A Historical Overview of Multi-storey Dwelling and Evaluation of Early Apartment Blocks in Magusa, North Cyprus

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ABSTRACT

First versions of many ongoing architectural typologies usually exhibit more unique and original characteristics compared to the following types of the same typology that came subsequently. Apparently, early apartment building typologies being more authentic and totally different than today's mass production examples offering more convenient for common needs of the multi-family dwelling as well as the genuine expectations of single families. It is possible to clearly observe this on the evolution of North Cyprus apartment building typology and quite interesting results hoped to be gathered. A quick observation shows that the first apartments, as original building types, contribute to everyday private and common life and its urban context with their clear distinctions manifesting in their exterior and interior space organizations, compared to monotonous contemporary apartments that have gradually lost their identity.

This research starts with the discovery of Famagusta city having unique dynamics in its transition to multi-story housing and in this sense, displaying quite a difference in characteristics from other countries, especially from Turkey. In this context, with consideration of the transitional process to multi-story housing, the historical development of this process and dependently, apartment concept's change over time; similarities and differences between the first city apartments built between 1958-87 and routinized and banal(ordinary) apartment buildings built after 1987 are aimed to be identified. Making use of previously conducted theoretical studies about apartmanization and with examples chosen from the apartmanization processes of Turkey, North Cyprus, and the world, the subject is attempted to be presented with its

varying dimensions and aspects. In the light of this data, the subject is analyzed through the examples of apartments and buildings that have been built in Famagusta city between 1958 -87 grouped under three main titles: building characteristic, floor characteristic, unit properties. However, it should be mentioned here that these buildings show more Unique and genuine characteristics rather than being one of the versions of the basic apartment types. This is the main challenge for this research interest to discover these characteristics and compare them with the modern-day apartments in order to further understanding of their qualities and values.

In conclusion, this thesis is based on examinations of cases gathered from archival research. Accordingly, on the subject of creating new information, data is collected by consulting archive research and sample examination methods. Through the process of archival research, documents from the archives of Turkish Municipality of Famagusta are combed. In this respect, alongside the literature browsing, sample analysis holds significant importance to gather the essential information. Qualitative research technique is used to obtain application data. And finally, a table is made for the purpose of determining building type characteristics of every chosen sample. And the results of this sample evaluation is interpreted based on a timeline sorted according to the construction dates of buildings. By the way of determining this change of apartment typology built between given dates in Famagusta city, in order to better clarify the similarities and the differences between unique characteristics of the first early period (first generation) apartments and common characteristics of today's ordinary apartments, the subject is aimed to be argued over samples. Eventually, it is expected that this study will shine a light on ever-increasing housing types with the specific characters and qualities of unique typologies from the past.

Keywords: Multi-storey housing/ Apartment house, Apartmanization, Modernity, Apartment typology, Famagusta.

ÖZ

Yıllar boyunca süregelen birçok mimari akımın ilk örnekleri tasarlandıkları mimarlar tarafından daha özebir (unique) bir dille ortaya çıkarılmıştır. Bu seri üretim (mass production) akımından uzak tutulan tekrarlardan kaçınma yanlısı çoklu yaşama elverişli tasarımlar, kendi içlerinde alışılmışın dışında detaylar sunarak kullanıcıya daha özgün bir yaşam alanı yaratıldığını hissettirmiştir. Bu noktada, temel tipolojilerin ilk örnekleri, aynı tipolojinin daha sonra ortaya çıkan alt tiplerine, kıyasla daha özgün ve aynı zamanda sıra dışı denilebilecek özellikler gösterirler. Bu durumu, çalışmanın konusu olan Kuzey Kıbrıs'taki apartman bina tipolojisinin değişiminde oldukça net olarak gözlemlemek mümkündür ve de oldukça ilginç sonuçlar elde edilmiştir. Hızlı bir gözlem yapıldığında bile, ilk apartmanların; dış cephe ve iç mekân organizasyonlarında ortaya çıkan belirgin farklılıklarıyla, monotonlaşmış ve kimliğini yitirmiş günümüz apartmanlarına kıyasla, kendine özgü bir bina tipi olarak, yaşama ve kente katkıda bulunduğunu göstermektedir.

Bu araştırma, Gazimagusa kentinin, çok katlı yaşama geçişinde kendine özgü dinamikleri olduğunun ve bu bakımdan diğer ülkelerden ve özellikle Türkiye'den oldukça farklı bir özellik sergilediğinin fark edilmesiyle başlamaktadır. Bu bağlamda, katlı yaşama geçiş süreci, bu sürecin tarihsel gelişimi ve buna bağlı olarak apartman kavramının zaman içindeki değişimi dikkate alınarak; 1958-87 arası inşa edilen ilk kent apartmanları ile 1987 yılı sonrası ortaya çıkan tekdüze ve sıradanlaşmış apartman binalarının arasındaki benzerlik ve farklılıkları belirlemeyi amaçlamaktadır. Apartmanlaşma hakkında daha önceden yapılmış teorik çalışmalardan faydalanılarak, dünyada, Türkiye'de ve Kuzey Kıbrıs'ta ki apartmanlaşma sürecinden seçilen

örneklerle genel olarak konu farklı boyut ve yönleriyle tanıtılmaya çalışılmaktadır. Bu bilgilerin ışığında daha sonra Gazimagusa kentinde 1958-87 yıllarında inşa edilen apartmanlar, bina örnekleri üzerinden; bina özellikleri, kat özellikleri, birim özellikleri olmak üzere üç ana başlık halinde gruplanarak incelenmektedir. İncelenen binalar sonucu ortaya çıkarılan özgün(unique) tasarımlar, kalite ve değerlerinin daha net anlaşılabilmesi amacıyla günümüz apartmanları ile karşılaştırılmaktadır.

Sonuç olarak, bu tez, arşiv çalışması yapılarak elde edilen örneklerin (case'lerin) incelenmesi esasına dayanır. Bu doğrultuda yeni bilginin üretilmesinde, arşiv araştırması ve örneklem incelenmesi yöntemlerine başvurularak veri toplanmıştır. Arşiv çalışması süresince Gazimagusa(Famagusta) Türk Belediye arşivindeki dokümanlar taranmıştır. Bu açıdan literatür taranmasının yanı sıra örneklem analizi, çalışmanın gereksinim duyduğu bilginin elde edilmesinde önemli yer tutar. Veri toplama niteliği bakımından qualitative research tekniğinden faydalanılmaktadır. Seçilen her bir örneğin bina tipiyle ilgili özelliklerini saptamak için bir tablo düzenlenmiştir. Ve bu örneklem değerlendirmesinin sonuçları binaların yapım tarihlerine göre sıralanmış bir zaman çizelgesi üzerinden yorumlanmaktadır. Gazimagusa(Famagusta) kentinde söz konusu tarihler arasında inşa edilen apartman tipolojisindeki bu değişimin saptanması yoluyla, ilk apartmanların özgün karakterleri ile günümüzün tekdüze apartmanlarındaki benzerlik ve farklılıklara daha net açıklık getirilebilmesi için konunun örnekler üzerinden tartışılması amaçlanmaktadır. Sonuç olarak, bu çalışmanın giderek artan modern konut gereksinimine, geçmişten gelen özebir tasarımların özgün karakterleri ve kaliteleriyle ışık tutacağı beklenmektedir.

Anahtar Kelimeler: Çok katlı ev / Apartman, Apartmanlaşma, Apartman tipolojisi, Gazimagusa.

DEDICATION

To My Beloved Family

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INTRODUCTION

Apartment as a relatively new housing type has spread with fast and uncontrolled urbanization process, observed in all over the world and the nearby geography Turkey, are actually multi-storey living units that emerged as a result of the industrialization movement of the modern era, which have been built with the logic of getting more use out of limited city land. Fast increase of migrations from rural areas to cities and insufficient number of housings that could not meet the housing needs of the rising urban population is one of the most fundamental factors of the birth of apartmanization. In this context, emerging apartmanization phenomenon has changed the housing scene in building scale and affected the morphology of the ever-expanding city in urban scale.

Apartment type housing which is one of the building blocks of the change in urban scale, is also varied based upon function of the city and the socio-economic level of its users. As (Yamen, 2015) stated "It can be observed that through the process of apartmanization, there are quite clear differentiations observed in the buildings that are built in the city centers, however the same typological structures almost look similar when you get further away from the city centers in the low income regions." Luxurious apartment buildings which include more unique qualities have been designed, especially for the families with the high economic income; multi-storey houses where a same or similar prototype is repeated – with lower expenditure, devoid of service

and qualities about common living, low standard – have been built for middle and low class families. This situation still goes on today; apartment type housings are designed as multi-storey piles of concrete which consists of repetition of the same prototype unit plan and same floor plan without considering the variations in the user and family profiles. Especially the low and middle-low income users who supposed to choose the houses from these types of multi-storey housings areas that look alike, in other words apartment housing piles, are deprived of finding housing options that meet their needs, expectations and preferences. These prototype/ordinary apartment designs that are increasing over time, emerge as current typologies that threaten, even damage the city's unique identity and the morphological structure that shapes it. However, in comparison to early examples of multi-storey/multi-family housing typologies, latest apartments instead of continuing some basic qualities of the earlier types, they trivialize and shadow these. Modernist architect Le Corbusier's Unite d' Habitation Marseille project which was designed according to the modernist principle of providing better living conditions between the years of 1945-1952 is a solid example of the dissertations he defends in his books. When looking at the foundational properties of this project which had marks all over the world after its construction, it is seen that it was designed with a lot of ideas about common usage area which are skipped over in today's multi-living conditions.

Accordingly, this understanding of housing that offers common living spaces to the users under the name of multi-storey building concept, with its versatile designed common space approach like the increasing of the green areas by clearing out ground floor and by turning the roofs into terraces and courtyards, to design shared spaces laundry and other services for common use, support the socializing of the inhabitants.

Due to their various living unıts design they used to welcome different family profile with diverge incomes and interest. These all used to enrich the housing environment in general and multifamily living culture in particular. Although, the characteristic of early apartment examples in this period which is western origin are seen also in Turkey and Northern Cyprus. This topic is examined in detail in the following section.

In conclusion, apartment concept and early apartment types in different geographies are introduced via examples of multi-family blocks in many countries the world. From this point of view, Famagusta one of the important cities of North Cyprus, provides a distinctive dynamics in the process of apartmanization which will be very interesting to be clearly distinguished through the analysıs them through of the collected samples in the thesis study.

1.1 Research Field

Cyprus Island, which has housed many different ethnicities over the centuries, had been harboring two different nations of people which were Turkish Cypriot and Greek Cypriots under one administration Republic of Cyprus which was established in 1960. However, under one governmental body cities were running by two separate municipality offices – one that represented Greek and the other Turkish Cypriots. For this reason, ~~a~~ Turkish Cypriots had to appeal to the Turkish municipality of the city whereas Greek Cypriots had to appeal to Rum Municipality for a request about building apartments. This process ended after 14 years with the war between two ethnic groups in 1974. After the war, Turkish Cypriots have settled in the north region of the island and Greek Cypriots were placed in south region. With the newly formed Turkish Republic of Northern Cyprus, the name “Turk” was removed from municipalities of every city that belongs to Turkish side besides Nicosia which is a divided capital city for both side.

Famagusta that is mentioned in this research, is the third biggest city of Turkish Republic of Northern Cyprus which is located at the east of the island. Before the war, city of Famagusta was growing consistently and coherently in urban scale. However, with the exchange of residents after the war, Turkish population on the north part of town had decreased. As a result, population of the city was tried to be balanced by bringing a group of immigrants from Turkey with the government's support to be placed in empty houses. "According to research and studies carried out by the Town Planning Department in 1981, the population of Famagusta was increased to 20 000, through the exchange of population between the two communities right after the war and through migrations from Turkey in the following years" (Önal, Ş.; Dağlı, U.; Doratlı, N., 1999). Through this process form of city had started to change as well. In addition, changing city form was not only due to the effects of war and immigration, but also changing life style from traditional to modern way of living, which had already started and became more visible right to the end of the colonial period.

After the war, Varosha district of Famagusta which was one of the city's most important sources of income and the center of culture and tourism; at the same time being the most developed part of the island before was closed to habitation. Due to this situation, the city lost its important urbanized part and it started to grow towards to linearly North-west direction because of some physical limiting factors like; walled city, military area, closed Varosha, and wet land etc. Parallel to this, one of the other important incident that provided a basis for the city to grow towards north is having founding "High Institute of Technology" in 1979 and it having been changed; first, in the year of 1984, into faculties that teach four-year educations in some departments and then, in 1986, into East Mediterranean University as we know it with the law which

was approved by the TRNC Parliament. In accordance with these factors, Famagusta underwent a fast and disorganized growth.

Today, if we look at the process of historical development of the city, it would not be wrong to evaluate the city of Famagusta which has 17 different settlement zones, in two stages as before and after 1987, on the subject of emergence, development and the change of apartment buildings mentality, just as Doratlı (2018) stated. In addition to this, (Oktay, 2002) noted the first apartment-type housing developments, in her article; "as 'social housing developments', were introduced by the government in 1987, to solve the housing problems of the low- and fixed-income citizens". As a result, of apartment blocks, built as repeating prototypes which were introduced by these two housing projects (1982&1987 social housing project) became popular in Famagusta, citizen's attitude towards apartment buildings has been dramatically changed; apartments built in accordance to the rapidly growing city have lost the qualities of their early period ancestors. In summary, based on all of this data, the year 1987 is seen as a breaking point in the apartmanization process of Famagusta and is chosen as a delimiter date between early period and late period apartments in accordance with the aim of this thesis.

1.2 Research Problem

Accordingly to understand the process of transition of the architecture of the multi-storey living in Mağusa; two main research questions seemed to be meaningful to be answered. The first is: What are building characteristic, storey characteristic, unit properties, space areas and space organization of the early period apartments in Mağusa? How these qualities changed through time, by comparing the early period

apartments with recent years examples– that developed highly rapidly exhibit almost the similar typology – in this context.

1.3 Research Aims and Objectives

Apparently, apartmanization emerged with a more soft and slow modernization process towards the end of colonial period in Cyprus, mainly in contrast to developing countries which were exhibiting a big and sudden change in housing scene due to more strong modernist state ideologies and planning decisions caused to damage the characteristics of the cities, neighborhoods and existing house types in order to replace them multi storey housing typologies, apartments in other words. In this process, just as (Mutdoğan, 2014) stated, "Housing is shaped by the influence of its user's socio-cultural and economic state as much as many different factors like economic and political condition and underdeveloped housing policies of the countries, planning strategies and building regulations of the urban areas."

Apparently, the first apartments in Famagusta were not built to solve the housing needs of any social groups but they were indicating the preferences of the high income families for the modern multi-storey urban living pattern. Thus most of them was family apartments which ideally used to house the members of the extended family at the beginning. Apartments in Famagusta show a different transition process defined by its own local dynamics. As Barkul (1993) stated "when the first period apartment houses, are examined regarding the quality of indoor living, some lessons can be taken in order to understand the needs of today's modern housing implementations" (Barkul, 1993), evidently most of which are missing in the most contemporary examples of the same typology we believe. Accordingly, the main aim of this thesis is to reveal the qualities of the first apartments built in Famagusta before 1987 which has been

underlined above as a very important threshold regarding to the history of the development of the city.

1.4 Research Methodology and Limitations

Methodology of the research consists of two parts literature browsing and inventory case study creation. Literature review as theoretical work and case study as more documentary and analytic work. Theoretical work on the subject of the thesis was mainly searching on: multi story/multifamily houses, apartment buildings within the framework of modernity, modernization industrialization and urbanization issues in general. Additionally aparmanization process in Cyprus is addressed by understanding its emergence and development in the world and in Turkey and the latest apartmanization development and variations of this building typology in Famagusta are investigated in particular. Finally it became clear that the study will focus the as single block apartment buildings in Famagusta city not mass or social housing apartments.

In the case study part in order to achieve the research aim, application of the carefully designed case study seemed to be very important. In this process two main research methods such as archival research and inventory work have been applied sequentially. At first necessary data, which are the project of the early apartment buildings, are collected through archival research. The archive of Municipality of Famagusta – formerly known as Turkish Municipality of Famagusta – was utilized. Starting from the oldest record in the municipality archives which was written in 1958, all the records have been combed through until the year of 1987. 26 apartment projects have been gathered between the first apartment project, encountered in 1961 and the process that has followed until 1987.

Secondly within the scope of inventory research, projects are analysed under five main topics as Building Characteristics, Storey Characteristics, Unite Properties, Space Areas and Space Organizations, and presented as tables together with the diagrammed plans. Finally the analysis of these characteristics, which is more qualitative values are are expected to create a reliable ground for the comparison between the early and recent apartment typologies.

1.5 Research Structure

This thesis study consists of five main sections. In the first section, introduction, importance of the study is introduced by dealing with the information about the general, scope in the regional and local scale; research aim and questions and method are clarified.

On the second section, Theoretical Background, by following a path from the general to the local scale, starting with emergence point the apartment phenomenon, aparmanization concept is mentioned on the basis of modernization movements in the world. By mentioning apartment varieties in addition to illuminated history of apartmanization, apartment concept is review under five main topics. The description of the apartment house and emergence of it in relation to the urban development which is one of the research interest of this thesis introduced under two separate sub-titles based on the developments in 18th and 19th Centuries and 20th Century. Thus, as main topics, starting from the various definitions related to apartment buildings, in the historical process of its development, modernization period and multi-storey residential block designs are mentioned, additionally, the same period examples in Turkey and the apartment blocks interaction with the city scale are introduced. This section will be concluded by giving examples on the related subject.

On the third section, development process of multi-storey housing in North Cyprus will be dealt with in more detailed and examples will be given from early period apartments from the three biggest cities of North Cyprus. The development of apartmanization in Famagusta, the third biggest city of North Cyprus, will be explained with the support of how it has been emerged as diverge building typologies seen in the island generally.

In the fourth chapter, the early period apartment buildings built between 1958 and 1987, which is the main aim of the thesis, are examined in detail under three subheadings. These are; building characteristic, floor characteristic, unit properties. Accordingly, the findings of the case study presented under the result of the case title. In the direction of the findings, the early apartment buildings of Magusa are compared with the apartments of recent examples.

To sum up, the fifth chapter is conclusion which is the sumerized the all headings and talked about the beneficial importance of the thesis according to results.

Chapter 2

BACKGROUND KNOWLEDGE OF MULTI-STOREY APARTMENT HOUSING BLOCK

This section contains information obtained from the literature review that grounds on the appearance of apartment which is a multi-storey housing block and its development. In this direction, it comes to the forefront as a section in which the apartment conception that forms the basis of the thesis is examined.

Housing types that are dealt with in this section were analysed in line with their emergence in western world in general and the effects of modern period to this multi-storey housing typology in particular by evaluating the articles, books and theses with regard to their existence in the city scale and their spatial development and improvement in the unit scale. In the light of the obtained information related to the first samples of multi-storey life were exemplified by the same type buildings in the world and especially in Turkey under the impact of urbanization process appeared in modernization period at first. Afterwards, they were discussed within the framework of apartment samples that were picked from all over Turkish Republic of Northern Cyprus so as to be a reference to understand the particularity of Famagusta and the development of the apartment building there, as it is the focal point of the thesis.

In brief, the aim of this section of the study is indeed to form a basis for understanding the change of apartment type housing based on the diversified structure of the society

and city over the past decades. For this purpose, the appearance of the historical development of apartment housing will be revealed through literature review. The current theoretical background study contains appropriate information to the thesis in order to better understand the emergence of the first apartments of Famagusta city as well as their originality, quality and differences from the recent day apartment buildings.

2.1 Apartment House: Multi Story Living Format

Taking for the word "apartment" we can see that it stems from the Italian word 'appartamento'. The root of the word is 'a parte' (ad partire in Latin) which means separated, divided. While on the one hand the word "apartment" states only one apartment concept in some languages such as English and French, on the other hand the term "apartment block" is used to state the entire building in those languages. The word "apartment" (appartement in French) which refers to a pile of rooms that are separated to sections within residential building and form a separate unit means building that hosts some independent residential units in Turkish language (Sakaoğlu, 1994) For this matter, (Barkul, 1993) made this definition "…an apartment which consists of a few rooms within a building in a size where a person or family can reside and...buildings separated into such apartments". Most of such multi-storey buildings that are named as apartment housing blocks or apartment blocks are generally designed for residential purposes. However, they may include additional such activities out of residential purposes as shop or office (Kılıç, 2009).

Dwelling is the smallest unit of the environment having a certain number of physical and social qualities (Peters, 1979). It has approximately a rate of 85% among all buildings that are named as "housing" in cities. Housing is the structure that forms the

backbone of the city in a vein, and making assessment on housing culture is equal to understand the DNA of the city. From this point of view, the apartment phenomenon and apartment building process is very critical and very important at the same time in respect of how structural pattern in cities as well as our daily life has changed during modernization process. Two important features of apartment are known to be; it is a structure which serves for sheltering only in one hand, and beside this, it has a very old history in fact, it emerged in Ancient Rome based on the combination of different sheltering units (Bilgin, 2010).

The apartment was developed as rental housing for the workers all across Western countries. The trend of ascent that was triggered by considering the height as competition and technological innovation tools like in America, this type appears as housing which is constructed for workers and officers in Turkey.

The nuclear family model which was spread throughout the world with the modernization process and apartment buildings emerging in cities as a consequence of it. These buildings consisting of many living units gradually improved more regarding to the development of the housing standards. It is an important matter which should be stressed that the solutions which were developed as settling of service spaces such as bathroom, toilet, and kitchen into internal and dark areas emerged in the plan consisting of living and service spaces mainly. This type of houses were accepted nearly in all cities around the world regardless of cultural and social differences. Furthermore, the fact that people have been living so far in those spaces that the previous generations never experienced before demonstrates that such housing types and life styles are inevitable and they are highly accepted (Bilgin, 2010). In this case, it is worth to think on and investigate how such housings have undergone a change

throughout 20th century. Thus, it will be possible to contribute to multi-storey housing design with more knowledgeable and innovative point of view.

2.2 Emergence and Development of Multi Storey Housing in Western World

The apartment is a new housing type which is constructed in cities in an increasing rate in parallel with economic, demographic and technological changes starting with the industrialization in western developed countries. It has gained importance as a building typology, which provides more people with sheltering through multı storey solutions in a building site (Barkul, 1993). Industrial movements that come into existence by saving time, power and finance in production with help of new inventions began in England and France in 18th century. Afterwards, it penetrated into Europe, America and the entire world respectively (Ulusoy & Ulusoy, 2014). In this way, the deficit on housing was solved thanks to multi-unit structures on the same ground, namely apartments in industrialized communities (Şener, 2000). As a result, an increase in apartment type housing was observed in parallel with industrialization.

Even though those multi-storey common housings became widespread after the industrial revolution, they emerged in Ancient Rome firstly. Those structures that are called as ‘Insula’ in singular and ‘insulae’ in plural form which means “island” were constructed at the altitudes changing from four to seven storeys. The main reason for constructing such structures is to find a solution to the urban congestion caused by population invading the capital city of the Roman Empire that became rich after the serial wars. These are the multi-storey structures in which particularly middle and lower classes lived and believed to be social housing rather than individual houses

where rich and noble class that was called as domus and villa lived as a result of the increase in private house costs in the city (Encyclopedia Britannica).

Figure 1. Insula, Ancient Rome (URL 1)

In fact, the reason for the emergence of such structures in this period can be understood from the words of Vitrivius pointing out that "much housing is needed due to the enormous size of Rome". Urban site is not enough for the whole population to settle in. So, this fact leads us to elevate houses to the sky". According to the enumeration in Rome A.D. 4th century, there were 46.000, insulae and 1.800 domus (detached houses) (Storey, 2001). It can be observed that the structure which was called as insulae emerging in Great Rome being the first great metropolis in the world is the closest type to the current apartment model (Encyclopedia Britannica).

The "insulas" that disappeared upon the collapse of Roman Empire was encountered in future eras in big cities of northern Scotland that were developing rapidly before the industrial revolution and later on in Europe. Those structures looked like rental houses but differently, they were big housings sheltering many families under the same roof (Yamen, 2015; Barkul, 1993; Bilgin, 1992)

2.2.1 Multi Storey Housing in 18th and 19th Centuries

The Industrial Revolution which firstly started in England in the middle of the 18th century and spread over Europe was the transition from man and animal power based production to machine power based production (Akın, 2008). Most of the workers in rural areas could not be supplied with job opportunities with the advent of the machine. Insufficiency of space, unplanned restructuring, health problems, loss of natural areas in cities as well as intensive migration from rural to the urban areas along with the serial production in factories that were installed. Different paradigms in many regions were easily adopted by the low income families and workers migrating to the cities (Batur, 1978). Major changes were experienced particularly in housing architecture, one of the important components of cities within the framework of urbanization phenomenon and rapid population growth in that period considering the architecture undergoing major conceptual changes; housing forms and-principles were modified; accordingly a new housing types emerged in urban structure. Those were new forms that had never seen and practiced before up to that time (Simmel, 2000).

The buildings that are described as apartment emerged as tall blocks that were multi-storeyed and constructed for middle class tenants sheltering for different families, being called as housings for workers in Paris and other European big cities in 18th century. Typical apartment unit that was constructed firstly in New York City in 1830s is known as railway apartment, since they were constructed as one on the top of the other and in a line like wagons and narrow rooms. Multi-storey units that were designed for low income groups in Berlin in 1860s were called as “rental barracks” (Figure: 2). The reason that such structures consisting of narrow, long and massive apartment blocks were built was the belief that sheltering people from different income

groups under the same roof would be helpful in solving social problems. However Housing units for high-income families were located towards the main street sides, while those for low income were facing courtyard. People with very low income sustained their life in alternative places like roofs or storerooms (Bilgin, 1999).

Figure 2. Berlin Rental Barracks (Yamen, 2015)

The presence of apartments carried on in parallel with the industrialization in European countries again in the second half of the 19th century. Those structures were constructed as buildings including many housing units on the same land as a solution to housing problem of workers and officers that were called as new middle class people and who were increasing in number (Encyclopedia of Istanbul - History Foundation İstanbul, 2010). The housing problem emerging as of the period called as the age of enlightenment increased much after the industrial revolution. Consequently, those storeyed housings accommodating workers and families of officers and that were constructed so as to make balance of the urban population increasing rapidly became the pioneer of the current collective housing (Birol, 2006).

The workers in England initially lived in rental huts, breakdown of single-family houses at early times of the Industrial Revolution. The basements started to be used as houses as houses could not be built in sufficient numbers in cities. While one sixth of the population lived in basements in Liverpool which was one of the industrial cities at that period, the abandoned houses whose owners were unknown started to be used as pensions which fifteen to twenty persons lived in (Ragon, 1986). It is a matter of a number of developments in modernization period of the multi-storey housing constructed in Germany experiencing industrialization period after England. Similar with England, the plan that was designed for Berlin by James Hobrecht (1825-1902) who was a city planner during modernization period of housing in the spatial context was an important study allowing spatial organization at unit housing scale to be determined too through legislation. The legislation determined in these periods took shape as the basic requirements such as fire regulation, light and ventilation and privacy, and formed the base of the collective housing of present day and the basis of apartment space standards dependently (Başdoğan, 2011), the pioneer of the current collective housing (Birol, 2006).

Construction of mass housing for workers was integrated with specific utopic offers in the first half of the 19th century; for instance Charles Fourier's phalansteries was empowered by Napoleon III during the Second Empire, promoting the mass housing for the service of workers as part of the reconstruction of Paris by Baron Haussmann. By establishing two different types of housing, the apartment design was refined extensively by the French till the end of the Second Empire. One of those types is the courtyard apartment housing which was based on the collectivity idea of mass housing on a social environment by which the apartments created barrier all around the yard

which served the habitants as a special area. The other type is the tenements that served collectively but far away from cooperation. In this type multiple housing got destressed in support of public senses, just as presented in the external appearance and circulation areas, lobbies, corridors and stair halls that were generally massive areas; also, they were regarded as the street extensions (Stern, 1980).

The apartment type housings in better quality were seen in America, New York in 1869 for the first time after Middle Europe, which is agreed to home the first apartment building by an architect who was working for Haussmann. The *immeuble de rapport* system which refers to renting different types of housings with one householder or more brought in money to Paris; moreover, the real estate caused building owners to design the buildings as investment tools (Kuban, 2007). The property prices in the city increased post World War, so this lead vendors to sell apartments as good alternatives to lodging houses. Those mentioned apartments were designed after the apartments of Paris and they were called as "French flats" to be differentiated from the tenements. One of the oldest apartments referred was the 1869 Stuyvesant Apartments on East Eighteenth Street, Manhattan, which were designed by Richard Morris Hunt, an American architect and trained in Paris. It provided a table consisting of narrow façade rooms set adjacently so as to meet the needs of its habitants who were in working class; moreover, it comprised all components that a single-storey building could contain (Figure 3) (Eriş, 2011).

Figure 3. Stuyvesant Apartments, New York City (URL 2)

Nevertheless, middle class American people of the nineteenth century opted for private detached house with multi-storey, instead of single storey apartments that was shared out with others. The multi-unit housing was embellished by the end of the nineteenth century through the tenements, multi-unit houses for the working class and families who were immigrating (Stern, 1980). In fact, not many low cost apartments that were built in either Europe or America before 1918 were planned to appeal to either comfort or style. Nonetheless, the second half of the 19th century was the period of great development in apartment design appealing to the upper-middle class and the wealthy in many European countries, especially in Paris and Vienna.

Towards the mid-19th century, numerous very cheap apartments were built up as a result that industrial workers increased in cities and towns in Europe and United States

of America. Those buildings were incredibly miserable, badly-designed, unhealthy and congested.

Naturally, Ottoman Empire was also influenced by the industrial revolution arising in the world. The industrial revolution beginning in Europe brought to the agenda a new formation in housing sector too. The factories that let also women find job increased the attraction of cities. The acceleration of migration to the cities brought housing problem together. This problem brought apartment structures to the agenda (Ulusoy & Ulusoy, 2014).

Even though the transition to apartment type housing in Western countries started before Turkey also considering the influence of industrialization and capitalism, Ottoman Empire first met apartments in Galata and Beyoğlu that were settlements for non-Muslim coming to Istanbul for trading towards the end of the 19th century (Yamen, 2015; Gökmen, 2011)

Collective life started with rental rooms in Ottoman Empire. There were series rental rooms belonging to foundations in big cities like Edirne and Istanbul beginning from the first half of the 15th century in the period Ottoman Empire. This is a kind of accommodation in which many families share the same structure with separate rooms and common health equipment. However, it perished in 18th century Istanbul; and there were housings having independent floors, separate kitchens and toilets, which is known from the official documents of the period (Anon, 2007).

Öncel (2010) states the emergence process of the first apartments in his book "Galata'da Yeni Bir Konut Tipi Apartmanlar" as: "the structures designed for the first

collective life in Galata were called as “Maison” or “inn”; but the definitions of such buildings changed to be “Apartments” according to the next cadastral map series prepared by E. Goad in 1905. In consideration of such information, it can be readily said that those structures that were examined as apartment type housing were defined as apartment in the new plans that were prepared after the period they were built. Thus, such information demonstrates that the mentioned apartment type housings were not defined so in Ottoman housing style, and they came into existence by closely a wave of construction within a quarter of a century” (Öncel, 2010).

Mübeccel Kıray summarizes the apartment building process as follows: “ribbon buildings and apartments started to be built with the appearance of middle class in 1880 for the first time. Middle class consisted of the workers of westward dependent business organizations and middle-scale traders. This population mainly consisted of non-Muslims. Consequently, structure samples of apartment and ribbon building emerged in the quarter of non-Muslims (Kıray, 1978).

The western world that represented the modernity had enough charm to draw the attention on it during the period when Ottoman Empire entered into regression and break up processes. This situation could be observed not only during the last period of Ottoman Empire and the foundation period of the Republic of Turkey, but also in many other countries existing then and especially in developing countries. National cultural characteristics can easily be ignored and uniform visuality is tried to be created (Yayınoğlu; Sunar, 2008, p. 19).

2.2.2 Multi Storey Housing in 20th Century

Rue Franklin apartment of Auguste Perret in France, Paris was constructed in 1903 for people with high, middle and low income (Figure 4). The space use was designed for different income groups as in Berlin. While usual floor plans addressed to middle and high income groups, roofs were hired to workers and other people with low income. This structure is the first apartment where reinforced concrete was used a carrier system. The “apartment housing” became living space for high and middle class too along with the reinforced concrete, glass, and iron, steel and wood in the 20th century. As opinions increased on the fact that allowing different live together would sharpen the distinctions, divergent apartments were designed for the workers. However, the fact that demand for it was in large amounts and as land prices were high, the flats were built in pretty small sizes. Those tenements having many different plan typologies were called as "cite" (Kumbasar, 2008). Furthermore, as there was very heavy migration to the downtown at the beginning of the 20th century, the tenements were also located in near areas to the city boundaries due to such pressure.

The most important reason that multi-storey housings that were built was to increase the performance of workers by creating healthy conditions emerging through the capitalist system; to meet their needs in such housings through the facilities provided in the best and healthy way; so to create a human profile that focuses only on business.

Figure 4. Rue Franklin Apartment, Paris, France (URL 3)

The most effective period in the spread of apartment life in USA gained momentum after all managements of the states started to provide families with low income with credit and support by the acceptance of housing legislation in 1937. Many apartments were constructed in Italy and Germany especially for the workers before the 2nd World War. The demand for rental housing increased much due to the structural costs that were raised after the 2nd World War, population movements and increase of workers in big cities, consequently, the construction of apartment increased (Balkan, 1997)

As a matter of fact, more than 75% of the Americans were living in apartments towards 1900s. Because apartments served many rich American urban single or middle-class families as practical, prestigious, secure and secondary dwellings near workplaces.

Those apartments were commonly used for rental purposes. Yet, the state of a unit ownership by multiple owners became much more spread in the 20th century. The mentioned ownership of housing could be in cooperation or condominium forms.

Cooperatively, all the dwellers of a building own it commonly; meanwhile, cooperative housing is much less spread in the United States than some European countries. What the condominium symbolises is the possession of a unit individually within apartment or other types of multi dwelling units. The fact that condominium owners are not dependent to each other financially, on the contrary, they can mortgage their own properties unlike in members of a cooperation is the main basis of the augmenting popularity of condominiums in the United States as well as other countries.

After the fire came out in the city center of Chicago, the center of steel industry, the land prices increased so they entailed new construction technics and technologies to be used. New "Chicago School" which was leaded by William Le Boran Jemey, Louis Sullivian, Dankmar Adler, Daniel H. Burnham and Martin Roche showed up, also high rise buildings were built by using steel frames. High rise structures were enounced to become urbanized process which was realized in Chicago first. The technological developments in elevation system and steel use as constructional elements allowed the construction industry to build high buildings, so the first contemporary skyscrapers started to be seen (Gottmann, 1967); (Barkul, 1993).

In brief, apartment type housing first came out as a necessity of economic, demographic, technologic and cultural activities, then post industrial development it turned out to be a building type in which the dynamic structure of the environment was shaped by people in the cities. The mentioned apartment housing is structure whose construction rate rapidly augmented in line with the movements in economy and demography, changes in technology post industrial development in developed western

countries. Moreover, it came into prominence as it supplied more people with sheltering by multiplex housings built on the same size of land (Barkul, 1993).

2.3 Modernism and Multi Storey Housing

Symbolic illumination of intelligence and science, French Revolution which is the pioneer of freedom and equality and eventually political and social fraction that Industrial Revolution created all around the world brought along modernity phenomenon (Atiker, 1998). One of the main factors causing modernity to emerge is the orientation of the government by the critisms to do innovations made by the leaders of society like physicians, priests, economists and philosophers in order to draw attention to the impairment, lacks in health and hygiene as well as housing problems that are faced in the cities. It was founded "utopian" designs that aimed at changing the society along with settlement conditions and would be a base for the modern urbanism at that period (Ragon, 1986). During that period, city planners as well as architects dealt with solving habitants' problems regarding settlement by making some regulations in building field, with good planning. Europe was furnished with many multi-storey buildings for the settlement of people who lost their houses after the Second World War (Diefendorf, 1989).

However, modernism which emerged at the beginning of the 19th century in architecture which donates novelty and creating originality as visible change caused by the modernity in production and products in different areas comes down and it is especially against eclecticism.

Thus, the foundation of modern architecture at the beginning of 20th century was laid in connection with the development of new structural technics, the technology

competition among countries and production of new materials (metal, bronze, steel, aluminium, etc.). After the idea was set forth by Taylor to gather and unify industrial works and turn it to a standard in 1913, it was put into practice by Henry Ford. This implemented system became a revolution that would lead radical changes in housing culture. Standardizing products by mass production caused the decrease in different individual-specific designs emerging through manual labour and dedifferentiation phenomenon showed up even though profit was derived from time and labour (Hasol, 1967).

Baper Y. cited that: “The starting point of the modern movement returns to the democratic movement and industrial revolution (Scully, 1975; Peter, 1994)”. Appearing after the industrial revolution the mass production brought along standardized design in architecture in company with modernism. As there was a certain framework of known architects such as Le Corbusier at the time, there was no sign of social culture in modernism. Modernist pioneers such as Le Corbusier, Mies van der Rohe, and Frank Lloyd Wright designed many housing blocks with the modernism. Unite d'Habitation dwelling unit applied by Le Corbusier in 1952 in Marseille, France became one of the leading buildings at that period with the characteristics including different location designs and functions depending on its imitation in five Eropean countries. Having a lift with the function of stopping at every three floors, its potential of increasing social interaction was an approach which had never been applied.

The blocks addressing to families in different sizes and that were settled by low income groups more were shaped in a form having all principles of modern architecture (such as use of roof, ribbon window, rising from the floor by pilotis, exposed concrete use, open plan and façade).

