PLAN OF A NEW SUBURB IN DAMASCUS FOR INDUSTRIAL LABORERS

BY

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Preface

WHERE THE GREAT CITY STANDS

The place where a great city stands is not the place of stretch'd
wharves, docks, manufactures, deposits or produce merely
Nor the place of careless salutes of new comers or the anchor
lifters of the departing
Nor the place of the best libraries and schools, not the place of
the most numerous population.

Where the city stands with the brawniest breed of orators and bards,
Where the city stands is belov'd by these, and loves them in return
and breed them,
Where no monuments exist to heroes but in the common words and deeds,
Where thrift is in its place, and prudence is in its place,
Where the men and women think lightly of the laws
Where the slave ceases and the master of slaves ceases,
Where the population rise at once against the never ending audacity
of elected persons,
Where fierce men and women pour forth as the sea to the whistle of
death pours its sweeping and unript waves,
Where outside authority enters always after the precedence of inside
authority,
Where the citizen is always the head and ideal and President, Mayor,
Governor and what not, are agents for pay,

Where children are taught to be laws to themselves and to depend on themselves,

Where equanimity is illustrated in affairs

Where speculations on the soul are encouraged,

Where women talk in public processions in the streets the same as the men,

Where they enter the public assembly and take place the same as the men

Where the city of the faithfullest friends stands

Where the city of the cleanliness of the sexes stands

Where the city of the best-bodied mothers stands

THERE THE CITY STANDS

" Leaves of Grass"

By

Walt Whitman

P L A T E S

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C O N T E N T S

CHAPTER I

I N T R O D U C T I O N

The planning of a new suburb for laborers in Damascus was the dream of many planners. The problem was thought of many times, plans were prepared and worked out, but none were ever executed. The aim of this thesis similar to other trials is to build a new suburb in the city of Damascus for its industrial laborers, but on a new basis.

The project will be carried out in the North-East of the city where the two Barada branches, Yazid and Tora, enclose a small Mesopotamia. The site was chosen for three reasons: the probable expansion of the city in the future will be towards that direction, its elevated position over the remaining parts of the city makes it more healthful, and the inexpensiveness of land is a major economical reason for the choice.

Does the Syrian Capital need a new suburb ? The answer to this question could be seen if a glance is taken at the highly congested quarters of the Capital. The old houses which date back one or two centuries, the narrow, dirty and muddy lanes which still represent the ancient Damascus mentioned in the Bible, the lack of organization of the main streets, the highly crowded covered and badly aerated markets, the many traffic problems encountered in the main arteries, and the congestion and the high birth rate; all that present to us the problems encountered in almost every largely populated city in the world and especially in the Orient.

To replan the city would not be feasible since that will take an indefinitely long time, much pressure on the proprietors,

and will not solve the problem of congestion. Moving into the suburb where we shall have more sun, more air, more space, more freedom, and where everything could be built right from the foundations, is the best solution.

The aim of this new suburb could be summerized in the follow-points:

1. To provide healthy well isolated compact homes for laborers.

2. To give the average laborer the opportunity to own his home through making the most efficient and economical subdivision of land.

3. To plan for schools, parks, and play-grounds to breed a more educated and healthy generation.

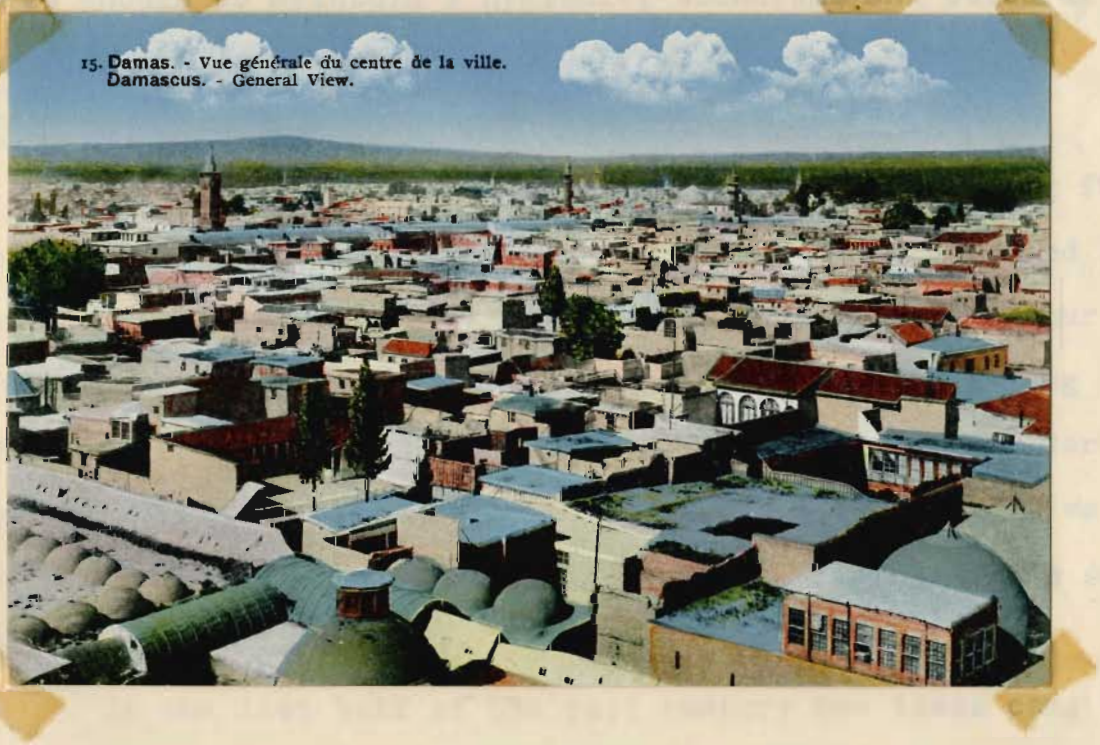
4. To plan for public and semi-public institutions.

5. To afford recreational centers for the grown ups.

6. To create accessible and convenient methods of transportation and communication between the laborer's home and work.

The land on which this project stands has an approximate area of 2,600,000 square meters. According to the street system followed and the zonning of the region, the land will be subdivided into 4 zones, appartment buildings occupying some while one flat dwellings are included in the others. The prospective population of the area would be 35,000 to 40,000 inhabitants. The density would be around 14000 per square kilometer or 80 persons per acre, which is the average density of the main cities of the world.

Many new ideas and recommendations will be followed in the development of this plan to give the most beneficial and efficient use of land.



Damascus as it stands in 1951

CHAPTER II

CITY PLANNING DEVELOPMENT

The planless growth of our cities in the last hundred years has assumed a chaotic and disorderly development. They have become rather intricate and complicated. In developing new cities or sub-cities we have to analyze the problem of planning to its fundamental and simple forms.

The Different Parts of a City:

The first step in planning a district is to divide it into different zones; industrial, commercial, and recreational. So in designing rather in planning we have to take into consideration the relation between these units with respect to the individual. As a matter of fact, the planning of the city differs with the means of existence available to its inhabitants. Anyway, the settlement should be large enough to maintain a hygienic, technical and cultural institutions within it.

Traffic Difficulties a Symptom of Disorder

Due to the fact that all our cities are converging from one center we may see that the transportation is highly congested at the center while it is rarely available at the periphery. All our activities are directed and concentrated at one center, thus making disorderly traffic systems. Traffic is a symptom of the haphazard planning of our cities. In trying to solve the traffic problems we are not tackling the desease itself, rather we are occupied with its symptoms.

Suggestions in the Solution of our Systems of Settlements:

In the last half of the past century two ideas came into existence toward solving our planning problem. The first is based

upon the old centric development and was applied by Unwin in his satelite city.

