



POLITECNICO DI MILANO
MASTER OF SCIENCE IN ARCHITECTURE AND
PRESERVATION

Economic Condition Enhancement in Bam City by Creating a new
Tourist Area, According to Iranian Regulations

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Abstract

Iran's young population and potential in terms of tourism is no exception. Iran has four different kind of climate areas, which desert region is very beautiful by having historical immortal past.

The occurrence of earthquake in Bam city, Kerman province, which is located in the desert region, resulted 25,000 people dead in 26 December in 2003, and it also destroyed Bam and its near villages. The thing which is remarkable in this national disaster, in addition to continuing constructing with traditional and inappropriate style, is formation of the buildings with metal skeleton, concrete skeleton, bearing wall etc. and a few building remained undamaged in this earthquake. After the earthquake, economic condition of Bam is very inappropriate even after 10 years. Bam is a very important city which is registered in UNESCO, because of a lot of valuable monuments, like Arg-e Bam, and its location on the Silk Road.

So according to Bam potential in tourism attraction, and unfavorable economic condition, we decided to create a new tourist area to help economic condition.

After having surveyed the location, studying the area, and the potential of its existing, we considered studies of the elements in the context of study plan, factors affecting of the design, studies of the same sample, and tourist complex design in the Bam city. This complex was designed in part due to the easy access of the city to the site, and heritage landscape of Arg-e Bam. In the design, we considered parts of the site for the future development. My main goal in designing this complex has been giving services to the local, regional, and national passengers, and increasing economic condition in Bam city. Now the project includes a hotel with ancillary services, and the Bazaar.

INTRODUCTION

Tourism History shows that in the distant past humans didn't rest for being aware from the world around, and they traveled a place to another, to find out the new ways. Perhaps since human began wide social life, and settled in different areas for using nature for agriculture, the travel has been difficult because of wasting his time and energy, so travel belonged to few people who were in the same business and was going to travel for business.

After the industrial revolution and the invention of high-speed vehicles, development and improvement of the communication between the countries, and shorten the time of travel facilities, it has provided in many different ways to travel around the world, and with relative increase income which was due to economic growth, it emerged a transformation in the field of tourism and round the world.

So today, in addition to social and cultural aspects, it has been as a profitable economic activity in the attention of many countries.

Although the tourism industry has not considered as a most important elements in our policy in this century, undoubtedly one of the most important of them. Tourism industry development prepares environment for growth, which this environment can be provided with tourism complexes.

Huge landscapes to the nature, high mountains, historical, cultural and crafts heritage, and symbols of cultural identity, is the strong and appropriate reason to create a hub of tourism in Iran.

The long era of human civilization, travel and develop a logbook in later years, has helped to create common interests and understanding between different peoples

around the world more than all factors and other forces. To access a broad and comprehensive view of the world is no better way to travel around.

The establishment of contacts between civilizations, many cultural manifestations lands with the emergence of new manifestations of cultural, and when the cultural image of the free flow of cultural unfamiliar cultural civilization can establish a mutual relationship, gradually like two air masses are moving towards each other, expanded ,and spread.

True heroes and true dialogue of civilizations, not a group of politicians, generals and businessmen but also thinkers, scholars and tourists around the world who have been able to track the history and etiquette in the different classes.

Today, tourism is one of the most important strategies for investment and economic development, through cultural and ethnic identity of each country.

Tourism in Iran, with the variety of climates, civilizations thousands of years and countless works of culture and art, is of great importance. Although Iran is the fifth country in the world for ecotourism and cultural and historical diversity tenth, but unfortunately has not yet worthy place among the countries achieved economic.

Chapter 1, Definitions of Concepts

1.1. Tourism

This definition was introduced in 1991 and was approved in Japan in Ottawa which called: to act as a business or residence.

Tourism in Iran, has an impressive history. Move, migration began in the Iran, when Korosh invaded to the Lydia in Minor Asia. After that time, Dariush has constructed a road from Shush to the Persepolis, and finally to the Sard, which had 2500 km long, with 111 Caravanserais, which was background construction of the motels. Caravanserais were called Chaparkhaneh in period of Daruish which connected provinces with each other.

1.2. Tourist

It is called a person who travel from her/his accommodation to the another country for less than one year (12 months).

1.3. Tourism Products

Tourism products are tourism infrastructure that will be available only with them the possibility of attracting tourists. One of the most important characteristics of tourism products is its service. Tourism marketing is the most difficult marketing in the world, which is known "selling dreams", since the largest part of that, inducing a sense to the audience. Tourism products are divided into 5 sections:

1. Transport - Transfer
2. Places of residence
3. Places of Hospitality
4. Attractions (natural and artificial)

5. Guides

From the five cases, three cases of first, in definition of the World Tourism Organization (WTO) are among the tourist facilities.

1.4. Definition of accommodation installation (hotels)

Accommodation installation is a unit for accommodation and hospitality, for the benefit of travelers, which has created based on criteria of building installations and equipment, according to relevant regulations, or approval of Ministry of Culture and Islamic Guidance. And the quality of services and regulations, is under the supervision of the ministry.

Accommodation and the shelter residence is considered by travelers (both domestic and foreign) first. Places of residence or domicile, including: a variety of hotels, motels, guesthouses, inns or hospitality, camping, beach, suites, residences and dormitory.

Number of rooms and beds: The total room or flat which has been ready for operation within a predetermined period of time that each residential institution for the benefit of travelers, depending on the number and called the number of bed room.

Hotel is one of the public residential installation which provide accommodation facilities and others services to the passengers. Today hotels is the most complete residential units in the world. In the today world the modern hotels provide within all the services needed by passengers, including accommodation, catering, equipment trade talks, political, international, national and patriotic exhibition of art and culture, entertainment and leisure, educational and scientific meetings and conferences and celebrations, sports activities such as swimming, gym, skiing, boating, hairdressers, postal and telecommunications services, shopping stores. The

most popular hotels in Iran are, Abbasi Hotel in Isfahan, Azadi Grand Hotel in Tehran, Laleh Hotel in Tehran, Homa Hotel in Tehran, Homa Hotel (Mashhad) and

The most important thing in making a good accommodation with a variety of hospitality and recreational facilities involved, referring a traveler to the hotel again, and the memories of his stay in the hotel. In the not too distant past, travelers and tourists, were often pilgrims, who had a short stay in the way caravansaries or the homes of relatives and acquaintances when they arrived towns. Only the holy places and religious cities, has been prepared houses for accommodation of pilgrims. The first tourist hotels according to international standards was built at the beginning of this century on the beach of the Caspian Sea.

In fact, hospitality is business and trade. In any commercial transaction, contract is bilateral, and satisfaction of both of the deal is a condition that can be considered successful transaction. If users are not satisfied in the hotel, grate investment of the hotel will be eliminated gradually due to lack of passengers, and ultimately to the detriment of hotel owners and thus will be the principal residence.

1.5. Types of residential installation and grading them:

Places of residence or domicile, including: hotels, motels, guesthouses, inns or hospitality, camping, beach, suites, residences and Pensions. Since the settlement of this study is the hotel we will mention only that.

1-5-1 cheap hotels (guesthouses and hospitality):

Guesthouses are rated in types 1 to 3 stars, and they are higher than in the hospitality. (Guesthouses in Iran is under the supervision of social security and retirement fund). Hospitality rank as Tier 1, Tier 2 and are privileged.

1-5-2 expensive hotels (luxury):

Hotels in International Standards classification and grading of 1 to 7 Stars and 1 to 4 grade, which are conventional and non-conventional types that will be mentioned later.

1-5-3 motels:

Usually they are built on the roads. In addition to motels are just a place to sleep, there are generally a gas station and restaurant.

1.5.4. Conference Center Hotel

1.5.5. Hotel Suites

1.5.6. Entertainment hotels

1.5.7. Apartment Hotel

1.5.8. unconventional hotel:

Many hotels can be considered as the ultimate destination for tourists. Some hotels because of location or weather conditions are unusual, which are for special tourists. Some of these hotels are as follows:

- Hotel garden
- The snow and ice hotel
- cave hotel

- Tree Hotel
- salt hotel
- mobile hotel

Statistics Records

1.6. Tallest hotel in the world:

Burj al Arab in the United Arab Emirates is one of the tallest hotels in the world. The hotel has 321m height. Construction of the hotel started in 1987 and ended in 1992. The hotel is 7 star by designer Tom Wright. The hotel is one of the most stylish hotels in the world and in fact the world's first 7-star hotel. This tower is connected the bridge to the beach. The building area of 70 thousand square meters and in construction have been used approximately nine thousand tons of steel. 180 meters long central hall hotel cost \$ 650 million.

1.7. Largest hotel in the world:

One of the biggest hotels in the world, is Drgntyng hotel in Malaysia. The hotel has 6118 rooms and has the largest entertainment centers in its place. In the past, the largest hotel was located in Las Vegas, with 5044 rooms, but by constructing of Drgntyng hotel, the record was broken.

1.8. Oldest hotel in the world:

According to the Guinness Book of Records, the oldest hotel in the world, Hexi Ryōkan Taigu in Vazv Japan. The hotel was opened in the year 717 AD and is famous because of its natural beauty and its geographical location adds to its attractiveness. Many hot springs around it, attracts tourists to the area.

1.9. Hotels design regulations

1.9.1. Graded hotels:

Since 1962, the World Tourism Organization has approved to develop a rating system and global accepted, and similar proposals were considered by the International Association of hotels. In 1995, have often been more than 100 classified systems based on the WTO model which was designed to be adapted to local conditions. Table 1-1 shows the standards established in accordance with the rules and laws of architecture and urban planning in Iran for hotels.

1.9.2. Classification of hotels:

Hotels may be classified due to the location, quality and performance standards. Hotels in the most developed countries, small hotels, including hostel, guesthouse, and other medium-sized and large hotels up to cover general operations and investment.

Table 1.1. Shows the standards established in accordance with the rules and laws of architecture and urban planning in Iran for hotels.

Rooms	Characteristics
More than 25	Small hotels, guesthouses, guesthouse business. They usually has private ownership run as a family. The example of tourism development in many tourist areas are actively encouraged.
50-80	Includes small independent hotels and luxury homes in the countryside and sites, hotels are large enough to have a separate management and may also have play equipment for the children.

80-120	Most of the big private hotels, a middle row of standards with independent restaurants and may also include an outdoor swimming pool and space for children to play.
110-200	New hotels in Europe tend to be placed in this size. Number of rooms that permit a better use of space and facilities including conference rooms and a separate private meetings, a coffee shop, restaurant and leisure center to be athletic. Examples of this hotel could be wider participation of dining venues, living and recreational facilities put at the disposal of clients.
150-250	Luxury hotels between the cities, and hot water. Hotels in larger size can provide personal service facilities. (Private beaches, golf courses, Restaurants and facilities)
300-500	Top-rated hotels in the city center and private inter-city hotels. These hotels usually has more than one restaurant, health club and sports facilities include an outdoor swimming pool and a large shopping center.
300-800	Most complete hotels. Holiday centers and clubs with the highest caliber of complex facilities, and entertainment facilities and shopping center.
	Mega cities and local economic and business hotels. They are spectacular in form and function, including extensive conference facilities and casinos.

1.10. The study of settlements in the country

Settlements in the country in terms of ownership can be divided into three categories:

1. The settlements are privately owned
2. Settlements owned by government sector

3. Settlements owned by the public sector

Table 1.2. Shows the annual capacity of beds and number of passengers in 1375, according to the hotels grade

	Unit		Rooms		Annual capacity of beds		Acceptable number of passengers	
	number	percent	number	percent	number	percent	number	percent
Total	521	0/100	235970	0/100	17000000	0/100	7000000	0/100
Total of 4 and 5 stars	25	8/4	4437	6/18	3000000	0/18	1000000	2/14
5 stars	9	7/1	2421	1/10	1650000	8/9	500000	1/7
4 stars	16	1/3	2016	4/8	1350000	2/8	500000	1/7
Total of 1, 2, and 3 stars	426	8/81	16907	7/70	11500000	6/67	5100000	9/72
3 stars	55	6/10	4690	7/19	3200000	1/19	1200000	1/17
2 stars	183	1/35	7104	8/29	4900000	3/28	2300000	9/32
1 stars	188	1/36	5113	4/21	3400000	2/20	1600000	9/22
Not rated	70	4/13	2553	7/10	2500000	5/14	900000	9/12

In 1375 the settlements of the country (private, public, government), which has more than 521 single rooms, 63% of the capacity of the private sector settlements and 20% government owned and 17% owned by the public sector (Fig 1.1). The capacity of total settlements which were 23897 rooms , about 63% percent owned by the private sector, 19.8% owned by the public sector and 20% owned by the public sector.

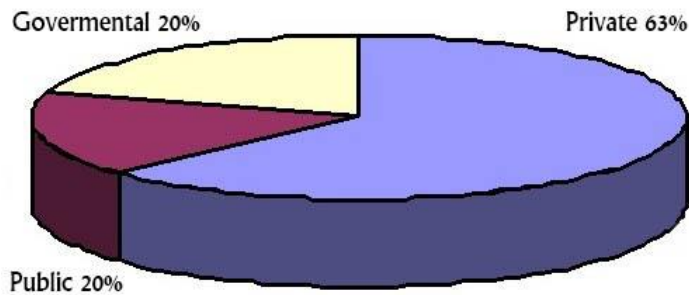


Fig 1.1. Distribution of accommodation room capacity in terms of ownership

This means that in this year 17 million beds was ready to use, and since, according to the average length of stay of visitors is 3.2 nights, nearly 7 million people have been able to stay in that accommodations.

Public settlements are divided based on international standards grades 1 to 5 stars. Based on information in 1375 about 8.4 percent of the total mass settlements were 5 and 4 stars. In other cases, the situation is as follows.

Table 1.3. Major public settlements grade 1 to 3 stars

About 10.6 percent of accommodation	3 stars
About 35.1 percent of accommodation	2 stars
About 36.1 percent of accommodation	1 star

About 13.4 percent of accommodation	Not rated
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According to the table 1-3, major public settlements grade 1 to 3 stars. In other words, the majority of residential and banqueting have been built with low stages, that's why they are not used with updated technology such as CCTV, the day and standard equipment, and video systems application, and they are not comparable to international standards and acceptable to tourists, especially tourists high-income countries and developed. This situation has caused many tourists to the country, be from countries with low income, and this category applicants with a low-cost settlements.

Table 1.4. Variation of accommodation room (guesthouse and similar facilities) during the first and second five-year program (1367 till 1376)

Description		1367	1368	1369	1370	1371	1372	1373	1374	1375	1376
Total	number	383	387	368	378	398	421	445	472	521	543
	room	1714 7	1689 8	1644 6	1678 1	1796 2	1873 1	1959 9	2128 1	2389 7	2478 6
4-5star	number	23	23	22	22	22	22	23	26	25	28
	room	4076	4076	3823	3823	3844	3829	4068	4377	4437	3713

5 star	number	8	8	8	8	8	8	8	8	9	9
	room	2252	2252	2252	2252	2252	2239	2225	2219	2421	2427
4 star	number	15	15	14	14	14	14	15	18	16	19
	room	1824	1824	1571	1571	1592	1590	1843	2158	2016	2286
1,2,3,star	number	355	349	341	347	357	370	393	402	426	433
	room	1277 2	1252 3	1232 4	1256 3	1310 6	1375 3	1449 3	1520 2	1960 7	1702 3
3 star	number	30	30	28	28	34	38	41	48	55	56
	room	1636	1636	2535	2535	2775	3130	3287	3872	4690	4822
2 star	number	131	127	128	131	136	142	159	162	183	185
	room	6122	5920	5956	5102	5517	5760	6182	6238	7104	7116
1 star	number	194	192	185	188	187	190	193	192	188	192
	room	5014	4967	4833	4926	4814	4863	5015	5092	5113	5085
Not rating	number	5	5	5	9	19	29	29	44	70	82
	room	299	299	299	395	1012	1149	1047	1739	2253	3053
Total annual changes	number	-	6	9	10	20	23	24	27	49	22
	room	-	249	252	335	1811	769	868	1719	267	889
Index changes	number	-	-	100	102/ 7	108/ 2	114/ 4	120/ 9	128/ 3	141/ 6	147/ 6

	room	-	-	100	102	109/ 2	113/ 9	119/ 2	129	145/ 3	150/ 7
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Survey provinces could be a way to know tourism situation in Iran: In 1375 the largest number of hotels belonging to the province of Khorasan, Tehran, Hormozgan, Isfahan, Mazandaran, in terms of attracting foreign passengers Isfahan, Tehran and Fars provinces are at the top. Iran ranks 70 in terms of attracting passengers among 200 countries, and 98th in terms of revenue. It is second country in terms of attracting passengers among 9 South Asian countries, and third in terms of income. These issues are all indicative of the importance of public investment and encourage private investment.

"Accommodation" is a fundamental pillar of the tourism industry. The number, equipment, and hotel management of the country, we can achieve about capabilities and the development of its tourism industry a geographical unit.

Table 1.5. Hotel rooms statistics, Iran, in 1994 (1373)

5-star	4-star	3-star	2-star	1-star	Not rating	Room number	Bed number
8	15	41	158	189	21	19573	39107

Table 1.6. World hotel rooms statistics in 1994 (1373)

Africa	America	East Asia	Europe	MiddleEast	South Asia	Total
384000	2493000	1557000	5462000	179000	143000	12218000

Comparing the two tables presents that ancient land of Iran in terms of historical and natural attraction is one of the world's top ten countries, it has only 0.3 percent of settlements capacity in world! Moreover, there are only 4449 rooms in 5-star hotels, 3533 rooms in 4-star hotels and 6,400 rooms in three-star hotels, it means more than half of the our hotel capacity belongs to the three-star hotel which is not usable for the tourists.

It is noteworthy that the quantitative and qualitative assessment of Iran's Guesthouse, compared to set standards in other countries are active in the field of tourism, in most cases, less is desirable Iranian standards. For example, two-star hotel in Iran has only toilet in the room, while in Europe this room has a shower or bathtub.

During the years 1369 until 76 averagely, it has added 7% to the room capacity settlements each year, and changes in the index has increased from 100 in 1369 to the 150 in year 1376.

The largest increase is in 1375, 1374, 1371. However, to increase public participation of the private sector settlements in accordance with the standard required by the government support is necessary. Support in 1375 was as follows:

- loan
- Pay a portion of the profit facilities
- Liberalization of pricing in order to save its newly built units and ...

All of these issues has caused that 124 principle approval demand create for the construction of residential facilities, which from those amount it was agreed only

109. This number could add about 7900 beds to capacity of beds, but unfortunately because of lack lending by the industry it was not performed.

In the governmental sector, from the all available settlements, about 3/78% owned by Iran Tourism and Touring, and 7.4 percent owned hotels in Iran and 17 percent in other cases. In this section is also from the all available settlements, about 3/55 percent owned Tourism and Touring, and about 5/17 percent owned hotels in Iran. As noted above, the main room capacity of settlements is privately owned. In this context it should be noted that during (1372-75) room capacity growth of private settlements has been 35%.

In the later stages, public and governmental sector have been 14 percent been 15 respectively. Aside from the low capacity of the settlements to travel to Iran in comparison with other countries, disproportionately distributed among all 27 provinces in Iran is also surprising, as 30% of all rooms are located in four provinces and 70% in the other 23 provinces.

Table 1.7. Shows the capacity of rooms and beds in four cities of Iran, in 1372

Provinces	Room number	Bed number
Tehran	4985	9471
Khorasan	3585	7037
Mazandaran	1716	3330
Esfahan	1413	3780

However, in the Hamedan province with its historical value, there are only 236 rooms, 289 in Kermanshah, 176 in Yazd, 102 in Ardabil, and 909 rooms in Shiraz.

1.11. Planning and standards of hotel spaces

Hotels are buildings complex, which the occasion of various activities of their customers and users, such as a guest, please refer to participate in seminars and events, use of recreational facilities and sports, food, ... seek space and the more facilities, and each of the related areas requires special equipment and comply with their own standards. According to significant amount of national funds spent on the construction of a hotel, comprehensive studies (in areas such as economic and technical justification, location, economic situation of the region, the existing competition, national attractions, compliance with similar projects in the future the location and surrounding areas, spaces design criteria, manufacturing methods, type of material) is required. In the process of construction of the hotel, planning, nature contestable hotels together, are great importance. Action plan and planned hotel, something much broader than the list of the primary requirements of the space. The hotel is Planning to be in different aspects, such as: location, market demand, level of competition, the quality of various aspects of its applications, restaurant, staff, budget and so on.

Chapter 2, Investigation Tourism

2.1. Tourism Investigation

Nowadays the tourism industry have been developed significantly, and many countries world have been able to improve their situation. The idea had been to many countries to overcome economic problems such as low per capita income, high unemployment, a shortage of foreign exchange earnings. Unfortunately, the situation of the tourism industry in Iran and considering the income figures resulting from the conduit, suggests that in spite of this ancient and historical monuments in the world in terms of the ten countries is important, has not made of existing capacities in the field of tourism, however given the reliance of Iran's crude oil exports and high vulnerability to the effects of oil price shocks and traditional, the tourism industry can greatly reduce the vulnerability of economic and policy makers to the problems existing in the both such as the lack of foreign exchange income, low income, high unemployment, low exports. In this section we try to identify and evaluate the tourism industry in Iran to investigate the problems and bottlenecks in this regard discuss and solutions to enhance the income of people in the area and down the unemployment rate. To thereby enable proper planning to attract domestic and foreign tourists.

Resident of Bam city are low-income, due to the earthquake that occurred in 2004 damaged a lot, and less attention to the agriculture due to lack of water, so certainly attract tourists and temporary stay of several days in the city can help to solve the unemployment and job creation. Therefore, the investigation of tourism in Iran and the region will be discussed.

2.1.1. World Tourism Organization (WTO)

Tourism industry flourished in 1950s after World War II, so that in 1950 about 25 million tourists travel to different countries, and it enhance rapidly tourism

industry, curious, adventurous and interested people to visit different parts of the place of residence and living and unknown place. Nowadays, World Tourism Organization (WTO) said the industry is ahead of the oil industry and machine building.

Now tourism industry has expanded to all over the world, to attract tourists in their homeland. For this purpose, tourism industry will be investigated from different angles. (Tourism economic studies, consulting engineers, urban fabric, 1380)

2.1.2. Study of tourism in Iran

Iran's geographical location and its historic old has been interest to travelers. Abundance of books, articles and travelogues related to the Iran confirms this. However, since the tourism industry in its infancy, considering it as a source of national income goes back to 1314. At this time, an organization called (Tourism Affairs) was established in the Interior Ministry. It replaced in 1325 by the Supreme Council of tourism that was replaced in 1334 under the approval of a law, (Tourism dept).

Then the facility Tourism Authority Company and the Ministry of Information and Tourism were in charge of tourism affairs with larger organizations and more funds.

Currently, the centers affiliated to the Ministry of Culture and Islamic Guidance of Iran Tourism and Touring, and is responsible for duties and guesthouses, hotels and tourism facilities all over the country. It was accorded in 1358 from the merger of companies and houses in Iran, winter sports and tourism facilities there.

Monuments, ancient and diverse climatic conditions, has not yet growth, and development is still in the very early stages.

2.1.3. Economic impacts of tourism (tourism)

Tourism industry has been considered from different aspects, but to dare to say that the economic aspect is preferable over other aspects. One of the most important works that at first glance could be taken of the economic aspect of the tourism industry is earning substantial foreign exchange, which this earning foreign exchange in addition to the growth of the regional economy will be employment of unemployed people. However, the economic impact did not stop there. In this section we try to offer more economic impacts of tourism.

2.2.1. Effect of national income

In the context of macroeconomic, one of the components of national income is exports XM , and with increasing of this component, national income increases. The tourism industry in both domestic and foreign tourists can help to increase this component.

Domestic tourism is a new import substitution to the import, and prevent the outflow of currency from the country. Overall, this decrease in imports (M), net exports (XM), and ultimately increase national income. In the field of foreign tourism by increasing the absorption of foreign tourists, foreign exchange earnings of the country increases and this in turn means an increase in exports. Arg- e Bam which is reminiscent of the Silk Road, is the city which is built from mud, can be introduce, for domestic and foreign tourists.

2.2.2. Transfer mention of income and wealth from region by sending tourists to the targeted areas

In international tourism, wealth transfer from high-income countries, which are often European countries, to other countries. The same effect is also visible in the domestic economy. Thus in the domestic tourism income and wealth transfer from high-income areas to areas hitherto which has attractive point. The tourism industry can be a redistribution of income and more balanced to it, and it will help whether in the international arena and in the domestic economy.

2.2.3. Formation discriminatory markets (dual)

Other works Login wealthy tourists, we can double the emergence of markets for tourists and natives in the market prices prevailing separate mention, government too, sometimes recognize dual market system, such as to buy property in countries with quite different rental rates, foreign exchange and domestic money markets to foreign and domestic individuals may double by distinguishing the product for each of the markets informally arise. Another type of transaction to create the parallel market by way of individuals with any tourist with different ways of Aborigines and price can be created. (Tourism economic studies, consulting engineers, urban fabric, 1380)

2.3. Effects of income distribution the factor of tourism among agents

Direct and indirect effects of tourism and tourism expenditures, related to the distribution of its revenues, this in turn, is depend on how ownership and exploitation of the resources in each country.

In less developed countries where the tourism industry is in its preliminary stages, the industry has been generally employment. In countries with developed tourism industry, further development of tourism can be proven the need to invest in advanced methods of transport, the development of recreational and

accommodation. The investment relationship and the effects of tourism on the economy, depending on the nature of the supply of capital and the use of its resources. In tourism, it will change as in other industries to gradually work toward using more advanced technology.

2.3.1. Changing consumption patterns of the host region

Tourism can have a significant impact on the consumption pattern of the host zone. In many cases, host people try to imitate of tourists cope, which can cause changes in consumption patterns. This could increase the propensity to import consumer items with the tourists. So the consumption pattern of imports into society faces a lot of tourists injected, increased propensity to import worse.

2.3.2. Pressure on domestic prices

If foreign tourists and domestic tourists come from the region, the level of income or price that is higher than destination, price pressures may be seen, Of course, if this is the increased demand caused by supply constraints are encountered.

2.3.3. Increasing the value of the domestic currency

In most developing countries obvious the lack of value, and this led to increased exchange rate in these countries. The development of the tourism industry through increase community national income, and also increased of foreign currency in the country, and concentrations of these currencies inside of country, prevent the outflow of domestic tourists on the one hand, increase the supply of foreign currency, on the other hand to reduce the demand for foreign currency, in general this leads to an increase in domestic currency against foreign currency.

2.3.4. Impact on Employment

Research suggests that the tourism sector will create more jobs than the other sectors. For this reason, many policymakers, consider tourism development as a favorable policy for reduction of unemployment in the region. It may also have a high income in this areas, this occurs when the industrial structure of a region, has a high value-added in the investment industry, but the high percentage of unemployment and unequal income distribution thus concentrated in small businesses. Specifications in the tourism industry can be as follows:

- Being relative tourism industry
- Low-wage jobs
- Part-time and temporary employment
- Seasonality of jobs in tourism industry
- Long-term development of tourist areas

2.4. Tourism and sustainable development

The term sustainable development accrued for the first time in 1980 for the World Conservation Strategy, which is result of joint activities International Union for Conservation of Nature, the United Nations Environment Program, and the World Wildlife Fund and general ecology specialist, were common, and since then the term is found development and more important in the literature.

In a landmark study titled "Our Common Future" report by the World Commission Environment and Development was released in 1987, it has defined Sustainable Communities meet the needs of the present generation without compromising the ability for future to meet your needs.