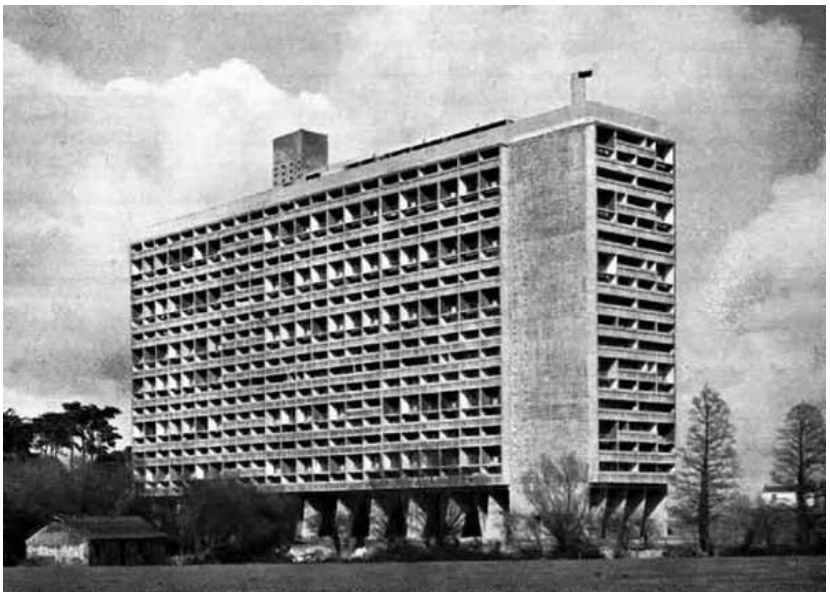


Figure 5. Unite d'Habitation, France (URL 4)

Le Corbusier had an idea over building which was imagined as “vertical garden city” by which he intended to make villa large enough to domicile settlers with their own spaces as well as spaces for shopping, eating, doing exercise and assembly area. In this way, the building roof was turned into running path, club, kindergarten, gym and shallow pool. Apart from the roof there were such facilities as shops, medical facilities and even small hotel inside the building. This type of building is called as Unite d’Habitation which signifies a city within another, and it is polished for the service of its dwellers by means of functionality.

Comparing the Unite d’Habitation with most his Works, it was not covering the same substantial quality, though it bore a mechanical impact as well as Five Points which was also developed by Corbusier in 1920s. For instance, such large buildings are supported by enormous pilotis which enables circulation, gardening and making space under the building itself. In addition, roof garden or terrace constitutes the largest common space of the building as a whole; what is more, integrated terrace into frontal

system diminishes the sense that the building is too high so as to establish an abstract ribbon window demonstrating the level of the building.

After the World War, tall blocks and slabs became popular in European city planning; furthermore, this type of construction in most of western European countries as well as northern European countries extends over 1960s. Even though the construction gained momentum at high rates at that period, there were still problems with technical and social concerns (R.Turkington, Kempen, & Wassenberg, 2017).

It was seen that the targeted result had never been achieved in the realized housing units. Among the ambiguous projects, as an example, it can be referred to the one happened in London, named as The Ronan Point in which gas explosion was witnessed in 1967 (Leyendecker & Ellingwood, 1977), and the demolition of the high-rise Pruitt Igoe happened in 1972 in St. Louis, USA (Montgomery, 1985).

The Pruitt Igoe housing blocks designed by George Hellmuth and Minoru Yamasaki in 1955 were created by a division into separate units, as white ones (Igoe apartment dwellers) for those with low/middle income and black ones (Pruitt apartment dwellers) reflecting racist discrimination. The reason for their construction was to provide accommodation for many people in need of housing after the Second Wrold War.

Figure 6. Pruitt Igoe Blocks in the US city of St. Louis, Missouri (URL 5)

Different treatments were provided as the lifts stopped in certain floors as a construction technique and there were common rooms, garbage rooms and laundry rooms. However, the ladders and long and large corridors became very convenient for the increase in crime rates in time. In fact, nearly half of the building blocks were emptied towards the end of 1960s. The first building block of Pruitt Igoe apartments in St. Louis, Missouri becoming an area where crime rate, powerty and racism increased was demolished by a dynamite in 1972. The remainings of Pruit Igoe apartments named by Charles Jenks as the day when the modern architecture died were demolished completely within four years. The statement of Mark Twain which is very famous "the rumour that I have died is extremely exaggerated" is valid for modern architecture too. It is not a "style" resulting in absolute failure and applied modern movement, but it is an architectural expression allowing many different comments. As Jurgen Habermas said, "it is an unfinished project yet". As seen in Unite d'Habitation and Pruitt Igoe projects, the mass housing units were designed for the same purpose, but they had different ends. At that point, it can be seen that socio-cultural, social and economic factors are important in standard design (Colquhoun, 1990) .

The change of housing with modernism effect brought into agenda a different housing type which hosts many vital factors and becoming popular towards the end of 20th century. Moving of low and middle income groups to urban perimeters brought along owned and privately protected housing with the settlement of low income group to the centers of prominent Brasilian cities in Latin America after 1940. This phenomenon which brought along marginalization entailed walling around the apartments as the distance became insufficient. Thus, the discrimination between income groups became more obvious by the city (Edgü & Ünlü, 2003). This issue was investigated later in details under the title '2.5 City Case and Apartment.'

2.4 Apartment Type Housing in Turkey

Acquaintance of Turkish Republic with modernity conception aiming to make the country contemporary coincides with the same period when the Republic was founded. In this context, one of the most powerful effects created by modernity, which allows people to self-expression through the new regulations in all areas of the society can be seen in architecture. Pointing out the health and hygiene features of modern housing which is the most important indicator of modern and contemporary life style, the first samples emerging as family apartments or apartments belonging to private ownership which hosts housing units that are hired for earning extra revenue, that is tenements and lodgments that are constructed by the government mostly for the workers are extremely important for the country in terms modern architecture. The samples of apartment as well as ribbon buildings within the framework of Westernization towards the end of 19th century were seen only in Istanbul and in a limited number. The second known housing type of the period is the "tenement" which refers to multi-unit building that are hired for generating income by a sole householder (Balamir, 1994).

There are three major parameters on which apartment phenomenon, becoming modern post 19th century in Europe and emerging in all cities and later in our geography during the period of modernization depends; one is the population explosion developing suddenly in the cities; the second is the obtained income through urban land speculation, that is, the economic appreciation of land in cities, and the last is the increase of elementary families in cities. When these parameters are hold together, it can be seen that no matter what culture, belief and habits are apartment building is inevitable (Bilgin, 1992).

The apartments corresponding firstly to the lifestyle of the elite during Republican period became the most important building meeting the sheltering needs of the society during that period. The apartments that have been constructed for 150 years in Turkey through several production types and by several actors were built to bring solution to housing problem with the organizations created manually by the government. The modern architectural products that are seen firstly in administrative buildings of the state, then in housing are almost equivalent to their European counterparts and especially in housing types. The apartment projects having roads from all four sides and filling island limits appropriate to neoclassic tradition applied by names Tayyare in Istanbul and Vakıf Apartment in Ankara by the design of architect Kemalettin as a result of westernization are some of the examples that are under the influence of Central European apartments of the multi-storey structuring in Turkey evoking 19th century palaces (Vanlı, 2006).

Figure 7. Vakıf Apartment, Ankara (URL 6)

As there is no function approach in these both samples directing the design defended by modern architecture, search for façade can be seen. The building plans consisting of juxtaposed rooms in its both sides facing courtyard and road did not make any difference in the façades. Tayyare Apartment is used as hotel in Istanbul today thanks to row rooms in plan type. Vakıf Apartment in Ankara provides services to public institutions. Transportation of airplane apartment between floors is ensured by the stairs in the courtyard. It was designed as four separate blocks repeating each other. (Figure 7) As for Vakıf Apartment, which is called as pious apartment, has totally 7 floors with the basement and loft. There is a large air space in the middle of the apartment designed as rectangular circle. The stairs that ensure the connection between floors is located in the middle of each façade, so a direct exit is opened to the streets around the building. While wet area faces internal air void, the rooms are lined along the exterior. The ground floors are used as workshop in both projects.

Figure 8. Tayyare Apartments, İstanbul (URL 7)

When it came to the 1930s among the first contemporary apartments in Istanbul, Ceylan Apartment by Sedat Hakkı Eldem in 1933 and Üçler Apartment which was designed by Architect Hüsnü in 1935 as an annex to İbrahim Galip Bey Apartment are the pioneers of multi-storey housing expansion. Such that, those architectures founded the base the principle approaches that are still valid in designing apartment houses appealing to a rational and a certain pleasure at the same time. Ceylan apartment which was built up by taking the form of building plot ensures access between floors for the users through circular ladder system inside and in the middle of the building. Another ladder which is located at the right back of the building built for the upper class is a service ladder designed for the servants residing in the building. Large span rooms lined up in a sequential order on the left side of the building are offered to the use of householders. A hierarchical order was ensured in the storey along with wet areas hidden interior and an area for the servants located on the right.

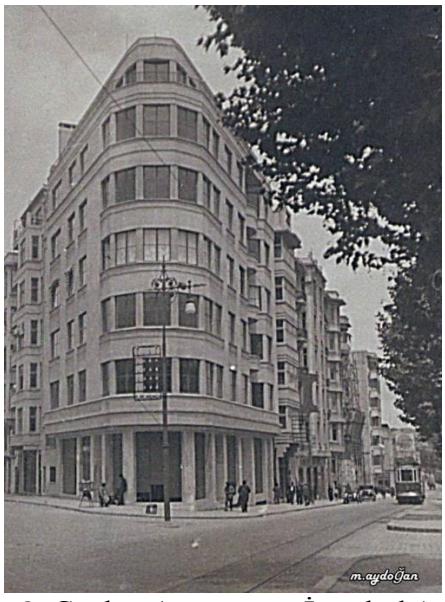


Figure 9. Ceylan Apartment, İstanbul (URL 8)

Whereas Ceylan apartment had the form defining the corner land (Figure 9), Üçler apartment was designed in a more geometric cubic form as much as the shape and form of building plot allowed. It is an additional apartment project built on İbrahim Galip Bey Apartment and as new tenements alongside. Instead of expanding the old building while designing this one, Arkan gave a character to the added part which was distinguishable and appropriate to the current one at the same time. It was designed for the user group "looking for rich and comfort" through the solution of two duplex apartments on four floors and apartments with six rooms each in the new building. The side façades were designed more simply in order to equalize the mobility of the building at street façade. It makes reference to the five principles of Le Corbusier's modern housing and consequently international modern housing block idea by the details like corner windows, horizontal bent window and the section left open in piles (a kind of pilotis) on the ground floor.

Figure 10. Üçler Apartment, İstanbul (URL 9)

The modernist apartments which were built up according to different building order of Istanbul and Ankara between the years 1930s and 1950s have a spindly form due to narrow façade parcels. At that period, what is outstanding is that plan schemes are needed for a long corridor in ensuring circulation between locations having night locations at the back and day locations in the front and installation and service section in the middle. For example, Zeki Sayar, Demir Ağ Tenement in 1930s and İpek Apartment in Nişantaşı built in 1940s, etc. The buildings of 1940s could not go far the 1930s traditional plans due to parcel size and shape (Vanlı, 2006). Even so, these apartments have their own characteristics in every building with their sensitive and detailed differences in spite of their stereotyped plans and all common aspects. Evolution of a similar apartment block due to the size of the building plot can be seen in Famagusta city of Northern Cyprus in 1980s.

The new era in all architectural affairs under Turkish rationalism which was witnessed in 1950s influenced housing sector too. The best exemplary at this point is the

Hukukçular site which was founded in Istanbul by Haluk Baysal and Melih Birsel in 1961. The building imparted rhythm to its façade by repeating a duplex floor between every two normal floors is deemed to be one of the most successful samples of Turkish rationalism in international area.

Figure 11. Hukukçular Apartment, İstanbul (URL 10)

19 Cinnah apartments that were built in Ankara at the end of 1950s and at the beginning of 1960s were positioned perpendicular to the street by breaking with tradition. Thus, it is a building having 15 duplex and 17 apartments directed to the north and landscape at the same time. This apartment that could be reckoned extraordinary even today consists of three duplex floors. It can be seen that each duplex consists of a storeroom, dining room, kitchen and lounge room on the ground floor and three bedrooms and bathroom upstairs. Later on, a seventh floor which consisted of two large apartments was added under the name of renovation project. The added apartments consisted of several private spaces such as nanny room, maid room, en-

suite bathroom designed according to user request. Application of pillars by emptying a part of the ground floor, leaving the topography on its nature, construction of duplex with a pool providing a common area of use make reference to the project 'Unite d'Habitation' in Marseille which is an important sample of modern life and housing of French architecture Le Corbusier. Cinnah 19 has the quality of being a sample for modern architecture being understood again more deeply at the end of 1950s and at the beginning of 1960s.

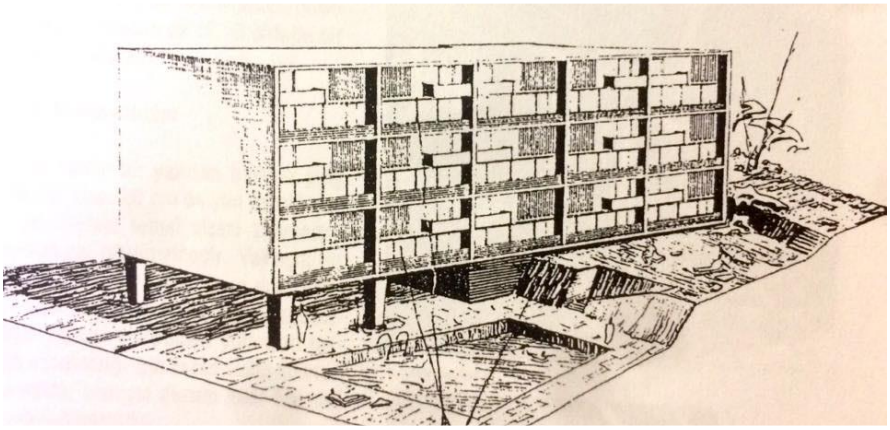


Figure 12. Cinnah 19 Apartment, Ankara (URL 11)

The apartments gained new conceptions with the direction of rational architecture after 1960. For example expansion of kitchen functions, duplex apartment solutions like duplex house put successively and extraordinary arrangements are some of them.

The cooperative system in Turkey started with garden house project dated 1935. The laws with number 5218 and 5228 encouraging housing construction which was made in 1948 decreased the land share forming an important input of the cost. Thus, the production of housing cooperatives increased (cinnah 19). Only one building could be built on a single parcel in Turkey until the property law was enacted in 1954. However, the land prices began to increase very rapidly in town within the framework of

urbanization spread after the Second World War. When the middle class became unable to pay the cost of a single parcel at that high cost, it was searched for other solutions allowing more than one family to divide the cost of parcel. The problem was solved by making condominium legitimate introducing property law. This situation made the construction of apartments an economic obligation by displacing it of being an architecture preference. Build-and-sell as well as housing cooperation system for allowing such a housing offer was developed (Bilgin, 1999).

The first apartments emerging as a reflection of Westernized laic life style till the condominium law dated 1965 were replaced by a new apartment concept which is the most common type of today's cities along with this law (İzmir web Hande Mete).

These buildings becoming uniform through serial production within time were turned into devoid of enthusiasm and excitement commercial monuments that were encountered in the first multi-storey common buildings. Unifying apartment houses with business centers in the city or using them to create new habitations out of town in applications after 1980 forced this type of building design to search for new approaches.

The samples of apartments and ribbon houses performed within the framework of Westernization towards the end of 19th century were seen firstly in administrative structures of the state, then in housing based on the needs stemming from the transition to the modern life. These modern architectural products turned into "tenements" which refer to multi-unit building that are hired for generating income by a sole householder. The apartments that wealthy people let the leading architects of that period build for either themselves or their families became a factor making family more prestigious in

the society with its modern and innovative attitude. Those apartments aiming at providing the continuity of traditional family life were deemed to be an investment at the same time. Those modest and modernist buildings that were designed generally as 3-4 storeys are extremely successful samples in terms of construction and high workmanship quality. (İzmir web Hande Mete).

The first samples of multi-storey apartment buildings are this type of family apartments in Northern Cyprus sample where the first samples of shared housing emerged as two independent storey housing. This situation reflected into the names of those multi-storey buildings mostly. For example Ali Fuat Apartment, Kutup Mehmet Apartment, Hüseyin Derviş, etc.

The elementary family model spread all over the world with the modernization process and as a result of this, and the increase of multi-storey buildings in cities revealed the apartment sample becoming prevalent. It is an important factor on the new culture idea caused by modernity that the rooms like bathroom, toilet and kitchen are located in dark areas in the plan type of rooms and corridors are applied and accepted in all cities around the world at the same time without being bound to any extension of the past. The three-storeys were called to be apartment in the first built multi-storey housings, but today housing units are designed within towers. As things stand today, the apartment in Turkey has become varied from multiple collective housings to luxury housings called as residence that are built as skyscrapers (Bilgin, 1999). Today, the diversity and quality of the first samples of multi-storey buildings has disappeared in Northern Cyprus too and the prevalent apartment concept has emerged.

In brief, the functional and contemporary 1930s tradition which closed the palace wannabe apartment period of the 1920s in multi-storey housing started to be reviewed, and caused rational approach to be adopted in 1950s. Even though individual authentic approaches were observed among Turkish architects in 1960s, the architectural identity that the first apartment samples offered at the end of 20th century was sought with the increase and spread of uniformity of single apartment houses in cities.

2.5 Urban Identity, Morphology and Apartments Typology

Housing type evolving from single-storey to multi-storey structures in conjunction with industrialization caused changes in cities and urban spaces as well. Physical structure of cities was influenced and thus changed with the urbanization phenomenon that came into focus as a result of apartment building. Besides that, however much the effects of residential change in unit scale to the urban scale comes into question, a set of movements such as augmentation in urban population and functions of cities triggered the change based on new social topography of city and the apartment type housing to emerge; they influenced and directed its development in future dates.

The distinctions of time and space became also permeable with the dissemination of electric use that was the symbol of technological and industrial revolution experienced along with modernity; thus, the border between indoor and outdoor space became ambiguous and outdoor turned into indoor. Therefore, urbanite individuals who started to spend more time in “outdoor” space began to develop their urban culture leaving the medieval privacy (Atiker, 1998).

Urban phenomena and urban life are the structures that may differ according to the conditions in which they exist in many different places of the world (Bakır & Ülgen, 2009). In Italian Encyclopedia of Tereccani, city is defined as "...a historical and legal formation making up the main core and characteristic of social life..." (Yılmaz, 2004). Sociologist Lewis (Mumford, 1961) stated that no one single definition could be made for the questions like what city is, how it has emerged and what functions it realizes. According to the definition of Lynch, the term city is a structure in space like architectural pieces and it can be perceived in longer time it has bigger scale. As Lynch stressed out, "...moving items of a city and exclusively people living in cities and their activities are as important as constant physical components. And we not only become spectators of such scene, but we become a part of the exhibition along with other participants too. Cities are the products of many creators improving themselves continuously in respect to their own reasons beyond being objects, perceived by billions of people from many different classes and having different characteristics, and even enjoyed matters" (Lynch, 1960). In fact, cities have a rhythm created by different systems coming together just like living things. They react physically to whatever happens around them. Even if cities that have a connection with the past and being the appearance of social designs in architecture remained constant for a while in general, it is in a fluctuation in details in the long run.

Cities have expanded spatially on the one hand, and they have undergone a change to shelter more people on the other hand. That is to say, the way of transportation which was enabled by technology affected the city types; so, the obsolete types and elements of the previous centuries were replaced by new elements. The habitats were formed in the direction of cultural values that cities owned, socio-economic status,

environmental conditions, political decisions or habits. The most important factor which was mostly influenced among reshaped habitats became the housing pattern.

New requirements of urban life reshaped the architecture through new functional typologies, and private family life began to take place in increasing apartment blocks that are the representative of multi-storey life style, when social and public life began to come into existence in spaces such as school, hospital, cultural centre, theatre, etc. Naturally, the new housing typology which is the representative of this new life style has come into the picture as the most effective architectural type in determining the appearance, form and identity of cities.

With the elevation of housings, not only vertical changes were witnessed but also re-organization of urban spatial construction became necessary. In this context, life standards of the consumers changed parallelly. Major changes were experienced in housing architecture, being sub-element of cities within the framework of urbanization phenomenon and rapid population growth in that period considering the architecture undergoing major conceptual changes; housing forms and manner principles were modified; so, new housing types emerged in urban structure. Those were new forms that had never seen and practiced before up to that time (Simmel, 2000).

Different studies were tested by utopians during those periods in order to improve life standards of workers. The utopians described as a step to modern architecture and stressing out the necessity that connections between human being and environment should be strong put into practise a part of the studies. The housings for workers which is a pioneer project of Robert Owen in Scotland, New Lanark considering that the more quality life workers have, the more efficient they will be has brought a new approach

to sheltering conception (Başdoğan, 2011). Yet, all these designed new approaches were considered in remote areas of the city centre. In this context, increasing the performance of workers with healthy conditions as a production of capitalist thought system, meeting the needs with the facilities provided in housing units, and creating a human profile focused only on work were targeted. The idea of designing a separate region for workers in outer boundaries of the city at that period can be observed even today in certain regions of the city as habitats where city-dwellers were distinguished according to their economic income. All these disintegrations are directly related to the functions of cities.

Herewith, the geographical position of a city, its natural and historical texture, its architectural structure, and the economic and cultural life style of the city, its authenticity in the subject of tradition is its feature. The shaping of the city by architectural characteristic and the influences of architecture from city are two important facts that cannot be segregated from each other. As it is mentioned by (Mushatat, 2014); "Urban identity, hence, could be seen in the distinct character that a place or city will have imprinted through its past, present and into the future. It is perceived by urban theorists to comprise three important aspects:

-Physical characteristics and appearances which compose the built environment and fabric (static) (buildings and open spaces).

-Activities and Functions which reflect the common interaction between people and how they act and use their physical context (dynamic), and

-Meanings, signs, and symbols which are considered the most complex features of identity since they are related to human behaviour, intentions and experiences (Perceptual)."

The function of a city is its socio-economic characteristics that are effective in its development and in creating an identity for it. New cities that were established in time began to diversify accordingly with their functions. These functions were grouped under three headings generally as economic, cultural and administrative functions. Those settlements that were diversified as agriculture, industry, commerce, university towns and capital cities influenced the development of housing in unit scale in the direction of supply and demand relationship. Or, the housing units emerging in the direction of urban function influenced the morphology of the city. Both statements are advisable, since city is a structure in the space of architectural works as (Lynch, 1960) stated before. As a matter of fact, city is a living structure and it is in continuous interaction with housing at unit scale.

Taking into consideration the patterns such as tourist cities, capitals or educational towns it can be seen that every city constructed new structures in order to meet their own needs and develop in a vein the urban topography allowed. It can be seen that housing, especially apartment type housings were influenced during that expansion and development process.

It can be observed that storeyed housings appropriate to family structure of those people living in that city and accordingly their life style emerged; the city expanding through developments formed its urban culture too within time.

Considering Famagusta sample which is the main study area of this thesis in the described frame, the city which is an education and tourism city expanded in the directions that its topography allowed. Famagusta which was education city with the arrival of universities during the period after the war grew fast and in an unplanned

way by allowing immigrants. All these developments influenced housing at unit scale and particularly the multi-storey housing, and the apartment blocks that became nearly prototype and nestled smaller square housing units where small families differently from a prototype family, students either living on their own or sharing the flat with their friends, and which resembled to each other mostly emerged at that period. The morphology of the city changed with the increase of those storeyed housing typologies (Irani, 2017). Famagusta, as a city of both tourism and education fostered the emergence of several storeyed buildings in apart hotel concept including small housing units designed for short-term stays, and both studio and housing units with one bedroom or two-bedrooms for longer sheltering. In conclusion, function of cities is affecting the identity of city-dwellers and the housing unit which is the need of city-dwellers and the city increasingly. The city and housing are always in interaction.

Chapter 3

DEVELOPMENT OF MULTI-STOREY LIVING IN NORTH CYPRUS AND FAMAGUSTA IN PARTICULAR

Seizure of Cyprus by outside forces has been repeated many times in its history due to its strategic location. The island was dominated; by Assyrian Kingdom in the 8th century B.C., then Egyptian and Persian administrations dominated it, by Rome in the year 58 B.C., by Byzantine in 395 A.D., and Lusignian in 1191 respectively. The Venice administration which began in 1489 went on till the Ottoman conquest that began in 1571. As of this date, a three hundred year of Ottoman domination was felt. From the year 1878, the island became an English colony as the administration period of the Kingdom of England began. As new regulations were experienced as of this date in many areas such as in administration system, education, health, transportation, communication, urban development, agricultural policies and developing country side of the island, the initiatives that were put into practice from institutional and legal organization to urban and architectural applications define the modernism process. In this way, the island witnessed the first signs of modern architecture during its colonial period. England dominated Cyprus in the year 1914 and then declared it to be its official colony in 1925. At that period, the British rulers founded many innovative projects with respect to law and infrastructure that promoted economic and urban renovation of Cyprus (Tozan, 2009).

The urban development issues also have a similar process to architectural applications. A tendency was observed from the peripheries to the exterior of the existing old urban fabrics located in other main cities than Lefkoşa and Famagusta, having fortification walls covering the entire old city, and which is the most important seaport of the island in the Early Period such as Limassol, Larnaca, Paphos and Kyrenia. It was aimed to ensure control in new development areas through this Law of "Construction Regulation of Roads, Buildings and Wells on Demesne" in 1927. This law, enacted in 1927, became insufficient in terms of controlling urban development accelerating post Second World War. For this reason, it was revised in 1946 and was divided into two parts as "Regulation of Roads and Buildings" and "Urban Planning" Laws.

However, as there was not enough number of specialists to work on urban planning in Cyprus, these two regulations were integrated and gathered under sole law again. Some developments as well as information started to be used for Cyprus regarding modern urban planning conception like ensuring zoning in cities and concentrating functions in specific areas. A number of housing study providing alternative approaches for the officers on the island in 1920s was conducted, afterwards, many projects were designed as the Projects of Hostel and Apartments in 1940s. Those projects reflected the standardization of space qualities and sizes and an arrangement accordingly with the modern lifestyle in settlement of the units obtained through standardization to the land by repetition. The first project among collective housing projects, supported by the government post Second World War, was implemented in 1946. Furthermore, Simpkins underlines the appropriateness of collective housing consisting of detached buildings in a garden or apartment flats at that period. The idea of multi-storey housing which was prevalent in Middle Europe was not popular since it was not preferred in

England at all. However, it emerged in the following decades as urban apartments and started to expand over the island (Tozan, 2009).

To conclude, this part investigates the process of adapting multi-storey housing life in Northern Cyprus with an approach from the general to the specific examples of Famagusta. This section which forms the original part of the thesis mentions about the phases of apartment building in Famagusta and how the first samples differ from the current apartments; in other words, the observed qualities of such apartments assessing case study samples that were obtained in the conducted studies. The samples obtained are investigated under five main titles and terminated with the conclusion part in the direction of the data obtained from the last case study analysis.

3.1 Development of Multi-storey Apartment Block in North Cyprus; Especially in Famagusta

Although the concept of apartment is generally regarded as a type of housing that has emerged as a result of industrialization in the world, there is a different beginning in North Cyprus. In fact, as Lynch (1960) points out, cities are known to be as viable micro-organisms as ever living, but their development and change can be perceived in the long run. One of the most important factors determining the development of a city's typology is its function. The function is determined by the main activities of the residents in that city. Thus, the city grows, develops and shapes in line with the needs of the inhabitants. The most important unit affecting this shape is the housing. Because the basic element needed by people living in a city is the need for housing. It is underlined that the Famagusta city is the main four factors influencing this urban morphology and the housing typology (which are now mostly apartment houses), given the natural limitations, historical development, function and development of the

needs of inhabitants (Oktay, 2002). These are respectively; In 1974, a battle took place between two ethnic groups (Turks and Greeks), the establishment of the 1979 high-tech institute, the transition of the high-tech institute to the 4-year faculty education system in 1986, the conversion of the present name into Eastern Mediterranean University, is the construction of social housing apartments in 1987, which will affect the forms of housing. As Oktay (2002) cited that; The first apartment-type housing developments, "social housing developments", were introduced by the government in 1987, to solve the housing problems of the low- and fixed-income citizens. (Oktay, 2002)

But before all these developments, modernity manifests itself in the single-storey town dwelling in urban and urban life at the end of the British colonial period. With the Republic of Cyprus, which was established in 1960, there has been a brief relaxation in the island and a visible development has been observed in this process. In this period, various typologies began to emerge, such as the multi-storey buildings constructed by the floor addition method as well as the apartment blocks built in one time.At this stage, in the city of Famagusta, single-storey houses began to build with the addition of floors in the direction of user demand, and the concept of apartment building in accordance with today's well-known definition of multi-storey residential buildings (apartments), which is increasingly designed from the beginning and built in one go. As (Uluçay, 2007) indicated, those ‘in between typology’ housing apartments are the first samples being the first steps of single-storey house transformation to multi-storey apartments. In this process, the most striking point is the desire of families to meet the needs of their newly married children.

The types of housing typologies on the island in this step are grouped by (Uluçay, 2007) under three groups that are; I. single-storey houses, II. houses with two independent storeys, III. multi-storey houses. But it will be more accurate to gather them under new three main titles considering the building development phases of Famagusta city during the transition process to multi-storey dwelling life. These are I. independent two storey houses, II. development of apartment types through adding storeys and III. single apartment blocks. (Figure 13, 14, 15)

Figure 13. Two Independent Storey House, Lefkoşa (Uluçay, 2007)

Figure 14. Apartment Types Housing by Adding Storey, Magusa (Author, 2018)

Figure 15. Single Apartment Building (Akmanlar2), Magusa (Author,2018)

The subject is reviewed in more details under foregoing sub-headings in continuation of this section in order to better understand the qualities of developments of the shared

housing conception which is among the first multi-storey life samples in Famagusta city which remains in Turkish side post-war.

3.1.1 Independent Two Storey Houses

Each innovation has emerged on the basis of the traces that previously pointed to it. Two independent storey housing typologies are the best examples for this in the process of entering to multi-storey life. This housing typology has the quality of being the seed of apartment typology that will invade the city through multiplying in a few decades sowed in early period.

As (Uluçay, 2007) indicated, the two independent storey houses, being new housing typology showing up based on the development of the metropolis region as no land to settle was left in the Walled city of Nicosia, in the course of time disappeared upon the transition into new housing typologies like duplex villa and apartment that would emerge later. The same situation applies to Famagusta. However, it is an undeniable fact that the dwellers of the island being accustomed to live in detached houses regard it as an interim step into multi-storey housing buildings. In fact, it can be observed that the first single-storey houses reflect the hall centered spatial organization which is closer to the traditional layout plan, and the second floor is designed the same way as in the ground floor as it can be seen in the samples provided as three steps by Bahar Uluçay.

However, in the second phase that emerged over time, the ground floor remains the same, while the hall of second floor has been minimized and has lost its central living area function. It has left its place to an entrance hall in small central location. Besides that, corridor which is widely used in apartment blocks also today comes to the forefront as the main circulation area separating and linking all locations. It can be

seen that the dining room, lounge room and guestroom are detached through movable furniture. Indeed, the conception of two independent storey housings is the first transformation step of apartment that will show up in a few decades. This housing typology is an important interim form to observe the main changes happened in housing during the transition from single-storey houses to multi-storey life. At the same time, this two independent storey housing type is the mark that shared housing conception was adopted long before apartments came into existence even though it is seen as two-storeyed single property. Later on, it started to disappear with the process of multi-storey dwelling.

3.1.2 Development of Apartment Blocks Through Adding Storeys

Republic of Cyprus was founded in 1960 after the British abandoned the island. While Cypriot Turkish population is dense usually in the walled city, the population density of Cypriot Greeks is seen outside the walls (Önal, Ş.; Dağlı, U.; Doratlı, N., 1999). There is no exact official or physical distinction between Cypriot Turks and Cypriot Greeks at that period, but Cypriot Greeks used to live mostly in south and southeast region of the island, whereas Cypriot Turks would live in the walled city and northwest region. Maraş region where Greeks were densely living was the most developed and urbanized part of the city where tourism-based economic activities were managed. As a fact, walled city was the center of Famagusta, and the city used to expand and enlarge as neighbourhood around this center. It can be assumed that Famagusta city consists of four main parts as different physical and functional features are based on type, rate and development trends essentially. Those are the Walled City, became evident due to its historical background, the quarter newly developed in northwest of the Walled City shaping the existing settlement type, Aşağı Maraş and Maraş, being a district (firstly founded by Cypriot Greeks and later on Cypriot Turks settled in) (Önal, Ş.; Dağlı, U.;

Doratlı, N., 1999). The improvements like buildings, planning of parceled land and street having different functions and located in Baykal region of Aşağı Maraş were designed under the local administrations with the determination of Cape 96 law (Doratlı et al., 2003). Single family urban houses on that region started to be structured as Turkish quarter in the city developing as neighbourhood applied the floor addition method due to the changes in social structure of the society and demand of married children of families for sheltering no matter what their style is (Irani, 2017). Thus, a new apartment building typology was born which came into exist by floor addition method.

The fact that plot dimensions were small as well as some deficiencies in planning made this two-storey inadequate for the growing families. In this way, houses starting to be multi-storeyed over time through floor addition method to single-storey or two storey twin houses caused disorganized structuring in the city layout. Some users tried to find a solution for the vertical circulation needs with ladder system they had added to their single-storey houses from the outside. Even sometimes, this ladder system added later from the outside provided the entrance to the house by connecting to the balcony of the building and so the balcony acquired a new use-function of a follow-up of the landing. Some owners constructed a common stair enclosure by dealing with their neighbours in the side-parcel (ex: Project 8).

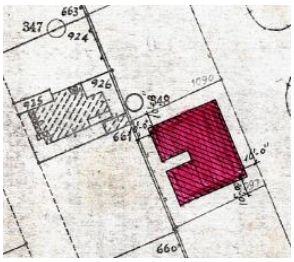


Figure 16. The Location of Project 8 in the Site. (Taken from Municipality Archieve by Author, 2017)

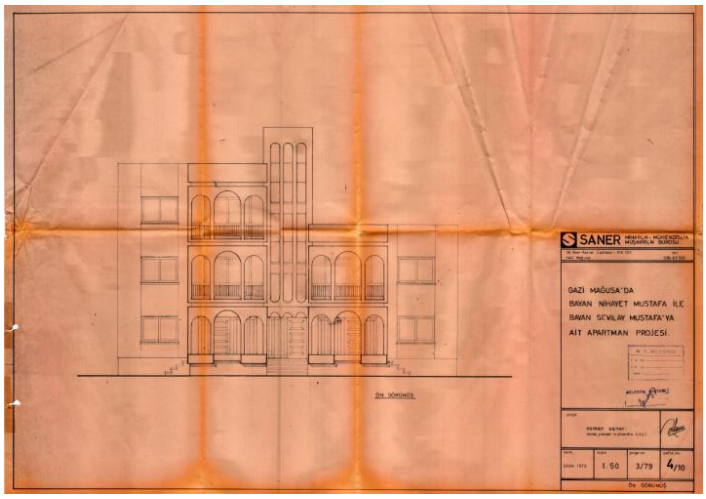


Figure 17. Elevation Drawing of Project 8 (Municipality Archieve by Author, 2017)

Thus, both parties planned to save land foreseeing they would add a storey over time. In fact, even the building seems to be multi-storeyed from the outside due to such idea, but the ground floors usually have the right to use the garden and a separate entrance like a detached single-storey houses. During this process the owners who could not get on with their neighbours began to build multi-storey buildings designed in the form of spindly plan side-staircase which had a new typology. Moreover, such disagreement sometimes can be interpreted as two different stair enclosure situated side by side in a narrow front (ex; Project 22). In fact, even these all developments prove that Famagusta city would meet multi-storey life in a more uncommon way.

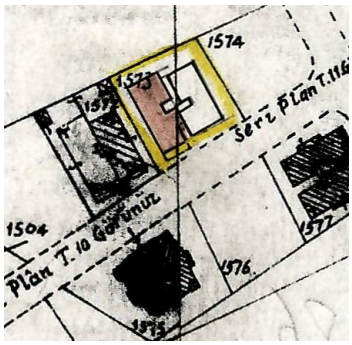


Figure 18. The Location of Project 22 in the Site (Taken from Municipality Archieve by Author, 2017)

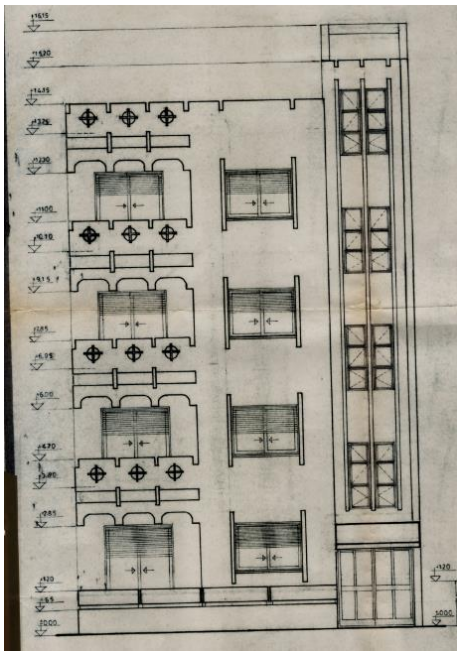


Figure 19. Elevation Drawing of Project 22 (Municipality Archieve by Author, 2017)

3.1.3 Single Apartment Blocks

Before the war, Famagusta city used to be developed more consistently and conformably when developed as an urban scale. Nevertheless, Maraş region which was closed by military intervention started to be called as phantom zone. Consequently, the development of Aşağı Maraş which was fast beside it ceased. At the same time, the city was expanded towards northwest side due to Limni forest located in the west of the city, military zone spread along the coast and limitations of Maraş region in the south (Önal, Ş.; Dağlı, U.; Doratlı, N., 1999).