Centric Development

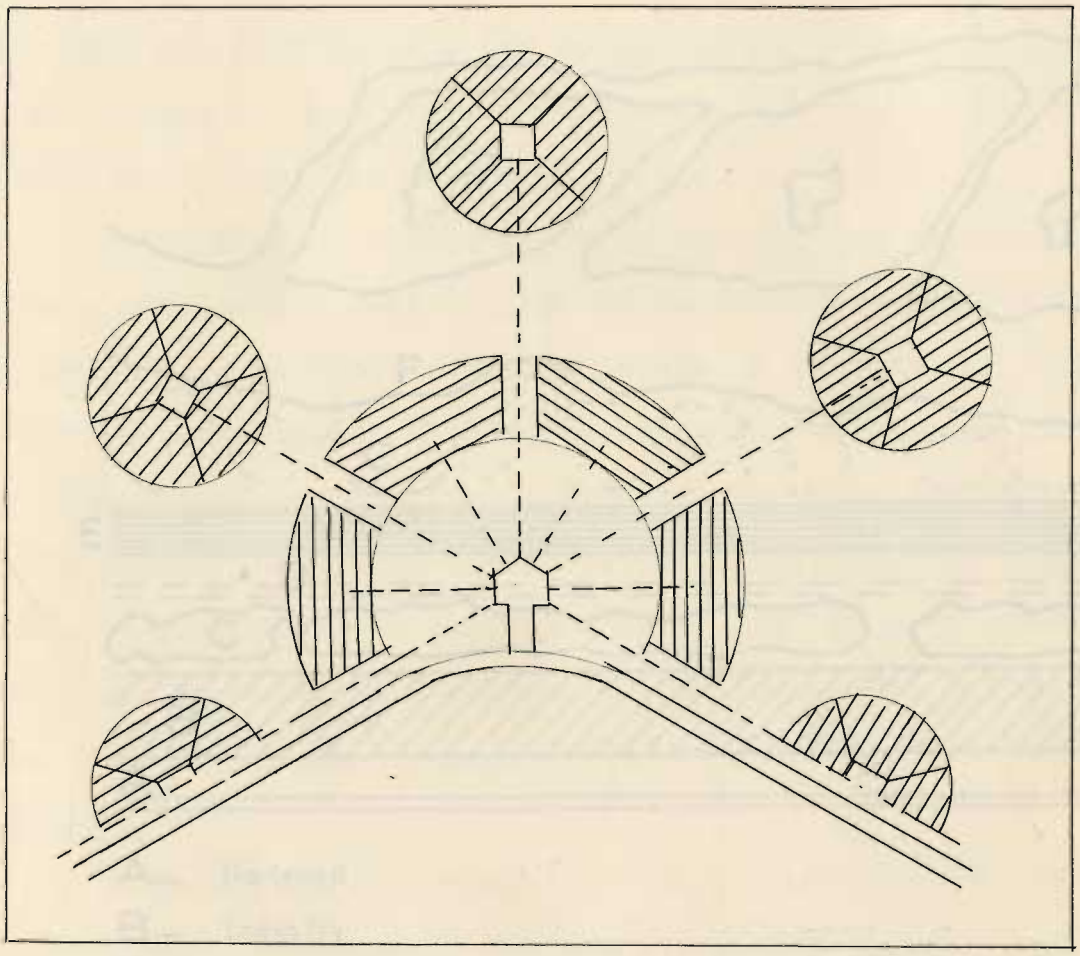
Unwin in his proposal advocates that the one part of the city be devoted for industrial commercial activities while three other equivalent parts be purely residential in character where local markets and recreational facilities be provided. These four parts would form what could be likened to a satelite city. A number of these satelites interconnected to each other and to a central city would represent a system that affords easy growth of the cities in the future.

Gloeden has developed the same idea of centric system but arrived at different conclusions. He does not require the existence of a central city but there will be a central satelite city which is first among equals.

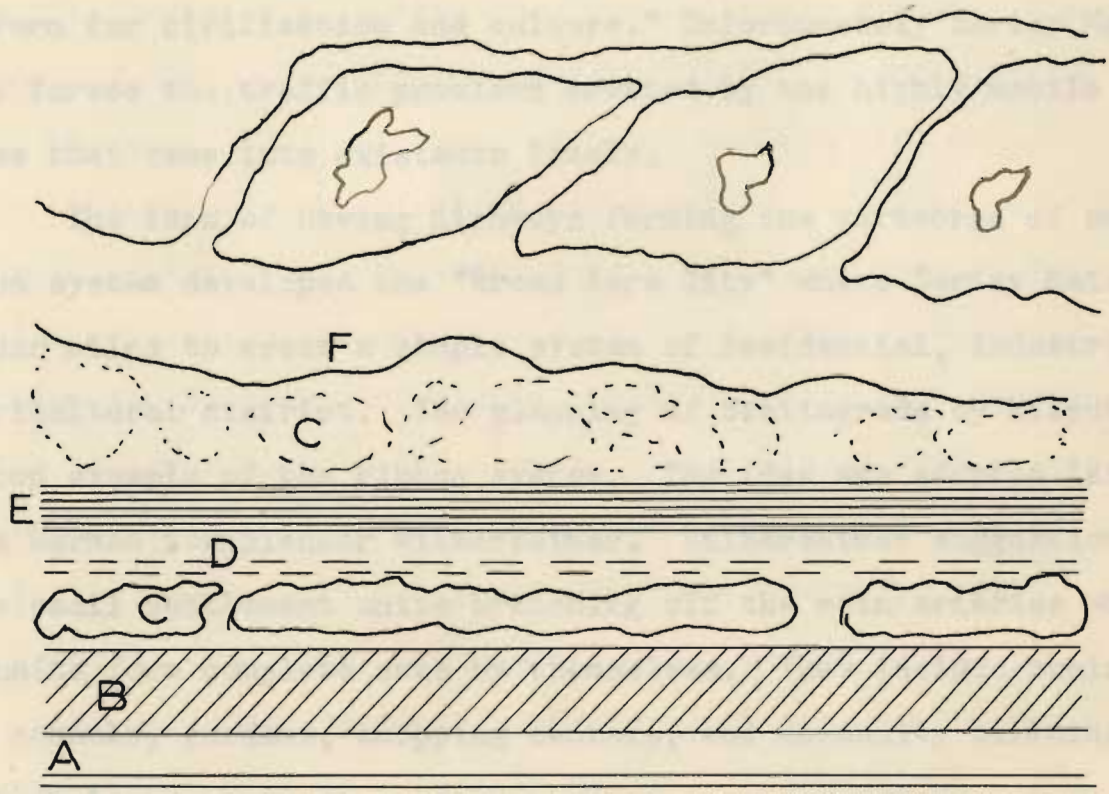
As an application of the centric system we have Maechler's reorganization of Berlin and Le Corbusier's "Une ville contemporaine". Le Corbusier had the idea of augmenting the density in the center of the cities, thus allowing more space for parks and open spaces. He proposed to erect some 20 skyscrapers in the middle of the city where each holds ten to fourty thousand people and it will be intended as the business center with its occupants. Outside the business center comes the residential district with its apartment houses.

Linear Development:

Another system contrary to the centric system is the linear system. It traces back its origin to the Spanish writer, Soriay Mata in his "Ciudad Lineal". Soriay Mata had in mind a wide thoroughfare



Centric Development
with
Satelite Suburbs + Towns



A— Railroad
B— Industry
C— Park
D— Highway
E— Residential area
F— River

Linear Development

where residential districts ran along on both sides. According to Soriay Mata "The character of infinity typical of ribbon town which can be elongated on two sides while it is limited in depth, makes it an ideal form for civilization and culture." Unfortunately Soriay Mata did not forsee the traffic problems created by the highly mobile vehicles that came into existence lately.

The idea of having highways forming the vertebrae of such a ribbon system developed the "Broad Acre City" where Soriay Mata took four miles to erect a simple system of residential, industrial, and agricultural district. The planning of Stalingrade by Milyutin is a good example of the ribbon system. The idea was adopted later on by a German townplanner Hilberseimer. Hilberseimer suggestion is to have small settlement units branching off the main arteries where these units form complete sets by themselves. They include their own parks, schools, gardens, shopping centers, and community buildings.

Conclusion :

The growth of our cities will increase the transportation difficulties. Consequently the centric system cannot cope with the increasing necessity for speed while the ribbon system can. The new tendency for decentralization which is created adversely to the tendency for connection is best solved by the ribbon system.