Goals sustainable tourism as a model for development, include:

- Modify the quality of life of the host society.
- Providing quality experiences for tourists.
- Maintain the quality of the environment in which both the host community and tourists its affiliates.

Sustainable tourism development has two main aspects of the protection of the (environmental) and (resources and cultural heritage), and a basic concept that is (carrying capacity). These aspects will ultimately be measured in terms of carrying capacity and determining its borders and within local integrated policies and programs to be implemented.

2.5. Environmental considerations in sustainable tourism development

Earth Summit in Rio, has underlid attention of governments and public opinion of the world's environmental problems. Since 1992, international organizations have been following to include number 21 rule and principles of the Rio Declaration and the instructions within its activities. World Tourism Organization has tried to extract the main points mentioned statement and instructions that can be used in tourism. The most important of these factors include:

- A. Travel and tourism can help in a healthy and productive life and homogeneity of nature. In this context activities such as Ecotourism, Rural Tourism, and Health Tourism, should be effective and needs to be examined.

- B. Tourism should help to the protection and restoration of ecosystems and earth, in this respect, tourism can protect national parks and other vital ecosystems contribute earth.
- C. The travel and tourism should be based on sustainable patterns of consumption and production.
- D. Tourism, peace, development and environmental protection related to each other. In this context, it must be efforts with publications, seminars and help the planners, these aspects are considered in the planning of attention.
- E. Different nations should notify natural disasters that can affect tourists and tourism. Publish pamphlets on the subject in relation to mitigating the effects of natural disasters in the areas of tourism would be useful.
- F. Environmental protection in the development of international law must be respected, worldwide travel and tourism industry. (Secretariat, tourism, sustainable development of tourism after the Rio Summit, translation inspire donations, archives of the International Centre for Tourism Studies and Research, 1373)

Chapter 3, Standards and physical planning

3.1. The library design criteria of tourism

Main areas of the library are as follows.

Required space for books including storage and shelves, reading rooms, including the hall reading newspapers and magazines, rooms for employees, ancillary spaces such as copying, binding, etc.

3.1.1. Book Spaces:

Program Description This section contains a detailed analysis of the amount of required shelves, which in this program it should be consider in terms of size, location and area of the state. Partition almost there is in all public libraries. To obtain useful area of the book, we can use the formal of 165 book in each meter (including corridors), along with 75 cubic meters of used books.

3.1.2. Reading area:

The most important factor in determining the reading area to determine the reading public and the percentage of people using the library at the same time. A library which has favorable location, position, form and space is attractive also to stimulate people to read, therefore it has an important role to raise the scientific and cultural growth. In general, the standard reading rooms for adults and children 86/1 and 79/2 square meters respectively. The book includes values for readers instead of people, tables and chairs and hallways and curator of the table.

3.1.3. Space for employees:

Including office staff, librarians space, secretaries, reception, accounting room, and multi-purpose rooms that resolve the needs of the people. And also storytelling space for children, group discussions and radio and television education classroom.

3.1.4. Equipment room

Include, stairs, toilets, air duct and cooling and heating equipment which take 20% of the all space. According to this classification to determine and define spaces and components to the library and the library are those who consider the range of activities. In general, spaces within each library that can be individually defined to include:

The location of the library and the librarian, Placement instruments and personal accessories, study hall, Books and magazines tank maintenance service facilities. (Neufert, architecture information, data architecture Neufert, translation by Hedayat Motabi, Azad publication, 1377)

3.2. Design criteria community hall

In the cultural part of community hall there is 500 capacity of people for holding seminars and meetings related to that, and in planning for this space there is some essential points which are listed below.

- A. Access and emergency exits
- B. The hall area
- C. attention to better quality of vision
- D. attention to acoustics and its effects on the used shape and the materials
- E. support spaces required for service areas

3.2.1. Access

According to the standards, it is predicted 1 meter for every 200 people, if by the door creates obstacles, it is necessary to need to add width of the door.

Door wide between 1.25m and 2.5 is suitable, and for the wide variations number of people are important. In the case of doors, span of doors should be more than 2 meters and must be open to the outside.

3.2.2. Hall area

The area required for the main hall, depends on the capacity of the salon, furniture and chairs size. It should be noted that each 14 chairs, needs a side passage for discharging. The width of the side passages for every 70 chairs, is 90 cm wide, and in front of the exit doors are required to observe a distance of 1 meter. If the capacity of the salon is 500 meters, the required space for a person is 0.4 meters, we need 200 square meters for the establishment of about the chairs, which taken into account, 0.5 square meters need for the corridors, so area about 450 square meters, is predicted for the hall.

3.2.3. Regarding points for better quality of vision

- A. Picking chairs alternately, improve the quality of vision.
- B. Attention to the height of the eye contour, and change its uniform, is also necessary to create a better quality of vision. In the picking seats in the hall, horizontal view angle, proportion of the platform, and length of curtains is important, in this regard 30 degrees is best diagnosed. (Neufert, architecture information, data architecture Neufert, translation by Hedayat Motabi, Azad publication, 1377)

3.3. Design criteria for restaurant

In order to provide better facilities it is necessary a restaurant in proportion to the number of clients. The restaurant includes a dining hall, kitchen and ancillary services.

3.3.1. Dining room: The size of the space that is used for this purpose depends on the number of clients and type of selected furniture, in the design of restaurant and especially dining room attention to the landscape and attractive environment has a favorable impact, and also lighting and using of different materials with suitable colors for improving this space is very important. In the case of furniture of restaurant, dimensions such as size of tables and chairs (depending on the type and shape), Distance to resort of clients and servers, and how to serve each one is considerable, used capita in the dining hall is 14 square meters for each client. To better explain, is given dimensions in two forms (1-2-3).

3.3.2. Guest bathroom: it is considered 4 services for men and women which are separately, for the restaurant referrals, which is not in direct contact with dining hall.

3.3.3. Kitchen and granary:

This part has the task of preparing and storing food and washing dishes which needs special facilities and services. In this space be considered areas for the following functions:

- Area for cooking and food preparation
- Cold buffet of salad, fruit, drinks
- Facilities for washing food
- The sink and storage containers
- Space mechanical installations (ventilation, heating, steam generation, etc.)
- Service area with adequate facilities to service restaurants.
- Space transport and disposal of waste collected

In the kitchen has been considered the other service areas for the employees which include: employee break room, dressing room, and bathroom

3.3.4. Service part: This part which is the relationship between the kitchen and dining hall should be in a place that be responsible for the available needs and be located in a suitable position for the guest access, and also in the design of this part it should be consider the transfer of the smell of food from the kitchen to the hall.

3.3.5. Official part of the restaurant: Restaurant Manager can be deployed in a room and controls directly or indirectly the restaurant.

Table 3.1. Shows the required area in the restaurant

Space	Preparation	cooking	Service	Washing	Food storage	Installation	waste disposal	total area
The required area sq.m.	50-70	120-150	20-40	100-120	20-30	20-30	10-15	330-445

(Neufert, architecture information, data architecture Neufert, translation by Hedayat Motabi, Azad publication, 1377)

3.4. Public spaces (hotel):

Introduce, quantity, and quality of public spaces is in relation to various factors, therefore, the designer should has prerequisite knowledge before any design in different issues. Here's what can be named as a principle, is flexibility subject of

public spaces in the hotel, to adjust its self with different conditions and harmonize. Public spaces in the hotel can be divided into five groups:

3.4.1. Spaces related to the residence:

3.4.1.1. Festivals hall and entertainment events

The hotels which has a special restaurant, hosting of the guests in the festival is one of the important and effective work. Usually one or two special hall is used for this purpose, because these celebrations have special importance in terms of income.

3.4.1.2. Accommodation in the open space:

All hotels regardless of large, small, and its type, must have their green spaces and free urban space around, which is minimized in the hotel which is located on the center, but never delete.

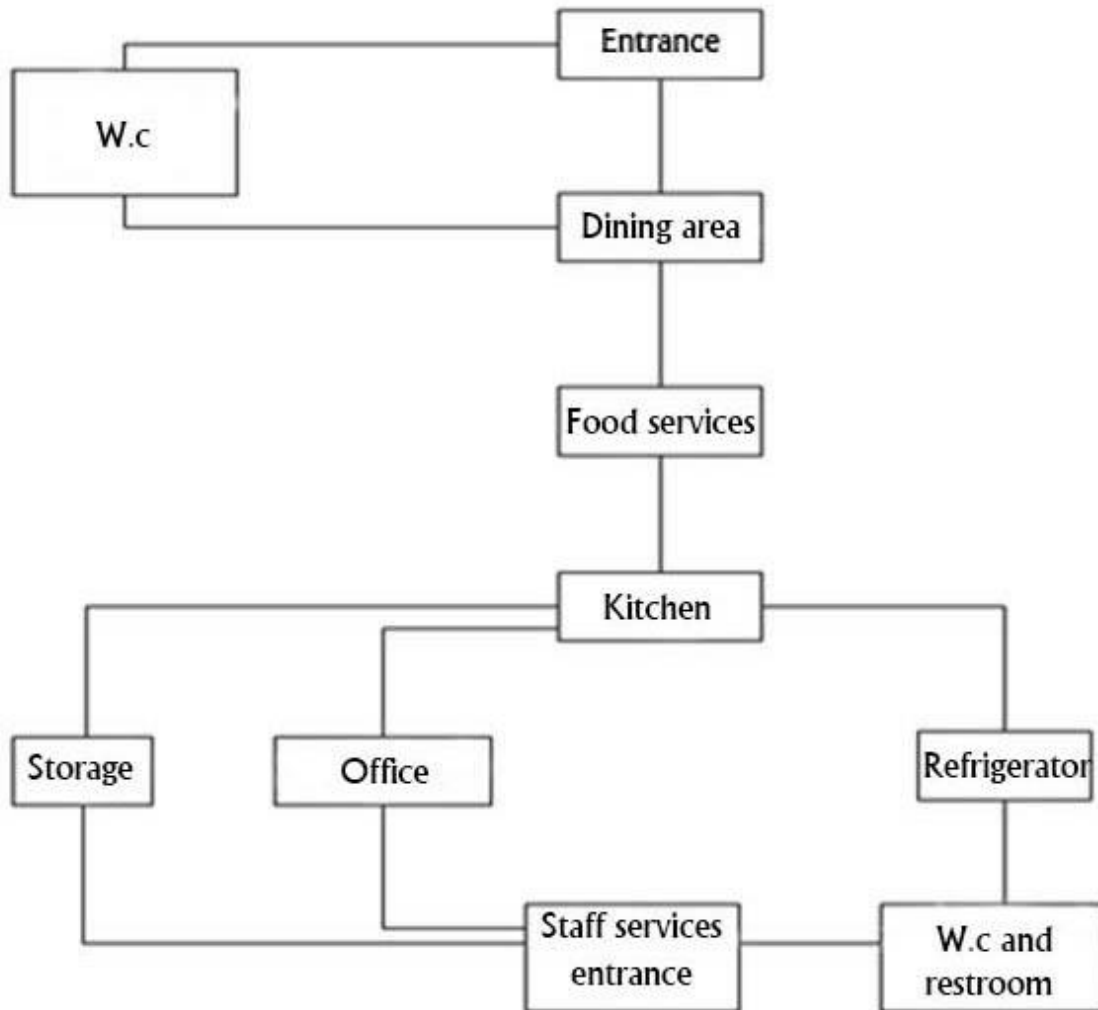
3.4.1.3. Spaces related to eating

- Prediction of individual space for breakfast, the hall is separated from the dining hall with its performance.
- If the spaces for eating (restaurants) services to travelers and non-travelers, it should be consider the dimension of lateral services according to the number of customers.
- If we did prediction to put a very interesting restaurant in the open space, it will be wonderful. This restaurant should first has the most beautiful sight in the day and at night, secondly has a location far from the wind, dust and noise.

3.4.2. Dining spaces

3.4.2.1. Restaurant

Today hotel is not only for the rich class as in the past, the majority of people of every class and group use that. Now this aspect is general public, we should almost pay attention to the decoration, furniture and equipment for the friendly reception and customer satisfaction. How to arrange desks in proportion to the number of customers and decorate them with colorful and varied flowers, and the items such as napkins on the table add attraction on the decoration. (Designed residential spaces, Shahid Beheshti University, School of Architecture Urban Publications, 1378)



Spaces chart in the Restaurant

Fig.3.1. Shows relationship between spaces of the restaurant

3.4.2.2. Grill room

Grill room, is a special room in the hotel, which cook in front of the customer, and there are restaurant and kitchen in this area, and travelers who wish can spend in this room.

3.4.2.3. Coffee shop:

In the coffee shop serves beverages, tea, coffee, and simple foods such as sandwich. Passengers sometimes enter the hotel, that restaurant is closed, but it is open 24 hours and should not be closed, meanwhile, the price of that is cheaper than restaurants.

3.4.2.4. Buffet:

Buffet or free buffet, which use for breakfast and lunch in the hotel for guests and passengers has an advantage which run with fewer staff and quickly.

3.4.2.5. Kitchen

In the kitchen everything must be considered a suitable place where-cooking, baking is separated, and natural light should be provided to prevent the additional costs comes, but unfortunately in most hotels kitchen set up in the basement as a result of natural light cannot be used. Kitchen wall should be tiled until the roof, and pavement should not be slippery. The roasts should be placed in a part that not make the problem for the workers.

3.4.3. Groups areas related to sports and games

Hotel residents for sports and recreation can use the facilities of the Sports Complex.

3.4.4. Lateral group of public spaces

3.4.4.1. Entrance and lobby

Part of the building is called lobby, which is as the entrance and entrance to the hotel, and itself is contain the major part of the installation, and the location of many essential structure of the hotel.

It is an important indicator in the hotel, and the reality of its value and prestige, if even we equipped all the rooms, and we keep lobby in poor level, it will not satisfy the passengers, so we can't achieve to the our purpose, so to the degree that the room is kept at a decent level, more attention to the lobby, which determines the grandeur greatness to be beautiful and attractive.

Architectural beauty, decoration, light, vivid colors, air conditioning, comfortable furniture and durable, well implemented, should be considered in the first place, and utmost diligence must be conducted, that this part which is indication of the status of the hotel and rooms, be placed utmost degree of majesty and beauty, and for this important initiative and artistic we can use taste professionals. Hotel guest's check begin and end in the lobby. Therefore, lobby which is a where for going, coming, sitting, and communication, must have part of the salon ladies and gentlemen, phone kiosks.

3.4.4.2. Reception, funds, administration

A. Reception

This place is the first and last encounter of the travelers, it means passengers work begins and ends here. Front Office, which occupied part of the lobby, is the most responsible part, and contains accounting, personnel and general administrative office, and hotel management office also be placed in this location. All this parts together set the rules of the organization concerned,

which is a major vessels, make workflow system. Therefore weaknesses of each part, will lead failure and lack of coordination. If the front office environment and space for the reception and the speed and convenience of the passengers, be properly, the success of the hotel will be supply.

B. Reception desk

The reception desk is placed in front of the office. What is predictions is, reception must have the talent and capacity for taken to work in the hotel in a large plurality of the number of passengers. Reception table is divided into several parts:

- a) The reception
- b) Information
- c) Fund

3.4.4.3. Floor severing space

These places in relation to the needs of passengers include:

Stairs and Elevators: dimensions of stairs and elevators depend on the following factors:

1. The volume performance in relation to the importance, and being small or large hotels.
2. The possibility of using them in an emergency case (fire, earthquake, etc.). So the step size must be such that they can use them collectively and hotel residents rushed from that.

3.4.4.4. Laundry

In the small hotels usually all the mentioned above, is done by the relevant institutions outside the hotel, but in the big hotels it is not economically, the spaces should be placed to do the services has formed with the above-mentioned. Obviously, all the materials from each floor collected, and are sent to the laundry by communication service (elevator, channel for dirty clothes).

3.4.4.5. Engineering part

This part is located near the powerhouse and devices such as desktop, clip and its technical work is available this part, and all the technical work of heating, ventilation, elevators, plumbing, painting, carpentry, keys, electricity, telephone, etc, is kept in this part. We add here that every part of the hotel was flawed it should immediately be removed, for example when a faucet is dripping, it will upsets the passengers during the night time, so small defect can be resolved with very little cost.

3.4.4.6. Special spaces for employees

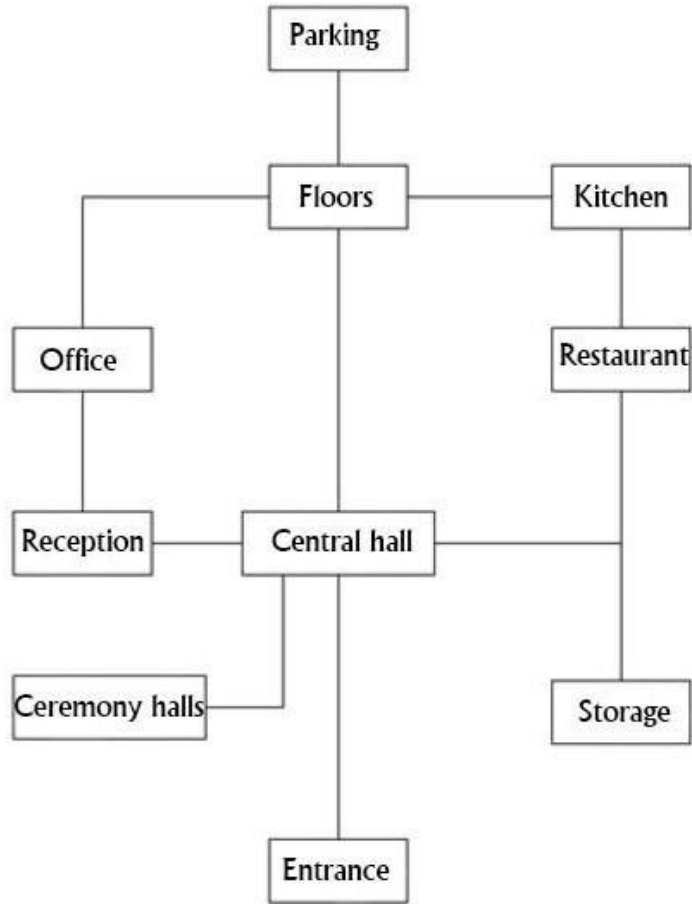
In this sector should be studied number of the employees in different parts of the hotel first. From the standpoint of the necessary services, a hotel can be divided as a following, so number of employees in any part be determined:

1. The supervision
2. Accept, fund
3. Guard
4. The set of classes (including bedrooms)
5. Laundry
6. Dining
7. Kitchen

8. Accounting and controlling various parts

The number of workers is calculated according to the number of rooms, and type of hotel.

- A. Staff rest rooms: Some of the staffs who sleep in the hotel at night, need a special place to rest. In this part, as well as other parts should provide all means of comfort and well-being of employees must be met in terms of cleanliness and facilities, in this room are usually used double-decker beds, to not occupancy too much. The hotels which are located in the city does not have the staff room.
- B. Staff dressing room space: In the hotel it should be placed a dressing room, to can the change the clothes in the beginning and end of the work. The room has separate toilets and showers for employees, and toilets, must be equipped with a siphon, soap, ...



Spaces relationship in services and official parts in the hotels

Fig.3.2. Spaces relationship in services and official parts in the hotel

3.4.4.7. Warehouses

In the hotel establishment, exist several warehouses according to the degree of importance and volume of work, and the number of rooms.

A. food storage:

Food storage should be covered tiles until the ceiling, and has fans, and always keep dry and away from moisture. It is clear the cache, will also be equipped with a refrigerator. Hygiene in food storage for about goods that may deteriorate, it is necessary.

B. Beverages storage:

Stock beverages that is close to the food storage, must be equipped with shelves for drinks and different refrigerators. Position of the Stock shall be such that car carries a box of drinks to the door.

C. Engineering storage:

This storage which is under the supervision engineering, in terms of business tools and mechanical appliances, is a particularly significant, because the materials and equipment in the warehouse is often rare and expensive, and they should carefully examine occasionally.

D. Printed matter and stationery warehouse:

The warehouse, which is usually located near the laundry, is run under the supervision of housekeeping hotel, and be held there the instruments such as towels, bed sheets, bedspreads, blankets, pillowcase and objects left by the passengers.

E. Housekeeping storage:

Is a storage for office papers and printing, and all instruments in connection with the administration, will be maintain in this area.

3.4.4.8. Installations:

For the installations part, it is specified a space on underground, in this project, as far as possible we try to use natural ventilation.

3.4.4.9. Parking

Hotel officials should be given attention to the parking, because when the passenger enters the hotel, should have mental welfare, and be sure that would not run into any problems. Usually the parking are divided into two categories:

1. Temporary parking: In order to keep the passenger car, in short time, until the passenger provides a room.
2. Parking permanent: that after taking the room, staff can take the car from the temporary to permanent parking. (residential spaces design, Shahid Beheshti University, School of Architecture and Urban Publications, 1378)

3.4.5. Private spaces:

Studies type floor of the hotel, is always paramount. Spaces for communal life (salons, etc.) are often overshadowed of the floors. Therefore, the designer must to start for planning, according to the understanding the general issues related to it (in terms of technical performance).

Identifying four areas of a room, with its furniture, has a significant importance, which ductility indoor spaces, is result of the combining them with each other.

We mention the dimensions of the furniture in this part, to achieve the minimum area of a room. These dimensions are:

1. Bed 200×100 cm
2. 2 Small desk 60×50 cm
3. WC 60×50 cm
4. Chair 50×50 cm

5. Desk 120 × 100 cm
6. Wardrobe for luggage in the entrance 120 cm

As a result, the minimum area required for a room is about 10 square.

3.4.5.1. Rooms

The spaces, which are placed in the hotel as a living, and sleeping room, must be able to meet their physical and psychological needs, it means this space should be comfortable, and the passenger does not feel alienation. In recent years, these spaces have been carefully studied before any other part of the hotel, and they was changed more than any other part. The main objective of the owners of the hotel, creating a warm and intimate and comfortable that attract more customers. Considering the financial constraints, different areas of a room, should has a functional like a tiny apartment, which include the following:

Entrance

Health services

Space for rest and sleep

Living space

Performance of the four space should be consistent with each other and both at the level and in height can be supplied with several solutions.

Simple small cells (a type of low cost), dose not specified space for the entrance, and there is a direct communication between public corridors and rooms. That means entrance door opens to the room directly. What should be considered in designing this kind of room is, first the door, should not create any bothers in the main parts of

the room, and in the second, at the opening time, is reserved from the eyes of people in the public hallway. In general, entrance, is a small space between the public hallway and the rooms, and also one of the walls in this area is considered for the bags, shoes, dirty cloths, and so on.

Lounge – Sleep space:

Furniture and sleeping space necessary appliances include: bed, small dresser, a writing desk, small breakfast table and so on. As mentioned earlier, it is better to separate beds be expected, but there is the possibility of connecting them according to customers demand, and also it should predicted a space for moving the bed to clean that.

Living area:

In a variety of simple and ordinary hotel, living space, located in the same sleeping space. In the luxury and expensive hotel, living area is placed individually. One solution for this is that with a little pressure, bed rotates around one of its axes, and accessories on the inside of the wardrobe is hidden and all of the remaining space allocated for the living. Another example is that the beds that convert to beds which this furniture is essential to living room.

3.4.5.2. Type rooms in the hotel:

Single rooms, double, triple, suites, apartments, studios, and contact room. Single room called a single bed in the room. Double room is a double or tween. The double room has a double bed together, and tween, has two single beds. Triple room has 3 single beds.

Suites: in this kind of rooms the reception area is located in entrance, and the room is behind of that, in some hotels this part can be located a few steps above the bathrooms and rooms. Can be found in the suite, a small kitchen. We can use also this kind of suites as a VIP for the important persons.

Apartments: include an open hall and three double bedrooms, each with two beds. If there are two rooms, usually a double room with a double bed and the other two single beds. There are on kitchen and bathrooms in common. At the reception to set up a sufficient number of chairs or sofa.

Studio: it looks like a studio in the first glance, but if you open the sofa into a bed, it will be a bedroom, so during the day we can use it as a reception area, and the night as a bedroom. Of course this room can has a kitchen and bathroom.

Contact room: two rooms which has a door between that, called contact room. Each room has a door to the main hallway, bathroom, and room separately, but also there is a shared door between them, that sometimes can be open, and close

3.5. Welfare and security issue

3.5.1. Furniture

Choosing the equipment for hotels, needs to special study and attention, and according to the different tastes of the passengers shall be design to be harmony. Furniture of the public room, like lobby and dining areas must be selected with the proportional to the decoration, and the colors should be fit together, and should not be used alight and sharp colors. Chairs should be comfortable, and quality should be washable and durable. The tables should be 2, 4, 6 and 8 members elected, and pavement of the dining area can be carpeted. Necessary room tools include, bed, ,nightstand, wardrobe, desk, chair, sofa, reading lamps, night lights, pillows,

mattresses, bed sheets, bedspreads, curtains, stationery such as paper, under smoking, telephone, refrigerator, trash containers (with lids) , TV, and ...

3.5.2. Board sign in the hotel

Existing the signs to guide people everywhere, has a particular value, and in anywhere of streets and cities, is tremendous. It is the signs that show people the way and guide the objectives and the confusion and questions that makes it unnecessary. In the hotel also signs paintings has important role, to provide guidance in guests.

Places of the signs is depend on the needs of the hotel and most used in the following locations:

1. The front door of the restaurant to write the menu on that day.
2. Front reception to write rate.
3. Knowledge to guide travelers who has booked.
4. As saying welcome to the passengers and visitors and groups.

In other cases, it is necessary to install sign into different floor, restaurant, emergency stairs, administrative staff, including management, accounting, personnel, etc.

3.5.3. Light

The hotel light supply, in different parts of that, is one of the artistic, technical, and sensitive issues, which need lot of delicacy and accuracy. Even with

psychological problems are related, plus the cost of electricity and supplying it also cannot be insignificant, and also providing light in the hotel has important impact on the welfare of the travelers and the hotel staff. The cost of lighting the hotel is a heavy expense items and if in the power consumption, there isn't caution, not only the budget is wasted, but also in terms of quality and comfort of operation have not benefited from light, because high power consumption and exposure to bright lights and bright lighting installation, are not serve safety and comfort of passengers and visitors, and sometimes it makes stress and unhappiness in the traveler, so for light it should be consider usual light , not too or low.

More important point, is that the light should qualitatively and quantitatively, in addition to the required lighting, create beautiful decor to significantly increase mental peace and physical relaxation. For example, too much light in the corridors of the hotel is not at all common, because too much light in the corridors increase noise because passengers talk louder with together. But if the corridor is less light creates a state of preventive and passengers are forced to speak slowly.

Usually in the corridors of the hotel, within days, roof or wall light used, and during the night, another light night on the floor of the hall is half a meter away (from the wall) which usually are locate 3 meters from each other used, but the rooms should be enough light, especially self-service and entrance of the hotel, which for this purpose, it also used the Spotlight.

Subject lighting in the restaurant, for food service, is technically and professionally. The amount of light and color, has not low value which allows the owner to customize it practical planning. Eyes when he sees light, the effect is reflected in all of human existence to create a different present.

