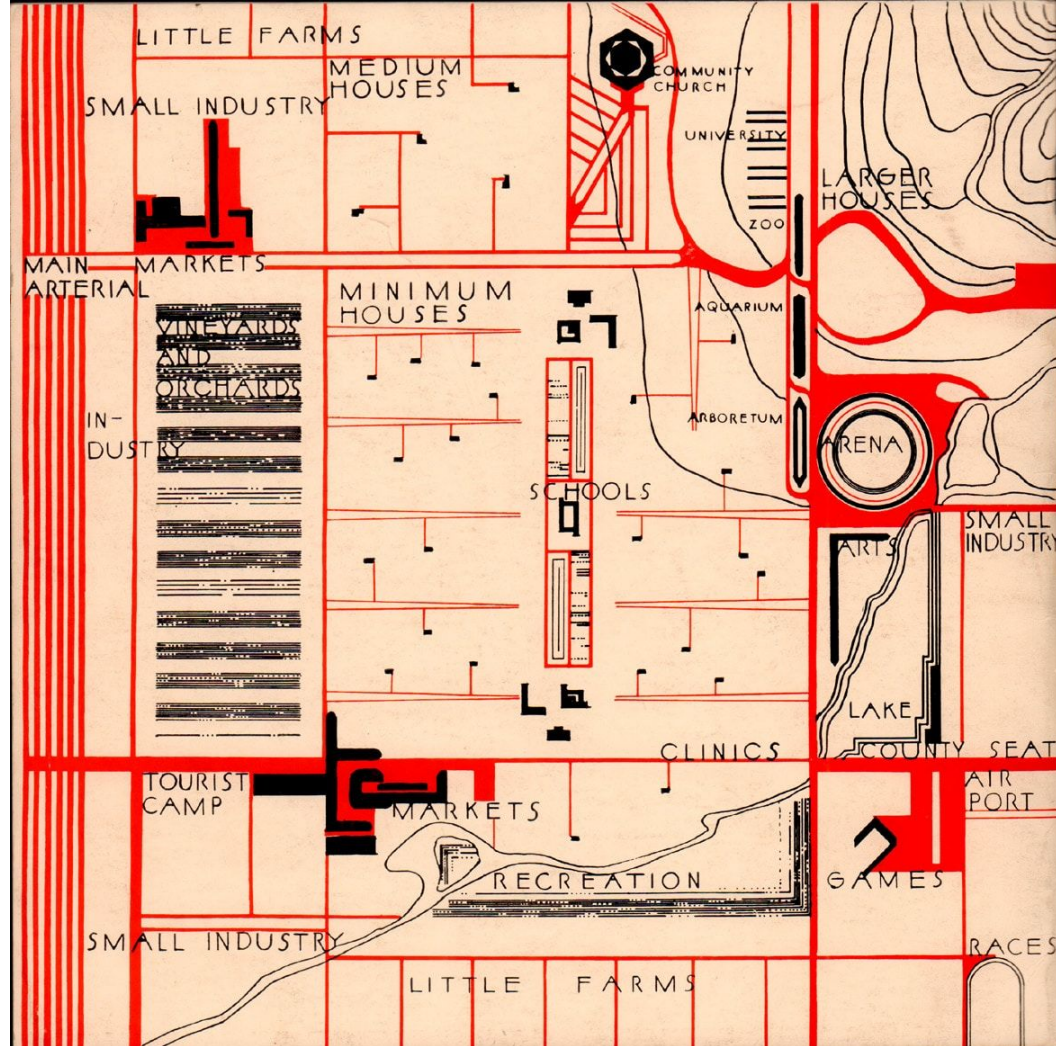
Density

Grid

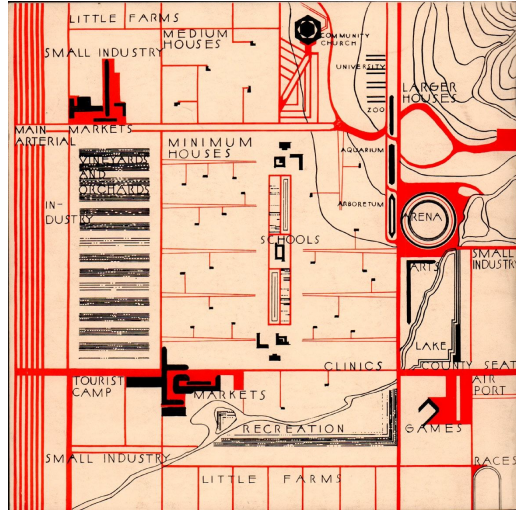
- Broadacre city follows a strict Grid distributing acres of 40x50meters across 4 sqmile equalling to a total of 2560 acres