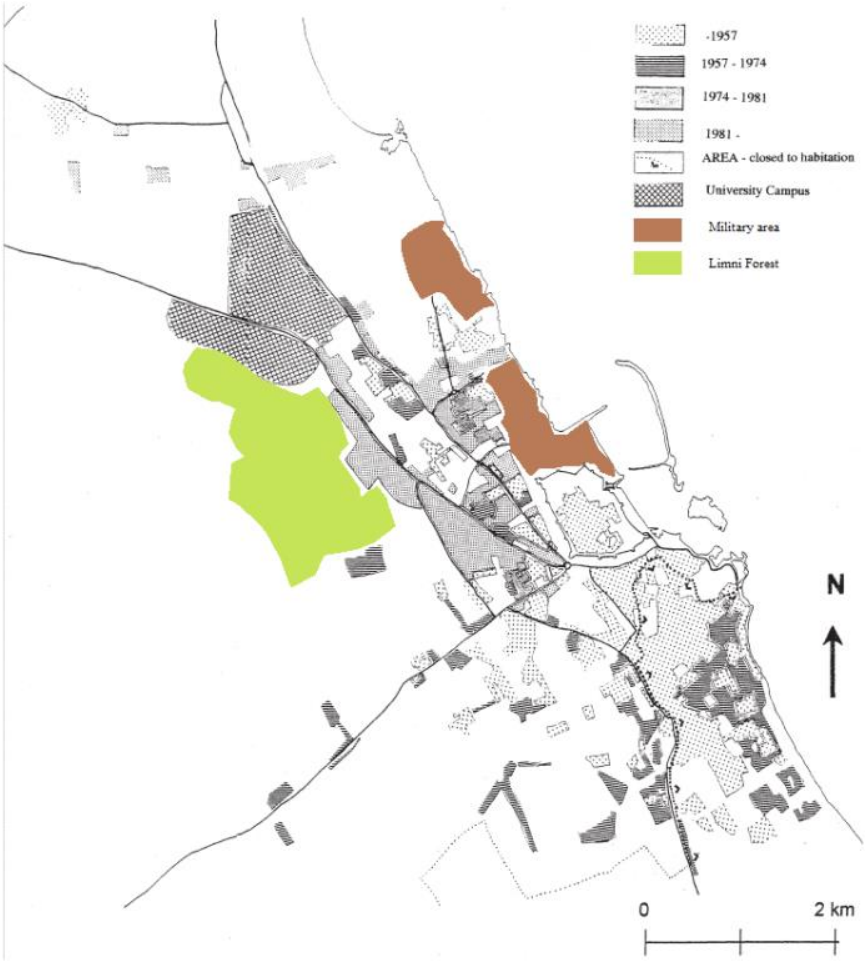


Figure 20. Developments and limitations of Magusa (Önal, Ş.; Dağlı, U.; Doratlı, N., 1999)

Another important factor affecting the development of urban form is the function that determines the economy of the city. As mentioned before, each city has its own distinctive population and structuring in the direction of city function. In this sense, Advanced Technology İnstitute was founded in Famagusta in 1979 so the city became education center which was used to be called as trade and tourism only. The Institute was named as Eastern Mediterranean University which is used currently by adopting four-year faculty education system in 1986. Foundation of the university accelerated the development of the city towards north and brought multi-storey buildings having small housing units that were designed special for students, which was unplanned and fast developing issue.

Afterwards, the ‘apartment’ conception starting to be standardized and multi-storey social housing apartments that were constructed in 1987 could not go beyond altering the first multi-storey housing buildings to have anonymous and monotonous appearance of especially new regions of the city as concrete piles having lost their quality and soul. Nonetheless, the story of apartment building in Famagusta city is not so boring. Apart from the types of multi-storey residential typologies that have been introduced above by the floor addition method, there are planned urban apartment blocks which are built in one time in between the independent two-storey era and the present era of similar / monotonious / prototype type apartment blocks. These planned urban apartments forming the basis of the current thesis were determined upon the archival research conducted and were analysed in case study part.

3.2 Remarkable Precedents of Single Apartment Block in North Cyprus

Some of the authentic approaches stressed in the Unite d’Habitation project in Marseille which is an important sample of “modern” life and housing environments that were brought by Le Corbusier to the architecture at the end of 1940s may have started to leave their marks ten years later on the island. In fact, the samples of multi-storey housing that are mentioned in this section were selected randomly taking into consideration the dates of construction.

As mentioned before, a similar exemplary to Unite d’Habitation was Cinnah 19 Apartment that we encountered under the title multi-storey housing in Turkey. This type of construction that was built at the end of 1950s and at the beginning of 1960s drew attention with its features such as its location on land, duplex apartment solutions, consecutive units, etc. Another exemplary which drew attention on the island with its

extraordinary features at the same period was the Police apartments in Çağlayan. Those apartments were built in 1958 to meet housing needs of police rendering service in Nicosia. Collective housing project of Golden Lane, which was designed by Alison and Peter Smithson in 1952 in London, consisted of housing blocks that were connected to each other by raised streets. It is very important that a project holding traces of an approach mentioned in Cyprus too which was under the management of the United Kingdom at that period was implemented.

Those apartment blocks that are the last examples of housing architecture of the British Colony period were designed by Costas Christofides, the chief architect of Public Works Department (PWD) and their plans were drawn by Georghalli. The project consists of three apartment blocks at a height of 4 floors mutually aligned as to form a triangle on the site plan. Each block evokes the Unite d'Habitation with the settlement of duplex apartment solutions inside. Furthermore, those blocks were attached to the stairway escalated in the central location with foot bridge on the second floor (Bağışkan, 2016).

At that period, the political importance of the island increased in the Eastern Mediterranean Sea right after World War II, and the British rulers established strong urbanization process which cooperated with "corporate modernism" between 1945-60. The trend of urbanization led to the emergence of clearly modernist but certain vernacular reference concrete-frame apartment and office buildings out of the historic town centers. New building legislations were established with regard to "roads and buildings" in 1943 in order to prevent the problems faced in multi-purpose buildings by shaping the ground floor in flexible way to separate it from the upper floors and no restriction relating to expression of modern architecture was left. Right outside the city

wall of Nicosia a new way of modernist language in architecture came out. Newly established rules on buildings gave freedom on the use of new materials with modernist language. In this way, brand new distinct and unified buildings came out in cities with the domination of using the concrete at that period. (Fereos & Phokaides, 2006)

The ground floor and upper floors are detached functionally as it can be seen it the exemplary of Efruz Apartment in Nicosia. This multi-storey reinforced concrete construction is located in the expanding region of the city walls towards outside. The stairwell tower reflects the features of the early modern period on the island with its perforated arrangement, functional detachment between floors and reinforced concrete structure.

As the emergence of modern architecture became widespread after the independence in 1960s, social and individual life changed dramatically. As modernization spreads through the society regarding the adoption of global way of life such as TV broadcasts, magazines, and cinema and so on, architectural project of that period indicates the awareness of the society as being contemporary with the modern way of life. Eventually, political resilience increased the participation of both public and private sector to make investment to support the economy and tourism so that it could become a key sector for the investors. Architects prepare many projects for touristic facilities. Changes in the vertical urban landscape become dominant. Newly erected high-rise buildings in Famagusta on the seaside turned out to be major touristic and local destinations that changed the public space into vacations and recreational spaces. High rise apartments were built in different part of Cyrus between 1960-74 for different

purposes such as for permanent use or summer vacation. Domestic architecture with modern style was mostly related to middle or high class (Bryant, 2012).

After the breakout of colonial period and the independence in Cyprus in 1960s, the (as Fereos&Phokaides called) "unified style" which is allowing to gather the multi-purpose usage and new materials in design, can be seen in architecture with the support of enthusiastic young architects that ensured with the economic development until 1974. The architects, who came to the island at that period, designed in modern style and crafted significant examples. One of the important features of Cypriot modernist architecture was the functionalist approach which was having a great impact in design. Rational organization of circulation and distribution of functions into space to shape the form were important concepts regarding the functionalism (Fereos & Phokaides, 2006).

In brief, it is obvious that multi-storey housing structures are influenced by the traces of the late 1950s and later modern architecture in Northern Cyprus. Those predominantly reinforced concrete structured buildings were the highest structures of that period in their vicinity and hosted units suitable for families in different sizes or consisting of the units of duplex housing. They were erected especially in the regions expanding towards outside the city walls. In fact, they are good examples of the times when an apartment block project would not become a pattern through the characteristics such as independency of the ground floor and upper floors, abundance in functional distribution inside the units and the abundance of units. Those examples demonstrate that mult-storeyed life in Northern Cyprus hosted different qualities together. Accordingly, it is possible to talk about similar qualities specific to Famagusta which is the focal point of this study.

3.3 Overview on Multi-Storey Housing Development in Famagusta

It is known that the lifestyle differences of users affect the architectural character of single-family homes. Although this is not so obvious in multi-storey blocks, the socio-economic and cultural class to which the user belongs, the lifestyle; It is evident that the structure determines the architectural character and hence the evolution it has undergone. The reflection of the identity of the user in the multi-storey houses is even more evident today. This started with the interior design of the apartment blocks, striking its mass and façade character. This is exemplified by the recently designed apartment architecture in the city of Famagusta.

In Famagusta, it is seen that these buildings, which were built in the first term apartments, mostly by the large families of the city, are named after the family's surnames or property owners (Ex Ali Fuat Apt., Hussein Dervis apt.) In some cases, the common staircase In the twin apartment blocks designed to use the house, it seems that the building, which looks like a single apartment block from the outside, gets the name of both owners. (Ex .: Nihayet & Sevilay Mustafa Apt.) The period has been a single block of apartment buildings (Ex: Arzu Apt. Today, it is seen that the newly constructed multi storey buildings are named with concepts such as park, residence, court. These buildings, which rise in complex within the city (ex: Sea House Residence in Gülseren), are designed with the expectation that every age user will be in activities outside the house. in; food and beverage area, sports hall, swimming pool, etc., the user presents an isolated life from city life. Some of the similar structures are confronted as a bulky building that rises alone in the city, at a scale that can be called incompatible with its surroundings. Ex; Golden Residence in Famagusta. The singular apartment block, which had risen to a modest size earlier, contained families with

different income levels. However, with these complex approaches formed by the grouping of several apartment blocks emerging in the future, the income level discrimination in housing is also clearly read. Even today, large complexes are being constructed in remote areas from the city center. For example, Caesar Court and Royal Life Residence in Iskele.

Indeed, after the 1974 war with laying the foundations of today's Eastern Mediterranean University in 1979 and it takes years of immigration from Turkey, consisting of smaller units in the city it observed the multi-storey blocks occur. Designed to be student-focused in the first place to obtain rental income, these apartments have been the blocks of choice for accommodating middle and lower class accommodation needs for immigrants. In this respect, the main objective in apartment blocks built by contractors and property owners in new ventures is to provide the highest possible profit from the building. For this reason, one-bedroom prototypes have started to be applied to two-bedroom apartments, where one floor usually has four apartments. As (Önal, Ş.; Dağlı, U.; Doratlı, N., 1999) stated that:

> Finally, the newly developing quarters in Gazimağusa show a completely different structure to the character of the city. Due to the lack of a master plan for urban development and physical development, it is necessary to take place in accordance with the legislation enacted in 1946 during the British Period, which regulates only individual buildings within unified (overall) plot ratio limits. As a result, these new quarters show a random development without any architectural identity and image. Lack of defined open spaces and green areas, as well as lack of unity; uncontrolled constructions; undefined public spaces in these new quarters, all help to create an environment without character.

Figure 21. A View from Magusa (Author, 2017)

This complex distribution within the city directly affects the plan layout and causes a chaotic situation in the city's appearance, such as detached houses, hybrid apartments, individual apartment blocks, bulky multi-storey buildings, and complexes consisting of several buildings. (Figure 21)

Yet another reason for such a plan is that these apartment units are often shared residences. In this case, the place of the night, or alternatively the private spaces, are taken by personal or personalized spaces of users who are not members of a family. It is inevitable that the comfort of these places is more important than the daytime space.

3.4 General Information on the Early Apartment Blocks: Five Apartments in 1961-73

The first apartment was Evkaf which was belong to Department of Foundations, built in 1961, that was the oldest structure in archival records of the municipality when the building of apartment blocks started to be traced. This apartment, having a linear shape has three storeys. Ali Fuat Apartment which was built in 1969 in Kaleiçi region was on the books under the name ‘apartment’ at that period even though it has only two

storeys. The ground floor was designed as a store. The first storey of this two-storey apartment hosted 4 different housing units. In fact, we can observe that early period apartments spread over walled city and its vicinity towards other regions of the city.

Although Arzu apartment that was built on Ayluka (Baykal in Turkish) region in 1971 out of the walls (Project 3) evokes the form of an ordinary city apartment of our day as a site plan, it reflects the characteristics of the period with its interior organization, detachment of the day and night sections, elevation of stairwell tower with perforated brick braids.

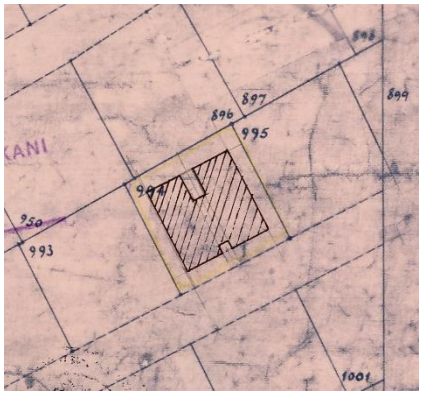


Figure 22. The Location of Project 3 in the Site (Taken from Municipality Archieve by Author, 2017)

Another evidence that Famagusta was in a transition period in multi-storey life at the period when the developing city enlarged in north direction is the Hüseyin Derviş Apartment (Project 4) which was designed as family apartment in 1972.This project that was designed as an apartment of 4 storeys at first changed in 1973 with the name of renovation project and was named as Akmanlar-2 apartment (Project 6) and then was submitted as a 7-storey project and it was accepted. Even though the 4 storeys got licensed in 1972 with the name of Hüseyin Derviş Apartment, the building was built in a lump after gaining acceptance as Akmanlar-2 Apartment. In fact, this case is an

indicator that Famagusta passed through phases in becoming acquainted with multi-storeys that are city apartments in today's context. Actually, another file preluding with file number of 63/72 in 1972 is Akmanlar1 apartment (Project 5). This project that preluded in the municipality after Hüseyin Derviş project was built the same year without considering restoration project necessary. It is known that Akmanlar-2 Apartment entered in the Municipality again under the name of restoration project due to demand in increasing the number of storeys by taking this project as an example.

These 5 different apartment projects that reflect the unique characters of early period in building of apartment blocks during the process starting from the foundation of the Republic of Cyprus until the war in 1974 were applied. Even though the construction of apartment after the war 1974 lived the standstill period of five years approximately, Famagusta city began to gain momentum again in 1978.

Chapter 4

CASE STUDY: EVALUATION OF THE EARLY APARTMENT BLOCKS IN FAMAGUSTA (1958-1987)

Apartment building emerged with the transition of single storey housing into multi-storey housing by adding floors to the buildings in Famagusta in line with the users' needs over time, and it was designed and built in a lump and changed the definition of multi-storey housing into the present shape. The first examples especially form the focal point of this thesis. The difference of the first examples of this kind of apartment architecture which emerged in Famagusta and is designed totally and constructed in a lump from apartment architecture which came out as a result of urbanization process in Turkey of 1950s makes the topic of the present study more interesting. As a matter of fact, the archival research conducted supports that. Only 5 registered apartment projects were detected in Famagusta Turkish Municipality in a period of about ten years from 1960 to the beginning of the 1970s. Those were family apartments that were constructed by famous Turkish Cypriot families. Considering spatial organization of those first generation apartments, their appropriateness to the plot and location in the city, it can be seen clearly that they have different architectural characteristics from today's ordinary apartments. This thesis aim to read the back plan of this different character. Thus, instead of reading *formal aesthetic* with regard to the form and façade of the architecture of early period apartment blocks, the building characteristics, floor characteristics and unit properties were taken into consideration.

4.1 Methodology for Data Collection

A three-month period archival research was carried out in order to collect the necessary data for forming the infrastructure of the study. Every file was investigated one by one starting from 1958, which is the oldest record date of those files, to 1987 that were present in the archive of Famagusta Turkish Municipality in accompany with the responsible for archives with the permission taken from Famagusta Municipality. However, the records before 1958, namely, older projects could not be accessed. The projects were not used to be registered on computer environment at the period of Famagusta Turkish Municipality. In fact, a part of the archive was burnt during the fire breaking out and the burning documents could not be transferred into the new archive of Famagusta Turkish Municipality moving to a new building after the fight. Since the project records started to be archived on computer environment as of the mid 1980s, those which were belong to prehistorical period were found and taken out of the files in the archive at the end of a long work, and recorded by the researcher on the basis of project name and record number. Consequently, a file containing 26 different projects was obtained after the disclosure of apartment projects that were kept inside unopened files perhaps for long years in archive cabinets (Figure 23). Those projects that were completely hand-drawn were digitized through professional browser. In consequence, it was seen that each project reflected the characteristics of that period and its designer through the factors such as selection of paper, quality of drawing, technical drawing knowledge and care, namely the differences as well as architectural subjectivity.

Yet, the plans of these projects especially which became hard to read naturally as they physically became old and wore down within time were drawn once again schematically on computer environment in order to make their analyses. Those plans were placed in an A4 table, analyzed and evaluated according to the headings indicated in this table. These headings are given in the table as functional, dimensional, relational and organizational features of spaces forming the features of building, floors and their usage features and housing units. Thus, an inventory study emerged including the analyses of 26 projects that were prepared with registration number and year of the file under the scope of the titles mentioned above. At the end of the study, numerical and verbal results of this evaluation were compared to the samples of common apartment typologies that have emerged in the last 15 years. The scanned copies of the selected apartment projects were arranged in A3 size and presented after inventory pages *in appendix.*

Table 1. List of Collected Projects (Author, 2018)

List of Collected Data:			
Project Year:	Project Number:	Project Name:	Location of the Building:
1961	1	Evkaf Apt.	Namık Kemal
1969	2	Ali Fuat Apt.	Walled City
1971	3	Arzu Apt.	Baykal
1972	4	Hüseyin Derviş	Karakol
1972	5	Akmanlar 1	Karakol
1973	6	Akmanlar 2	Karakol
1978	7	Naciye & Şadan	Baykal
1979	8	Nihayet & Sevilay	Baykal
1979	9	Kutup Mehmet Apt.	Baykal
1979	10	Mehmet Öz Karaman	Baykal
1980	11	Hüseyin Osman Zinnureyn	Baykal
1980	12	Dağlı Kardeşler	Baykal
1980	13	Mustafa Ülker Hüseyin	Baykal
1981	14	Balcıoğlu Dwelling	Baykal
1984	15	Halil Murat Apt.	Baykal
1984	16	Safiye İ. & Erdoğan S.	Baykal
1984	17	Hanife M. Osman	Baykal
1984	18	Mehmet Niyazi Apt.	Baykal
1984	19	Sultan N. & Mevlüt B. Apt.	Baykal
1984	20	Hasan M. Süleyman Apt.	Baykal
1985	21	Şükrü Ahmet Apt.	Baykal
1986	22	Ali Ç. İbrahim Apt.	Karakol
1987	23	Gürsel A. P. & Soner E. R.	Baykal
1987	24	Gülgün K. & Kemal A. Apt	Baykal
1987	25	Levent Sanayi Apt.	Baykal
1987	26	Arif Hayrettin	Sakarya

4.2 Analysis of the Collected Data

In this part of the study, the 26 apartment buildings collected according to the date of the final construction of the archive work, using the four main headings previously used by (Yamen, 2015). It is inventoried based on building characteristic, floor characteristic, and unit properties. The values of the projects examined are summarized in tables in the final section. The results of the content analysis are included in the appendix section of 26 projects that are inventoried.

The results obtained by the analysis of the building characteristics were evaluated on the subheadings such as the number of facades, the number of facades, the use of ground floor, the existence of the basement floor, the position of the staircase, etc. In order to be able to observe and understand the evaluation results more clearly, it has been presented in tabular form under the title of building characteristic.

Under the heading of the floor characteristic, the number of units on the floor and unit variety are analyzed and the change in the historical process is emphasized compared to the first examples of the monolithic multi-storey house today.

When inventorying is done, two different values are entered in the Unit Properties section as total number of spaces in unit and total variety spaces in unit according to the unit variety in each apartment block. The aim here is to be able to calculate how the unit interior space variation in the first projects changes over time. Since the calculations are mostly 3 + 1 units, the evaluation is done through these units. 21 projects have a total of 231 rooms and 151 various rooms. Divide by 21 in both figures to find the average value. Thus; the average ratio obtained shows 11 space and 7 different funtioning spaces.

Regarding the space of places, it analyzes the reflection of the various places and monotone units that have disappeared over time in square meters. Thus, the size and organization of living spaces have changed with the names of the missing spaces.

The façade character and external form approaches of the buildings are not included in the scope of the examination.

All of the deductions obtained under these four headings are tabulated and summerized in the conclusion section.

4.2.1 Building Characteristic

As Famagusta city developed within years, each region that was allowed to be inhabited went through a process of different parceling processes. Consequently, land sizes in the regions that started to develop after 1970s increased, while the land sizes in Baykal region which developed after 1950s were smaller since they were divided into plots to build detached single-storey twin buildings (see the first parceling in Irani's thesis). Those new plots that were more suitable for apartment housing not only relieved the design of multi-storey housing but also caused the apartments to be standardized.

Table 2. Building Characteristics of 26 Apartments (Author, 2018)

Building Characteristic																											
Project Number:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Accordance of building with site	C	C	C	C	C	C	C	C	C	C	I	C	C	C	C	C	C	C	C	C	I	I	I	I	C	C
Location of building in site	U	F	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Façade number	4	2	4	4	4	4	3	4	4	4	4	4	4	3	4	4	3	4	3	4	4	3	3	4	4	4
Number of floor	3	2	4	4	7	7	4	2	6	1	4	3	2	4	2	4	4	3	3	4	5	2	3	4	4	3
The usage of ground floor	S	S	D	D	D	D	D	P	S	D	S	D	P	D	S D	S D	S	S	D	S	S	D	D	D	D	S
Basement floor	-	-	+	-	-	-	-	-	+	+	+	-	-	-	+	-	+	-	-	+	+	-	-	-	-	-
Number of basement floor	-	-	1	-	-	-	-	-	1	1	1	-	-	-	1	-	1	-	-	1	1	-	-	-	-	-
The usage of basement floor	-	-	P	-	-	-	-	-	P	P	P	-	-	-	S	-	P	-	-	P S	P S	-	-	-	-	-
Location of staircase	B	M	F	F	F	F	F	F	F	F	O	F	F	F	F	F	F	M	O	M	O	F	O	O	F	F
Staircase tower	S	C	S	S	S	S	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C

Legend:

Accordance of building with site:	Compatible: C			Incompatible: I	The usage of ground floor:	Shop: S	Dwelling : D	Car Parking: P
Location of building in site:	Fit: F			Unfit: U	The usage of basement floor:		Storage: S	Car Parking: P
Location of staircase:	Front : F	Back : B	Middle : M	Overside: O	Staircase tower:		Closed: C	Semi open: S

The apartments in Evkaf Apartment (Project 1) which was built in 1961 were aligned along the façade in parallel with the main road. A stair tower is located at the rear front of a building with a rectangular position parallel to the road. The circulation area is located at the rear front of a building, namely it is an exterior corridor which provides access to the apartments after the stair tower. The building is located outside the boundary line with a stair tower and four façades, two of which were long and the other two were narrow. There is a duplex unit in the corner on the upper floor of the store floor of the building whose ground floor was designed as store. Having only three storeys with city walls in front is an indicator that it is a building complying with the horizontal continuity of the city without any contradiction.

Ali Fuat Apartment (Project 2) is the most attractive one among early period apartments in Famagusta, within the walls in 1969. The building that was built fit to the land where it was located had only two storeys and was designed as an apartment. The ground floor was designed as a store and L shape stair tower was located at the center of the building. Since the building which was built as an attached building was located in the corner plot, has only two façades. Ali Fuat Apartment which recalls Ceylan Apartment in Istanbul (in 1933) (see on page 34) has skylight area, named as courtyard in the project and located just behind the stair tower. This space which was left in attached buildings, having no distance to the next-door became very popular in multi-storey housing apartments in the following periods in order that it could be used as "space for light".

Arzu Apartment which was built in Baykal region of Famagusta in 1971; it has the quality of being the first prototype recalling the present apartment blocks. In this building which was designed by setting setbacks from four corners of the boundary lines within the scope of "Cap 96" located in Baykal region, the stair tower was located vertically on the front façade including the entrance to the building with perforated brick surface, thus the building was allowed to get air and light. This application started to be used commonly in city apartments that were built in the following years. This apartment, having four façades was built as four-storeys. The building evokes the "cantilever" in traditional typology with its solid organization, parapets and eaves in front of the stairwell tower. It draws the attraction with this feature, and distinguishes from other buildings easily.

Later on, the Akmanlar-1 & Akmanlar-2 projects that were constructed as 7-storeys at the beginning of 1970s (Project 5&6) can be seen as the main typologies of city

apartment concept, which tends to rise. One of the most remarkable characteristics of those apartments is that stair towers which are closed with a grid surface formed by perforated brick braids that are used in the early period apartments are eradicated in the front façade, and reflect the two-unit arrangement in the plan organization to the façade and thus, making different the main façade facing the road. These buildings are located in the middle of land setting back for minimum four meters each, from their land borders. Unlike the first two samples (Evkaf & Ali Fuat Apartments), ground floors are used as housing, as in Arzu Apartment. Those two apartment blocks that drew the attention at that period in Karakol as the highest structures cannot be recognized anymore and even they are lost in the developing and expanding city.

Construction of the apartment type buildings that halted after the war at that period was brought to agenda with the housing project belonging to Naciye & Şadan M. Salih (Project 7) that was constructed in Baykal region in 1978. This building is a very important sample for apartment housing built through storey adding method. This structure whose first two storeys were built before has a hybrid appearance in this respect. While the ground floor uses directly the garden like a detached house independent from other upper storeys, the upper storeys are accessed with help of stairwell tower in front of the building. The stairwell tower of this building which has in total four storeys was built near the border of next-door neighbor for common use considering that next-door neighbor was going to build an attached house. Thus, both proprietors maximally benefited the plot size which was small using commonly the single stairwell tower in the middle.

Another sample of hybrid type is the apartments belonging to Nihayet & Sevilay Mustafa built in 1979 (Project 8). This apartment type was designed in such a way that

two floors on one side and three floors on the other, in line with the needs of two separate families to allow them later add storeys in case of any need. Thus, it makes an impression that it is an unfinished apartment project when seen from outside.

Another noteworthy project designed the same year is the apartment project belonging to Kutup Mehmet and built on Larnaca road (Project 9). The building, constructed by master architect Bora Altun, who was one of the most famous names at that period, was built with a basement, a ground floor and five storeys. The basement floor of the apartment was designed as parking area, and the entrance of vehicles to the building was ensured through a ramp by the side of apartment. In fact, this building using the basement floor as parking area is an interesting and the first sample reflecting directly the increase of possession of cars in changing life to multi-storey housing design in Famagusta city.

The idea of parking area on the basement floor that was applied in the aforementioned project of the Architect Altun was practiced in some apartments even though not so common at that period. On the other hand, Halil Murat Apartment (Project 15), built in 1981, attracted attention with mezzanine floor which was built for the usage of store on the ground floor. Another apartment project fitting the borders of corner plot and built in 1984 is the apartment belonging to Hanife & Mustafa Osman (Project 17). The most important feature of this project is that it includes a different use function in a single apartment block, apart from the store and residence. The first floor of the building whose ground floor was constructed as store is an office and the upper floor is residence. It can be seen this functional and diverse use was tried to be applied in a single apartment which was built by Burhan Altun and belonging to Şükrü Ahmet (Project 21) in the following periods. When it comes to the 1987, the repetitions such

as the closure of stair tower in multi-storey housing, the design of single type units, and the application of the same unit in every floor draw the attention.

4.2.2 Floor Characteristic

The diversity that was observed in the early period apartments between 1961-1973 in Mağusa, gradually vanished and instead, the dedifferentiation in apartments of the last period increased. However, some of the buildings that were constructed by the famous extended families of the period were duplex, having a spacious circulation area consisting of two, three or four bedrooms, a corridor and halls. Those apartments host housing units in different sizes at the same time.

Table 3. Floor/Storey Characteristics of 26 Apartments (Author, 2018)

Storey Characteristic																										
Project Number:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Number of flats (units)																										
Ground floor	-	-	2	2	2	2	1	2	-	2	-	2	-	1	1	1	-	-	1	-	-	1	1	1	2	-
First floor	5	4	2	2	2	2	1	2	4		1	2	2	1	2	2	-	2	1	2	6	1	1	1	2	2
Second floor	4				2	2	1	1	4			2		1		2	-		1	2	6	1	1	1	2	2
Third floor					2	2	1		4					1		2	2			2	6	1		1	2	
Fourth floor					2	1			4																	
Fifth floor					2	1			4																	
Sixth floor					1	1																				
Seventh floor																										
Typical floor			2	2			1	2	4			2		1		2			1	2	6	1	1	1	2	2
Unit variety:																										
(1+1)	x								x																	
(2+1)	x	x	x		x	x															x					
(3+1)		x			x		x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
(4+1)				x		x										x										
Duplex	x																									

There are five flats on the first floor and four flats on the second floor of the Evkaf Apartment which was built in 1961. The building has totally eight units with two

bedrooms and one duplex apartment. The storey height is 330 cm on the ground and, 300 cm on the first and the second floors. Ali Fuat Apartment in Kaleiçi consists of two units with three bedrooms and two units with two bedrooms. In total, there are four flats in each storey. Nevertheless, no unit in the building, using the whole plot in attached buildings resembles another. The ground floor of the apartment was 4:50 cm at height, while flat height was the same with Evkaf Apartment. All buildings, excluding Arzu Apartment in 1971, generally had three bedrooms as of that period until the date when Kutup Mehmet Apartment was built in 1979. Those were generally constructed as each floor to include one apartment in long, narrow rectangular form as they shared the stair tower with their twin neighbor apartments. In bigger plots, the site plan which was obtained by setting back from the land borders seems to be almost in square form. These samples are generally houses with three bedrooms and two apartments on each floor. We can see that Kutup Mehmet Apartment has four flats on each floor, and the flats consist of two separate rooms having no definition of a certain function like office or housing. The trigger of flat structure of 1+1 that might take place in the following period draws the attention. Apart from the flat with four bedrooms on the ground floor of Safiye İsmail & Erdoğan Salih Apartment which was built in 1984, the rest flats have three bedrooms. This demonstrates that the single apartment with two bedrooms which was built in Famagusta until the year 1987 was Arzu Apartment. Except that, Kutup Mehmet Apartment can be accepted as one of the first samples of today's 1+1 flats.

4.2.3 Unit Properties

As a result of the analysis and investigation of the plan of housing units of the early period apartments: variety of usage that different spaces offer, and attractive sizes and locations of particularly kitchens and halls in this regard, clarification of the formation

of night/day, formal/informal zones by the inter space relations, and indispensable spatial use and experience richness in a housing unit stemming from the testing of various spatial organizations can be seen. The following sub-headings mention about these facts.

4.2.3.1 Variety of Spaces/Space Variety/Diverse Spaces

The most attractive feature of early period apartment blocks that were built with at least three bedrooms for middle and upper class in Famagusta is the variety of space. Those spaces which do not exist in many apartments today are evidence of the difference of early period samples. Associating or separating spaces depended on function diversity such as living room, dining room, guest room, daily room, hall, warehouse and laundry offer variety and mobility in space perception and use. This draws the attention as an indicator of richness for indoor daily life. Although Arzu Apartment which was built in 1971 consisted of units having only two bedrooms as private spaces within the period researched, hosts four separate spaces used for informal purposes like hall, daily room, dining room, and formal purposes like guest room, but in relation with each other.

The bedrooms also differentiated as master bedroom and child room. The day and night rooms having a separate bathroom and toilet dissociate from each other by a corridor. The kitchen door opens directly to the hall as a separate space. Evkaf Apartment and Ali Fuat Apartment have similar features to Arzu Apartment.

The hall concept lost its previous feature of being entrance hall in Akmanlar-1 and Akmanlar-2 Apartments, and was replaced by a daily room concept. Informal feature of the section allowing the entrance into the building is an indicator of the tendency to open out not with spaces having an entrance hall and a corridor of Mediterranean

housing, but with main spaces like lounge room. Despite that, the day and night sections in those two apartments are divided by a long corridor. While the kitchen is located right next to day zone in general, it seems to be exceptionally located at the farthest point of night zones in Mehmet Özkaraman Apartment which was built in 1979 (Project 10). It is clear that a kitchen is one of the most private spaces of family life. This type of kitchen can be seen in some exceptional apartments like Dağlı Kardeşler Apartment, (Project 12) and Hanife Mustafa Osman Apartment (Project 17). In some of the early period apartments there are some samples where the kitchen is bigger than the master bedroom or equal. (For ex; Ali Fuat Apt. Project 2)

Table 4. The Changing Position of the Kitchen through the Time

It can be seen in other samples than the ones mentioned above that the kitchen is located right next to daytime living spaces. It can be seen that the walls are removed and the kitchen is included in daily life in many examples such as Leventler Sanayi Apartment (Project 25), Mehmet Niyazi Apartment (Project 18), Safiye İsmail & Erdoğan Salih Apartment (Project 16). The kitchen which is an extension of wet area and located in the center of the flat, separating the day and night zones like in Evkaf Apartment, Ali Fuat Apartment, Arzu Apartment, Akmanlar 1&2 Apartments is increasingly included in daily life. The kitchen has become an extension of daily living space today in many projects built in Famagusta. The spaces such as hall, daily room,

dining room and guest room are about to disappear, while the kitchen has become an important part of the house and offers living space (Table 4).

4.2.3.2 Function Zones and Space Areas

In the course of time, the idea of gaining more from plots influenced most the square meters of flats. In the course of apartment buildings, the square meters of circulation areas observed in the region of Famagusta and in Turkey, among other countries that are particularly known are decreasing. The use of a large circulation area between approximately 7 and 10 square meters (nearly the size of a room) before 1974 reduced circulation areas to reach more a functional space organization, unlike the observed early period apartment samples. Thus, it became inevitable to support the main usage areas in terms of square meters.

However, the living spaces where users of those first samples were going to spend their daily time were directly proportional to the number of rooms, at least at an appropriate size. The proportion of night section began to be equal to daytime section until the early 1980s. However, this proportion started to develop conversely as of 1980s. While the night section stayed constant as spatial organizations with three rooms, one bathroom and WC, the daytime section gradually diminished and reduced to a single space within time with the disappearance of daytime spaces like lounge room, dining room and guestroom that were related to each other. Consequently, the proportion between day and night sections started to develop conversely (numerical descriptions, support, etc.).

Table 5. Space Areas of 26 Apartments (Author, 2018)

Space Areas (sqm.)										
Unit Types:	**(2+1)**					**(3+1)**				
Space Names:	Living area	Kitch.	Bath.	Room	Circul. area	Living room	Kitch	Bath.	Room	Circul. area
Project Number:										
1	12 m²	7 m²	5 m²	8-10 m²	8 m²	-	-	-	-	-
2	25 m²	12m²	6m²	12-13m²	12m²	30m²	14m²	8m²	10-13-13m²	16m²
3	38m²	11m²	6m²	13-14m²	15m²	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-
5	34m²	15 m²	4	15-15 m²	9 m²	43 m²	12 m²	5 m²	12-14-16 m²	10 m²
6	25 m²	10 m²	4 m²	11-13 m²	7 m²	-	-	-	-	-
7	-	-	-	-	-	34 m²	14 m²	5 m²	13-16-16 m²	21 m²
8	-	-	-	-	-	20 m²	9 m²	4 m²	9-10-17 m²	19 m²
9	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	23 m²	14 m²	5 m²	14-15-15 m²	23 m²
11	-	-	-	-	-	21 m²	13 m²	4 m²	11-11-13 m²	15 m²
12	-	-	-	-	-	25 m²	17 m²	5 m²	15-17-17 m²	26 m²
13	-	-	-	-	-	20 m²	9 m²	4 m²	9-10-17 m²	19 m²
14	-	-	-	-	-	22 m²	11 m²	4 m²	10-10-11 m²	6 m²
15	-	-	-	-	-	20 m²	13 m²	5 m²	10-12-12 m²	19 m²
16	-	-	-	-	-	29 m²	15 m²	5 m²	9-11-14 m²	7 m²
17	-	-	-	-	-	25 m²	15 m²	5 m²	11-13-15 m²	9 m²
18	-	-	-	-	-	33 m²	11 m²	4 m²	11-12-14 m²	11 m²
19	-	-	-	-	-	35 m²		6 m²	8-10-13 m²	4 m²
20	-	-	-	-	-	22 m²	12 m²	4 m²	9-10-12 m²	15 m²
21	26 m²	9 m²	5 m²	8-11 m²	5 m²	21 m²	9 m²	6 m²	10-11-15 m²	7 m²
22	-	-	-	-	-	26 m²	16 m²	7 m²	12-13-15 m²	14 m²
23	-	-	-	-	-	24 m²	17 m²	7 m²	11-11-18 m²	12 m²
24	-	-	-	-	-	24 m²	17 m²	5 m²	11-12-16 m²	14 m²
25	-					37 m²	14 m²	5 m²	11-11-14 m²	5 m²
26	-	-	-	-	-	15 m²	13 m²	5 m²	9-11-12 m²	18 m²
Total:	14	64	231	34	7	12	52	167	26	6
Average:	7	10.6	11	11.3	7	6	8.6	7.9	8.6	6

However, it is not only the daytime sections that became smaller and standardized within time. The size of rooms in housings, which were called as flats with three rooms are even smaller than early period child rooms. For example, this is clearer in the projects where many functions are applied in a single apartment like Şükrü Ahmet Apartment (Project 21). Even though rooms in general became smaller after 1980, the size of master bedroom was preserved when compared to other rooms. While room sizes were arranged before at close rates in a flat with three rooms (for example, 12-

13-14 m2), they turned into being one bigger room (11-11-14 m2) than the others in the following periods. This last half-century change can be seen easily when 26 samples are handled and examined altogether.