3.5.4. Fire fighting

One of the issues that must be considered in the organization of the hotel, is the issue of the fire suppression or fire. Forecast of this issue for prevent of fire probable is important. Neglect in that, may cause damage to the compensation that is not possible, because this hazard always threats , large or small institutions, and is a fact that have been said about it Treatment should be done before the event. The most important epistles refer to the following:

1. Creating emergency stairs in the building, according to the engineers.
2. Installation the tap, and water pipe in the hallways.
3. Capsules installation for fire extinguishers, and special balloons in all parts of the fire suppression.
4. An alarm devices, in different parts of the hotel (in case of smoke in the atmosphere of the complex, the device with alarm).
5. Signs installation indicating emergency exits
6. Training in the field of fire to the staff and hotel workers.
7. Obviously, capsules fire check every time by fire agencies or companies to be trusted

3.6. Most important cases in hotel design:

1. It should be noted that the main part of the hotel, is building, and this fundamental point should be consider that that building map has designed only for hotel, so design and plan shall be implemented that will not cause further problems in the future.
2. It will be timely, appropriate, and affordable that the vehicle which transports the purchased goods to the hotel, to go to the front of the

warehouse, and vehicle is not forced to stop far from the hotel to taken by workers.

3. It is better that dining room, restaurant and store locate on the ground floor, closer to each other, so every things will proceed with speed and discipline, and it will be more benefit for the hotel.
4. Size and dimensions of windows, should be considered smaller, and they shouldn't devote one side of the wall for the window, because it is natural the large windows, in addition will vast energy in the hot and cold seasons use a lot of curtains, which is timely, and also it should be cost a lot for dusting and washing the windows. It requires considerable cost substitution of old worn clipped to clothing fabric curtains are frequent, especially in the hotel with a 150 rooms or a little less and more.
5. For the sheets and pillowcase and other washable fabrics should create channels in each floor, to take them directly to the laundry. It is clear that this canal should be considered wider. And also this canal should be design for the garbage, to workers take them out easier.
6. In the water piping, and installation of the tap of water, it should be ensure that rooms will have a separate valve for each room, in case of deterioration of the faucet or shower, they are not forced cut water of other rooms to repair them.
7. When electrical wiring, it is better to install separate fuse for each room, so as there is a problem in a room, other rooms have electricity.
8. For the room door entrance recommended that kind of locks select, and install, which from the outside, show that the door is locked from the inside or not? By installing these locks from the outside of room can be seen that passenger is inside.
9. It is be installed firefighting supplies on the all floors.

10. Entrance doors of the restaurant or coffee shop, shall be design, which tables pass easily from that.
11. Power switch is in the hallway or in the bathroom should not be install near the tub or the shower.
12. Hotel is better to oriented north and south.
13. It is better a small window in the window, equipped with screens, so if passengers need to have air, is not forced to open all the windows.
14. Bathtubs should have the handle, and the baths without tub, shower trays should be considered.
15. Ventilation is required for bathroom.
16. In hotels there must be a way of escape stairs, which in the emergency cases it can be used to save their lives.
17. Entrance doors, hotel, restaurant and kitchen, should open automatically.
18. If the hotel is equipped with central heating, radiators should be installed in locations where there is widespread use.
19. The sign of the hotel should be installed in a location, where the light does not disturb the passengers.
20. Hotel gas piping must be done during construction.
21. Considering the special elevator for staff and workers.
22. Whenever, the timely purchase of land and construction of the hotel, it should not be ignore green space dooryards growers, because the beautiful landscape is very important for the passengers, and gives more value to the hotel location.
23. Predicting the future development of the hotel's location in terms of having the necessary facilities is necessary.

24. Balcony each room is devoted for one room, it cannot be shared by two or more rooms. (Websites sun, investment in construction of hotels, August 1387)

Chapter 4, Same Sample

4.1. Pars Hotel in Kerman

The hotel is located in the city of Kerman and has the following features and spaces.

Spaces in the Pars hotel, in Kerman, Iran

Single room 99

Double rooms 164

Doubles Pars 6

Suit Citadel 12

Suit Pars 12

Apartments Aria 2

Apartments Pars 1

Restaurant

Traditional Restaurant

Bath

Jacuzzi

Seafood Restaurant bank

Air conditioning

Handcrafts pavilion

Parking

Game net

Fast food restaurant

Conference Room

Tennis court

Taxi

Photo shoot studio

Indoor pool

Gym

Billiard hall

Agency services

Green space

Photos and different views of space Kerman Pars Hotel.



Fig.4.1. shows the view from outside, swimming pool, billiard, and lobby area in Pars hotel, in Kerman, Iran

4.2. Mashhad Pars Hotel, in Mashhad, Iran

Mashhad Pars Hotel includes the spaces as below following:

Spaces

Suit 2 Multiplayer 22

Apartments 6

Double Feature apartments 184
Double standard apartments 16
Restaurant
Traditional restaurant dishes
Sauna
Wet sauna
Air conditioning
Gardens and pavilions
Room service
Parking
Conference Room
Artificial lake
Indoor pool.
Tennis court.
Outdoor amphitheater.



Fig.4.2. Photos and different views from different areas of Mashhad Pars Hotel, in Mashhad, Iran

4.3. Pars Hotel Elgoli, in Tabriz, Iran

Pars Hotel includes the spaces as below following:

Single room 200.
Double room 140.
Special apartments.
Restaurant.
Indoor pool.
Tennis court.
Jacuzzi.
Bank.
Air conditioning.
Internet inside the room.
Conference Room.
Sauna.
Gym.
Trade stands.
Taxi.
Room service.
Barbers wet sauna.
Satellite.
Laundry / Washing
Billiard hall.
Crafts booths.
Outdoor swimming pool
Parking.
Child Room
Fast food restaurant, fax / phone remotely.



Fig.4.3. Spectacular photos of Pars Hotel Elgoli, in Tabriz, Iran

A few examples of hotel plans implemented in other countries as exemplary is intended to design hotels.

4.4. Park Hotel, in Sydney, Australia

Location:

The hotel is located in Hyde Park of Sydney Harbour in Australia, with cliffs and beautiful views of the Sydney Opera, has a distance five minutes of Sydney's central, and twenty-five minutes from Sydney Airport.



Fig.4.4. Shows out side view of Park hotel, in Sydney, Australia

4.4.1. Guest room:

The hotel has 158 guest rooms with private balconies, and luxury spaces, with a great view of the scenery, and Sydney Harbour Bridge and its Opera. The ventilation system is air condition.

4.4.2. Restaurant and coffee shop:

Kitchen and cafe which is located right on the shore of Sydney Harbour, has a stylish and new interior design.

4.4.3. Entertainment:

Sports facilities include a gym halls, sauna, steam, and massage services and beauty salon. On the roof are located chairs for sunbathing, the pool and spa. The hotel has 6 rooms with capacities of up to 30 persons, with equipment including: multimedia system and adjustable lighting, insulated walls, and sensory doors. The running system of library, contains speaker, microphone, multimedia system, excellent lighting. (Website Hotels Park Sydney, August 1387)



Fig.4.5. shows in side view of Park Hotel, in Sydney, Australia

4.5. Laleh Hotel, in Tehran, Iran

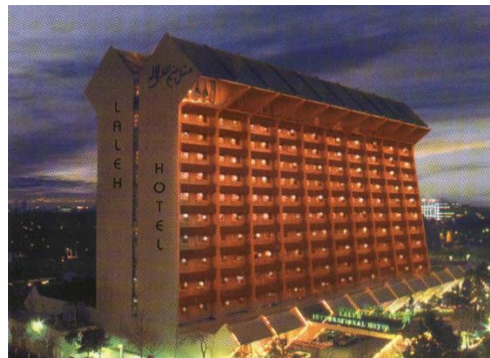


Fig. 4.6. Shows Laleh Hotel, in Tehran, Iran

Intercontinental Hotels Corporation in 1946, by the International Pan American Airlines, was formed at the request of the U.S. government, through the addition of traveler to South American countries, helps to strengthen the economy of the country. Intercontinental the company now has 68 hotels on five continents. Laleh hotel is one of the chain Intercontinental hotels, after the Islamic Revolution, bought its share from the U.S. Company. Laleh Hotel, with an area of over 160 square meters, with 13 floors, has 40 single rooms, double, suites and Royal Suites. This hotel has built in 1350, and restored in 1376. Laleh hotel is five-star hotel, and its location is perfect for domestic and foreign guests, because it is in the city center, and guests have easily access to the required locations.

Tis hotel has four Chinese, European and Iranian restaurants, and swimming pool, sauna, a conference room and various shops. 470 personnel are working in this hotel. (Websites sun, hospitality in Iran, August 1387)

4.6. Dolphin and Swan Hotel



Fig.4.7. Shows Dolphin hotel, in Walt Disney World in Orlando

"Hotel Dolphin and Swan Hotels "are located in front of each other, in New city in Orlando. This two huge hotel, which is visible from great distances, have a lot of attractive and the lively spaces. There are two huge statues of dolphins on the hotel, and two high statues of swans on the small hotel, which have 15 meters height.



Fig.4.7. Shows Swan hotel, in Walt Disney World in Orlando (Websites sun, hospitality in Iran, August 1387)

Each hotel has decorated with beautiful graphics and illustrations; including bananas green leaves painted, on the background of sand the Dolphin hotel, and of blue waves of Swan hotel which covered the surface. In this project simultaneously with categories of architecture, trade and income were taken into consideration and as "Walt Disney" says: "The project architecture is entertaining".

Entrance lined with tents, pillars of banana trees and palm leaves, decoration of beach scenes on the walls, are designed to look like leaves floating scaffold and coastal trails lily.

"Michael Graves" designed this two hotels as part of the main plan of Walt Disney World. A corridor roofed, connects two hotel lobbies, which are located in front of a crescent-shaped lake.

Dolphin Hotel which seems larger and more magnificent than the Swan hotel, contain an area of 1260 square meters. Triangle tower and its 27-storey, is the main center of the hotel, and a 9-storey building that are located the guest rooms. A fountain such as oyster shells, is scattering water around the entrances.



Fig.4.7. Shows view of Dolphin hotel from the Swimming pool, in Walt Disney World in

12-storey building of Swan hotel, with 55,350 square meters has divided into several parts: main building which roof line gently has curved, and two in their arms contain guest rooms, were drawn outwards towards the water. Big and colorful shade

are extended on the entrance, to form the ship's cabin, and cast shadow on the corridor which connect the two hotels. In fact, nothing of the graphic designer Michael Graves, is not spared. Restaurants containers marked dishes with orange rings, the tables has designed and slices of orange and lemon. Michael Graves guest has designed room furniture with designs of fruits, waves and flowers, and are placed the lamps with based pineapple.

Chapter 5, Design Studies

Important points in the hotel design

1. Guest's path, equipment and staff should be separated.
2. For each room, it is required 6 square meters of hall space width of 1.05.
3. Garbage must be accumulate in roofed space with a ceiling height of 4.30 m.
4. For increasing the efficiency, it is better paths between the kitchens - food delivery - the restaurant be as short as possible.
5. Rooms according to the size, can have the living room with seat space - TV - desk - Refrigerator – Desk for the bags
6. There are two kind of laundry service in the hotels,
 - Sheets fare or contract with laundry outside the hotel.
 - A central part within the hotel and it's done by departments.
7. Kitchen design is done in 4 stages:
 - Preparing a plan including all major areas.
 - The minimum and maximum number of employees for each episode.
 - Specify the necessary equipment for each episode.
 - The allocation of spaces.

5.1. Analyze the feasibility of project

The first step in the construction of a new hotel with its development plan, is preparing a study of the Bazaar and its financial forecast. In the first part, the demand for housing and accommodation on the part of the Bazaar, will be studied and analyzed. In most hotels, in addition to the bedrooms, bars, restaurants, theaters, sport facilities, meeting room, and shopping center, there are potential opportunities for gainful employment. A careful study of the Bazaar, will be identified the

possibilities. In addition the study, definition and appropriate description of these spaces will provide numerous requirements, such as proper combination of bedrooms, special foods, and the need for space for audio-visual works. In multi-user projects knowing about the kind of demand that offices, shops, sports and other land uses are primary importance. For example, in Dallas, Texas office of North Dallas and surrounding areas that were growing and the acquisition of wealth rapidly, caused operators Sheraton Hotel of Park Central, not only add additional restaurant halls, but also a space square (3700 square meters) for recreation club. The success of a project like hotel depends on the following issues:

1. proper position
2. The continuous and strong demand
3. The right combination of facilities
4. Management Professional

Design and shape of the hotel, influence on two groups: first on the hotel guests, and second staff who are working there. Another issue that, prospective operators seek the designs that make possible the development of the hotel, which this development may expand by adding a secondary building, increasing bedrooms, making space for meeting, or sports club.

5.2. Project definition

Providing an exact definition of the project, to identify the land uses framework, initial public activities, and estimates about the size is a great help to the designers. It should be emphasized, determining the degree, quality, services and facilities of the hotel, and what kind of people we want to attract.

For example, the report of Sheraton Hotel Company about the requirements of the Sheraton hotel, on the outskirts of the industrial city of Detroit is as follows:

The hotel is set high, luxury, for entertainment, a meeting hall and 500 rooms. It is located, on one of the residential-commercial areas, in suburban of Detroit. This hotel should be designed, to accommodate client groups for seminars and business traveler. This possibility should also be for the passengers who are on holiday in the area. Public amenities should respond to the people's demands, business groups and local, state and commercial organizations.

According to the studies concluded that the desired hotel, five star, complete with recreational facilities, with respect to the substrate potential projects, it is among a resort hotel in the touristic area, which has a range of sports and recreational facilities.

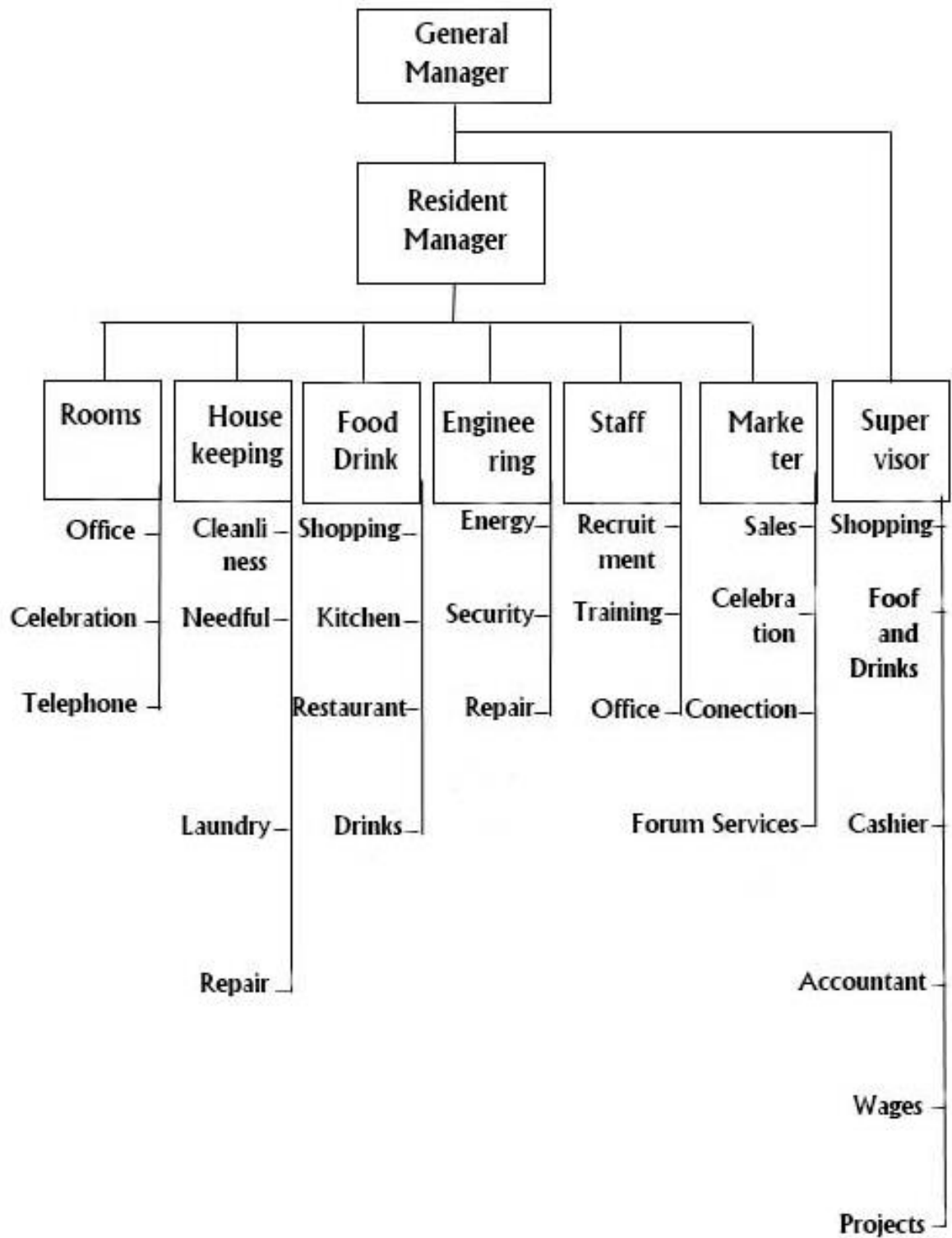


Figure 5.1. Shows the formation of a medium-sized hotel, which has a resident manager at the hotel who supervises of hotel’s activities.

5.3. The required amount of space according to the type of hotel:

Table 5.1. Shows the required amount of space according to the type of hotel

Name Space	Seats Number	Hotel type
Bedrooms		Entertainment
Number of guest rooms		350
The number of openings		364
Net area (sqm)		32.5
Gross multiplier		45%
The bedroom space (square meters)		16493.5
Public spaces		
Lobby		
Cafeteria	150	350
Restaurants	263	284.5
Counter a drink in the lobby	50-60	111.5
Entertainment hall	100	175
Total (sq m)		954
Spaces for events and celebration		
Holiday house	560	700

Meetings / celebration	280	312.5
Total (sq m)		1012.5 5.7%
Trade / Recreation		
Gross multiplier		25%
Total public spaces		2677
Office		
Office lobby		130
Executive offices		97.5
Hospitality and Sales		93
Accounting		97
Total (sq m)		422.5
Gross multiplier		0.20
The total area of office space		507
Service areas		
Food preparation		
Main Kitchen		332
Kitchen		42.5
Stock food and drinks		112.5
Sum		487

Receiving dock / warehouse rubbish		130
Public Storage		130
Total (m)		260
Spaces staff		
Staff		98
Workers		197
Dining staff		88.5
Total (m)		383
Laundry / housekeeping		
Laundry		279
House keeping		167.5
Total (m)		446.5
Engineering / Mechanical		
Office Engineering / Workshop		325.5
Mechanical		488
Total (m)		813.5
Gross multiplier		0.25
The total area of service areas (square meters)		2987.5
Total area (sqm)		22665

Area per room (m)		65
Sports		
Swimming pool and gardening		327
Fitness		1896
The physical space (sqm)		297

5.4. Floor plan types:

- 1. One-sided or two-fold plan
- 2. . The tower plan
- 3. Plans Atrium

In choosing a plan should consider the following:

Location of the bedrooms in arrangement of the corridor, with taking into consideration the circumstances of the site, and one-side corridors. Seating corridor, location of public or services corridors, or separating them. Design and form of the corridor, determine the best method for the design of public and service elevators, sheets storage, shots, parts of the sales, and location of the emergency exit staircase. The one-dimensional or two-dimensional plane, shapes and compounds which in, the service and lifts corridors, been placed in the angles of the project, have several advantages. These compounds, decrease space infrastructure other bedrooms, and environment of the building. Because of the need to connect to lobby public lifts, and service lifts to the housekeeping and other services sectors, away from view, designing this corridor is complex. One of the common objectives in the design, is

putting the elevator in the middle third of the floor, so as to minimize travel distances.

These plans show the different states of the bedroom's floor.

1. An one-side or two-side plans

- A. One-Sided Plan (Alameda Plaza hotel in Kansas City, Missouri, United States): This plan is a one-sided design, with a lift and stairs that don't have any relation with bedroom's structural.
- B. Two-Sided Plan (Hotel Sheraton, Hartford, in the United States): This design shows an elevator corridor, which is cost-effective, and the service space is in the "back" of public elevators.
- C. Non-coaxial two-Sided plane (offset) (Westin hotel in Tulsa, Oklahoma in the US): Corridor which is equivalent to three bedroom, located in the center of the offset.
- D. L-shaped two-sided plane (Boston Marriott Hotel in Boston, Massachusetts): The plan includes elevators which are located in the corner of the L-shaped and is as the offset economically. Therefore, the design of the bedrooms, needs a careful planning, otherwise, they will be combined with others to create a suite.

2. Plan towers

Unlike other plans that are combined to form, the tower shape plan, has limitations for the number of rooms within the floors. Tower shape has a direct impact on the appearance of the tower, structure, and the scale. The effectiveness of the plan, is directly proportional to its shape.

Tower plan types:

- A. Pinwheel shape plan (Berkshire Common hotel, in Pittsfield, Massachusetts): The plan is a simple combination of 16 rooms on four plans as indicated. Corridor of this plan using scissors staircase, is very effective, but the passages that extends to the corner of the building, is excessive.
- B. Square plan with H-shaped corridor (Noble Inn hotel in Tampa, Florida): The project, has circulation and corridor very economic.
- C. Cruciform plan (Hotel Holiday Inn Ontario, Canada): The corridor project is very frugal, but it has increased building environment.
- D. Circular tower (hotel Westin, Seattle, Washington): This combination creates a very efficient plan with a very compact corridors and toilets bedrooms are a good plan.
- E. Triangular Tower (New Otani hotel in Los Angeles, California): The design shows a corridor with a suitable shape and composition, that it has good access to the bottom of the tower.

3. Atrium Plans

The third major category of bedrooms plan, is Atrium project that after a long time, was used by the architect Hohn Portman, in Hotel Hyatt. Actual composition and shape of the Atrium, is located the bedrooms along one-sided corridors, which are similar to the open balcony and the lobby.

- A. Square shape Atrium (Hyatt Regency hotel, located in Louisville, Kentucky): The plan shows classic atrium shape, with a one-sided corridors and scenic elevators.

B. Modified Atrium (Hyatt Regency Hotel in Cambridge, Massachusetts):

The design combines a small central atrium, with two arms which has bedrooms on either side, to increase the efficiency of the scheme.

Almost all the atrium hotels, have glass elevators overlooking to the lobby, and create motion in the space.

5.5. Dimensions and sizes

One of the important decisions in the design of the bedroom, which has an important effect on the hotel plan, is the pure width of the room. This decision determines the module structure of all buildings, including public spaces and services in the lower floor. As a rule, we should use best the external walls (natural light, sights), and vital dimensions of room is its width. Increasing the room width reduces the total number of rooms, and increasing corridors length increases the number of bedrooms.

Width of the bedroom: The most common size is 3.7 meters, which was used for the first time in the mid-1950s by Holiday Inn chain motels, as the standard for all buildings. In this size there is a pass way in the room, after the accommodating the necessary furniture. In the United States and Canada, has no constructed any first-class hotel or chain (other than cheap motels) with a width of less than 3.7 meters.

Length of the bedroom: length of the room are usually more changes, although may be dictated by structural constraints, and range of them includes bathroom, bedroom, workspace, day use area. The environment should be designed in such a way that uses the maximum daylight and natural landscapes. Sleeping area should be design with a length of 4.2 meters for twin beds or a large size bed, and 7.3 meters

for double beds, which should be considered for access from both sides. Two comfy chairs and a coffee table occupies an area of about 1.7 m, which this size may be increase to 2.3 by accommodating a sofa or sofa bed. In recent years, a better standard size bedrooms for the hotel have been created with different quality:

Table 5.2. Shows a better standard size bedroom with different quality

Living area		bathroom		All bedrooms	
Dimension(m)	Area	Dimension(m)	Area	Dimension(m)	Area
3.5*4.5	16	1.5*1.5	2.3	3.5*6.2	21.9
3.6*5.5	20.1	1.5*2.3	3.4	3.6*6.6	29
4.1*5.8	23.8	1.7*2.6	4.4	4.1*8.6	34.2
4.5*6.1	27.9	2.3*2.7	6.6	4.5*9.1	41.8

5.6. Amount or extent of changes

Ceremonial and high-grade hotel, present a lot of rooms with different dimensions. The overall length is usually 6/8 or 6/9. In other areas, widths may be increase up to 3.9 or 4.5, this has allowed the re-location of the beds. In the most high-grade hotels, suite are considered as a proportion of the rooms (4-8 percent), and these suites are usually located in the corners or upper floors of the building economically.

5.7. Ceiling height

Ceiling height of the room, depends on the area, especially the length of the room, and weather conditions. The roof above the entrance and bathroom can be shorter to insert the ventilation system and canals.

Table 5.3. Shows the ceiling height standards of bedrooms in the hotel

Name Space	Height (m)
Medium- living and sleeping space	2.7
Minimum	2.5
Preferably in hot weather	3.0
Bathroom and the entrance area minimum	2.2

The output of electric and mechanic, cooling, sprinklers, and ventilation system usually space on the false.

5.8. Bedrooms plan

Many operator companies believe that the bedrooms and toilets, have more impact on the guests than other areas. Due to being nature and characteristics of the residential, any defects or deficiencies in design or equipment, such as lights switch failure, adjoining bedroom door, mirror, and bathroom, they been highlight and specific for the guest.

Until 1829 opening date of Tremont House in Boston, there was not any hotel with private rooms. Guests were ready to shear the room and even there bed with

passengers and other guests at the guesthouse. This innovation mean private usage of the bedrooms and the ability to lock their doors, was a success and a standard for a new and flourishing industry. During the nineteenth century, Hotel industry for mentation and competition, released possibilities of new technology in their work quickly, such as the use of natural gas, running water, electric lights, voice messaging systems, communications (phone), lifts and the central heating system. These innovations peaked in 1908 at the Hotel Statler in Buffalo, for the first time in a great hotel, all the bedrooms had private baths. Advertisement had announced proudly: A room and a bathroom with a dollar and a half. Another design innovation of Statler Hotel is the initiative back to back bathrooms and toilets for economic issues, characteristics such as circulating cooling water in every room, full-length mirror, and light switch on the entrance, telephone, and radios. The best designers are those who understand the specific needs of their customer, and identify welfare facilities of the group. Therefore, standards of the rooms is important in these cases:

1. Reducing the cost of construction and pre-production parts.
2. Consistent quality and price chain management system.
3. Effective in organizing clean rooms.
4. Economical when purchasing appliances, furnishings, furniture and installation.
5. Fitness in repair work and replacement.

5.9. Bedroom floors

Since bedrooms occupy an area between 65 and 85 percent of the total area of the hotels, so for savings in the design, bedroom floor is repeated several times in different floors. Therefore, the main objective in the design to maximize usable space, and minimize circulation and services space. In addition, the department

should has appropriate shape, composition and form of the plan should reduce cost's energy consumption, heating, and air condition.

Goals in designing of bedrooms floors:

1. The composition and form / determining the site

Position of the room be consider according to the sun, generally north-south are preferred on east-west. The analysis of wind power, the potential sights bedrooms, implemented building from the street, and evaluation different appearance of the building are important.

2. Floor Plans

It is better combination of the bedrooms occupy at least 70% of the floor area, and elevators, and place on the internal walls rather than exterior walls. Corridors plan should be designed based on the ease of circulation, and the lift places on the middle part. If there is a sprinkler system in the hotel, the distance of the room to the emergency stairs is 45 meters, otherwise it should be consider according to the local regulations.

Bedrooms for disabled people should be in the lower floors, and near the elevator. In urban areas with population density and limitation of the land, is the most important issues that should be considered, location arrangement of the public and service spaces. In most cases, two major cases dictate the position of bedrooms and shape of the structure, which are location of the lifts, and the establishment of a preferential location celebrations hall that are free of columns.