— FULL
— VOID

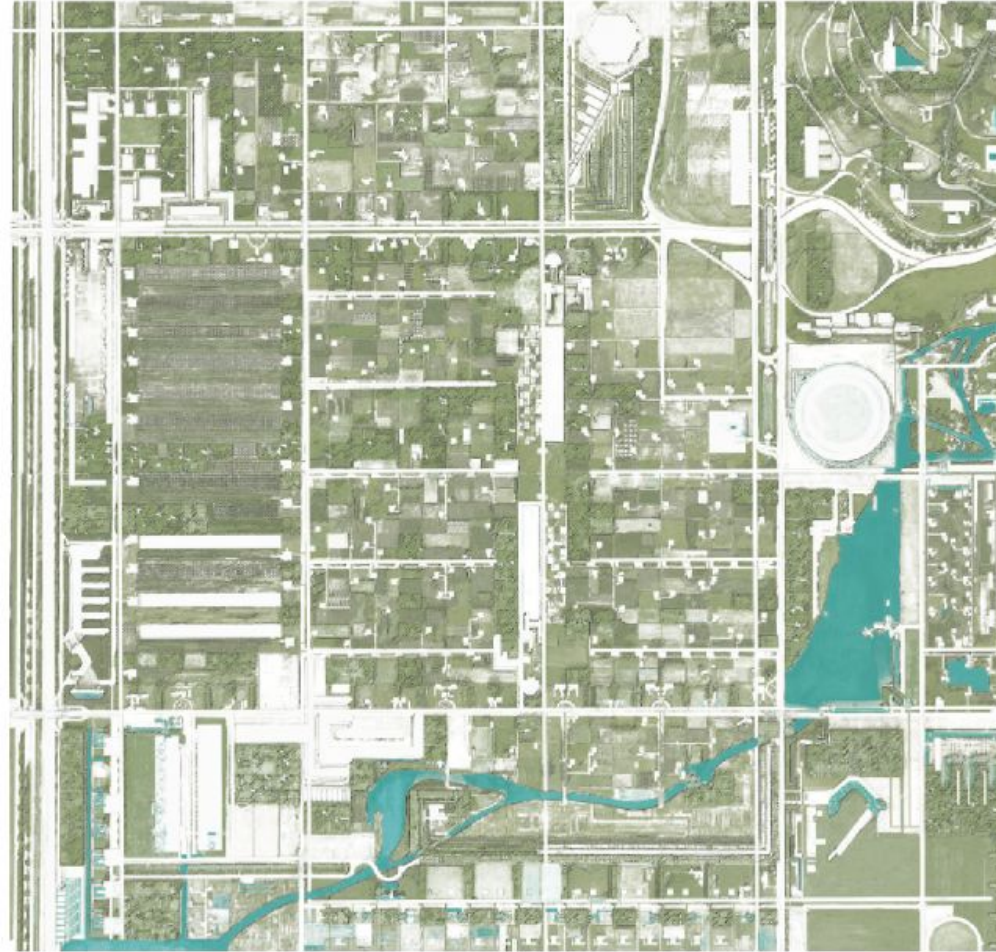




Density



Landscapes and waterbodies of broadacre city.
The open areas consisting of farms, gardens, orchards and vineyards occupies more of the conceptual city than the percentage of built areas.