CHAPTER III

STREET and STREET SYSTEM

The skeleton of a city plan is the street system. The street determines the kind, the function, and the degree to which the city is logically planned. A street is an aqueduct for traffic; it is the means which facilitates our communication and movement. Traffic in fact is the determining factor of the size, shape, and efficiency of a street. The problem of traffic is encountered in every largely populated city. The increase in the number of highly mobile vehicles, the increasing population and consequently its need of moving around both created the traffic and street problem which should be solved right from the beginning by designing not only for today but for tomorrow as well.

Street System

The different systemsof streets which are known today proved to be satisfactory only to a certain extent. The gridiron system known some 23 centuries ago by the Romans and Greeks and applied in many ancient cities, and being as well used in one of the largest modern cities of the world, i.e., New York, proved to have a very excellent geometrical appearance when it is laid on paper, but applied to our modern cities could be cumbersome and hindering to the required swift and quick communication to the distant points of the city from its center and vice versa.

The other contrasting system, the diagonal system, also is not new, but it is better in its affording a ready means of connecting the scattered parts of the center. Yet in the same manner it raises

the problem of traffic congestion to its climax at the center as it directs all transportation to and fro from one point.

The improvement that could be applied in the radical system is the superimposing of a system of circumferential streets to the radial thus providing direct easy access between two points without passing through the center. A very good example of circumferential or rather circular development of streets could be Vienna; the spectacular and jolly city. Moscow is another example. Super imposing of the grid iron system to the radical could be illustrated in Washington. Washington D.C. was planned by the famous l'Enfant. As stated by President Taft "Washington's appointment of l'Enfant and educated French Engineer to lay out the capital city was a most lucky circumstance in our history."

We meet in many instances other less orderly systems such as the organic system where the streets, lanes, and ~~the~~ thoroughfares follow no definite plan except that set by its natural growth.

None of the aforementioned patterns could fulfill completely the requirements of a new city, solve the problems of congestion, or have the pedesterians not subjected to danger. By means of efficient traffic organization and proper coordination of different urban elements traffic could be reduced and concentrated within the great arteries. To attain such a result the traffic should be isolated completely from pedesterian paths, or have them come together on rare occasions. As a result, the isolation of the residential areas, dwellings, houses, and public and semi-public buildings should be effected.

In planning the area under consideration the system of streets will have the main thoroughfares completely isolated from dwellings and by that planning two main advantages would be attained:

1. Securing privacy of homes
   a. Less danger of traffic
   b. Less noise
   c. Less dust
   d. More home feeling
   e. Having more chance to have something of the country reproduced in their yards
2. Acquiring more agreable streets
   a. It imparts a general air of spaciousness
   b. Increases the amount of visible greenery

Residential areas are developed around dead end or cul-de-sac streets. The dead end street idea was originally proposed by Unwin and Wright and adopted later on by many engineers in the planning of superblocks.

Dead End Street

A dead end street is defined by Nolen in his city planning text: " In many places where topographic or other conditions make it difficult or undesirable to extend a street to its intersection with another, such streets may be designed with 'dead end' or returned upon themselves forming places to which great charm is attached by the sense of seclusion and privacy which they impart." Hilberseiner a German architect insists in his "New City" on having all residential streets dead ends as their advantages outweigh these of the other kinds of streets.

Width of Streets

The main streets or thoroughfares are designed to isolate the heavy and thorough traffic totally from the residential and

business quarters. The width of the "road way" is based upon the general recommendations for moving and parking cars. The lane width for moving cars is 9 feet for slow moving cars and 10 feet for fast moving cars. For parking various widths are recommended as they depend upon the angle at which the car is parking. The following table gives the space requirement for different angles of parking.

Angle with curbline	Width of strip	Min. Clearance required	length of curbline occupied	Number of cars in 100'
0°	8'		20'	5 cars
45°	16'-10"	8' - 2"	12'	8.3 cars
63°	18'- 5"	14' - 9"	10.5'	9.5 cars
90° (Head in)	17'- 6"	29' - 2")	8.5'	11 cars
90° (Back in)	17'- 6"	18' - 5")		

It may be seen that parking at 63° is the most efficient in its requiring less space compared to the numbers of cars that could park at one unit length. The 63° angles parking will be used in designing for business center streets while the 0° angle parking will be used in the main thoroughfares and arteries.

Sidewalks are usually afforded to provide the pedesterians with a safe path. The best development in sidewalk design is to isolate the sidewalks from the roadways by green belts which beautify the street and safeguard the sidewalk. At intervals the pedestrians must be given the chance to cross the road from one side to another but not so often as they form an obstacle for highly mobile traffic.

The width of sidewalks as recommended by different town planners has a range of 4.5' - 15'. Some do set 3.5' as the minimum for sidewalk width. The green belts which are to separate sidewalks from roadways have a minimum of 5 feet up to 24 feet. In some of the parkways of American cities belts of 42 feet are used. Belts used to separate two traffic lanes should never have a ribbon shape. A minimum of 26 feet should be allowed or better eliminated altogether.

In planning the suburb under consideration five main types of streets will be used:

a. Minor streets in residential quarters which are in this case the short cul-de-sacs.

b. Major streets for residential quarters.

c. Business center streets.

d. Main thoroughfares

e. The boulevards that surround the suburb.

Type A - Minor Residential Streets

1. Dead end streets in Zone A.

Length : 150 - 200 meters

Width

2-lanes for moving cars at 10' or 3.m.	6.00 m
1-Green belt at 9' or 2.7 m.	2.70 m
1-Sidewalk at 4.5' or 1.30 m.	1.30 m.
Total	10.00 m.

One sidewalk will be used as the other side of the street will be bordered by garages.

2. Streets in Zones B,C,D.

	Width
2-lanes for moving cars at 10' or 3 m.	6.00 m
2-green belts at 9' or 2.7 m	5.40 m
2-sidewalks at 4.5' or 1.3 m	2.60 m
Total	14.00 m.

Type B - Major Residential Streets

	Width
2-lanes for moving cars at 10' or 3 m	6.00 m
2-parking lanes at 8' or 2.40 m.	4.80 m
2-green strips at 12.5' or 3.60 m	7.20 m
2-sidewalks at 7' or 2.00 m	4.00 m
Total	22.00 m

Type C - Business Centers Streets

Business streets would be isolated and parallel to the main thoroughfares. The traffic will run principally in the thoroughfares since these streets are to be used mainly for shopping. Here more parking place would be alloted as every business man may park his own car and yet not deny room to the customer's car. Wide sidewalks in front of shops would be recommended to allow free way for pedestrians:

	Width:
2-moving lanes at 10' or 3.00 m	6.00 m
1-loading and unloading lane at 9' or 2.7 m	2.70 m
1-parking lane at 63° at 19' or 5.5 m	5.50 m
1-sidewalk at 18' or 5.50 m	5.50 m
Total	19.70 m

Type D - Main Thoroughfares

Width:	
4-moving lanes at 10' or 3.00 m	12.00 m
2-parking lanes at 8' or 2.40 m	4.80 m
2-protective strips at 8' or 2.50 m	5.00 m
2-sidewalks at 7' or 2.00 m	4.00 m
Total	25.80 m

Type E.- The Boulevards abutting the rivers:

Two streets	
Width of each:	
2-moving lanes at 10' or 3.00 m	6.00 m
1-parking lane at 8' or 2.40 m	4.80 m
2-green strips at 9' or 2.70 m	5.40 m
2-sidewalks at 5' or 1.60 m	3.20 m
Total	17.00 m
Total width	
2 streets	34.00 m
1 canal	6.00 m
	40.00 m

Comparing the upper designs with the limits of street widths where :

Thoroughfares or Boulevards	24.00 m
Secondary thoroughfares	18.00 m
Minor streets	15.00 m

We find that they compare satisfactorily.

Lighting of streets

Roads must be either well lighted or not lighted at all. In fact to light the streets poorly would leave patches, rather pools, of darkness which form an element of danger for traffic because of the hesitation of drivers to use their lamps.

There are two systems of street lighting namely : Kerb-side lighting and centrally suspended lighting. Each has its own merits and defects. The kerb-side lighting throws the shadow of the traffic at the street and at the same time leaves the sidewalks with little illumination, if any. The other lighting system provides a patch of light at the crown of the road leaving the sides in semi-darkness.