5.10. Determining composition of bedrooms

A successful method has been shown for studying compounds of rooms, in terms of analysis, which is form and shape of architecture, beds type, location of the suites, and number of bedrooms. Mr. Guy Ramsey says, "the demand and taste of the people is changing. People are now much closer to their point than before, so more attention should be paid to the design, and particular details.

5.11. Bedroom plans

The followings bedroom plans, show a variety of solutions to accommodate family and working groups in hotels, either cheap hotels to luxury conferences. Bigger rooms usually have better living spaces, work rooms, and larger bathroom than the usual one.

Dubbed double room in a cheap motel (motel Day Inn): The door usually open outside to the corridor, and living, bathroom area are limited.

Dubbed double room types: The beds occupy 70 percent of the room, so living room space is limited.

King sofa convertible into bed (Holiday Inn): a standard layout with large closet and a sitting area with a sofa convertible into a bed.

Convertible sofa to the bed (Holiday Inn): is a small conference room, with king-size beds.

King room: the bed is placed diagonally (like hotels Sheraton Plaza and Palm Springs), with larger sizes, bed placed on the floor diagonal to reduce the institution place.

Luxury Room (Four Seasons Hotel in Montreal, Canada): A room with a window, which has wider width rather depth. Living space is large and has a large bathroom with four piece of cosmetics.

Reverse design (Sheraton hotel in Washington): In the bedroom with unusual design, the bed is in front of the window, and living area is near the toilet.

Luxury King Room, (Sheraton Grande in Los Angeles): Room sizes are larger than usual, with the living area, work desk, big bathroom.

5.12. Rooms for the disabled

Due to the increasing elderly population and taking into account the special needs of the disabled, hotels must provide facilities. As a matter of principle and law should be equipped one to two percent of the rooms for the disabled. Disabled rooms usually place on the ground floor to have easily accessible to the parking. A long steep slope levels should not exceed 7%.

Corridors must be at least 91 cm wide and 81 cm door must be opened without a hitch. It is better we use sliding doors, and shelve which we use should not be higher than 1.37 meters. Height of the bathroom stuff is 86 cm, and the mirror must be lowered to a height of 1 meter. The handles should be facing on the wall in the bathroom and toilet, toilet height be considered 43 cm.

5.13. Suite

One of the main ways that a hotel can presents the different facilities quality to provide, a number of guest suites, in the composition of the bedrooms. It is a living room which connects to one or more bedrooms. The big hotels have some kind of the suites, which may only have one bedroom to three or four.

Table 5.4. Shows types of suites standards in the hotel

Type Suite	Living room	Bedrooms *	Key *	Spans *	Percent
Based suite	One span	Position (alcove)	1	1.5	2
Conference Suite	One span	1	2	2	3
Suite room	One span	2	3	3	4
Suite executives	Two spans	2	3	4	1
Two luxury suites	Three spans	2	2	5	0.5

* Key: a rentable unit

* Room: a single space, whether independent or not rentable.

* Crater: A module type of construction openings system

Suites which occupy usually 5 to 10 percent of the all rooms, ordinary place on the upper floors, but in unmoral conditions can be placed vertically and in different floors. In the last ten years, some new facilities have been added to the suite hotels. One of these fast services is enrolling the name in the upper floors of the hotel. These services were developed in such a way that the guests on the floors of the towers or tapestries, could pass from bustling atmosphere in the lobby and enroll their name on the floor. Larger halls related to this floor may have some large span, and a reception desk, an office, a small living room, TV, a conference room and a large hall.

5.14. Suites plan

Hotel suites combines independent living room and sleeping areas. The largest suite can be expanded to 10 or more structural spans, to combine more number of bedrooms and living. Types of suite are the following plan:

1. Mini suite: It has one living area with single-span, and a space for king-size bed, which separating by TV and dressing table this tow rooms.
2. Normal suite: (Westlake Plaza Junior Suite, in Westlake, California), which include the living room which has two times bigger area than a normal room, and a bedroom with bathroom.
3. Suite (Hospitality): it is for the conference, and the suite has two separate living spaces, as well as conference room / dining which include kitchen and storage.

5.15. Design of bathrooms

With the exception of some economic hotels, it is better which shower and bathroom locate back to back, that is economic for service channel, water piping, plumbing and ventilation.

5.16. Design of toilets

They can be design inside of the bathroom or separate from the bathroom. Siphon toilets are common with nuclear components may be placed in the walls for making easy cleaning the floors. Siphon water tank can be placed in the vicinity of the channel. Countertops are one of the standard requirements are raised in luxury hotels and suites. Central fixtures are preferred components.

5.17. Balconies and terraces

Amenity space in the form of balconies and terraces add the numerous expenses (continuation and expansion of the building structure, loss of space room), and also may have problems regarding security (access) wind suction, insulation of water. Balcony, terrace areas are usually limited to the areas which have beautiful scenery. A balcony may look out of the building and may be sunk in the area of the room, or may be angled or gear to extend the side view or use the natural ventilation. Balcony provide better cleaning of glasses and windows, and could create a second way of emergency exit.

5.18. Designing public spaces

While the bedrooms, occupy the maximum size of a hotel, but what determines the difference between the hotels, are public spaces of them. The basic difference in the hotel is public spaces. For example, hotels for conference, have big spaces for meetings and conferences, the entertainment hotels have impressive sports facilities, and center, luxury hotels in addition recreational facilities, have excellent food supply.

In the international Seoul Hilton hotel, in Seoul, Korea, Henry Moore sculpture creates an exciting and memorable experience, both for hotel guests and clients, and emphasize the effect of excellent opportunities to showcase works of art in all hotels. Matrix of public spaces according to the type of hotel that has been shown in table 5.5 shows the matrix of space in various hotels.

Table 5.5. Matrix of public spaces according to the type of hotel

Type of hotel	Lobby	Dining and drinking places	Event space	Sport and recreation space.	Parking lot
Suburban	Average	Average	Average	Average	Great
Urban recreation	Average	Average	Different	Average	Small
Conference center	Average	Average	Great	Great	Great
Suite	Small	Average	Average	Average	Average
Super Deluxe	Small	Average	Small	Average	Average
Coastal resorts	Small	Average	Small	Great	Average
Multifunctional hotel	Great	Great	Great	Average	Average
Games Night	Great	Great	Great	Grand (Casino)	Average

A main purpose of the planning and design of public spaces around the lobby of the hotel is that they have gathered, this type of arrangement is such a way that guests can find other places with minimum of difficulty, and create an opportunity to combine the two spaces when it is necessary, especially in atrium hotel. (Figure 5.2)

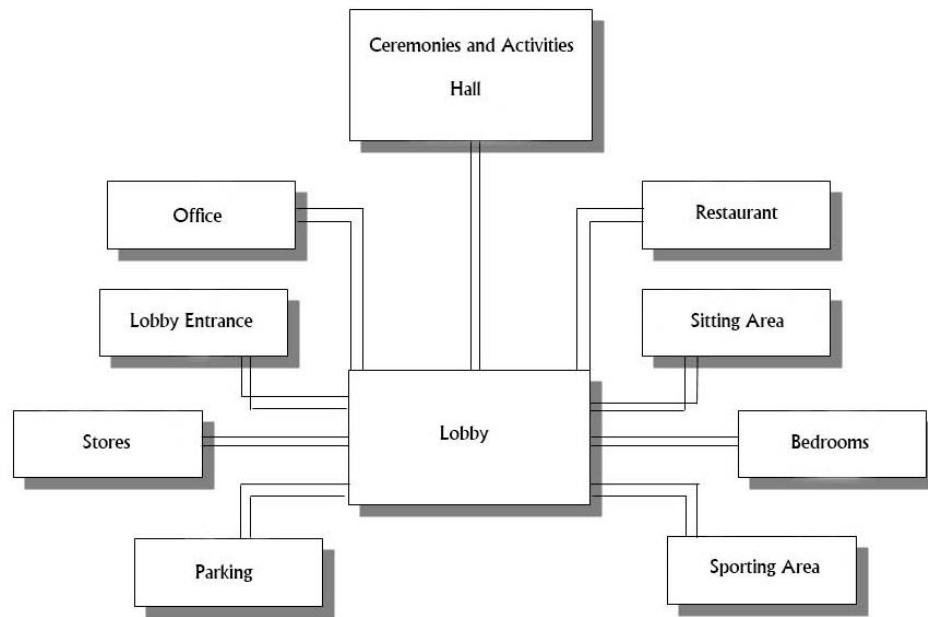


Figure 5.2. Schematic layout of public spaces that show the relationship between public spaces

5.19. Furniture

Knowing the type of customers, determine not only the most suitable combination of beds, but all other equipment and furnishings for a specific hotel, also is effective in the ability renting the rooms and achieving the highest level of income, so the rooms should have great flexibility and ability to change that. The combination of bedrooms for different hotels is in the following table.

Table 5.6. Shows the combination of bedrooms for different kind of hotels

All bedrooms percent					
Type of hotel	Double double	King	King and convertible sofa bed	Convertible sofa bed	comments
Cheap Price	100	0	0	0	-
Motel	60	28	10	2	The move away from the double double
Conference center	40	40	15	5	Singles, couples and visitors except for weekends
All suites hotel	10	90	0	100	All rooms are connected by a living room.
Luxury hotel	20	60	10	10	Dubbed double bed with large double beds replaced.
Family / recreation	80	8	10	2	In doubles, space for crib be provided.
Mega	55	35	5	5	-
Lahary	20	60	10	10	Limited number of rooms

The full list of furnishings and furniture can be provide with review of the bedroom, such as sleep, rest, work, recreation and entertainment, clothing and spatial requirements of each provision. A common double bedroom, has a multi-division, bathroom, dressing room, and closet space for clothes are located in the entrance hall, sleeping space in the center of the room, and living space, work space are near the window.

Bedroom in the hotel has a capacity of one to four or more, and may take place some activity at the same time (for example, the bathroom, dressing, sleeping and watching TV), and the room should be flexible and adaptable to a variety of users. With rising costs of construction and decoration, finding a solutions in the design of the bedroom that within a realistic budget can, combine applications bedroom with comfortably, is important, one of these methods is reducing the furniture or minimizing size of them. In this way, the designer can add the following to work:

1. Queen-size or king-size bed with a width of 180 cm: use of bed smaller than a king-size bed two meters, provides more open space.
2. Using convertible sofa bed or wall beds, which create flexibility and more open space.
3. Designing paces for clothes, suitcases increase open space in the room.
4. The combination of drawers with TV cabinet and using a sliding table on a wall shelf, kills the use of two or three independent pieces of in the room.
5. Living seats are designed as a way, they can be used at the desk, the necessity of having the rear seats which is very vertical, will be eliminated.
6. With using of full-length mirrors, room space looks bigger.

7. In designing the bathroom must predict the shelf, mirror and bathroom lighting, and also possibility of separating toilet and bath.

Table 5.7. Shows size and type of the beds in the bedrooms

Types of beds in the bedrooms		
Types		size
Doubles	Two single beds	1*2 m
Double double	Double bed	1.25*2 m
Queen Double	A Queen size bed	1.5*2 m
King	A king-size bed	2*2 m
King of California	A king-size bed	1.8*2 m
Double major	Two single beds	1.51*2 m
Double Queen	Two Queen size beds	
Double sofa bed convertible	A double bed and a sofa convertible into bed	
Queen convertible sofa bed	A Queen size bed and a sofa convertible into bed	
King, convertible into beds	A king-size bed and a sofa convertible into bed	
Convertible sofa bed	A convertible sofa bed	
Wall Beds	A flat wall	

Needs related to furniture, storage space and other furniture items are related to the hotel room type, and the number of people who are staying in a room. Closet space, storage devices, hangers and other items are in the below table.

Table 5.8. Shows the needs of furniture in different hotels, according to the standards

Stay 1-3 nights double room	High grade	Medium	Minimum suitable dimensions
Hanging space (the locker)	120cm	90 cm	Internal depth 56 cm, height 16 cm meter rail, upper shelf 175 cm
Storage space (cabinets and shelves)	150 cm	110 cm	Shelf height 20 cm minimum and increases to 40-30 and low levels of floor 10 cm
Desk and arrangement	100 cm	50 cm	The minimum depth of 40 cm, suitable for 55-50 cm, height 75-70 cm.

Depth cabinets	45 cm	45 cm	Depth 50-45 cm and a width of at least 90-75 cm.
Side tables	-	-	Width of at least 37.5 cm to 60, height cm 60-70 proportional to the height of the bed.
Removable seats	2-3 number	2	Seats: lightweight, compact and has a cover
Desk	1 number	1 number	Circle or square tables

5.20. Decoration and interior equipment

While the room layout, is an important factor in order to satisfy the guests, details of interior design is equally important. Interior design bedroom, should represent continues style and design of the hotel and public spaces. Thus, the designer must select designs and patterns that can be used for large public spaces and for more private bedrooms. Those required to complete the design bedroom in the table below.

Table 5.9. Shows required decoration to complete bedroom design

Furniture	
------------------	--

Shelf	Desk, dressing table, tables, chairs, Headboard shelf above the bed and TV
Fabric coating	Bedspreads, curtains, upholstery chairs, tables, and carpet.
Lighting	Bedside and desk lamps, and living spaces.
Essentials	Mirrors, artwork, plants and other living things (objects such as buckets, operator is part of a media company).
Bedroom Works	
Floor	Usually cover the carpet with a soft layer of foam is used, or may be used tiles in the resorts hotels (places where the weather is hot) and suites with parquet and in some parts may not be covered.
Wall	Washable wallpaper or color is preferred.
Ceiling	Acoustic cover
Door	Filled wood
Door frame	Painted to match with the doors and walls
Bathroom works	
Floor	Ceramic or glass tile, cannot be carpeted.
The walls	Ceramic tile or marble around the tub, wallpaper or paint in other areas

Ceiling	color
Acoustic	Bedroom wall should be equal to 48 scale acoustic STC.
Electrical / mechanical	
Sockets	At least five outlet: two for beds, one for the desk, dressing table and seating area.
Cable	For TV, phone, fire alarms and other communication systems.
Safety against fire	At least one detector sensor and a plume diagram in each bedrooms, some areas require additional geysers.

5.21. Bedrooms decoration:

Bedrooms decoration, in the city center hotels designed like public spaces.

1. Sheraton hotel in Washington, has used cream color and glass surface (as a result of its lobby).
2. Adolphus Hotel in Dallas, has used very luxury furniture.
3. La Reserve in White Plain, New York, shows designer attention to all the details, including furniture and accessories for staying in the hotel, which is unusual in business hotel.

5.22. Entrance doors and access to the hotel from outside

The best place to view the landscape architecture of the hotel, is the pass which leads to the entrance doors of the building, which in this pass, view details area, and exterior design such as, night lighting, the entrance pass, canopy, and landscape are effective to eager guests to spend time in the hotel.

The relative priority of the inputs that should be considered when designing are:

- a) The main entrance to the hotel
- b) Entrance to the halls celebration
- c) The entrance to the restaurant / counter supply drinking / night club / lounge games and nightlife
- d) Entrance for bus / airport
- e) The entry for suites or apartments

It is necessary to highlight each entrance according to the its function, by shading, appropriate signs, installing special lights or other architectural elements. Some entrances, need a space for wanting taxi or bus, and some others need temporary storage for suitcases. The design of the hotel entrance, it needs can be summarized as follows:

Provide a canopy at the main and secondary entrances (celebration hall), to protect visitors against bad climate, and also add lighting, signs, heating device. The lighting are located under canopy invisibly, with lamps and soft light, that light intensity of the lights in the entrance lobby is lux400 (400 times the light of a candle) and in the corridors is lux200. For passing the buses, the shelter is considered an appropriate height.

5.23. Main feature of the hotel customers

Main features of the hotel customers, which is very effective in design and furniture of rooms in the hotel, are mentioned in the below table.

Table 5.10. Shows Main features of the hotel customers, which is very effective in design and furniture of rooms in the hotel

Guests characteristics	Purpose of Travel	Design factors Bedrooms
Work		
Group Occupation for single or double rooms, stay 2 to 4 days 75% male, 25% female	Meetings, conferences, communication Professional, business and educational meetings.	A king-size bed, double bed, double bed, with bath and dressing room, a living room with good working space
Single Occupation for single rooms, stay 1 to 2 days 85% male, 15% female	Corporate work, business meetings, conferences.	A king-size bed, a standard tub with shower, a sitting area with an extremely good working space
Entertainment		
Family Occupation for double or more (Including the children) Stay 1 to 4 overnight cheap or medium cost	Family holidays, sightseeing, sports activities	Double bed, sofa bed or king-size convertible interconnected rooms, a sitting area and TV, a bathroom, a large part, a balcony, access to the outside

couples Occupation double room Stay 1 to 7 overnight medium to high cost	Tour clubs, socializing, sightseeing, theatre, sports, weekend programs, shopping, spend holidays	King-size beds, a table for dinner and the proper capacity closet, bathroom a big part.
single Occupation single room Medium to expensive cost	Tour, club, association, visit cultural spaces, art, theatre, shopping	Queen size bed, suitable for eating area and desk, bathtub Standards

5.24. Revenues and expenditures in hotel

Income and expenses for hotel are shown in the table like classification. Consulting companies for hotels, publish annual statistics for hotel and accommodation industry, as national and international organizations which are very useful in this industry.

The following table is a summary of public and the main functions of the hotel:

Table 5-11. Shows summary of public and the main functions of the hotel

Checklist spaces	Checklist spaces	Checklist spaces
Guests bedroom	Support area	Lobby

King 43%	Elevators	Corridors
Double 50%	Storage for sheets and...	Living area
Unable 2%	Equipment sales	Stores
Suits 5%		Management
hallways		Services
		Telephone
Food and beverage	Lobby office spaces	Accounting
coffee shop	Counter lobby	Waiting room / reception
Restaurants offer special dishes	Management office lobby	Accounting Manager
Roof restaurant	Assistant director	Assistant Accounting Manager
Place serving light meals and ready	Credit Manager	Accounting staff
Snack counter	Reception / secretary	Rights Officer
Junk Food	Room Manager	Secretary, warehouse copy
Hall drink	Reception / secretary	Files morgue
Counter for drink in the lobby	Space Reservation	Computer Room
Recreational hall	Reservation Manager	Food preparation areas
Recreation hall for the night	telephone operator	Main Kitchen
	Fire room	Pantry Coffee Shop
	General Treasurer	Part prepare food for

Spaces for events and activities	Counting room	Restaurants offer special dishes
Celebration hall	Workspace / post	Space for service to hotel
The entrance hall celebration	Store	Shopping
Small celebration hall	Office of CEO	Chef Office
The entrance hall a small celebration	Waiting rooms and events	Stock dry storage
Banquet room	General Manager	Refrigerated foods
conference room	Deputy executive	Stock beverages
Boardroom	Resident Manager	Cold drinks
Lecture Halls	Director of food and beverage	Controlling foods Office
Theater	Secretary	Health services
The storage room	Conference room	Dock receipt and storage of raw materials
Audiovisual equipment warehouse	Sales and Procurement	Dock rubbish
Admission to meetings	Reception / waiting	Dock receipt of raw materials
Apart room	sales manager	Office Dock receiving raw materials
Interpreters room	Reseller	Office Order
Office administrator	Public Relations Manager	Luggage storage warehouse
Dressing artists	Responsible procurement	Storage of empty bottles
	Reception ceremony	
	The drinks	
	Refrigerator rubbish	

Health services, telephones		Rubbish storage
Club Tennis / Golf	Engineering Space	Washing Cans
Children's playroom	Engineer	Aggregator device
Skating hall	Resident Engineer	Equipment warehouse
Billiards	Department secretary	Public Storage
	Carpentry workshop	Staff room
	Plumbing workshop	Security
	Electrical workshop	Staff / Reception
	Painting workshop	Staff management
	REPAIR TV	Assistant directors, staff
	Locksmiths	Interview room
	Computer section	Training room
	Mechanical space	Storage and Archive
	Mechanical equipment	First aid
	Emergency generator	Service staff
	Contor room	Toilets and changing rooms for men
	Fire pumps	Toilets and changing rooms for women
	Electrical panel	
	Elevators rooms	Cafeteria staff

	Telephone equipment room	Laundry and housework
	Athletic area	Laundry
	Swimming pool	Room dirty sheets
	pool surrounding area	The laundry
	Jacuzzi	Laundry trained crew
	Health services, sauna	Warehouse logistics
	Exercise training room	House keeping
	Game room	housewife
	Management Office	Assistant housekeeper
	Supervision and care	Sewing room
	Storage equipment	Stock Sheets
	Refinery pool	Stock robes
	Squash	Warehouse logistics
		Lost objects

Chapter 6, Proposal

6.1. The different aspects in architecture design

6.1.1. Functional aspects:

In the architecture, each space is designed for a specific function, hospital space as a space with emergency and treatment function, and a hotel has spaces with residential and recreational function. The hotel rooms is a place to relax and stay, and design with different furniture and dimension.

6.1.2. Geographical and environmental aspects:

In our country people live in coastal areas, mountainous, and desert. The area may be hot, cold, rainy, or dry. Every region has its own specific plants and agricultural crops and landscape design in different areas are also different.

In climate of intended site, which is located in the desert area, the layout and appearance of old buildings in the area, are built more local materials such as clay, brick, and today the new materials is visible.

6.1.3. Artistic aspects

Human is tasteful, stylish, and elegant and likes beauty. Bam culture and history is also full the beauty and art, and architecture in the city has been very beautiful with beautiful masterpieces like Arg-e Bam, Bazaar, and Morghak. Unfortunately, many of the houses were destroyed.

6.1.4. Technical aspects

Any part of a building either visible or invisible of it, including the use of industry and material. Technique in our architectural masterpieces such as Naghshe

Jahan square, Behesht garden, and Fin garden, . . . may be observed. In project design, it has used various materials in different parts of the building.

6.1.5. Social and cultural aspects:

History, social, and religious values of each society, creates unity, development, continuation and community life, and is one imputative objectives in the architecture design. Creation security and privacy with suitable landscape and good facilities is necessary in the architecture. (Lazio, Pol, 1377, thinking drawing for architects and designers, translations by Mahmoud Saeed Madani, art and architecture publications)

6.2. Spatial values in the design

6.2.1. Space

Space is the most important factor in the design of architectural, that we move and do activities among open or closed spaces, and we have a relationship with the objects around, and we experience natural beauty, breeze, warmth of the sun, contact with objects, and together. For this reason architectural space should be emotionally and beauty aspects associated with the above qualities. Entering to architectural space, create sense of reserved, having shelter, and closed. When we are talking about the spaces such as lobbies, bedroom, restaurants, and green spaces in the hotel, it is not just mean big or small spaces, it means attention to the differences in appropriate scale, light quality, how to communicate with the surrounding space and nature.

6.2.2. Elements affecting in the architecture space

Color: all things around us have their own color from the color of objects is one of the main features that it is concerned with human emotions understanding.

Texture: If we look at carefully on the surface of a wooden chair or a rug, we find that any material has procedural level that is unique in its quality. Texture of the materials has a depth influence on cognitive and emotional human, in the architecture spaces.

Light: light is the main factor in the quality of dynamism and vitality in the architecture space. It has a special place among the constituent elements of the space, qualitatively, symbolic, and practical function. Without light there is no color and texture.

The architectural design it is tried to obtain the best possible use of natural daylight, and artificial light is used as a supplement during the nights.

Motion: The world is moving like a river, and is changing to grow and evolve, and achieve to everything from the poverty. The universe is based on the movement.

For motion it is necessary we have a space, and specific atmosphere must be created for each movement, the shaping the space that the architect's duty dictates the quality and quantity of motion. For example, the corridor and hallways in the building not only determines the direction of movement, but it also shapes quality of the space, and also the spaces such as streets, roads, and highways, which are special spaces, indicate there are different specific movement for the people, and space movement is not new, to be just for the time, but also it there was in during the primitive and nomadic people.

6.2.3. Manufacturer elements in the architecture space:

Architectural space defined with architectural elements, and achieve the desired quality with the suitable combination of walls, columns, ceilings, and floors, and create the conditions necessary for familiar, useful, pleasant, pretty, environment.

Quality of the created space, entirely depends on the type of confining elements, and composition of them. Direction of space, amount opening and closing of space, relations with other areas, all depend on the way to use the walls, columns, floor, and ceiling. (A. Donis. Dandys, 1383, beginnings of visual literacy, translation sphere, M., Soroush Publications)

6.3. Architectural structure:

Bam city is one of the cities in Kerman province, in southeastern of Iran. According to the statistics in 1385, the population of Bam city is 277,835.

The center of the city is at 58 degrees east and 21 minutes in east, and 29 degree, 6 minutes north, and altitude is 1060 meters above sea level.

Bam city is located in 200 km Kerman between the ways Kerman - Zahedan roads.

Bam weather is hot and dry, but due to its proximity to the desert climate is variable, so sometimes has been reported the hottest summer and coldest winter the country. The annual precipitation average is 68 mm.

One of the unique attractions part of the Bam is Arg-e Bam, which is the largest adobe building in the world, and compared with Wall of China in terms of grandeur and beauty.

Arab geographers of the ninth century notes about the economic importance of the Bam: Bam is an important provincial capital and its people are very expert, and it is marketplace which attracts the people to this city, clothes which are produced is in many countries of world renowned, reputation, and is honor of the Islamic countries, more people are to excellent weaver.

Bam is one of the more important city in the Kerman, from historical-cultural and economic view, and is one the first city in the Iran in terms of the tourism industry. In the Bam, there are many domestic and foreign tourists all year. Horticulture, agriculture and weaving are basis of the economy, which water for agriculture and horticulture in the city of Bam comes from Ghanat (flume) and the river.

6.4. Location of the site

The site is located on the north of the Bam city, in front of the Arg-e Bam.

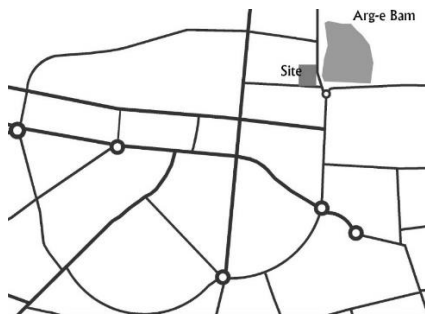


Fig.6.1. shows magnification of the location of the site

6.5. The reasons for choosing the site:

According to studies, the location of the hotel should be located in a position that has perfect weather, pristine and beautiful nature and landscape, far from the urban bustle, and on the other hand have easy access for travelers. Regarding the

position of the site it is on one of the main axes of the city of Bam. As well as having beautiful landscape and pristine super site is intended for hotel design.

Table 6.1. Shows Swot analysis of the site

Strength	Weakness	Opportunity	Threats
Vast and flat area	Keeping built limits from main street	Built a new connection zone between residential and cultural area	Threat of car in the main street
Near palm garden, so existing native products		New destination for residents, tourists, and new generation	
Emphasizing masterpiece Arg-e Bam			
Wonderful visual view			
Opportunities		Activities	Spaces
New community zone and improving rage of users		Comminuting, Social activities, Live music, Eating	Hotel (hamam, restaurant, coffee shop, bar)
Exposure local products		Selling local products, observing production process,	Bazaar (stores, traditional restaurant, bar)

6.6. Design process

6.6.1. Site

The benefits of this site for the hotel is its convenient location, easy access, good weather, and low traffic, and the most important reason is view to the heritage landscape of the Arg-e Bam. In studies conducted in different architectural styles, and comparison them, and also the different attitudes people, and the satisfaction of them, which was conducted by psychologists results that can be achieved is that, in the design, it is very important, the space compatible with the spirit of people, lack of complexity in space.