4.2.3.3 Spatial relations

The elements of spatial definition and openings not only characterize the enclosed and weak space definitions but the types of spatial relationships, related to the degree to which the space remains autonomous or more or less linked to other spaces. Accordingly, there are two basic types of spatial relations underlined by (Meiss, 1986): Juxtaposition and interpenetration. (Pierre von Meis, elements of architecture)

When the first apartment samples in Famagusta are analyzed in this regard, it can be seen that the kitchen, wet areas and private spaces are aligned juxtaposedly as cell space units, and they only expose a juxtapositional spatial organization by means of another area, namely, circulation area (corridor or hall). However, it can be seen that the relationships established among spaces of daily life have a more flexible roaming network than today's city apartments thanks to the transitions. The space circulations are divided into three; axial, loop and hall(s) according to the relation with each other (Meiss, 1986). The entrance and exit are at different points in axial circulations. The circulation between spaces draws a complete circle in loop areas. Hall circulation means that a space on the focal point gathers all spaces around it. It is possible to find those three different organizational solutions in early period Famagusta apartments. However, the most extraordinary one among them is the loop organization. It is always necessary to visit the area on the focal point in order to pass from one place to another in such circulation areas. Juxtaposed openings between rooms that do not have precise borders like Evkaf Apartment, Arzu Apartment allow users to move comfortably

inside the house. Thus, the users who want to pass from one area to another can use spaces freely without having to pass through the space on the focal point. For example, the door used between the living room and corridor which was used in Dağlı Kardeşler Apartment in 1980 provide loop and flexibility in the use of space. So, a user, trying to arrive at night zones does not necessarily pass through the entrance hall every time. Another similar example is Akmanlar1 Apartment. The living spaces are freely used by the users thanks to the loop area circulation that can be located among daily room, balcony, guest room, dining room and corridor. This loop circulation, applied in nearly all apartment examples that were examined gradually disappeared over time unfortunately. For example, there is axial circulation network but not loop in the samples such as Sultan Noyan Apartment in 1984, Şükrü Ahmet Apartment in 1985. In fact, this topic is one of the spatial qualities that today's apartments in Famagusta began to lose towards the end of the 1980s. In conclusion, when we examine the first apartment examples of Famagusta, we can see that they are rich projects where many important features can be seen in a plan with regard to spatial design, circulation and inter space relations.

4.3 Results of the Case Study

While every building shapes in accordance with land, location and its functions; the cities have a complicated structure formed by the constitution of different buildings occured through different settlements and various urban fabrics (Tsai, 2005). From this it can be seen that Famagusta city building typology is formed by different morpholic structures.

The period of mutlti-storey structurings is a determining role in the formation of urban morphology, while the land size, changing and shaping in line with regional subdivision, is one of the most important factors influencing the configurations of

apartment buildings. In this sense, it has been determined that every emergent apartment is constructed as part of certain limitations depending upon the location and land -and contains specific qualities. Such that, the quantitative and quantitative values resulting from the inventory study are presented in this section via tables.

Considering the values on the building characteristic table, some facts for the apartment type housings of the years between 1961 – 1987 in Mağusa are listed below:

- They are generally seen in accordance with ground borders
- All multi-storey buildings are located with retractions from butts and bounds, except for Ali Fuat apartment in ´Kaleici´ (inappropriate for the land).
- The apartment buildings usually have 3 or 4 facades.
- The land subdivision and size has influenced the development of the apartment type housings to a great extent.
- At the first periods the 2-3 – storey buildings have been called ´apartment´.
- Within those years the biggest constructed building was 7-storey–height.
- The use of elevators in some buildings with numbers of floors draw some attention.
- But the general situation shows that multi-storey buildings are 3 or 4 –storey-height.
- Although the basement is generally used as independent housings, the use of shops is quite common.
- Such that, in some examples both of the functions have been used together. (One section of basement as housing, one as workplace)
- The separate use of toilets in the shops was of interest.
- Some examples show us the storey-use as galleries.

- The number of floors of a basement is maximum one.
- Even if there is not much construction of basement, they are usually used as car parks or storehouse.
- While half-open stair enclosures with open-hole brickworks were constructed in the first examples, in time such stair enclosures were shut down. There are even examples in which the position glides from the front facade towards the center of the building.

Considering the storey characteristic features of this period´s apartments:

- They usually have 2 units at one floor.
- The apartments with 1 unit in every floor are those which are contiguous with the buildings which are built on long rectangle land with its short facade to the road with one side at the neighbour's parcel.
- Projects have been constructed in which there are agreements with the neighbor for the joint use of stair enclosure with the aim of solution for the negative side of the land size.
- As a result of having two separate owners, the number of the floor at one half of the building and the total building height is different from the other half, even if there is an appearance of an apartment as a whole in the layout plan of apartments constructed in this way.
- Taking a look at the variety of units at the floor, it can be seen that the first examples hold several units of different sizes such as (1+1), (2+1), (3+1) duplex.
- But in time this variety gives place to (3+1) units. Today we encounter apartments of (2+1) units and 4 units at every floor.

Back at this point, it can be seen that the room variety inside the units undergo a similar process. Such that entitled as unit properties room numbers have been collected by considering independent room numbers noted down for every unit and 21 projects holding housing samples with different functional room numbers (3+1) data has been collected and calculated as about 64 percent. This means that; within the inspected 21 architectural apartment projects there are rooms having 7 different functions and usage varieties at one (3+1) unit owning about 11 independent rooms. Today it is observed that this different function and usage variety decreases.

- By taking this rate into consideration, the fact of 11 rooms with different functions within 12 independent sections in some examples shows the rich room variety above the average value of the first examples. (This comparison has been made upon apartments owning (3+1) units).
- In time it can be seen that some examples lose the room variety by a rate of 70%.

Looking at the changes in the values of room areas, units of 2+1 and 3+1 have been taken into consideration during this analysis. In this direction;

- Even if there is no radical change in the walk area which used to have an area as big as a room in the first samples, it can be observed that this walk area has a downward tendency.
- While the room sizes in the first samples were serial (11-12-13m2) size or (12-15-15m2) with one small and two equally big rooms, today it can be observed that in time this changed into two equally small and one big room (11-11-14m2).

- While an increase of 1-2 meters can be observed in the bathrooms, it is clear that the downward tendency of the spatial variety in the living areas (such as bedroom, living room) influences the spatial areas even a little.

Lastly, when inspecting the space organization;

- It occurs that night and day rooms mostly reveal different organization characteristics; while the day rooms are within a circular relationship pieced together.
- It can be seen that night rooms own an axial organization per hallway and that in time the kitchen, which falls into night rooms in the project becomes the function separating the night and day rooms.
- So in the course of time the kitchen loses its functions as separator between night and day rooms and becomes an extension of a day room, the living room.
- Looking at samples preparing for this period, it shows

  Projects in which the kitchen still serves the function of a separator between night and day rooms is accessible to two doors adds freedom to the circular loop and additionally shows its tendency towards being a part of day rooms and being a frequented place as a transit area. From this one can realize that the solution of open kitchens in today´s apartments are commonly shared.

As a result, the revealing of some qualities of apartment units changing or discharging in time and its comparison with those from the present day and a discussion upon it have been provided with this case study made upon the first apartment samples in Famagusta.

4.4 Comparison between Early and Later Apartment Blocks

The fact that there are both similarities and differences in the early and later apartment blocks has been mentioned when appropriate while the apartment process of Famagusta city is being investigated. Still it will be beneficial to look at this topic over some randomly chosen samples of today´s apartments. As mentioned before, the function of the city also influences the residential building. Such that, the first apartments of Famagusta have turnt out to be housings vertically growing of prominent families showing the structure of extended family. But later with the established Eastern Mediterranean University the city has changed to an education city.

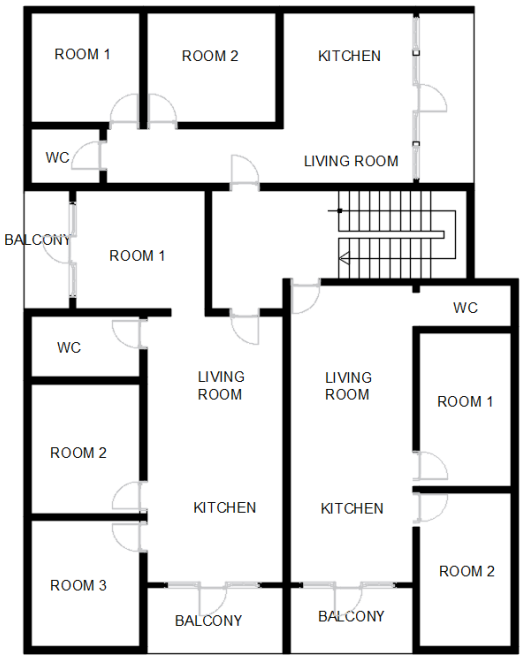
Actually this transformation has changed the family structure of the society and the life-style and therefore naturally affected and changed the apartment type housing settlements.

The day rooms with big square meters visible in the first samples gave place to smaller areas which can be referred as common areas. The obtained migrations from Turkey post-war and the establishment of the university have caused a socio-cultural and socio-economic rupture with the society meeting a new social class. The fact that the university is close to the city center was the reason for the construction of apartments close to the university or city center with the aim of meeting the housing needs of the new students. This situation has given high-income families a lead to prefer new housing projects spanning uptown.

As visible at Tonguz Ayman Apartment above, apartment blocks containing at least 3 or more units at one floor generally are built with (1+1), (2+1) rooms. As

seen in the sample, there are no concepts such as circulation areas providing a transit between day rooms or night rooms even with apartments containing (3+1) units.

Table 6. Tonguz Ayman Aparment (Author, 2018)

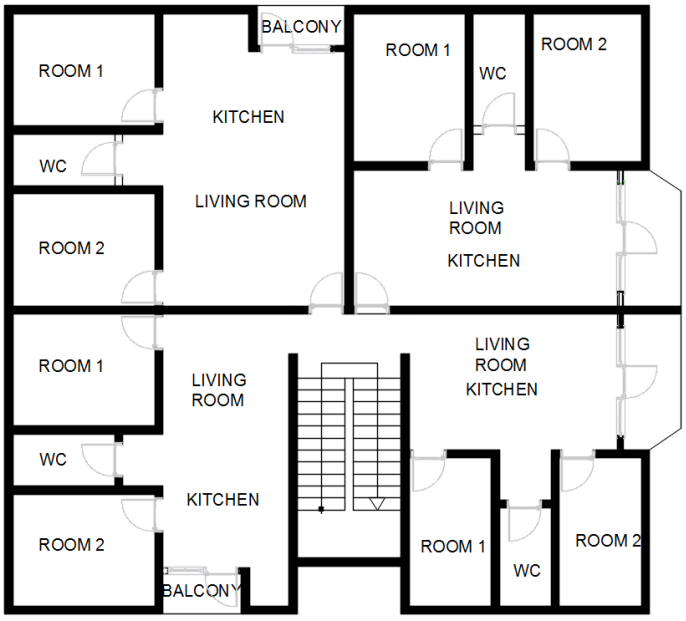


There is the need for areas requiring an informal way of use such as honoring guests at home as the changing life-style has an outward tendency and most of the family members are working. And this has caused the disappearance of the concept of daily room, guest room and living room. With the purpose of placing more rooms into a room with low square meters by removing the circulation area, it is being observed that arrangements in the form of rooms with an access directly to the living room are being asked for in storey plan solutions.

Another similar sample is given with the Yalkin Apartment in the region of Gülseren. Containing 4, (2+1) units at each floor, this apartment block exemplifies

the solution of kitchen and living room as a mutual living area. In this way, the rooms are private areas; and kitchen and living rooms are shared areas.

Table 7. Yalkın Apartment (Author, 2018)



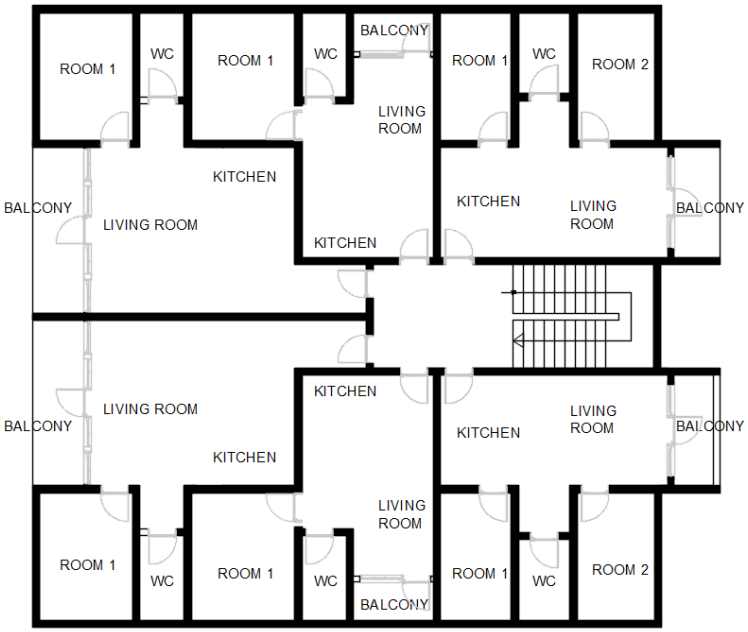
Descriptions such as day rooms and nights as mentioned in the first samples; and the related concepts such as circulation area, kitchen, and study room have disappeared.

Eventually, equality of the room sizes and designs aimed at two different users from different families is being elaborated. The equal sharing of the area provides and enables an equal sharing of the rent as these housing units are shared renting housings.

Even apartment blocks containing (1+1) housing units have been constructed with the purpose of meeting the needs of single member family such as users living alone. These are small flats which rescue the user from the necessity of using a

shared area and can create a totally private living space. In this way, the individualized unit designs have actually influenced the concept of apartment blocks and reached a point in which some qualities of shared areas got ignored. The stair enclosures containing half-open hollow brickwork in the first samples gave place to a closed box area. These shared areas with an ever-changing user profile are today uncared and airless.

Table 8. Ekener Apartment (Author, 2018)



This situation has given lead to the multi-unit building concept in which units are rented out. Apartments which usually carry the surnames of the family used to be built for keeping the family together and investing for the future. The multi-storey housing apartments which eventually appeared with commercial concern have transformed into housings created by contractors via build-and-sell approaches for profit. As most of the buyers buying the flats in these buildings use them for rental income purposes, they have taken on a similar task for rent houses appearing in the first samples of the history.

Apartments which in time moved away from certain design qualities with mass production, were diprived of enthusiasm and excitements from the first samples of the multi-sotrey residential buildings.

The maintenance and repair of these buildings used by temporary users, mostly students and immigrants went wrong and have been left to become old. The fact that low and middle income classes moved to the city center has supported the emplacement of the high-income groups towards city boundaries. This event has created housings with ownership and personal security guards bringing along the alienation. Walls have been put up around housings with the purpose of ensuring the segregation. With this, the segregation among different income groups became evident. The apartments which first carried family surnames in the first samples now carry new foreign names such as residence or court. Even if shared areas are being tried to be implemented in this type of residence, the purpose is to present a life abstracted from the city life more than socializing. The unit variety at each floor has been deceived. The room variety in urban apartments has become: living room, kitchen, room, bathroom, toilet and balcony and cannot go further from these concepts. The circular concept of variety in the room organization has also disappeared as a result of losing the room variety.

To sum up, the care in the design approaches from the first samples of urban apartments in Famagusta have started to get lost and be forgotten due to commercial concerns.

Chapter 5

CONCLUSION

The apartment type housings have become a housing typology able to hold different harboring units and related different family structures under the same roof in line with different income groups in the same building at the same time. This feature in fact known as being constructed with the purpose of meeting the housing needs of the low and middle class in Ancient Rome. Later on workforce housings came to the fore constructed for finding a solution for the increasing overpopulation of rapidly emerging cities with the industrial revolution.

Indigenizing the idea of holding different income groups under the same roof, the apartment type housing underwent changes and even became an indicator for class differences. Such that, this differentiation not only made the architectural quality of buildings visible, but also the urban scale and the class differences in terms of the location of these buildings in the city. While even floors were used as housings in some first samples in Europe, the basis of multi-storey housing standards of our present day came to light with the description of basic necessities (through new rules) related to light, air conditioning and privacy issues of housing rooms.

Generally seen as the housing of the working class, the apartment has been accepted as the housing of the new life-style based on the reflected

individualization and the working-mother model within the nuclear family growing with the modernization process.

5.1 Outcomes of the Research

The apartment type came to exist almost in similar conditions in all countries all over the World without being an extension of any culture and past. The new family structure and new life-style features created by the housing modernity are reflected by the apartment type and are shared commonly.

With this, especially geographical and cultural differences in the first generation apartment samples were remarkable. At this point, starting to come from ten years behind in Famagusta city, the transition process to the multi-storey housings can be summed up as follows.

- The change in the urban function has effected and changed the housing unit; the change in the housing unit has effected and changed the physical structure of the city.
- The fact that Famagusta is an education and tourist city has brought up forward little harboring units in the style of apart hotels for short-term accommodations; and studio apartments and various multi-storey housing types containing one-room or two-room housing units for long-term accommodations.
- The emergent apartment type housings with 2-3 storey height compatible with its urban fabric has begun to rise in the upcoming years.
- The reason for the transition process to the multi-storey living of the Famagusta city has not been the type of need for meeting the lack of housings due to industrialization and immigration from rural-to-urban as in other countries.

- The apartments first emerged as shared residential buildings constructed with the method of adding storey on existing building with the purpose of prominent families for meeting the needs of their newlywed children. Instead of horizontally developing housing types, this housing tpye has begun to become more popular with the aim of meeting the requirements of big families.
- Apartments came to light as the housing type necessary for the changing life-styles of the families. In time, apartment buildings were designed by prominent architects and constructed in one go as an element reflecting the prestige of those families.
- In the first samples it is possible to see several different units under the same roof such as (1+1), (2+1), (3+1), duplex in these apartment buildings containing units appropriate for different family structures.
- A single prototype was indigenised gradually and this variety gave place only to buildings holding units in the types of (3+1) or (2+1) or (1+1).
- While they were entitled as 2-3 storey apartments in the first samples, the arising apartment buildings today are constructed 4-5 storey at the least.
- The fact that these buildings which look alike, are constructed quickly and are designed insufficient have discriminated the social structure into classes such as student, worker, immigrant etc. has caused a chaotic or sometimes a monotone image in the urban fabric.

To sum up, the transition process of the Famagusta city to the multi-storey living has brought to light the specific design of the first apartment samples of the city and its excitements. The city was inspected based on the 26 constructed different apartment's project between the years of 1961-1987.

There was the attempt to reveal the distinctive developments and changes emerging in line with the multi-storey living over the qualities from the time of period when the concept of urban apartment was not a commercial architectural product or monument. With this, the concept of city and housing which interact with each other has been discussed over a city apartment which is a new housing unit for Famagusta. It is expected that if some qualities in the designs of city apartments won´t be forgotten, it would be beneficial for bringing light to forthcoming designs in the Famagusta city.

5.2 Final Comments

- The first multi-storey buildings were used as family apartments. However, today the apartment buildings in Mağusa are usually used as rental houses. Consequently it causes number of negative points regarding the quality of the apartment blocks and multi-storey living.

- The ground floors of the early apartment buildings are used independent from the rest of the apartment building like a single storey house (Ex: Project 1 – Evkaf Apt.). Thus, it is seen that the common garden is owned by the ground-floor user who is usually the owner of the building and carrying all responsibility for the quality of the common outdoor and indoor areas mainly staircases.

- Another important issue is that the staircase tower of early apartment buildings are constructed as a semi-open area with its grid brick structured façade. This characteristics which is simply very appropriate with the climatical conditions changed over time and became totally closed indoor common circulation spaces. Finally in emergent monotype apartments almost all common spaces especially staircases generally exhibiting a very bad conditions and poor maintenance seem extremely neglected due to the absence of the laws and regulations regarding to the definitions and expectations multi-storey living habits.

- The local living habits and spatial hierarchy of the individual home in the island are simply reflected in the design of early multi-storey housing blocks. For instance, some balconies in Efruz Apartment in Nicosia are not only designed to be the outdoor extensions of the indoor spaces but they provide a link between the staircase and the entrance door of the housing units. Thus the semi-open staircase connected to the entrance door of the flat through these balconies in every floors. Apparently these type of the semi-open spaces are designed to be used like the front garden as it is in the single storey private house.

As a result, this study tried to touch many characteristics of the first multi-storey housing samples and compare them today's modern apartments in Mağusa. It is hoped that all these gathered information, comments and evaluations will encourage further research and inquires to develop better and suitable local solutions for the apartment type houses and typologies.

REFERENCES

Akın, U. (2008). *Kültür ve Mekân Etkileşimi: Beyoğlu Örneği*. İstanbul: Yüksek Lisans Tezi Marmara Üniversitesi Sosyal Bilimler Enstitüsü

Anon. (2007). *Apartman, Çok katlı kolektif konut, Bir görsel belgeleme.* İstanbul: Arrademento Mimarlık Dergisi, vol:4.

Atiker, E. (1998). *Modernizm ve Kitle Toplumu.* İstanbul: Vadi Yayınları.

Bakır, A., & Ülgen, P. (2009). *Geç Ortaçağlarda Avrupa'da Kent Ve Kentsel Yaşam Hakkında Bir Değerlendirme.* Celal Bayar Üniversitesi : Sosyal Bilimler Enstitüsü Sosyal Birimler Dergisi .

Balamir, M. (1994). *Kira Evi'nden 'Kat Evleri'ne apartmanlaşma: bir zihniyet dönüşümü tarihçesinden kesitler.* vol: 260, pp.29-33: Mimarlık.

Balkan, E. (1997). *Apartman.* İstanbul: Eczacıbaşı Sanat Ansiklopedisi, YEM Yayınları vol:1.

Barkul, Ö. (1993). *İstanbul'da İlk Dönem (19.yy. Sonu -20.yy. BaGı) Apartman Konutlarının Yapısal, İşlevsel ve Çevresel Yönden Değerlendirilmesi.* Doktora Tezi İ.T.Ü.

Başdoğan, S. (2011). *Konutun Modernleşmesi ve Modern Dünyada Mimarın Meşruiyet Sorunu.* Vol:5, 17-23: Güney Mimarlık.

Batur, A. (1978). *Toplu Konutun Tarihsel Gelişimi ve İki Örnek.* Mimarlık.

Bilgin, İ. (1992). *Konut Üretiminin Karşılaştırmalı Analizi.* İstanbul: YTÜ Mimarlık Fakültesi Egitim ve Kültür Derneği Yayınları.

Bilgin, İ. (1999). İstanbul: Ofset Yapımevi.

Bilgin, İ. (2010). *Türkiye Mimarlığı: Türkiye'de Konut Kültürünün Değişimi.*

Birol, G. (2006). *Modern Mimarlığın Ortaya Çıkışı ve Gelişimi.* 3-16: Megaron Mimarlar Odası Balıkesir Şubesi Yayını.

Bryant, R. (2012). *Life Stories: Turkish Cypriot Community.* Oslo: Peace Research Institute.

Colquhoun, A. (1990). *Mimari Eleştiri Yazıları* . İstanbul.

Diefendorf, J. M. (1989). *Urban Reconstruction in Europe After World War II.* 26(1), pp. 128-143: Urban Studies.

Edgü, E., & Ünlü, A. (2003). *Relation of domestic space preferences with Space Syntax parameters.* London: 4th International Space Syntax Symposium.

Eriş, E. (2011). *A Study of The Design Implications of The Traditional Turkish House on Apartment Buildings in The Post-Republican Era.* İstanbul: Yeditepe Üniversitesi Master of Science in Architecture.

Fereos, S., & Phokaides, P. (2006). *Modern Architecture in Cyprus Between the 1930s and 1970s: The Search for Modern Heritage.* Docomomo Journal.

Gottmann, J. (1967). *The Skysraper Amid the Spawl, in Metropolis on the Move:*. New York, U.S.A: pp: 125-150.

Gökmen, G. P. (2011). *Türkiye'de Apartmanlaşma Süreci ve Konut Kültürü.* Eylül, vol:5 : TMMOB Mimarlar Odası Adana Şubesi Yayını.

Hasol, D. (1967). *Urban Reconstruction in Europe After World War II.* Mayıs : Mimarlık.

Irani, S. (2017). *Discussion on Typo Morphological Approach and Baykal Neighborhood in Famagusta.* Famagusta : Eastern Mediterranean University.

Kılıç, E. (2009). *XIX. Yüzyıl Sonu Batılılaşma Hareketlerinin Pera/Beyoğlu'nda Apartmanlaşma Sürecine Etkileri ve Mimari Yansımalar.* Yüksek Lisans Tezi, Haliç Üniversitesi.

Kıray, M. (1978). *Apartmanlaşma ve modern orta tabakalar.* İstanbul: Çevre Dergisi.

Kuban, D. (2007). *Osmanlı Mimarisi.* İstanbul: YEM Yayınları.

Kumbasar, B. (2008). *Apartmanlaşma ve modern orta tabakalar.* İstanbul: Yüksek Lisans Tezi, YTÜ.

Leyendecker, E., & Ellingwood, B. (1977). *Design to reduce the risk of progressive collapse.* Building Science Series.

Lynch, K. (1960). *The Image Of The City.* İstanbul: Massachusetts Institute of Technology.

Meiss, P. v. (1986). *Elements of Architecture From form to place.* New York: Routledge.

Montgomery, R. (1985). *Pruitt-Igoe: policy failure or societal symptom. The metropolitan midwest: Policy problems and prospects for change.*

Mumford, L. (1961). *The City in History: Winner of the National Book Award.* USA: Permissions Department.

Mushatat, S. (2014). *Between Tradition and Modernity: Determining Spatial Systems of Privacy in the Domestic Architecture of Contemporary Iraq.*

Mutdoğan, S. (2014, Mart). *Türkiye'de Çok Katlı Konutun Oluşum Sürecinin İstanbul Örneği Üzerinden İncelenmesi*. Retrieved from http://www.sdergi.hacettepe.edu.tr/KonutOlusumuSelinMUTDOGAN.pdf

Oktay, D. (2002, 4 19). The quest for urban identity in the changing context of the city: Northern Cyprus. *Cities*, 261-271.

Önal, Ş.; Dağlı, U.; Doratlı, N. (1999). The Urban Problems of Gazimagusa and Proposals for thr future. In *Cities* (pp. 333-351).

Öncel, A. D. (2010). *Apartman, Galata'da yeni bir konut tipi.* İstanbul: Kitap Yayınevi.

Peters. (1979). *Etüt Ve Proje- Sıra Evler- Toplu Konutlar 3.* Ankara: s.19.

R.Turkington, Kempen, R. V., & Wassenberg, F. (2017). *High-rise housing in Europe: Current trends and future prospects.* Housing and Urban Policy Studies.

Ragon, M. (1986). *Histoire D'l Architecture et De L'Urbanisme Modernes, 4.* İstanbul: Kabalcı Yayınevi.

Sakaoğlu, N. (1994). Dünden Bugüne İstanbul Ansiklopedisi. In *Cilt:1 Türkiye Ekonomik ve Toplumsal Tarih Vakfı Yayınları* (p. 281). İstanbul.

Simmel, G. (2000). *Metropol ve Zihinsel Yaşam.* İstanbul: Der. Aydoğan A., Şehir ve Cemiyet, İz Yayıncılık.

Stern, R. A. (1980). *With Rhetoric: The New York Apartment House.* Pennsylvania: Massachusetts Institute of Technology and the Trustees of University.

Storey, G. (2001). *Type Insulae 1 Architectural Residential Units at Ostia.* American Journal of Archaeology.

Şener, S. (2000). *1944 Yılı Sonrası Toplu Konut Uygulamalarında Apartman Plan Tipolojileri Gelişimi.* İstanbul: Yüksek Lisans Tezi İ.T.Ü.

Tozan, A. (2009). *İngiliz Sömürge Dönemi ve Sömürge Sonrası Kuzey Kıbrıs'ta Kent ve Mimarlık.* İTÜ.

Uluçay, B. (2007). *Houses with two Independent Storey in Development of Modernization Process of Social & Urban Context: The Case of Nicosia 1940-70.* EMU: Unpublished Master Thesis.

Ulusoy, M., & Ulusoy, H. E. (2014). *Kültürel Değişim Bağlamında Konut; Konya Örneği.* Konya: Selçuk Ü.

URL 1. (n.d.) Retrieved May 6, 2017, from https://www.google.com.cy/search?q=Insula+ancient+rome&source=lnms&tbm=isch&sa=X&ved=0ahUKEwjS9-Tx3KjdAhVM6KQKHbzfBzMQ_AUICigB&biw=629&bih=611#imgrc=zOg2xWqjCxeamM:

URL 2. (n.d.) Retrieved August 28, 2018, from https://www.google.com.cy/search?q=stuyvesant+apartments&source=lnms&tbm=isch&sa=X&ved=0ahUKEwikzLPk36jdAhVKI1AKHYH6DcUQ_AUICigB&biw=629&bih=611#imgrc=eNBK1vrLafCgPM:

URL 3. (n.d.) Retrieved June 3, 2015, from http://www.hiddenarchitecture.net/2015/06/rue-franklin-apartments.html

URL 4. (n.d.) Retrieved July 30, 2015, from http://polinice.org/2015/06/30/bernini-brutalista/unite-dhabitation-at-marseilles-france/

URL 5. (n.d.) Retrieved May 15, 2017, from https://en.wikipedia.org/wiki/Pruitt%E2%80%93Igoe

URL 6. (n.d.) Retrieved April 4, 2017, from https://www.google.com.cy/search?q=vak%C4%B1f+apartman%C4%B1&source=lnms&tbm=isch&sa=X&ved=0ahUKEwiy1cPJ4ajdAhWP2KQKHdwpAu4Q_AUICigB&biw=629&bih=611#imgrc=7T33SOXbf1qB9M:

URL 7. (n.d.) Retrieved May 5, 2013, from http://bibliopola.blogspot.com/search/label/Harikzedegan%E2%80%99dan%20Merit%20Antique%E2%80%99e%20Tayyare%20Apartmanlar%C4%B1%20%2F%20Otel%20Merit%20Antique%3A%20Ge%C3%A7mi%C5%9Fi%20ve%20Bug%C3%BCn%C3%BC

URL 8. (n.d.) Retrieved July 25, 2006, from http://www.boyutpedia.com/805/6068/ceylan-apartmani

URL 9. (n.d.) Retrieved July 25, 2006, from http://www.boyutpedia.com/805/6131/ucler-apartmani

URL 10. (n.d.) Retrieved July 8, 2010, from http://v3.arkitera.com/h54726-gecmisin-modern-mimarligi---3-besiktas---%C5%9Eisli.html

URL 11. (n.d.) Retrieved August 13, 2016, from https://lavarla.com/cinnah-19/

Vanlı, Ş. (2006). *Bilinmek istenmeyen 20. yy Türk Mimarlığı Eleştirel Bakış.* Ankara: Şevki Vanlı Mimarlık Vakfı Yayınları.

Yamen, G. (2015). *Apartman Tipi Konutların Mimari Tasarımını Ve Üretim Sürecini Etkileyen Faktörler: Gebze Ve Çayırova Örneği.* İstanbul Teknik Üniversitesi.

Yılmaz, N. (2004). *Farklılaşan ve Ayrıştıran Mekan Olarak Kentleşme.* Marmara Üniversitesi Dergisi.

APPENDICES

Appendix 1: Project 1 – Document no: 46/61 Evkaf Apartment

Project 1 – Document no: 46/61 – Inventory of Evkaf Apt.

Building Characteristic	**Architect: A. M. Ali, Location: Namık Kemal**					
Accordance of building with site	Compatible: X		Incompatible:			
Location of building in site	Fit:		Unfit: X			
Façade number	4					
Number of floor	Ground + 2					
The usage of ground floor	6 Shops					
Basement floor/ number / usage	No basement					
Location of staircase	Front / Back: Back		Middle:		Overside:	
Storey Characteristic	**Ground**	**First Floor**			**Second Floor**	
Number of flats (units) on floor	-	5			4	
Unit variety; (1+1) / (2+1) / etc.	-	(1+1), (2+1), Duplex			(1+1), (2+1)	
Height of floor	230+100cm	300 cm.			300 cm.	
Unit Properties		(1+1)	(2+1)	Duplex	(1+1)	(2+1)
Room / number of		1	2	2	2	2
Living room / number of		1	1	1	1	1
Kitchen / number of		1	1	1	1	1
Bathroom / toilet / number of		1	1	1	1	1
Balcony / number of		1	1	1	1	1
Total number of units(Bedr. Kitc.)		6	7	7	7	7
Variety in unit (Bedr./MasterBed.)		6	6	6	6	6
Space Areas		(1+1)	(2+1)	Duplex	(1+1)	(2+1)
Living space		12 m²	12 m²	12 m²	12 m²	12 m²
Kitchen		5 m²	7 m²	7 m²	5 m²	5 m²
Bathroom		4 m²	5 m²	7 m²	4 m²	4 m²
Room		8 m²	8-10	8-10	8 m²	8 m²
Circulation area		8 m²	8 m²	12 m²	8 m²	8 m²
Space Organization		(1+1)	(2+1)	Duplex	(1+1)	(2+1)
Axial						
Loop						
Hall						

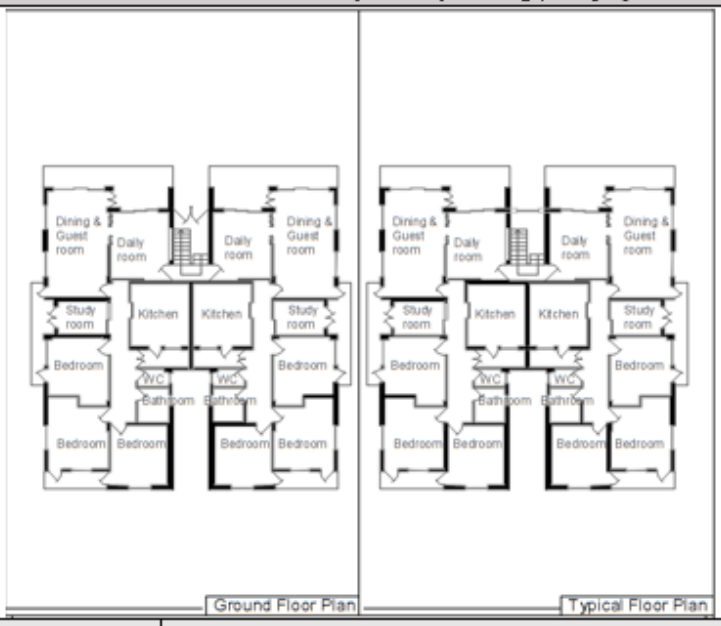
Appendix 2: Project 2 – Document no: 49/69 Ali Fuat Apartment

Project 2 – Document no: 46/69- Ali Fuat Apt.			
			
Building Characteristic	**Architect: Ezel Reşat , Location: Walled City**		
Accordance of building with site	Compatible: X	Incompatible:	
Location of building in site	Fit: X	Unfit:	
Façade number	2		
Number of floor	Ground + 1		
The usage of ground floor	Shops		
Basement floor/ number / usage	No basement		
Location of staircase	Front / Back:	Middle:X	Overside:
Storey Characteristic	**Ground Floor**	**First Floor**	
Number of flats (units) on floor	-	4	
Unit variety; (1+1) / (2+1) / etc.	-	3*(2+1)-1*(3+1)	
Height of floor	440cm	300cm	
Unit Properties		**(2+1)**	**(3+1)**
Room / number of		3	
Living room / number of		1	
Kitchen / number of		1	
Bathroom / toilet / number of			
Balcony / number of		1	
Total number of units(Bedr. Kitc.)		9	
Variety in unit (Bedr./MasterBed.)		7	
Space Areas		**(2+1)a**	**(3+1)**
Living space		25 m2	30 m2
Kitchen		12 m2	14 m2
Bathroom		6 m2	8m2
Room		12-13 m2	10-13-13
Circulation area		12 m2	16 m2
Space Organization		**(2+1)a**	**(3+1)**
Axial		x	x
Loop		x	x
Hall			

Appendix 3: Project 3 – Document no: 4/71 Arzu Apartment

Project 3 – Document no: 4/71 – Arzu Apt.			
			
Building Characteristic	**Architect: Hasan E. Ali, Location: Ayluka**		
Accordance of building with site	Compatible: X	Incompatible:	
Location of building in site	Fit:	Unfit: X	
Façade number	4		
Number of floor	Ground + 3		
The usage of ground floor	Dwelling		
Basement floor/ number / usage	1 Floor – Car parking		
Location of staircase	Front / Back: Front	Middle:	Overside:
Storey Characteristic	**Ground**	**First Floor**	
Number of flats (units) on floor	2	2	
Unit variety; (1+1) / (2+1) / etc.	2+1	2+1	
Height of floor	300 cm	300 cm	
Unit Properties	**(2+1)**	**(2+1)**	
Room / number of	2	2	
Living room / number of	1	1	
Kitchen / number of	1	1	
Bathroom / toilet / number of	1 Bath. + 2WC	1 Bath. +2WC	
Balcony / number of	2	2	
Total number of units(Bedr. Kitc.)	12	12	
Variety in unit (Bedr./MasterBed.)	11	11	
Space Areas	**(2+1)**	**(2+1)**	
Living space	Daily.14-Gu.14-Din.10	Daily.14-Gu.14-Din.10	
Kitchen	11 m2	11 m2	
Bathroom	6 m2	6 m2	
Room	13-14 m2	13-14 m2	
Circulation area	15 m2	15 m2	
Space Organization	**(2+1)**	**(2+1)**	
Axial			
Loop	x	x	
Hall	x	x	

Appendix 4: Project 4 – Document no: 53/72 – Hüseyin Derviş Dwe.