The best system that could be chosen is a combination of both. Two ranges of lighting should be adopted for traffic routes group A and group B. Group A is meant for traffic roads where full illumination should be available. Mounting height should be of the order of 25 feet or 7.50 meters. Average spacing should exceed 150 feet or 45 meters. For lanterns the overhang should vary according to the width of the carriage way. In straight sections of road, light sources should be placed on both sides, with central lighting every third side lighting point for roadways more than 40 feet.

Group B of lighting is used for other than traffic roads. The mounting height will be between 13 and 15 feet. Average spacing will be not more than 120 feet maximum. In all roads, the parts carrying lamps are to be moved back a distance to avoid being a dangerous obstruction to traffic.

Group A recommendations are to be applied to types E,C,D of streets.

Lighting for type E:

Two lights on each side 7.50 meters high 50 meters spacing are used to illuminate the road with a centrally suspended light every 150 meters.

Two other lights are used to illuminate sidewalks with 13 feet or 4 meters high and 50 meters spacing.

Type D:

Two lights on both sides 7.50 meters high at 50 meters spacing.

A centrally suspended light at 150 meters intervals.

Type C:

Two lights on both sides 7.5 meters high at 50 meters interval.

A centrally suspended light at 150 meters interval.

Group B recommendations to be used for types B & A .

Type B:

Two lights on both sides 4.50 meters high at 50 meters interval.

Type A:

Two lights on both sides 4.50 meters high at 50 meters interval.

Trees:

Trees do give the street a form of great beauty. They break the monotony and give the street an air of coziness and a country feeling which only nature can afford while man never create. The trees need not be planted at equal intervals; they may be planted in groups of two and three leaving a space where the sidewalk may look freely

at the streets. In order not to establish a monotonous arrangement, "there should be always an effort to create a picture, the colors forms and textures of which are harmonious and beautiful."[1] Shrubbery is used as well as trees to form a kind of fence between the sidewalk and the roadway. Trees mostly used for street adornment are:

Oriental plane

Honey locust

Pin oak

Red oak

Gradient

Gradient of streets according to regulations should be:

a. For thoroughfares, boulevards, parkways, and secondary thoroughfares not greater than 7 %.

b. For minor streets and alley not greater than 10 %

c. For pedestrian ways or cross walks not more than 2.5 %

The North-West street has

length : 600 m.

Difference of level : 15 m.

Slope : 15/600 = 2.5 %

The South-East street

Length : 1200 m.

Difference in level : 20 m.

Slope : 20/1200 = 1.33 %

The North-East street

Length : 775 m.

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1. Principles of City Planning by Lohmann.

Difference of level : 15 m.

Slope : 15/775 = 2 %

The North-West street

Length : 800 m.

Difference in level : 20 m.

Slope : 20/800 2.5 %

Boulevards Yazid and Tora will not exceed 1 % in slope as they run along the banks of rivers.

Pavement

All the pavements used in the streets, and boulevards and minor streets will be bituminous macadam. Lanes and foot paths will be paved with concrete cast in place or with precast cement tiles.

Orientation

As the orientation of streets controls the orientation of dwellings in most cases, it has been seen that the laying out of well oriented streets is of utmost importance especially in crowded areas. A French housing official, A. Augustin Rey says," The orientation of the public streets and the consequence that it entails dominate in reality the whole health of towns and dwellings." The best direction to which houses are to be oriented as it is pointed out by Hilberseimer in his "Penetration of sunlight into the Room", is South-East or South-West. The reasons for that will be discussed later in dwellings and houses orientation. The direction of the streets as shown in the plan is South-East and South-West, due to the fact that some are to be perpendicular to others.

Drainage

Drainage usually is provided for by raising the road at the central line or the crown. The cross section of the streets will rise 1/4 inche per horizontal foot.

CHAPTER IV

TRAFFIC AND TRAFFIC CONTROL

Street Capacity

Capacity by definition is the number of vehicles that can pass in one unit of time in one street. The basic formula to calculate the capacity of one single lane of one roadway:

$$C = \frac{5280\ V}{P}$$

The maximum that a roadway could handle as seen by observation was 200 cars per hour under ideal conditions.

Main thoroughfares of 4 lanes of traffic may handle usually for a speed of V = 20 miles per hour :

$$C = 2 \times \frac{5280}{56} \times 20$$

$$= 2 \times 1800 = 3600 \text{ cars per hour}$$

For the other types D & C of streets we find that it can handle half as much per hour. The numbers thus given make the design quite satisfactory where not more than that number will be using the street in one hour.

Traffic Control

The problem of traffic has been the main trouble of the civilized world since the inauguration of the motor car. The high rate of car multiplicity, the high speed at which cars were meant to operate, and old systems of streets which were not prepared to receive such a large number of vehicles, all created the exceedingly puzzling problem of traffic.

Solution of traffic problems has two faces : accomodation for free circulation and securing the safety of people. The problem of road safety has one main solution, the reducing of vehicle-speed and segregation of pedestrians-pathways.

Reducing the vehicle-speed could be effected through signals indicating the speed at which the carriage is expected to run and at the same time controlling this through the traffic police. Pedestrian problem could be divided into two parts: the problem of pedestrians walking longitudinally crossing the carriage-way. Although the second has the higher percentage at casualities, still both should be solved. A foot pathway well paved and segregated from the roadway by the green strip will induce the pedestrians not to use the carriage way. The solution of the pedestrians crossing the road could be done primitively by assigning a footpath across the road where the traffic will be obliged to respect any pedestrian passing through. The use of guard rails on curbs with openings at intervals could be a good means of separation and has been used recently in Beirut and Damascus at dangerous points. The real solution of crossing the roads is to have a segregated path either by subway or bridge.

Any solution to be effective should be accompanied by good circulation instructions.

The other main problem aside from safety is circulation. The radical causes of circulation are two : 1, the delay caused by heavy conflicting streams of traffic. 2, the chocking of the conduits themselves by various obstructions, mainly standing vehicles.

The first circulation problem is the obstruction caused by

junctions and intersections of streets. The control of traffic at crossroads could be achieved by three main methods: 1. "Fly-over" bridge, an excellent solution for crossroads but rather expensive. 2. Round-about, which turns all traffic in one direction and leaves it to adjust itself through a weaving motion. 3. Automatic signals. Among these three solutions the second solution presents itself as being the most suitable solution to be used in the plan of the suburb.

In the design of a round-about the roadway widths, the weaving space and the angle of convergence should be considered. The Engineering Dept. Committee in England set up by the Minister of Transport as to design and lay out of streets in built-up areas worked out the following table for round-abouts dimensions of two roads crossing each other at right angles.

Diameter of island in feet	Width of carriage way round island in feet	Total width between outer curbs in feet	Max. Converging angle degrees	peak capacity in V/PH	Remarks
60	30	120	85	2500.	
75	30	135	59	3000	
100	30	160	55	3500	
105	40	185	59	4000	
150	30	210	40	4000	
140	50	240	53	5000	
180	40	260	40	5000	
240	50	340	40	6000	

The other problem of circulation was the obstruction due to waiting cars. The only solution to that is to afford adequate space

for parking. Parking was fully dealt with and taken into consideration in a previous discussion. Aside from waiting cars, wheel barrows and tram cars present a very serious obstruction to traffic flow. That is why wheel barrow should be completely forbidden and omni-buses be substituted for tramcars.

Conclusion

The foregoing recommendations will be used and applied in the new planning of our laborers suburb thus affording provision for today's as well as for tomorrow's.

CHAPTER V

Recreational Facilities

Any wage earner works for 8 hours a day, sleeps for 8 hours and eats, dresses, and does private business in an average time of 3 hours. The total accounted for time is 19 hours thus leaving 5 hours unaccounted for. He has to spend these 5 hours somehow, somewhere, doing something. This uaccounted for interval could be an upbuilding factor in this wage-earner's life or a down-pulling agent striving to destroy his moral, physical and social life. We have to know how this time is spent or rather wasted. It is not merely a simple problem which affects that individual's personal behaviour; it is a social, moral and economical problem which would affect a community's destiny. Our man has to seek recreation by some way. He is well tired, exhausted physically and mentally and we have to provide him with an upbuilding atmosphere where he may restore his physical and mental potentialities rather than overexhausting them.

