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ARCHITECTURAL DESIGN OF A COMMERCIAL CENTER IN BEIRUT

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ARCHITECTURAL DESIGN

OF A

COMMERCIAL CENTER

IN

B E I R U T

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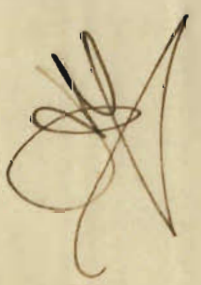

"The candidate fully appreciates the helpful advice of Professor K. Yeramian in the preparation of this thesis. Much of the improvement in the functionnal design of the hotel is due to his valuable suggestion. We wish to express by these simple words all our gratitude for his help and supervision".

C O N T E N T S

INTRODUCTION

If we rapidly glance at the past development of Beirut, we will easily determine the reasons for its present rather bad situation regarding the congestion in the downtown area:

Before the first world war, Beirut was governed by the Ottoman Sultan, separated from the remainder of Mount-Lebanon. At that time, the town was small, with few inhabitants, and its limits were the sea, the pine forest Southwards and the Beirut river Eastwards.

After the first world war and the fall of the Ottoman Empire, the French took over the administration of Lebanon. At that time, Beirut was incorporated to the state of Lebanon and was chosen as the capital. This new situation, brought to the town an unusual prosperity. But, strange as it may appear, the town of Beirut has hardly gone beyond the limits assigned in the past. On the other hand, by the mere fact that Beirut became the Capital of a new state, and the outlet of a number of interior countries to the sea, its population increased tremendously, so much so, that nowadays the population of the city of Beirut is half the population of Lebanon ! ? (1/2± million) !

What is to be expected from such an abnormal situation of confinement of land and tremendous increase in population ? We are witnessing the results every day in the downtown shopping and commercial places: the circulation is unbearable, the loss of time appreciable, the efficiency of work low.

The first remedy to such a situation is to disperse the shopping and commercial center from the two or three main roads where it is confined ever since the days of the Ottoman Empire.

The purpose of this study of ours is, in conjunction with the above proposed idea of developping satellite commercial centers, the development as a Commercial center of an actual lot owned by the candidate. The location of the piece of land and its dimensions seemed satisfactory to me for choosing it to be developped as a Commercial Center.

The piece of land, as it may be seen in the cadastral plan, Plate 8 of the drawings, lies at the intersection of two streets, Said Akl and Mukhalesiat streets. According to the new general town-planning scheme of the Beirut municipality, this intersection will be widened into a square with dimensions 45 by 30 meters. (Projected improvements are shown in red in the cadastral plan) . The piece of land is to the south of this square, and to the west of Said Akl's street; it has got the advantage of vicinity to the present centers of the city: The Debbas square and Place des Canons. But our proposed center will be at the same time remote enough from the congestion of these centers. It lies near to and inside of the border of the future commercial belt which, going up from the harbour, will surround the heart of the city and pass some 50 meters to the south of the land.

In order to relieve thecongestion inside the Commercial zone, it is expected that traffic will be reduced to the minimum.

The problem of controlling the traffic will give rise to the corresponding problem of finding areas to use as parking places for the cars and buses coming from the mountains to Beirut. The position of the piece of land at the beginning of the Commercial zone suggests as natural and very necessary the management there of a garage or parking place.

Together with these two developments: A shopping center, and parking place or garage, which will occupy respectively the ground area and the underground, there will be a hotel occupying the floors above ground, because for a spot such as this one, the latter is likely to flourish more than any other kind of development, be it dwelling houses or recreational center.

The situation being as we have outlined it in the preceding pages, we have therefore decided to study the planning of our piece of land to serve conjointly the three following functions:

1) Underground garage or Parking place
2) Ground floor of shops and stores
3) Above floors will house a hotel.

PART I

Problems of Shopping Centers

The land as it stands presently occupies an area of 1340m2 which will be reduced to 1150 m2 by the new alinement of the streets as shown in the cadastral plan in map number 8. The shape

of the land is trapezoidal with a width 22 meters running east west, and a mean length of about 50 meters running north south. The problem was to get out of this piece of land the greater possible number of shops. The frontage length along the square and Said Akl street is about 68 meters. Out of these we must subtract a minimum of 12 meters for the two entrances to the hotel; the main entrance and the service entrance, and for the entrance to the parking place below. There remains only 56 meters of frontage, which can afford room for 14 shops giving 4 meters frontage to each shop, this being a mean value. Yet we have planned our scheme so that we get 21 stores, or an increase of one third.

