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THE HOUSE THAT CONTAINS ME

URBAN RESIDENCE PROJECT
IN THE DENSE FABRIC OF THE CITY OF TEHRAN

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ABSTRACT

Il campo d'interesse della ricerca è stato l'attuale processo della progettazione e la conoscenza dell'abitare nella città di Tehran, in cui sembra che stia portando la città a ricrearsi e ripensarsi grazie alla presa di coscienza delle differenze esistenti, rispetto al passato, nei nuovi processi di trasformazione nei quali la città è intesa sia come spazio costruito ma anche sociale.

Il progetto si propone di restituire dei valori tradizionali dell'architettura iraniana, persi recentemente, per sperimentare il sentiero dell'abitare in una casa che sia conforme alla nostra identità.

Da sempre il concetto dell'abitare è fortemente connesso ai sentimenti del vivere in un luogo che dia la sensazione di stare a casa, in cui nei tempi delle battaglie più efferate degli anni passati lo abbiamo perso, a forza della volontà di vivere in un ambiente moderno ed all'avanguardia dell'occidente.

Ci siamo proiettati e presentati in una realtà che è completamente straniera dai nostri radici, causando delle costruzioni delle scatole vuote di anima e lo spirito.

Il percorso progettuale si è sviluppato affrontando inizialmente il decorso storico per capire quali sono quegli elementi necessari per la ricostruzione il sentimento dell'abitare a casa iraniana nella città di Tehran. Successivamente sono state affrontate le necessità del vivere nella società moderna del tempo attuale, soprattutto in rapporto ai legami sociali e lavorativi delle persone, ed infine è stato elaborato il progetto, come una sfida per affrontare dei temi precedentemente inquadrati.

Urban residence project in the dense fabric of the city of Tehran

Some aspects of domestic traditions like privacy and hospitality are principles of Iranian traditional housing, and shape the physical environment of Iranian living space.

Along with the evolutions caused by modern movement in the Western countries, the wish of modernity in Iran internally pushed the country towards modernization. After 1945, the government's push towards industrialization led to the fast growth of urban areas, which in turn impacted housing development and changed the traditional housing to modern types. Some researchers have described modern housing development in Iran as the imitation of modern Western models and introduced it as a failure, in which residents' needs and cultural values of traditional house architecture have been ignored. These studies have criticized the modern housing with the historical ignorance of cultural values and aim to represent modern architecture as a new pattern with a tendency towards destroying traditional values. However, this project highlights the impact of some features of Iranian local traditions like privacy and hospitality, which were considered as a new framework for designing Iranian modern housing. Hence, we elaborate to understand the relationship between Iranian domestic tradition and modern housing in Tehran. This paper points out that a new style in architecture, which partly belonged to modernism and partly belonged to traditional architecture, was created in Iran during the modernization period.

This called semi-modernism architecture tried to transfer Iranian's local traditions in housing architecture more than public architecture.

After doing a historical research on the city and its general conditions, the study selects some houses in Tehran as a case study to understand the arrangement of

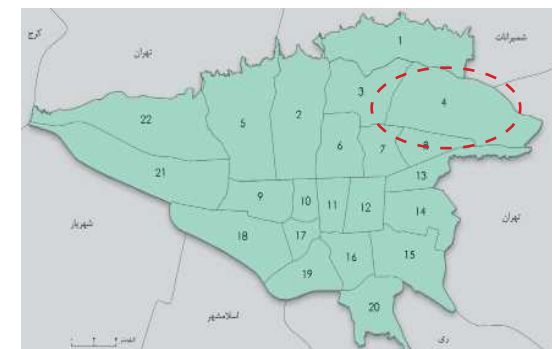
spaces in a traditional house based on the importance of privacy and hospitality. In addition, three types of modern houses (detached house, row house, and high-rise apartments) during the second Pahlavi period are selected to recognize the solutions of semi-modernism for creating a new space arrangement.

The study is divided into five sections. First section describes the territory of the city of Tehran and the study of history in various dynasties.

The following section describes the social conditions of the city and the quality of life in the various districts.

The third part discusses the Iranian market for building and construction. Next, the fourth section includes all the analyses of the district subject to our planning.

The discussion concludes in the research with some cases studies of modern buildings in the vicinity of the project site and finally ends with the project proposal where it was tried to satisfy the traditional Iranian architecture, at the same time to meet the needs of the modern living.



1.1 GEO-MORPHOLOGICAL CHARACTERS

Location of Tehran:

State		Iran
Region		Tehran
province		Tehran



1.2 TERRITORIAL CHARACTERS

Geography

Tehran is the capital of Iran. Located in the north of the country, at the foot of the Alborz mountains, the city gives its name to the province of which it is also the capital.

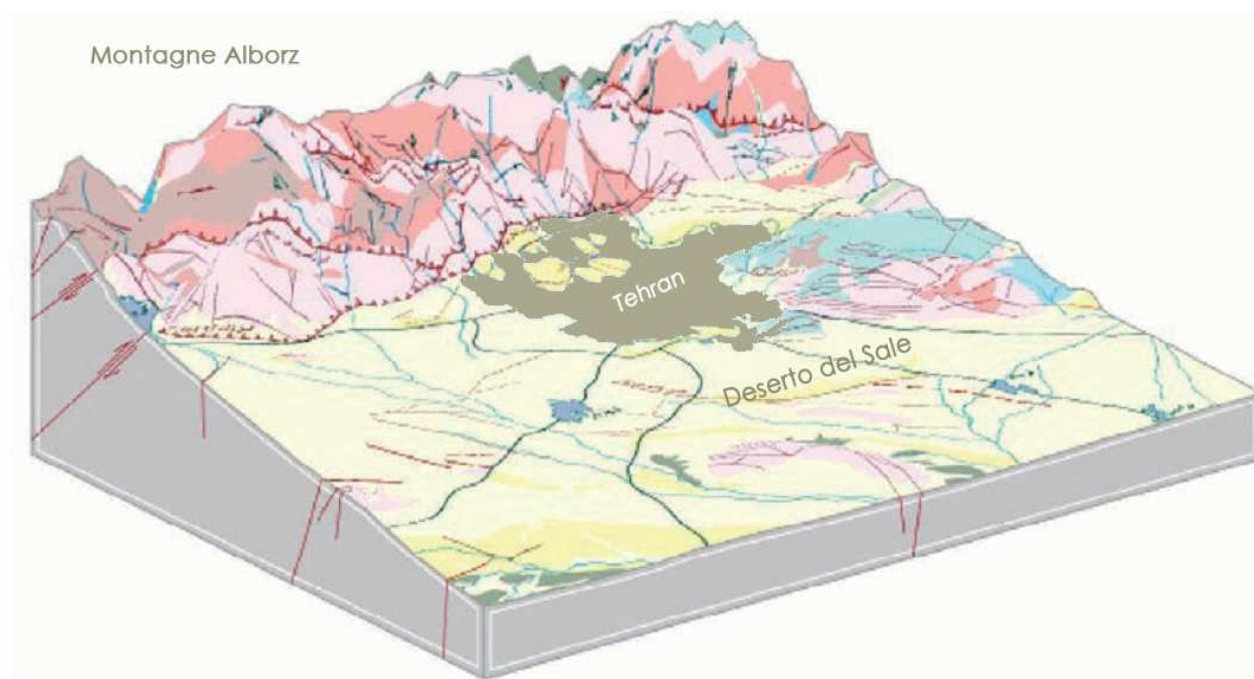
Tehran has seen its population gradually increase since becoming the capital following the change of the ruling dynasty in 1786: with its 8,429,807 inhabitants, registered in 2015, Tehran is the largest city in Iran. The metropolitan area's population numbered approximately 13,500,000 in 2008.

This considerable population growth is mainly attributable to the improvement of living conditions and the action of attraction exercised on the population of the neighboring provinces. It has undergone a strong acceleration since 1974, following the increase in oil prices during the first oil shock, when the outskirts of the city expanded very quickly.

Tehran hosts almost half of the country's industrial activities, which are mainly related to the automotive sector, to electrical and electronic equipment, as well as to the arms, textiles, sugar, cement and chemical products sectors in general.

The city of Tehran stands at the foot of the Alborz mountains, on a flat hill that slopes towards the south. The city reaches an altitude of 1,100 meters above sea level in the southern part, while it touches 1,200 m in the central portion and 1,700 m in the northernmost sector. The city and its suburbs cover an area of 86,500 hectares.

The foundation of the city was initially limited to two circumscribed areas that possessed the characteristics of a plain: the upper area, which had a soil composed of coarse and permeable gravel, and the lower area, more impervious, where the soil was composed of alluvial deposits thin. The region where Tehran was built is a transitional place between the salt desert (kavir Namak) and the Alborz mountain range.

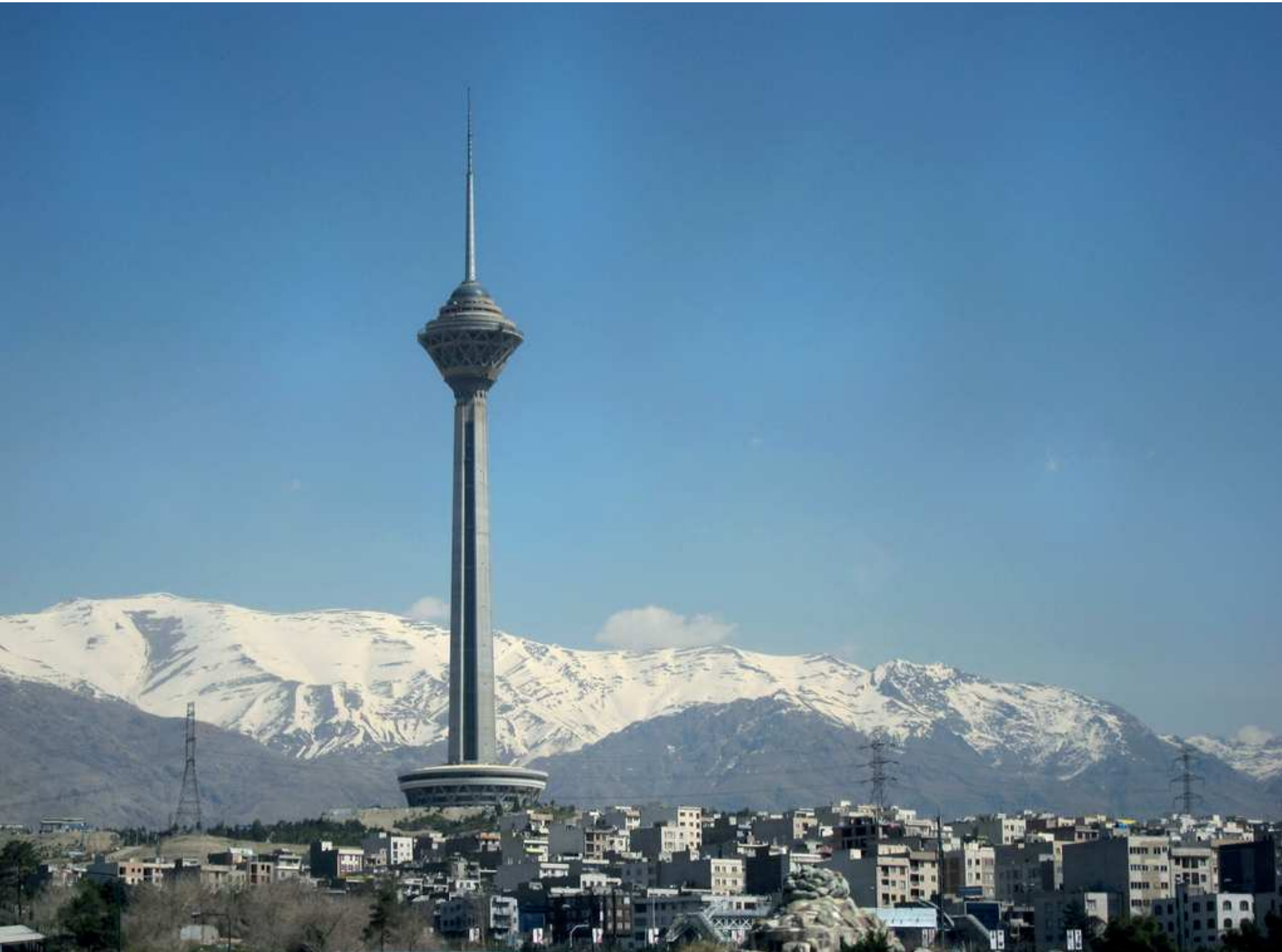




The view of Tehran towards the north

also several rooms for auditoriums and concerts.

Under the usable part of the tower, there are only elevators and stairs; on the top there are restaurants with panoramic views of Tehran, a five-star hotel, a meeting center, a shopping center. The complex also includes a parking area of 27,000 square meters. The octagonal base emphasizes the traditional Persian architecture.



Climate

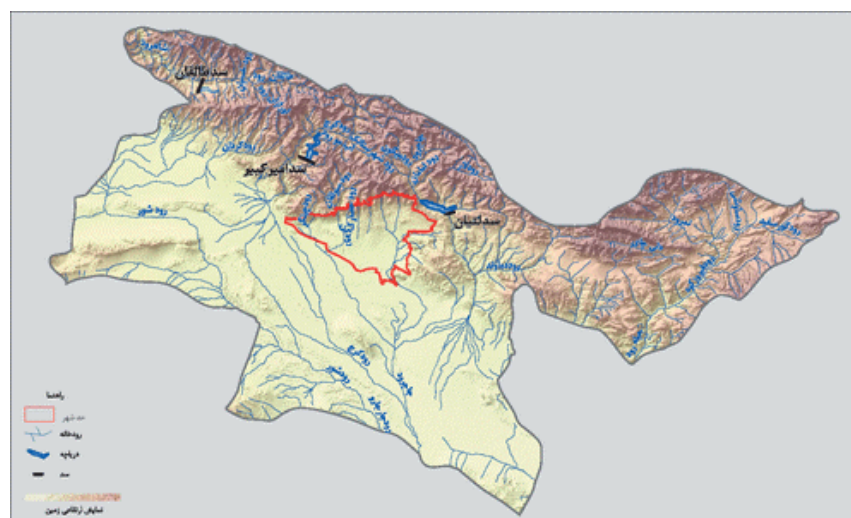
Tehran's climate is largely defined by the geographical location of the city, surrounded by the high mountains to the north and the desert to the south. The climate can generally be described as mild in spring, hot and dry in summer, temperate in autumn, and cold in winter. Being a large city, with significant differences in height between the various districts, it is worth noting that the climate is often cooler along the hilly slopes to the north, compared to the flat areas to the south. Summer is generally hot and dry, with very little rainfall and generally low relative humidity, even if the nights are cool. Most precipitation occurs in the period between late fall and mid-spring. The hottest month is July (the average minimum temperature is 23 ° C, the maximum is 36 ° C), while the coldest month is January (the average minimum temperature is around -1 ° C, while the temperature maximum average reaches around 8 ° C).

Dati meteo ^[5]	Mesi												Stagioni				Anno
	Gen	Feb	Mar	Apr	Mag	Giu	Lug	Ago	Set	Ott	Nov	Dic	Inv	Pri	Est	Aut	
T. max. media (°C)	8	11	16	22	28	33	36	35	31	24	15	10	9,7	22	34,7	23,3	22,4
T. media (°C)	3	5	10	16	22	28	31	30	25	18	11	5	4,3	16	29,7	18	17
T. min. media (°C)	-1	1	5	10	15	20	23	22	18	12	5	1	0,3	10	21,7	11,7	10,9
Precipitazioni (mm)	37	34	37	28	15	3	3	1	1	14	21	36	107	80	7	36	230

As anticipated, the climate of Tehran between the north and the south is very variable. Several factors such as the Tacial heights, the Damavand and Shemiran mountains, the natural freshwater basins such as the Karaj river and the artificial ones such as the dam and the lake of Amir Kabir and Lar in the north, together with the semi-desert plain in the south, condition significantly the climate of the region.

In the city these factors are added to the inquisition. The Markasi region, of which Tehran is the capital, has an average annual precipitation of 230 mm.

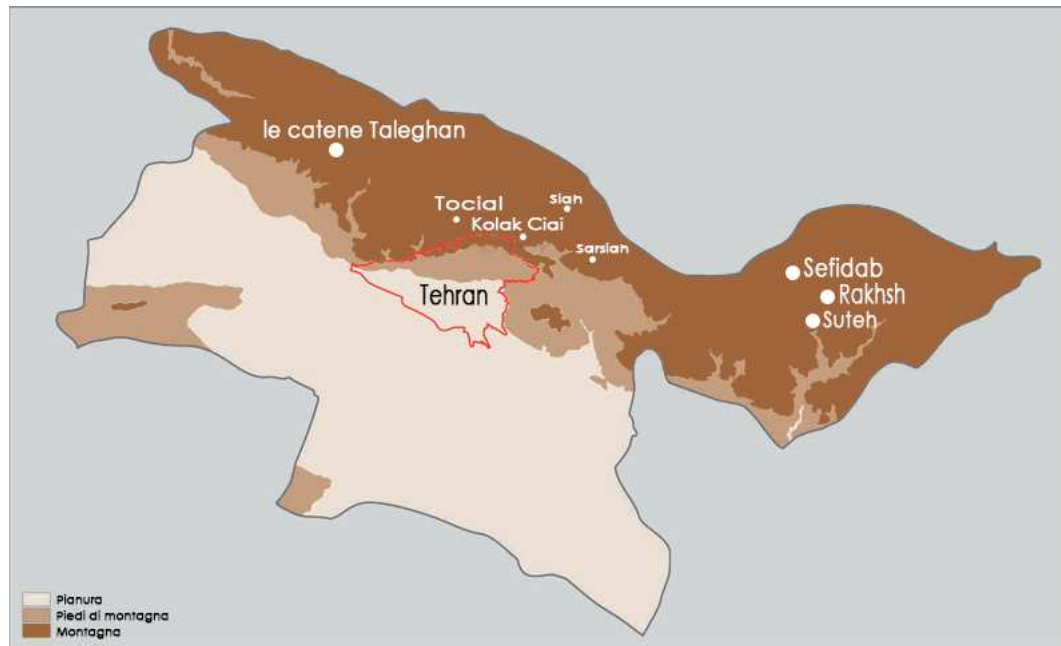
Tehran, like most of the Iranian territory, presents a high degree of seismicity of the soil as the territory is strongly subject to seismic phenomena such as the earthquake.



The heights (Mount Damavand)

Distant 75 km north-west of Tehran, Mount Damavand stands out, with its 5671m of height it is the highest of the Alborz chain and also of Iran. Mount Damavand has been an ancient extinct volcano for over a hundred thousand years ago. The top of this conical shaped mountain has a crater with a small, often icy water basin, 100 m wide and 30 m deep. On the summit the temperature even in summer is several large below zero but its sides are covered with flowers and varied vegetation, especially with wild poppies. At the foot of the mountain there are several interesting caves to visit and the surrounding area is rich in thermal waters with many infrastructures for the treatment of diseases such as rheumatism and respiratory disorders, which attract many people every year. In summer the plain below, known as Vaoaro, famous for the record of winter snowfalls (8 meters), is the ideal and preferred place for many Iranian nature lovers.





The Tucial mountains

The southern slope of the Alborz range, known as the Tucia mountains, is the destination of many climbers and sportsmen, as this is the only one in the country, with an efficient network of ski infrastructures, including a gondola and a cableway that run at full capacity. Also in the Tucial mountains there are several shelters that host mountain lovers.

The refugees

The Kolac Cial refuge is located at 2600 m on the homonymous mountain that has a height of 3350 m. It is managed by the Minister of Education and is usually made available to schools for school trips. The Shirpala refuge is located at a height of 2750 m and can be reached in about 5 hours, climbing one of the various existing trails depending on the season. Shirpala is a shelter with a restaurant and a tea room, as well as a dormitory that can accommodate up to 150 people. Another shelter is the Palangcial, located at an altitude of 2550m, which can be reached starting from the village of Darake; it has a dormitory that can accommodate up to 70 people. the Golezard cave, located at the foot of Mount Damavand, which, despite having a steep slope, is easily accessible.

Another interesting cave to visit is the Rudafshan cave which is located in the central portion of the Alborz range, near the small town of Damavand. Within this cave with a ceiling composed of calcareous material, there are small springs of pure water; it is easily accessible and usable. The cave of Yakh Morad is one of the most beautiful in the area but also the coldest. In spring it is particularly visited as wild flowers grow in the external area surrounding its entrance, filling the air with their scent.

The lakes

In the summer between the small mountain ranges of Ghare Dagh in the north and Zarrin in the south, at an altitude of 2500 m, you can practice swimming, water skiing and fishing at the Tor and Mamaj lakes. Also in the region there are three dams and their respective artificial basins:

The lake (the dam) Amir Kabir fed by the waters of the Karaj river is the largest and most visited one. In summer it has a pleasant and fresh temperature and here you can practice activities such as fishing, hang gliding, water skiing, etc.

The lake of the Latyan dam, located 25 km from Tehran, is the most easily accessible from the city, but is used above all for fish farming.

In the region there is also Lake Lar, which however is the farthest from Tehran (about 85 km) despite this being a beautiful and ideal destination for those who love nature.

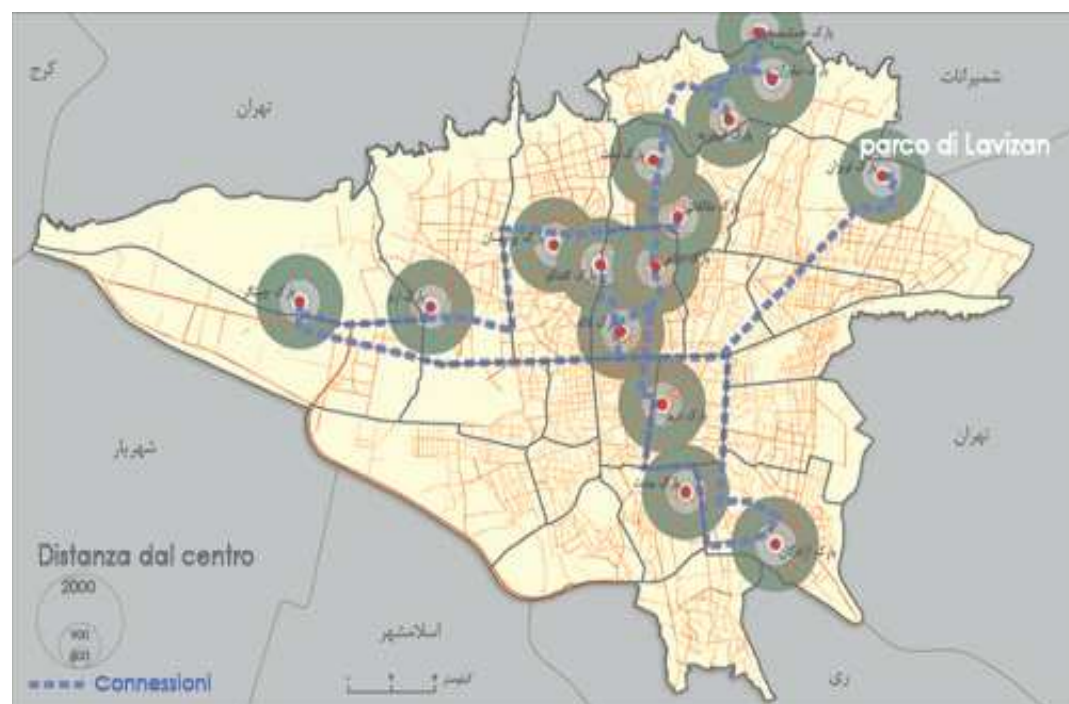
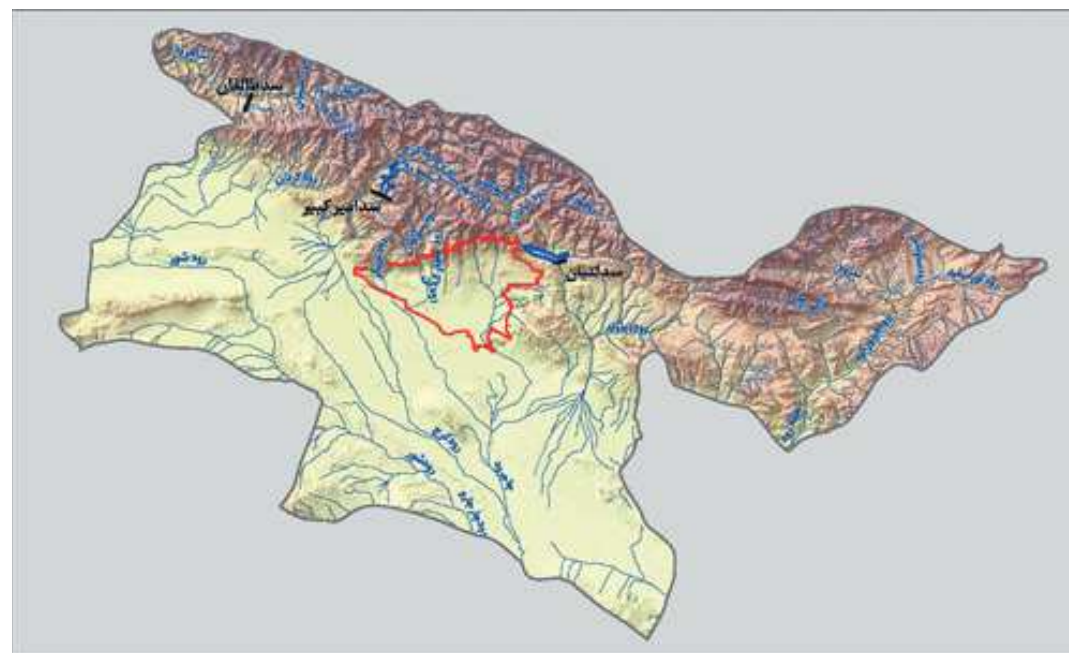
The parks

In the Markazi region and in its capital city, Tehran, there are several parks and green spaces, of variable dimensions: their surface varies in fact from a few hectares (as in the case of city parks) to hundreds of hectares (as in the case of parks major), among which stands out above all the park of Citgar which, with its more than 1450 hectares, is the largest in the region. This park has a long cycle path and several jogging routes and is accessible in all seasons of the year.

The Lavizan natural park

This park on the northern outskirts of Tehran, on the border with the town of Lavizan, with an area of approximately 1100 hectares, is the most frequented by the inhabitants of the city; here, people visiting the town of Lavizan can also buy homemade products and objects of local craft production. Along with the Verdavard park and the homonymous mountain with 1000 hectares of surface there are other more or less

large green spaces such as the Gazal park with a surface of 950 hectares.