6.6.2. Site analysis and location of the building

Before the project design, the conditions of the land should be examined carefully, to act the maximum use of existing facilities on the ground, and forecast the solution for the limitation. In analyzing the site, the various factors were studied, such as the size, shape of the site, injuries, soil quality, access, adjacent neighbors, suitable and annoying sights. The location of the hotel building was identified according to the orientation toward the sun, appropriate vision to the Arg-e Bam, and palms garden, and wind direction, and distribution of open and closed spaces were considered.

6.6.3. Design ideas or concept

Because of the vicinity of the site project with Arg-e Bam which is heritage landscape of the Bam, the design were inspired by the same elements of that. The design work has done by understanding and usability of the masterpiece.

There are a lot of historical elements in the Arg-e Bam, and also in the city which they were built according to the climate condition and needs of the people in the past such as Bazaar, Karvansarai, Hamam, Wind catcher, Court yard ect. Which are clapped in the earthquake in 2004, so it is studied all those elements, and be highlighted in the design to remind the historical architecture. Before starting the initial sketch, it is considered the mentioned above elements.

6.6.3.1. Wind Catchers:

Wind catcher, as a cooling system, can make use of wind renewable energy in order to provide desirable ventilation. Oldest one side wind catcher is built 2000 years ago, in Arg-e Bam, at the ruling settled (hakem neshin).

This architectural element can be seen throughout the vernacular architecture of warm climates of Iran. In this study, Yazd has been chosen as a sample of hot and dry climate.

Wind catcher, as its name suggests, is an indispensable part of the skeleton of buildings located in hot and dry or hot and humid climates of Iran. These wind catchers can guide the wind flow and make use of natural clean energy in order to adjust the temperature of residential space to a temperature in the range of human comfort.

Wind catchers consist of several components that are endowed with aesthetic aspects and heavily affect the performance of wind catchers. Identification of these components contributes to a better understanding of the structure of these wind catchers. In this part, the physical components include rack, shaft, main and subsidiary blades as well as open and closed apertures. These components are discussed in detail in the following section.

Wind catcher basic rule is the sum of two parts, airflow and suction.

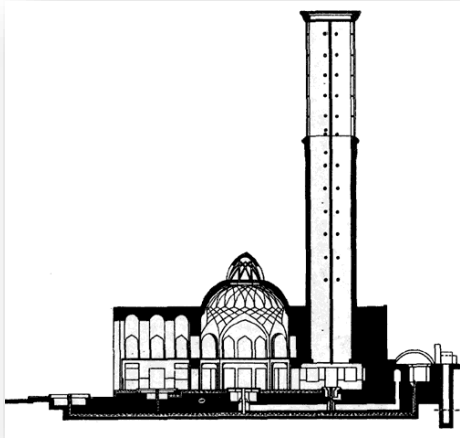


Fig.6.2. Shows eight-sides wind catcher, of Dolat Abad, in Yazd, Iran, with 34m height tallest in the world

6.6.3.2. Court Yard:

In the modern world building heating and cooling needs due to technological advances, was resolved. Local methods compatible with nature were gradually forgotten, and the buildings associated with technology regardless of humanism and harmony with nature were created.

The architecture is such an important part to play in endangering the environment, and awareness of this issue, sustainable architecture in the importance of sustainable development. Court yard is the main space in desert houses. These

homes are typically deployed in terms of the direction of Mecca, and the spaces around central courtyard have been organized.

Courtyard synchronized with the movements of the sun, southern part is shadows home, and northern part is Shahneshin position of the sun. This type of organization and orientation, the summer and winter areas logically placed on courtyard.

Home builders according to the turn the sun on different sides, devoted each side to the seasonal and hourly. With regarding to this issue, the front facing the sun, the winter dwelling, backs to the sun, the summer hours, western side for the cold winter days, and for avoid of the sun East Front has been built.

Table 6.2. Shows Central courtyard features that create stability in local architecture

Principles of sustainable architecture	The role of the central courtyard in achieving sustainability principles
Energy conservation	To enable the use of solar energy, optimal orientation of the spaces to the sun's atmosphere, providing daylight in the spaces around the courtyard, spaces divided into two categories: summer and winter in the yard, energy storage in the pool, energy storage yard in brick paving and walls of adjacent brick yard, and extend the life of the building

<p>Harmony with the climate</p>	<p>Thoughtful face of natural forces, Compensation poverty moisture dock by water, According to the southwest courtyard Svyaby The possibility of using light and natural ventilation in the spaces around the central courtyard, Protect of the building against desert storm, Optimal use of the temperature difference between night and day</p>
<p>Reduce the use of the new resource materials</p>	<p>Using excavation soil from the yard as a main materials, Use of available resources in construction site thanks to the central open space, Remove the transportation costs of materials, The use of local materials, Elimination of environmental pollution caused by construction</p>
<p>Meet the needs of the residents</p>	<p>Man's relationship with nature and the sky, Create a hierarchy of access to the home, Iranian-style Islamic sanctity of private life, Providing habitat for training children and adults based on the teachings of nature and the laws of creation, Physical and psychological security, flexible implementation models for different segments of the central courtyard of financial strength, Contribute to the perception of place and a sense of space, space and the human factor identity, Respect for human scale, Creating a familiar and refreshing atmosphere in the house, Improving quality of life pattern central courtyard</p>

Harmony with the place	attention to the social and cultural fields, attention to the climate , attention to the field of physical
Holism	The pattern of the central courtyard of the manifestation of the principles of sustainability in single buildings and extend it in the context of giving effect to the principles of sustainable architecture in the entire process leading to the creation of a healthy environment



Fig.6.3. Court Yard of Mortas House, in Yazd, shows connection of the human and nature

6.6.3.3. Caravanserai:

Caravanserai is combination of caravan means a group of passengers who travel group, and House, meaning house and place. Both words are derived from Pahlavi language. Providing the road with auxiliary stations in certain areas of in Hakhamaneshian period with name of Chaparkhane started, but there is not available any evidence.

In the Islamic era because of the importance of trade, tourism, pilgrimage and gained knowledge, construction of caravanserai has increased. They are the biggest Islamic buildings. Caravanserais plan inspired by the introverted house with a central courtyard built. It was a Local where people of different ethnic groups and even nations lived together in a few days. Carvanserai made a place for exchanging of ideas and different social and cultural issues and customs different.

In general we can divided Iranian caravanserais into three general categories:

A - Caravansaries with central courtyard in desert areas

B – Caravansaries without yard in edge of the Persian Gulf

C - Caravansaries completely covered, mountainous areas such as Emamzadeh Hashem in Tehran – Shomal road.

Plans are usually square or rectangular, with a prominent entrance massive and long, usually simple and without any decoration, with walls that are sometimes embedded wind catchers at the end of it.

Safavi Period is activist in restoration and construction of Caravanserai. In this period Shah Abbas I, who according to his reflection, decided to rebuild and revitalize the Silk Road and one of the requirements of this revival knew building the Caravanserai. One of the Caravanserai in Safavi period is Shah Abbas in Karaj,

which has built in Shah Soleyman Safavi period between 1078 to 1109 has been constructed.

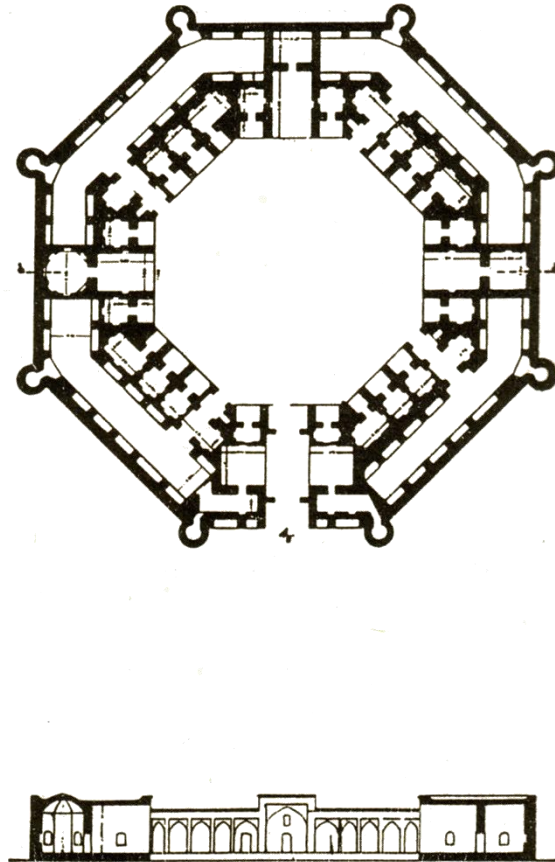


Fig.6.4. Khan Khoreh Caravanserai, on Shiraz-Abadeh road, Iran, Safavi Period

6.6.3.4. Hamam (traditional bath)

Body shower and bath was a religious ritual. In all religions before Islam - from Worshipped sun to the Zoroastrians -bathe was one of the participation conditions for ceremony.This is not only in a place like the Royal Palace of Persepolis, but

archeologists have found traces of the bath, after a search of the concluded that the construction of public baths the Achaemenid (hakhamaneshini) era was common in all cities.

Wash out what is essential and what is desirable, on several occasions ordered the Muslims, so after Islam, Persian kings, but not men, to fill the Iranian cities of Isfahan public baths so that in a city like only 272 public baths were built during the Safavid period.

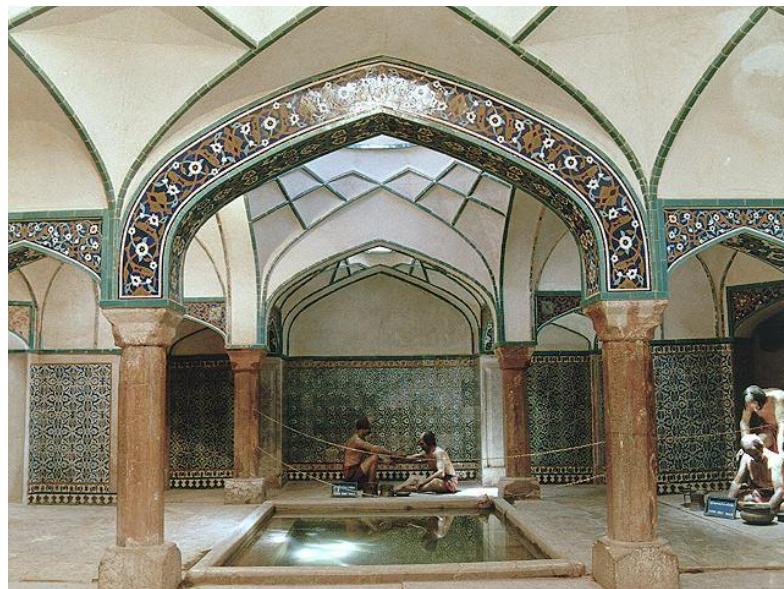


Fig.6.5. Ganj Ali Khan Hamam, in Kerman, Iran, in Safavi period, around the year 1007 to 1029



Fig.6.6. Vakil Hamam, in Shiraz, Iran, has built in the year 1187, By Karim Khan Zand

6.6.3.5. Bazaar:

Bazaar means the place of purchase, sale and supply of goods. The Bazaar word has an ancient history.

History of Bazaar is same with formation of urbanization in Iran, about ten thousand years ago. In all political and social period of Achaemenid to Sassanid and post-Islamic Iran, we witness the social, political and economic markets and the creation of fine architecture with different performance classes of beneficiaries and communication of the complex large-scale enterprise with welfare and have been fun.

But what remains today of the old bazaars in Iran, belong more to the Safavi era to the next. The Bazaar of big cities like Isfahan, Tabriz, Mashhad, Shiraz, Qazvin and highly developed alongside the old order and a number of inns, baths, seminaries, monasteries and recreational facilities such as parks and polo ground was built is.



Fig.6.7. Tabriz Historic Bazaar Complex, in Tabriz, Iran

6.6.4. The initial sketch

When thinking about the project and its design, different ideas comes, which work on any of the ideas, led to independent and complete option. Each of these options, put under consideration the project from the particular view, and reveals projects possible facilities. And also all of the ideas have features, advantages, and their own values. One of the important points in the design and evaluation of project options is the quality of spaces of the each option.

Chapter 7, Structures and installations

7.1. Building installation

Creating a suitable environment for life in different seasons is a critical issue. The first man by recognizing the fire, saved himself in the cottage and caves with smoke unhealthy heat in winter, later by putting the chimney and transferring smoke out, the first fireplace done. Now in the large buildings is not economically, to install electrical heaters in each room, in terms of energy consumption, and it created some problems that led to highly recommend the central heating, mean ventilation and heat distribution from the center and heating one or more buildings by that are. Central heating system has two advantages which are, first, fuel is used only one location (powerhouse), and a professional ombudsman controls the devices and prevents of risks, Second, due to the small size of the heating systems (radiators and convectors) they can be placed in suitable places and with the temperature at 80 to 85 ° C does not cause any danger, and in summer there is no need to collect and storing them, these and other advantages made to be used central heating also in small buildings.

7.1.1. Central heating system

In the central heating system, that heat is transferred from an energy source to different parts of the building. Existing a fluids such as water, air and oil vapor is necessary for the heat transfer. Fluid rises heat with receiving temperature from the energy source, and then gives its heating to the cool place, then go back again to heat source to get again.

7.1.2. Radiation Central heating

Heating the building by a heat surface from the way of radiation is called the central heat radiation system. The floor, ceiling, and wall which are inner surface of

the building, be placed the tube by warm water or air channel, hot gas, electrical resistance network, and the heat in the form of radiation into the place.

7.1.3. Central heating with steam

A system which heat transfer is steam, is called central heating system with steam. It is clear that in very cold regions and in the high buildings that the water pressure and height of the building is considerable, it is recommended the use of central heating system with steam. There is an argument that this type of system is better than the systems studied, but has some disadvantages, including noise in the system that causes by these following reasons.

1. Pathing the steam from the pipes and other connections, creates noise by increasing the speed of steam and whistle.
2. In one part of the tube which caused clogging by distillation steam, instantaneous pressure change products sound.
3. It is very simple to set up and problems such as pipe distribution or broking, there is no the network, and we never need to repair the network.
4. More importantly, in the summer season can be used as a simple ventilation for cooling air.

7.2. The proposed system

The proposed system for heating and cooling of the building is air conditioning system, which uses a fan to provide heating and cooling of the buildings. The air conditioning system includes a system which is based on the type of buildings.

1. Central air conditioners

2. Regional air conditioning system
3. Local air conditioning system

The regional air conditioner is recommended here, and all air condition systems have kinds:

1. All air
2. All water
3. Air-Water

All water system also has their own different types:

1. Two pipe
2. Multi-tube

7.3. Ventilation

The ventilation is that to do operations on the air, to make comfortable and healthy for living and working. In the ventilation, all the different factors of the air should be set and fixed, which contain wind speed, and air temperature, air humidity, smooth the air from dust and clean air by destroying the bacteria.

7.4. Control and planning system:

7.4.1. Control and planning of heating system

1. Criteria in this section are true only in the areas where temperatures are above 10 ° C.
2. All of the heating and cooling system should have properly system for set up, to set internal temperature that is 20 maximum degrees in cold months and at least 28 degrees in the warm months. In hot and humid

region should be respected at least 25 degrees in the warm months. In some large spaces (with special function, such as industrial), can be used topical warming.

3. Any heating system for any heated areas should have one or more cutting and automatic control of heating system, according to the internal temperature of the relevant space. By all the following conditions, cut and automatic control of heating can be performed by a single system:
 - The total area of space be smaller than 400 square meters,
 - Terms of using of space occupation be the same,
 - Thermal terminals of spaces be similar,
 - The spaces have the same orientation,
 - Solar index of spaces be the same range,
 - The thermal inertia of the space be the same.
4. If the heating surface more than 500 square meters, consists of several space, carried by a central system, it is necessary in addition to cutting and automatic control systems mentioned in the preceding paragraph, one or more of the central heating system is set automatically according to the outside temperature. In addition, the maximum level which each heating system can support is 500 square meters.
5. If heating is done by connected electrical systems, and contains several space with an area more than 400 square meters, it is necessary to adjust the device automatically with the outside temperature, for controlling temperature of the electric power space.
6. If the heated space area be more than 400 square meters, it is recommended to predict a system for evaluation of the energy consumption for heating and hot water.

7. If we add a floor or spaces to the existing building, the criteria outlined in the above paragraphs, is also true for additional space, if one of the following conditions shall remain in force.
 - Additional area be over 150 square meters.
 - Floor to ceiling height be more than 3 meters, and spaces volume of the additional area more than 400 square meters.

8. In general, it is necessary to insulate the heating installations (such as boilers), water reservoirs and water circulation circuits and not exposed to the air.

7.4.2. Control and planning cooling system

1. Provided criteria in this part is related to the systems which have been designed for providing thermal comfort in the warm months, with natural ventilation. Provided criteria in this section are not mandatory in these cases.
 - Evaporative cooling systems, like water cooler
 - Systems due to specific function, control the air temperature and humidity more than extent envisaged for the thermal comfort.
2. If the building is in an area with high chilling requirement, and there is no any system to limit the amount of cooling by external conditions exist, and the cooling system is provided 400 square meters for an area or more, the external doors are should equipped with a system for closing automatically and one of the following must be met:

- During the usage of cooling systems, all external opening should be closed.
 - The system should be forecasted to stop cooling system automatically, in case of a long stay the opening.
3. Using heating and cooling in the same time is illegal, unless we use heat production, for cooling in another place, with no increase in total energy consumption. For example, this issue was raised at the core of tall buildings.
 4. In the cold months, if they need to adjust the humidity of the fresh air, the setting should be done without the use of cooling systems.
 5. If the consumption total power cooling systems be more than of 50 kW, it is necessary to anticipate a system for determining the energy consumption of the cooling system in all the building.
 6. If we add a floor or spaces to the existing building, the criteria outlined in the above paragraphs, is also true for additional space, if one of the following conditions shall remain in force.
 - Additional area be over 150 square meters.
 - Floor to ceiling height be more than 3 meters, and spaces volume of the additional area more than 400 square meters.

7.4.3. Control and planning ventilation and air change the general criteria:

1. Provided criteria in this section, is only in the case of occupied spaces where temperature is over 10 degrees.

2. In this section, ventilation system refers to a system that has a mechanical transmission channels, and natural channels, to the outside of the building.
3. When several consecutive space ventilate by a single system with a flow of fresh air, they have used methods based on criteria of health, and safety.
4. Air exchange rate shall not exceed 1,2times higher than the minimum to meet sanitary conditions, if we use heating or cooling system.

7.5. Lighting System

In addition to compliance Section 13 of the building regulations, for energy savings in lighting system, it is necessary to consider the following recommendations and requirements:

7.5.1. Systems and lighting equipment

In high traffic areas of public buildings, is should exist at least one lighting source, with low consumption bulbs. If there are more than one lighting source in that place, the low consumption bulbs key should be in the entrance of the spaces.

It is recommended to use low consumption lamps in the kitchen, and main lighting switch should be on the closest point. All the lighting systems which installed in roofs with thermal insulation, that do not use low consumption bulbs, should be used of elements that prevent from wasting lighting energy in the ceiling. In the design of building lighting system, must be complied illumination range in Section 13 National Building Regulations.

7.5.2. Lighting reduction systems

Enclosed spaces lighting, with area more than 10 square meters, or lighting of that is more than 12 watts per square meter, and carried out by more than one source, must be controlled in such a way that the lighting be reduced by half. Moreover, provide the uniform lighting level in the space. Reduction brightness uniformly should be provided to one of the following ways:

1. Using the reducer light to control all Lighting systems
2. Controlling odd and pair row by two keys
3. Providing independent switch for the middle lamp, in three lamps systems
4. Providing independent switch for each bulb with each collection

(National Building Regulations, Section 19 "savings and energy" - Office to develop and promote national building code Publications, Tehran 1381)

7.6. Construction

The selected structure is concrete, which we used flat slab on the ceiling. Chosen reason is due to its advantages of concert construction.

The flat slab system of construction is one in which the beam is used in the conventional methods of construction done away with the directly rests on column and the load from the slabs is directly transferred to the columns and then to the foundation. Drops or columns are generally provided with column heads or capitals.

A reinforced concrete flat slab, also called as beamless slab, is a slab supported directly by columns without beams. A part of the slab bounded on each of the four sides by center line of column is called panel. The flat slab is often thickened closed to supporting columns to provide adequate strength in shear and to reduce the amount of negative reinforcement in the support regions. The section of column at

top, as it meets the floor slab or a drop panel, is enlarged so as to increase primarily the perimeter of the critical section, for shear and hence, increasing the capacity of the slab for resisting two-way shear and to reduce negative bending moment at the support. Such enlarged or flared portion of and a capital. Slabs of constant thickness which do not have drop panels or column capitals are referred to as flat plates. The strength of the flat plate structure is often limited due to punching shear action around columns, and consequently they are used for light loads and relatively small spans.

7.6.1. Methods of Design:

Two approximate method methods are adopted by the codes for the design of flat slab or flat plate .These method can be used provided the limitations specified therein are satisfied. The two design methods are:

- A. The direct design method
- B. The equivalent frame method

7.6.2. Reasons for choice of slabs system

1. Construction Economics
2. Servicing Ability
3. The ability to transfer or load absorption
4. Economy of the materials

Conclusion

In this study, first we tried to introduce Arg-e Bam as a superior pole of the tourism in the Bam city. So by analyzing the main axis of Bam we found out two features of tourism in this zone, which are existence historic buildings and easy access to the Arg.

Regarding to this issue which there are a lot of historic and cultural area in this zone, we can tell this zone is an area with a lot of major activates with Trans-scale urban, which forms skeleton of the city. Existence of several important historical, memorial, and cultural buildings together is very important in terms of tourism, and facilities plans for creation a tourist area.

Then by studding and considering needs of tourist, and local people, we decided to create a Bazaar and Hotel in Bam, which is very major issue in increasing economic condition of Bam.

In this step we tried to select our site by respecting to this heritage and nature. After studding this area we found a vast and flat area next palm gardens and in front of Arg, with wonderful visual view to the Arg and Palm gardens.

Now a days mechanical life is caused to forget local and Iranian architecture, so all architects are worry and they are trying to renew that.

Since Arg-e Bam is symbol of Iranian architecture, we studied Arg-e Bam complex to understand local and Iranian architecture. This complex contain Bazaar, Caravanserai (Hotle), Bath, Mosque, School, different kind of houses and ect.

During the studies of Arg-e Bam we understood sustainable architecture was important for architects, also in 3000 years ago.

For example they created Chaharfasl house (four season houses), which have Court Yard inside and Wind Catcher in north side. They created Court Yard because

of principles of sustainable architecture, energy conservation, harmony with the climate, reduce the use of the new resource materials, meet the needs of the residents, harmony with the place, and holism, and Wind Catcher as a natural ventilation in north part of the buildings, so in the summer time people moved there to be safe from the hot and dry climate. And also we see pool and trees in side of court yard for increasing humidity.

So by considering Arg-e Bam we decided to use this local and traditional elements in our design. For example we designed a hotel like Caravanserai, with Court Yard Public Bath, Traditional Iranian Restaurant, with Iranian arches.

During design we paid attention to Sustainable Architecture which is discussible issue in all the world, for this reason we used the harmonic materials to this climate condition, ventilation façade, and removable shelter in font of windows to use natural energy, and reduce energy consumption.

Finally we designed a Public Bazaar with every kind of shops, restaurants, and place for introducing Arg-e Bam, and a place for renting small cars. This Bazaar connect hotel to the Arg-e Bam, so guests from the hotel to the Arg-e Bam can pass from this Bazaar. For respecting to the Arg-e Bam we put Bazaar underground, and we created Wind Catcher as a natural ventilation.

For the development anticipation of hotel, we supposed that Cultural and Historic Works Institute of Bam can permit to the hotel, to rent out the Houses and Caravanserai which are inside of Arg-e Bam. So with this politic we can returns liveliness to the Arg-e Bam like 3000 years ago.