This increase was reached at by taking advantage of the following situation: Running parallel to the Mukhalesiat street, at a distance of 17 meters to the south of our land, there will be, and the municipality is beginning to open a road 15 meters wide which will take the traffic from Debbas place directly to the quarters of St-Nicholas, Sursock, and Achrafieh.This proposed new street will relieve the present heavy traffic on the Mukhalesiat and Said Akl streets. A short closed end street goes from this new road northwards till it reaches the southern limit of our land. My idea was to open this closed end road partly through a strip of our land, and partly through the neighbour's land.

This device we have resorted to is not meant to be a communication from the new 15 meters road to the square open to vehicles, but it will be reserved to pedestrians, this because we think that one of the main requirements of shopping streets and shopping centers is the elimination of through traffic from the shopping streets, as this will diminish the congestion and the number of accidents. In consequence what we have finally resorted to is a combination of a cul-de-sac reaching a point 20 meters from the square and the continuation of this cul-de-sac by a passage for pedestrians. The cars will be hindered from using this passage by the columns sustaining a wide corniche of the hotel above; this is shown in the ground floor plan Plate I of the drawings.

The second means of increasing the number of stores was to have a covered passage under the building, which will be also used by pedestrians only and which leads from the cul-de-sac to the Said Akl street. Shops and stores will be open under the hotel on both sides of this covered passage, and the secondary entrance to the hotel will be situated in this passage as shown in Plate I. This second feature of the planning to gether with the opening of communication from the 15 meters road to the square, made it possible to increase the number of stores by one third, and to comply with an important requirement of modern shopping centers: Keep away from through traffic.

PART II

Ground Floor and Parking Place

As it can be seen in Plate 1 , the main entrance has been placed at the corner junction of Said Akl street and the square, this corner being the most appropriate for such a function; Duc to the importance which must be given to the entrance of a hotel, it should be placed facing the square.Also, to give to the entrance a better appearance, and a wide sidewalk in front of it, we have receded at the corner by cutting across it as shown in Plate 1.

The first flight of stairs facing the entrance door is two and a half meters wide, while the second flight, perpendicular to it,is two meters wide, which is quite enough for easy circulation, the 2.5 meters not being necessary for functionning purposes, but only for the appearance of the entrance.The space alloted to the elevator is 2.5 by 1.4 meters net which is enough for an elevator containing 6 persons. Next to the elevator, there is a triangular shaped space which will be used as an enquiries office for the hotel, and as a newspapers and cigarettes stand. To the other side of the staircase room, a shop which has got two entrances, one on the square, and the other leading to the staircase in front of the enquiries office, can be used if necessary as a restaurant or a Soda-fountain by the direction of the hotel. The space under the first landing enclosed by the back walls of the shops will be alloted to

the central heating plant. This space has got an area of 14 m2 and a clearance of 1.5 steps which is ample enough to house the central heating system.

The back walls of the shops facing the cul-de-sac and the Said Akl street in the northern part of the building are touching each other, giving for the first ones a depth of 7 meters and 8 meters for the others. On the southern part of the building, while giving to the corresponding shops equal depths of 8 meters, the space left between the back walls has been devoted to toilet rooms; aeration has been secured for these toilets by opening windows towards the open space above the ramp leading to the underground parking place. The frontage width of the outside shops varies between 4 AND 5 meters, while in the covered passage we have managed to have some stores with a frontage width of 3.5 meters and shallower depths, as in the passage we need not have stores too deep because light is not abundant there.

As the ceiling of the shops is at a height of 4.6 meters, we have devided this height into two, the first being the shop proper with a ceiling at 2.5 meters, and the space left above will be used as a storage place or a small office for the management of the store. The stairs leading to the attic of the shops will have only one flight running parallel to the back wall of the shop. The stairs will have a rise of 20 cms. and a width of 24cms. 13 steps will be necessary to reach the attic, and these

will occupy a horizontal distance of 2.9 meters, which distance is more than provided for in all shops.