Le principali piazze

The ancient square of Baharestan, together with the homonymous palace, is one of the most significant symbols of Iran's imperial past and its passage to the republic. If until the end of the nineteenth century this was still the private garden of the Qajar rulers, only in 1905, with the development of the city, it became an integral part of the capital, to the point that today the ancient royal palace of Baharestan welcomes the headquarters of Iranian Parliament.

The Hassan Abad square was commissioned by Ashtiani, a great minister of the Nassereddin Shah, in memory of his missing son; at the time of its construction the square was at the western limit of the capital. Between 1925 and 1934 four Palladian-style buildings were built on its sides but later some of them were demolished to make room for multi-storey palaces (with a questionable taste) to house the headquarters of the National Bank of Iran. Work has recently begun on the restoration of the square.

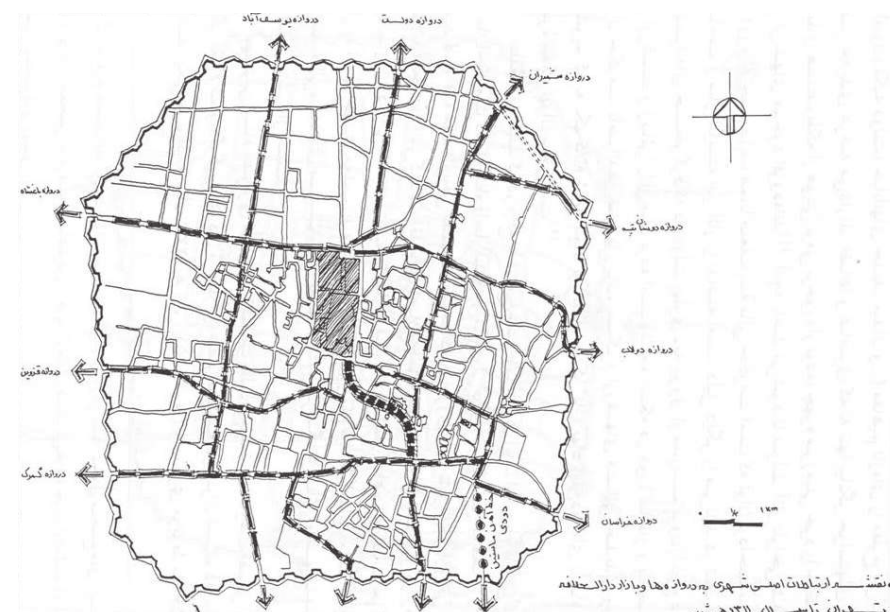
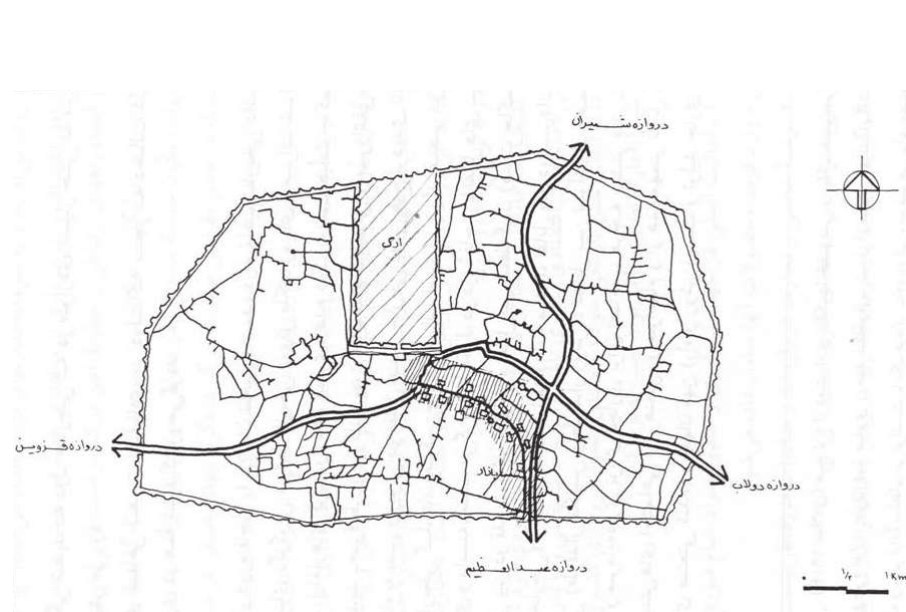




The square of the Hippodrome is all that remains of the great hippodrome of the Qajar rulers. The ancient Hippodrome, which initially appeared as a simple garden outside the city, was progressively expanded by the sovereigns, who also erected some buildings here, until Nasereddin had a real square built and built a building that served as its entrance. With the advent of the Pahlavi dynasty the hippodrome then became a place of arms for the army.

The square of Arg is one of the oldest in the capital as it dates back to the Safavid period.

The realm of the Qajar was concentrated within the citadel, where therefore most of the royal palaces rose, all built around this great square; over the centuries, however, the square changed its name many times (piazza dello Sicà or piazza Tupkhu-neh etc.) until it was known, today, with the original name that was Arg).



The square of Imama Khomeini (named in memory of the father of the revolution in Iran), was formerly known as the square of Sepah; this was commissioned by a great figure of the time, Amir Kabir, Grand Minister of the Shah Nassereddin, and was built, with the initial square name of Tupkhune, in 1889. Currently not much remains of the ancient splendor of the era , except for the imposing building that housed the headquarters of the Imperial Bank.



Piazza Azadi (piazza della Libertà) is one of the squares belonging to the contemporary era as its construction is quite recent. The square, which with its extension of over 1500 square meters is the largest in the entire Middle East, is located west of Tehran and was built at the behest of the last ruler of Iran, Mohammadreza Pahlavi. Inside the large tower that overlooks the square, there is a museum.



1.3 HISTORICAL EVOLUTION OF THE CITY

Tehran: the toponym

The historian Yaghut Hamavy in the year 1239 d.C. to write the name of the future capital of Iran he used the Arabic letters, but states that “Tehran” is a purely Persian word and adds that the local population also writes and pronounces the name of Tehran in Farsi language (Persian). However Tehran is written differently in classical Arabic (تِهْران). It should be noted that in the alphabet of the Farsi language, after the Arab invasion, many Arabic letters have penetrated, therefore we refer to the Persianity of the word Tehran.

The origins of the word “Tehran” in the spoken language of the inhabitants of the time must be traced back to the union of the words “Teh” and “Ran”, which means “person who follows and guides animals and lives underground (underground shelters) “. This detail suggests that in Tehran there were underground dwellings used by the locals to live there, as among other things confirmed in the writings of some historical travelers of the time such as Yaghut Hamavy and Zakaria Ghazvini. Others argue, however, that the name comes from the composition of the words “Tehr” and “An”, which means “a flat place”, or plain.

Origins of the city in the past

Contrary to what it appears today, the area on which the city currently stands, at one time, was characterized by a green expanse, full of wild orchards, woods and undergrowth with impenetrable vegetation and it was in these woods and cliffs that the original inhabitants they found refuge and food.

Some traces of these prehistoric dwellings have been found which confirm this news.

Although there are no written records, thanks to the discovery of archaeological finds and with the favor of topographical and climatic characteristics, it is indeed possible to affirm that the lands between the Tacial mountain in the north and the Ali a Rey spring (a city a few kilometers south East of Tehran and one of the ancient capitals of Imperial Persia) were already inhabited in prehistoric times.

however, due to urbanistic needs but above all due to the incompetence and negligence of the local administrators, in the various successive epochs, they brought to the city, complete loss of such material evidences.



Kingdom of Ilkhanian-Mongols (1256-1265 A.D)

Before describing the city during this dynastic period, it is necessary to specify that at that time, not far from Tehran, the ancient city of Rey once stood, a very famous cultural, religious, scientific and above all very rich center of palaces, squares, gardens and mosques.

Not so grandiose but quite important, it was also the city of Varamin. Also south of Tehran. However, these two important centers, with invasion by the Mongols, were destroyed and most of the population fled from the invaders: many of the fugitives fled to Tehran where, with time, they brought many benefits.

The Spanish ambassador, one of the first western travelers, passed through Tehran on his journey to Samarghand to meet Tamerlane. In his travelogue he remembers Tehran as an extended, green and pleasant city. He says he stayed in a large palace, where Tamerlano used to stay: it was a sumptuous palace mentioned in the ancient texts of which, unfortunately, no name and origin are known.

We know for certain that at the time the southeastern limit of Tehran coincided roughly with the place where the sanctuary (tomb) of Seyed Ismael is currently located, while the north-eastern limit was located at the Ciale Meidan and Yahya shrines. The houses along with orchards and crops went eastwards until they passed the already mentioned Yahya Shrine, until they reached the current Golestan Palace.

Tehran in the Safavid dynasty (1501-1736 A.D)

At the beginning of the rise of the Safavids, led by Shah Ishmael, head of the Turkish nomad tribe Aq Quyanlu and heir of the Scythian tradition, Tehran was only a small city.

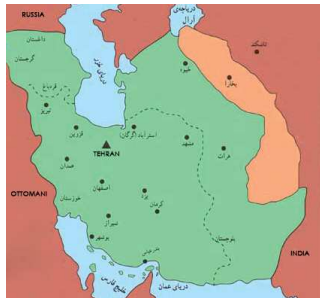
At the beginning of the fifth century after the Hijra (or the flight of Muhammad from Mecca, which occurred around 1600-1630 AD) the historian Hebert calculated that Tehran had a population of about 15 thousand inhabitants and that the houses, estimated in a number of about 3,000, they were mostly underground shelters.

We know that the first architect of Tehran was a certain Hafezi. He contributed as supervisor to the construction of the city and the fortification of the city itself (1583 AD)

In the first half of the tenth century after the Hijra, the population of Tehran was naturally divided into bands: there were individuals belonging to high society, the rich, landowners, nobles with birthright, rich businessmen, some enlightened (ie the few able to read, write and teach), some religious (Mulla), two Maktab (religious schools), a doctor, a traditional pharmacist (a shop for medicinal herbs).

Under the Safavid dynasty and in the following period (until the eleventh century after the Hijra), Tehran did not combine much. Green still prevailed in the city and the buildings were still few: the alleys were crossed by many streams and waterways and were full of high and luxuriant plane trees, so that Pietro Della Valle, passed by Tehran, called it "the city of plane trees".

The Qajar dynasty (1781-1925)



In the period between the fall of the Safavids and the assassination of Nadir-Shah-Afshary, which occurred in 1744 AD, Iran (or more precisely the Persian Empire, which at the time still included parts of India, the Caucasus and Iraq, etc.) was shaken by wars of succession between the Afghan groups and the Kurdish tribesmen, the noble families Zand and Qajar. In the south various local principalities were established, while in the north an Azeri identity (of Turkish language) was formed with various leaders.

With the expulsion of the Afghans and the restoration of central power by the Qajar (nomadic truchi) in 1779 AD, Turkish became the official language of the dynasty. With the rise to power of the Qajar, Tehran awoke from a long nightmare in which war, corruption and poverty reigned, as the city was placed at the crossroads between Iran and the rest of the Persian empire. Specifically, Tehran was for many years the scene of wars between the Zand and the Qajar themselves who divided the north and the south for several years.

Eventually the Qajar had the upper hand and managed to unify Persia, choosing Tehran, until then a very small city, as the capital. Here it is important to remember that Tehran, in addition to having a favorable morphology and climate, was also strategically very important, being almost at the center of the empire which, at the time, still comprised almost all of the Caucasus, part of Central Asia and a part of the present countries of the Persian Gulf.

The Shah Mohammad Khan came to power, he started some initiatives to expand the city and in particular the imperial citadel; he devoted himself to expanding Divanolemare (the palace of justice) and building a beautiful building outside the imperial citadel.





In Tehran at the time lived about 1500 individuals, to which more than 3000 soldiers and officers must be added. At the time, Tehran resembled a small village, with an area of about 5-6 square kilometers; of this extension, more than half was part of the citadel with the adjoining imperial gardens, while the rest were only dark and narrow alleys. Without any doubt, Fath-Ali-Scià, descendant of Mohammad Khan, was the first and true architect of an urban renewal: in fact he owes a great expansion and modernization of the city, such as to make Tehran assume the appearance of a real capital of a state transforming it into a big city. He ordered, among other things, the making of the famous marble throne of the Golestan Palace.

Fath-Ali-Shah also embellished the imperial citadel with various constructions in the typical Persian-Islamic style; started the construction of several beautiful and impressive mosques, including the famous Mosque of the Wake, finished in 1875 AD, and gave birth to the first real schools of Tehran, such as the schools of Marvi and Sadr. His public works include the market portal of Tehran and the Porta Scià Abdolazim located at the southern edge of the city, as well as the beautiful palace of Fajr in a pyramid shape.

Fath-Ali-Scià was an enlightened and excellent ruler for the new capital, but in Iran he is remembered above all for his pomp, waste and in particular for having lost or sold off most of the empire (in particular almost all of the Caucasus) .

After him his successors continued, albeit not with the same enthusiasm and many waste, to build and enlarge the city of Tehran and the rest of Iran.

Haji Mirza, the great Vezir (minister) of the Shah Mohammad, had new wells dug because the existing ones were no longer able to meet the needs of the continuously growing city population. Among the works he created, it is worth mentioning the construction of a canal a few kilometers long that connected the Karaj river, west of Tehran, with the village of Yaftebad and the outskirts of Tehran.



During this period, the Russian military officer Naskov drew the first map of Tehran, which saw the prints in Moscow around 1826 A.D

At the time, however, there was not yet a square, an open space in the city, with the exception of a small square between the market and the imperial citadel, naturally called Piazza dello Scià. During the reign of the Qajars (who remained in power for 150 years), the imperial palace became a veritable citadel within the city, within which nothing was missing. However, the palace was frequented and lived only by princes and the royal family, courtiers and court personnel, as it was forbidden to the people.

With the succession of the different kings, the citadel became a tangle of carriage roads, palaces, fountains, streams and blind alleys, which could be accessed directly from the north walls of the city through some fortified gates, called Azadoldule.

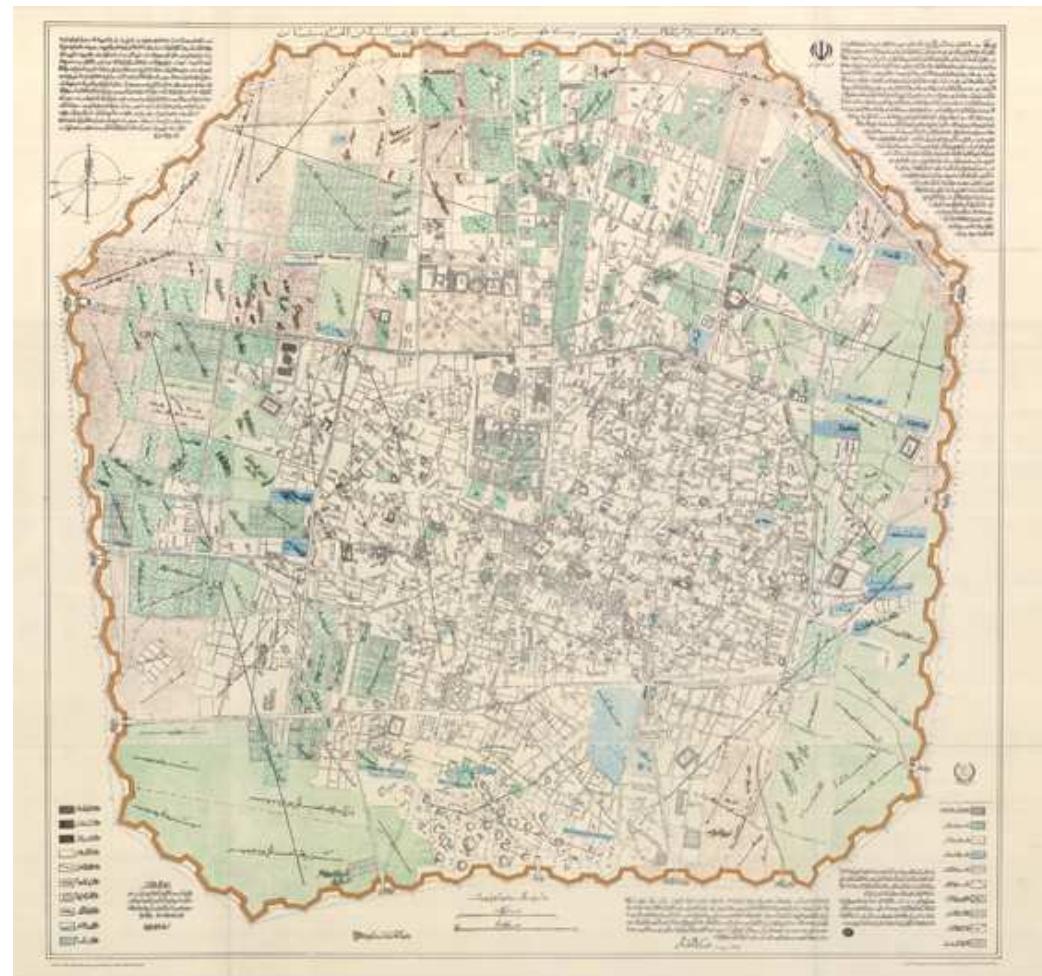
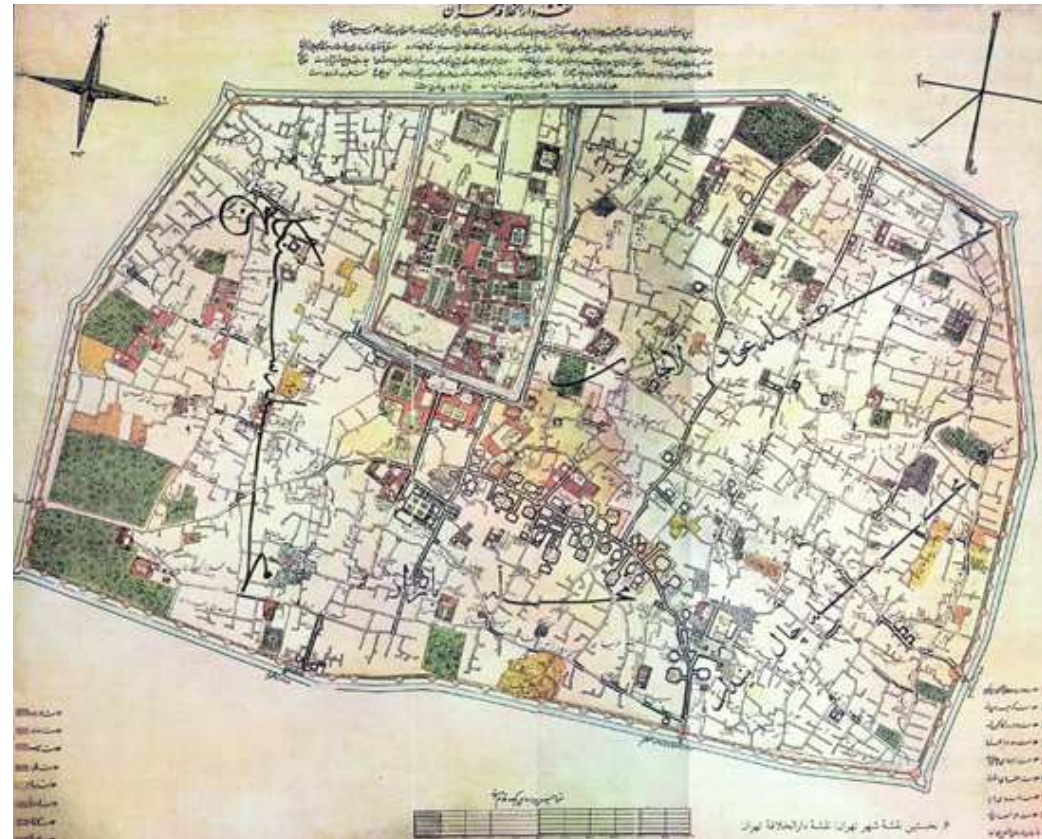
The Shah Naser-al-Din, together with his brilliant and enlightened Grand Vezir (minister), called Amir Kabir (great) made many reforms, changing Tehran both on the urban and the socio-cultural level.

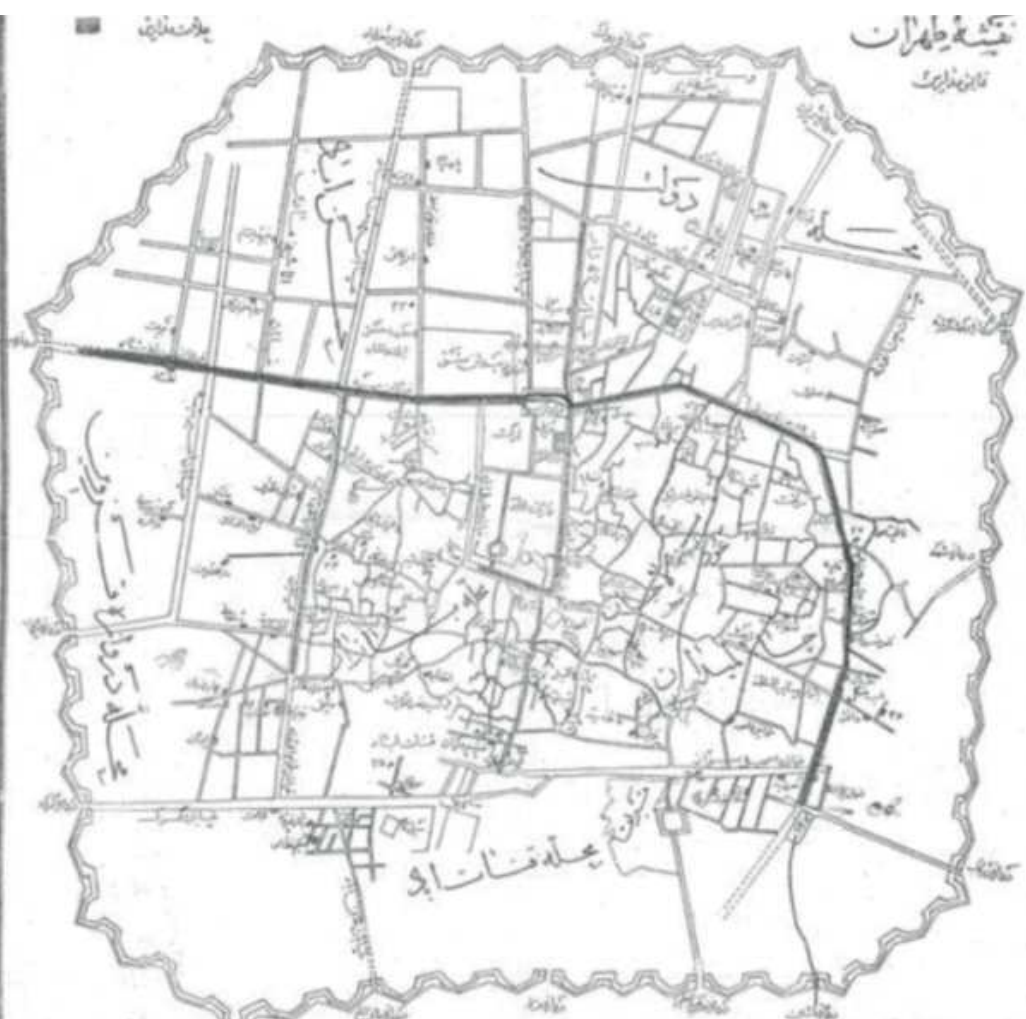
In the long reign of the Nasereddin Shah, Tehran became noticeably livelier; the old wall was demolished with the addition of new fortifications. The city grew quickly: new palaces were built and new, more spacious and functional roads were built.

Amir Kabir established new schools, including the first Institute of European Languages and the Polytechnic. However, it was not until 1905 that Tehran was officially declared the capital of the empire.

Between the end of the 1800s and the beginning of the 1900s, Persia, undergoing European influence, gradually became a democratic country: new institutions, offices, ministries and embassies arose, hitherto unknown to the majority of the people . Particularly noteworthy among the new public offices are the post office, customs and public lighting offices, etc.

A small railway was also built that connected Tehran to the small and ancient city of Ray, located south of the capital.





The old fortress of the Safavid kingdom was demolished, the moat was filled with earth. In this period the city was almost rebuilt taking as a reference model the urban structure of the city of Paris: a new ditch was dug and twelve gates were built all around the city (these, however, were later demolished in 1928, but their names are remained impressed in the memory of the inhabitants who still use them today to indicate precisely the place where they stood, such as Porta di Yusefabad, Porta di Shemiran, Porta di Khorasan, etc.).

A new map drawn at the end of the nineteenth century by the Austrian Alexander Friedrich Stahl, a professor at the Tehran Polytechnic, shows the extent reached at the time by the city which, according to a new census (albeit approximate), showed the presence of 250,000 people.

New neighborhoods were built, Lalehzar or Aladuole, equipped with street lighting. North of the citadel there were two large squares, Mshgh square and Tupkhune square, where some elegant buildings were later built, which later became the site of embassies and new ministries. But the economic and popular heart of the city always remained the old market south of the citadel. The most impressive buildings of the Nasereddin Shah era were the Sepahsalar Mosque, with the homonymous Madrasedh (Sepahsalar school), adjacent to the Spring Palace (baharestan), the current Palace of the Parliament. The only real noble palaces of Tehran were those of the kings and their numerous children and grandchildren, since only the ruling family held almost the totality of the country's wealth. Among these beautiful buildings we can mention Ashrabad Palace in the north, Sahebgharanie, the Zafiro Castle and the Turquoise Castle. At the beginning of the twentieth century Tehran became the largest city of Iran with more than 250,000 inhabitants. In the city, horse-drawn carriages, steam locomotives, gas lighting and, later, electric cars made their entrance.



Tehran with the Pahlavi (1925-1979 A.D)

In 1925 A.D, the last ruler of the Qajar (Shah Ahmad) was dismissed by Reza Khan, better known as Reza Pahlavi, founder of the homonymous dynasty and father of the last King of Iran. The Pahlavi ruled in Iran for a short time, during which however Iran came out, from the state of extreme backwardness it was.

The city of Tehran in particular, continuing to be the capital of the country (which in the meantime has changed its name to Iran), saw many changes over the last century, tending to look more and more like a modern and western city, at least in appearance. These important changes must also be traced back largely to the discovery of oil, a new and significant source of wealth.

With the Shah Reza Pahlavi in the country we witnessed important socio-political and cultural changes, starting from the renewal of the army, from the construction of the state railways and new roads, to which was added the strengthening of state bodies, the establishment of new ministries, the opening of banks and credit institutions; but above all investments in the industrial and transport fields were supported. During the reign of the Shah Reza Pahlavi the whole country (and in particular, the capital) was positively invested by significant transformations.