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Description

Machin life of the 21st century, has increased human's need to spend leisure time either local and tourism industry

Iran's young population and potential in terms of tourism is no exception. One of the beautiful places is desert by the historical immortal past. The occurrence of earthquake in the city of Bam, Kerman province, which is located in the desert, resulted in 25,000 people dead in December 26, 2004 and it also destroyed Bam and its near villages. The thing which is remarkable in this national disaster, in addition to continuing constructing with traditional and inappropriate style, is formation of the buildings with metal skeleton, concrete skeleton, bearing wall etc. and also that a few building remained undamaged in this earthquake, and so by creating a tourists area we will help to the economic condition of Bam city

After having surveyed the location, studying the area, and the potential of its existing, we considered studies of the elements in the context of study plan, factors affecting of the design, studies of the same sample, and design tourist complex in the Bam city. This collection was designed in part due to the easy access of the city site, and a view to the heritage landscape of Arg-e Bam. In the design, I considered parts of the site for the future development. My main goal in designing this collection has been giving services to the local, regional, and national passengers, and increasing economic condition in Bam city. Now the project includes a hotel with ancillary services, and the Bazaar

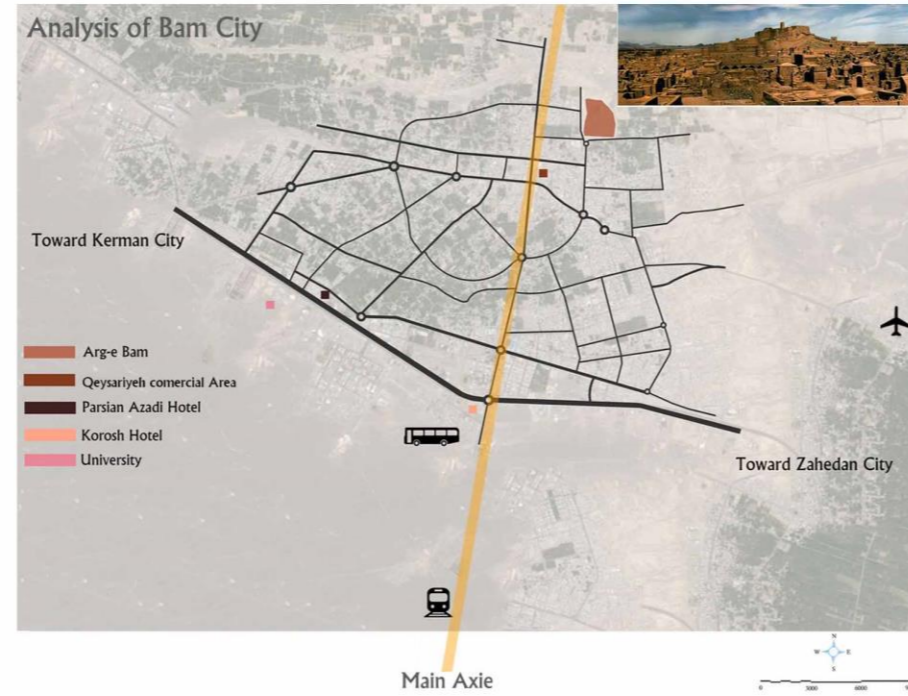
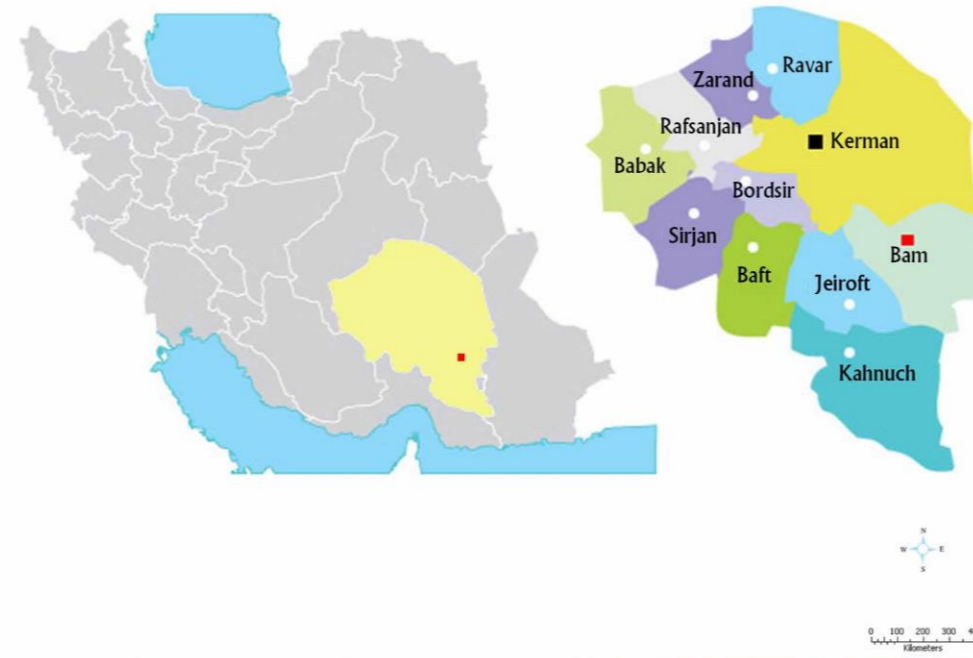
Bam city is one of the cities in Kerman province, in southeastern of Iran. According to the statistics in 1385, the population of Bam city is 277,835

The center of the city is at 58 degrees east and 21 minutes in east, and 29 degree, 6 minutes north, and altitude is 1060 meters above sea level

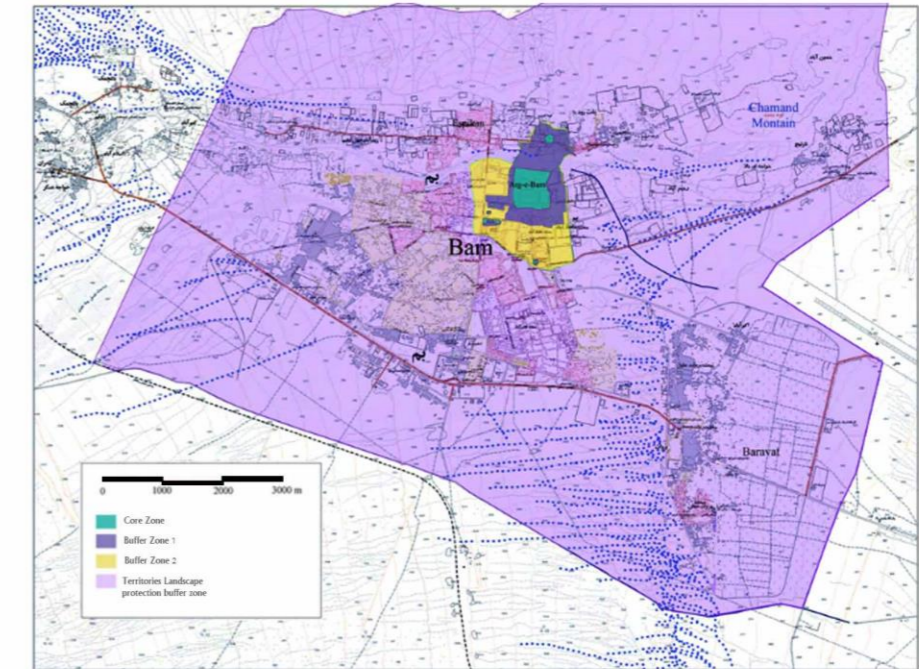
Bam city is located in 200 km from Kerman between the Kerman - Zahedan roads Bam weather is hot and dry, but due to its proximity to the desert climate is variable, so some times has been reported the hottest summer and coldest winter the country. The annual precipitation average is 68 mm

One of the unique attractions part of the Bam is Arg-e Bam, which is the largest mud brick building in the world, and compared with Wall of China in terms of grandeur and beauty The castle is located on the hill with height of 61m, It was most 20th century the home town of Bam, its area is close to 20 hectares, which is symbol of Iranian Architecture

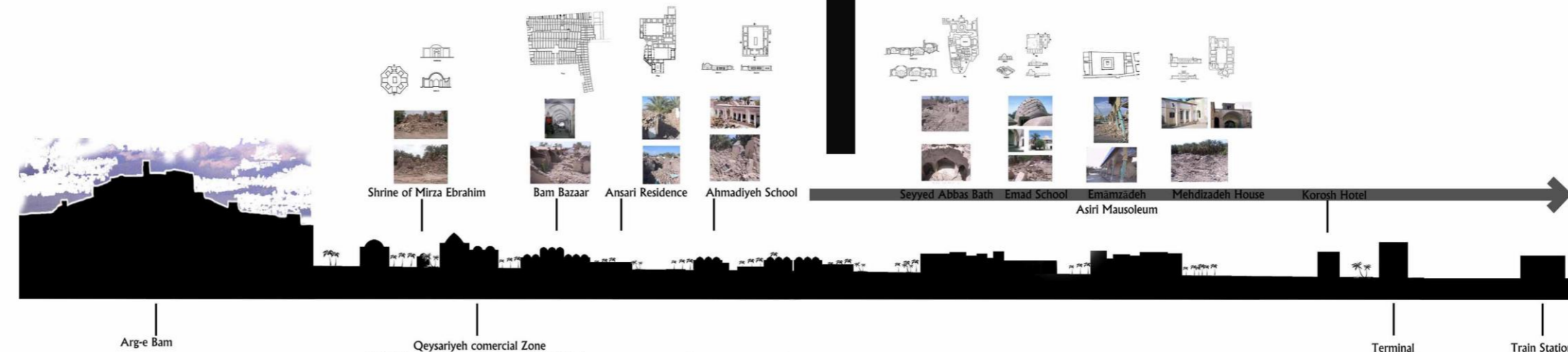
Geographical Position of Iran and Bam city



Reduced Map of Bam and its protection zones



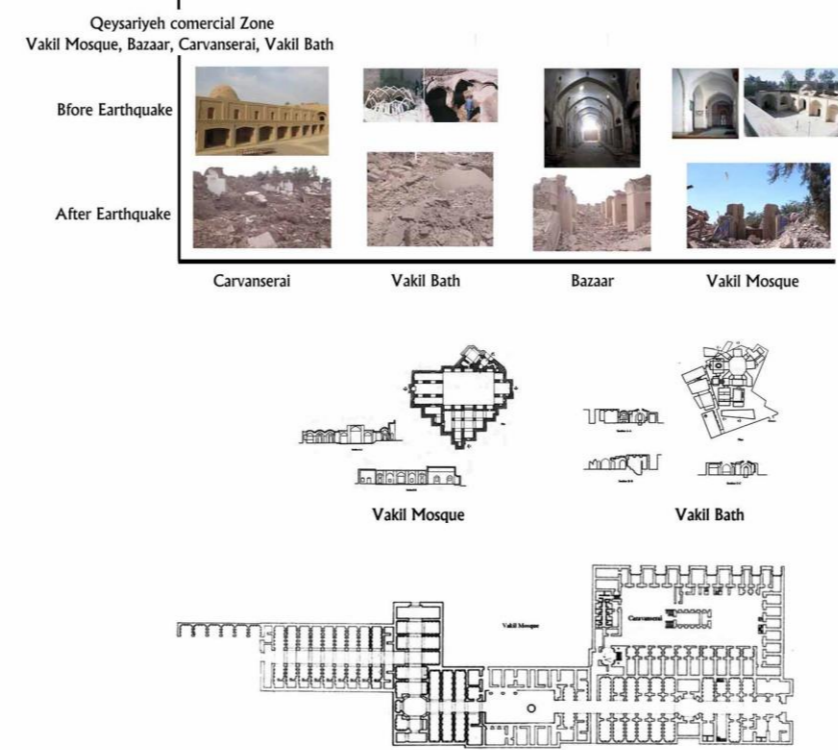
Main Axie Analysis of Bam City



As we can see, in this important axie there are cultural, commercial, religion, and alot of valuable and historic areas

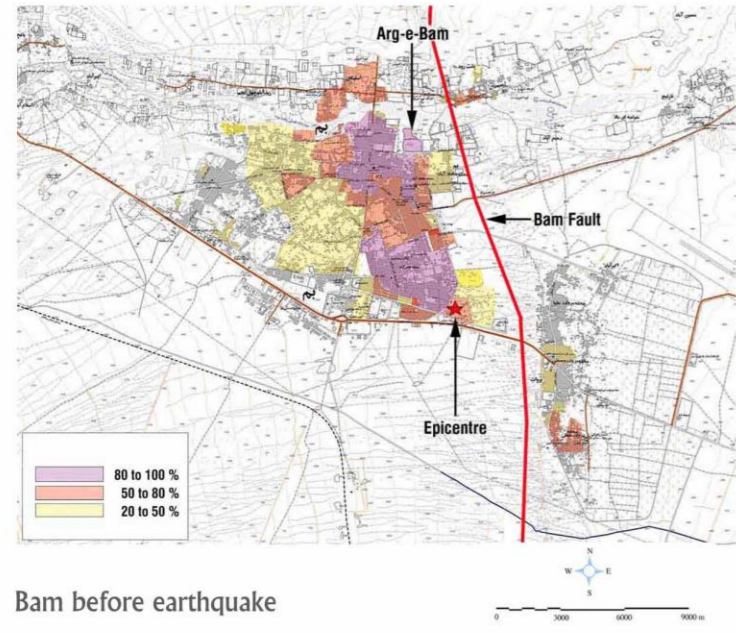
And also there is easy access to the Arg-e Bam, from the train station and terminal, because of this two important points our selected site is near Arg for inviting more local and other people

By considering the needs of the people, we will created a new tourist area, which contains a new Bazaar and Arg Hotel. So it is a suitable politic for inviting the people in Arg, and helping to the economic condition of Bam city



Bam Fault

Estimated Damage Caused by the Bam Earthquake of Dec.26, 2003



Bam before earthquake



Bam after earthquake



Mirza Na'im School

West Sabat House

Analysis of Arg-e Bam



1. Main Gate (south)
2. Bazar
3. Tekiyeh
4. Jamah mosque (Main mosque)
5. Mirza Naim Ensemble (School)
6. Mir House
7. West Sabat House
8. Caravansaray
9. Stables
10. House near the west wall
11. Second Gate
12. Windmill Tower
13. Garrison (Barracks)
14. Kote Kern
15. Governor's Residence
16. Chaharbai (Four Seasons)
17. Aseer Quarter
18. Hammam
19. Main Tower

The Photos before and after earthquake



The Visitor Road of Arg-e Bam
The path, already, is designed to facilitate the access of the Citadel from the Main Entrance/South Gate to the Governmental quarter/Second Gate



Mirza Naim house

Bazaar



Mosque

Tekiyeh

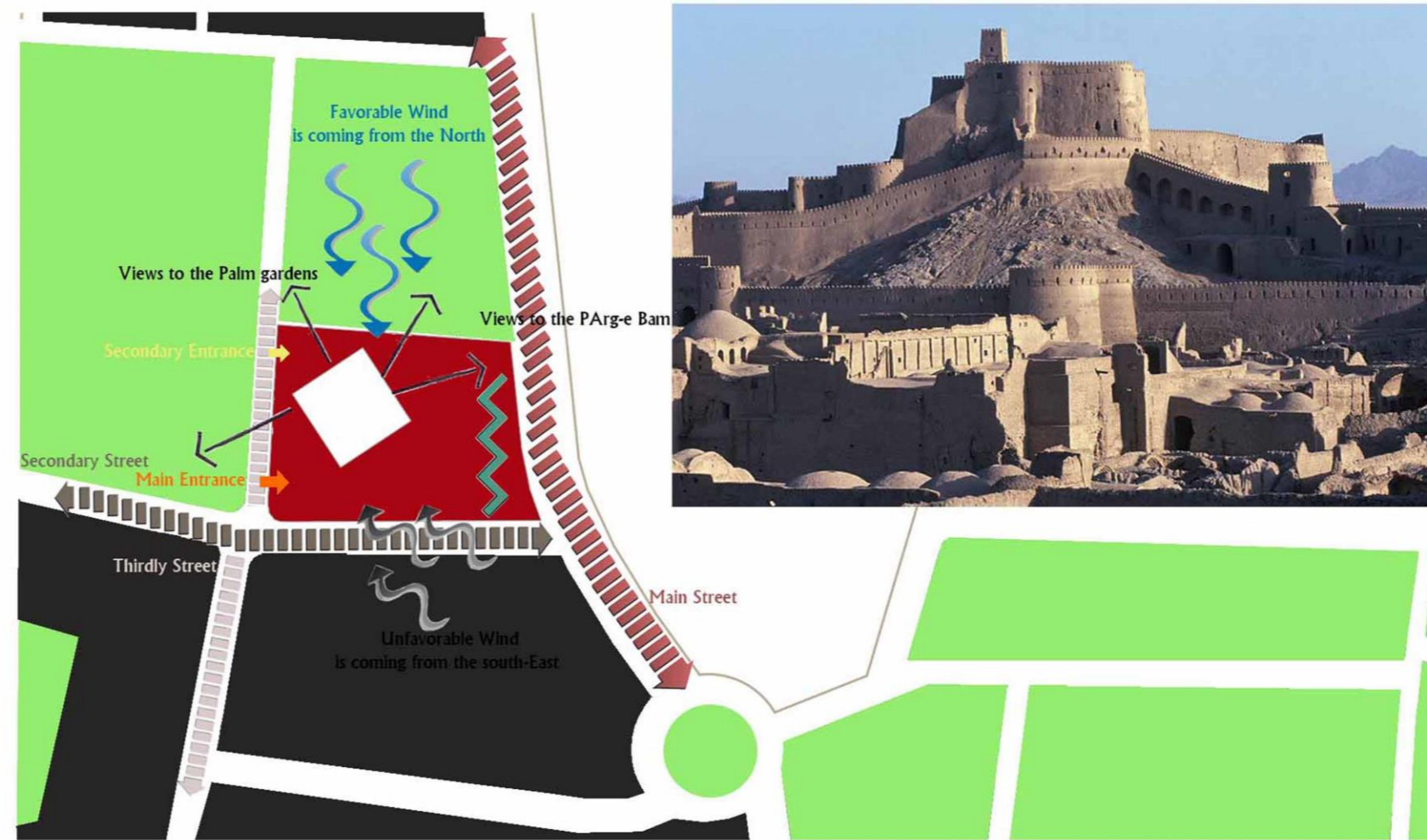
Garrison

Stablea

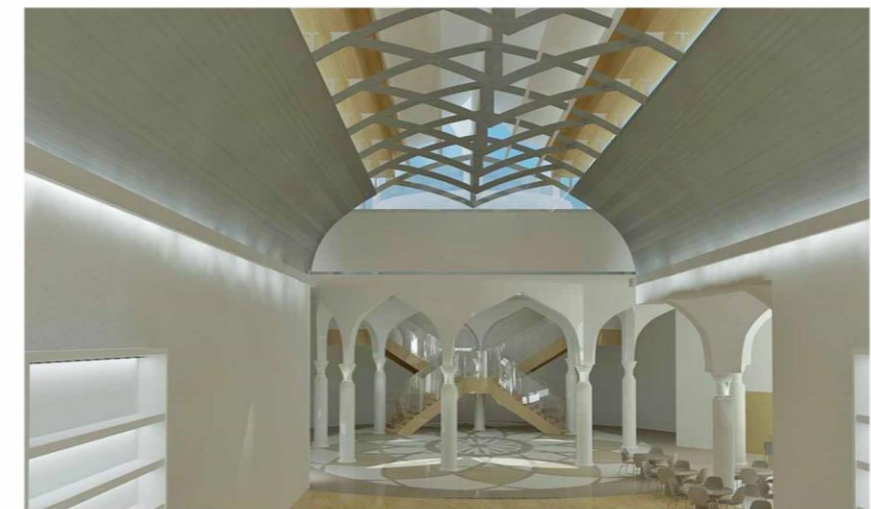
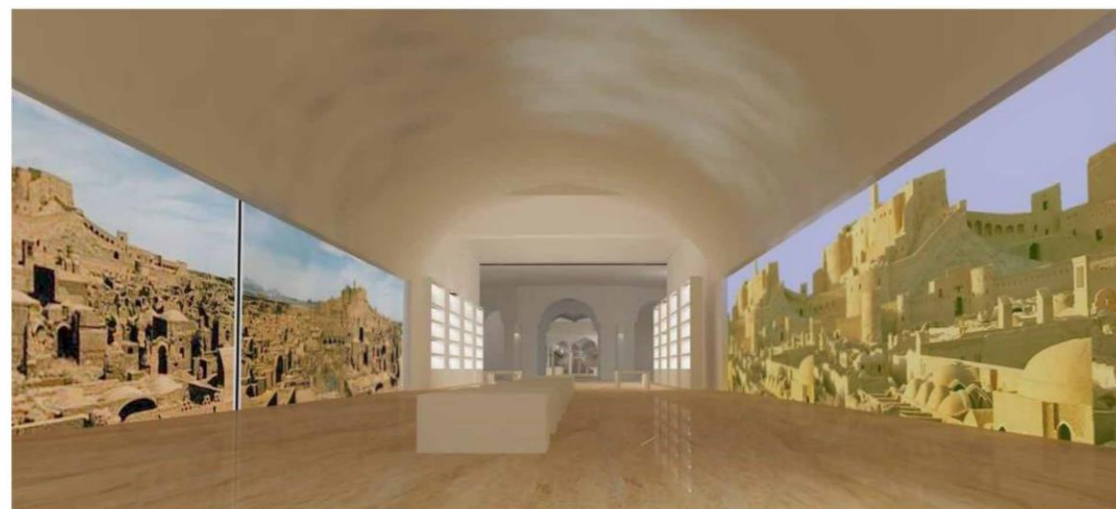
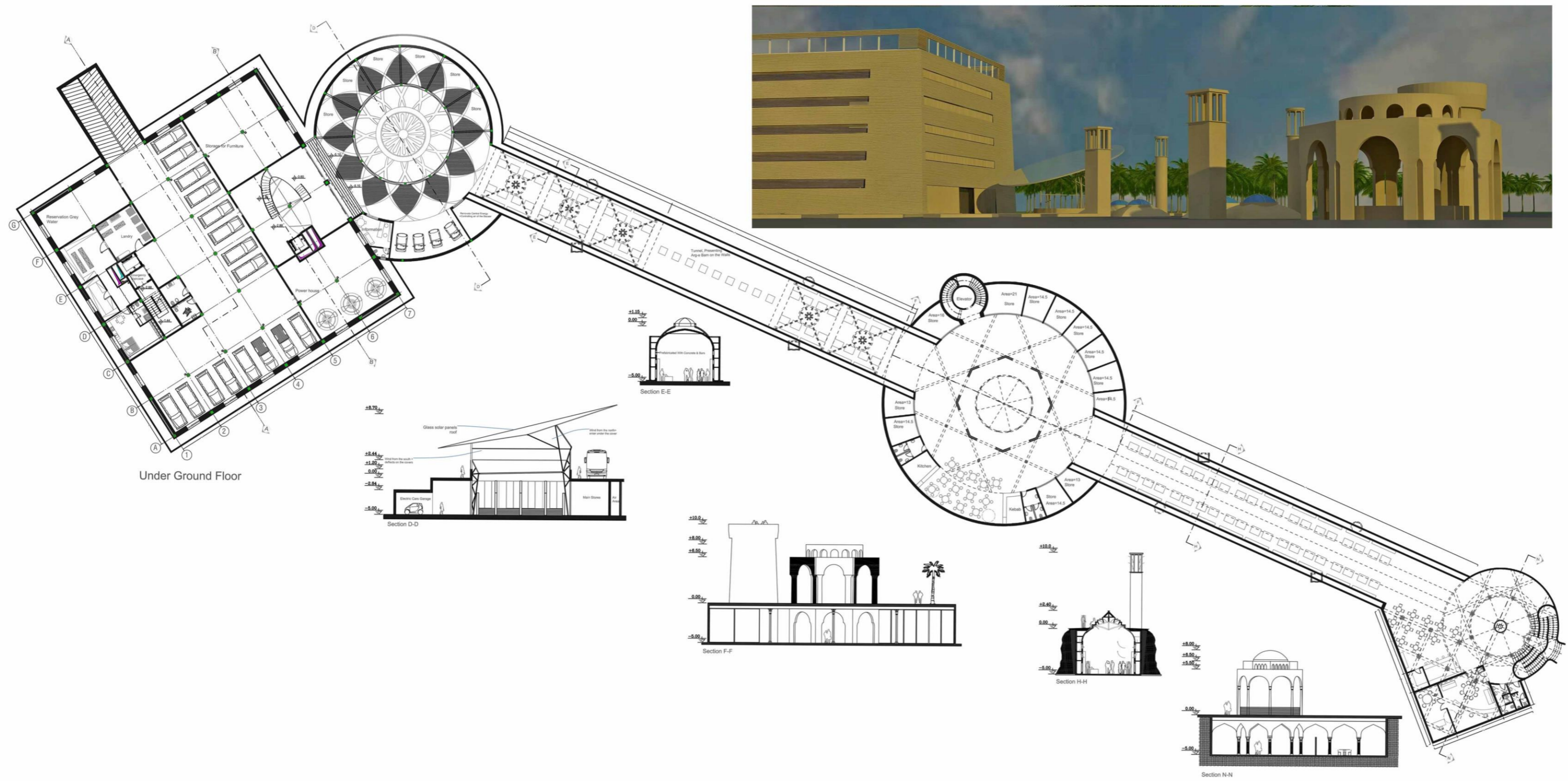
Chaharfasl

Governor's Residence

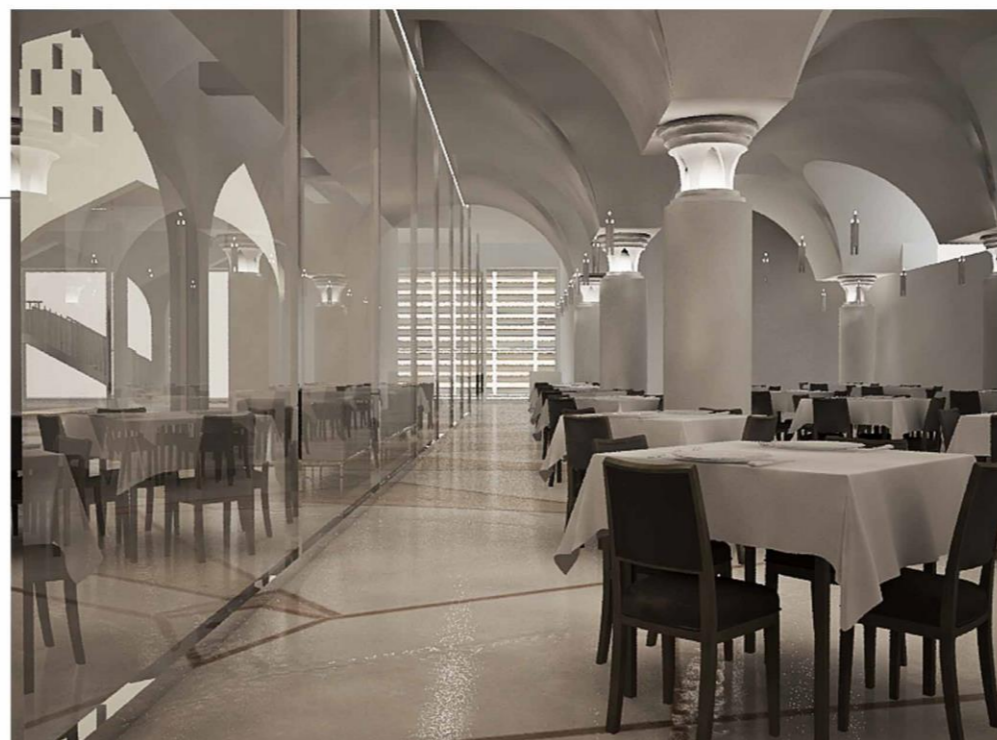
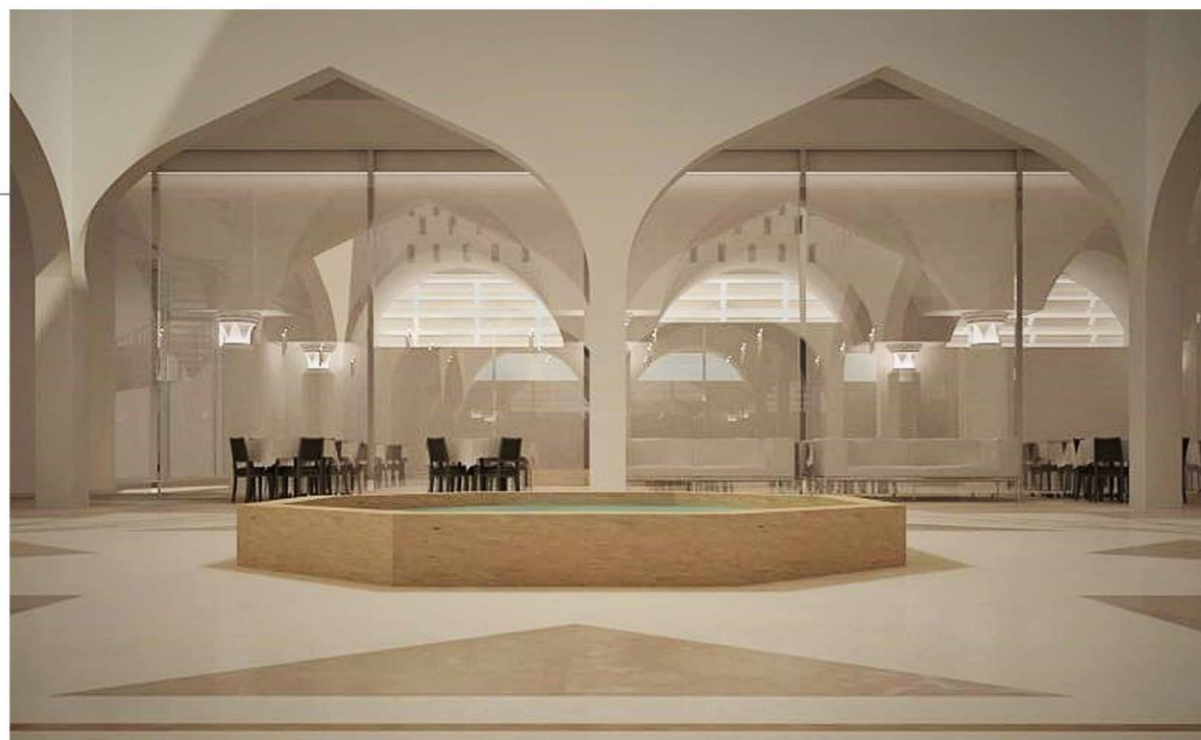
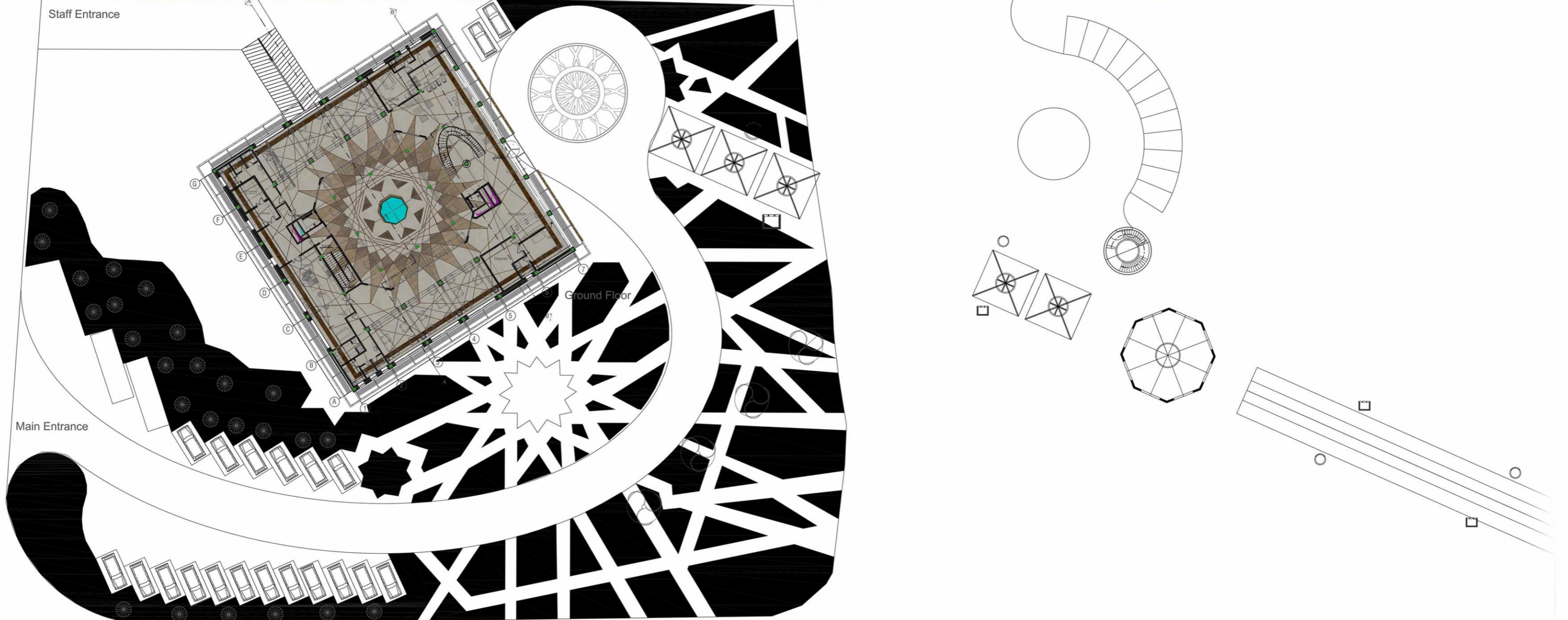
Site Analysis