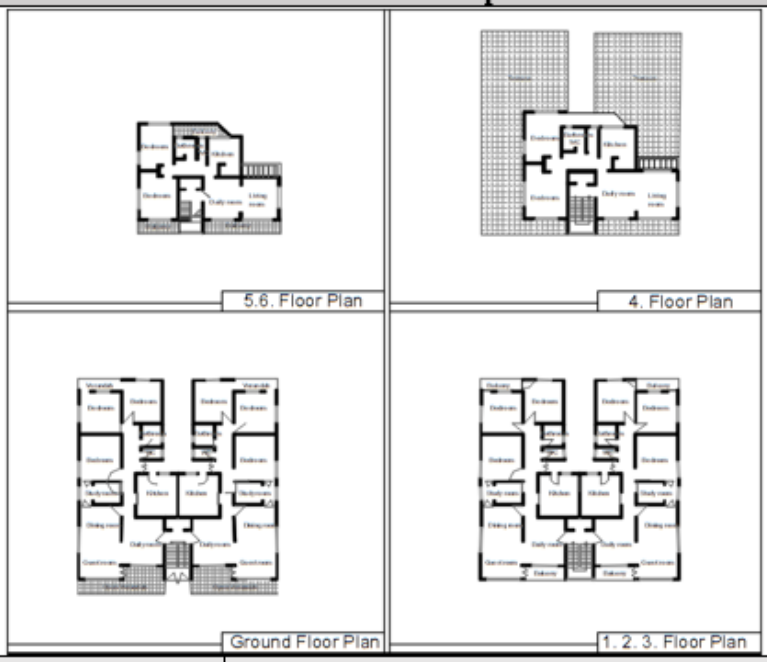
Project 4 – Document no: 53/72 – Hüseyin Derviş Dwelling (First project of Akmanlar 2)			
			
Building Characteristic	**Architect: Bora Atun, Location: Karakol**		
Accordance of building with site	Compatible: X	Incompatible:	
Location of building in site	Fit:	Unfit: X	
Façade number	4		
Number of floor	Ground + 3		
The usage of ground floor	Dwelling		
Basement floor/ number / usage	No basement		
Location of staircase	Front / Back: Front	Middle:	Overside:
Storey Characteristic	**Ground**	**Typical Floors**	
Number of flats (units) on floor	2	2	
Unit variety; (1+1) / (2+1) / etc.	4+1	4+1	
Height of floor	300 cm	300 cm	
Unit Properties	**(4+1)**	**(4+1)**	
Room / number of	4	4	
Living room / number of	1	1	
Kitchen / number of	1	1	
Bathroom / toilet / number of	1 Bath. + 2WC	1 Bath. + 2WC	
Balcony / number of	1	1	
Total number of units(Bedr. Kitc.)	12	12	
Variety in unit (Bedr./MasterBed.)	9	9	
Space Areas	**(4+1)**	**(4+1)**	
Living space	Gu.+Din.22 – Daily 14	Gu.+Din.22 – Daily 14	
Kitchen	13 m2	13 m2	
Bathroom	4 m2	4 m2	
Room	12-12-15 m2+ 9study	12-12-15 m2 + 9study	
Circulation area	14 m2	14 m2	
Space Organization	**(4+1)**	**(4+1)**	
Axial	x	x	
Loop	x	x	
Hall			

Appendix 5: Project 5 – Document no: 63/72 – Akmanlar 1 Apt.

Project 5 – Document no: 63/72 – Akmanlar – 1 Apt.			
			
Building Characteristic	**Architect: Bora Atun , Location: Karakol**		
Accordance of building with site	Compatible: X	Incompatible:	
Location of building in site	Fit:	Unfit: X	
Façade number	4		
Number of floor	Ground + 6		
The usage of ground floor	Dwelling		
Basement floor/ number / usage	No basement		
Location of staircase	Front / Back: Front	Middle:	Overside:
Storey Characteristic	**Ground Floor**	**Typical Floor**	**6. Floor**
Number of flats (units) on floor	2	2	1
Unit variety; (1+1) / (2+1) / etc.	3+1	3+1	2+1
Height of floor	280 cm	280 cm	280 cm
Unit Properties	**(3+1)**	**(3+1)**	**(2+1)**
Room / number of	3	3	2
Living room / number of	1Daily-1Guest&Dining	1Daily-1Guest&Dining	1Daily-1Guest&Dining
Kitchen / number of	1	1	1
Bathroom / toilet / number of	1 Bath. + 2WC	1 Bath. + 2WC	1 Bath. + 2WC
Balcony / number of	4 Balcony	4 Balcony	2 Balcony 2 Terrace
Total number of units(Bedr. Kitc.)	14	14	12
Variety in unit (Bedr./MasterBed.)	8	8	9
Space Areas	**(3+1)**	**(3+1)**	**(2+1)**
Living space	Din.+Guest30-Da.13	Din.+Guest30-Da.13	Din.+Guest22-Da.12
Kitchen	12 m2	12 m2	15 m2
Bathroom	5 m2	5 m2	4 m2
Room	12-14-16 m2	12-14-16 m2	15-15 m2
Circulation area	10 m2	10 m2	9 m2
Space Organization	**(3+1)**	**(3+1)**	**(2+1)**
Axial	x	x	x
Loop	x	x	x
Hall			

Appendix 6: Project 6 – Document no: 31/73 – Akmanlar 2 Apt.

Project 6 – Document no: 31/73 – Akmanlar-2 Apt.



Building Characteristic	**Architect: Bora Atun, Location: Karakol**			
Accordance of building with site	Compatible: X	Incompatible:		
Location of building in site	Fit:	Unfit: X		
Façade number	4			
Number of floor	Ground + 6			
The usage of ground floor	Dwelling			
Basement floor/ number / usage	No basement			
Location of staircase	Front / Back: Front	Middle:	Overside:	
Storey Characteristic	**Ground Floor**	**First Floor**	**4.Floor**	**5 & 6**
Number of flats (units) on floor	2	2	1	1
Unit variety; (1+1) / (2+1) / etc.	4+1	4+1	2+1	2+1
Height of floor	280 cm	280 cm	280 cm	280 cm
Unit Properties	**(4+1)**	**(4+1)**	**(2+1)**	**(2+1)**
Room / number of	4	4	2	2
Living room / number of	1	1	1	1
Kitchen / number of	1	1	1	1
Bathroom / toilet / number of	1 Bath. + 2WC	1 Bath. + 2WC	1	1
Balcony / number of	2	2	1+2Terrace	3
Total number of units(Bedr. Kitc.)	12	12	10	10
Variety in unit (Bedr./MasterBed.)	9	9	8	7
Space Areas	**(4+1)**	**(4+1)**	**(2+1)**	**(2+1)**
Living space	Gu.+ Din.22-Daily14	Gu.+ Din.22-Daily14	Dai14+Li11	D14+L11
Kitchen	13 m2	13 m2	10 m2	10 m2
Bathroom	4 m2	4 m2	4 m2	4 m2
Room	12-12-15 m2 +9Study	12-12-15m2+9Study	11-13 m2	11-13m2
Circulation area	14 m2	14 m2	7 m2	7 m2
Space Organization	**(4+1)**	**(4+1)**	**(2+1)**	**(2+1)**
Axial	x	x	x	x
Loop	x	x	x	x
Hall				

Appendix 7: Project 7 – Document no: 47/78 – Naciye & Şadan M. S.

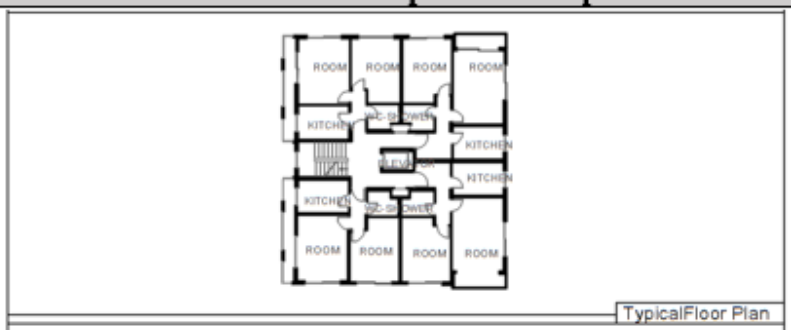
Project 7 – Document no: 47/78 – Naciye & Şadan M. Salih Dwelling			
			
Building Characteristic	**Architect: Server Erozan, Location: Ayluka**		
Accordance of building with site	Compatible: X	Incompatible:	
Location of building in site	Fit:	Unfit: X	
Façade number	3		
Number of floor	Ground + 3		
The usage of ground floor	Dwelling		
Basement floor/ number / usage	No basement		
Location of staircase	Front / Back: Front	Middle:	Overside:X
Storey Characteristic	**Ground Floor**	**Typical Floor**	
Number of flats (units) on floor	1	1	
Unit variety; (1+1) / (2+1) / etc.	3+1	3+1	
Height of floor	295 cm	295 cm	
Unit Properties	**(3+1)**	**(3+1)**	
Room / number of	3	3	
Living room / number of	1	1	
Kitchen / number of	1	1	
Bathroom / toilet / number of	1 Bath. +2WC	1 Bath. +2WC	
Balcony / number of	1	1	
Total number of units(Bedr. Kitc.)	8	8	
Variety in unit (Bedr./MasterBed.)	6	6	
Space Areas	**(3+1)**	**(3+1)**	
Living space	34 m2	34 m2	
Kitchen	14 m2	14 m2	
Bathroom	5 m2	5 m2	
Room	13-16-16 m2	13-16-16 m2	
Circulation area	21 m2	21 m2	
Space Organization	**(3+1)**	**(3+1)**	
Axial	x	x	
Loop	x	x	
Hall			

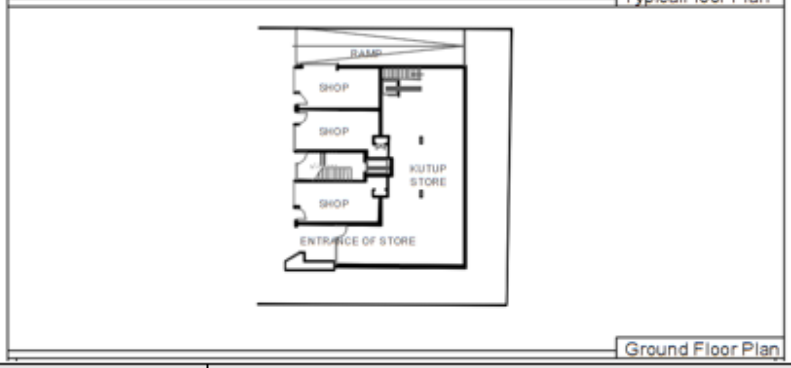
Appendix 8: Project 8 – Document no: 03/79 – Nihayet & Sevilay M.

Project 8 – Document no: 03/79 – Nihayet & Sevilay Mustafa Apt.			
			
Building Characteristic	**Architect: Osman Saner, Location: Ayluka**		
Accordance of building with site	Compatible: X	Incompatible:	
Location of building in site	Fit:	Unfit: X	
Façade number	4		
Number of floor	Ground + 1		
The usage of ground floor	Piloti-Car Parking		
Basement floor/ number / usage	No basement		
Location of staircase	Front / Back:Front	Middle:	Overside:
Storey Characteristic	**Ground Floor**	**First Floor**	
Number of flats (units) on floor	-	2	
Unit variety; (1+1) / (2+1) / etc.	-	3+1	
Height of floor	311 cm	307 cm	
Unit Properties		**(3+1)**	
Room / number of		3	
Living room / number of		1	
Kitchen / number of		1	
Bathroom / toilet / number of		1 Bath. + 2WC	
Balcony / number of		1	
Total number of units(Bedr. Kitc.)		9	
Variety in unit (Bedr./MasterBed.)		7	
Space Areas		**(3+1)**	
Living space		20 m2	
Kitchen		9 m2	
Bathroom		4 m2	
Room		9-10-17 m2	
Circulation area		19 m2	
Space Organization		**(3+1)**	
Axial		x	
Loop		x	
Hall			

Appendix 9: Project 9 – Document no: 74/79 – Kutup Mehmet Apt.

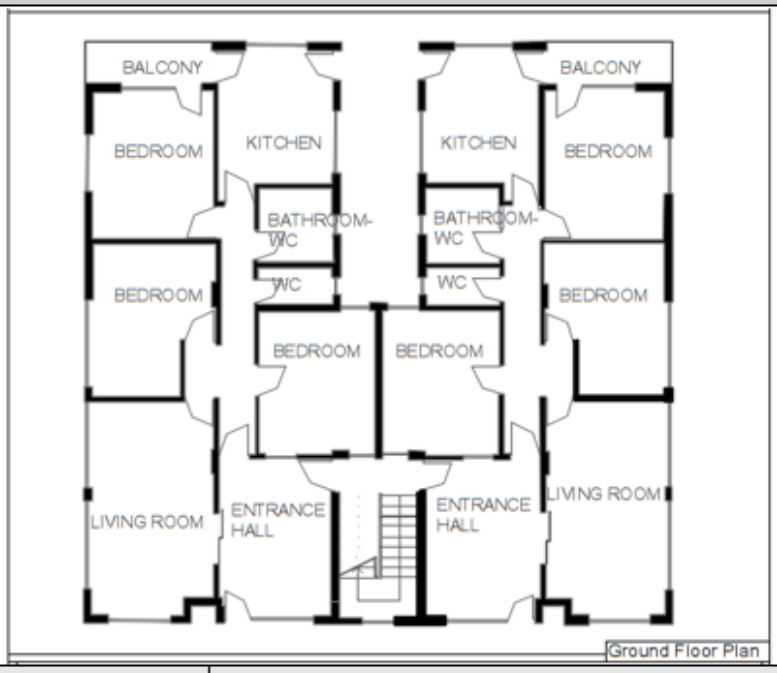
Project 9 – Document no: 74/79 – Kutup Mehmet Apt.





Building Characteristic	**Architect: Bora Atun, Location: Ayluka**		
Accordance of building with site	Compatible: X	Incompatible:	
Location of building in site	Fit:	Unfit: X	
Façade number	4		
Number of floor	Ground + 5		
The usage of ground floor	Shop		
Basement floor/ number / usage	1 Floor – Car parking		
Location of staircase	Front / Back: Front	Middle:	Overside:
Storey Characteristic	**Ground Floor**	**Typical Floor**	
Number of flats (units) on floor	-	4	
Unit variety; (1+1) / (2+1) / etc.	-	(1+1)dwe. / (2+0)office	
Height of floor	345 cm	270 cm	
Unit Properties		**(1+1)**	**(2+0)**
Room / number of		1	2
Living room / number of		1	0
Kitchen / number of		1	1
Bathroom / toilet / number of		1	1
Balcony / number of		1	1
Total number of units(Bedr. Kitc.)		5	5
Variety in unit (Bedr./MasterBed.)		4	4
Space Areas		**(1+1)**	**(2+0)**
Living space		14 m2	-
Kitchen		7 m2	7 m2
Bathroom		4 m2	4 m2
Room		11 m2	11-14 m2
Circulation area		3 m2	3 m2
Space Organization		**(1+1)**	**(2+0)**
Axial		x	x
Loop			
Hall			

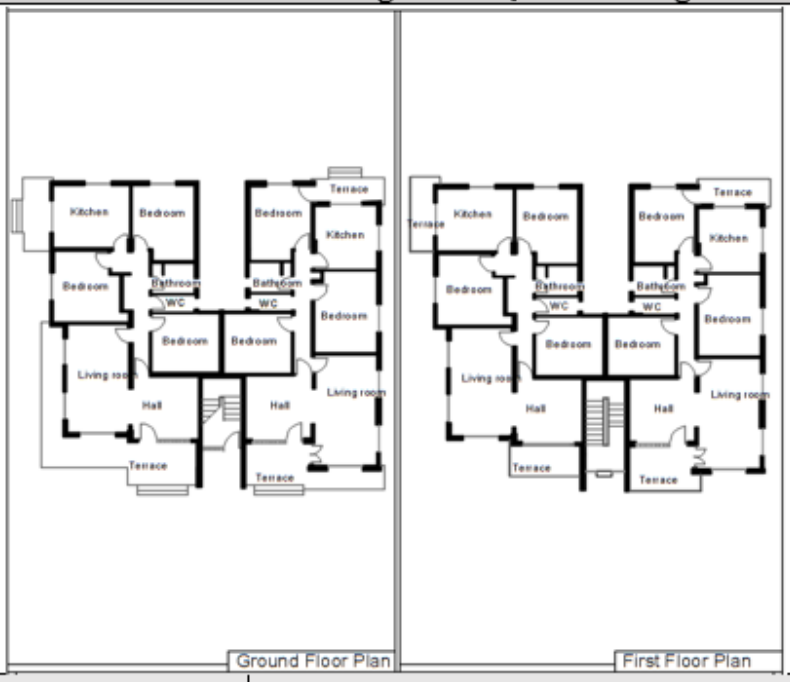
Appendix 10: Project 10 – Document no: 83/79 – Mehmet Ö. Dwe.

Project 10 – Document no: 83/79 – Mehmet Öz Karaman			
			
Building Characteristic	**Architect: Orhan Bahtiyar, Location: Ayluka**		
Accordance of building with site	Compatible: X	Incompatible:	
Location of building in site	Fit:	Unfit: X	
Façade number	4		
Number of floor	Ground		
The usage of ground floor	Dwelling		
Basement floor/ number / usage	1 Floor – Car parking		
Location of staircase	Front / Back: Front	Middle:	Overside:
Storey Characteristic	**Ground Floor**		
Number of flats (units) on floor	2		
Unit variety; (1+1) / (2+1) / etc.	3+1		
Height of floor	311 cm		
Unit Properties	**(3+1)**		
Room / number of	3		
Living room / number of	1		
Kitchen / number of	1		
Bathroom / toilet / number of	1 Bath. +2 WC		
Balcony / number of	1		
Total number of units(Bedr. Kitc.)	9		
Variety in unit (Bedr./MasterBed.)	6		
Space Areas	**(3+1)**		
Living space	23 m2		
Kitchen	14 m2		
Bathroom	5 m2		
Room	14-15-15 m2		
Circulation area	23 m2		
Space Organization	**(3+1)**		
Axial	x		
Loop	x		
Hall			

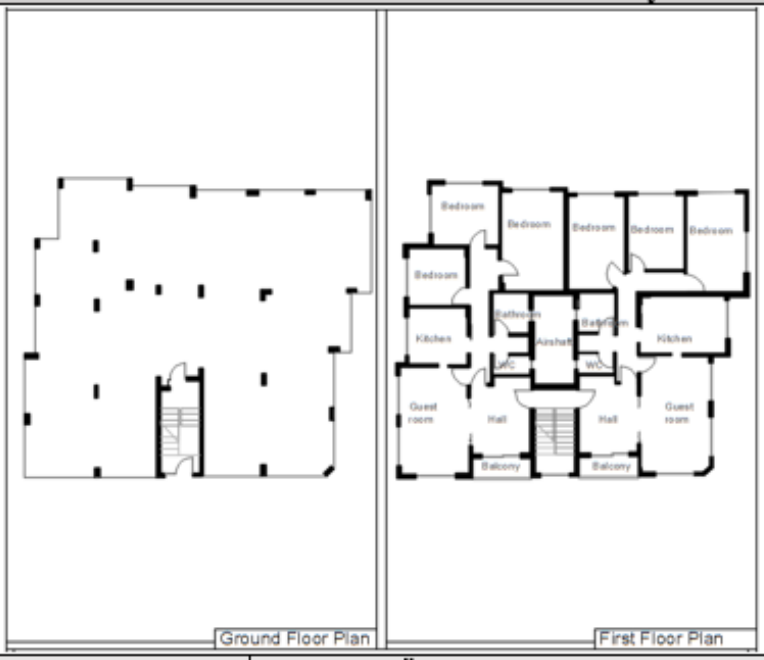
Appendix 11: Project 11 – Document no: 10/80 – Hüseyin Osman Z.

Project 11 – Document no: 10/80 – Hüseying Osman Zinnureyin Dwelling			
			
Building Characteristic	**Architect: Orhan Bahtiyar, Location: Ayluka**		
Accordance of building with site	Compatible:	Incompatible: X	
Location of building in site	Fit:	Unfit: X	
Façade number	4		
Number of floor	Basement + Ground + 3		
The usage of ground floor	Shop		
Basement floor/ number / usage	1 Floor – Car Parking		
Location of staircase	Front / Back:	Middle:	Overside: X
Storey Characteristic	**Ground Floor**	**1.2.3. Floor**	
Number of flats (units) on floor	3 Shops	1	
Unit variety; (1+1) / (2+1) / etc.	-	3+1	
Height of floor	455 cm	300 cm	
Unit Properties		**(3+1)**	
Room / number of		3	
Living room / number of		1	
Kitchen / number of		1	
Bathroom / toilet / number of		1 Bath. + 2WC	
Balcony / number of		3	
Total number of units(Bedr. Kitc.)		12	
Variety in unit (Bedr./MasterBed.)		7	
Space Areas		**(3+1)**	
Living space		21 m2	
Kitchen		13 m2	
Bathroom		4 m2	
Room		11-11-13 m2	
Circulation area		15 m2	
Space Organization		**(3+1)**	
Axial		x	
Loop		x	
Hall			

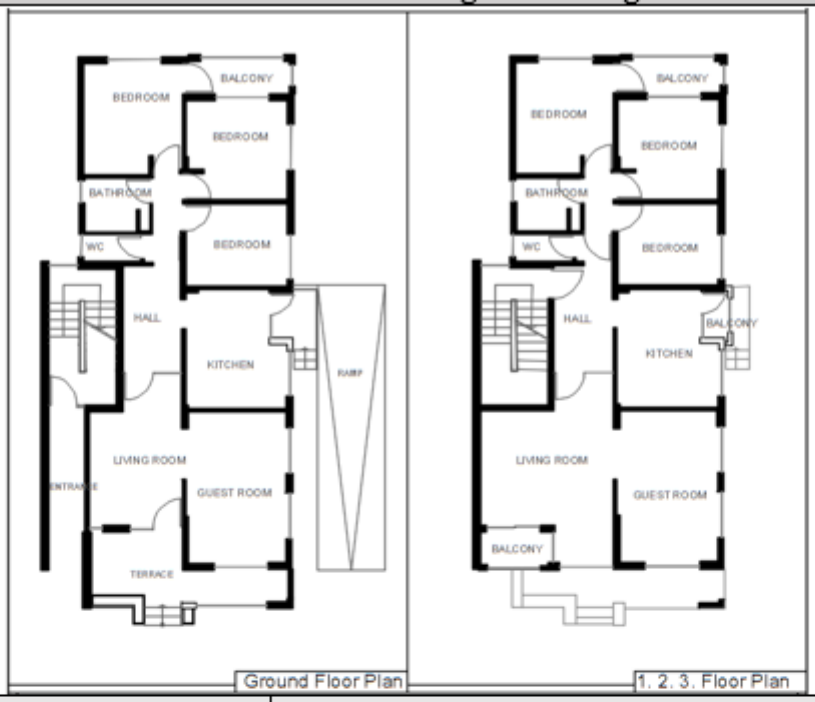
Appendix 12: Project 12 – Document no: 09/80 – Dağlı Kardeşler

Project 12– Document no: 09/80 – Dağlı Kardeşler Dwelling			
			
Building Characteristic	**Architect: Osman Saner, Location: Ayluka**		
Accordance of building with site	Compatible: X	Incompatible:	
Location of building in site	Fit:	Unfit: X	
Façade number	4		
Number of floor	Ground + 2		
The usage of ground floor	Dwelling		
Basement floor/ number / usage	No basement		
Location of staircase	Front / Back: X	Middle:	Overside:
Storey Characteristic	**Ground Floor**	**First Floor**	**Second Floor**
Number of flats (units) on floor	2	2	2
Unit variety; (1+1) / (2+1) / etc.	3+1	3+1	3+1
Height of floor	317 cm	300 cm	300 cm
Unit Properties	**(3+1)**	**(3+1)**	**(3+1)**
Room / number of	3	3	3
Living room / number of	1	1	1
Kitchen / number of	1	1	1
Bathroom / toilet / number of	Bath.:1 – WC: 1	Bath.:1 – WC: 1	Bath.:1 – WC: 1
Balcony / number of	0 Balcony 4 Terrace	4	4
Total number of units(Bedr. Kitc.)	7	7	7
Variety in unit (Bedr./MasterBed.)	9	9	9
Space Areas	**(3+1)**	**(3+1)**	**(3+1)**
Living space	25 m2	25 m2	25 m2
Kitchen	17 m2	17 m2	17 m2
Bathroom	5 m2	5 m2	5 m2
Room	17-17-15 m2	17-17-15 m2	17-17-15 m2
Circulation area	26 m2	26 m2	26 m2
Space Organization	**(3+1)**	**(3+1)**	**(3+1)**
Axial	x	x	x
Loop	x	x	x
Hall			

Appendix 13: Project 13 – Document no: 56/80 – Mustafa Ülker H.

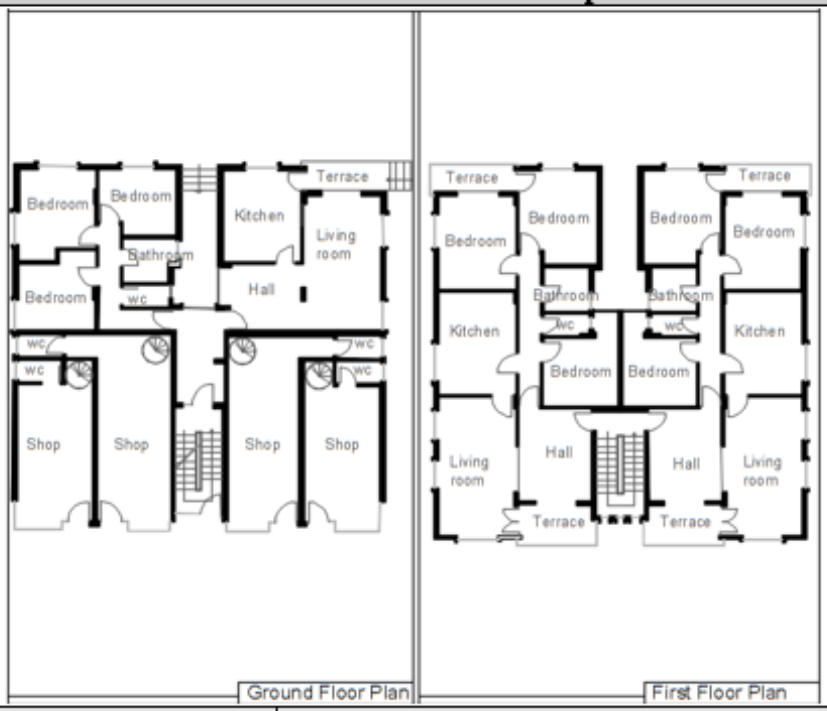
Project 13 – Document no: 56/80 – Mustafa Ülker Hüseyin Twin House			
			
Building Characteristic	**Architect: Özden Erozan, Location: Ayluka**		
Accordance of building with site	Compatible: X	Incompatible:	
Location of building in site	Fit:	Unfit: X	
Façade number	4		
Number of floor	Ground + 1		
The usage of ground floor	Car parking		
Basement floor/ number / usage	No basement		
Location of staircase	Front / Back: Front	Middle:	Overside:
Storey Characteristic	**Ground Floor**	**First Floor**	
Number of flats (units) on floor	-	2	
Unit variety; (1+1) / (2+1) / etc.	-	3+1	
Height of floor	311 cm	307 cm	
Unit Properties		**(3+1)**	
Room / number of		3	
Living room / number of		1	
Kitchen / number of		1	
Bathroom / toilet / number of		1 Bath. + 2WC	
Balcony / number of		1	
Total number of units(Bedr. Kitc.)		9	
Variety in unit (Bedr./MasterBed.)		7	
Space Areas		**(3+1)**	
Living space		20 m2	
Kitchen		9 m2	
Bathroom		4 m2	
Room		9-10-17 m2	
Circulation area		19 m2	
Space Organization		**(3+1)**	
Axial		x	
Loop		x	
Hall			

Appendix 14: Project 14 – Document no: 02/81 – Balcıoğlu Dwelling

Project 14 – Document no: 02/81 – Balcıoğlu Dwelling			
			
Building Characteristic	**Architect: Feridun Ardost, Location: Ayluka**		
Accordance of building with site	Compatible: X	Incompatible:	
Location of building in site	Fit:	Unfit: X	
Façade number	3		
Number of floor	Ground + 3		
The usage of ground floor	Dwelling		
Basement floor/ number / usage	No basement		
Location of staircase	Front / Back: Front	Middle:	Overside:
Storey Characteristic	**Ground Floor**	**1.2.3. Floor**	
Number of flats (units) on floor	1	1	
Unit variety; (1+1) / (2+1) / etc.	3+1	3+1	
Height of floor	315 cm	315 cm	
Unit Properties	**(3+1)**	**(3+1)**	
Room / number of	3	3	
Living room / number of	1 Living + 1 Guest	1 Living + 1 Guest	
Kitchen / number of	1	1	
Bathroom / toilet / number of	1 Bath. + 2WC	1 Bath. + 2WC	
Balcony / number of	1 Balcony+2 Terrace	3 Balcony	
Total number of units(Bedr. Kitc.)	12	11	
Variety in unit (Bedr./MasterBed.)	9	8	
Space Areas	**(3+1)**	**(3+1)**	
Living space	22 m2	22 m2	
Kitchen	11 m2	11 m2	
Bathroom	4 m2	4 m2	
Room	10-10-11 m2	10-10-11 m2	
Circulation area	6 m2	6 m2	
Space Organization	**(3+1)**	**(3+1)**	
Axial	x	x	
Loop	x	x	
Hall			

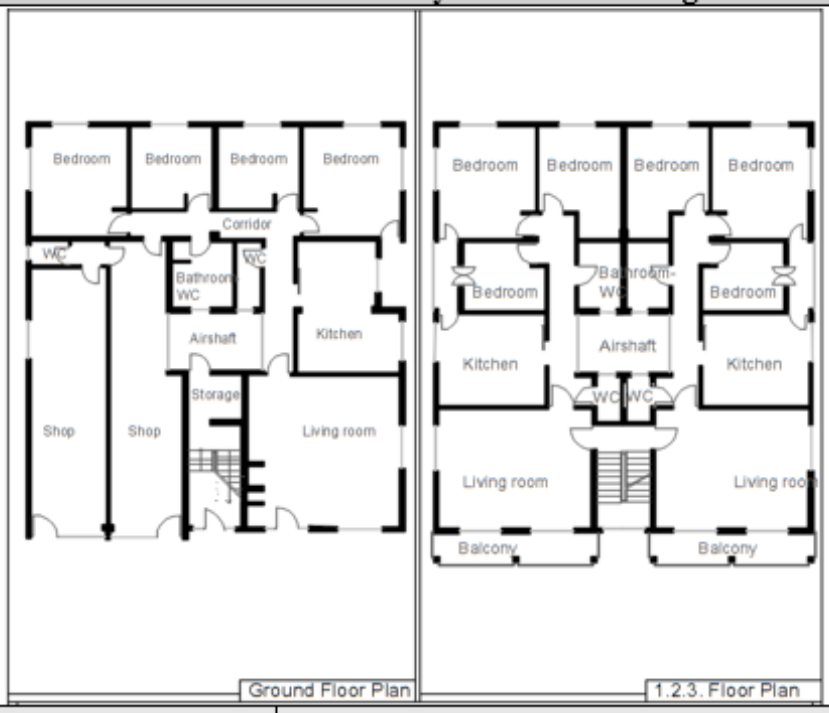
Appendix 15: Project 15 – Document no: 12/81 – Halil Murat Apt.

Project 15 – Document no: 12/81 – Halil Murat Apt.



Building Characteristic	**Architect: Osman Saner, Location: Ayluka**		
Accordance of building with site	Compatible: X	Incompatible:	
Location of building in site	Fit:	Unfit: X	
Façade number	4		
Number of floor	Basement + Ground + 1		
The usage of ground floor	Shop + Dwelling		
Basement floor/ number / usage	1 Floor - Storage		
Location of staircase	Front / Back: Front	Middle:	Overside:
Storey Characteristic	**Ground Floor**	**First Floor**	
Number of flats (units) on floor	1	2	
Unit variety; (1+1) / (2+1) / etc.	3+1	3+1	
Height of floor	300 cm	300 cm	
Unit Properties	**(3+1)**	**(3+1)**	
Room / number of	3	3	
Living room / number of	1	1	
Kitchen / number of	1	1	
Bathroom / toilet / number of	Bath:1 - WC:1	Bath:1 - WC:1	
Balcony / number of	0 Balcony 1 Terrace	4	
Total number of units(Bedr. Kitc.)	9	10	
Variety in unit (Bedr./MasterBed.)	7	7	
Space Areas	**(3+1)**	**(3+1)**	
Living space	30 m2	20 m2	
Kitchen	14 m2	13 m2	
Bathroom	4 m2	5 m2	
Room	10-11-12 m2	12-12-10 m2	
Circulation area	15 m2	19 m2	
Space Organization	**(3+1)**	**(3+1)**	
Axial	x	x	
Loop	x	x	
Hall			

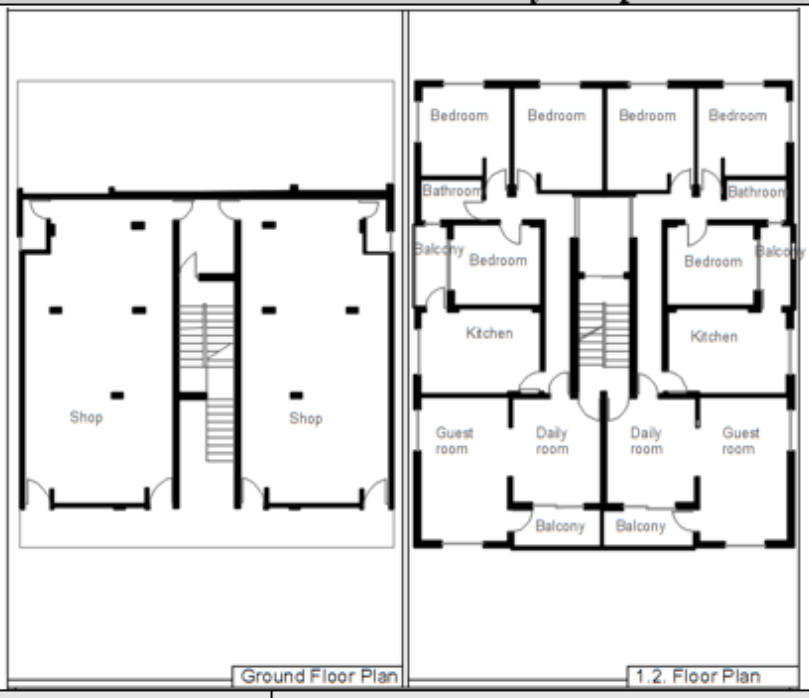
Appendix 16: Project 16 – Document no: 11/84 – Sayfiye İ. & E. S.

Project 16 – Document no: 11/84 – Safiye İsmail & Erdoğan Salih Apt.			
			
Building Characteristic	**Architect: Gökhan Noyan, Location: Ayluka**		
Accordance of building with site	Compatible: X	Incompatible:	
Location of building in site	Fit:	Unfit: X	
Façade number	4		
Number of floor	Ground + 3		
The usage of ground floor	Shop+ Dwelling		
Basement floor/ number / usage	No basement		
Location of staircase	Front / Back: Front	Middle:	Overside:
Storey Characteristic	**Ground Floor**	**1.2.3. Floor**	
Number of flats (units) on floor	1	2	
Unit variety; (1+1) / (2+1) / etc.	4+1	3+1	
Height of floor	290 cm	290 cm	
Unit Properties	**(4+1)**	**For each (3+1)**	
Room / number of	4	3	
Living room / number of	1	1	
Kitchen / number of	1	1	
Bathroom / toilet / number of	Bath: 1- WC: 2	Bath: 1- WC: 2	
Balcony / number of	0 Balcony 1 Terrace	2 Balcony	
Total number of units(Bedr. Kitc.)	9	8	
Variety in unit (Bedr./MasterBed.)	6	6	
Space Areas	**(4+1)**	**For each (3+1)**	
Living space	37 m2	29 m2	
Kitchen	19 m2	15 m2	
Bathroom	6 m2	5 m2	
Room	2*14.5- 2*10.5 m2	9-11-14 m2	
Circulation area	15 m2	7 m2	
Space Organization	**(4+1)**	**For each (3+1)**	
Axial	x	x	
Loop		x	
Hall			

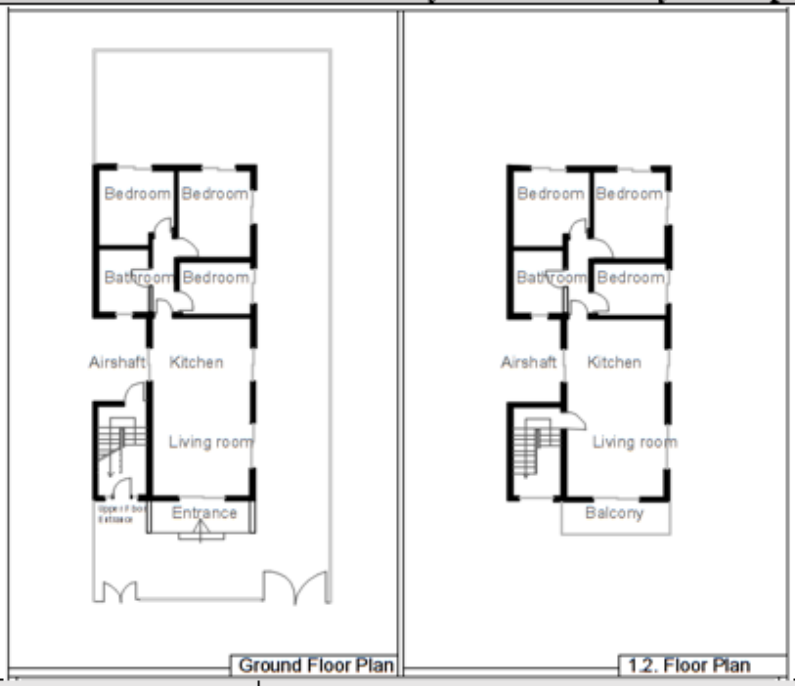
Appendix 17: Project 17 – Document no: 25/84 – Hanife M. & M. O.