These changes largely favored the internal movement, especially towards the capital, thus creating the conditions for its rapid territorial expansion and slow but significant economic growth.

Among the first initiatives, there was the construction of the north-south and east-west road axis beyond the layout of the old walls that constituted an obstacle to the expansion of the city and the consolidation of central power.





With the renewal of municipal laws, an attempt was made to give an urban-aesthetic order to the city's layout and new roads (including the Bazaar, Jomhuri and Khayam streets), indispensable for the expansion of the capital, were built.

The old city was finally demolished, and in the following years a large ring road was built. The city's road network was then further strengthened with the construction of via Scià Reza in the north, via Shabaz to the east, via Nezami to the west and finally via Sciush to the south. Tehran grew rapidly in this period, reaching an area of around 46 km².

A new urban plan, drawn up under the supervision of the then interior ministry, drastically changed the historic center of Tehran with the demolition of most of the ancient citadel and its buildings and palaces, and their replacement with new government buildings such as the Palace of Justice and that of Finance. Only a few ancient buildings, including the palace "Golestan" and "Sciamsol-e-Mareh", have been spared from this urban destruction.

Again with Scià Reza Khan, roads and crossroads called "Rezakhani" were built for the expansion and modernization of the capital. The old "Sanglage" quarter was also demolished, later becoming a city park, today known as "Park-e-Shahr". Under the rule of the Shah Reza Khan, a university, a hospital with 500 beds, the city's large railway station and some factories were finally established.

Starting from the northern limit of the "Tupkhane" square and expanding in the south-east direction, various palaces and government offices arose, including the Post Office, the State Police Building and the Ministry of Foreign Affairs.

In the wake of Mohammad Reza Pahlavi, Tehran began to change radically, becoming in a few years the small and unknown capital as it was in a large modern metropolis.

The royal family, investing in magnificence rather than in power, abandoned the ancient palaces of the center to move to the European-style pharaonic villas that were built north of the capital; together with the royal family, many of the rich also moved to the new elegant neighborhoods also located in the north of the city. This shift is determined by the creation of the social gap created in the city which later became a cause of serious socio-political hardships, dividing the capital into two north and south poles (on the one hand the rich and noble neighborhoods, on the other the poor and less well off).

The urban transformation of Tehran during the last twenty years of the Pahlavi can be divided into three phases:

1. Growth of the separation and the gap between the northern and southern districts, which reached its peak with the transfer of the royal family to the Palace of Niavaran.
2. Greater investment in infrastructure and development in the northern area of Tehran, to which is added the announcement of the intention to create complex future plans always concerning the northern area of the city, inevitably entailing new social problems.
3. The approval of a long-term general urban plan (25 years) with the aim of marginalizing the old and poor neighborhoods with the construction of a futuristic city called Shabestane Pahlavi, thus increasing the already wide gap between the various social classes.

In the period of agrarian-social reform (white revolution) lasting 4 years, Tehran continued to develop uninterruptedly. With the implementation of the aforementioned urban plan, the city progressively expanded along the east-west axis, towards the town of Karaj, which then became a very important industrial center.

This disproportionate growth has naturally highlighted the problem of transport on an industrial level and also that of environmental impact.

Still on the urban plan Tehran was divided into 9 municipal districts that extended to the foot of Mount Alborz with a vast road network; with the construction of a metropolitan line, combined with the transfer of the old shops of artisans and merchants outside the city center and the construction of large buildings in the suburbs, however, there was a clear shift in population. Some of these works were carried out with the construction of large residential districts such as Lavizan and Shahrak-e-Gharb, together with the great road junctions, the creation of green spaces and city parks and finally the closure and transfer of the old and cumbersome stations of the buses.

But all these improvements did not serve much to solve the problems of a fast-growing capital as it was Tehran in that period, so much so that in the end almost all the big projects to change the aesthetic-urban aspect were ineffective. Tehran looked more and more like a chaotic and messy city.

With the increase in the price of oil in the 1970s and the consequent increase in the fund present in the government coffers, the dreams of magnificence of the governed have also increased.

They often have a large amount of money to design pharaonic architectural and engineering works that have nevertheless remained unfinished or simply drawn on paper only. Projects such as the General Plan of 1977-78 which envisaged the construction of a mega-district for offices, embassies and offices for foreign and international affairs, in the north of the country, in Abbasabad Street, with an area of 554 hectares, of which 199 hectares were planned for the actual construction while the remaining surface was thought to be destined to the creation of large green spaces and enormous squares such as the Piazza dello Scia (which should have been larger than the Red Square in Moscow, surrounded by art galleries, museums, libraries and centers for foreign trade).

All this was necessary but not urgent and as already mentioned remained unfinished even for lack of funds.

2.1 QUALITY OF LIVING IN THE CAPITAL

The term quality of life has been the subject of many studies. However, no standard definition of the concept is still presented, nor is any definition widely accepted. Quality of life is explored using different approaches (subjective, objective or a mixture of the two) and in relation to some indicators, including life expectancy, education, mortality rate, etc. However, today we agree that none of them can be used as a reliable indicator of quality independently of the others, as they all appear to be indispensable: the quality of life is, in fact, a variable determined by the interaction of these indicators. Changes in people's income levels, living conditions, including their housing, health care, the environment, safety, satisfaction with family life, social interactions, etc., all interact in a complex way, determining the quality of life and its changes. Measuring the quality of life in urban areas has become a key research tool to promote urban planning and management in modern cities.

These studies have key functions such as informing citizens, social and political groups about trends in quality of life. The results of the studies are used to evaluate policies and to help develop management and urban planning strategies, helping politicians to understand and prioritize social issues so that they can improve the quality of life of citizens. The concept of quality of life is associated with a series of other terms such as health, well-being, conditions and lifestyle, satisfaction and happiness. Studies show that quality of life depends on two types of factors:

1) objective factors 2) subjective factors.

The objective factors, or criteria, show the standards of life in general, while the subjective factors show the attitude of the people towards their life, as each individual compares what happens to him with implicit and personal norms. A heated debate on whether to consider both factors as determining factors in the quality of life is still open. An examination of the studies conducted on the subject shows that some of them have used objective factors, others have used subjective factors, while only a few have used a combination of both. The present study uses objective factors to measure the quality of life in different neighborhoods of Tehran. Before dealing with the latter, some of the indicators identified as essential for the concept of quality of life were identified and analyzed, drawing from both literature and personal experiences. To examine the quality of the

indicators identified for the study, including those related to urban services and public facilities in the various districts of Tehran, five categories of judgment were created, using a clustering analysis method: " quite good ", "good ", " to some extent good ", "not good ", " very bad " .

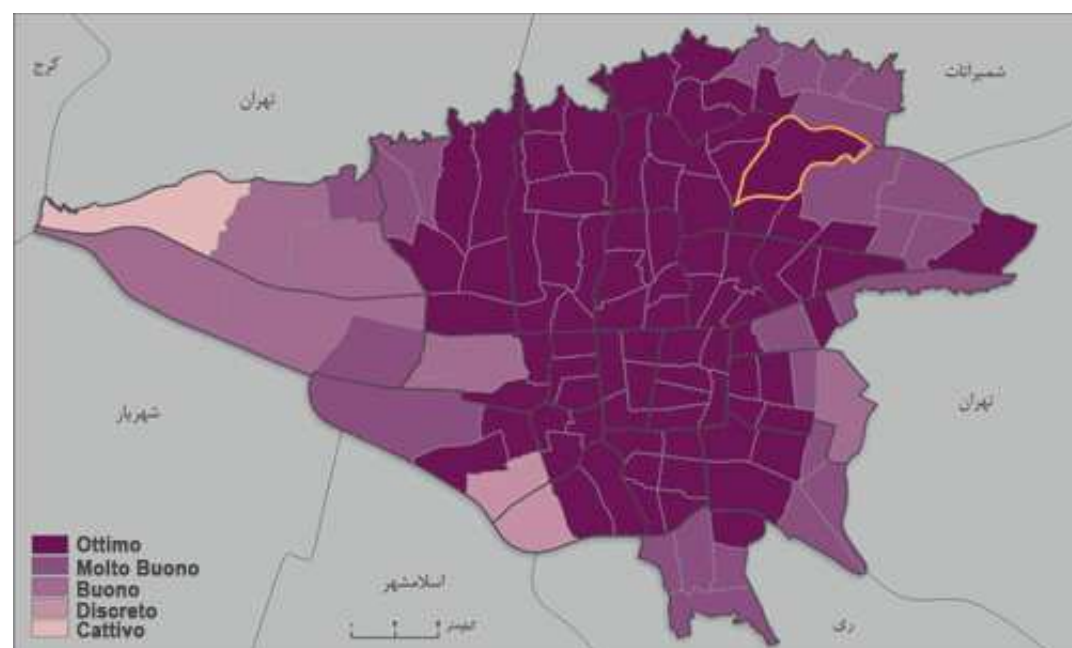
To examine different aspects of quality of life, a factor analysis method was used. Using this method, 27 indicators showing different aspects that contribute to determining well-being (see Table 1) have been divided into 4 groups, each of which indicates an aspect of the quality of life:

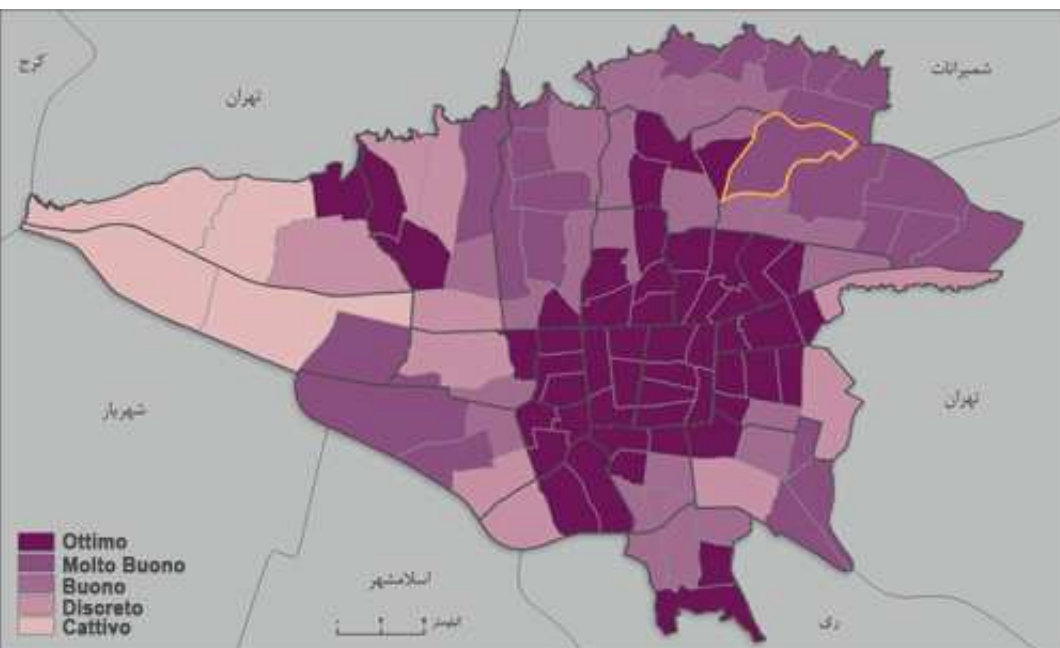
- Access to urban facilities and services
- Quality of the social fabric
- Quality of housing
- Quality of the environment
- Access to education

2.2 ACCESSIBILITY TO SERVICES

Instruction

Education services include kindergartens, primary schools, middle schools, high schools, exceptional children's schools and universities. Data on educational services in different neighborhoods of Tehran have shown that the distribution of nursery schools, and therefore access to them, is very good in most districts; only three out of a total of 117 districts (18, 19 and 22) access to nursery schools was not good. The highest number of exceptional children's schools is located in the central areas of the city, and specifically in the districts located in zones 6, 10, 11, 12 and 16. With the exception of the districts located in zones 21 and 22 and part of the District 18, the distribution of primary schools is relatively good and, with the exception of two districts, access to middle schools and high schools is very good. The best access to the universities was detected in the northern and central districts (within districts 1, 3, 6 and 7). Although access to middle schools, high schools, kindergartens and primary schools were better than other educational services, all in all, the spatial distribution of educational facilities and services in Tehran was very good; with the exception of one district in zone 22, where the population density is very low, and two districts in zones 18 and 19, access to educational services is generally very good.





Cultural services

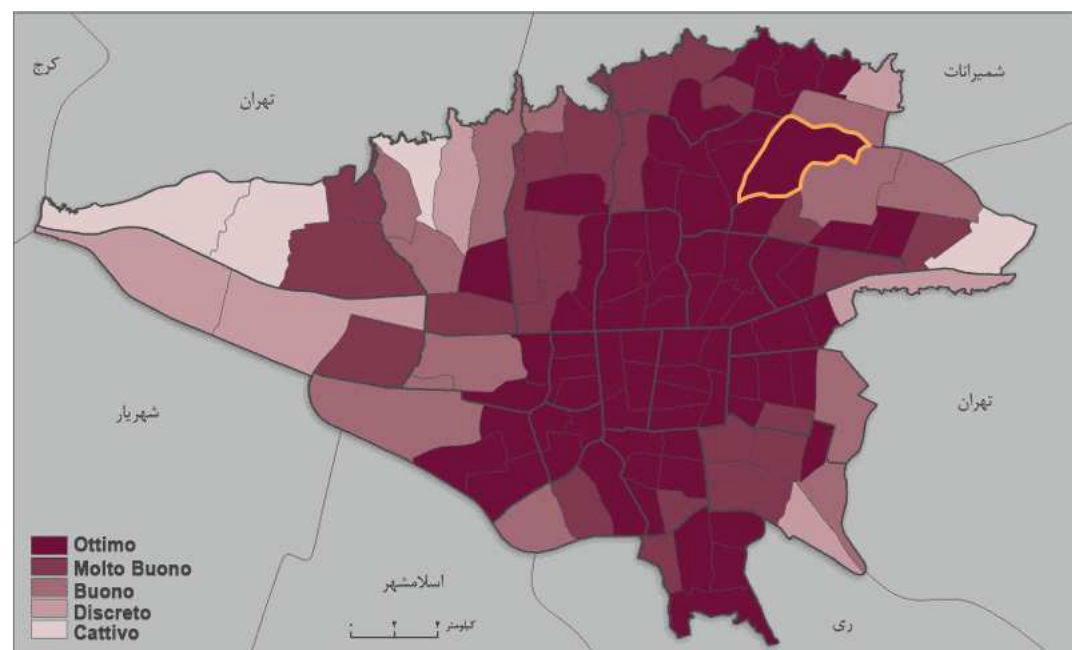
Cultural services are public libraries, mosques, cinemas and cultural centers (or local culture houses). The data obtained from the survey show that the central parts of the city, especially the districts 3, 6, 11, 12, 14 and 20, have the best accessibility to public libraries, while districts 21 and 22 are more lacking. The districts located in the center of the city, together with those located in the center of the southern and eastern area of Tehran, and in particular districts 4, 8, 10, 11, 12, 13, 14, 17 and 20, have the best access to mosques, while districts in eastern, western and south-western areas do not have a good level of access to mosques. Districts located in central areas, in particular districts 7, 8, 10, 11, 12, 13 and 16, present the best access to the cinemas, while all the remaining parts of the city do not have good access to the cinema. The distribution relating to the quality of access to the cinemas is rather unequal as the cinemas are concentrated above all in the central part of the city. Distribution instead of cultural centers is very good throughout Tehran; with the exception of the north-east and north-west areas of the country (districts 21 and 22), almost all the other districts are characterized by excellent access to cultural centers.

While the cinemas are concentrated above all in the central part of the city, cultural centers are better distributed throughout the city than other cultural services. Therefore, the central neighborhoods of Tehran have the best access to cultural services in general; the northern and southern districts of the city, on the other hand, have good access to cultural services, while the western, south-western and south-eastern districts show the worst quality of access. Overall, it can be said that the center has the best access to cultural services, while the western districts (districts 21 and 22) and the eastern suburbs (districts 13 and 14) have the worst access.

Health services

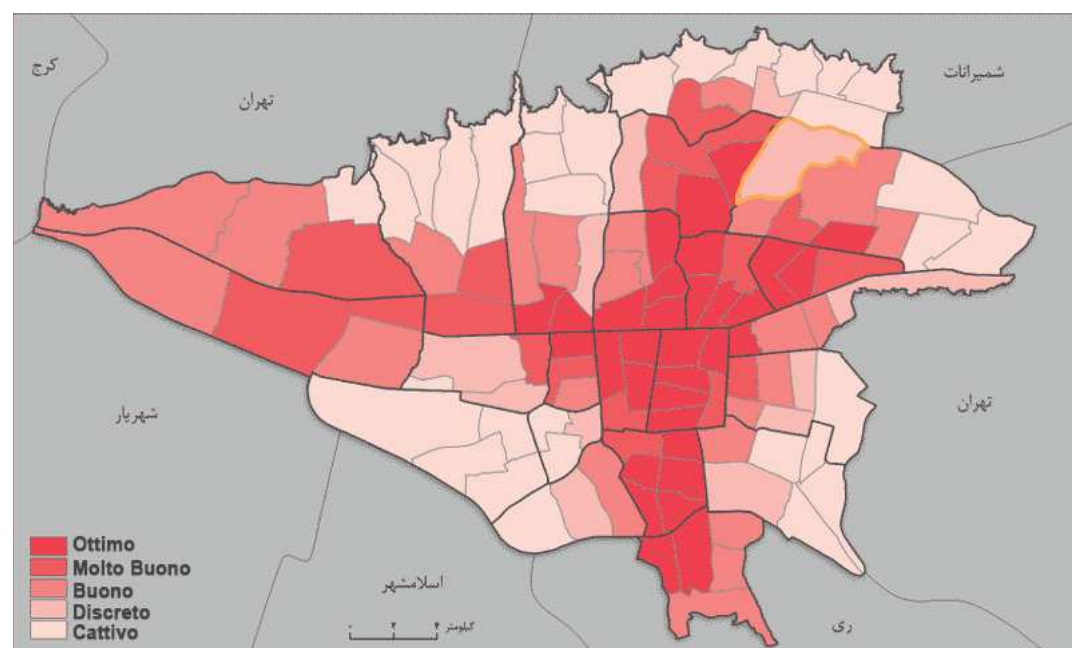
Health services are offered by hospitals and health centers. The data obtained from the clustering analysis show that most hospitals are concentrated in the central districts of the city, particularly in the districts 1, 3, 6, 7, 8, 10, 11, 12, 13, 16 and 17, while in particular, district 21 and part 4 have a less good level of access to hospitals.

Since the hospitals located mostly located in the central districts of the city, and mainly in the districts 10, 11, 12, 14, 16, 17, 19, access to them is better precisely in the central districts, despite however a good level of access to health services is also present in southern and on-western neighborhoods. Even the northern areas, with the exception of the districts located in zone 3, have a fairly good level of access to health centers; on the contrary, instead of what happens in western areas (district 22), where access to health centers is not good.



Access to public transport

The possibility of access to public transport has an important effect on citizens in terms of quality of life. The results obtained from the analysis of access data to the subway stations showed that the central districts of the city located in zones 3, 6, 12 and 16, have the best access while the northern, eastern, south-eastern districts and westerners reveal a very low level of access to the subway.



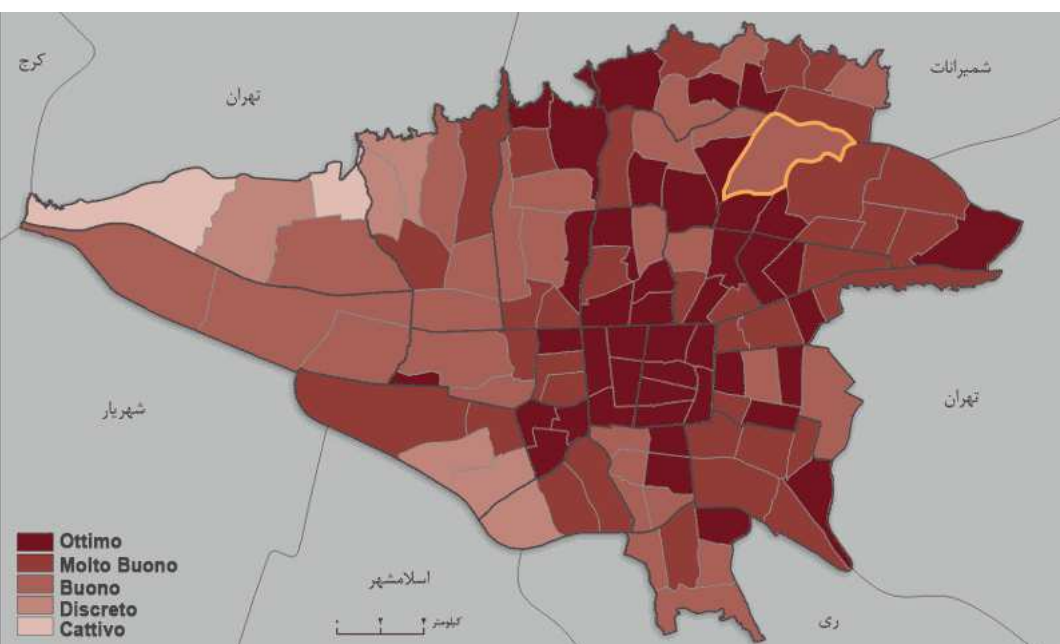
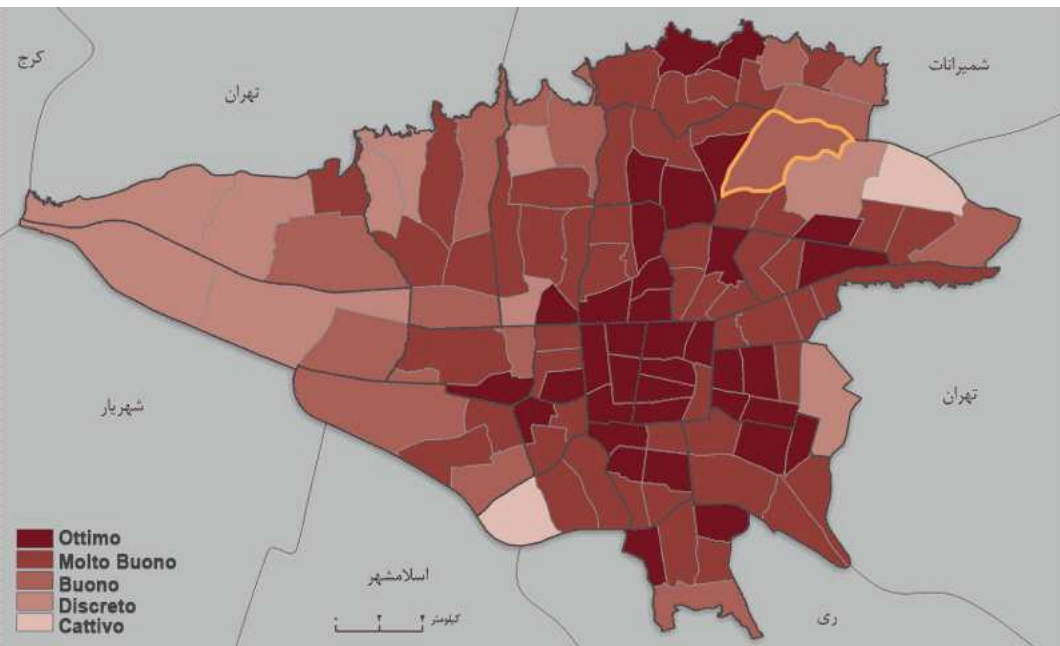
Emergency services

The analysis of the data collected regarding access to emergency service centers, including the fire department, ambulance services and police stations show that:

- The central part of Tehran, especially the districts within zones 10, 11, 12 and 17 have the highest density of fire station stations.
- Western districts, especially those located in zones 18, 21 and 22, have little access to these services.
- The districts located in the southern part of the city, in particular the districts 11, 12 and 16 have the best access to emergency services, while the districts located in zones 18, 21, 22 and some neighborhoods in zones 9 and 15 have the level poorer access to them.

With regard to access to police stations, districts 6, 7, 11, 12 and 16 showed the best level of access, while districts 21 and 22 were the most lacking in this regard. Compared to other emergency services, fire stations are better distributed throughout the city, but overall, access to emergency services in the central, eastern and south-eastern districts of the city was the best compared to of the other districts.

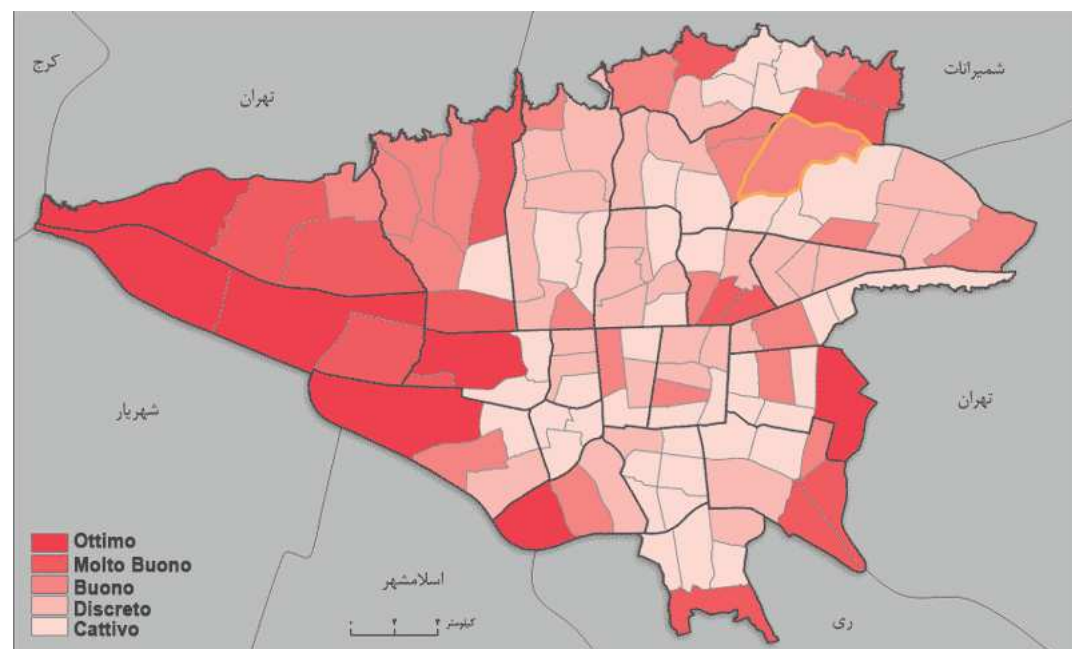
However, the level of access in the north-eastern districts is good, while the possibility of access to the emergency services of the western and su-western districts is decidedly lower, in particular in the districts of zones 18, 19, 21, 22 and some parts of districts 4 and 14.