Program



INDUSTRIAL & COMMERCIAL

RESIDENTIAL AND OFFICES

Falling Water Project

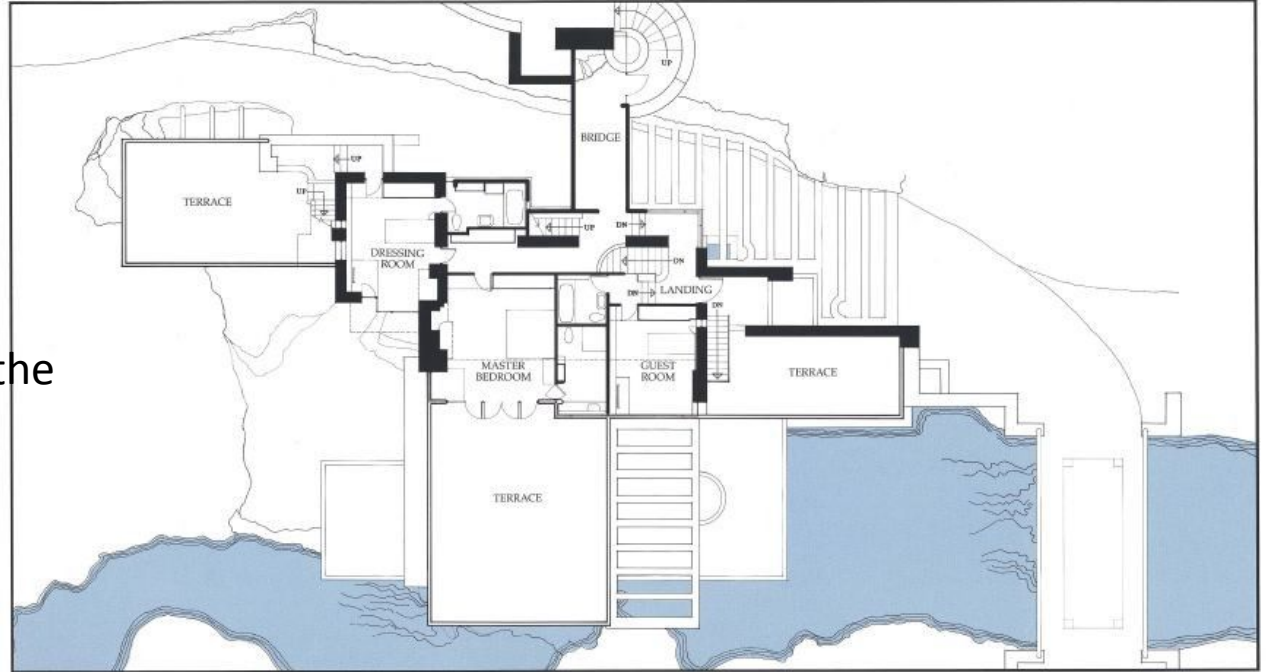
- Fallingwater is a man-made dwelling suspended above a waterfall.
- It offers an imaginative solution to a perennial American problem: **how to enjoy a civilized life without intruding upon the natural world.**
- With Fallingwater, Frank Lloyd Wright went one step further—designing a house nestled into a mountainside, with views that made the house appear to be part of nature itself.



The terraces form a complex, overriding horizontal force with their protrusions that liberated space with their risen planes parallel to the ground. In order to support them, Wright worked with engineers Mendel Glickman and William Wesley Peters. Their solution was in the materials.



- Wright believed that a country home should become part of the landscape.
- Reinforced-concrete cantilever slabs project from the rocks to carry the house over the stream.





the Solomon R. Guggenheim Museum was the last major project designed and built by Frank Lloyd Wright between 1943 until it opened to the public in 1959, six months after his death, making it one of his longest works in creation along with one of his most popular projects. Completely contrasting the strict Manhattan city grid, the organic curves of the museum are a familiar landmark for both art lovers, visitors, and pedestrians alike.



The exterior of the Guggenheim Museum is a stacked white cylinder of reinforced concrete swirling towards the sky. The museum's dramatic curves of the exterior, however, had an even more stunning effect on the interior. Inside Wright proposed "one great space on a continuous floor," and his concept was a success.



Walking inside, a visitor's first intake is a huge atrium, rising 92' in height to an expansive glass dome. Along the sides of this atrium is a continuous ramp uncoiling upwards six stories for more than one-quarter of a mile, allowing for one floor to flow into another. The ramp also creates a procession in which a visitor experiences the art displayed along the walls as they climb upwards towards the sky