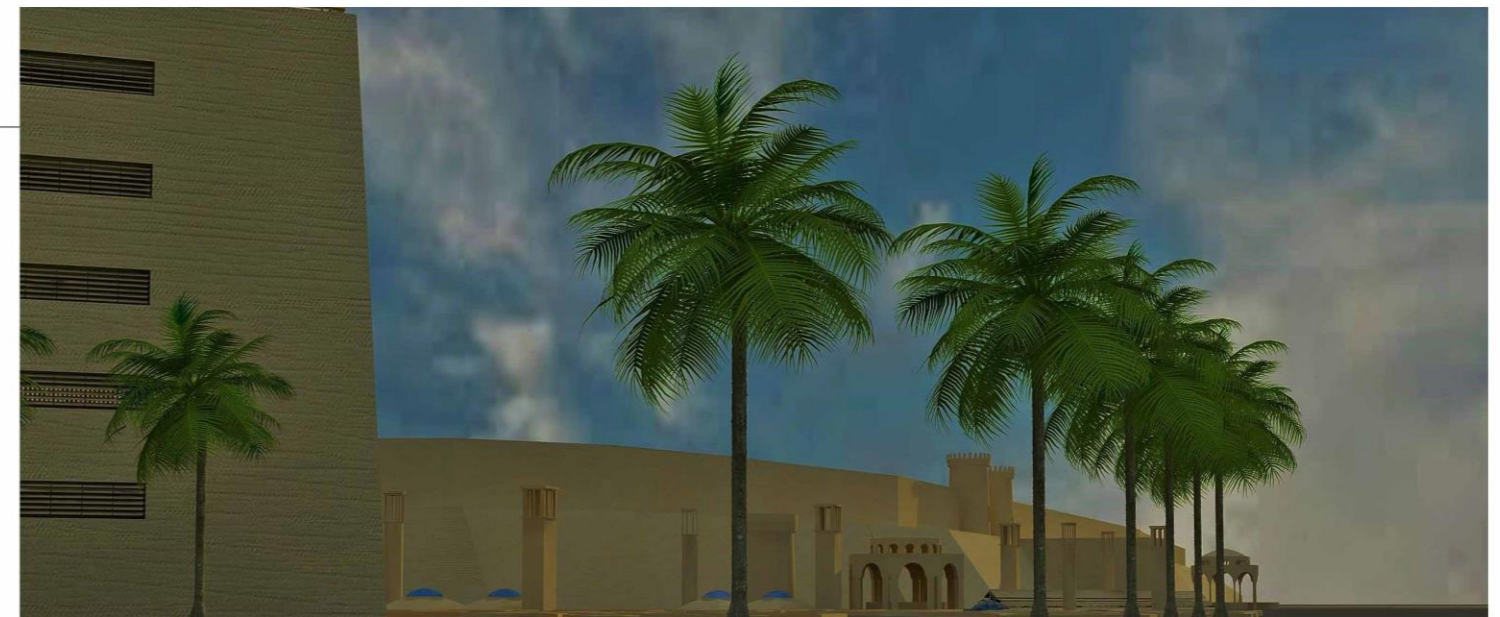
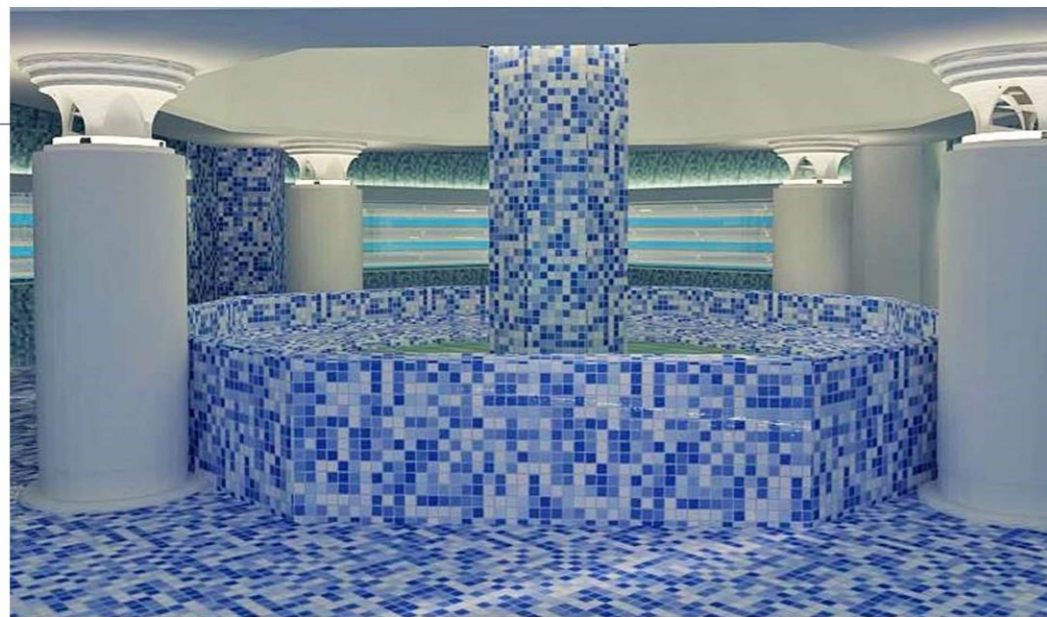
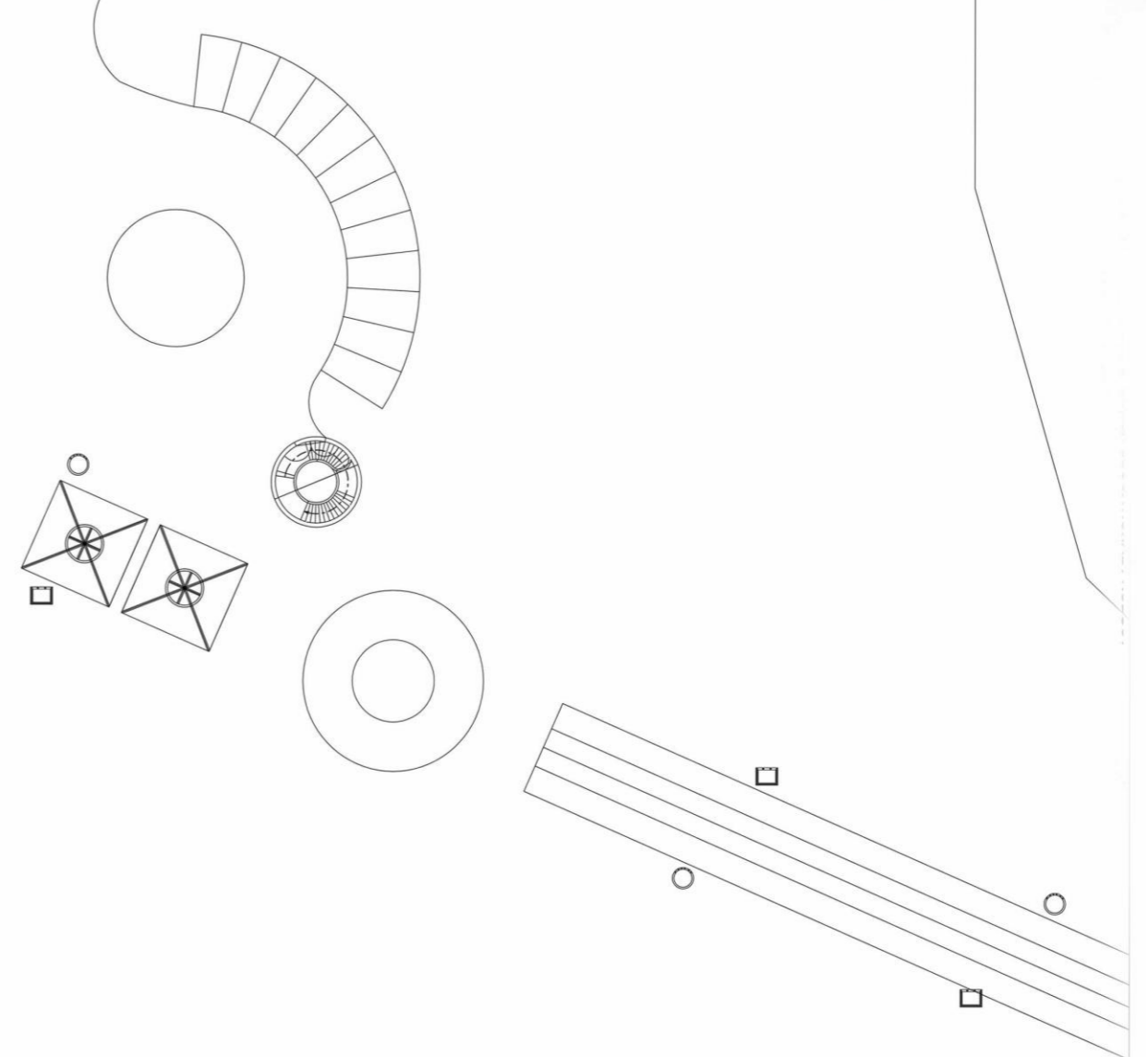
PLANS



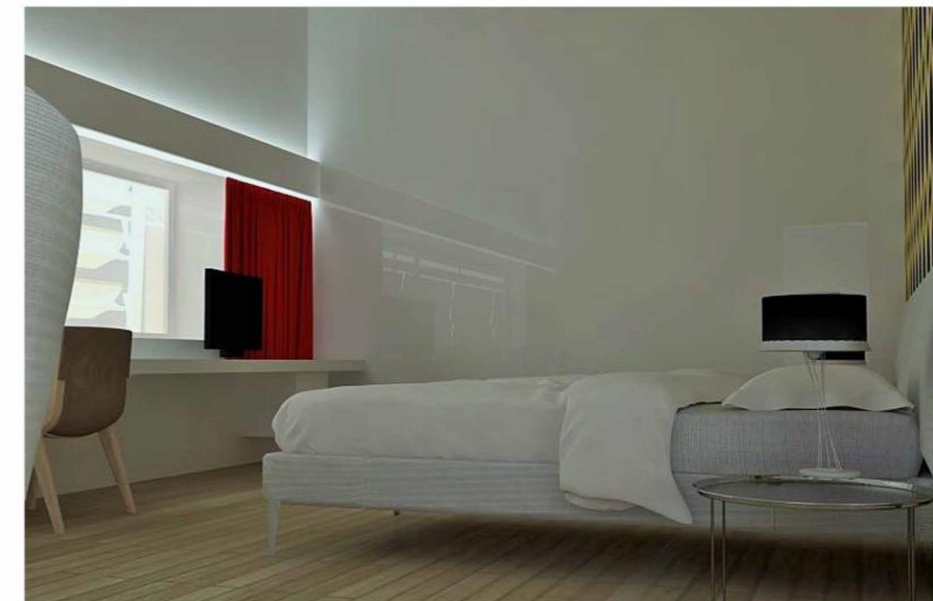
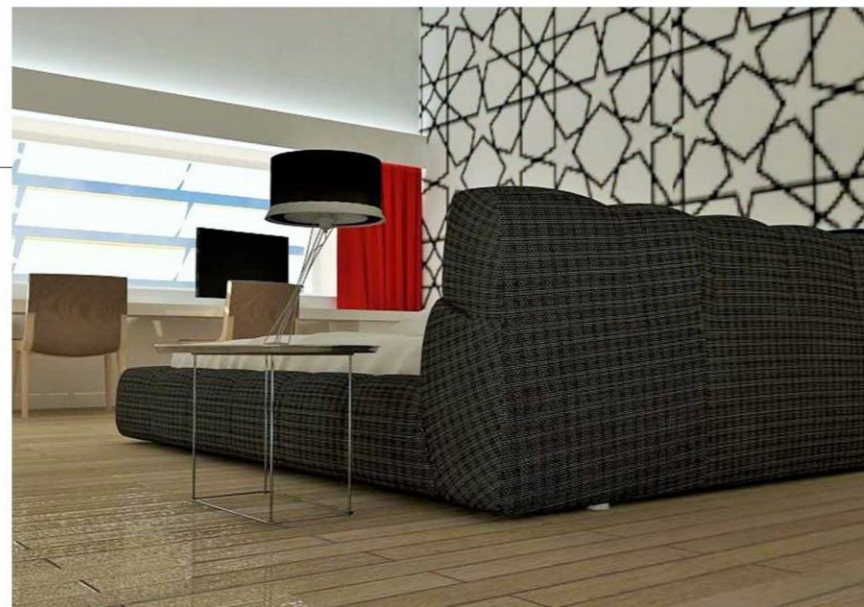
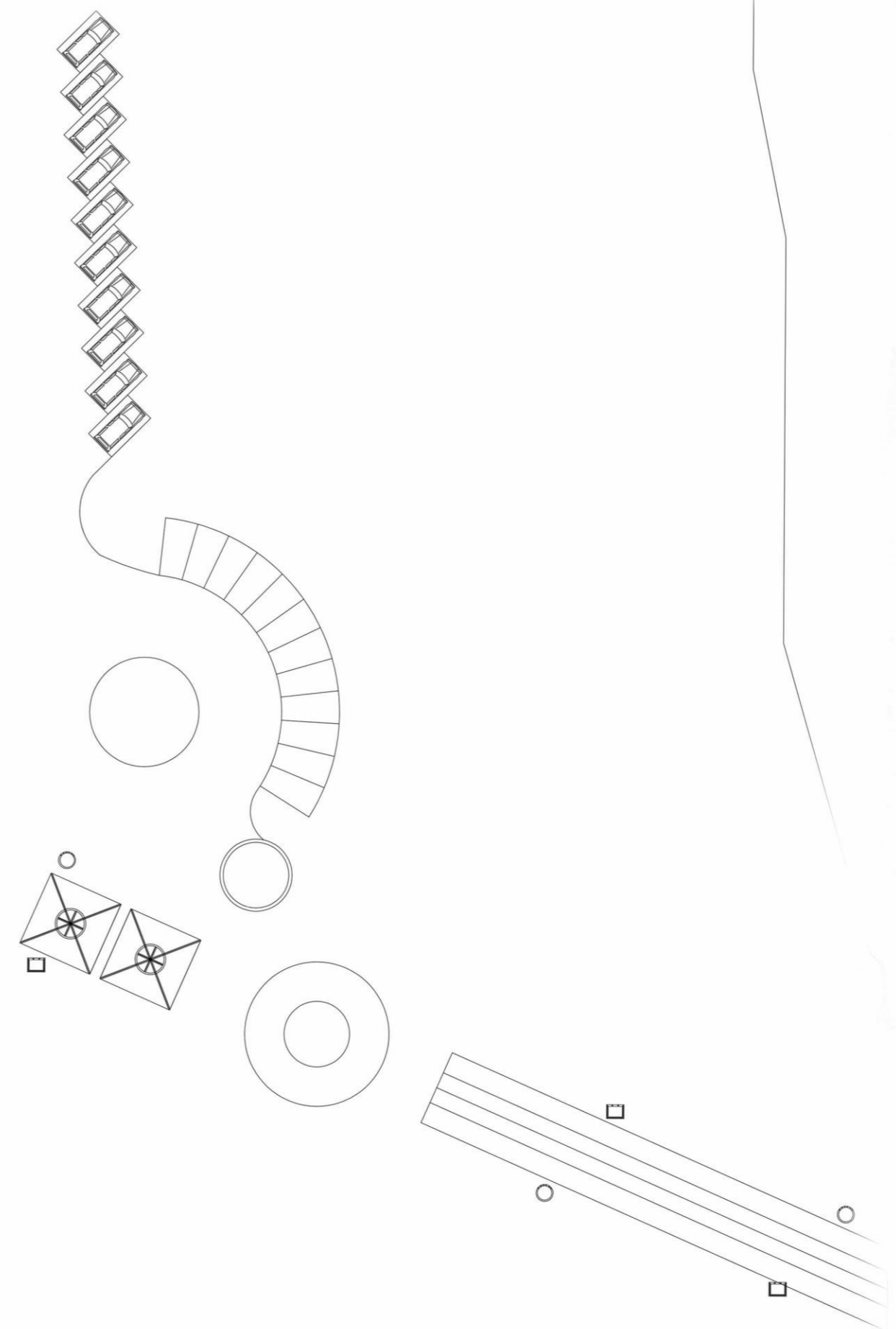
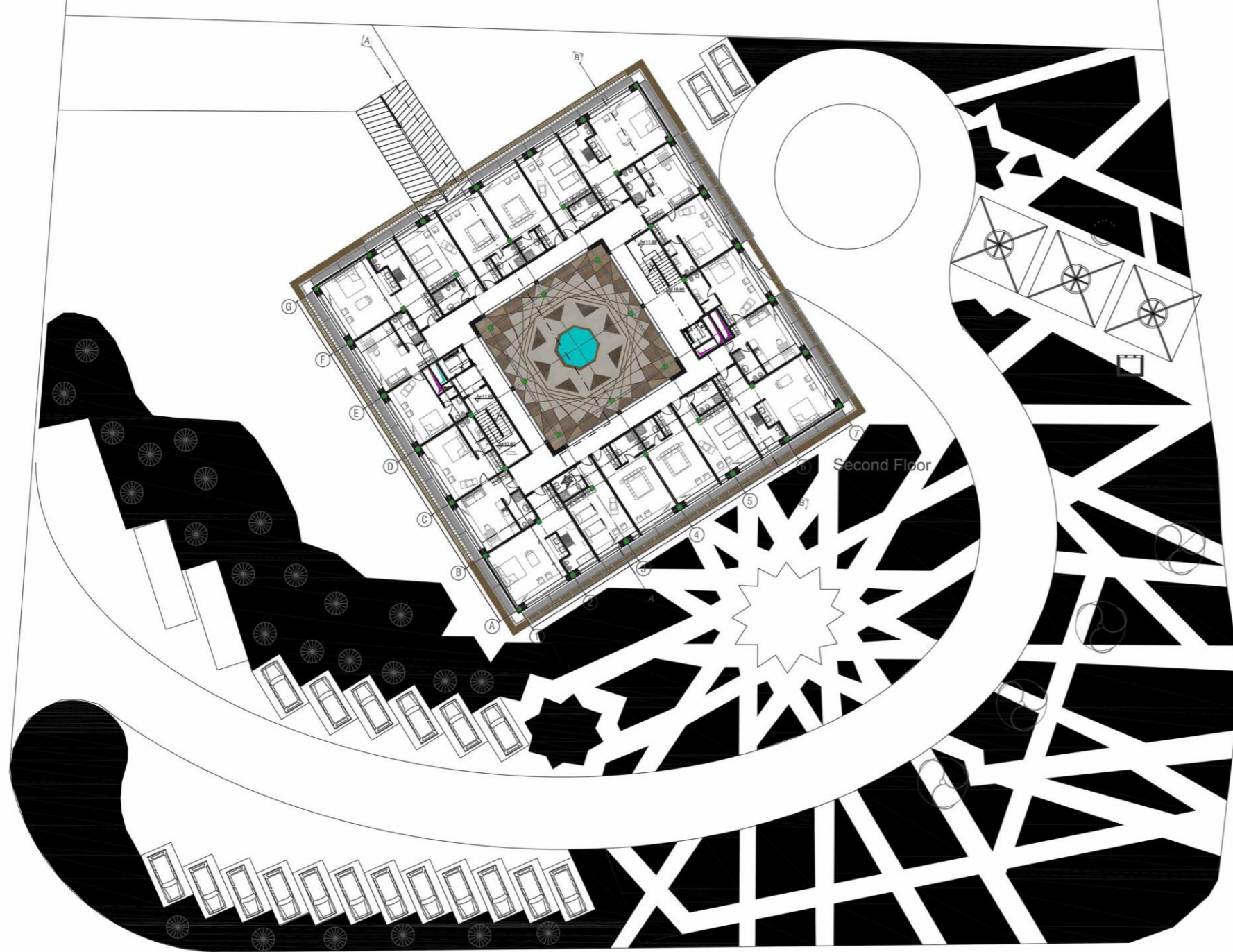
Under Ground Floor



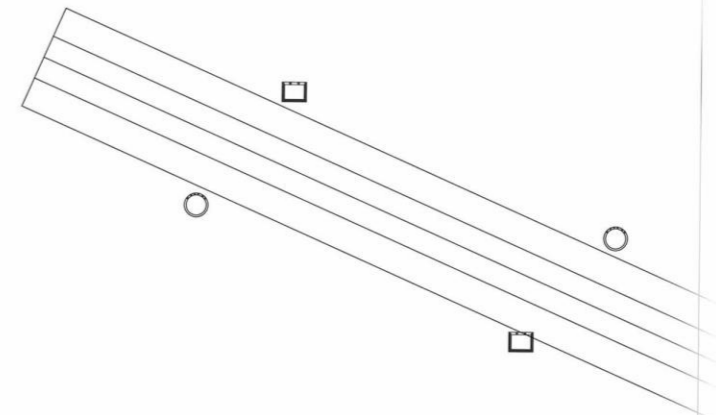
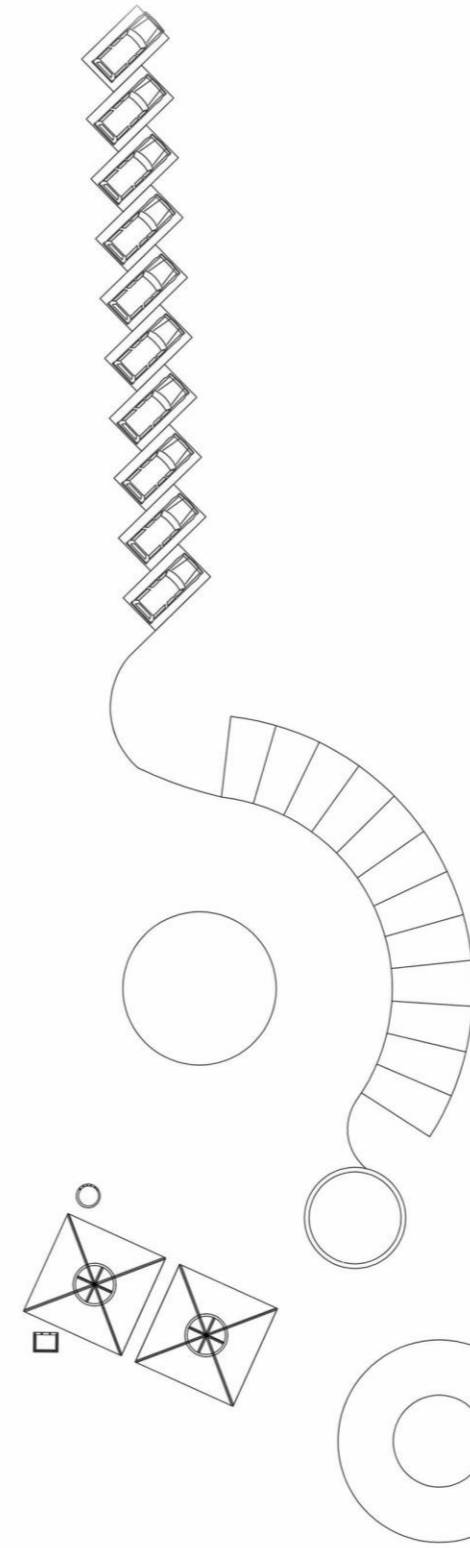
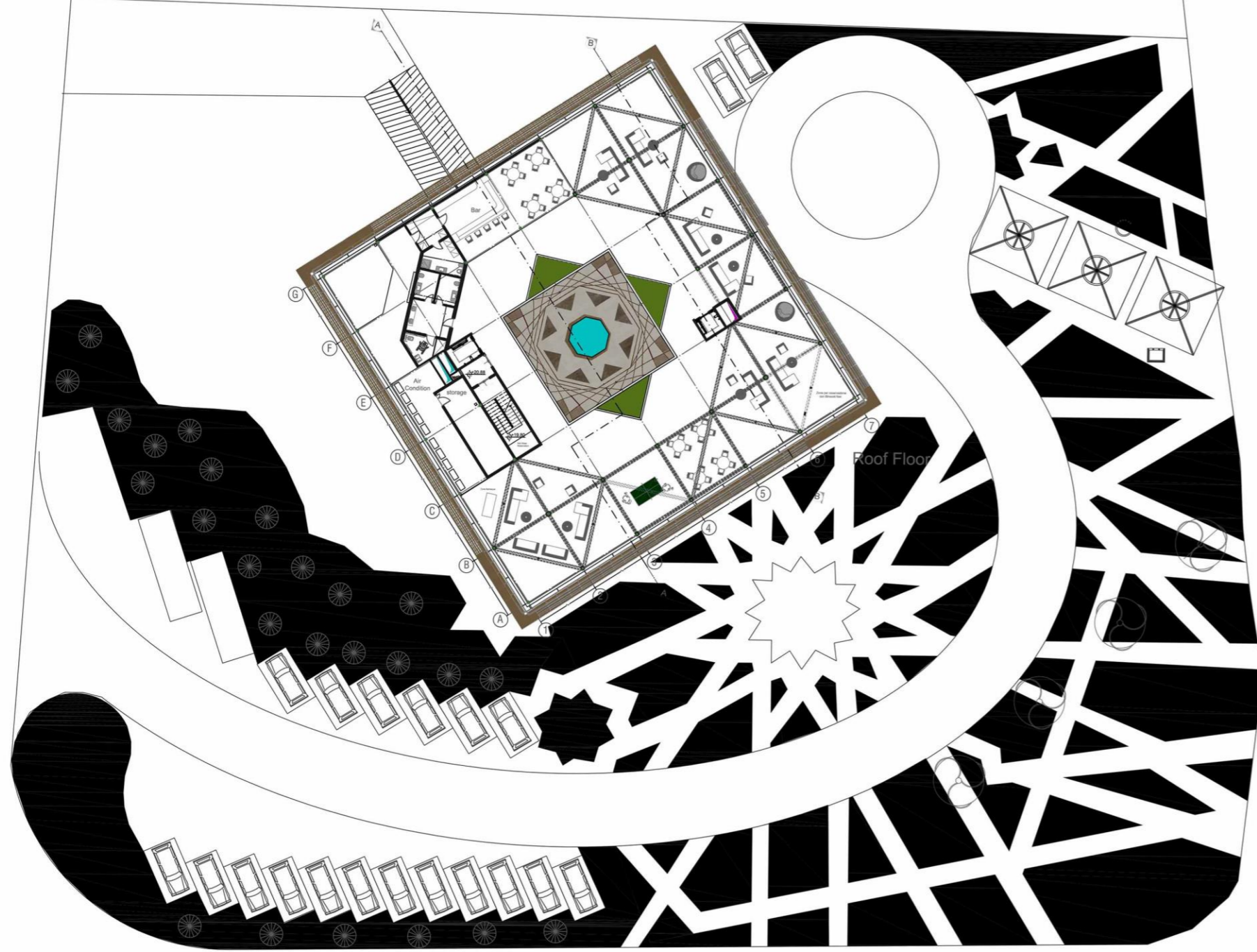
Ground Floor