Access to recreational and sports facilities

The analysis of data relating to the indicator of enjoyment of recreational and sports services, including parks and sports clubs (sports facilities, swimming pools and clubs), shows that the districts located in the eastern, central-northern, southern part and part of the areas south-east of the city, especially the districts 2, 4, 6, 16 and 20, present the best level of access to the parks. Furthermore, the districts located in the north, center, south and south-west of the city, in particular the districts 1, 2, 3, 4, 7, 8, 10, 11, 12, 13, 14, 16, 17 and 18, show good access to sports complexes. However, districts 21 and 22, located in the West End, have very low levels of access to these services.

Sports complexes are better distributed within the city than parks. In general, however, recreational and sports facilities have an acceptable spatial distribution throughout the city. The northern and southern districts of the city have the best access to these services; even in the south-eastern districts, access is still enough for good access; in the districts located to the south-west, on the other hand, and in particular in the districts located in zones 9, 19 and 21 and the district 2 located in zone 14, the level of access to these services is the lowest.



Outline of the history of the subway

When Nasser al-Din Shah, one of the kings of the Qajar dynasty, was approached the car on his journeys to Europe, he showed a definite interest in importing cars into Iran, preferring "iron vehicles" to his royal carriages. However, it was Mozafar al-Din Shah, (another king of the Qajar dynasty), who brought the first car to Iran in 1902, only 15 years after the production of the first diesel-powered engine. In October 1900, while the king was returning to Iran, two cars he ordered and produced by the Renault company, were on their way to his home; however, only one of these reached Tehran, as the other, due to a fault on the road from Anzali to Tehran, was left at the side of the road, where, exposed to rain and snow, it became a piece of garbage. One day, while the king, passing royal cars and his car, was passing in front of the Saudi Arabian embassy near Baharestan, a bomb was thrown at the royal procession; in this attack some of the pilots, coachmen and valets were killed or wounded, but the king, in the car, survived the attack. After Mohammad Ali Shah, the car was given to his son, Ahmad Shah, who then bought a second car, driving them quite frequently. At that time, the public transport system was limited to some horse-drawn carts along two main routes: one of them started from the Nezam school on the west side of the Sepah road and Bagh Shah Sq. (Now called Hor) and ended at Hasht Gonbad Sq. (Now called Hasanabad Sq.), While the other route started from the Bazaar to end up in Cheragh Bargh Street. The horses that pulled the carts on the rails were replaced, at the end of each journey, with fresh and rested specimens.

The first trains of the steam railway, called by the mashin Doodi people (smoky cars), operated as a link between Tehran and Rey, under the regime of Nasser al-Din Shah. The Tehran-Rey steam train ticket at the time was sold at the cost of 3 Shahi (local currency) but was later increased to five Shahi in the time of Mozafar al-Din Shah, to then reach a cost of 7 Shahii in the period of government of Ahmad Shah and finally of 10 Shahi.

The first private car was imported to Iran in 1904; according to the Nazem Al-Islam there were 10 cars at that time in Tehran. The first cars that were imported were produced by Ford and they were all four-seater, with maximum speed that did not exceed 40 kilometers per hour. The first imported heavy vehicles were chain trucks with solid and differential tires.

In 1949, the national parliament passed a traffic tax law: the tax for a private car was 50 Rials, for a horse-drawn wagon, 12 Rials, for a carriage, 15 Rials.

In addition, every car entering Tehran and coming from another city was forced to pay 10 Rials as a tax, a decidedly high cost compared to the monthly rental prices for a house located in a good area, which roamed around 50 Rials.

In 1949 Tehran had 432 private hire vehicles, 108 vehicles belonging to foreign embassies, 36 privately owned motorcycles, 615 bicycles and 135 private hire motorcycles. The total number of vehicles in Tehran in 1926 was around 1140.

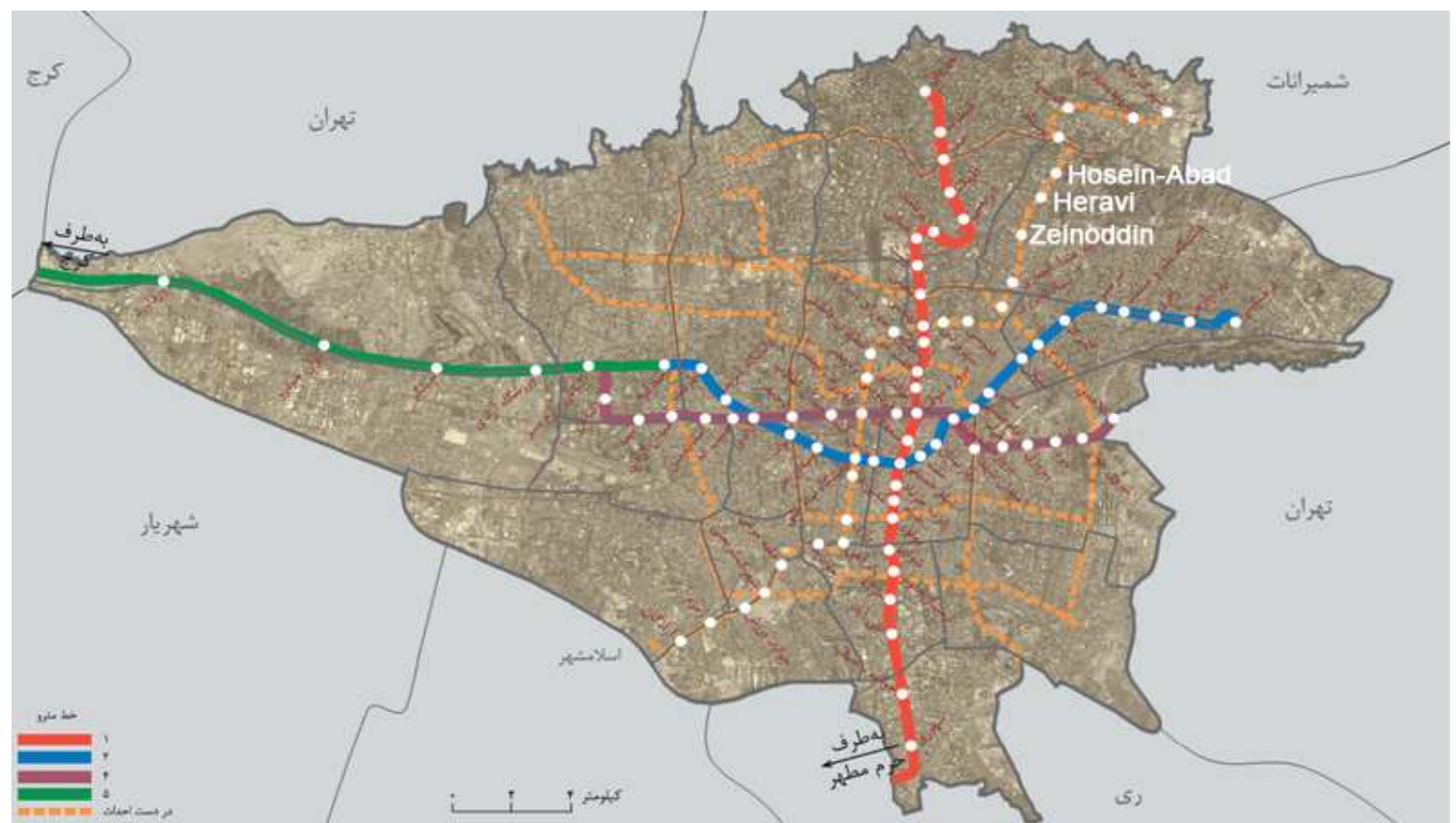
The first bus was used in Rasht by a Belgian businessman. However, the company was not profitable due to the low fare associated with the race. So the bus was sold to a businessman named Moein al-Tojar, who took him to Tehran after the constitutional revolution and started using it as a public transport vehicle, asking each passenger for a fee of 3 Shahi. After a few years, many other buses were imported by several businessmen. The first bus completely built in Iran dates back to 1911.

Nel 1919, a seguito di una grande insoddisfazione del popolo verso il sistema di trasporto pubblico a Tehran, venne istituito un apposito ufficio per volere del Primo Ministro, Vosough al-Doleh, il quale venne adibito all'organizzazione degli affari di trasporto urbano.

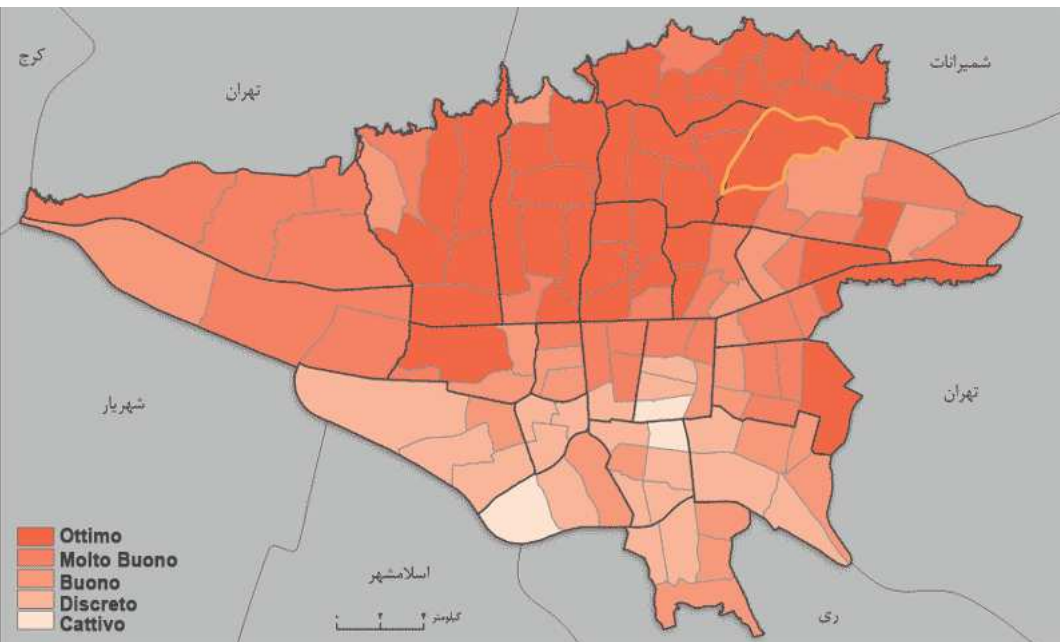
In October 1933, a law was approved for the construction of new roads and highways; this was then modified in July 1935 and became popular with the name of “law for the construction and development of roads and sidewalks”.

In September 1941, there were nearly 100 buses operating in Tehran, 90 of which were supplied by Mercedes Benz Company.

In 1952, the “Vahed Bus Company” company was established with a capital of 300,000,000 Rials. In its first year, the company had available 171 buses operating on five routes. In 1969, the first double-decker bus, built by the Iran National Company, joined the existing budget. According to police statistics, in 2006 there were 1,917,766 passengers.



2.3 QUALITY OF SOCIAL TISSUE



Social quality

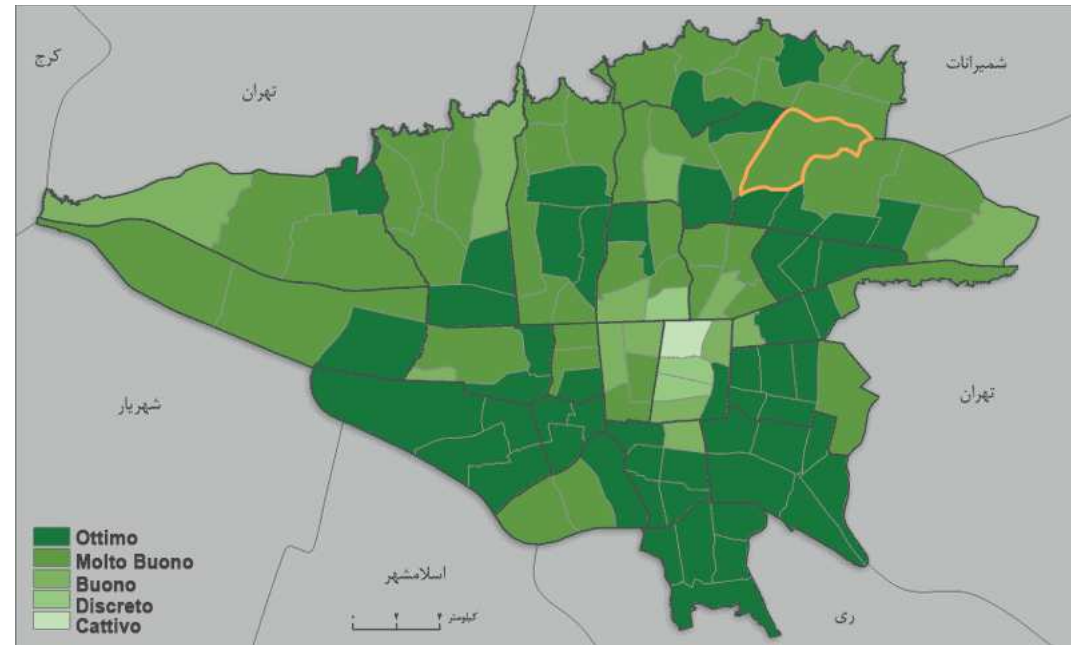
This factor indicates the social situation of the city. It consists of indicators such as the rate of education, the rate of training for men and women over 6 years, the number of family members, the employment rate, the number of unskilled workers employed, residences with three or more bedrooms and with areas of more than 101-200 square meters.

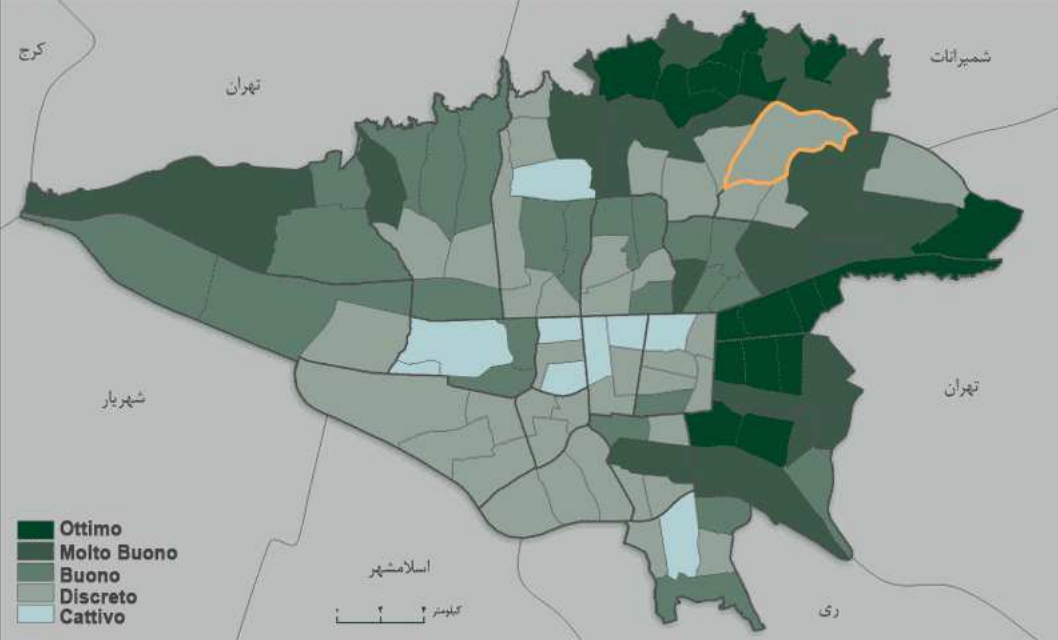
The northern and central districts have the best level relative to this indicator. Even the western and eastern districts show a good level of quality of the social fabric, while the southern and south-western districts show themselves as those in which the social fabric is less good.

Tehran can therefore be divided into two parts in terms of social capital, a northern and a southern zone: the first, which covers almost two-thirds of the city, has a good level of quality of the social fabric, while the second has a low social capital, thus showing a clear difference with the northern area.

Housing quality

This factor includes variables such as the area where the dwelling is located, the percentage of families with or without houses owned, the average number of people living in a house, etc. The analysis of these parameters showed that the southern part of the city, together with the south-western, south-eastern and north-western districts, present the best quality of living. The western, eastern and northern districts show instead an acceptable housing quality, while the central parts of Tehran, especially the districts located in zones 10 and 11, have the lowest housing quality: the buildings in the center of the city, mostly small dwellings are old and obsolete, unlike what happens in other parts of the city, where buildings are new, more spacious and with more rooms.

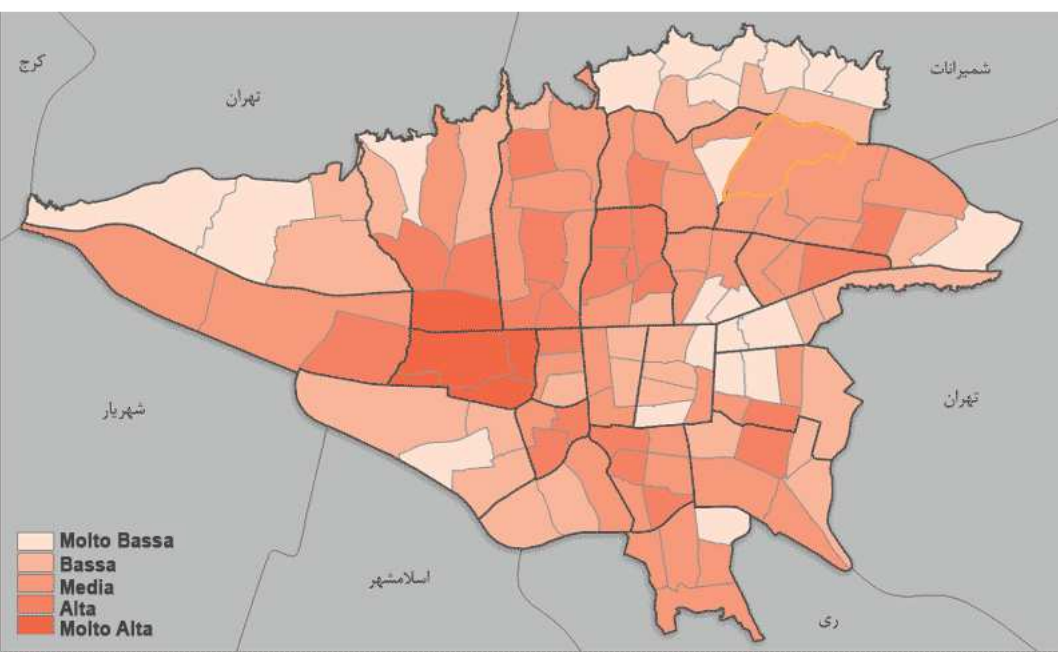
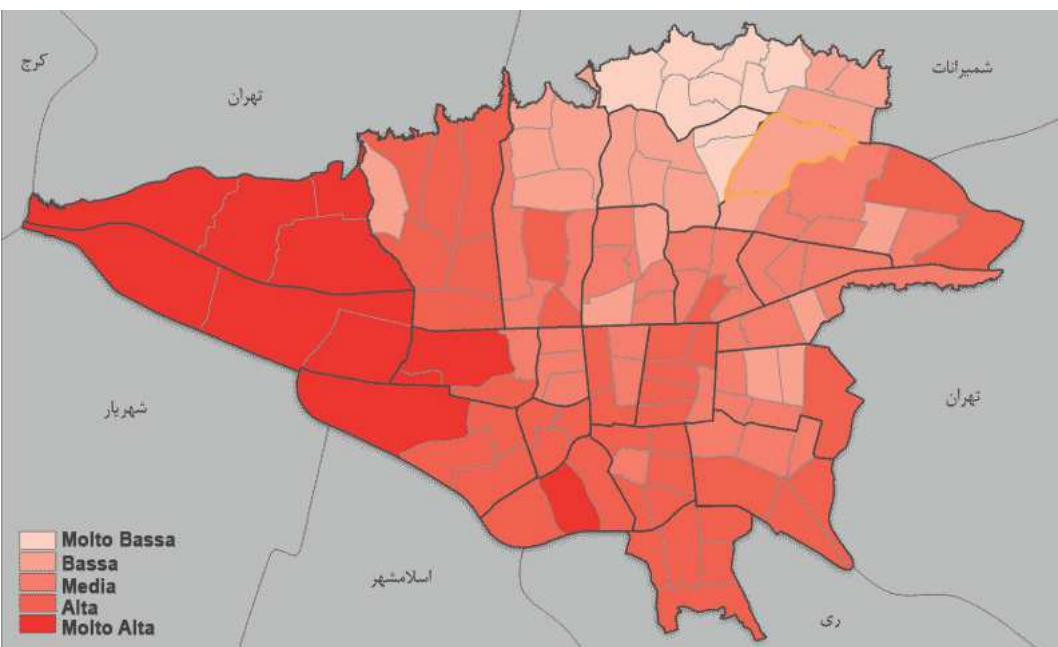




The quality of the environment

This factor includes indicators such as air and noise pollution. Air pollution mainly affects the central districts of the city and those located south-east. On the other hand, noise pollution reaches its maximum level within district 9. But considering these parameters together, a more complex picture of environmental pollution emerges. In this sense, the northern districts are the best in terms of global environmental quality. Even the north-western, eastern and southern districts appear good in terms of environmental quality, while the western and central districts have the lowest environmental quality.

In general, the northern, western and eastern districts of Tehran have relatively good environmental conditions compared to the western districts, where, especially in the areas around the Mehrabad airport, the lower environmental quality is found.



General quality of life in Tehran

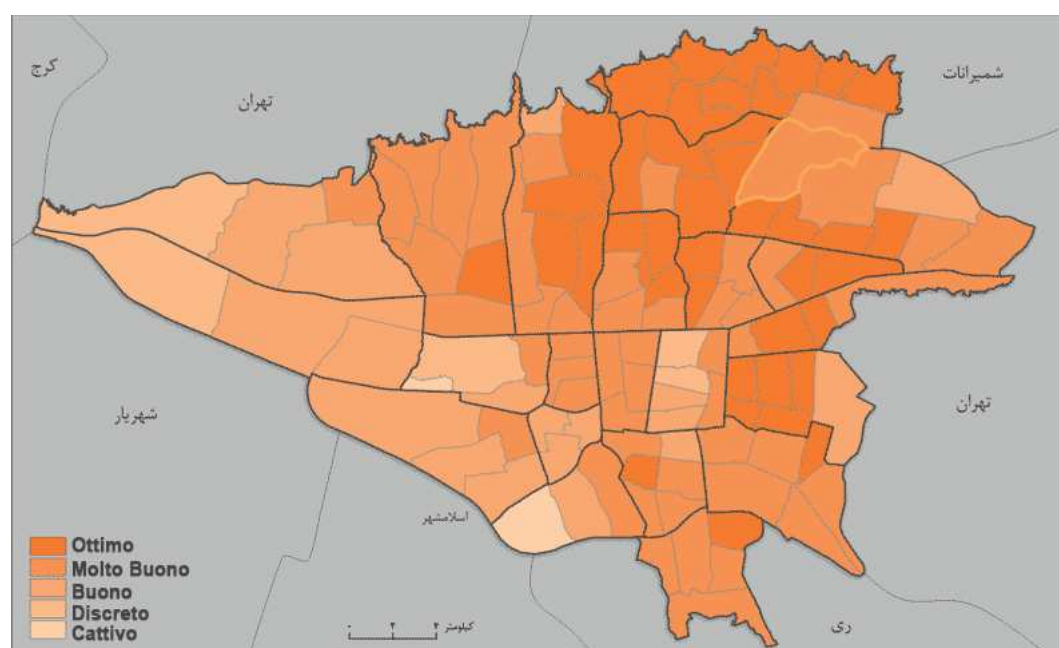
To obtain a general picture of the quality of life in Tehran, the four dimensions into which this has been subdivided and analyzed in the preceding paragraphs are here considered jointly.

It should be remembered that this study to measure the general quality of life in Tehran uses rather limited objective indicators - the only four parameters that are available in all 117 districts of the city - and that it has not been possible to compare these data with further subjective indicators. Therefore, the results obtained must be interpreted with this limitation in mind.

Despite the limitations mentioned above, the general picture of the quality of life in Tehran is discreet in almost all the districts; the best quality conditions are found in the northern area of the city, particularly in the central-north and north-east districts. However, the quality of life is good even in the north-western and south-eastern districts, as well as in those of the south-west area of the city.

Only in two districts (respectively in zone 9 and in zone 19) the quality of life is very poor; however, the general quality of life in six districts is rather poor (two places in the western part of the city, two in the city center itself, a district in zone 9 and a district in zone 18).

In two districts in zone 9, poor quality of life is basically due to high environmental pollution. In a neighborhood of zone 19, the poor quality of life is instead attributable to the poor quality level of the social fabric and to the relatively high level of environmental pollution. In a neighborhood in zone 18, the poor general quality of life is mainly due to the poor quality of the social fabric, the high environmental pollution and the considerable difficulties in accessing urban services and facilities. In two districts located in the western part of the city, the 21 and 22 districts, the poor quality of life is mainly due to the difficulty of access that these districts show towards urban services and facilities. Finally, in two districts located in zone 12, the poor quality of life is mainly due to the poor quality of its social environment and the poor quality of housing.



3.1 THE BUILDING INDUSTRY

The construction and construction sector continues to be one of the most important and dynamic sectors of the Iranian economy and seems destined to remain so in the medium term due to the high rate of population growth (1.29%) and the structure of the population, which by now has reached 80 million inhabitants and is estimated to reach 100 million during 2040-50.

Traditionally known as a rural society, Iran has developed a modern urban society over the last 50 years. If in 1956 the majority of the population (69%) lived in rural areas, today 71.5% of the population lives in the city; of this percentage, over 50% grew up in an urban environment.

According to the latest census (2007), over 30 million Iranians live in the top 20 cities (2/3 of whom, around 20 million, are concentrated in the country's major cities, including Tehran, Mashad, Esfahan, Tabriz, Karaj and Shiraz).

The demographic growth and the high urbanization rate impose on Iran, among other things, the construction of new and modern housing and adequate urban infrastructure: not only large buildings with a high concentration of social housing but also luxury homes, shopping centers, hotels and offices, roads, railways, subways, airports, etc.