Another feature of the ground floor plan, is the covered passage which is 20 meters long by 4.75 meters width.The height of the covered passage extends all through the upper floors till the roof, dividing the building above into two big units which communicate with each other by means of a wide corridor which spans the passage below it.At the roof we have managed a ceiling with all glass panels framed into steel, which panels can slide horizontally so that the roof may be open during summer for better ventilation, and closed in winter, giving only light, the ventilation taking place by the sides.As it appears in plate, the secondary entrance to the hotel is placed at the middle of the passage.The first flight of stairs having 15 steps at 17 cms. the step, will clear off at the landing a height of 2.5 meters, providing passage under the second flight of stairs which reaches the spanning corridor of the hotel above.Also two ventilation blocks, one meter wide have been deviced as shown, for the garage below.

The entrance to the underground parking place has been chosen where it is for two reasons:

1) This point is the furthest away from the square,where no space could be sacrificed economically for the entrance.

2) As it appears in the cadastral plan, Plate 8 of the drawings, there exists in front of the entrance a street at right angle to the Said AKL street, this street widens the space in front of the entrance for cars to move around and circulate freely.

Plate 2 shows the plan of the underground parking place and the ramp leading down. This ramp has a slope of 25 %; to go down a vertical distance of 4.25 meters to reach the floor of the parking place, it requires a length of 17 meters as shown. The columns from the floors above the garage, were approximately 25 in number scattered in the garage area; in order to open free space for circulation, we have reduced their number to 12 columns only, arranged as shown in the plan, so that some cars park transversely in between the columns, and other cars park parallel to the long direction.

The part of the garage area which is below the cul-de-sac has been arranged to house four big repair shops, two small ones and a toilet room, while the part under the ramp may be used also for parking cars.

P A R T III

THE HOTEL

GENERAL CONSIDERATIONS

The need for a hotel in business, commercial, or shopping areas is obvious. Usually in such areas, apartment houses or dwellings should not be allowed by zoning regulations; the only buildings allowed for dwelling should be hotels. Such

hotels are not meant to be for tourists coming from abroad like the St. Georges hotel or the Normandy. The situation of the land does not favour the development of first Class hotels of that type with all the luxury to attract and satisfy foreigneers who come to enjoy their life.

On the other hand,nearly all the persons coming from countries in the interior,such as Syria, Transjordan or Iraq, which people are usually merchants and businessmen,will need a place where to spend some days while they are achieving their affairs in town. The same happens with people coming from the mountains to buy goods in Beirut; they will often have the need to spend only one night in town, and for that they need not have to go to such luxurious places as the Normandy. They will gladly find a good and cheaper hotel near the spot where they are working. One must keep those facts in mind when analyzing the arrangement and the planning of the hotel.

Hotel First Floor

To reach the first floor of the hotel we climb 27 steps at 17 cms. each; these 27 steps being necessary to cle enough distance for high shops in the ground floor. As we arrive at the last step of the second flight of stairs; we can see all around the hall,salon, Dining Room, bar, and direction office. In Plate 3 we can see how the salon and hall make a big unit hardly separated from the staircase by a balasteade. The

fumoir and reading room open into the salon by big glass doors which occupy nearly the whole length of these two units.To the right of the staircase , as we acceed to the hotel,we find the toilets divided in two sections , one for men,the other for ladies. Nearby,and well seen from the entrance we have the direction office. The dining room and the bar are placed to the left,yet the bar is so placed that it opens at the same time to the dining room and the hall. The dining room with its big dimensions,8.5 by 8 meters is wide enough to house 50 persons at dinner.

Opposite the dining room we have an office for the kitchen and behind it the kitchen. This office is essential in such a case as there should not be by any means a direct communication from the kitchen to the outside:the ditches are brought from the kitchen to the office where the waiters come and pick them up to the dining room. We further notice that the size of the kitchen,6 by 7 meters,is in proportion to the size of the dining room.

At this point the building is divided in two blocks by the open space above the passage;and to reach the southern part of the building ,the corridor 2 meters wide spans over the passage. The stairs coming up from the passage reach the corridor near the arch as shown in plate 3. This secondary entrance at the center of the long building is a necessity in solving the problem of circulation inside,as the persons coming directly to their rooms will do so without having to pass by the reception quarters of the hotel.

The corridor when reaching the southern part of the building, divides into two narrower ones,one of them going southwards, and the other eastwards. A bay window ~~which~~ runs along the corridors for light and aeration.