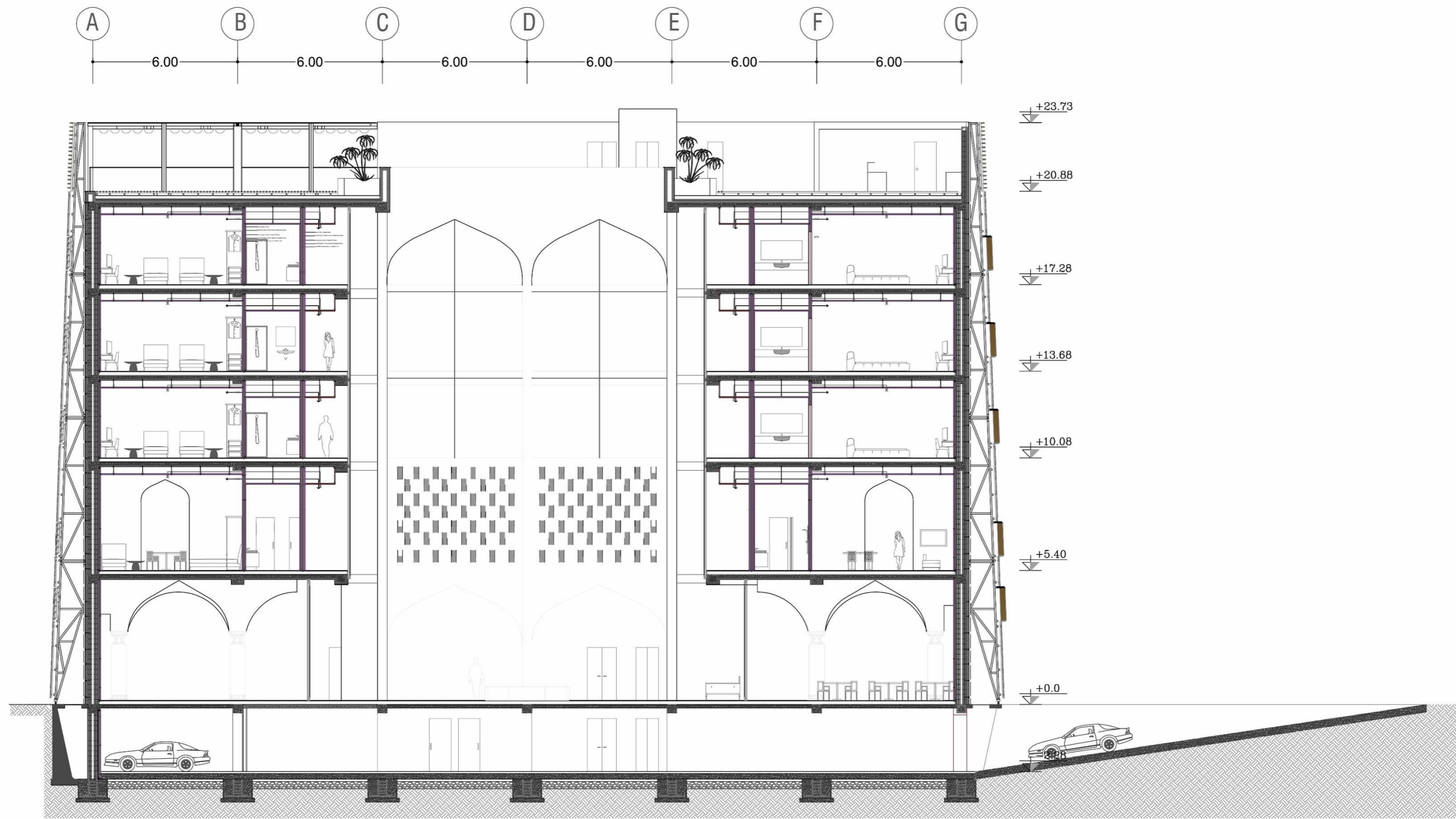
First Floor



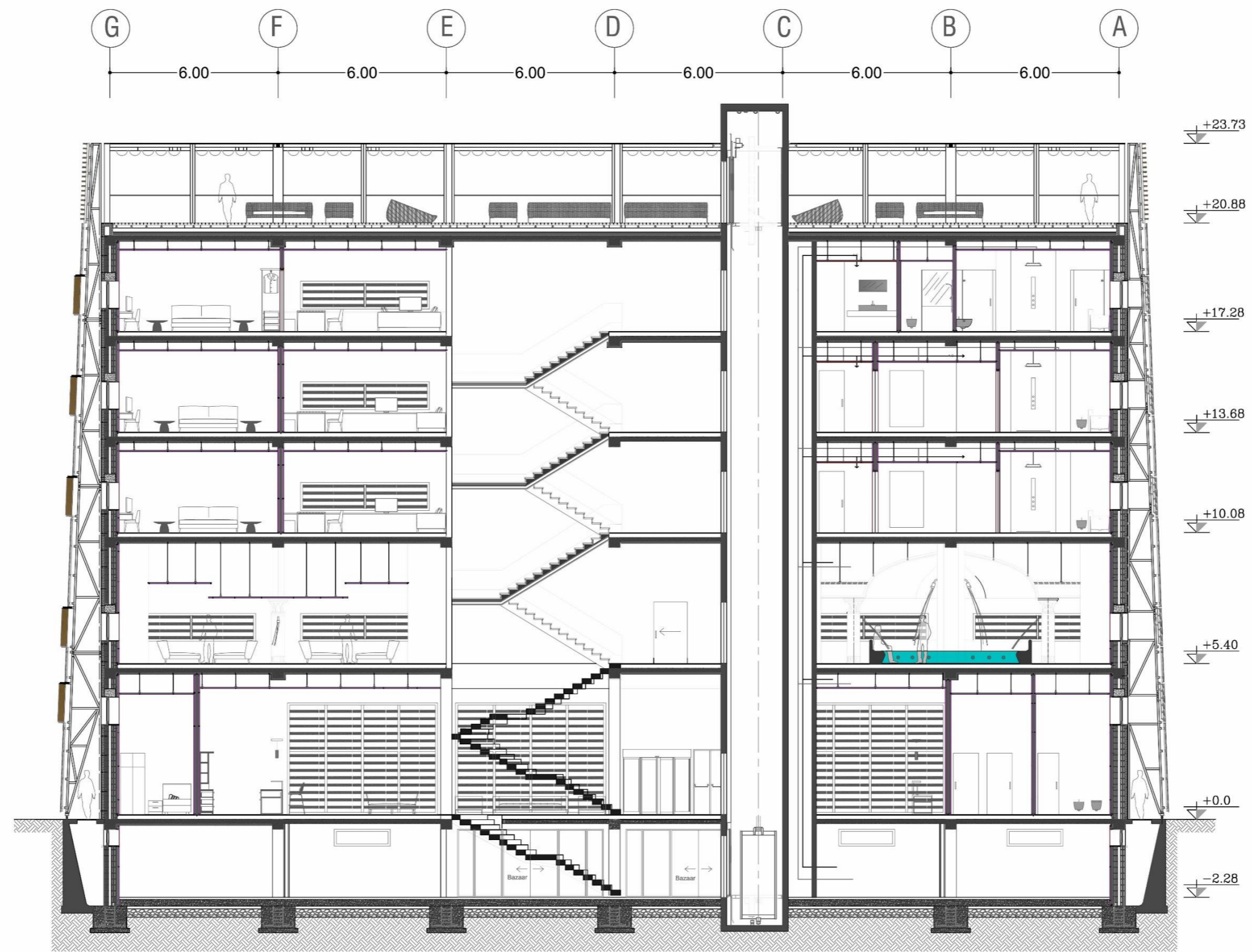
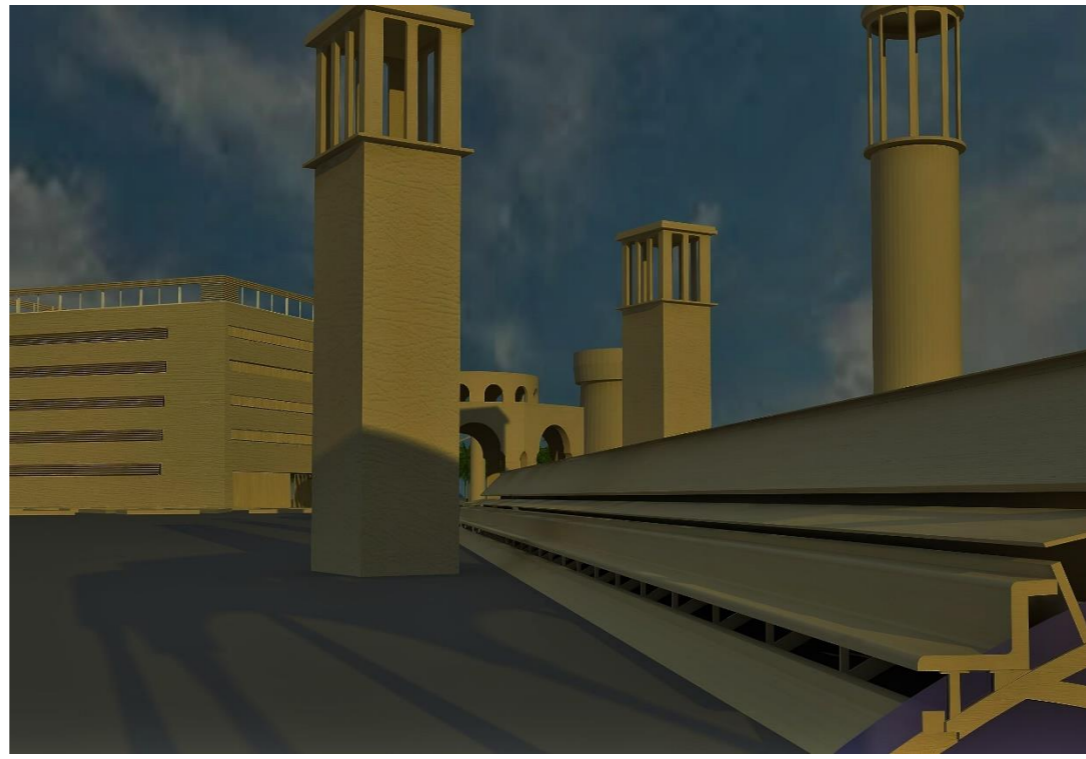
Type Floors



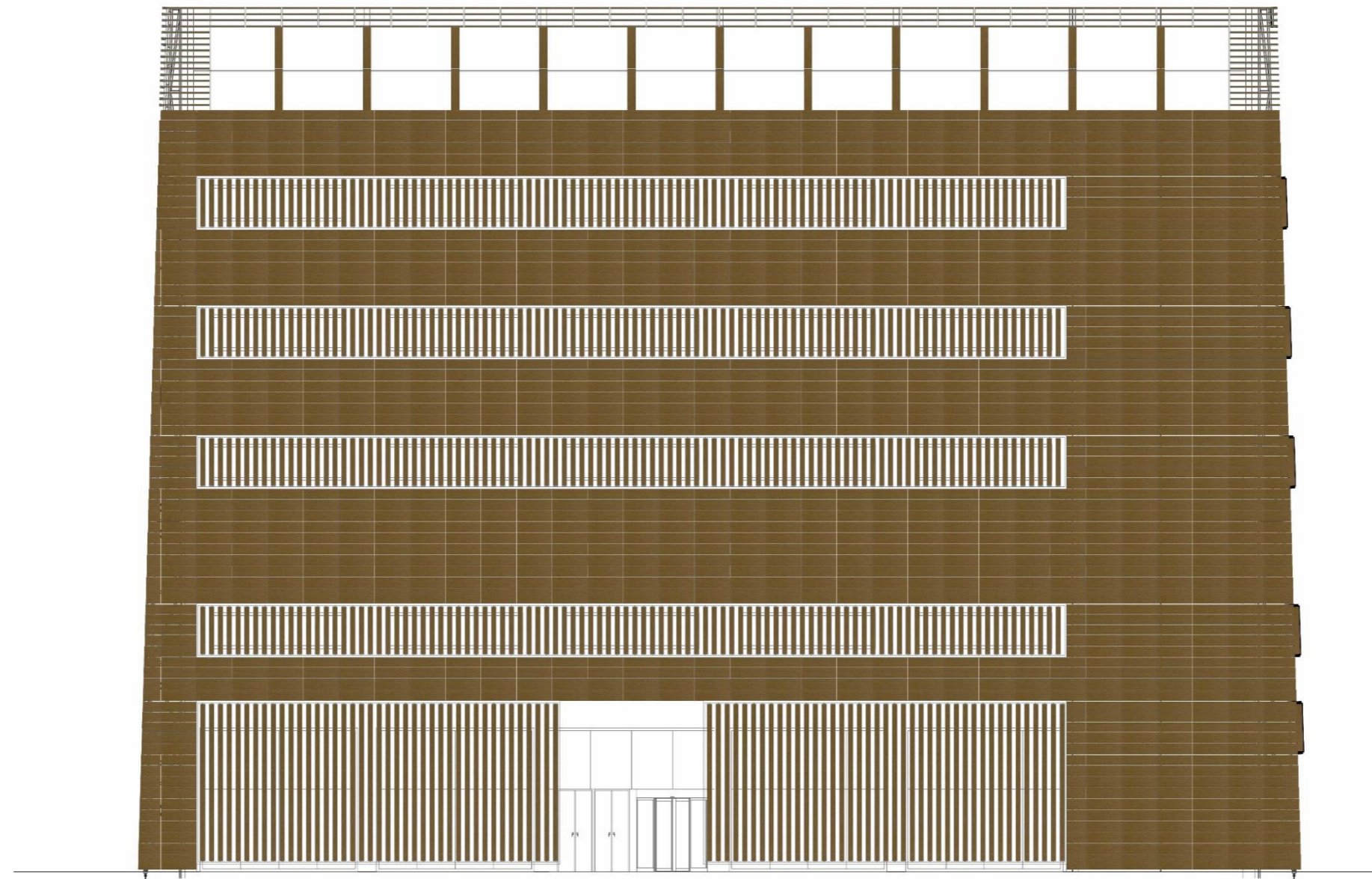
Roof Plan



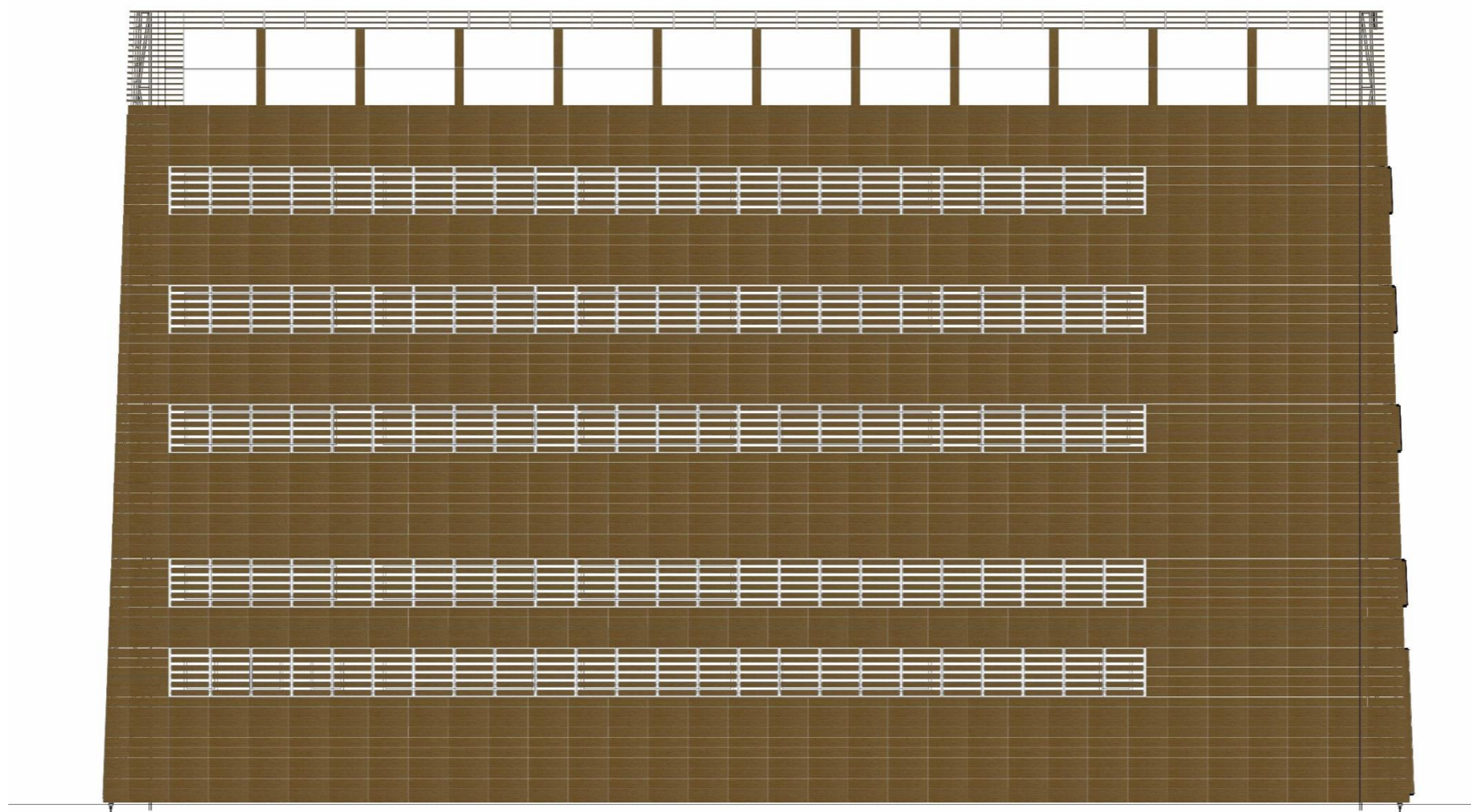
Section A-A



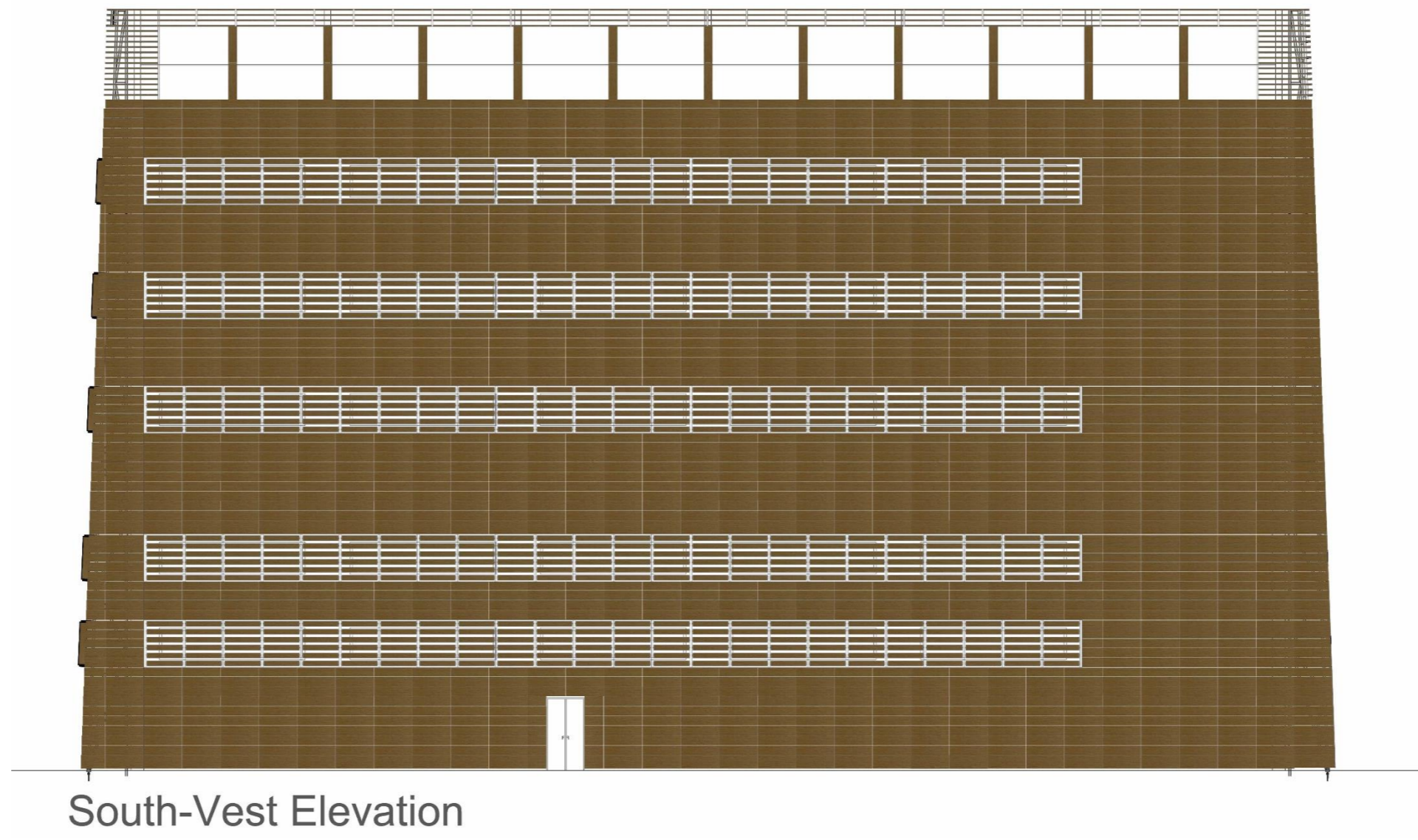
Section B-B



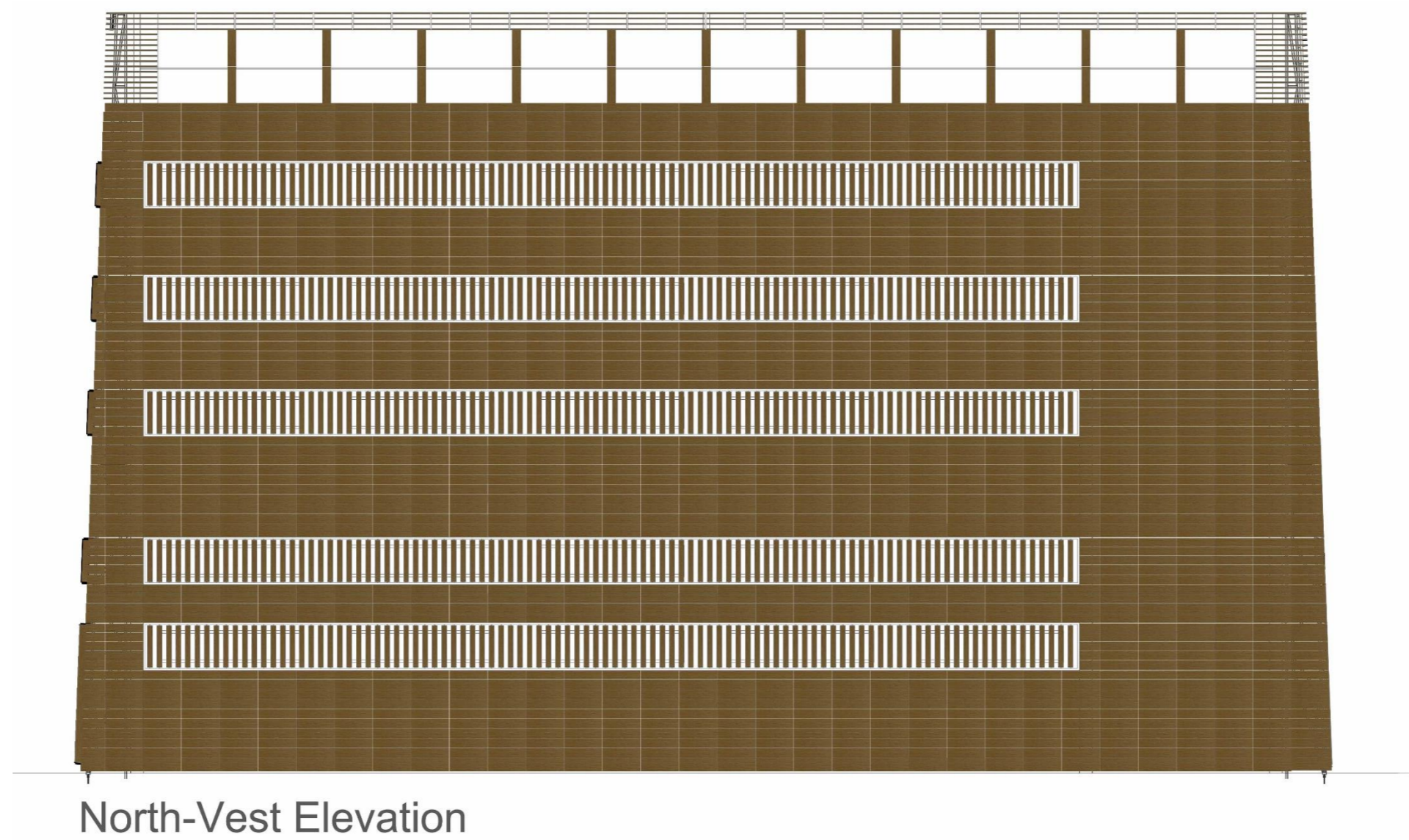
North-East Elevation



South-East Elevation



South-Vest Elevation



North-Vest Elevation