Project 17 – Document no: 25/84 – Hanife Mustafa Osman Dwelling				
				
Building Characteristic	**Architect: Gökhan Noyan, Location: Ayluka**			
Accordance of building with site	Compatible: X	Incompatible:		
Location of building in site	Fit:	Unfit: X		
Façade number	3			
Number of floor	Basement + Ground + 3			
The usage of ground floor	Shop			
Basement floor/ number / usage	1 Floor / Car Parking			
Location of staircase	Front / Back: Front	Middle:	Overside:	
Storey Characteristic	**Ground Floor**	**1.2. Floor**	**3. Floor**	
Number of flats (units) on floor	0	0 (Just 8 Office)	2	
Unit variety; (1+1) / (2+1) / etc.	-	-	3+1	
Height of floor	350 cm	300 cm	300 cm	
Unit Properties			**For each (3+1)**	
Room / number of			3	
Living room / number of			1	
Kitchen / number of			1	
Bathroom / toilet / number of			Bath.: 1 – WC: 2	
Balcony / number of			2 Balcony	
Total number of units(Bedr. Kitc.)			8	
Variety in unit (Bedr./MasterBed.)			6	
Space Areas			**Unit 1**	**Unit 2**
Living space			25 m2	34 m2
Kitchen			15 m2	25 m2
Bathroom			5 m2	5 m2
Room			15-13-11 m2	15-2*12m2
Circulation area			9m2	10 m2
Space Organization			**Unit 1**	**Unit 2**
Axial			x	x
Loop				
Hall				

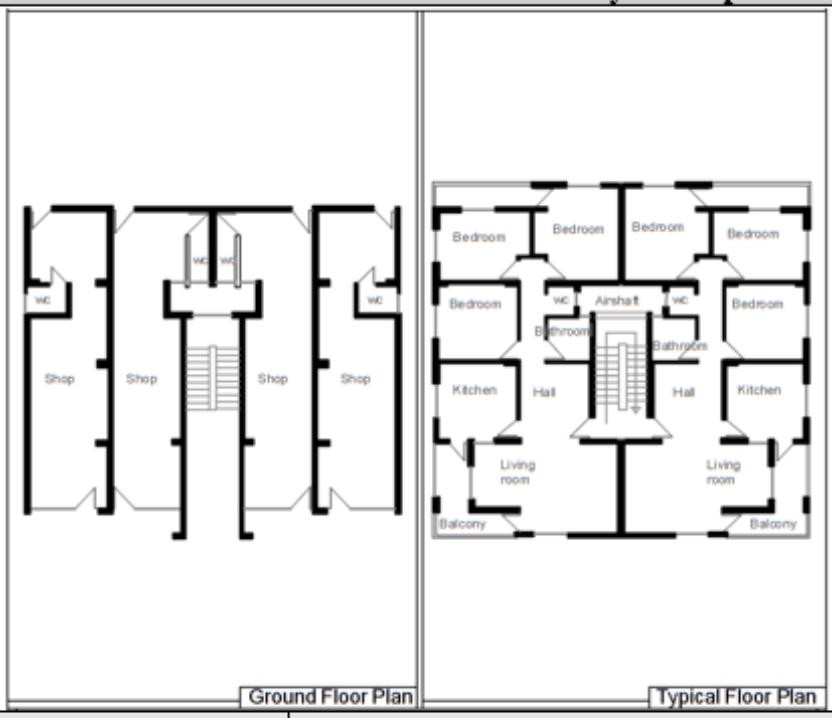
Appendix 18: Project 18 – Document no: 75/84 – Mehmet Niyazi

Project 18 – Document no: 75/84 – Mehmet Niyazi Apt.			
			
Building Characteristic	**Architect: Selçuk Balbaros, Location: Ayluka**		
Accordance of building with site	Compatible: X	Incompatible:	
Location of building in site	Fit:	Unfit: X	
Façade number	4		
Number of floor	Ground + 2		
The usage of ground floor	Shop		
Basement floor/ number / usage	No basement		
Location of staircase	Front / Back:	Middle:X	Overside:
Storey Characteristic	**Ground Floor**	**1.2. Floor**	
Number of flats (units) on floor	0	0 (Just 8 Office)	
Unit variety; (1+1) / (2+1) / etc.	-	-	
Height of floor	474 cm	312 cm	
Unit Properties		**For each (3+1)**	
Room / number of		3	
Living room / number of		1	
Kitchen / number of		1	
Bathroom / toilet / number of		Bath.+ WC: 1	
Balcony / number of		2 Balcony	
Total number of units(Bedr. Kitc.)		9	
Variety in unit (Bedr./MasterBed.)		7	
Space Areas		**For each (3+1)**	
Living space		Daily r:14/Guest r:19 m2	
Kitchen		11 m2	
Bathroom		4 m2	
Room		11-12-14 m2	
Circulation area		11 m2	
Space Organization		**For each (3+1)**	
Axial		x	
Loop		x	
Hall		x	

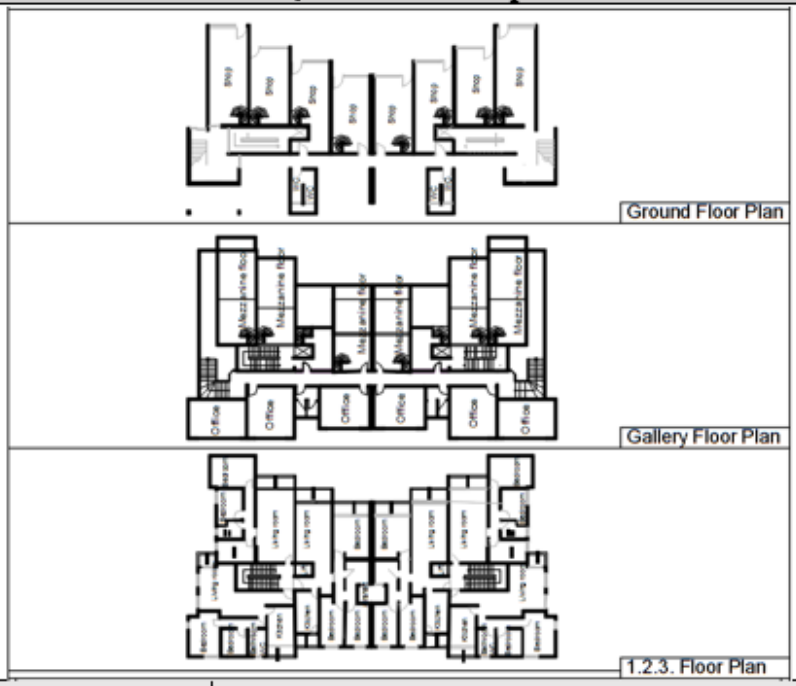
Appendix 19: Project 19 – Vise no: 228/84 – Sultan N. & Mevlit B.

Project 19 – Vise no: 228/84 – Sultan Noyan & Mevlit Beyzade Apt.			
			
Building Characteristic	**Architect: Gökhan Noyan, Location: Ayluka**		
Accordance of building with site	Compatible: X	Incompatible:	
Location of building in site	Fit:	Unfit: X	
Façade number	3		
Number of floor	Ground + 2		
The usage of ground floor	Dwelling		
Basement floor/ number / usage	No basement		
Location of staircase	Front / Back:	Middle:	Overside:X
Storey Characteristic	**Ground Floor**	**1.2. Floor**	
Number of flats (units) on floor	1	1	
Unit variety; (1+1) / (2+1) / etc.	3+1	3+1	
Height of floor	300 cm	300 cm	
Unit Properties	**For each (3+1)**	**For each (3+1)**	
Room / number of	3	3	
Living room / number of	1	1	
Kitchen / number of	1	1	
Bathroom / toilet / number of	Bath. + WC: 1	Bath. + WC: 1	
Balcony / number of	0 Balcony-1 Terrace	1 Balcony	
Total number of units(Bedr. Kitc.)	6	7	
Variety in unit (Bedr./MasterBed.)	4	5	
Space Areas	**For each (3+1)**	**For each (3+1)**	
Living space	35m2	35 m2	
Kitchen			
Bathroom	6 m2	6 m2	
Room	8-10-13 m2	8-10-13 m2	
Circulation area	4 m2	4 m2	
Space Organization	**For each (3+1)**	**For each (3+1)**	
Axial	x	x	
Loop			
Hall	x	x	

Appendix 20: Project 20 – Vise no: 734/84 – Hasan Mehmet S. Apt.

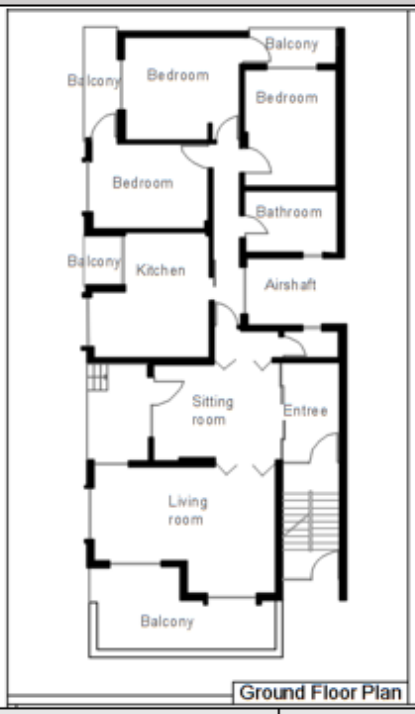
Project 20 – Vise no: 734/84 – Hasan Mehmet Süleyman Apt.			
			
Building Characteristic	**Architect: S. Ersen, Location: Ayluka**		
Accordance of building with site	Compatible: X	Incompatible:	
Location of building in site	Fit:	Unfit: X	
Façade number	4		
Number of floor	Basement + Ground + 3		
The usage of ground floor	Shop		
Basement floor/ number / usage	1 Floor – Car Parking and storage		
Location of staircase	Front / Back:	Middle: X	Overside:
Storey Characteristic	**Ground Floor**	**1.2.3. Floor**	
Number of flats (units) on floor	-	2	
Unit variety; (1+1) / (2+1) / etc.	-	3+1	
Height of floor	345 cm	306 cm	
Unit Properties	**For each (3+1)**	**For each (3+1)**	
Room / number of		3	
Living room / number of		1	
Kitchen / number of		1	
Bathroom / toilet / number of		1 Bath. + 2WC	
Balcony / number of		2 Balcony	
Total number of units(Bedr. Kitc.)		10	
Variety in unit (Bedr./MasterBed.)		7	
Space Areas		**For each (3+1)**	
Living space		22 m2	
Kitchen		12 m2	
Bathroom		4 m2	
Room		9+10+12 m2	
Circulation area		15 m2	
Space Organization		**For each (3+1)**	
Axial		x	
Loop		x	
Hall		x	

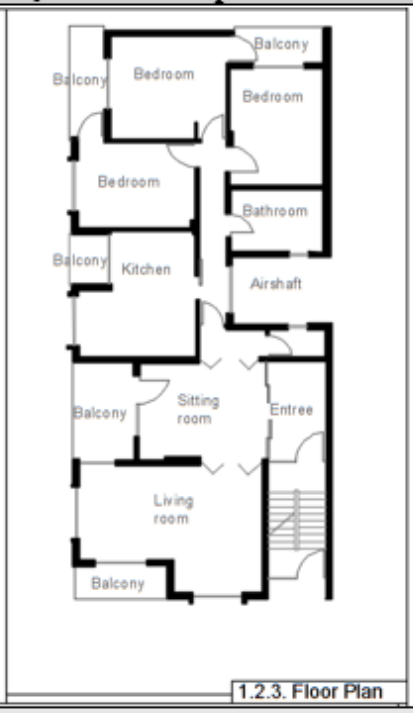
Appendix 21: Project 21 – Vise no: 884/85 – Şükrü Ahmet Apt.

Project 21 – Vise no: 884/85 – Şükrü Ahmet Apt.				
				
Building Characteristic	**Architect: Burhan Atun, Location: Baykal**			
Accordance of building with site	Compatible:	Incompatible: X		
Location of building in site	Fit:	Unfit: X		
Façade number	4			
Number of floor	Basement + Ground + Mezzanine + 3			
The usage of ground floor	Shop			
Basement floor/ number / usage	1 Floor – Car Parking and storage			
Location of staircase	Front / Back:	Middle:	Overside: 2 side	
Storey Characteristic	**Ground Floor**	**Gallery Floor**	**1.2.3. Floor**	
Number of flats (units) on floor	-	-	2*3=6 Unit	
Unit variety; (1+1) / (2+1) / etc.	-	-	4*(2+1) - 2*(3+1)	
Height of floor	340 cm	255 cm	285 cm	
Unit Properties			**(2+1)**	**(3+1)**
Room / number of			2	3
Living room / number of			1	1
Kitchen / number of			1	1
Bathroom / toilet / number of			1	1
Balcony / number of			1 - 2	3 Balcony
Total number of units(Bedr. Kitc.)			6 - 7	9
Variety in unit (Bedr./MasterBed.)			5 - 5	5
Space Areas			**(2+1)**	**(3+1)**
Living space			25-27 m2	21 m2
Kitchen			10-8 m2	9 m2
Bathroom			5 m2	6 m2
Room			8-11 m2	10-11-15 m2
Circulation area			5 m2	7 m2
Space Organization			**(2+1)**	**(3+1)**
Axial			x	x
Loop				
Hall				

Appendix 22: Project 22 – Document no: 18/86 – Ali Ç. İbrahim Apt.

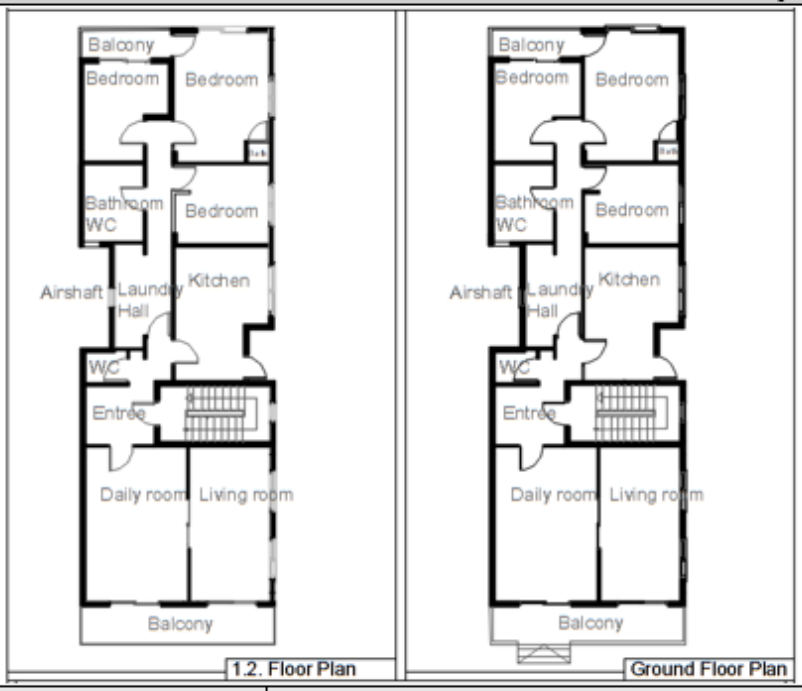
Project 22 – Document no: 18/86 – Ali Ç. İbrahim Apt.



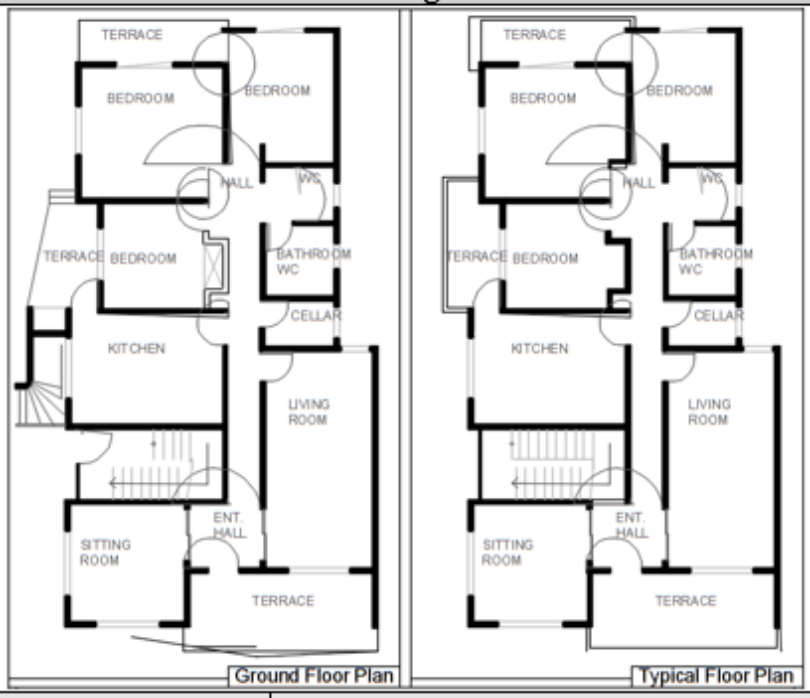


Building Characteristic	**Architect: Feridun Ardost, Location: Karakol**		
Accordance of building with site	Compatible:	Incompatible: X	
Location of building in site	Fit:	Unfit: X	
Façade number	3		
Number of floor	Ground + 1		
The usage of ground floor	Dwelling		
Basement floor/ number / usage	No basement		
Location of staircase	Front / Back: Front	Middle:	Overside: X
Storey Characteristic	**Ground Floor**	**1.2.3. Floor**	
Number of flats (units) on floor	1	1	
Unit variety; (1+1) / (2+1) / etc.	3+1	3+1	
Height of floor	315 cm	315 cm	
Unit Properties	**(3+1)**		
Room / number of	3	3	
Living room / number of	1	1	
Kitchen / number of	1	1	
Bathroom / toilet / number of	1 Bath + WC	1 Bath + WC	
Balcony / number of	4	5	
Total number of units(Bedr. Kitc.)	13	14	
Variety in unit (Bedr./MasterBed.)	9	9	
Space Areas	**(3+1)**	**(3+1)**	
Living space	Living 26+ Sitting 15	Living 26+ Sitting 15	
Kitchen	16 m2	16 m2	
Bathroom	7 m2	7 m2	
Room	12-13-15 m2	12-13-15 m2	
Circulation area	14 m2	14 m2	
Space Organization	**(3+1)**	**(3+1)**	
Axial	x	x	
Loop	x	x	
Hall			

Appendix 23: Project 23 – Document no: 9/87 – Gürsel & Soner Apt.

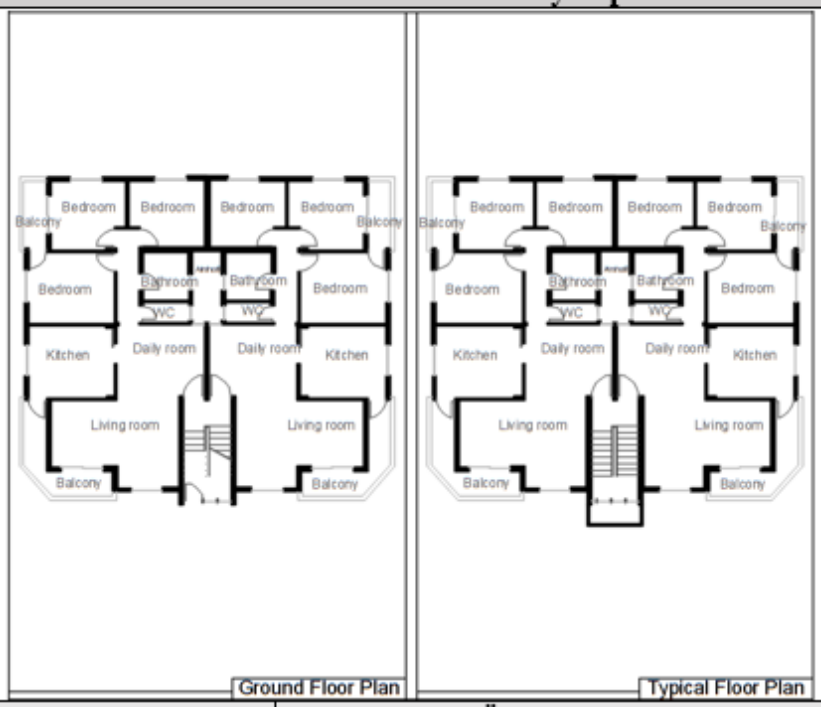
Project 23 – Document no: 09/87 – Gürsel Ali Pit & Soner E. Raşit Apt.			
			
Building Characteristic	**Architect: Yılmaz Ertoğrul, Location: Ayluka**		
Accordance of building with site	Compatible:	Incompatible: X	
Location of building in site	Fit:	Unfit: X	
Façade number	3		
Number of floor	Ground + 2		
The usage of ground floor	Dwelling		
Basement floor/ number / usage	No basement		
Location of staircase	Front / Back:	Middle:	Overside: X
Storey Characteristic	**Ground Floor**	**1.2. Floor**	
Number of flats (units) on floor	1	1	
Unit variety; (1+1) / (2+1) / etc.	3+1	3+1	
Height of floor	300 cm	300 cm	
Unit Properties	**(3+1)**	**(3+1)**	
Room / number of	3	3	
Living room / number of	1	1	
Kitchen / number of	1	1	
Bathroom / toilet / number of	2 Bath + 2 WC	2 Bath + 2 WC	
Balcony / number of	2	2	
Total number of units(Bedr. Kitc.)	13	13	
Variety in unit (Bedr./MasterBed.)	10	10	
Space Areas	**(3+1)**	**(3+1)**	
Living space	Daily 24+ Living 19	Daily 24+ Living 19	
Kitchen	17 m2	17 m2	
Bathroom	7 m2	7 m2	
Room	11-11-18 m2	11-11-18 m2	
Circulation area	12 m2	12 m2	
Space Organization	**(3+1)**	**(3+1)**	
Axial	x	x	
Loop	x	x	
Hall			

Appendix 24: Project 24 – Document no: 59/87 – Gülgün K. & K. A.

Project 24 – Document no: 59/87 – Gülgün Kemal & Kemal Ahmet Apt.			
			
Building Characteristic	**Architect: Osman Saner, Location: Ayluka**		
Accordance of building with site	Compatible:	Incompatible: X	
Location of building in site	Fit:	Unfit: X	
Façade number	4		
Number of floor	Ground + 3		
The usage of ground floor	Dwelling		
Basement floor/ number / usage	No basement		
Location of staircase	Front / Back:	Middle:	Overside: X
Storey Characteristic	**Ground Floor**	**1.2.3. Floor**	
Number of flats (units) on floor	1	1	
Unit variety; (1+1) / (2+1) / etc.	3+1	3+1	
Height of floor	300 cm	300 cm	
Unit Properties	**(3+1)**	**(3+1)**	
Room / number of	3	3	
Living room / number of	1	1	
Kitchen / number of	1	1	
Bathroom / toilet / number of	1 Bath. + 2 WC	1 Bath. + 2 WC	
Balcony / number of	3	3	
Total number of units(Bedr. Kitc.)	13	13	
Variety in unit (Bedr./MasterBed.)	9	9	
Space Areas	**(3+1)**	**(3+1)**	
Living space	Living 24 + Sitting 14	Living 24 + Sitting 14	
Kitchen	17 m2	17 m2	
Bathroom	5 m2	5 m2	
Room	11-12-16 m2	11-12-16 m2	
Circulation area	14 m2	14 m2	
Space Organization	**(3+1)**	**(3+1)**	
Axial	x	x	
Loop	x	x	
Hall			

Appendix 25: Project 25 – Document no: 97/87 – Levent Sanayi Apt.

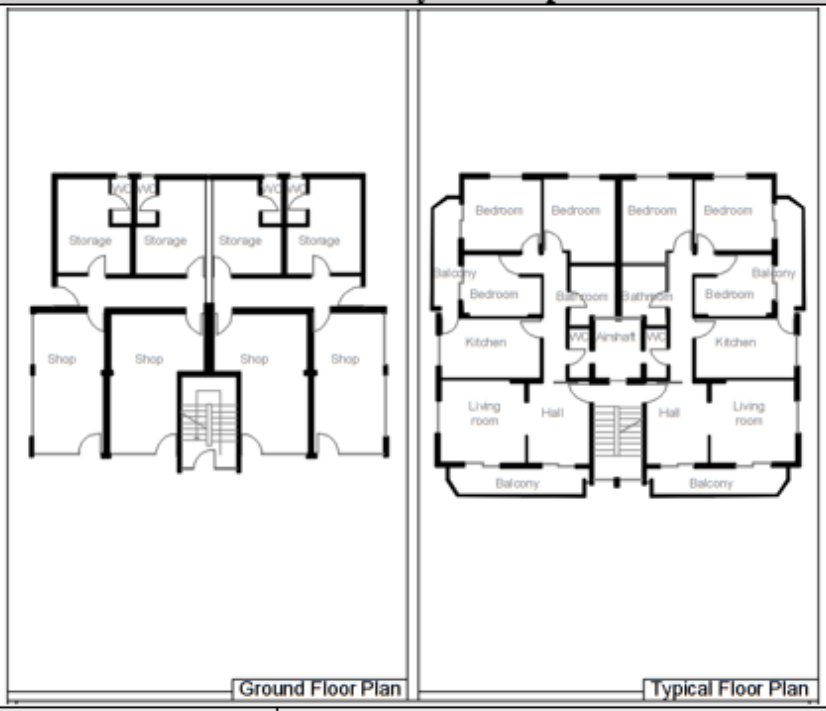
Project 25 – Document no: 97/87 – Levent Sanayi Apt.



Building Characteristic	**Architect: Erol Özüner, Location: Baykal**		
Accordance of building with site	Compatible: X	Incompatible:	
Location of building in site	Fit:	Unfit: X	
Façade number	4		
Number of floor	Ground + 3		
The usage of ground floor	Dwelling		
Basement floor/ number / usage	No basement		
Location of staircase	Front / Back: Front	Middle:	Overside:
Storey Characteristic	**Ground Floor**	**1.2.3. Floor**	
Number of flats (units) on floor	2	2	
Unit variety; (1+1) / (2+1) / etc.	3+1	3+1	
Height of floor	306 cm	306 cm	
Unit Properties	**(3+1)**	**(3+1)**	
Room / number of	3	3	
Living room / number of	1	1	
Kitchen / number of	1	1	
Bathroom / toilet / number of	1 Bath. + 2 WC	1 Bath. + 2 WC	
Balcony / number of	2	2	
Total number of units(Bedr. Kitc.)	10	10	
Variety in unit (Bedr./MasterBed.)	7	7	
Space Areas	**(3+1)**	**(3+1)**	
Living space	Living 22 + Daily 15	Living 22 + Daily 15	
Kitchen	14 m2	14 m2	
Bathroom	5 m2	5 m2	
Room	11-11-14 m2	11-11-14 m2	
Circulation area	5 m2	5 m2	
Space Organization	**(3+1)**	**(3+1)**	
Axial	x	x	
Loop	x	x	
Hall			

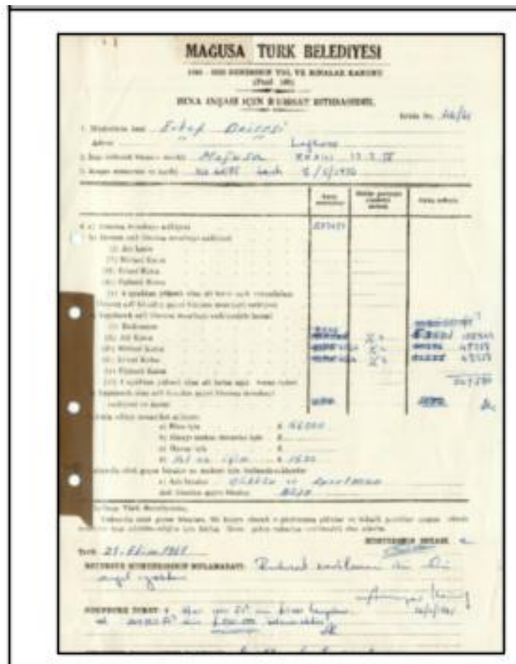
Appendix 26: Project 26 – Vise no: 518/87 – Arif Hayrettin Apt.

Project 26 – Vise no: 518/87 – Arif Hayrettin Apt.

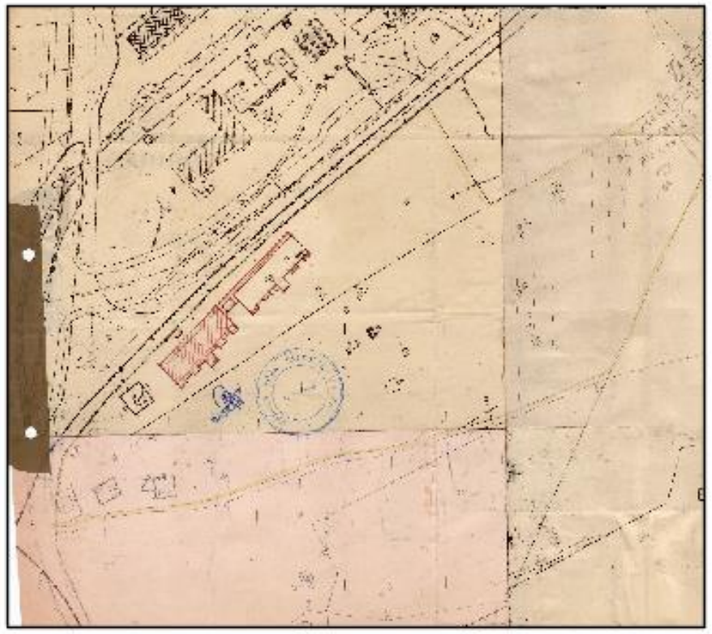


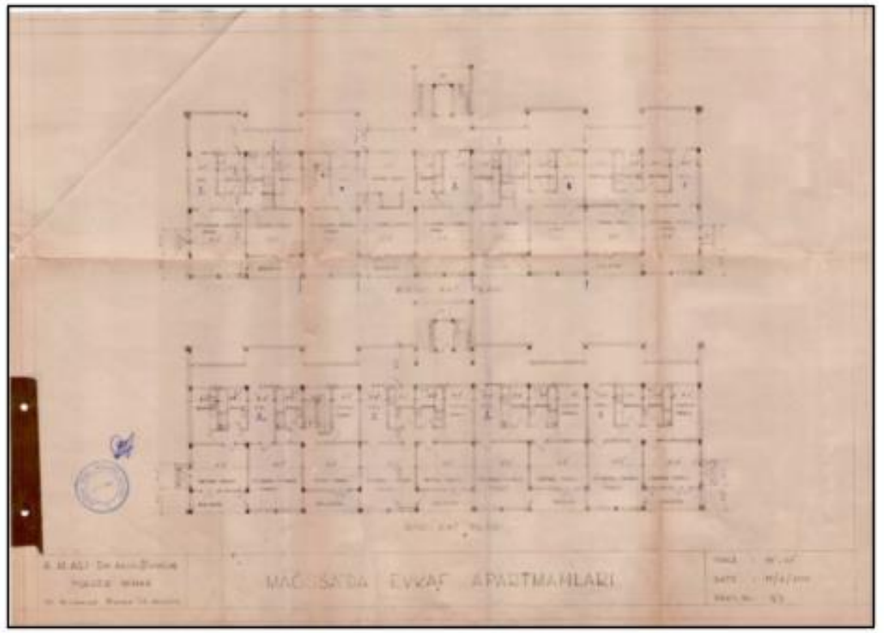
Building Characteristic	**Architect: Yılmaz Ertoğrul, Location: Sakarya**		
Accordance of building with site	Compatible: X	Incompatible:	
Location of building in site	Fit:	Unfit: X	
Façade number	4		
Number of floor	Ground + 2		
The usage of ground floor	Shop		
Basement floor/ number / usage	No basement		
Location of staircase	Front / Back: Front	Middle:	Overside:
Storey Characteristic	**Ground Floor**	**1.2. Floor**	
Number of flats (units) on floor	4 Shop + 4 Storage	2	
Unit variety; (1+1) / (2+1) / etc.	-	3+1	
Height of floor	412 cm	315 cm	
Unit Properties		**(3+1)**	
Room / number of		3	
Living room / number of		1	
Kitchen / number of		1	
Bathroom / toilet / number of		1 Bath. + 2 WC	
Balcony / number of		2	
Total number of units(Bedr. Kitc.)		10	
Variety in unit (Bedr./MasterBed.)		7	
Space Areas		**(3+1)**	
Living space		15 m2	
Kitchen		13 m2	
Bathroom		5 m2	
Room		9-11-12 m2	
Circulation area		18 m2	
Space Organization		**(3+1)**	
Axial		x	
Loop		x	
Hall			

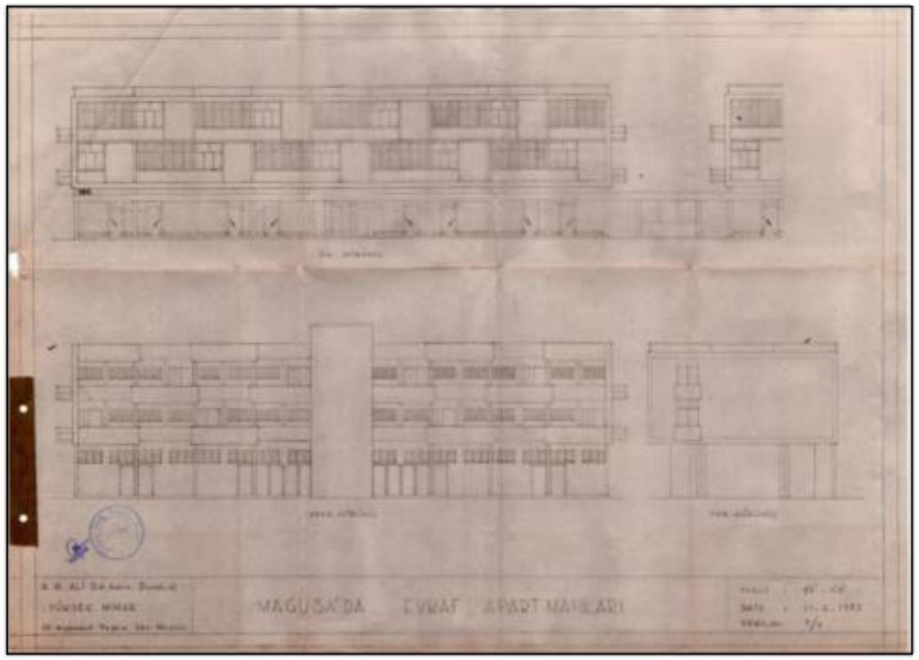
Appendix 27: Project 1 – Document no: 46/61 Evkaf Apartment