From a geological point of view, Iran extends into one of the most active seismic areas on earth. This entails the need, on the one hand, to construct the new buildings in compliance with the best anti-seismic practices and on the other, to activate urgent adjustments and structural consolidation interventions in most of the buildings now present in the country.

The road and motorway network, essential in a country that is 5 times the size of Italy and which aims to become the tenth country for car production by 2018, is well developed throughout the national territory but needs to be upgraded as far as the stations are concerned of service with annexed reception and catering facilities, taking into account the long distances that separate the individual cities.

Important plans to expand existing international airports and upgrade the railway network have been announced.

3.2 POPULAR AND RESIDENTIAL BUILDING

Recent estimates indicate the presence of 16.5 million families in Iran and 14.5 million housing units present today in the area.

According to the latest available estimates, we learn that the need for new homes is currently around 1,685,000 units / year and that real estate production is instead equal to about half of the need.

The following is the data released by the Central Bank of Iran (CBI) regarding the average economic investment in residential building found in Tehran and in the main cities with over 2 million inhabitants (Isfahan, Shiraz, Mashad, Tabriz, Tazd and Karaj).

3.3 HOTEL RECEPTION FACILITIES

The current hotel capacity of Tehran and other major cities in the country is significantly lower than its demand. The few five-star structures present today were built at the time of Pahlavi and therefore currently require significant economic investments to finance expansion and modernization works.

Local engineering and architecture firms have been commissioned to follow these projects and have often made use of contacts with important international firms that have actively collaborated in the design.

Before the intensification of international sanctions in 2012, the Government had encouraged many investments in the tourism sector, arousing above all the interest of Chinese, South Korean, Austrian and Spanish companies.

In recent years we have witnessed the opening of an ever-increasing number of reception facilities in the so-called "Hotel Apartment" formula, created with investments originating in particular from the Gulf countries but also from initiatives by brilliant local entrepreneurs.

The island of Kish, in virtue of its privileged status as a free zone with a predominantly tourist and commercial vocation, has been hosting more and more national and international fairs and conventions in recent decades, attracting, as a result, an increasing interest in foreign operators specializing in tourist accommodation facilities and services.

Note

- In the country there are architectural buildings of rare beauty dating back to the Qajar age, the so-called "caravanserragli", which, if properly restored with appropriate professionalism, have all the requisites to quickly become luxurious and refined hospitality structures.
- In 2010, a German company was awarded a plot of land to set up a golf course with international standards.



3.4 SEISMIC ADAPTATION WORKS OF THE BUILDING HERITAGE

The standardization of certified buildings (above all anti-seismic) of the building stock is one of the priorities of the Government that for this purpose in 2011 has allocated about 130 billion euros to finance this type of intervention (11.5% with the rest private investments and bank loans, only partially subsidized).

Like all the news, the new directives will take some time before being completely followed, but the decision has been taken and certainly in the coming years the Iranian construction market will undergo important changes to adapt to ever higher technical standards.

3.5 CONSTRUCTION FOR PUBLIC SERVICES AND INDUSTRIALIZED / PREFABRICATED BUILDINGS

Around the big cities satellite poles are springing up, the "new cities". These poles offer interesting opportunities in the supply of plants for the collection and disposal of urban waste, surface underground stations, sports and recreational spaces, shopping centers. Even the domestic demand for housing for popular use made through the use of prefabricated buildings economic is particularly high.

3.6 RESIDENTIAL CONSTRUCTION

The country's capital, Tehran, with its more than 14 million inhabitants, is not only the largest real estate market in Iran but is also the one that often anticipates trends and fashions. This is why it is of particular interest to Italian operators who intend to invest here.

The main problems of the city are represented by traffic, the high level of air pollution, the scarcity of surface and underground spaces destined for public car parks, the insufficient number of petrol pumps compared to the circulating fleet.

The 2006 census showed a shortage of 1.5 million housing units. This shortage, combined with the increase in population, has led to a sharp increase in the price of properties in 8 years.

Residential building extends as oil spill in the northern part of the city that hosts, in addition to wealthy Iranian families, also a large part of the international community.

The average life of the buildings is currently divided into three bands:

- 50% are between thirty and forty years of age or more;
- 40% between ten and thirty years;
- 10% new or less than ten years old.

The type of dwelling traditionally present in Tehran (independent houses or terraced houses) is leaving more and more space for residential buildings with high population density with cuts in apartments ranging from 60 to 250 square meters.

Selling prices vary substantially from district to quarter: from 1,300 euros per square meter in the popular neighborhoods located in the south of the city to 3500-6000 euros per square meter in the residential districts of Jordan, Mahmoudieh, Zafaranih, Elahieh, Niavaran and Farmanieh.

Recent estimates indicate that the annual turnover generated by the sector is over 35 billion euros.

3.7 OFFICES

As for office space, the latest BCI published data shows a stagnation / decline in the number of building permits issued, perhaps due to the crisis induced by international sanctions.

This means that sales prices are higher than in the residential segment.

Also in this case the highest concentration of prestigious real estate is located in the northern districts of the city where sales prices can reach 9,000 euros per square meter.

Tehran is, and will remain, the political, economic and commercial center of the country. As a result most major local and international companies will want to have their own office in the capital.

Should the current difficult situation induced by international sanctions be overcome, in the coming years the demand for office space will be destined to grow proportionally to the economy.

The location will be one of the main critical success factors, not so much for the prestige that can derive from it, but because this will allow to limit to a variable extent the times due to travel and the delays caused by the intense and chaotic traffic (currently to move from the north to the center of the city of Tehran takes no less than one or two hours by car).

In addition to the location, a functional design (nowadays many offices are adapted residential apartments) will be awarded the certification of quality and safety, linked above all to seismic risk (in this regard it is noted that Iran is in high risk countries in the world geological seismic map).

Important projects are also underway, such as the area destined to host the new Fair and the City of Entertainment that will be built near the international airport of Tehran.

3.8 BUILDING MATERIALS AND INTERIOR FURNISHINGS

From the architectural point of view, the new buildings of the main cities are almost all inspired by the American model: high ceilings, facades clad in precious marble (abundantly available locally at a great price), intense use of different materials (in any case produced locally) such as iron, steel, aluminum, cement, ceramic wall tiles.

Only in the luxury sector of the sector did the company import products from abroad. Among these the most requested are currently represented by:

Anti-seismic, thermal, insulating and anti-noise products;

Elevators;

Mosaics, whirlpool baths, sauna cabins and Turkish baths;

Latest generation lighting systems and articles with adjustable intensity and electronic or sensor start-up;

Safety, alarm and fire equipment;

Automatic garage doors;

Plates, bars, nets and laminates of iron and steel;

Ceiling account;

Coatings for parquet and laminate floors;

Handles, taps and shower enclosures;

Cladding in glass and aluminum for facades;

Large doors, windows and counters for common reception areas;

Coatings, equipment and special materials for sports and relaxation environments.

In the field of furniture, Italian design is the most appreciated in kitchen, bathroom and walk-in closets.

The importation of these products is today however strongly discouraged by strong taxes. Everything suggests that the importation of this type of components will resume once the international sanctions are over and / or relaxed.

Business opportunities with Italy

The country has excellent engineering and architecture companies that work in close contact with ministries, municipalities, foundations, urban development and tourism authorities, private construction companies.

The Italian engineering and architecture companies can set up with these counterparts interesting collaborations in the field of design, construction of large civil works, restoration and interior design.

Good opportunities also for Italian companies able to offer special building materials with high technological or design content.

4.1 GEOGRAPHICAL AND NATURALISTIC FEATURES

The city of Tehran is located between the geographic coordinates 51 °, 15 'to 51 °, 33' longitude east and 35 °, 32 'to 35 °, 49' latitudes, with an area of about 950 square kilometers. The defects of Shiyan, Kosar and Nanjar also exist.

From a geomorphological point of view, the city of Tehran includes the following divisions: northern altitude, northern foothills, Tehran plain. District 4 of Tehran is located at the foot of the hills.

Description of the district 4

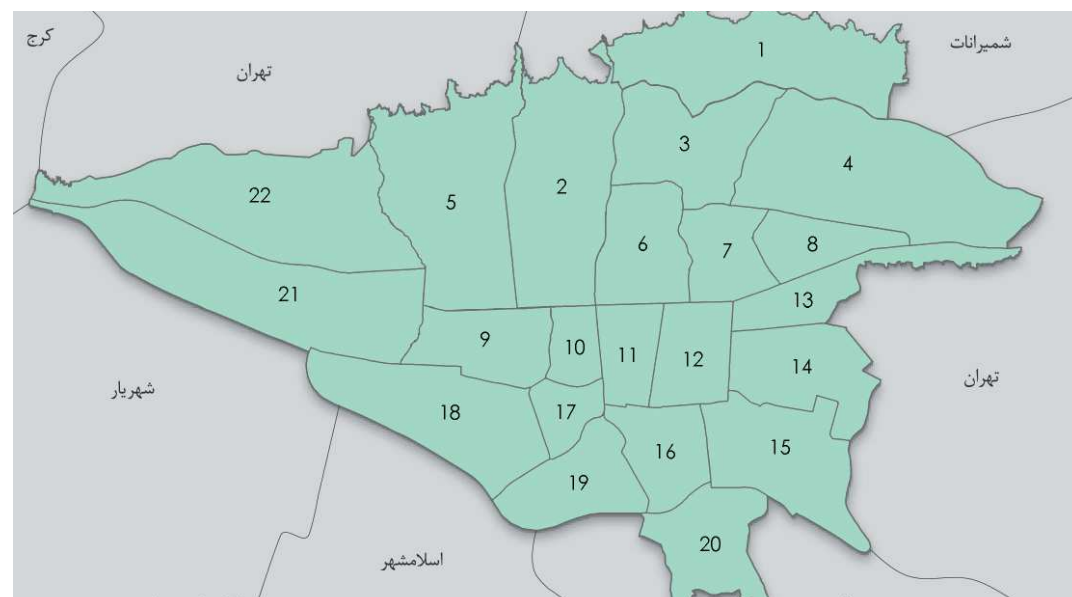
District 4 is one of the 22 districts in which the city of Tehran is divided and is located in the north-eastern part of the capital. The area of the district is bounded on the north by district 1, on the west by district 3, while on the south by districts 7, 8 and 13.

Extension



With an area of 61,288,367 square meters, it is one of the largest districts of the entire city, occupying almost 3.4% of the total area of Tehran; within the district there are 9 zones and the project site is located in zone 3, where it is divided

into 3 districts: Pasdaran, Mobarakabad and Shian.





Story

District 4 in the historical period of the late Qajar and Pahlavi, contained gardens and fields of agriculture and from 1956 onwards the region, preserving its fabric Giardinello became the oasis place for the construction of the summer villas of the bourgeoisie of the city of the city. Villages like Sohanak, Booston, ARAJ, Golestan, Mobarakabad and the area around the garden of Heravi, had such structure and consistency.

The primary residential centers in this area were formed in the northern districts of Narmak and Tehranpars in 1956-66, developed gradually, and modern constructions began to appear until the 1970s in the same neighborhoods, together with the industrial zone. Since the 1970s, the eastern portal of the district has given rise to the location of immigrants from other towns and villages in the country and this has gradually created the marginal tissues of the popular neighborhood Khaksefid, Shemirano and Kazem Abad.

General scheme

District 4 with an area of 61,288,367 square meters is located in the north-eastern part of Tehran. There are currently 803,789 people in this area, where, these 41,376 are men and 39,028 are women (Iranian Statistics Center, 2006). 23,326 families live in this region. Currently, it is divided into 9 zones and 20 neighborhoods. The western Tehranpars district is more densely populated and Kalah (Kuhak) is the less populous district of the 4th district.

4.2 CRITICAL ISSUES AND OPPORTUNITIES

- The presence of the most beautiful natural elements around the boundaries of the district, including the Lar valleys, the Lafian dam, Lavasanat and Lashgarak and the lush valleys of Fasham, Oshan, Meygon and the recreational areas of Darband Sar, the ski slopes of Shamshak, Abalei and Dizin.
- It has the largest margin among all the districts.
- This area is located on the north-east and east side and presents wonderful landscapes, good air and a lot of water that can be used in urban planning, for the deployment of Tehran's metamorphic, national and transnational (including diplomatic) uses.
- It has one of the most important points of entertainment and leisure, among which we mention the recreational and tourist centers of Telo, Lavasanat and Lashgarak.
- One of the vast forest parks in the region, such as the Lavizan forest park, is located in the area, occupying 13.2% of the district's share and serving as one of the most important natural lungs in the region and the city of Tehran.
- Carrying out of technical and professional activities in the region.
- Strategic role in providing water and electricity to the city.
- The existence of a 400 kw water supply and water treatment plant, which is the entry point for the entire Neka electrical system. One of the strengths of the region is the achievement of a clear indicator for the region and can play the role of relief agent in case of crisis.
- Large areas dedicated to university education. Like the University of Science and Technology, Water and Power University, which can be considered an important national research and education institution.
- High level of education of the population compared to other districts.
- Urban axes with excellent facilities that play an important role in the structuring of the city.
- High number of large-sized plots where there is the possibility of building new buildings with quite considerable cuts in the apartments.

Critical issues

- High percentage of new buildings with the direct consequences that entails.
- Sensibile riduzione della qualità delle aree residenziali per l'insediamento eccessivo di attività commerciali.
- New buildings in a typically western architectural style that have damaged the characteristic historical aspect of the architecture of the area.
- The flow of citizens is high due to the number of shopping centers built in the area and the increase in traffic.
- The Sayyad motorway divides the district into two parts, thus becoming an infrastructure barrier that prevents direct and easy communication between the east and the west of the district.

4.3 MARKET SURVEY

The values of housing in different neighborhoods

ZONE	CONDITION OF CONSTRUCTION	COST to mq
Pasdaran	New	2500
Mobarakabad	New	2300
Shian	New	2050

The values were calculated on the date of the research, based on the criteria of the change of the Iranian currency and the euro.

After having analyzed this district from various points of view and placing all the information obtained next to it, we arrive at the conclusion that this part of the city has excellent social - economic possibilities and is still subject to accepting new buildings both for public and even private structures. In addition, always looking at the rents and sales announcements we note that there is a high number of houses for restoration work. There is a large number of houses of very little construction in which they can be demolished and give rise to new last-generation condominiums in the construction sector. It is the place where every young architect's dream is crowned, having the opportunity to work in the field and experiment with everything that has been learned in the academic world.

The city itself being between the foot of the mountain and the desert, continues to expand towards the east and west, always in such a way as to create popular neighborhoods in the suburbs where they welcome most of the number of immigrants arriving from other regions to the capital. But unfortunately these peripheral cities do not have the standard qualities of housing and services for the city itself, and following the wrong policies do not even have the appropriate connections with the capital where it offers the possibility of work for this social class.

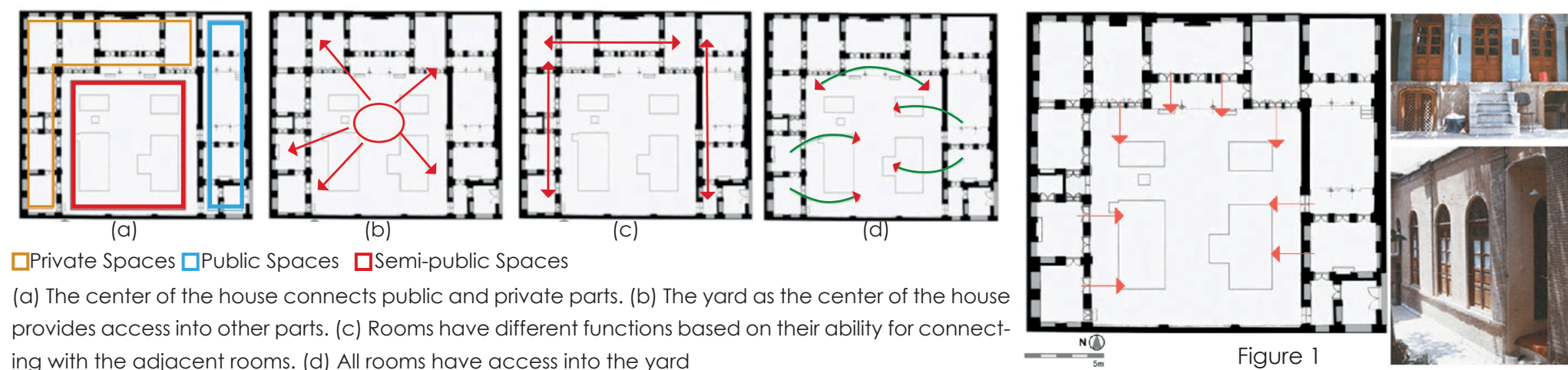
The quality of life gradually increases, going from the south to the north and the citizens have acquired numerous socio-cultural varieties, being most immigrants from various backgrounds.

4.4 LIVING IN TEHRAN - DIFFERENT TYPE OF RESIDENCE

4.4.1 Traditional house architecture - Late Qajar period

-Reza-khan house in Tehran

The arrangement of spaces in this house based on the importance of privacy and hospitality. Traditional house architecture in Iran mainly has an internal pattern, in which a yard is surrounded by rooms and the rooms only have access to the open space through the yard. In this pattern, there is no opening space from the street except for an entrance door and some small windows to provide privacy of the families in house and neighbourhood scale (Figure 1). Privacy and hospitality, derived from Islamic theory, are the most important feature of Iranian traditional values in house architecture.



Private Spaces Public Spaces Semi-public Spaces

(a) The center of the house connects public and private parts. (b) The yard as the center of the house provides access into other parts. (c) Rooms have different functions based on their ability for connecting with the adjacent rooms. (d) All rooms have access into the yard

Providing privacy in Reza Khan house is created through a physical hierarchy which starts from a public space, directed to semi-public, and subsequently is led to a private part. The traditional house in general was divided into two parts: 'Andaruni' (meaning inside) representing the family quarters, which would be predominantly the females' place, and 'Biruni' (meaning outside) which was a special part for guests. Biruni was located near the entrance part, whereas Andaruni, was located in the private zone of the house (Figure 2).



Entrance



Private zone and Courtyard



Private zone

4.4.2 Housing development based on the evolutions during modern movement - Second Pahlavi period

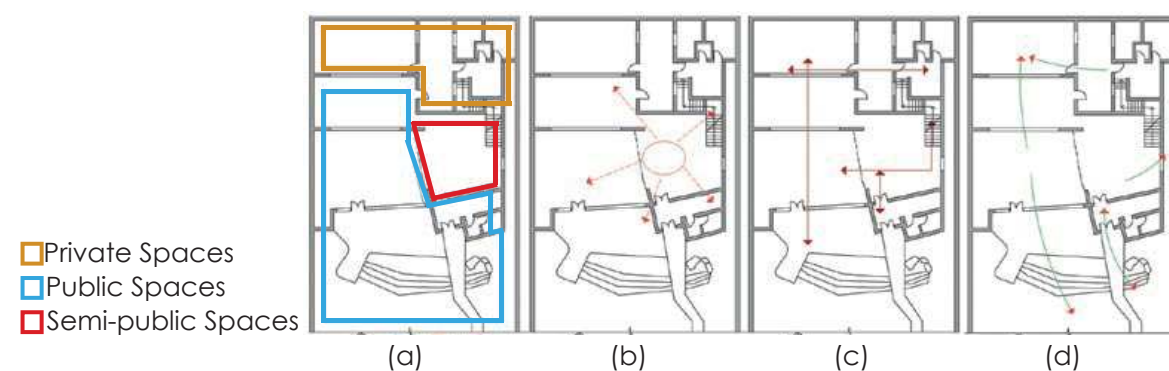
Based on the undeniable evolutions like cultural, socio-political, and economic factors in the country, the need of housing specifically in Tehran became part of the government's challenge. In this respect, the framework for new housing was affected by several factors, which changed the pattern of a house from traditional into modern. For instance, the new urban development, which was requested to provide easy access for using cars in neighborhood scale, was one of the socio-political influential factors on housing architecture.

According to the existing housing and archival information from the Second Pahlavi period, this study categorizes housing architecture by type in three houses, which were developed based on the evolutions in Tehran as detached housing, row housing, and apartment.

1-Detached (single) house

-Tumasian House

The detached houses were constructed to replace traditional houses in Tehran. This type of house is observed as a combination of the western style of modern movement houses and traditional house architecture for one or two families. The detached houses were located in the terraced plots and are usually found on one side of a yard. The houses have the main entrance opening to the main hall with the staircase which located in the living room or corridor leading the residents to the upper and lower levels (Figure 3). The orientation of the building is mostly north-south based on the new urban grid and new division of housing land. The architecture of detached houses in general provides privacy for residents by making direct access mainly to the yard same as a traditional house. High walls around the yard also give a private place for residents. The interior floor plan has a central hall or staircase hall, through which the privacy was achieved by separating the house in different zones and levels. In such a configuration, the request of an extended family for having a private place is answered.



- (a) mainly private spaces are located in the second floor
- (b) The central hall locates in the middle of the plan
- (c) Flexibility of connecting different parts of house
- (d) All rooms have opening into the yard and backyard

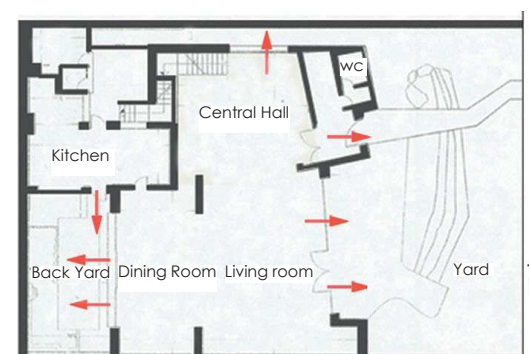


Figure 3. Tumasian House has the internal pattern and walls surrounded the Yard. Residents cover windows with curtains to close the neighbors' view to the house.

2-Row houses (residential complex)

-400 Units residential complex - 2nd Pahlavi,

The need of constructing low price houses for low-income class influenced the architecture of the row houses. The initial program of Row Houses was a complex building suggested for low-class people in the old core of the city, which was supported by government. In 1944, three members of the Society of Iranian Architects, Ali Sadegh, Manouchehr Khorsand, and Abbas Ajdari, designed the first large scale housing project in Tehran, known as Chaharsad Dastgah (400-Unit Housing) (Figure 4). This kind of house was usually built in two stories with an average base area around 180 m². The architecture tried to make a compromise between the old and the new type of design (Figure 5).

The main entrance to the house was possible from a small forecourt like the entrance area in a traditional courtyard house. Inside a house, staircases replaced corridor, enabling a connection to different levels of the house. Each floor had an average of three or four rooms, and every two rooms had access to each other and were separated by a partition door.

The kitchen, bath, and storage room are located on the ground floor, and there is an extra bath in the yard. The first level was a public level with the living room and the second level was a private one. Row houses with the second level had a small balcony facing the yard. Because the orientation of the house was based on the street's urban grid, the façade of the houses had two views, one faced the yard and the other directly faced the street.



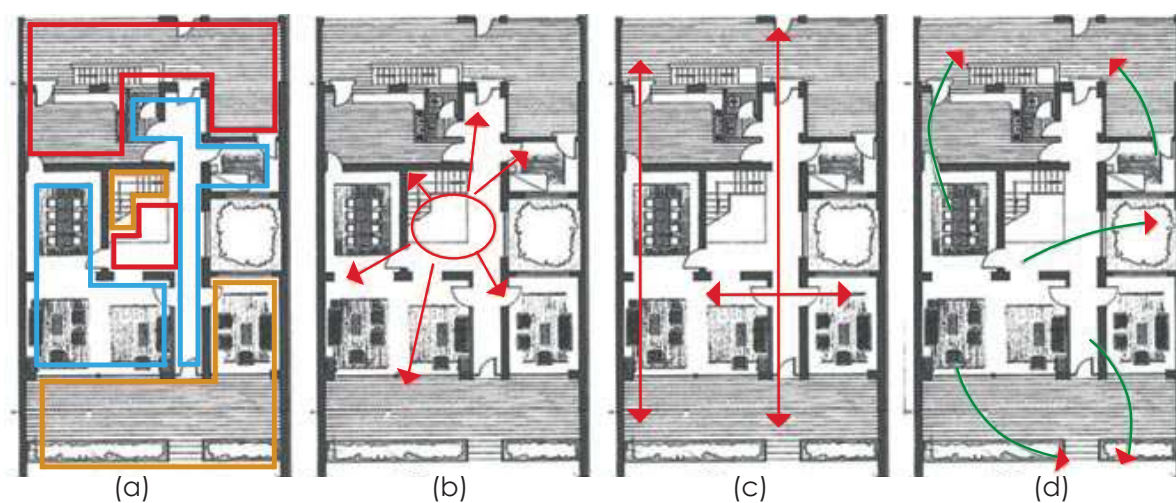
Figure 4. The Site view of 400 Units residential complex



Figure 5

(a) one unit of a Row house (Narmak project)

(b) Proposed site plan has changed by residents for having a private yard.



- Private Spaces
- Public Spaces
- Semi-public Spaces

(a) Public area links the interior parts.

(b) A central hall divides the house into private and public areas.

(c) Flexibility of connecting different parts of house.

(d) All rooms have opening into the private open space



3-Apartment (high-rise buildings)

-Ekbatan Residential Complex

Under the USA's free-market foreign policy in the 1960s and 1970s, the Tehran Redevelopment Company (TRC) in collaboration with a New York firm, Starrett Housing Corporation, undertook one of the most extensive and innovative Middle Eastern public housing projects. As part of Tehran's masterplan designed by the Austrian-American urban planner Victor Gruen – aided by Iranian architect Abdolaziz Farmanfarmaian – the scheme accommodated 15,500 low- and middle-income families, especially those of civil servants (Shahrak-e Ekbatan)(Figure 6). The government tried to encourage the upper class people by offering financial loans and different facilities for buying and renting apartments.

Mostly, the first and the second floors of this type of apartments had commercial and office functions, respectively, with the houses located on the upper floors. The residential entrance was separated from the commercial levels to provide the privacy of residents. The roof gardens and public green areas of apartments were a substitute for courtyards. These apartments were equipped with big terraces.

In East Ekbatan, Gruzen and Partners designed 14 huge Y-plan slabs along a central boulevard, along with another 4 super-slabs alongside the northern ring-road to achieve the required dwelling density. Each of these mega-slabs had a series of gardens and pools embedded within it, and sat upon a double row of V-shaped concrete columns to provide a continuous ground-level landscape (Figure 7).