The problem of recreation and recreation facilities has to be dealt with mainly in townplanning. The movies, the saloons, the lectures halls, the worshipping places, the fields for athletics, the cafés, the play-grounds and the parks, all could be considered places for recreation; but what kind of recreation - an upbuilding recreation or downpulling one ? Saloons, cabarets and cafés could never be considered upbuilding if they are to be compared with athletic fields, parks, play-grounds, lecture halls and libraries. The movie could be considered a mental recreation which has equal advantages and disadvantages. So the problem is to reduce the number of degenerative re-

creations by increasing the number of helpful recreational centers, thus directing 1/5 the time of the normal citizen from a poisonous part of his life to a flourishing energy storing part.

We have considered so far the worker. What about the children of his family and what about his wife ? The children need recreational areas where their trends are diverted to building up their bodies and minds. Their need is well illustrated by roaming around in any street or lane which is the only place affording recreation for these play-loving kids. No further consideration of the women's bad lack of recreational facilities is needed.

To build well our society, to save it from the destructive elements of vice and crime, to increase its population and wealth, and to decrease the number of hospitals and jails, we have to afford adequate recreational facilities which comprise mainly the parks, play-fields, open space for athletic shows, play-grounds, and other healthy recreational facilities.

Selection of Recreational Areas

Nolen in his city planning mentioned 5 principles which should be considered in selecting sites for parks, play-grounds and parkways:

1. To acquire those easily accessible small tracts in different parts of the city which may most cheaply be adopted to serve as local play-grounds, neighborhood or recreation centers.

2. To seek also some moderately large tracts even though less accessible for the present generation, provided they are capable

of conversion at relatively small cost which will have the beauty of natural scenary.

3. To acquire property for large parks in advance of a general settlement of the neighborhood.

4. To select generally but not always lands which are not well adapted topographically for streets and buildings.

5. To distribute the parks and play-grounds over the city in such a way as to give the maximum of use to the people who will be called upon to pay for their acquisition, development and maintainance.

The different kinds of recreational areas should be grouped according to the age of people using them or according to their functions. The main kinds are:

1. Play-lots
2. Play-grounds for schools
3. Play-fields for athletics
4. Neighborhood parks
5. Community parks
6. Reservations, forests and parkways.

In addition to that, there should be in every lot or dwelling a small patch of land which is reserved for recreational use.

Standard Sizes & Spacings for Recreational Units

A very fair standard for recreational areas has been set at 15 % of the total area populated or 1 acre for every 200 or 300 people for high densities and one acre for every 100 persons for very low densities.

Squares & Plazas

They could be at any size and any shape. They are used downtown where land is expensive or possibly adjacent to public buildings or sites for them.

Play Lots

They are mainly meant to be used by children who are less than 5 years old. They should be located if possible within the bolck or the superblock. The radius for such lots usage could be as high as 3/8 of a mile, if a safe crossing is provided. Usually it varies between 1/4 - 1/8 mile with an area of 5000 - 10000 ft^2., a minimum of 2500 ft^2 could be permitted. Usually 1/10 of the population are children of less than 5 years old where every child needs 75 ft^2 on a play lot. 1/3 the number of children could be on the lot at one time.

As a population of 35,000 - 40,000 is expected to reside in the suburb considered:

The number of kids will be : 40,000/10 = 4000 kids

The kids playing at one time: 4000/3 = 1350

The area required : 1350 X 75 = 100,000 ft^2

Hence with an area of 20,000 ft^2, 5 would be required; while if a lot area of 10,000 ft^2 is taken 10 would be required.

Play-Grounds

They are to provide recreation for children of grade and junior high school age. They have to serve 1/4 the population of 5 - 15 years old where 1/3 of them are playing at one time. With

an average area of 150 sq.ft. for each.

So for 40000 people we need:

40000 X 1/4 X 1/3 X 150 = 500,000 sq.ft.

The size allotted for each is usually 2 - 7 acres although an average of 5 acres is recommended with every 1/2 mile radius of area served. Although two are satisfactory more were used in combination with high school play-grounds.

Again if we use the formula $A = .577\ r^2d$, where A is the area of play ground required, r the radius of the area served in miles, and d the density per acre and for a density of 60, we shall need 7.5 acres per 1/2 mile and for a density of 90 we shall need an area of 11 acres.

Play Fields

They provide active recreation for adults and permit athletic activities. The size of such play fields has a minimum of 10 acres where 20 acres are recommended. They serve usually those people who are between 15 - 24 years of age. A play field requires 600 sq.ft. for every player where 1/5 of the population are within the age of using such a playfield and 1/4 of the population between 15 - 24 are expected to use the play field at one time. So for 40000 people we need:

40000 X 1/4 X 1/5 X 600 = 1200000 sq. ft.

30 acres or 120ooo sq.ft.

One play field of 30 acres which will include the different kinds of sports will be located at the north of the suburb, where spaciousness and accessibility are afforded.

Neighborhood Parks

These parks could be combined with play grounds and play fields whenever economy of land is required. Community parks could be developed in between the blocks where it could be accessible by the inhabitants of that community and isolated from traffic and traffic nuisances.

Parkways and National Parks

The parkways and national parks in general could be developed outside the limits of the city. In the suburb of Damascus the existence of rivers provides a very good site for the development of parkways and national parks.

CHAPTER VI

Public & Semi-Public Buildings

Many of the ancient cities were rendered everlasting through their public buildings and civic centers. The public buildings were the glory and the pride of the ancient and mideaval ages. The kings and rulers used to take special interest in developing the grandeur and the beauty of their palaces, their temples and the civic centers of their cities.

In the modern city, public and semi-public buildings are still a place where the city can show its character and pride. Nevertheless, the adornment of the city by the public buildings should not be everything in choosing our buildings sites and in choosing them.

Thomas Adams wrote," Such adornment has always been the dominant consideration in the planning of capital cities by powerful rulers; but in democratic countries it is, or should be secondary to the aim of securing healthfulness and efficiency in living and working conditions. The beautiful building in democracy should have its roots in healthful homes, and a community that is well housed will grow in that pride and love of city that produces order and beauty in public places and in buildings devoted to art, education and associated community life is all its forms."

" The creation and preservation of beauty are possible without extravagance. Ugliness and disorder usually follow from the wrong use of money not of saving it."

Public buildings usually include museums, libraries; the buildings where the government authority is exercised, schools, markets hospitals, jails, worshipping places, fire houses and structures con-

nected with water supply, drainage and electricity. The civic center would be a good idea of grouping some of these buildings in one center thus creating good access, better design, and more efficacy.

The suburb of Damascus will have as public buildings :

The municipal building and police station.

The post office and fire brigade building

The mosque

The library city hall or auditorium

The cinema or theater

The five aforementioned public buildings will form the civic center.

The Site of Civic Center

The location of the civic center should be near and accessible to, but not directly within the paths of heavy traffic flow. Also it should be near but not necessarily immediately within the heart of business center. It should be easily accessible from all parts of the city by one or more public carriers. The grouping of public buildings in one center is advantageous in that it permits the concentration of public business and facilitates the interdepartmental affairs. In the same time such a grouping gives dignity and favourable impression to the town.

The other public buildings which are not included in the civic center and should not be, are: the public schools, the hospital and the business centers.

The Hospital

The hospital is one of the most important necessities for our suburb. It should fulfill many conditions at the same time. It

should have large and wide plot with much sun and open air around it. It should be away from congestion and traffic nuisances but must be accessible at the same time. The area allotted for it should not be less than 5 acres with a park adjacent to it thus affording more clearance and a country-like location.

The Public School

The public school location should be included in the elements of city planning of our suburb where the location of the schools should fulfil many requirements that would not be fulfilled later on if their site is left to the hazardous choice of educational boards.

The schools in this laborers' suburb will have two main kinds: elementary schools and high schools for both sexes. The size of the school is something debatable but the minimum could be set as 400 pupils. The number of pupils in a community in relation to the proper location of that community is not well established but could be fairly estimated. If we make the elementary education obligatory we shall have 13 - 15 % of the population going to elementary schools. The number of schools needed will be 6 - 8 schools of 600 each. The number of high schools will be of course less; as less than 40 % of the elementary schools students would go to high school.