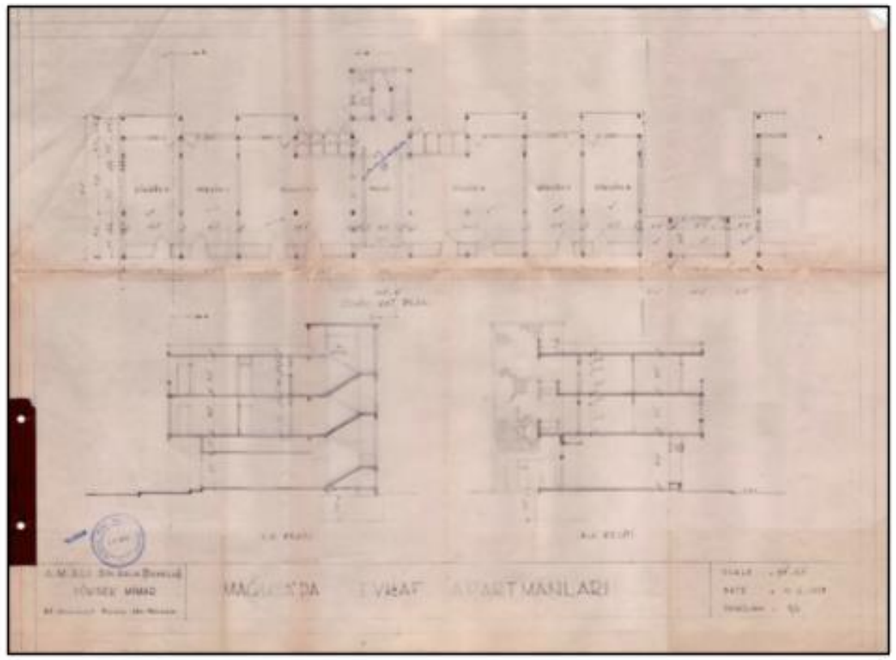

MAGUSA TURK BELEDİYESİ

BİNA İNŞAİE İÇİN İSKELE RUHSATNAMESİ

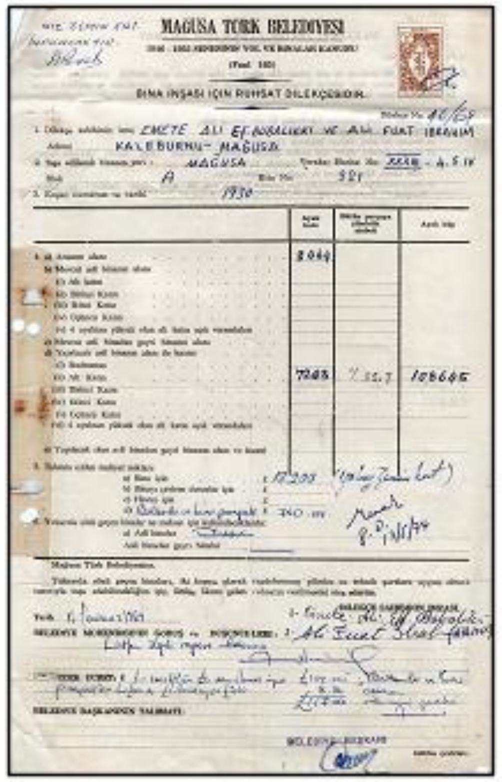








Appendix 28: Project 2 – Document no: 49/69 Ali Fuat Apartment



MAĞUSA TÜRK BELEDİYESİ

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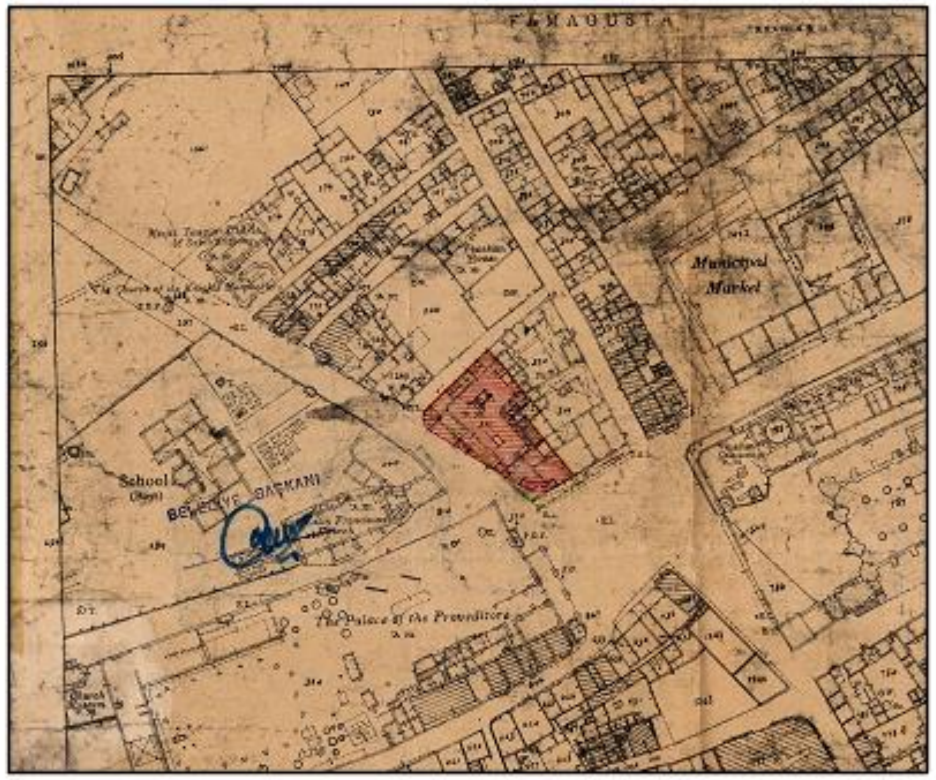
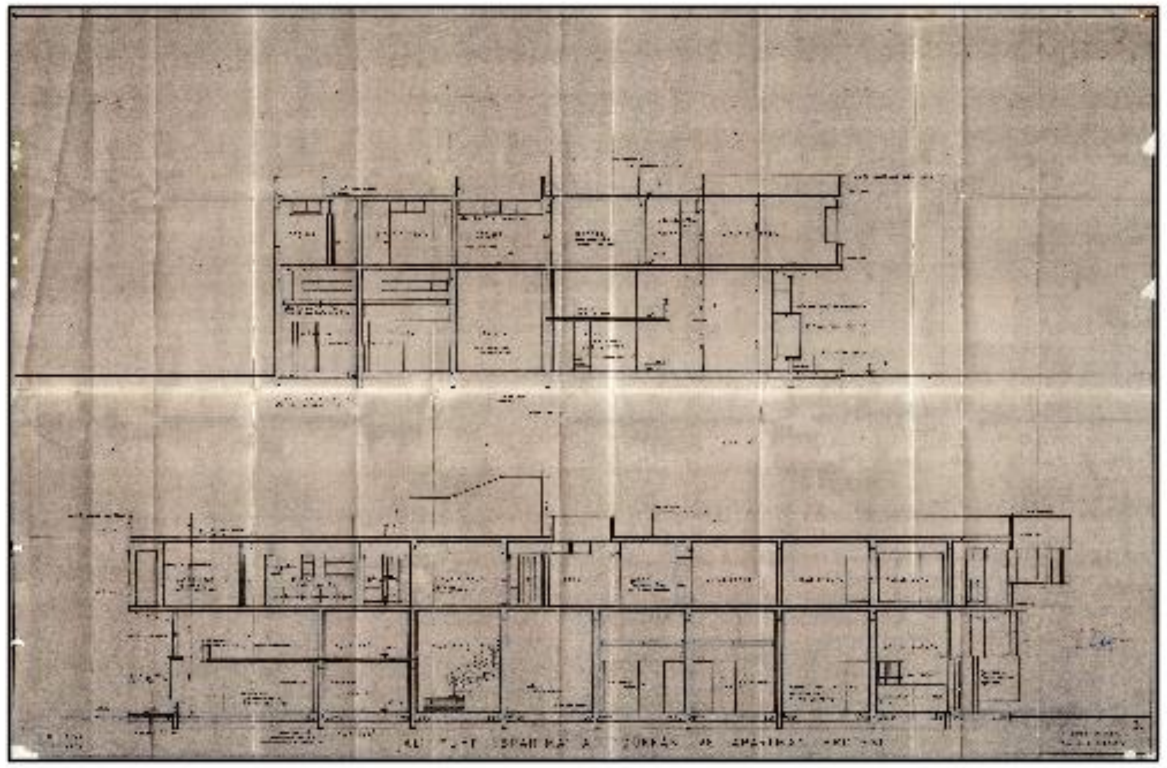
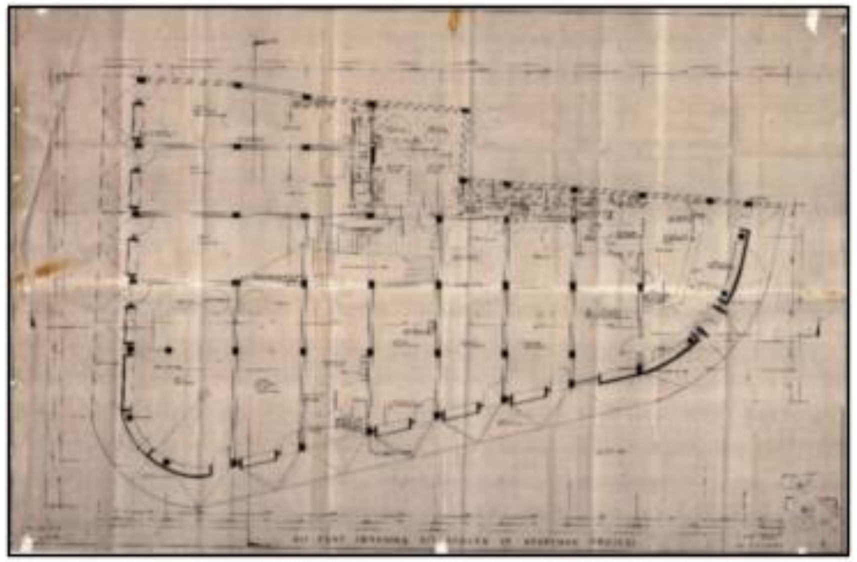
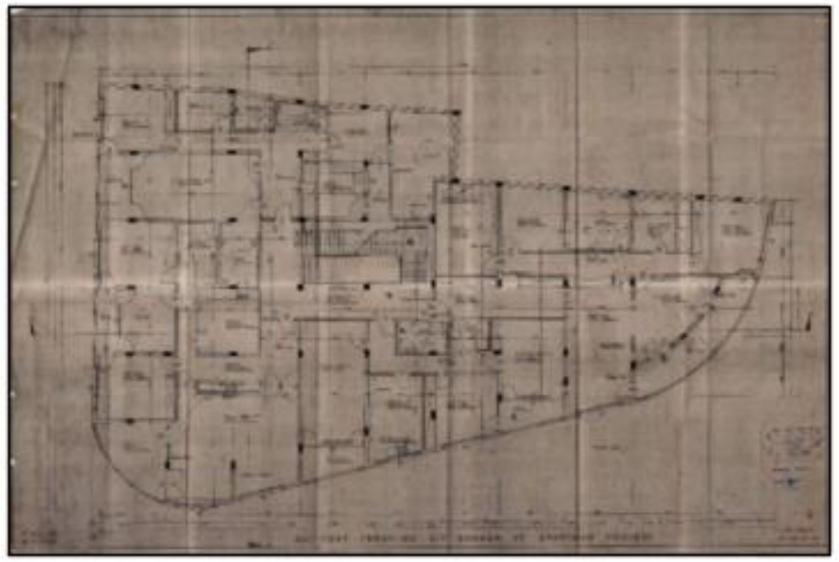
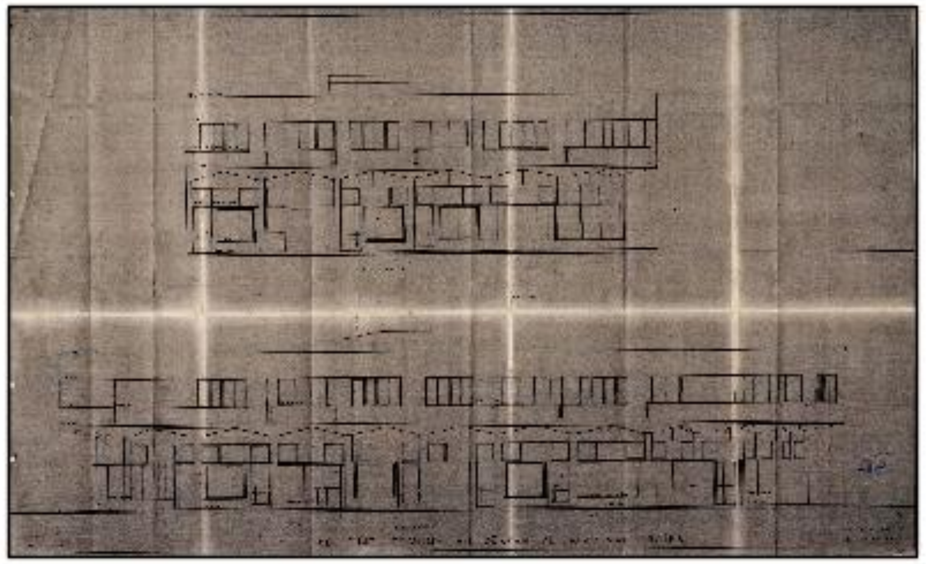


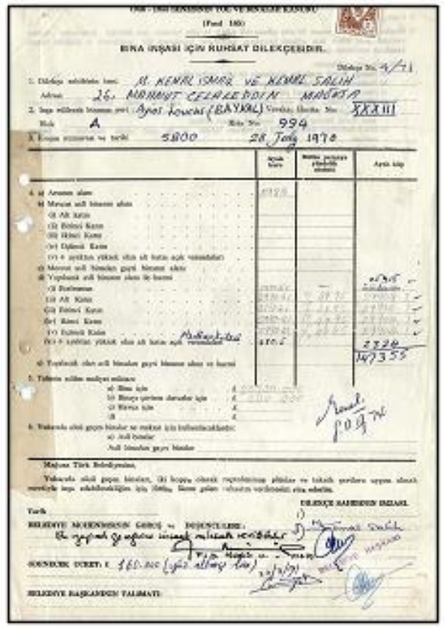








Appendix 29: Project 3 – Document no: 4/71 Arzu Apartment



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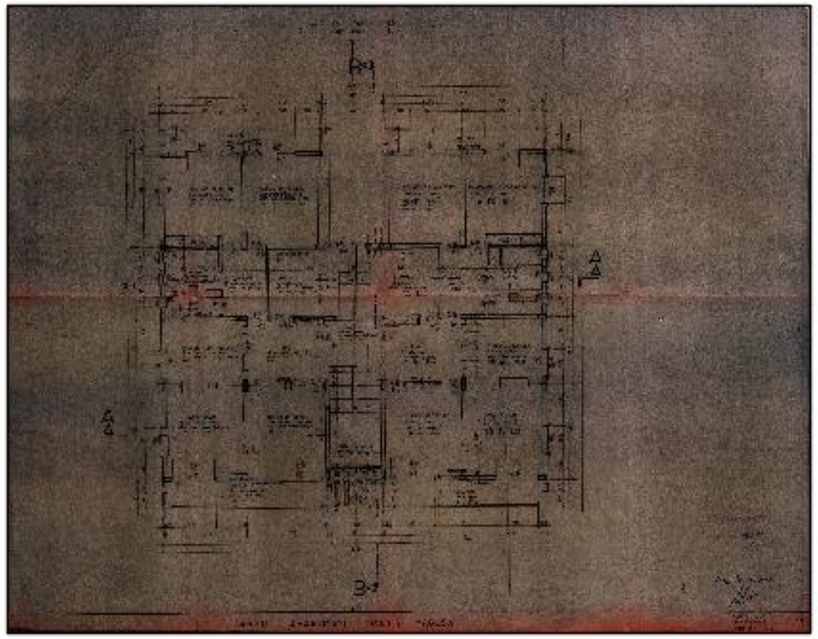
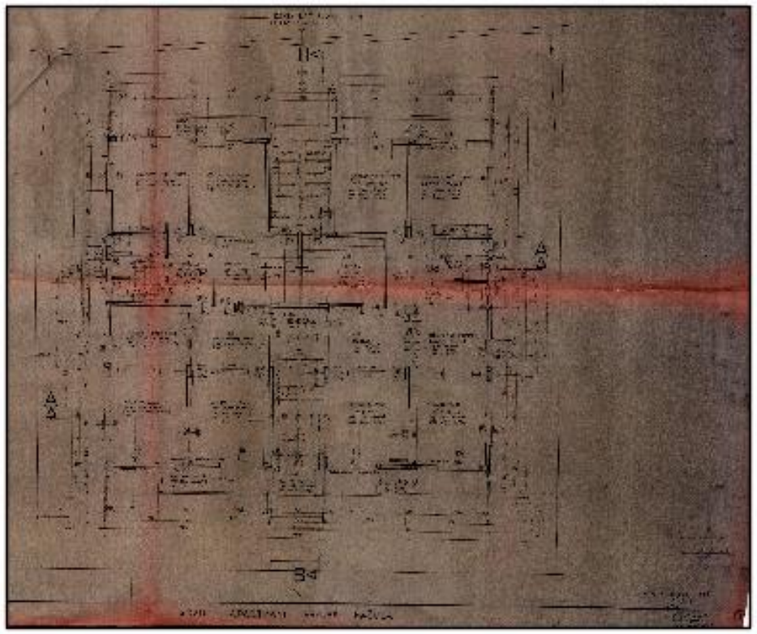
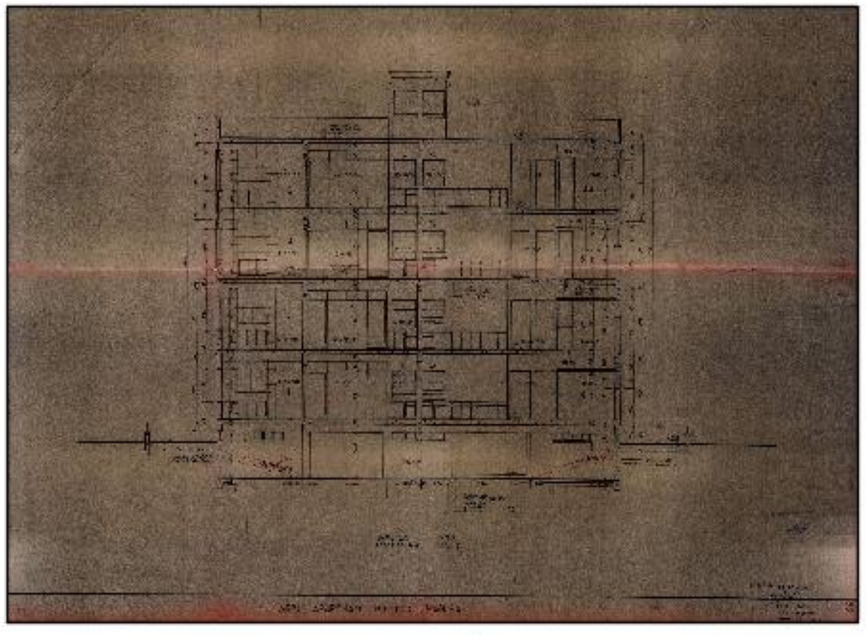
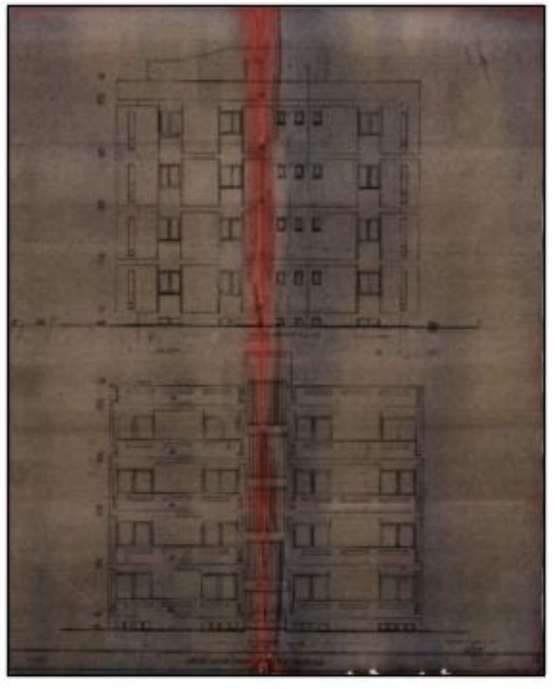
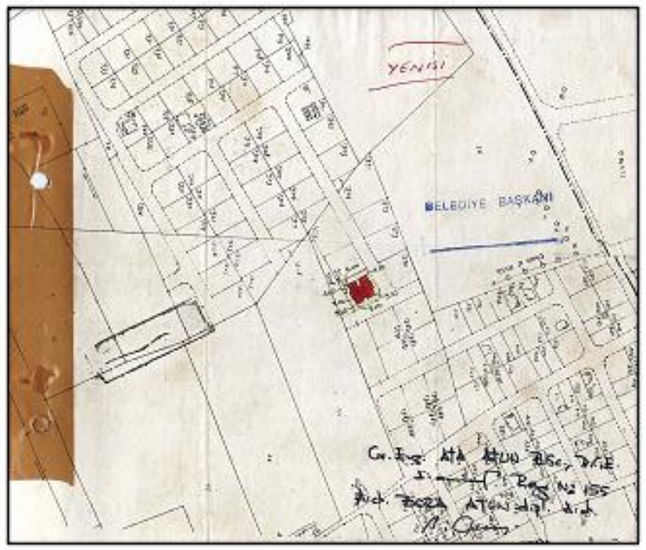


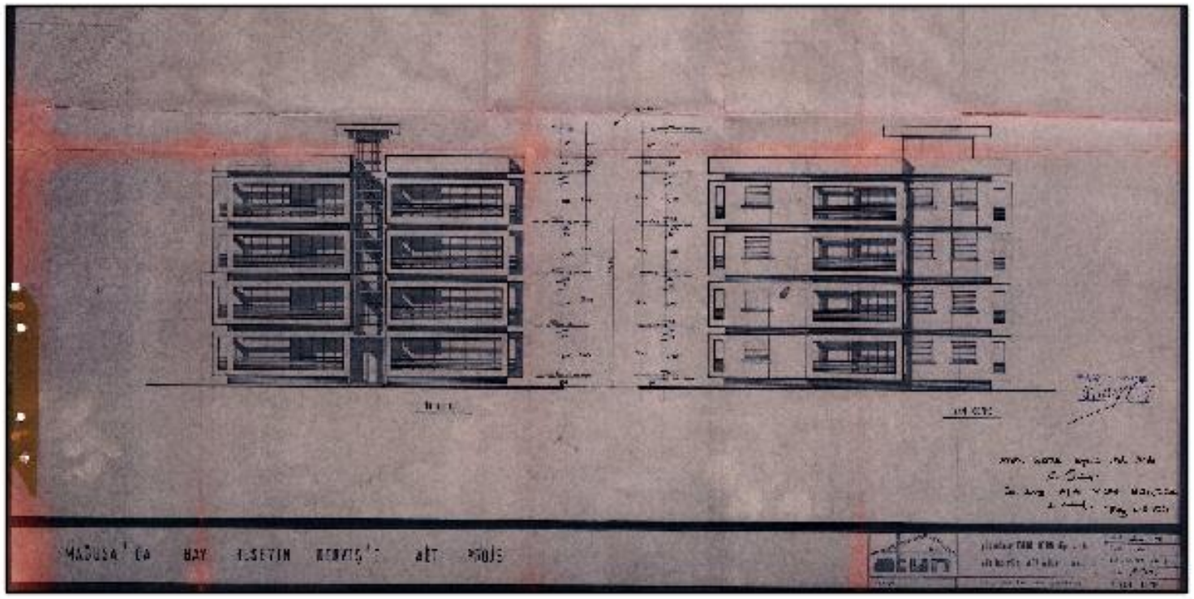


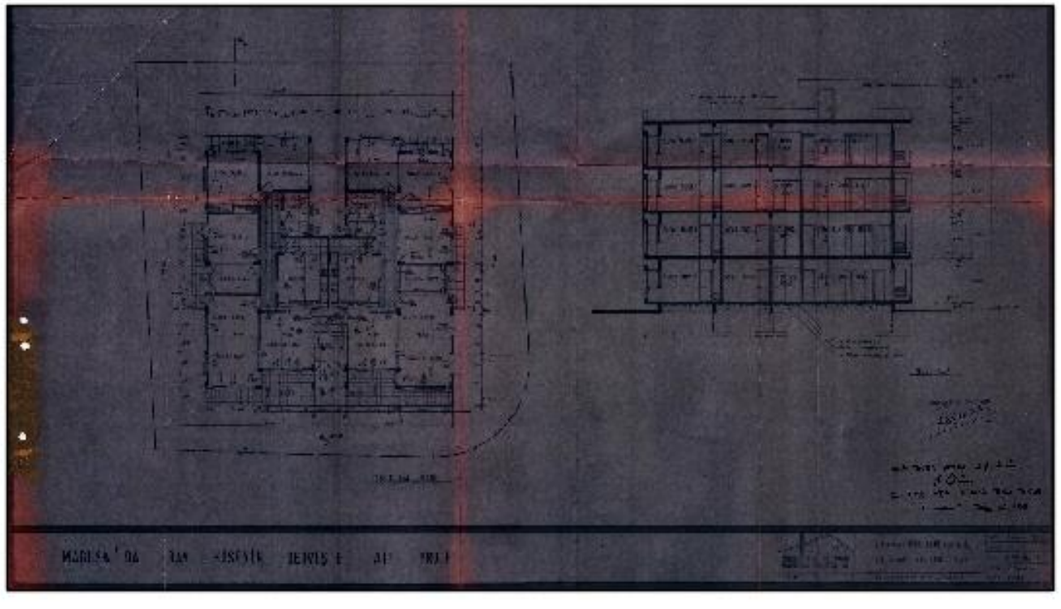


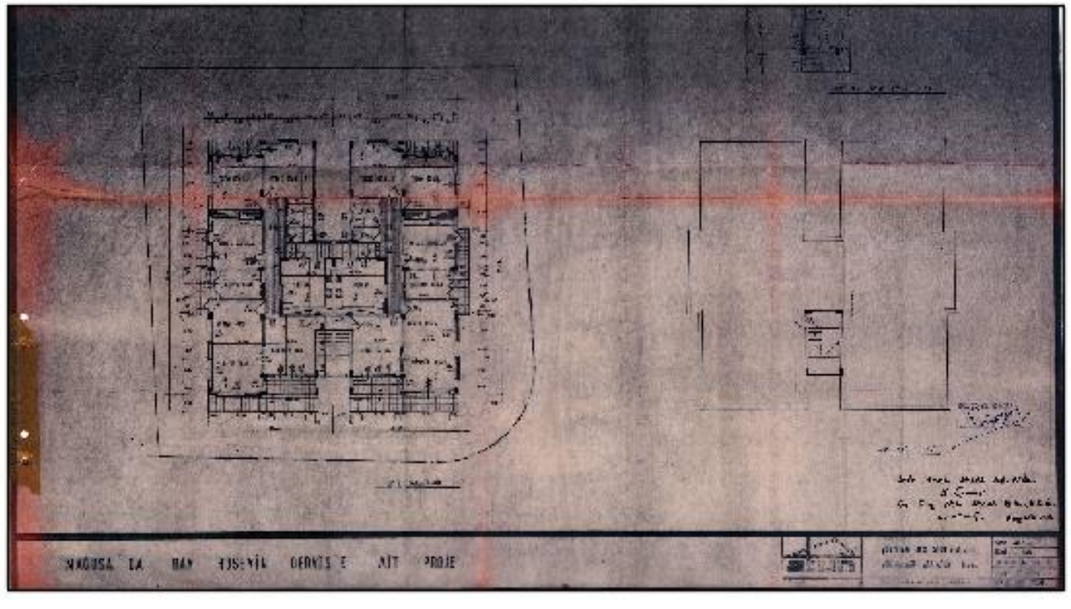


Appendix 30: Project 4 – Document no: 53/72 – Hüseyin Derviş Dwelling (First Project of Akmanlar2)

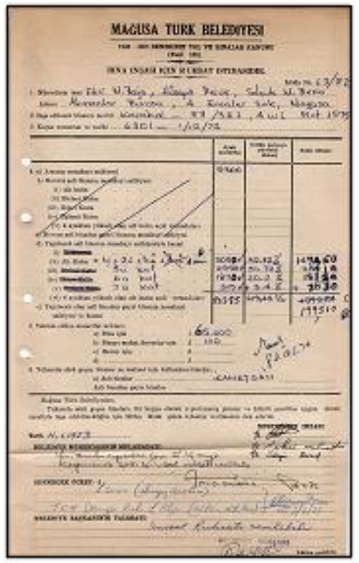


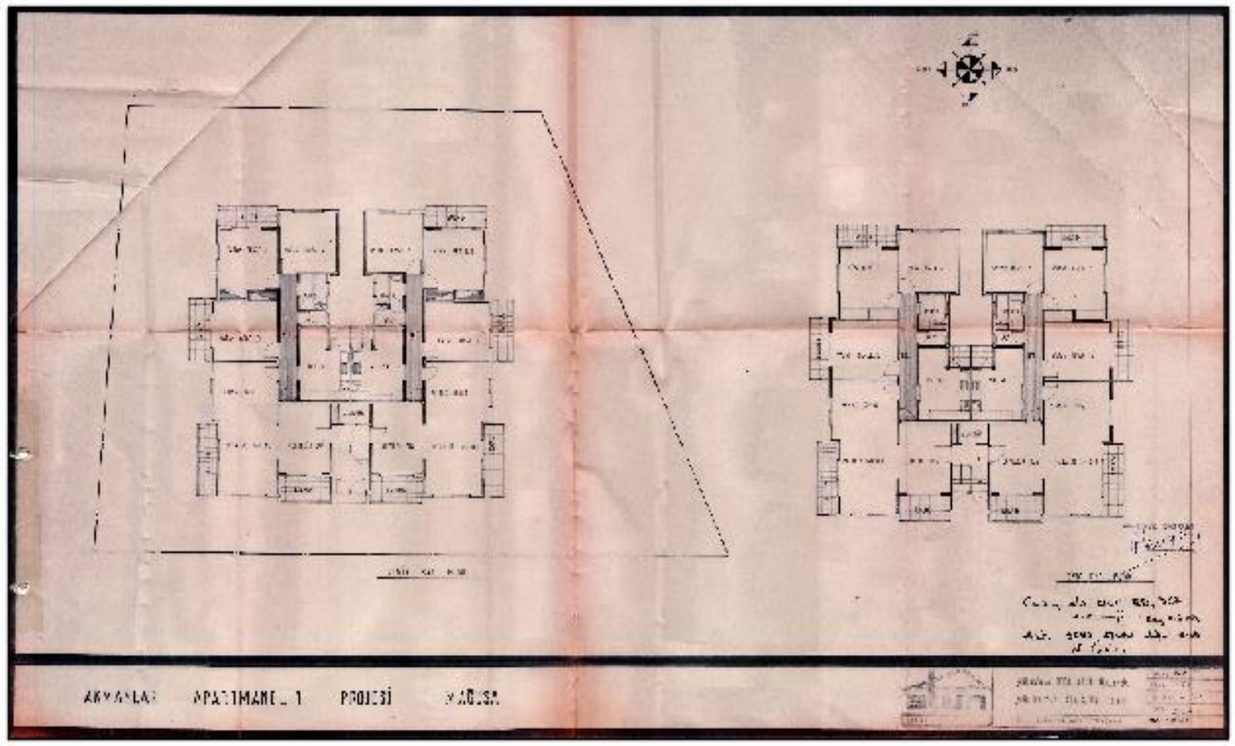


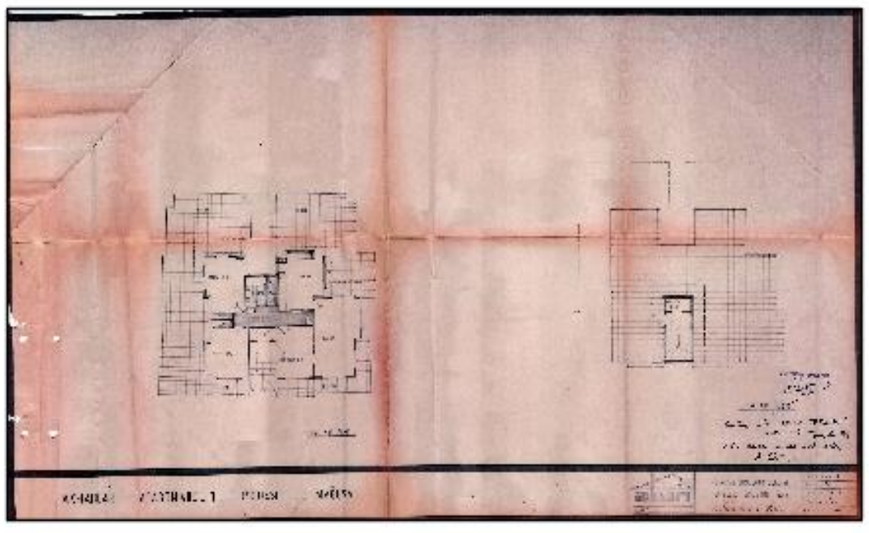


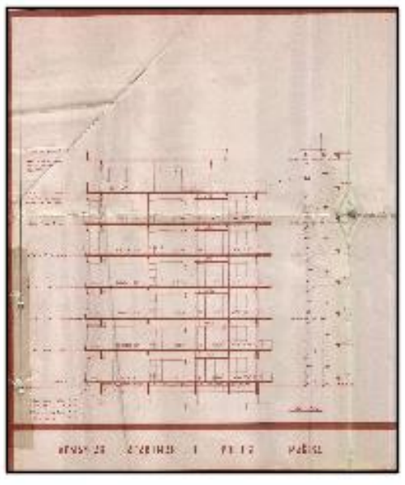


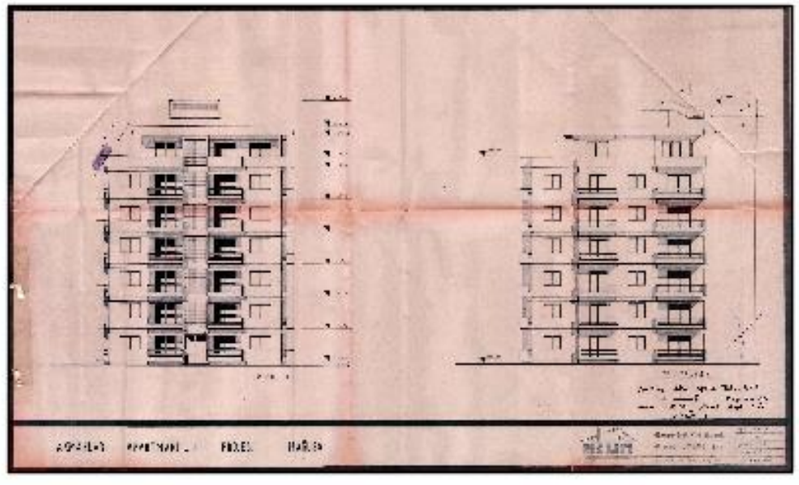
Appendix 31: Project 5 – Document no: 63/72 – Akmanlar 1 Apartment


MAGUSA TURK BELEDIYESI

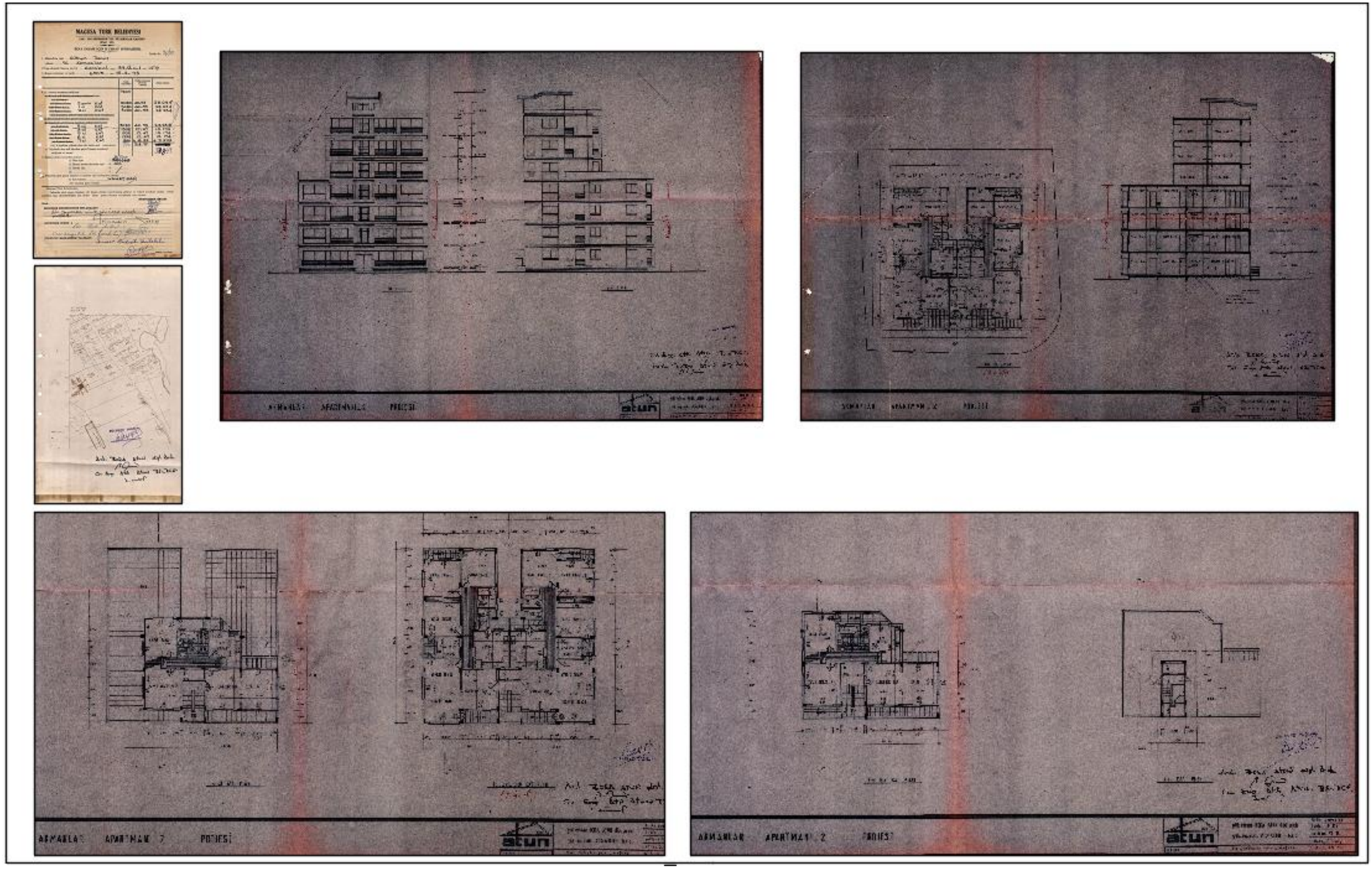




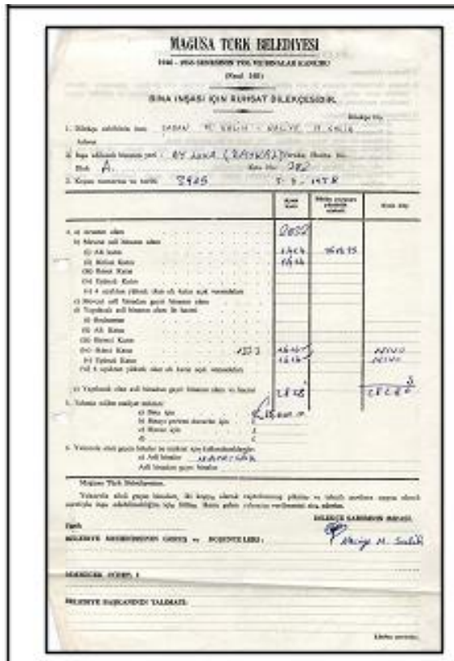




Appendix 32: Project 6 – Document no: 31/73 – Akmanlar 2 Apartment (Reconditioned project of 53/72 – Hüsyin Derviş Dwelling)



Appendix 33: Project 7 – Document no: 47/78 – Naciye & Şadan M. Salih Dwelling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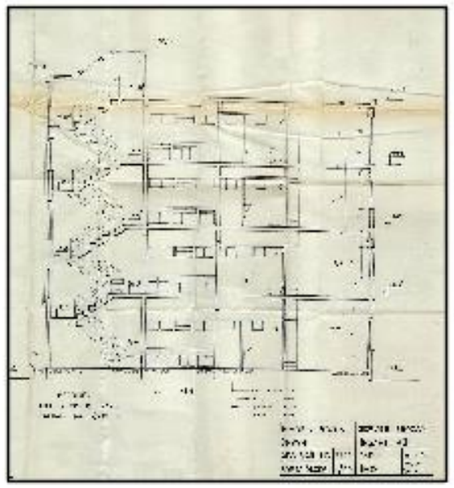
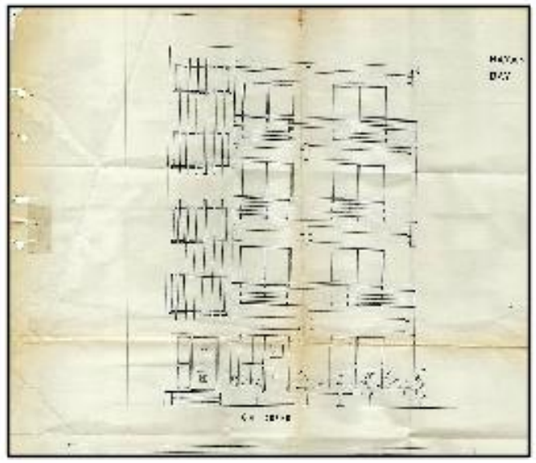
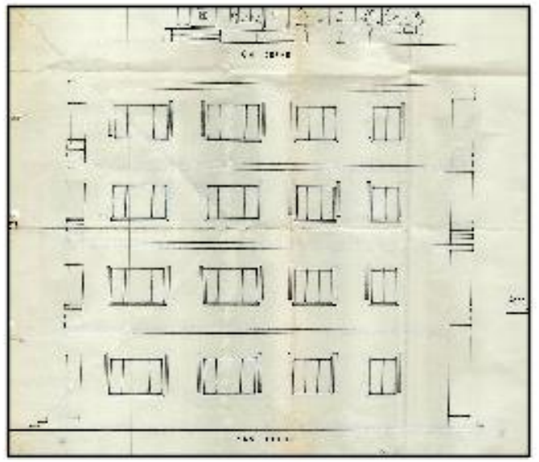
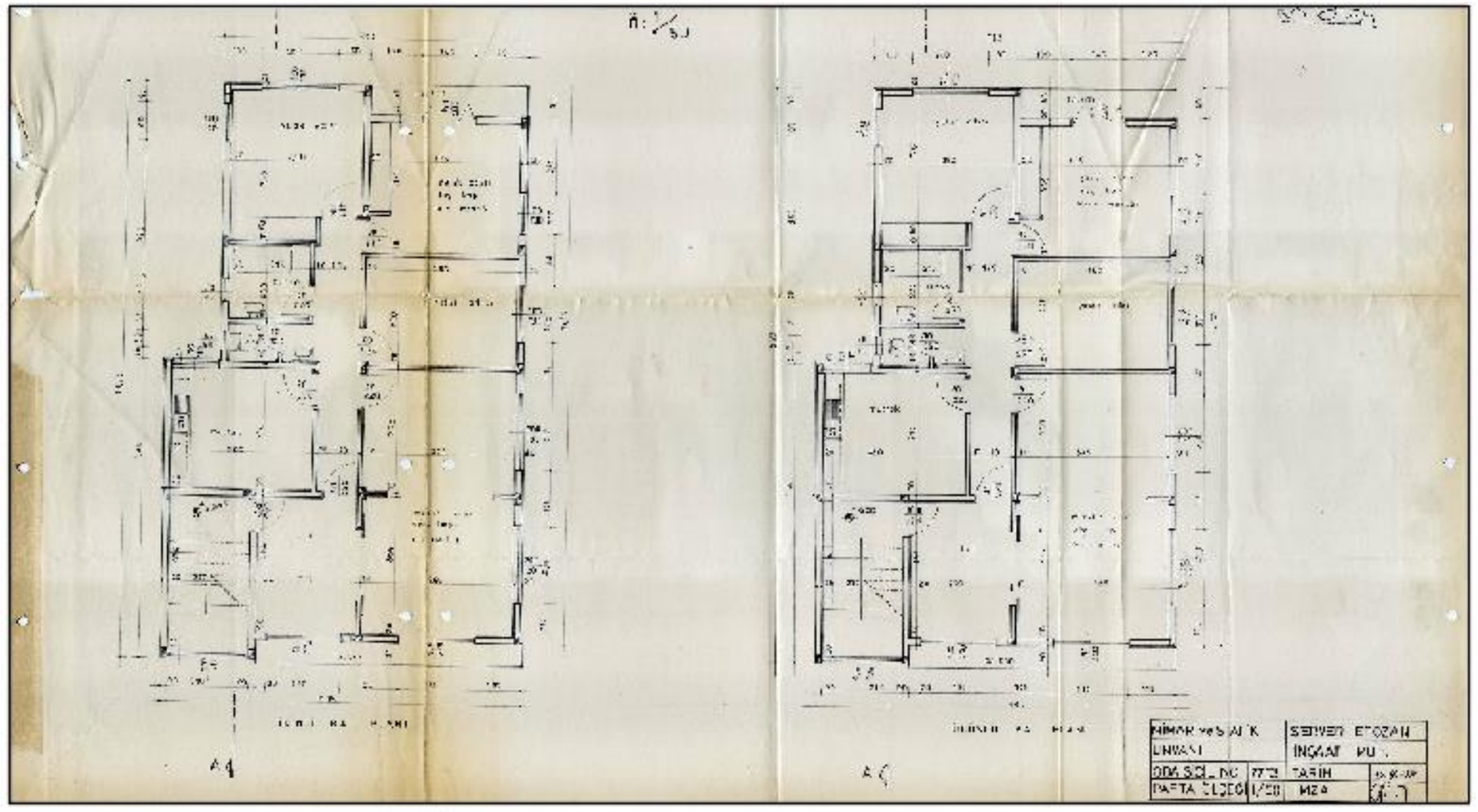
BINA INŞASI İÇIN RUHSAT DILEKÇESIDIR.