Figure 6, Ekbatan residential complex

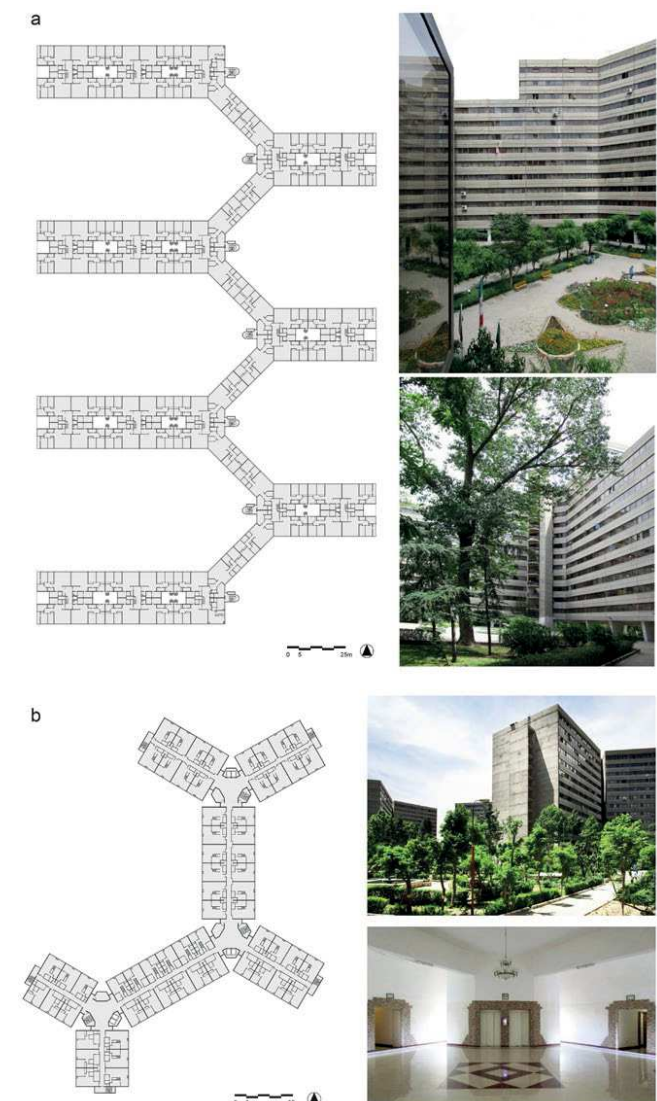
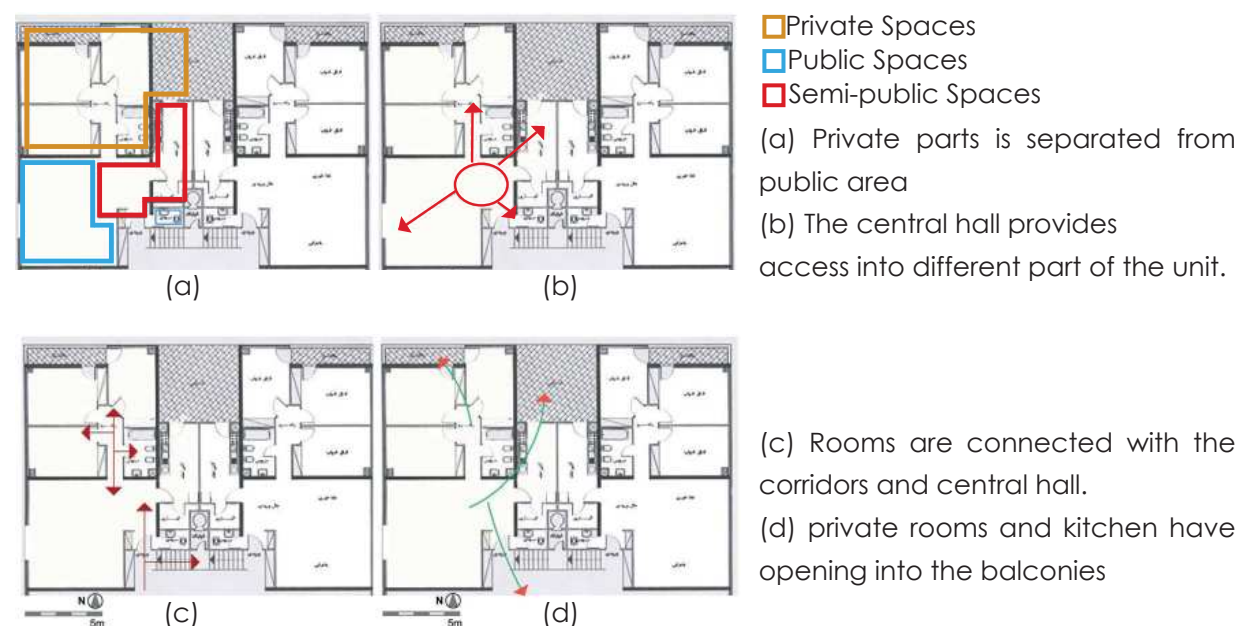
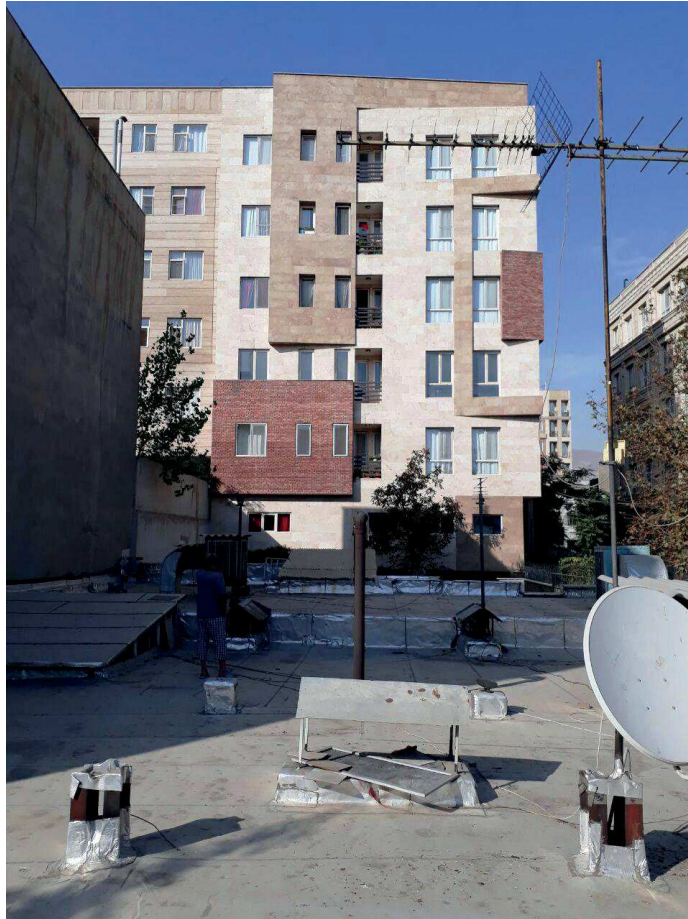


Figure 7

(a) Typical residential mega-slab in East Ekbatan.
(b) Typical residential mega-slab in West Ekbatan.

5.1 THE STATE OF FACT



Picture above, north view

Picture below, north east view



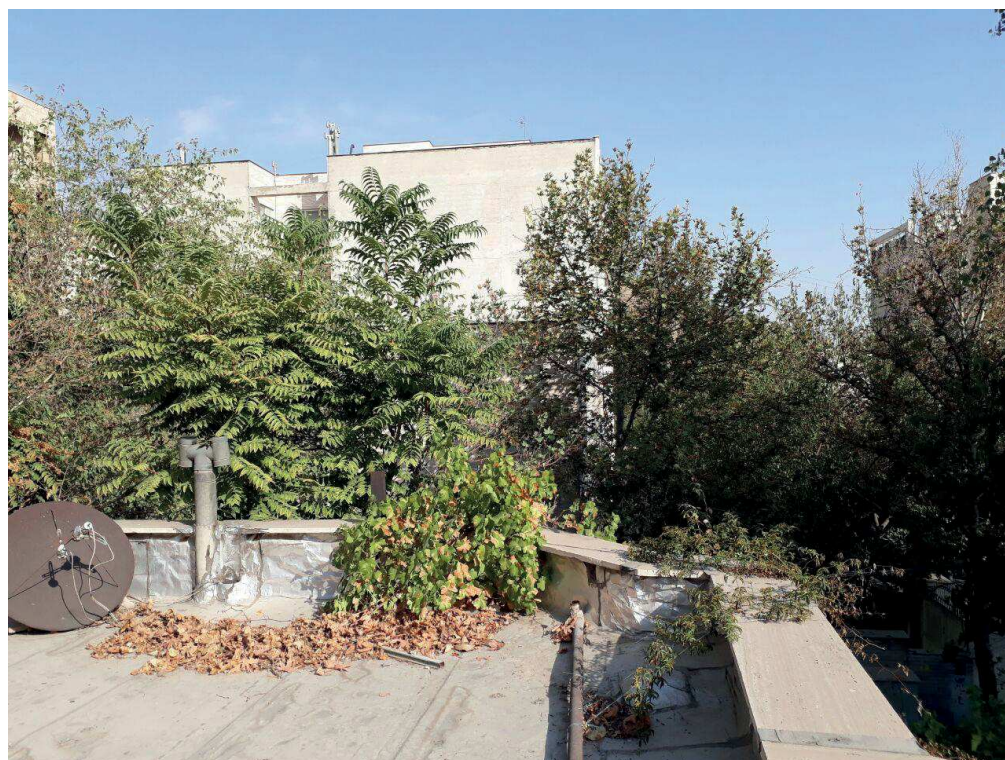
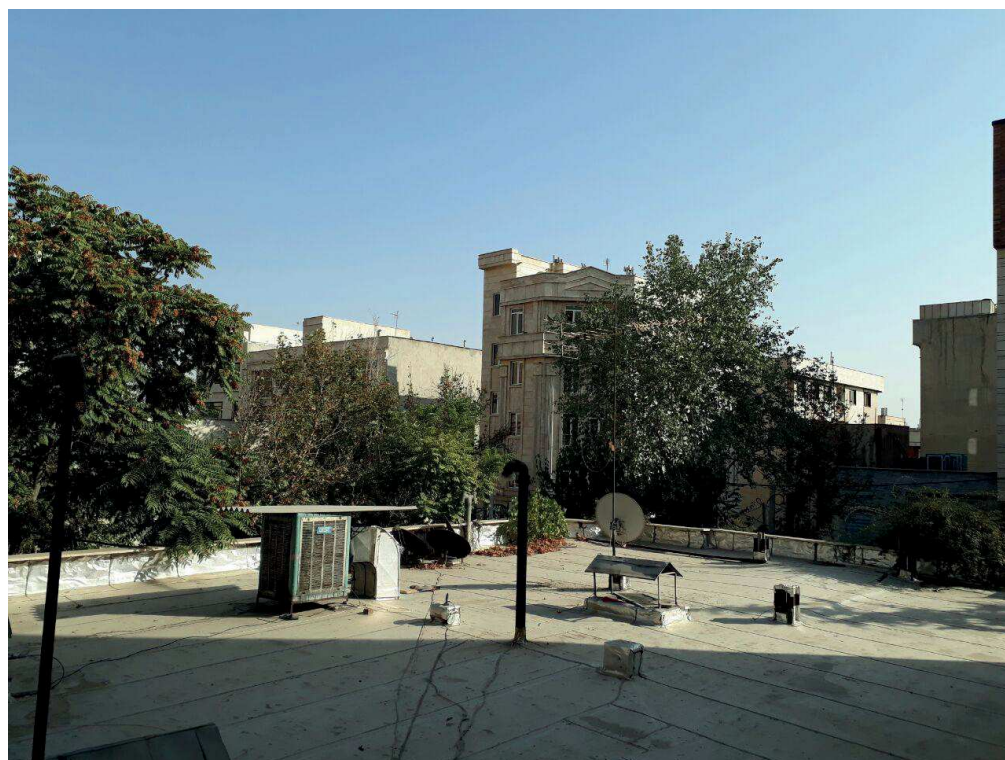


Image above, east view

Picture below, south-east view

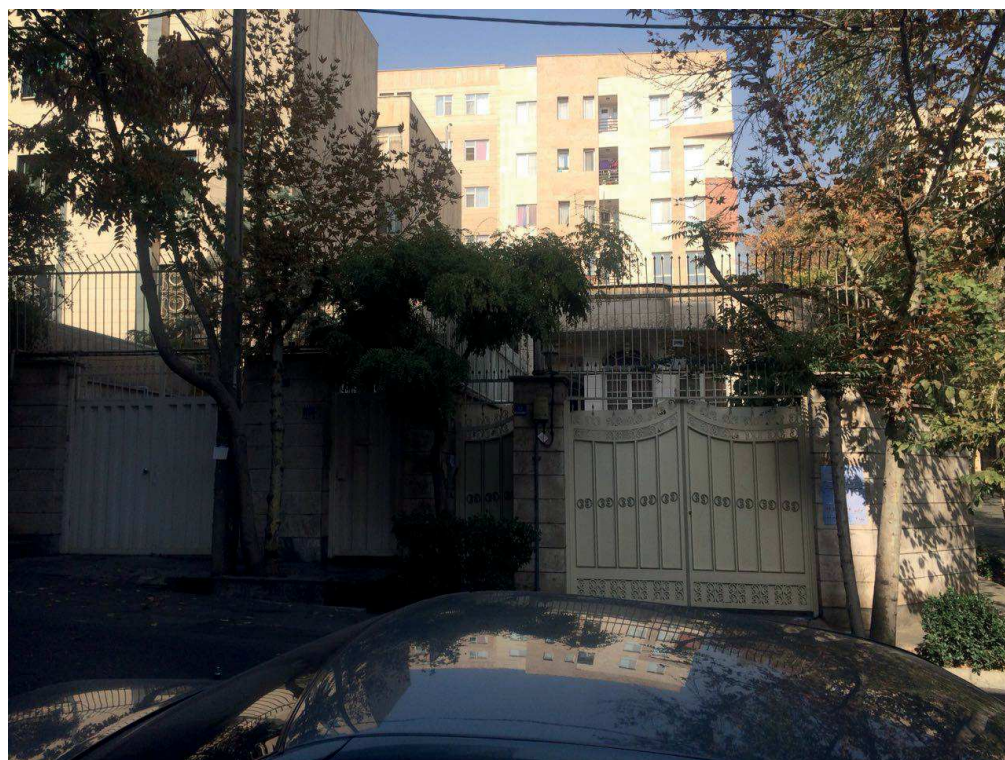




Picture above, south view

Picture below, west view

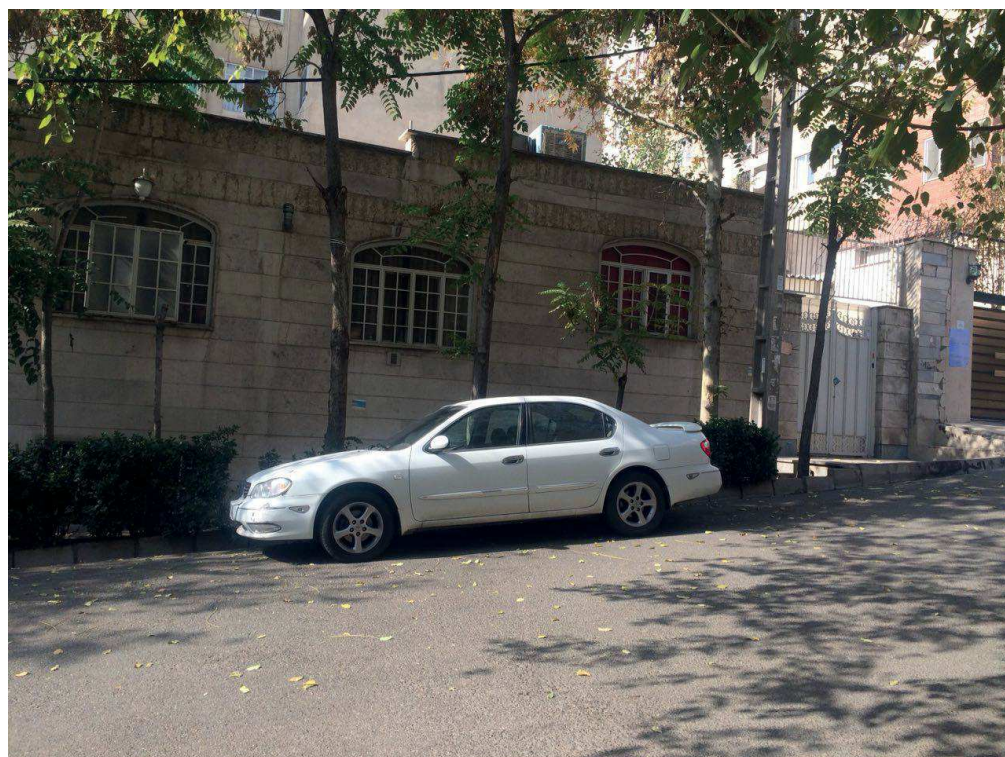




Picture above, north view

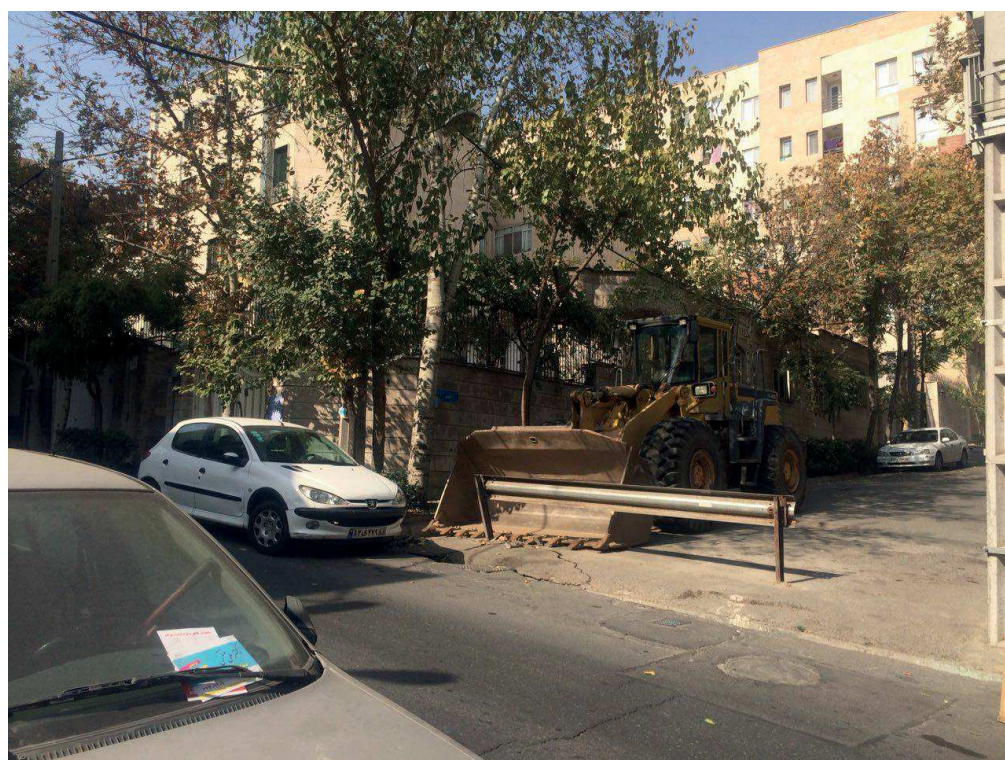
Picture below, south-west view

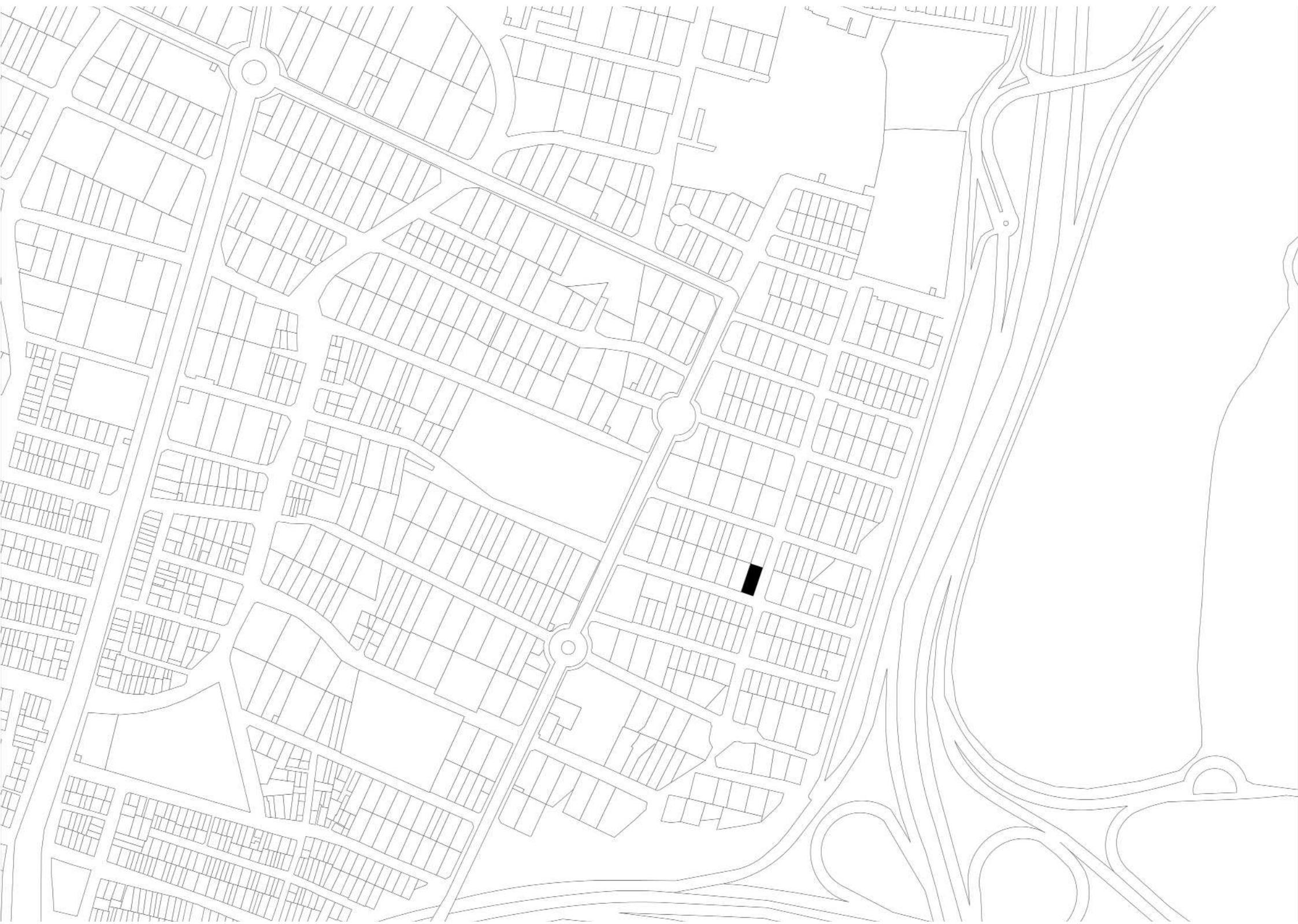




Picture above, west view

Picture below, northwest view





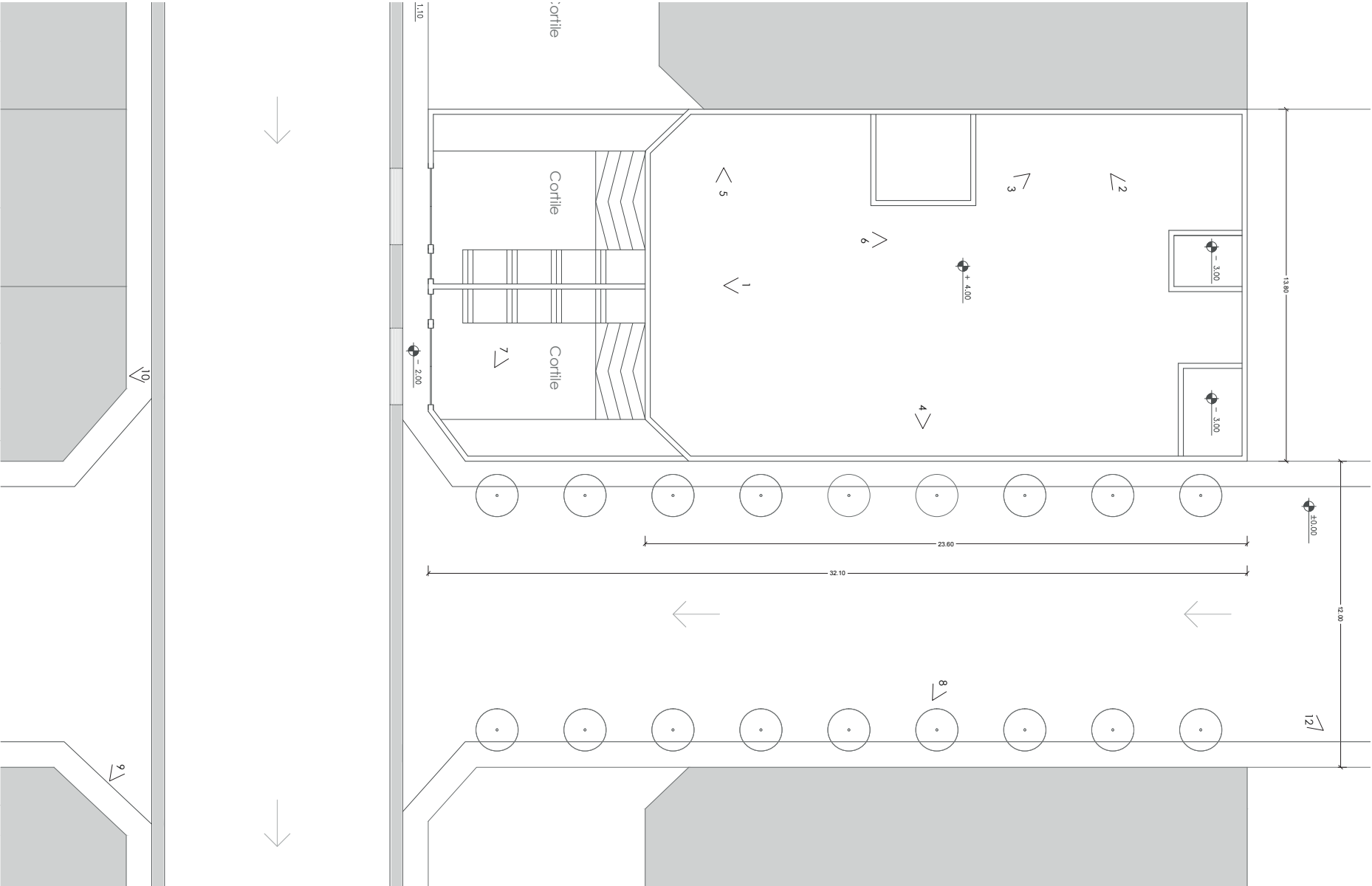
DESCRIPTION OF THE SITE

The site is located in a residential neighborhood of a medium-high social class where the majority of the houses are new buildings, replaced by the old villas of the late 70s and early 80s.