A combination of high school with elementary school for girls will be tried in a few cases in this suburb. The maximum distance allowed for elementary schools from the pupils homes is 1000 meters which could be covered in 15 - 20 minuts.

The location of schools should be away from dangerous crossings traffic and should be located adjacently to play-grounds and play fields.

Market & Shopping Centers

It is not in fact a part of the public buildings but it is a part of the public utilities. The main considerations taken in the plan are

a. To segregate the shopping centers from residences.

b. To afford shopping frontage which requires an average of 5 meters per 100 persons.

c. To separate the business street from the main street thus diverting the traffic and affording a safer shopping place for pedestrians.

d. Giving a wide sidewalk for those who are shopping.

e. Giving ample place for parking in the business street.

f. Having a separate track for loading or unloading trucks.

To fulfil the aforementioned requirements, the shopping strips were found very satisfactory in some designs while enclosed centers were devised in other designs.

CHAPTER VII

HOUSING

A satisfactory solution of town planning is achieved when plans for houses and plans for the whole city are laid out simultaneously. Then it could be possible to meet the social, economic, psychological and hygienic requirements of good human living.

Types of Dwellings :

The main types of dwellings that could be discussed in such a treaty on town planning are:

Row houses

Attached houses

Detached houses

Apartment houses

In fact the one family house can never be matched by any other type of housing. It connects the house to the garden and provides all the hygienic social and psychological requirements of a home. A row house could achieve some of the conditions that are fulfilled by the free standing house but never all of them. The apartment houses although very much disfavored nowadays, could fulfil many conditions that are satisfied by single family homes. These apartment houses could be even ideal homes for childless couples and bachelors as they offer much of a communal life that is lacking in the single family homes. It is true that the tenant in an apartment house cannot have a garden but he can enjoy the sun light, the fresh air, and the scenary offered by such gardens that surround his building. Even a better arrangement could be achieved by having a mixed type of dwelling where an apartment house

may stand every now and then among garden type dwellings. The minimum number of rooms in a house should include at least: one master bed room and two others for the children so that there are seperate sleeping quarters for boys and girls, a living room with a dining recess, a kitchen and a bathroom. The importance of having a large living room should not be overlooked although the house might be small. A good arrangement of rooms always determines the size of a house.

Insolation and Orientation of Houses

The importance of sunlight in planning our dwellings is never to be forgotten. Nevertheless, our builders forget this when they construct dwellings, while they remember it when they build shelters for animals.

The value of insolation was very much stressed even in Socrates' teachings and philosophy. Xenephon reports in his Memorabilia that Socrates preached the south orientation for houses. This principle was applied in Priene the Greek city in 350 B.C. when it was laid down so that the important rooms of houses face the south.

Nowadays there is much confusion in regard to orientation where some planners run the rows of houses South-North and others East-West. In both cases the rooms are not insolated; in fact the façades are only receiving the sun light.

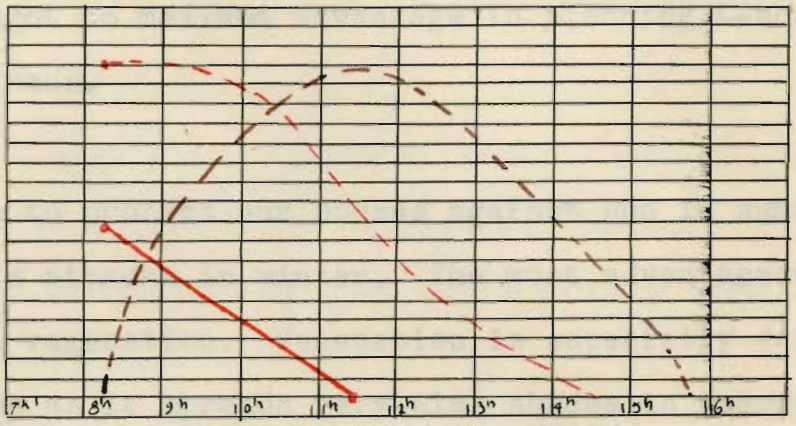
To study well the difference that exists between the effects of different orientations we have to take one house in a row of houses, have it face the North, the East and then the South-East. A further better study could be applied to an L-shaped house. An extensive study on this subject was published by Hilberseimer in "Penetration of Sun

light into the Room", 1935. In that study a set of these bed rooms taken from typical plan of a semi-detached house are tested. The quantity of sunrays that penetrate in them is carefully measured on June 21 and December 21 for three main orientations: East, South, and South-East exposures. The quantity of sunrays that penetrates is given by the three following graphs.

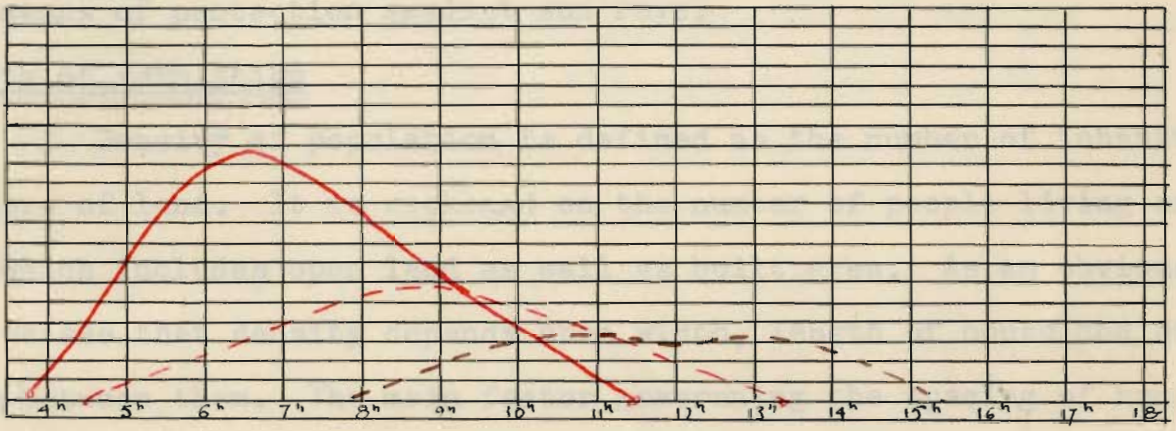
The result of these studies indicate that the insolation of the rooms reaches its maximum in winter and minimum in summer for South exposure. For east exposure the opposite is true where insolation reaches its maximum in summer and minimum in winter. The South-East orientation is a solution mid-way between both. The total of sunlight penetration is the same for the three exposures. But the warmth of the health-bringing infrared rays is useful in the spring and the winter only if the sun penetrates deeply into the room at those seasons. Here the south, south-east or south-west orientation fulfills this condition while an east or west orientation does not. The ultra-violet beneficial rays could be at their maximum efficacy between May and September from 8 a.m. to 4 p.m.. The south, south-east or south-west orientation is better for the ultra-violet rays penetration while East and West orientation is worse.

We may conclude that the least advantageous orientations ~~that~~ are East and West while South orientation is the most beneficial. In fact South-east and South-west orientations are to be preferred to due south as the rooms could be combined in such a way as to have the bed rooms receiving the sunlight from the South-East while the living room will receive the sun from the South-East and South-West. This

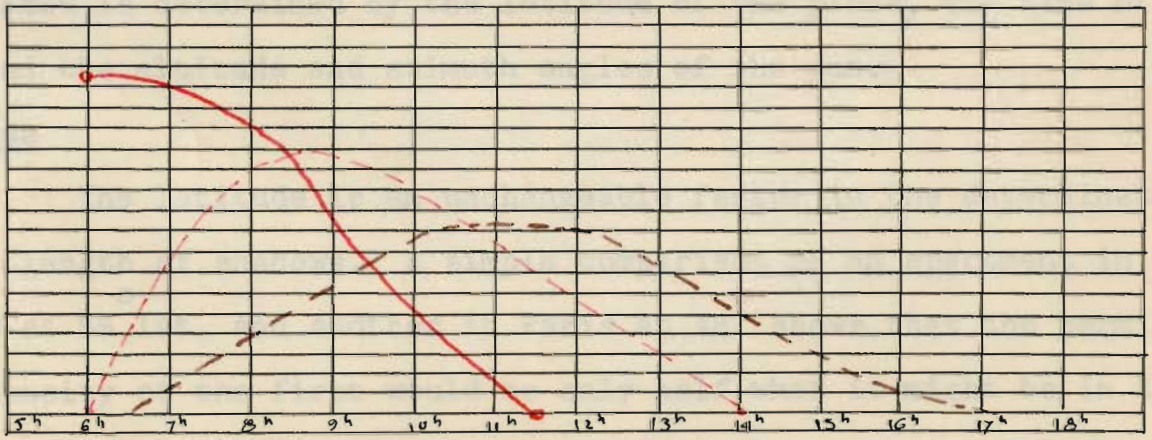
Sun Penetration Diagrams at different Seasons and different Orientations



DECEMBER 21
South orientation: Sun Max. East orientation: Sun Min.