The three rooms on the east facing the Said AKL street are provided with private baths;one of these rooms has got also a living room next to it. These three units together will be suited for a small family who wants to spend some time in the hotel. The four rooms in the middle will be used mainly to spend the night,as they do not have direct access to the outside. These rooms together with the three rooms to the west are second class rooms,as they are not provided with private baths; but as we see in Plate 3,six toilets are devoted to these nine rooms.

The problem of aeration for the toilets which are inside,as can be seen in Plate 3,has been solved as shown in figure 1. This has been done by lowering the ceiling of a row of three successive toilets,and having holes in this false ceiling. An aspirator placed at the opening to the exterior will drag the air from inside the toilet.

The purpose we have aimed at in the planning of the hotel,is the complete separation of the bed rooms from the reception quarters;for that,all the bed rooms have been placed on the southern part of the building,giving us 12 rooms which vary in dimensions between 3.5 and 4.5 meters. These 12 rooms have got 9 baths,which may be seem too much compared to the number of baths in a corresponding private house with the same number of rooms; but one must not forget that in a hotel,the persons living

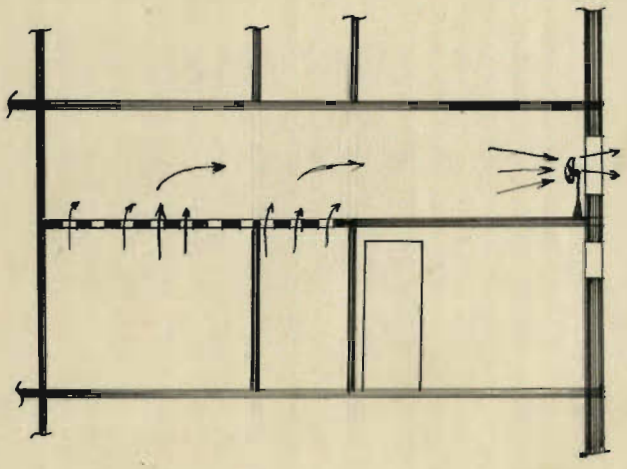

Figure 1

in different rooms are not members of the same family, and that if a person is using for example a toilet room to take a shower, somebody else cannot come in and wash his face at the lavabo; and I think that a bad feature of the design of our hotels, except for s some of the best, is the lack of sufficient means of sanitation.

PART IV

SECOND AND THIRD FLOORS.

These two upper floors are planned to be only the sleeping quarters; the stairs leading up to the second and third floors of the hotel are 1.5 meters wide, and the two flights of stairs contain 21 sreps. This height of 21 steps corresponding to 3.5 meters is enough for bed rooms. The arrangement of the rooms in the southern block of the building is similar to that of the first floor below. But as we can see in Plate 4, the arrangement of the rooms in the extreme northern part of the building does not follow at all the divisions below: In the first floor we have very big ~~uni~~ units of the reception qvarters, and in the floor above we have five small bed rooms. In order to make this division possible without having to show beams in the ceiling of the salon; we must use the flat-slab construction in the northern part of the building This type of construction will give us all the freedom to place the 10 cms. wall partitions in the northern block as shown in the plan of plate 4.

The 5 rooms above the salon, fumoir and reading room, will not be as large as the rest of the bed rooms, and they will be used by single persons. The space above the dining room has been divided into a small salon facing the staircase, a bed room with a window on

the open space above the passage, and a double unit of bed rooms and living rooms with private baths: as for the space above the kitchen,pantry and direction office, it has been divided into three rooms with private baths,one general storage room, and toilet for the public use.

The number of bed rooms in each floor is 22, which gives for the whole hotel with 3 floors a total number of 56 rooms.

PART V

ARCHITECTURAL CONSIDERATIONS.

As one may judge from the ground floor plan,there are two parts in such a plan which must be given more importance than others regarding the general functionning of the building; these two points of attraction are the main entrance to the hotel, and the entrance to the passage below. This importance in the horizontal disposition of these units is reflected in the composition of the elevation by the masses rising above them in vertical columns only for the main entrance,and in a vertical mass cut across by horizontal receding concrete strips 10 cms. thick, above the passage entrance. These two vertical dispositions give a more flattened aspect to the horizontal disposition of windows in between and on both sides.

As shown in plates 5,6, and 7,the strips of the exterior walls which are between the bottom and top of every row of windows, are projecting 10 cms. outside;these strips will be covered with grey marble,while the walls in between the strips will be left white: this feature will achieve a good contrast of texture, together with the vertical columns and strips above the main