The site is located near the intersection of two major highways that connect the north to the south and the western part to the eastern part of the city.

The cost of selling these houses to the real estate market is 2,000 euros per square meter, but the quality of housing is scarce.

Near the site there is a naturalistic park in which it has greatly influenced the flow of citizens and the quality of living in this part of the city.



SITE ANALYSIS

Neighborhood analysis

Margins

The lot is located in the Shamsabad residential district.

The streets surrounding the area are:

- Via Ostad Hassan
- Via Reyhani
- Via Omid
- Via Soleimani

Accesses

access to the analysis area is somewhat restricted and can be done via two routes, all of which are driveways:

- Via Qaderi, which represents the main direct access to the current residence
- Via Soheil, a secondary access road from Via Omid

Urban flows

The area is invested daily by external traffic that crosses it.

The roads that ideally define the perimeter are main urban roads.

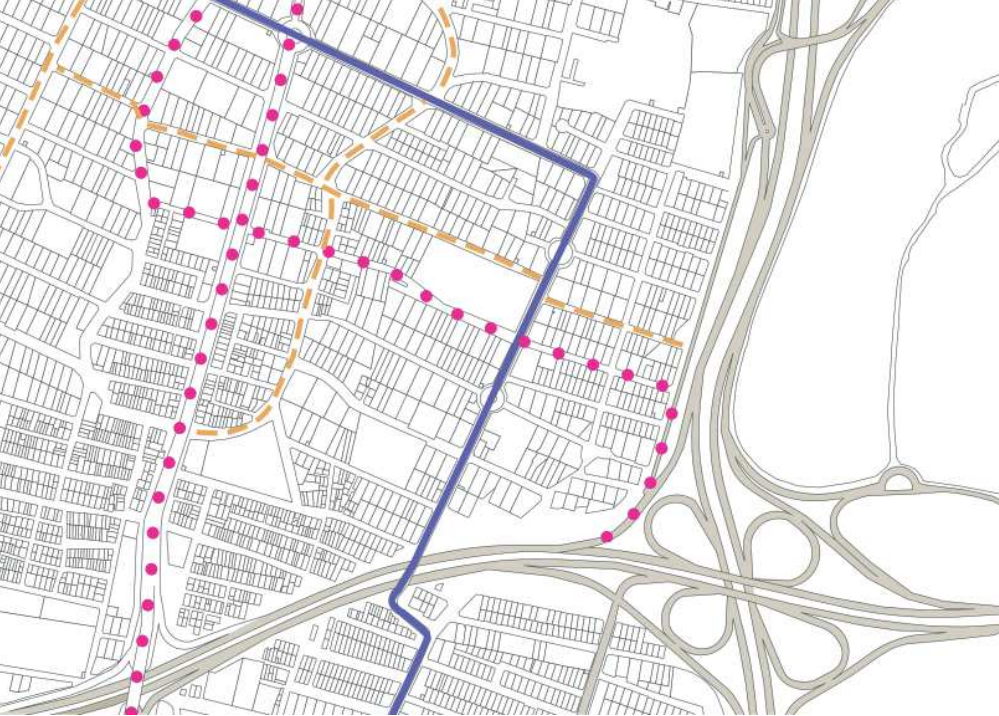
The acoustic and air pollution impact on neighboring residences is very high.

Interruptions

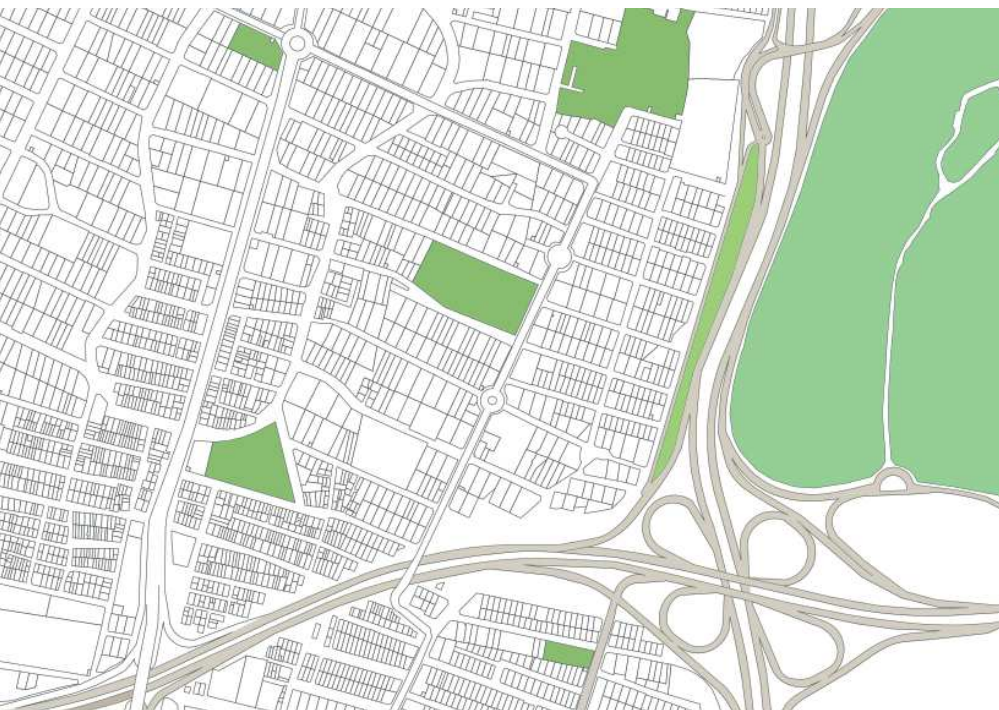
The analysis area is limited by two barriers in which they prevent the flow of vehicles passing through secondary roads.

- Via Soheil Nord, which represents the driveway secondary access.
- Via Soheil Sud, which allows access from the Imam Ali car and Hemmat auto road.





- urban neighborhood street
- secondary urban road
- main urban road
- highway



- green-public areas
- equipped green
- natural Park



- shopping center
- buildings with shops on the ground floor
- buildings school functions
- buildings religious-social functions
- sports buildings
- project site

MOBILITY LANDSCAPE

There are two main urban roads with a high flow transition that are located in oves and east of the lot.

two other streets are one-way that connect to the main roads.

Proximity to the intersection of two main roads of the city, from a high importance for reaching to any part of the city in less time.

OPEN SPACE LANDSCAPE

The Orkideh and Sadaf park are the main green spaces in the vicinity of the project area. both are located on the same main urban road, with high traffic.

The existence of the natural park in the vicinity caused the arrival of a large flow of citizens over the weekends.

BUILDING LANDSCAPE

The buildings located near the area are mainly residential, but most of the buildings facing the main streets have various types of shops on the ground floor.

The existence of 4 shopping centers along the main road axis seems excessive and caused traffic in the area.

5.2 REFERENCES

After doing a general research on Iranian architects and their works, always in the area covered by my project, I saw projects similar to my case, that is in the residential-apartment category, in which they received international and national attention. Three of these projects are close to my site and one is a little bit far. Their architects were rewarded by the national bodies and their project was published in various magazines and this was also a reason for their choice on my part. This for a simple reason that I would not have wanted to drag myself with personal emotions and make objective choices that are pleasing only to me.

Their approach to modern language and how they satisfied the soul of the local tradition were interesting. In addition, these projects are recently realized and this was another reason to have received my attention. Because they are young architects, where they are part of my generation, and this is different from their way of designing.

In general we only study the case studies or western references but for me it was very important to show, to those who have not the slightest idea, with what language the Iranian architect of my generation is planning, and on which track is moving to express and meet the needs of the home. I think this comparison is very important especially when the project is located in another completely different world, with a different culture from the place where we study.



ALIREZA TAGHABONI

We started with the idea of flexibility, the architect says, and we thought that the building has a dynamic facade.

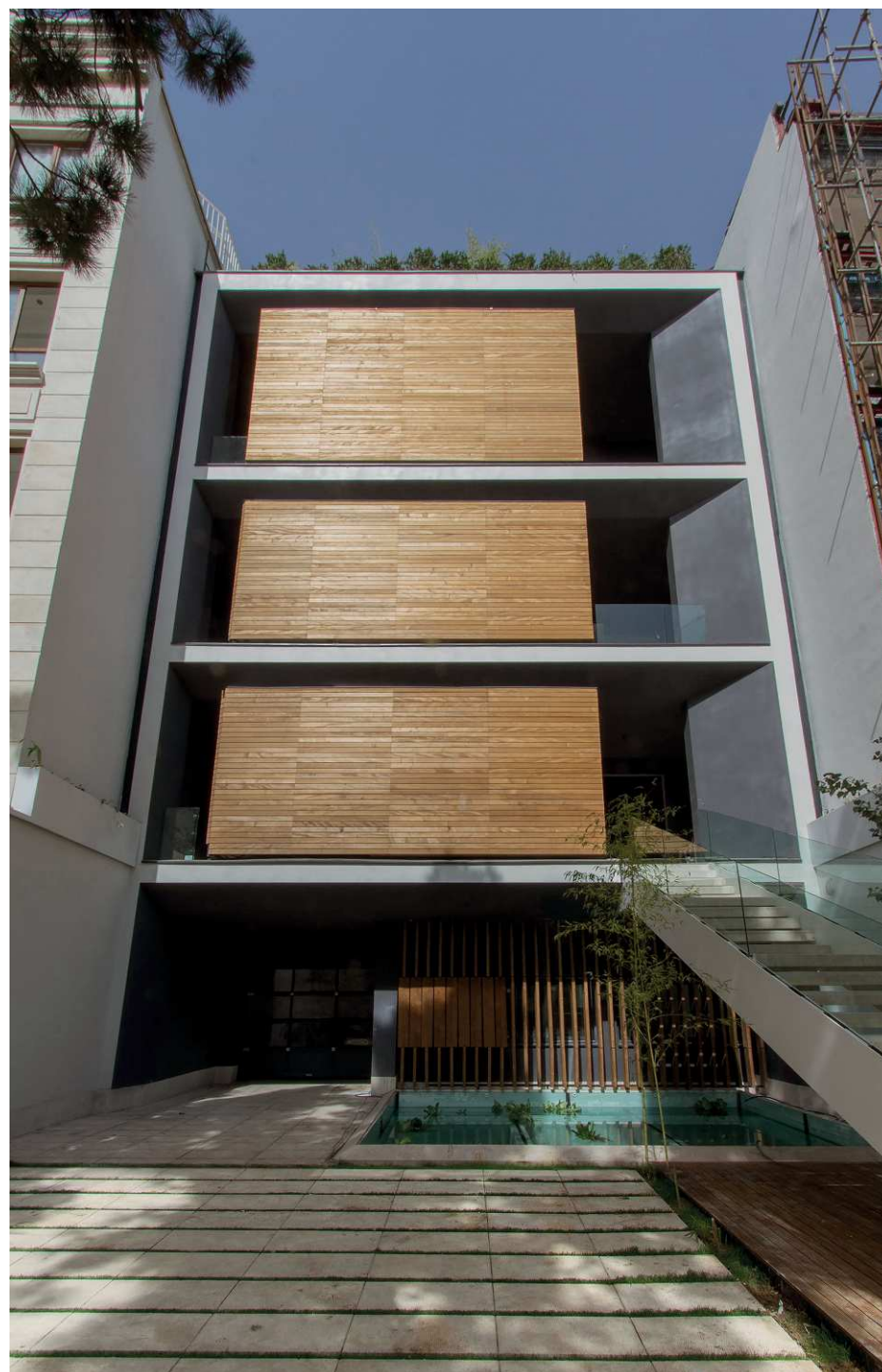
Following our previous projects, we have tried to find a solution, they change the way and the traditional idea of openings.

Taking into consideration the climatic conditions and the idea of introversion and extroversion, we have come to think of how it is possible to have a closed volume during the cold of winter, without large openings and balconies, as opposed to the summer with transparent volumes and large openings and terraces.

The revolving cube, with its dynamism in changing the shape and volume of the house and the internal spaces, satisfied both the climatic need for the design part and the client's desire to have an exclusive house distinct from the others. So being able to convince the Iranian client that he had in his heart the desire to live in a classic house with European style was a great undertaking.

We had to think about how to create different forms and different dynamic spaces, through this façade which is just over 10 meters.

This house is a single-family house with two underground floors for swimming pools and a fitness area, ground floor is parking and from the first floor to the fourth have been used as living rooms, kitchens and bedrooms. The top floor is the study and a playroom for children along with a small pool and roof garden. All the floors have been connected by a lift and the central skylight gives the possibility of a view of the lower floors.



AWARDS

- WAF 2014, Shortlisted
- Gran M'emar Award 2013 Residential
- Middle East Award (MEA) 2014 Residential

Name of project: Sharifi-ha House

Location: Tehran

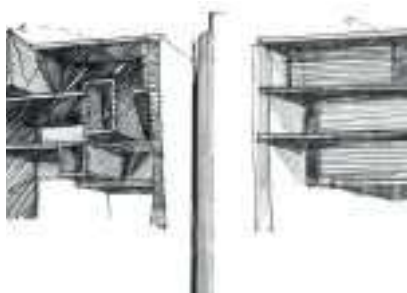
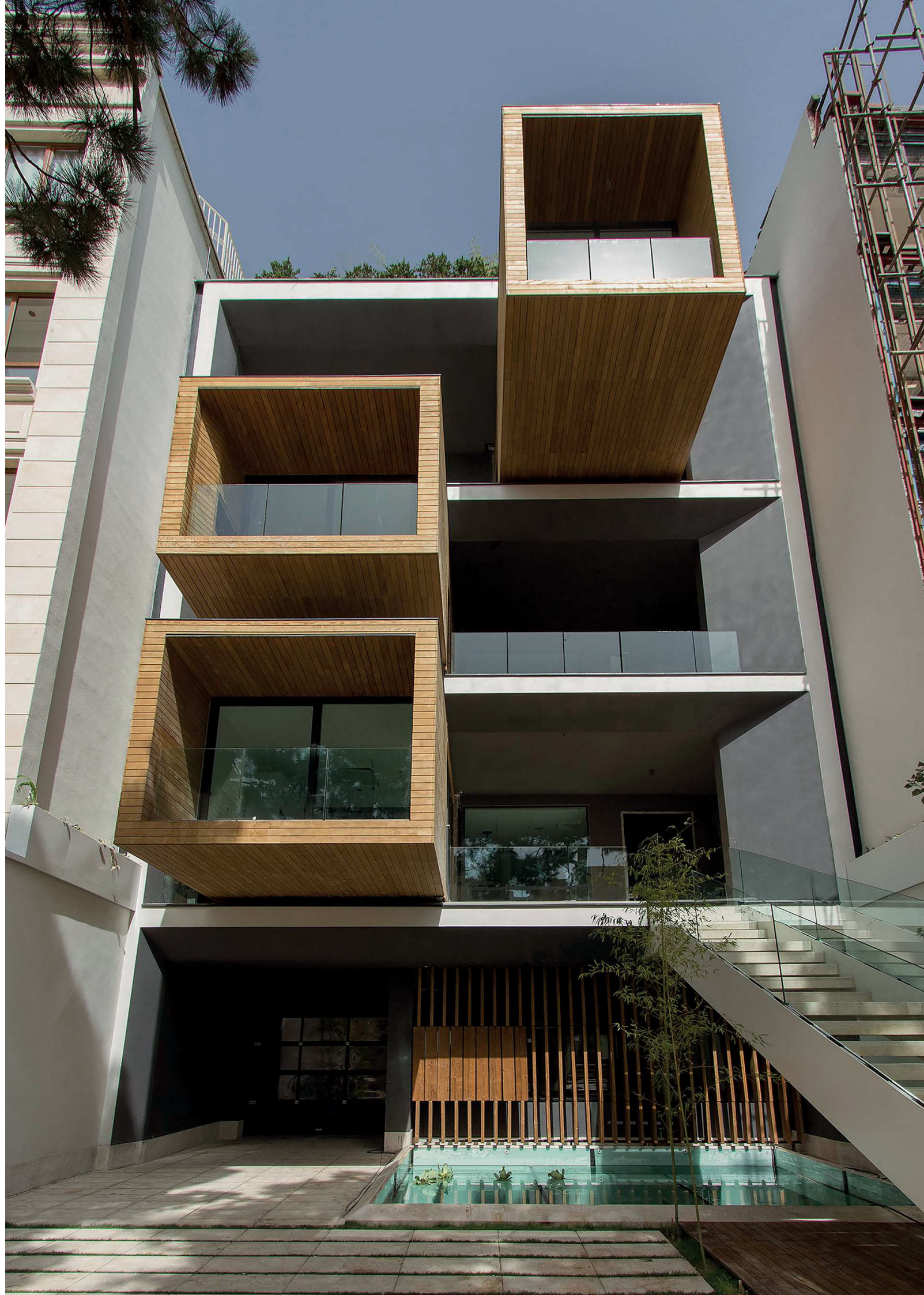
Type: Residential Building

Date of Construction: 2013

Site area: 1400 m2

Main Material:

Budget:



Even the housing philosophy behind the Sharifi-ha House is very remote and dates back to the ancient Iranian dwellings that had a winter living area (Zemestan-Neshin) and a summer one (Taabestan-Neshin).

The extraction of this philosophy of the climatic home, from the Iranian tradition and applying it to the rotation of the prospectus, and transforming a two-dimensional façade into a dynamic façade, works very well and is appreciable. But we must pay attention that in traditional Iranian houses, climate adaptation, took place by changing the position with respect to the sun. For example, in winter, taking the light from the south brought the greatest heat and vice versa, during the summer the living in the house moved to the north, receiving less sun, because the shadow created in that orientation was exploited. But in the Sharifi-ha house, he controls the reception of the quantity of light inside the house, instead of changing the orientation of the use of the sun, used in the tradition of the area. This creates problems in the distribution of natural light, because in the case of turning the rotating cubes, the light will not reach the building.

To compensate for this defect, a large skylight was installed in the center of the building to satisfy the light needed for the bedroom areas and other spaces and services that were placed at the bottom of the house.

As a result, the rotating volumes were intended for functions such as breakfast rooms and guest rooms, and the study and adjacent spaces became runners and an open kitchen, so as not to apply any dividing element (such as a wall) that prevented the arrival of light . Moreover the latter causes the problem of privacy of the most intimate spaces.

Revolving cubes with their intended use divide the house in two, the house is inhabited by the client, totally on the other side and this suggests that perhaps the choice of functions were not suitable.

This is also emphasized by the choice of very different materials, in which he created a kind of very strong distinction between the inside and the outside of the house. It seems that the rotating part is a kind of interconnection to the main building. Especially observing the contrast of the warmth of the materials with the lightness of white inside.

Increasingly, the complex urban plots mean that the new buildings are to be found among old structures. Space is missing and so is light. Even the Sharifi-ha House was originally characterized by a facade that was much narrower in width than its depth and length. Consequently, for architects, transforming a two-dimensional façade into a three-dimensional façade was an indispensable intervention.

The systems used to ensure that the wheel volumes are similar to those of theater sets and consist of three motorized disks placed between one room and another.

So the idea of rotation became famous, not because of its original motif (building's climate adaptation) but because of the simple ability to create a dynamic facade.

Regarding the execution of the cubes, although there are many examples already made in restaurants, theater halls etc. But there are several challenges for its realization: Structures, connections, air conditioning, volumetric conflicts, mechanical and electrical installations and, moreover , its architectural design.

The success for the execution of this rotation, in the context of Iranian construction, is a big step to improve the quality of local buildings. It is even more difficult to convince the Iranian client to spend on such executive details.

Introversion and extroversion

The idea of rotation in the prospectus hints at the challenge of introversion and extroversion.

An attractive challenge that also has consequences. Recently the idea of opening and closing the facade is very usual but here the architect had to overcome the challenge, thinking at the same time of the problem of natural light.

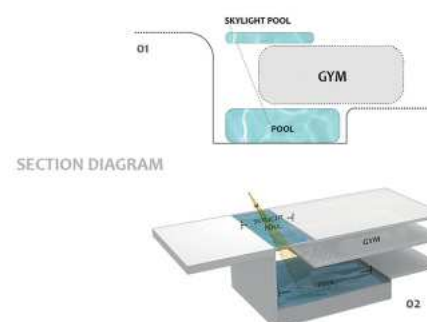
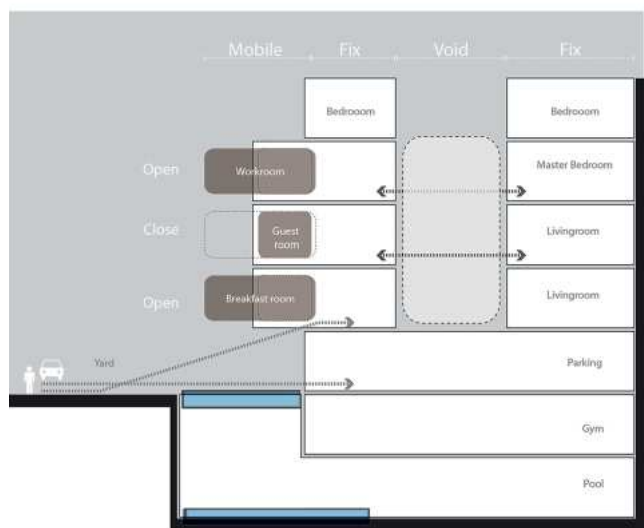
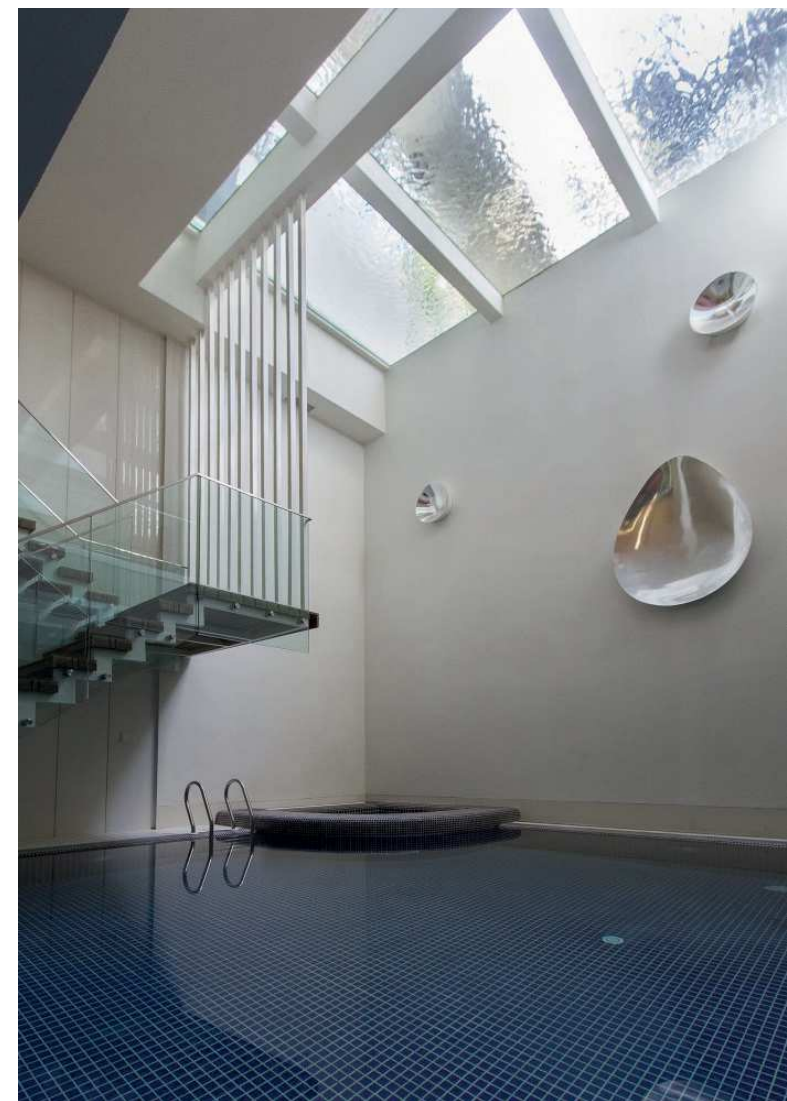
Therefore with the closing of the volumes, almost all the relationships of the building with the outside are interrupted, except the skylight. And vice versa with the opening of the cubes, the whole building opens up to the outside world, including the bedrooms and the services. An introversion and extroversion so drastic, are found in the few buildings.

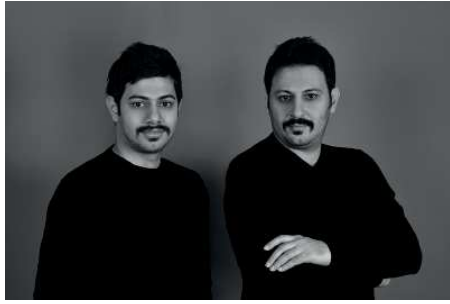
Here we must also review the role of the central skylight which in this case reads for the inner courtyard in traditional Iranian homes. The inner courtyard has the objective to give the wide openings and to create a strong connection with the curtain inside a building that for its culture and its traditions, has been closed inside of itself. Therefore a very strong relationship with the outside in the moment of its rigid introversion creates a beautiful paradox.

It must be specified that the central skylight due to its size and proportions will not be able to assume such a role and on the contrary has caused the division of the house into two parts again. Perhaps even the circulation and internal subdivisions are to emphasize these defects.

Instead the architect with a brilliant idea moves back 3 m from the building compared to the covered area given by the municipality, and in this way the two underground floors for the fitness area and the swimming pool manage to have natural light and in this way one buried space turns into a fun and lively space.

Instead the external courtyard which is a habitable element and very important for the Iranian house, in this project it has become only a place of passage.





NIMA E SINA KEIVANI

Keivani Architects focused on the spiritual dimension of architecture, in which the creation of significant and innovative spaces was considered a significant task. Based on their theoretical and practical experiences, the design team uses updated methods and technologies to update their ideas, in which social, environmental and economic sustainability is at the center. Their creativity and ideas are usually influenced by regional culture and environmental circumstances, which on a global scale make their practice innovative, unique and useful for human society.