JUNE 21
South orientation Sun Min. East orientation Sun Max.



MARCH 21
All orientations the same

South orientation
Southeast orientation
East orientation

arrangement could be brought to maximum advantage in planning L-shaped houses for high density areas.

Protection against Sun

In fact we have to protect our houses against sun in summer as well as we long for its attacks in winter. The most advantageous protection we may have is vegetation. Vegetation is especially designed by nature for this purpose as it spreads very wide shades in summer and affords no obstruction to sun rays in winter. Balconies could be very good means of protection against sun rays.

Density of Population

Density of population is defined as the number of inhabitants per acre of land. It is reckoned on the number of people living on an area which includes open land as well as built area. As an obvious result we see that density depends upon width, length of house and distance between them. The main factor governning the spacing of houses is the shadow cast by them on the neighboring houses. The length of the shadow is determined by the latitude of the place, the time of the year and the altitude and azimuth angles of the sun.

Latitude

The latitude is an unchangeable factor in the determination of the length of shadows. A simple comparison of an apartment in Moscow at 55° lat. and another in Paris at 48° shows that the permissible density at the first would be only half what it might be in the second. The farther one moves southward in the northern hemisphere the shorter the shadows are and the higher the density becomes.

Orientation and Topography

Orientation as it has been shown in a previous discussion is best once it is laid in a diagonal direction. Topography has quite an effect as in an area sloping southward people can live more healthfully and comfortably than in a plain area or north sloping area.

Is High Density to be condemned ?

To start with we have to differentiate between overcrowding and high density. Overcrowding does not mean high density; it means bad housing in the worst sense, ill-planning and low standard of living from every point of view. High density is not a bad thing in itself; what we are against is overcrowding. Overcrowding is well illustrated in many American and European cities as well as in our oriental cities. In Damascus especially, the problem of overcrowding is very serious. The old city which still holds its old badly built houses, the very narrow lanes, the overlapping of houses on each other, all show the urgent need of reformation or rather of planning intelligently the units which are to replace these slums. Nevertheless, while planning for a new region, high density is advantageous and recommended for many reasons. In fact low density results in something against community life itself, devaluates the land, disorganizes the whole structure of the city, increases distances and makes community services uneconomical. For very low density the city will be neither city nor country.

On the other hand high density for well planned regions proves to be better than low density as it affords better communal life with more social intercourse and more economical use for expensive

land and construction. Thus taking the average density of the highly populated cities as in Paris, 140/acre; Berlin, 120/acre; London, 60/acre Chicago, 50/acre; we find that a good average density to plan is 80/acre. A high density could be achieved with the use of the following types of dwellings.

Dwellings

Planning houses depends mostly and restricted by density. As density goes higher special type of dwelling is to be used to allow for such development. The lower the density the less restrictions are and more freedom is taken in planning. In the suburb under consideration standard types of dwellings will be used.

Type A

L-Shaped one family house.

The houses in L are to be used where high density and privacy are to be achieved. The L-shaped house will form one unit by itself completely detached from the neighboring buildings; thus affording adequate insolation in every room of the house. The little square garden which is left inside the house would give a pleasant home to the worker and will in the same time contribute to the general garden appearance of the city. The house will be planned to hold 3 sleeping rooms which are the minimum requirements for a 6-member family, a living room where a part of it will be used as a dining room, a kitchen, & a bathroom, and stairs leading to an entresol. The orientation of the house will be in such a way as to have the living room exposed to the south-east while the bedrooms will be directed to the south-west. The area occupied by the house would be 103 m^2. The patch of land

will be 300 sq. m. where 175 sq.m. will be alloted for the garden, The construction materials of these one-story houses will be inexpensive as it need not be strong to support more than one flat. These dwellings could give the laborers complete privacy and seclusion and every laborer will be able to own such a house on installments in a short time.

Type B

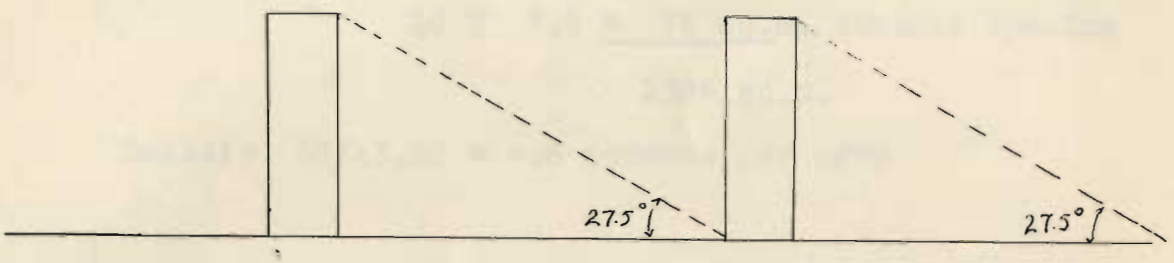
Apartment houses.

The single flat dwelling is very ideal in its fulfilling conditions of city life, but apartment building is more important due to the fact that economy has to be taken into consideration. The main type of apartment building used in Zone C will be composed of four storeys wher two stair cases will give access to four apartments in each floor. Each apartment will be composed of 3 bed rooms for 6 persons, or 2 bedrooms for 4, a living room with dining room combined, a bath and toilet room, a kitchen and verendas or balconies. This apartment plan given will form a sample design for such buildings, in the meantime other types could be designed as well.

In Zone D the same apartment arrangement will be used but there four staircases are combined to give a zigzag shaped building which gives more surface exposure to open air from the sides of the apartments.

The limited height of the apartment building will be four storeys where each storey will have a height of 3.10 meters thus giving a total height of

4 storeys	3.10 X 4 =	12.40
raised above the ground		0.60
		13.00 m. total height



Having determined the height of the building we have to determine the spacing as the spacing is a function of the height.

Taking the angle of light to be 27.5° we may find the most economical height that gives maximum density. With a storey height of 3.10 meters we shall have the following heights for the increasing number of storeys :

4 storeys	13 m.	spacing will be	25 m.
6 "	19.5 m.	"	37.5 m.
10 "	32 m.	"	61.5 m.

To bring into consideration one staircase double apartment unit we shall have 10 persons living in each floor. For the different number of storeys we shall have the following number of population occupying the following areas:

4 storeys with 40 persons

Area occupied	20 X 10	= 200 sq.m.	built area
	25 X 25	= 625 "	spacing
	10 X 5	= 50 "	spacing laterally
		875 sq.m.	total

Density 40/8.75 = 4.57 persons per acre

6 storey building with 60 inhabitants

Area occupied 20 X 10 = 200 sq.m. built area

27.5 X 37.5 = 1030 sq.m. spacing

10 X 7.5 = 75 sq.m. lateral spacing

1305 sq.m.

Density 60/13.50 = 4.6 persons per acre

10 storey building with 100 inhabitants

Area occupied 20 X 10 = 200 sq.m. built area

35 X 61.5=2150 sq.m. spacing

10 X 15 = 150 sq.m. lateral spacing

2500 sq. m.

Density 100/25 = 4 persons /acre

The upper calculation shows clearly that for apartment buildings to obtain maximum density 4 or 6 storey building could be used as well. Due to the fact that a 6 storey building requires a lift, the 4 storey building was chosen as it insures a competent density without an excessive height.

CHAPTER VIII

Zonning

Zonning is a very important consideration in building and keeping the shape of the city to what it is to be. Zonning has as a main aim the segregation of the different districts of the city limiting each in height and area. In zonning we have three main districts which we have to consider namely: the residential, the commercial and the industrial districts. In the suburb at hand the industrial district will be lacking due to the fact that the suburb is meant mainly for residential use. The area of the suburb is divided into four main zones:

Zone A : is meant to include only flat dwellings: the area of each dwelling will be limited to 300 sq.m. and the height will not exceed 3.5 meters. The main aim of this zone is to develop a complete new idea of affording seperate detached houses at the cheapest and the most economical rate. Two green belts will be added to seperate the two units that this zone contains. In between the block amidst the green belts schools and parks will be located thus giving what the inhabitant of this zone needs of education for his children and recreation for his family. The commercial district or center is totally excluded and segregated from the residential district. A frontage of 7.5 meters is provided for each 100 inhabitants as many of them will be making most of their shopping downtown.

Zone B : Zone B has in fact a special planning by itself. The radial circumferential system is needed in that zone. The houses will be limited to 2 1/2 storeys in height. The area built of each lot will be

not exceed 20 % of the total area. The zone was left free for private designs to be carried on in that district. As far as the frontage is concerned no building will give on main streets. All dwellings will give on the private roads and lanes.

Zone C : is a major part of the area where the buildings are located and already designed. The height of buildings in this zone and zone D will be 4 storeys as it has been discussed in Housing. The spacing will be 25 meters as shown on the plan of that zone. The commercial district will be occupying a block by itself near the main thoroughfare and will be seperated from the residential district.

Zone D : has the same development as zone B although the buildings were given a different arrangement.

CHAPTER IX

Utilities Systems

1. Water Supply

Sources of Water Supply

Nature has granted Damascus with excessive quantities of water. The main supply source of potable water in Damascus is El-Fige. El-Fige supply is very abundant and could be used to supply the new suburb. Nevertheless, in case the water of El-Fige is not enough, infiltration and purification basins can be developed to clean the water of any of both rivers that surround the city.

The Reservoir

An elevated place for the reservoirz should be chosen as it has to be on equalizing reservoir for the consumption of the city where water is pumped to the reservoir and drawn from it consequently. The design of the reservoir depends mainly on the quantity of water required for the consumption of the city in 24 hours in case the supply of water is uniform, for safety a capacity of 48 hours will be designed for.

Distribution System: To connect the reservoir with the community, a distribution system is to be used. The plan of the whole distribution system may be likened to a tree where its root is the collecting reservoir, the trunk the principal supply mains, the branches the distribution system, the leaf stems the service pipes and the leaves themselves the places of consumption.

To deal with distribution system we have to start from the consumers' homes where the leaf is. Due inspection should be carried on to prevent wastage of water due to bad fixtures and connections. Proceeding to the stem of the leaf which represents the service pipes that connect the house system with the street mains, we have to choose carefully the material of the service pipes, be careful with the connections, and locate their positions where they may be easily dug out and repaired. The material recommended for use in service pipes is lead or galvanized iron. A very satisfactory and permanent service is found in cement lined pipe as it outweighs the other two kinds of materials by standing corrosion, not being poisonous in the presence of some chemicals and having a low first cost. Pipes for street mains are usually made of iron. Street mains should have a well organized plan of laying down as they present the same problem of digging out in case carelessness in planning and design was dominating. The street pipes in the residential streets where service pipes are to branch from could be installed on both sides of the street as that will shorten the length of the service pipes and facilitates trenching. In the main arteries the one street pipe could be carried over on one side only of the street. Hydrants must be located for fire water use and for draining, connecting and disconnecting water supply at different regions of the city.

2. Sewage Disposal

When we supply water we have to dispose of it. In fact we have to complete the circuit of water. Sewage system is as important as water supply system as on both depends the public health of a whole city.

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The sewage system starts at the different units of residence. The plumbing system forms the beginning of the sewage system thus it should be well installed and fitted. To insure such a good installation a plumbing code is to be worked out and police power delegated to see after it. Regulating the sizes, the kinds of pipes, the fittings, the placing of taps, the vents and the grades of horizontal lines, is of utmost importance.

Sewage is usually carried by sewerages which are run under the streets to carry the sewage run off to the place where it should be disposed of. Sewers could be divided into two parts:

1. Utility sewers
2. Storm water sewers

The first is used primarily to carry polluted water which is collected from houses, firms and factories; the second is used to afford an escape for storm and rain water. In most cases both usually are combined and one system of sewers is used. In our plan only one system will be laid down as the expenses for laying two systems could not be justified.

The sewers are but conduits which lead the water to where it should be disposed of. Here the problem starts. The existence of two rivers on both sides of the suburb could present a solution were this plan laid down 50 years ago. But the pollution of river water, the danger that it would impose on the public health and the natural beauty that will be erased present a very severe objection against the use of water ~~from~~ in rivers as a means for sewage disposal.

The sewage flow in this case should be either disposed of in the river at least 500 meters beyond the boundaries of the city or by devicing a special plant for sewage treatment. Treating the sewage disposal in a plant has many beneficial results mainly the use of the filtered water for irrigation, the use of the dry sludge as a fertilizer, and the freeing of the city from any spot that spoils its beauty.

3. Transportation

To connect this suburb with the city and afford communication within the suburb itself, an adequate system of transportation must be available. Road transport is mainly divided into three groups:

a. Motor transport

b. Horse drawn transport

c. Transport by pedal cycle

Motor Transport: Motor transport is subdivided into two categories:

i. Private transport

ii. Commercially operated transport, both passengers and goods.

Private transport usually includes all vehicles owned for private purposes. Private cars will form quite a part of the transportation in the suburb as many of the prosperous first rate workmen as well as many of the business men will be owning private cars. The fact that production of cars is carried on a large scale cheap small cars will be available for the average salary earner.

Commercially operated transport is subdivided into two main parts: Goods transport and Public passenger transport. Goods transport uses usually locomotives, heavy motor cars and motor cars. The

other kind of public transport namely the passenger transport is very important in this case as a big percentage of the inhabitants of the suburb will depend mainly on the public passenger transport. Public passenger transport is usually effected by the use of three kinds of vehicles:

i. Stage carriages, which are motors carrying passengers in groups to a short distance with seperate fares, are mainly omnibuses and short distance coaches.

ii. Express carriages, which are motor vehicles conveying passengers at seperate fares for long distances.

iii. Contract carriages, which are motor vehicles carrying passengers for hire or reward, not at seperate fares but under a contract expressed or implied for the use of the vehicle as a whole.

Stage carriages will be of course used for transportation within the suburb itself while Express carriages will be used for communication with the main parts of the capital.

In fact the value of the whole suburb its function and use will depend mainly on how efficient our transportation system will be.

CHAPTER X

Financing of the Project

A huge project of this kind as the development of a new suburb that will hold 35 - 40 thousand people, could never be carried out by individuals or small companies; it should be executed by the government or a huge company supervised by the government. The enterprise may be built on loaned money for a long period say 10 - 20 years. The money thus spent on the project will be recollected by selling on installment the dwellings to the tenants or by renting them. The expenses will include:

a. Appropriation of land
b. Subdivision of land
c. Paving of roads
d. Organization of parks
e. Laying of utility systems
f. Building of retaining walls for the rivers
g. Planting of recreational areas
h. Construction of public buildings
i. Development of residential centers.

All these expenditures will be charged to the tenant where he will have to pay a rent to ammortize the expenses and pay their interest. The tenant will be the real owner of his dwelling as soon as its cost is covered.

CHAPTER XI

C O N C L U S I O N

Man is the axis of new cities; his needs are the basis of their plans. The present conditions in which we are still living make us feel the inhumanity of our cities. They were not planned to conform to the elementary human necessities. May be we cannot afford better conditions because of lack in our economic means, but lack in economic means is mainly due to the bad conditions of living that overburden our moral and spiritual behavior. Let us break that vicious circle and start a new city life where we may feel that we are human beings. Let us have new cities where dwellings express our desire for shelter, dignity, and intimacy; where parks express our hunger for open space, for recreation, and for an environment favorable for the development of our youngsters; where the most diverse elements composing the urban whole conform to the scale imposed by man providing scope for his highest aspirations.

Planning for new suburbs creates new neuclii for new cities which replace by and by the old cities changing the whole life of a community and raising it to where it should be.

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