AWARDS

- International Architecture A' Design Award winner 2016 in Italy
- Iran Architect Award Finalist



It is a project that has spritzed from the traditional Iranian houses and their particular windows called Orsi. So also to pay attention to the distribution of light inside the house through these windows, with the use of vegetation and the use of water which are two of the very important elements for the Iranian tradition, they tried to create a space with the soul of the Iranian tradition, but at the same time modernizing the elements to meet the needs of the modern world of living.

The main concept is to revive the traditional Orsi windows, which are windows that slide up and down as opposed to normal windows that move around the central pivot.

Name of project: Orsi Khaneh

Location: Tehran

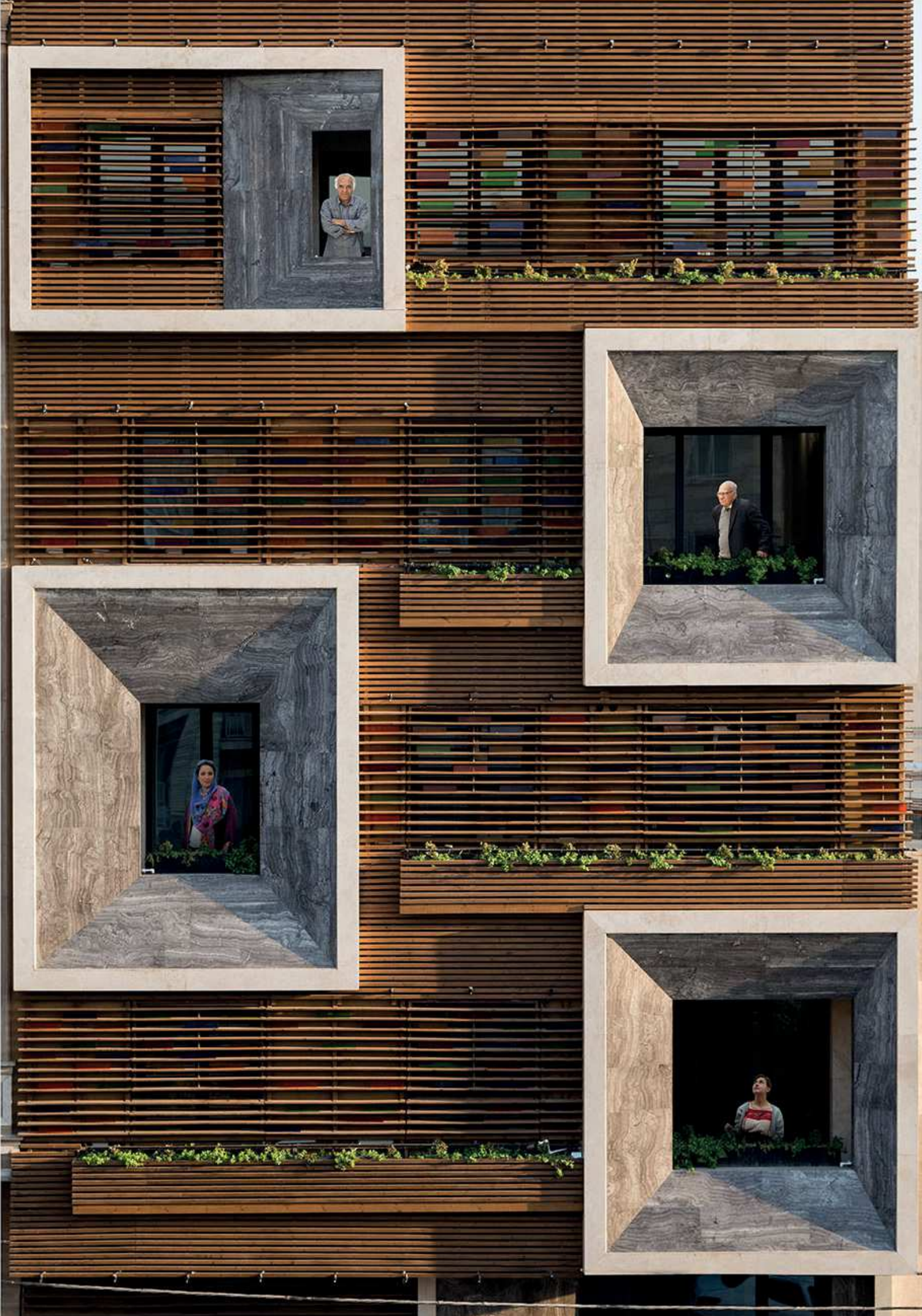
Type: Residential building

Date of Construction: 2015

Site area: 300 m2

Main Material: wood- ston- Stained
glasses

Budget: (Rials and USD) 700000 \$





Most of Orsi's designs are floral and geometric motifs of Islamic art and since metal entered the building industry, this art has been completely forgotten. There is no precise historical research to know the origin of Orsi but, what is witness of their imprint is found more in the travel diary of travelers. Samuel Benjamin is one of those foreigners who was in Iran as the first ambassador of the United States and was amazed by the color games of Orsi. He writes in his diary:

Iranians instead of building as many windows as they do in the West, they make everything a unique and large piece that starts from the floor and reaches the ceiling and dividing it into different frames and applying colored glass, creates an incredible space both inside and outside. Outside of the building. Regardless of the aesthetic nature of these windows, their benevolent influence on the soul was the reason for their persistence in Islamic architecture.

With the end of the Qajar period, Orsi was always present in Iranian homes but from 1921 with the arrival of the Pahlavi dynasty and lifestyle change, the appearance of the fabric of the city has also changed. And this change has spread slowly from the capital to the other cities.



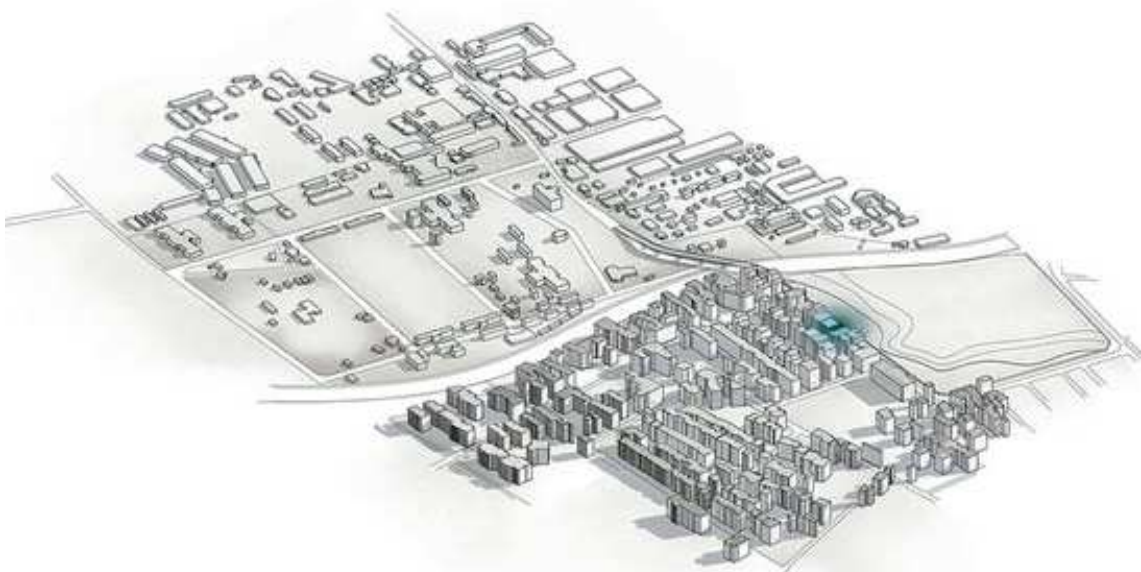
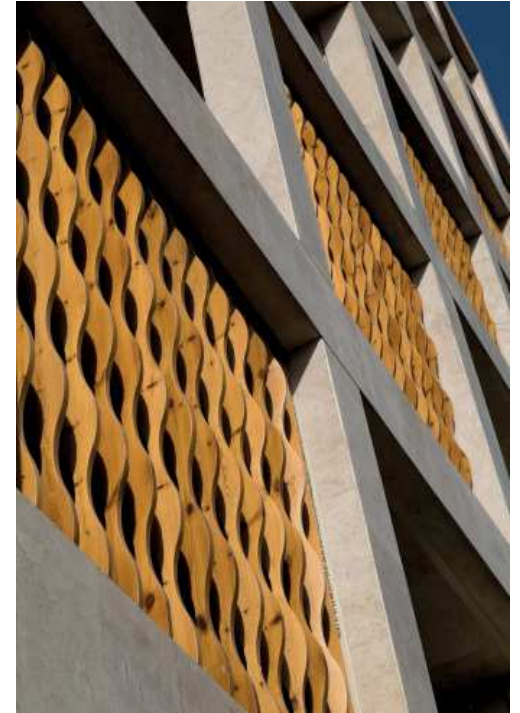
Le finestre Orsi



REZA SAYADIAN

The house for this architect is considered an inseparable concept from the ancient Iranian civilization and its culture; linked to nature, offering freshness and liveliness to its inhabitants. In other words, the house in its ancient concept is a combination of building and garden that would place humans inside it. A human space that envelops every single detail of nature such as the sweet sound of birds chirping, the melody of water drops on the surface, the touch of the trees, the golden color of the sun's rays on the brick structure and the reflection of the building surrounded by nature on the surface of a pool of water.

With the change in people's lifestyle, the development of cities and the growing demand for the construction of skyscrapers; this precious heritage of our ancestors' efforts to involve architecture with the surrounding nature has been erased, which has changed into a vague memory in less than a century. This project was the result of our efforts to revitalize this lost heritage and give a new interpretation to the old concept. Which we believe that one of the main reasons of the cultural crisis with which our society is engaged today is the result of this sudden shift in the living space.



AWARDS

- Gran M'emar Award 2015 Residential, winner of the 3rd place
- Architizer A+2016 special mention
- Chicago International Architecture Award 2016 for the best new architecture
- 2A Architecture Award 2016

Name: Saba House

Location: Tehran

Type: Residential

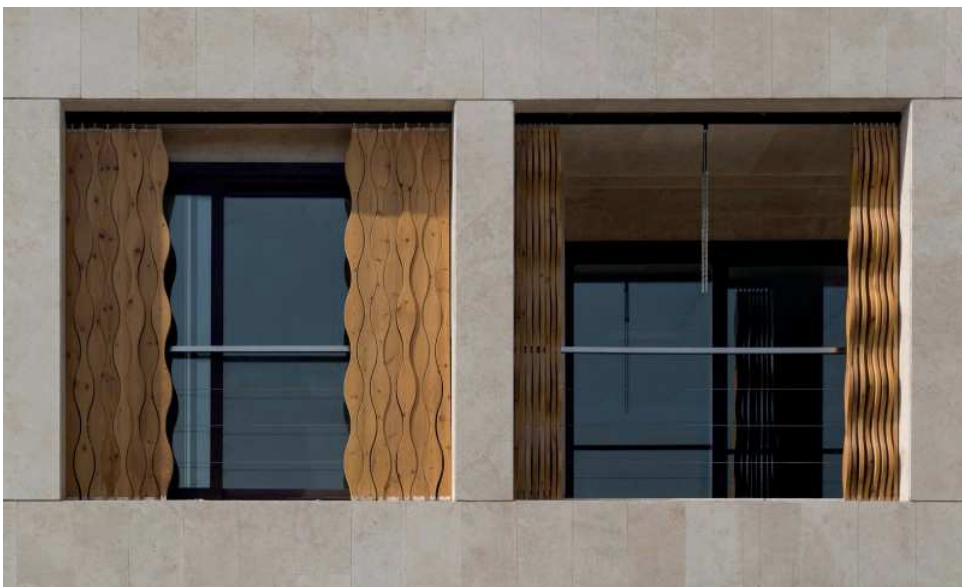
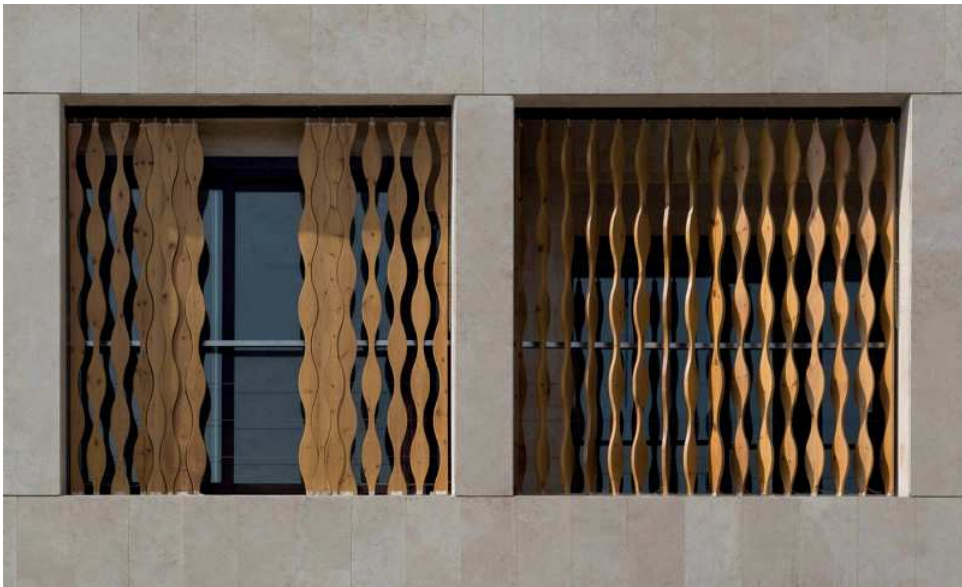
Date: 2015

Site area: 1000 m²

Main Material:

Budget:





The position of the lot

The project is located in a land 20 meters wide and 50 meters long. The 30 meters in length of the northern part of the site plan were those granted by the municipality for construction. So the covered area of the apartment divides the connection between the road to the north and the garden to the south. One of our problems was to find a solution for reconnecting these fractures.

Then lifting the vegetation from the street level to the north facade and continuing on the roof and descending to the south facade and finally rejoining with the garden of the inner courtyard, we were able to resolve the issue. In other words, the landscape is continuous from a connection between the northern and southern facade and the roof in the middle. In this way it was possible to create the connection lost by the fragment of buildings with the landscape.

The facade is dynamic and flexible in which it varies its appearance based on the needs of the inhabitants.

This double facade, which seeks to relate to its context, consists of an inner shell, like a transparent double-glass curtain and the outer wooden movable shell with the ability to control natural lighting and together provide the inhabitants with light daytime and nighttime privacy.

The 2.40 m long saturated woods are sliding inside a track where they were built with the collaboration of a team in a low-cost year and can be controlled manually.

Opening and closing of this second layer totally depends on the needs of the inhabitants to the amount of light and to the view and privacy desired by them.

In the facade facing the garden, the flower boxes were installed one above the other, instead of the railing and rainwater collected by the rain along with the water collected from the use of the inhabitants, are purified and used to water with a smart system, these vertical boxes.

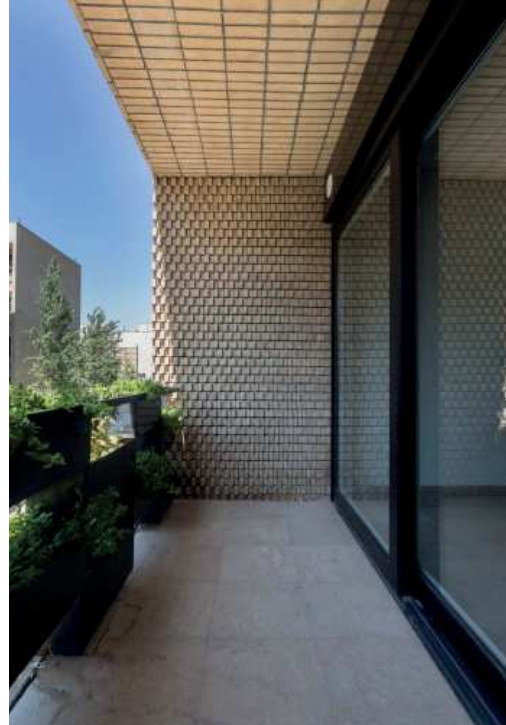
For the construction of this building only local and above all

sustainable materials were used and the rest of the materials recycled from the demolition of the existing building such as bricks, were obtained and re used in the floor and wall of the courtyard of the new building.

The double façade has guaranteed the prevention of heat dispersion and the second layer has a double vertex in which the external and internal space is delicately limited.

It was the solar panels that provided the energy needed to illuminate common areas. Energy is collected by the solar panels positioned on the roof, saved in a battery and used in case of need in this way there has been a pragmatic approach to nature and sustainability.

Condominio Saba has 24 apartments in two sizes of 120 and 140 square meters in 6 residential floors and two common floors. The project area is 1000 square meters and the built area is 4960 square meters.





MAZIAR JAFARIEH

Apartment No.55 is located in a residential neighborhood north of Tehran. The concept derives from the demolition and reconstruction of an old paternity house, with large traditional windows and a picturesque green garden that was a quiet place for the family and now had to be transformed into an apartment with the maximum surface allowed, wishing the building stands out in the neighborhood.

The site area is 300 square meters (11.1 m × 27 m). The maximum percentage allowed for construction from the municipality is 60% of the land that is built in the northern fragment.

There are eight floors (five residential units, hall, two-storey car park, warehouses, mechanical hall and swimming pool with glass walls). This project is the result of our efforts to revitalize this lost heritage, says the architect, and give a new interpretation to the old concept. In designing the interior spaces and the façade of the project, our strategy focused mainly on simplicity and 'avoid complex shapes.

The façade of the street is colorful and lively, with minimal language.

This lively façade seeks to communicate with the city and, and transmit its joy to the outside so that openings are framed by colored panels that overlook the pass, but are protruding to prevent excessive entry of natural light into the interior spaces. The saturated HPL panels cover the inner skin of the painted metal frames. The detail of the frame designed and created by the architectural team and installed on the façade of the building before covering the local white bricks.

Through the materials of the wall and the triple-glazed windows and positioning the cabinets also as acoustic and thermal insulation, we were able to protect the internal spaces from noise pollution and guarantee thermal comfort.

the contrast of the white brick structure with the urban rigid body seem so appropriate and the addition of three vivid colors (Iranian blue, saffron yellow and green) has also contributed to give the façade liveliness. On the north facade, modular planters shape the rotating shades of the balcony. These green layers prevent the view of the interior.

The design intent is to give maximum functionality and privacy. We positioned the project's private functional area to the south, while the public functional area was located to the north. Between these two areas, in the center of the building, we set the vertical connection.



Name: No.55 Apartment
Location: Tehran
Type: Residential Building
Date: 2016
Site area: 300 m2
Main Material:
Budget:



5.3 PROJECT PROPOSAL

For me too, the challenge and the study focused on the demolition and reconstruction of an old paternity house closely linked to the Iranian way of living and replacing it with a residential apartment that is connected to the principles of cultured architecture and to elements of traditional houses of Iranian architecture.

the main concept was to revive the bond of architecture with nature, when the vertical distribution of modern apartments takes away this possibility from the inhabitants of the houses, the path of living with nature. Especially for a tradition that is too connected with the principles of nature and the presence of water.

I tried to create the connection with the context through the use of local materials and the inevitable elements of the local architecture tradition.

At the same time I had to look for respect for tradition and for it to be reborn, not to bring the project to the unnecessary complexity of the idea of living in the modern world. On the contrary, all internal distributions and even facades follow the extreme simplicity of designing. Maximum functionality and guarantee the needs of the new lifestyle of the new way of living, were the main intents in the project.

The area of the site subject to the studies is 444.98mq (13.8 * 32.10) and the maximum surface area allowed for the new construction of the municipality is 60% of the land. the new construction should be built in the northern fragment. Maximum number of floors are 6 and in my case 4 of these were for sale and the last two floors were allocated to the owner.

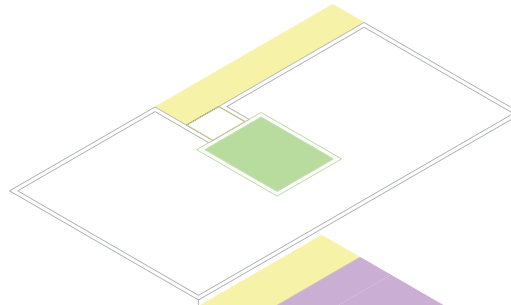
At the level of the general distribution, the vertical connecting body is moved to the west to solve the problem of natural light at that point, detaching itself from the building next to it. This detachment makes it possible to move away from the building next to each other because of the choice of materials and aesthetics.

Each sale plan is divided into two apartments, always paying the utmost attention to the functionality of the choices and the private plans include the total area allowed.

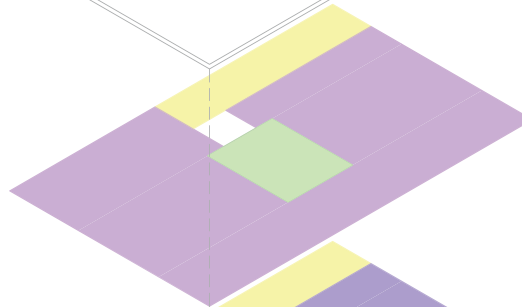
In total we have ten apartments and three underground floors in which they include parking lots, cellars and gym space and a private swimming pool.

The choice of the brick for the façade makes it possible to create a strong bond between the building and the local tradition. Through sky light pools and pools of water we have the opportunity to satisfy natural light by using innovative glasses and materials to create them, and re-connect with our lost heritage of living spaces connected with nature and above all water. the inner courtyard is one of the fundamental elements for Iranian introverted architecture that creates a strong connection with the sky and captures the wide openings towards itself. Within a building that for its culture and traditions has been crossed within itself, this creates a beautiful paradox. So bringing the courtyard to the top floor gives the landowner the opportunity to use the lost courtyard of the demolished old house again. In larger areas intended for terraces, the path of the habitable courtyard is reborn.

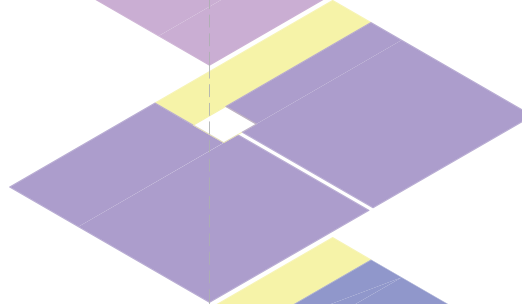
Pianta Copertura



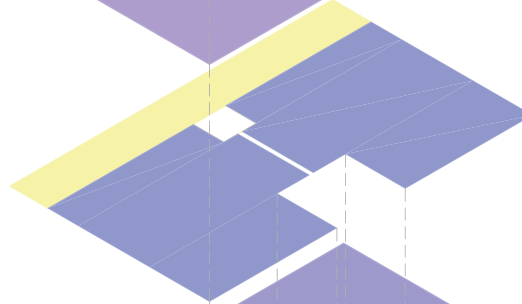
Piani Privati
App. H 215.90 mq
G 215.90 mq



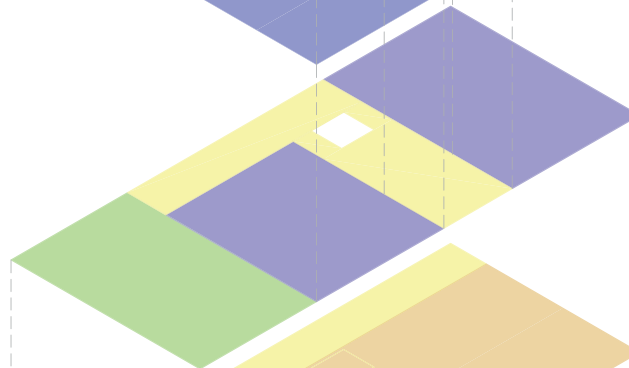
Piano Tipo
App. E 139.31 mq
F 111.35 mq



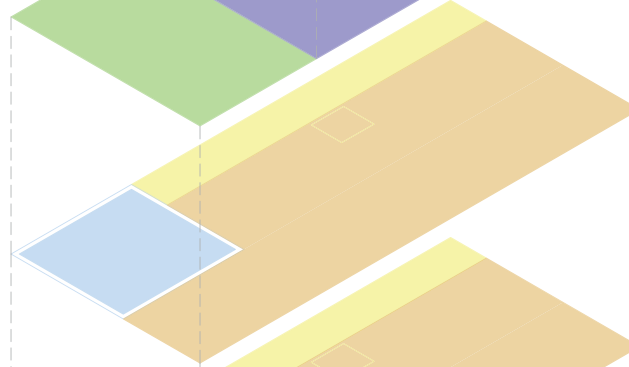
Primo Piano
App. C 104.59 mq
D 104.59 mq



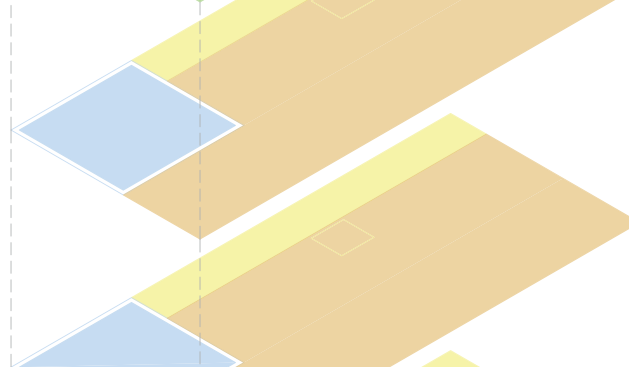
Piano Terra
App. A 87.91 mq
B 104.62 mq



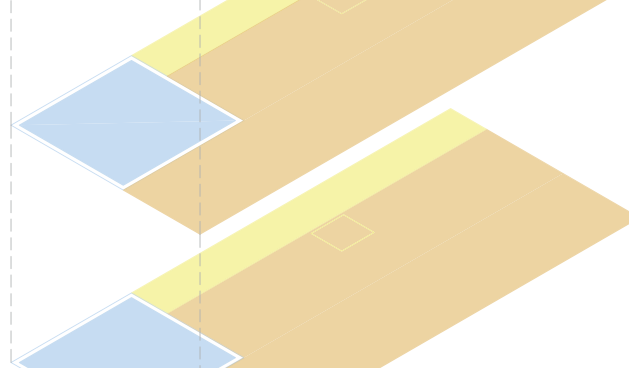
Piano -1
Parcheggio 310.24 mq
Gym 72.16 mq











Piano -2
Parcheggio 310.24 mq
Gym 72.16 mq



Piano -3
Parcheggio 310.24 mq
Gym 72.16 mq



-  Cortile interno
-  Piani privati
-  Piano tipo
-  Piano terra
-  Piano interrato
-  Gym
-  Cortile esterno
-  Collegamenti verticali

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