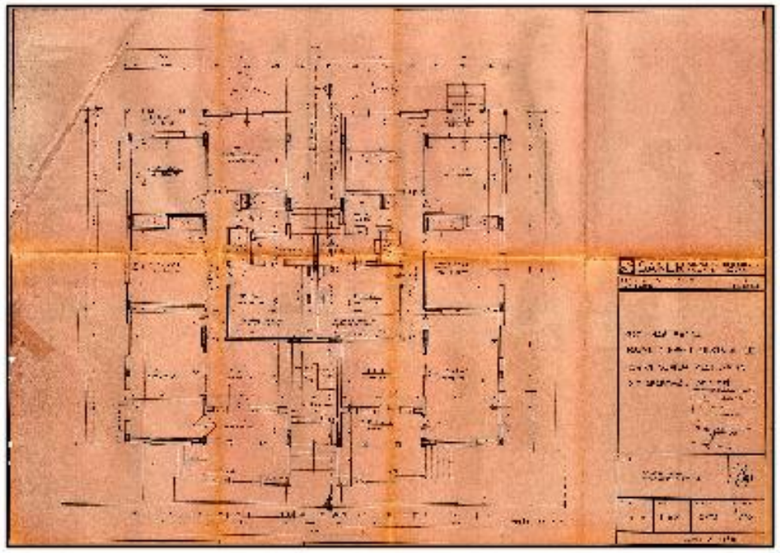


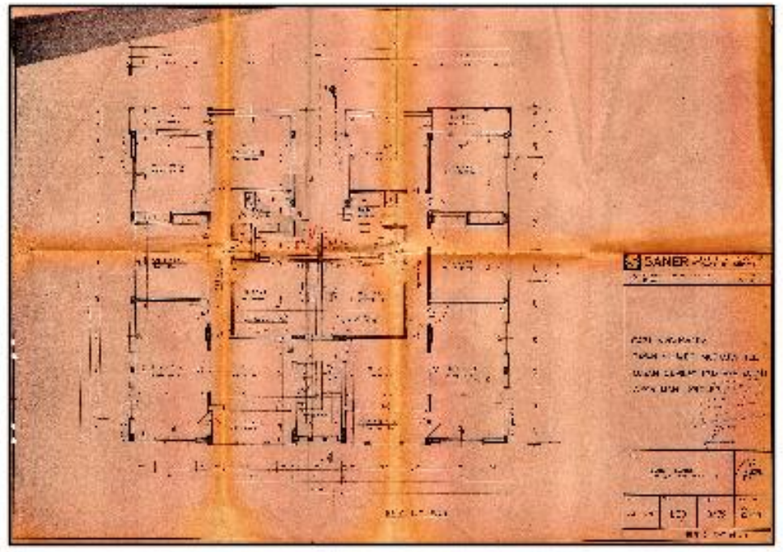


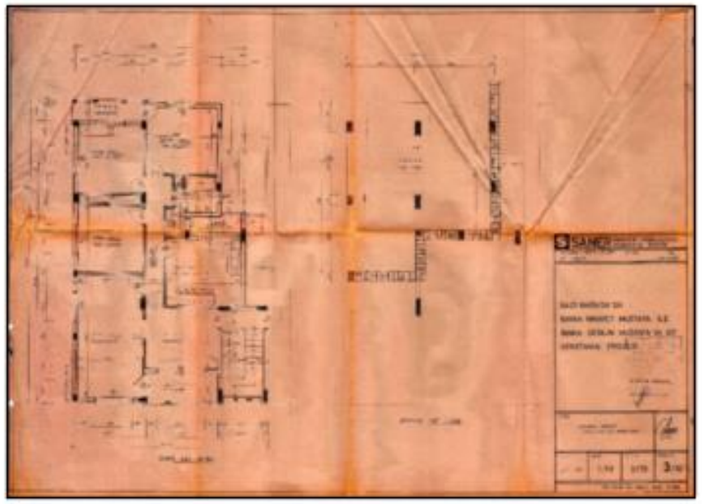


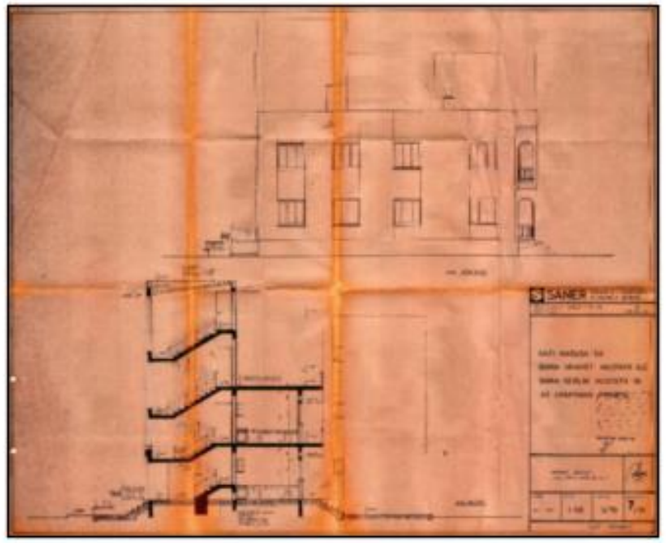


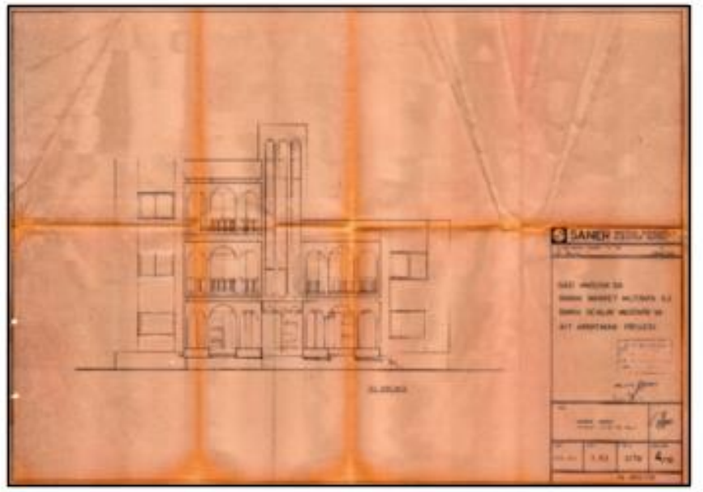
Appendix 34: Project 8 – Document no: 03/79 – Nihayet & Sevilay Mustafa Apartment





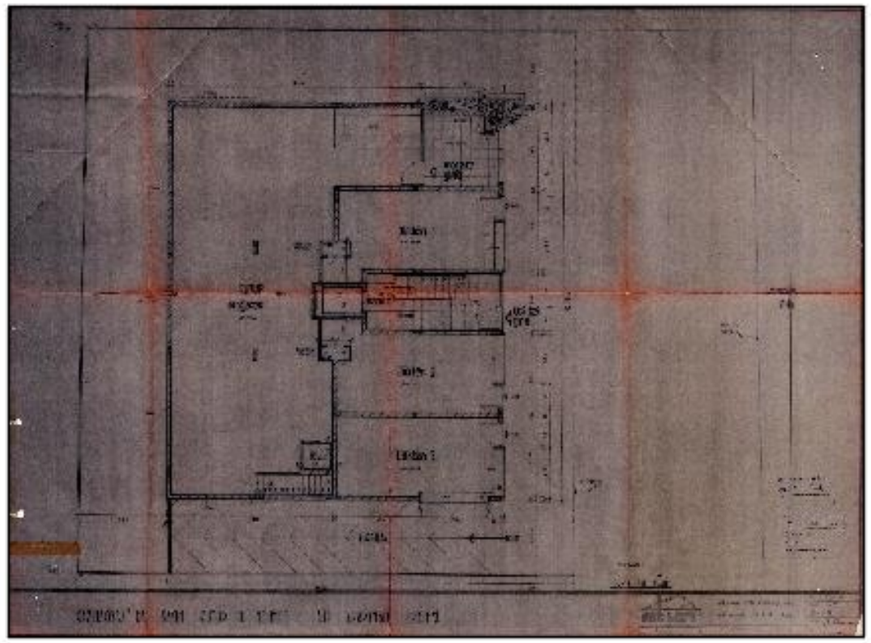


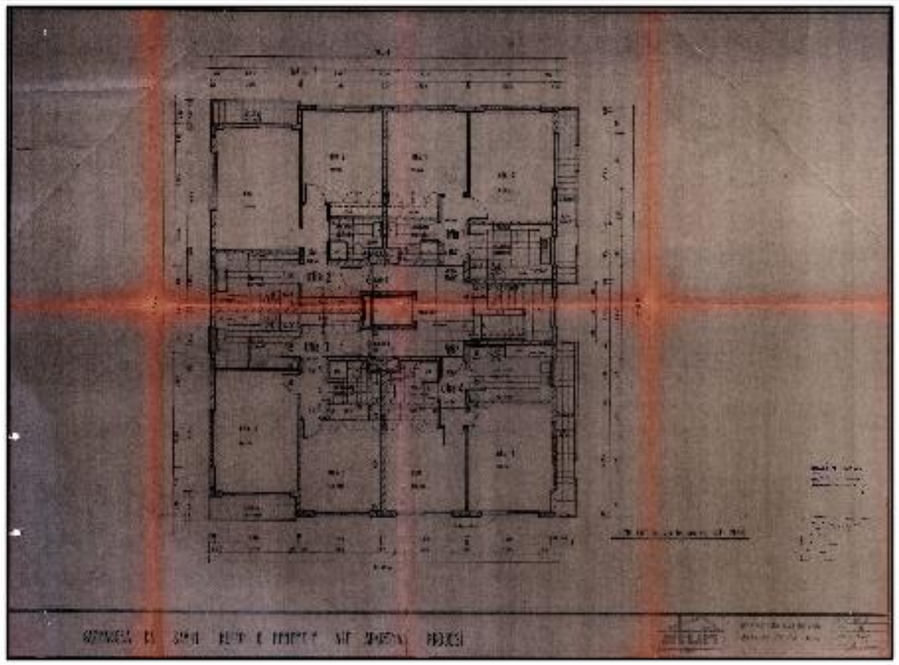


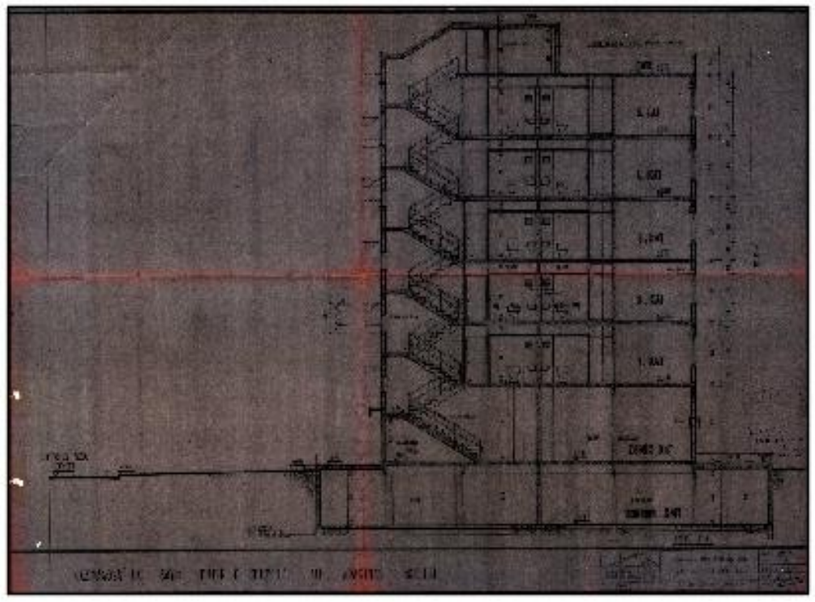


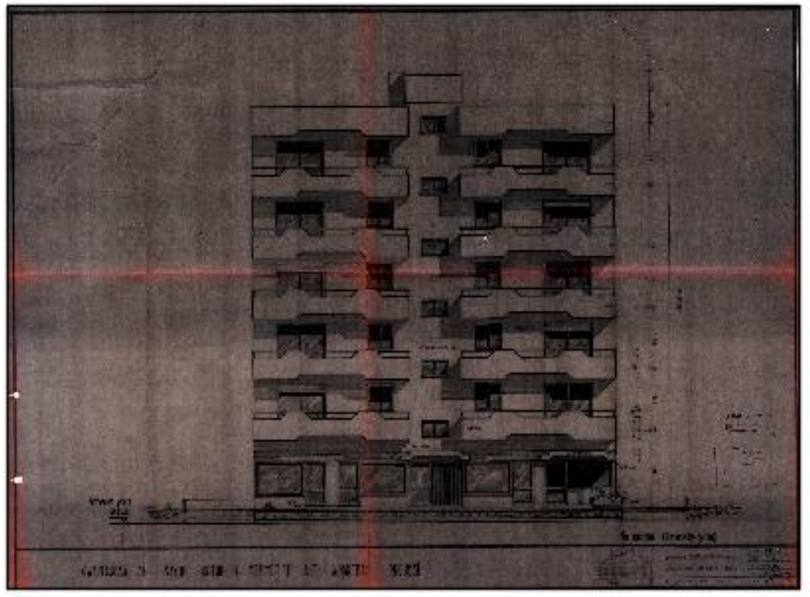
Appendix 35: Project 9 – Document no: 74/79 – Kutup Mehmet Apartment


Gazi Magosa Belediyesi

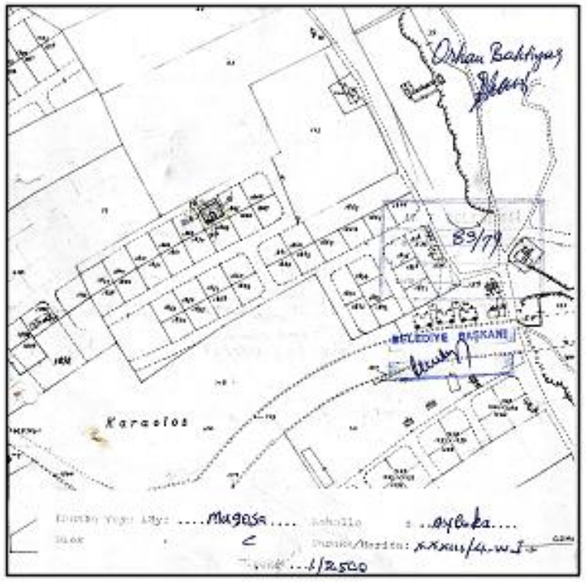


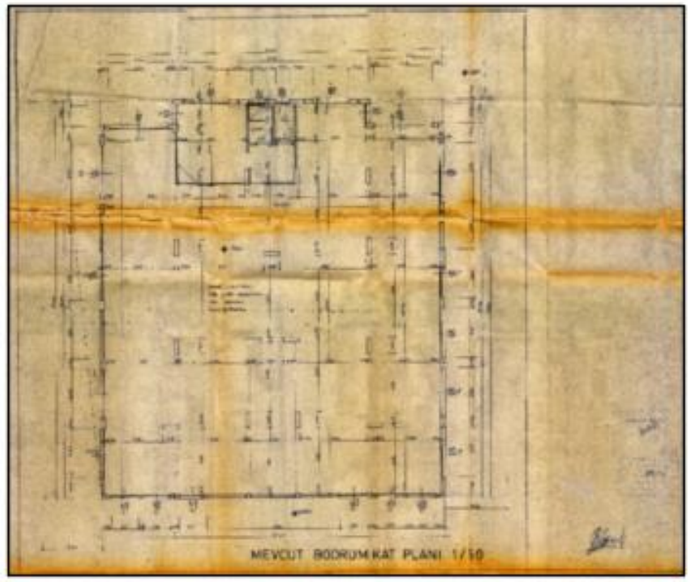


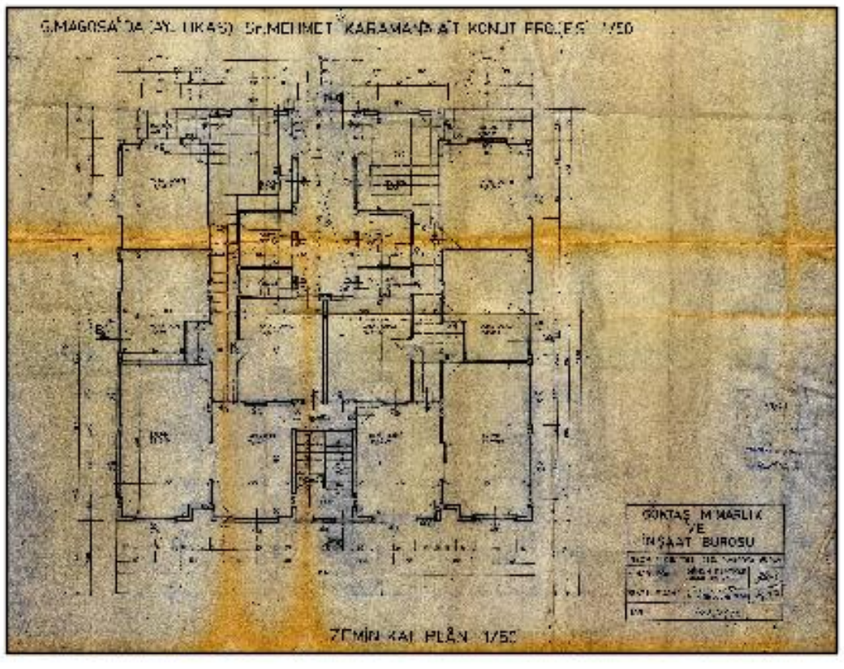


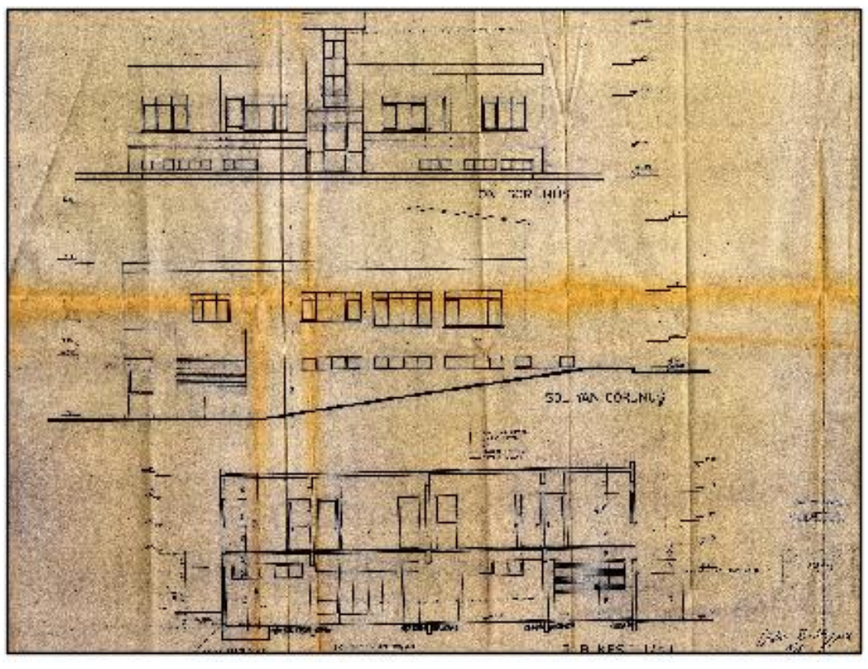


Appendix 36: Project 10 – Document no: 83/79 – Mehmet Öz Karaman Dwelling

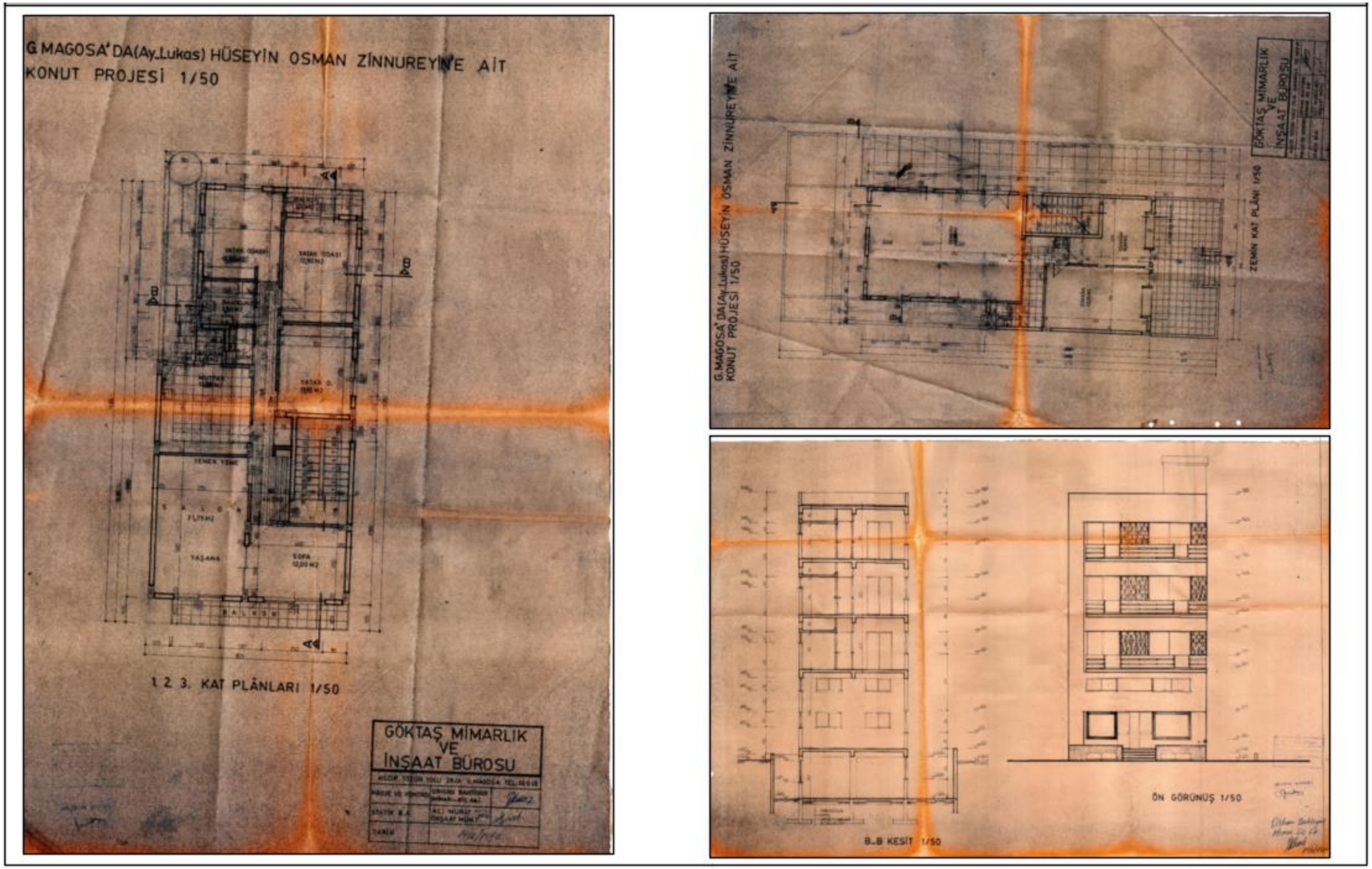




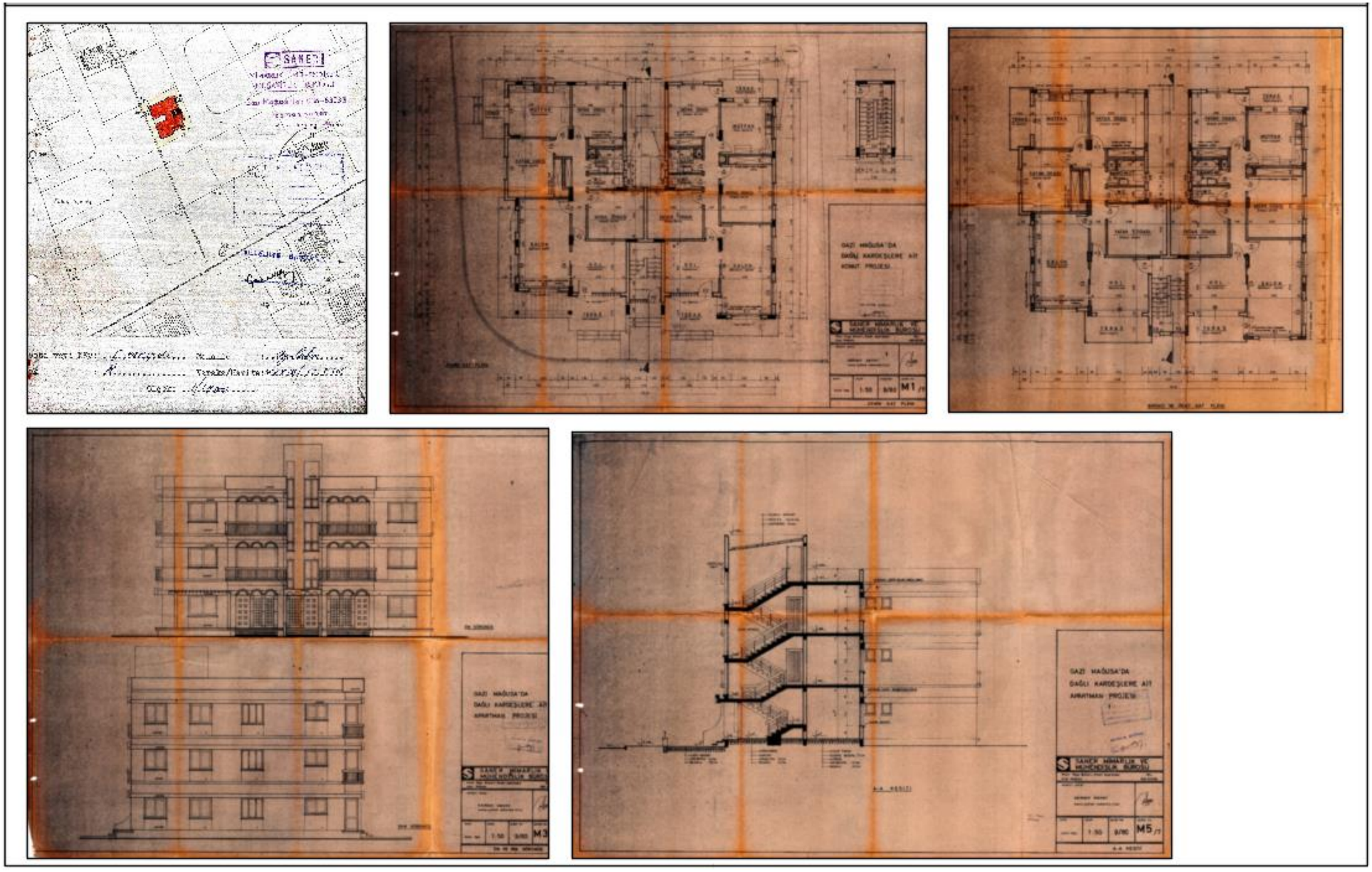




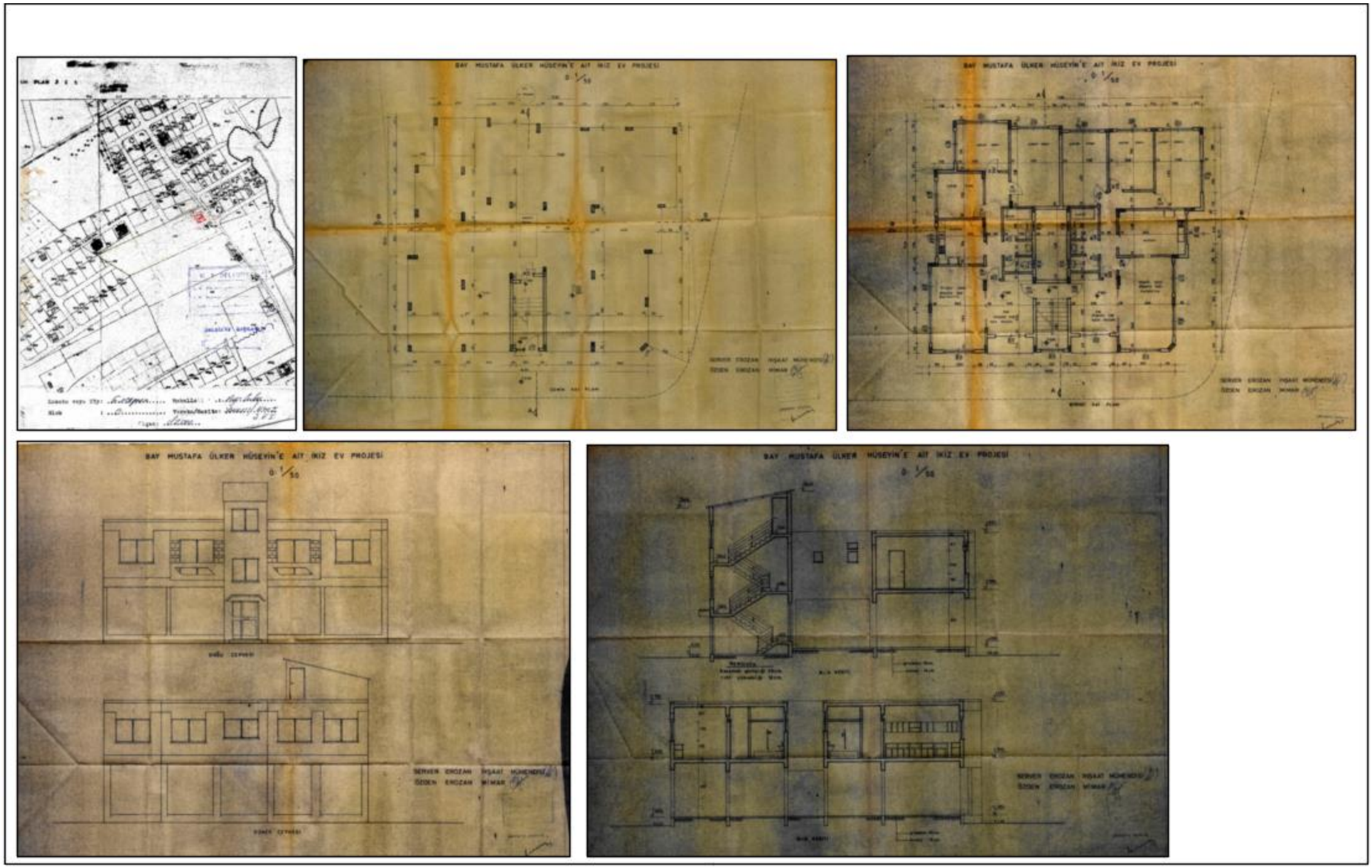
Appendix 37: Project 11 – Document no: 10/80 – Hüseyin Osman Zinnureyn Dwelling



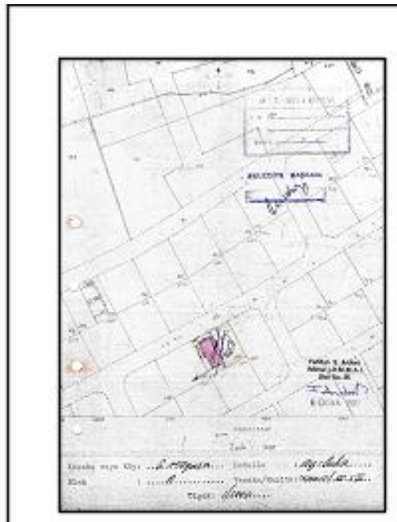
Appendix 38: Project 12 – Document no: 09/80 – Dağlı Kardeşler Dwelling

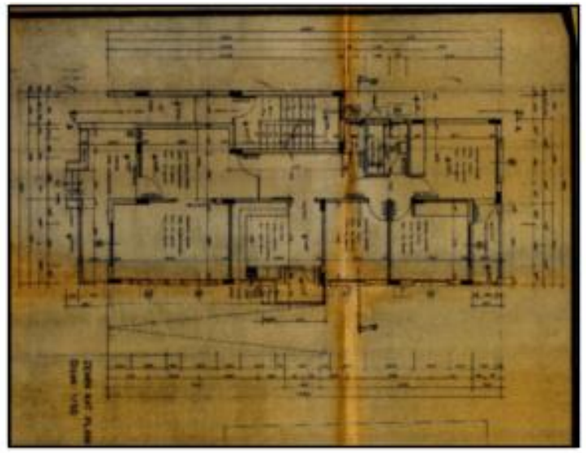


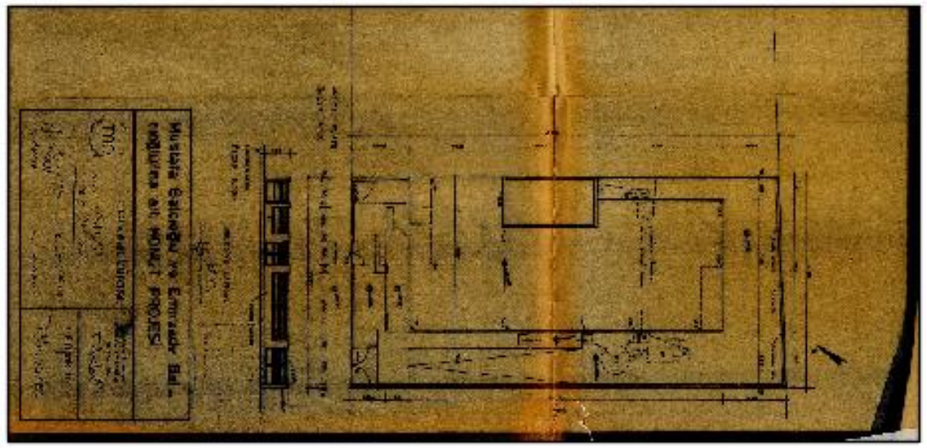
Appendix 39: Project 13 – Document no: 56/80 – Mustafa Ülker Hüseyin Twin House

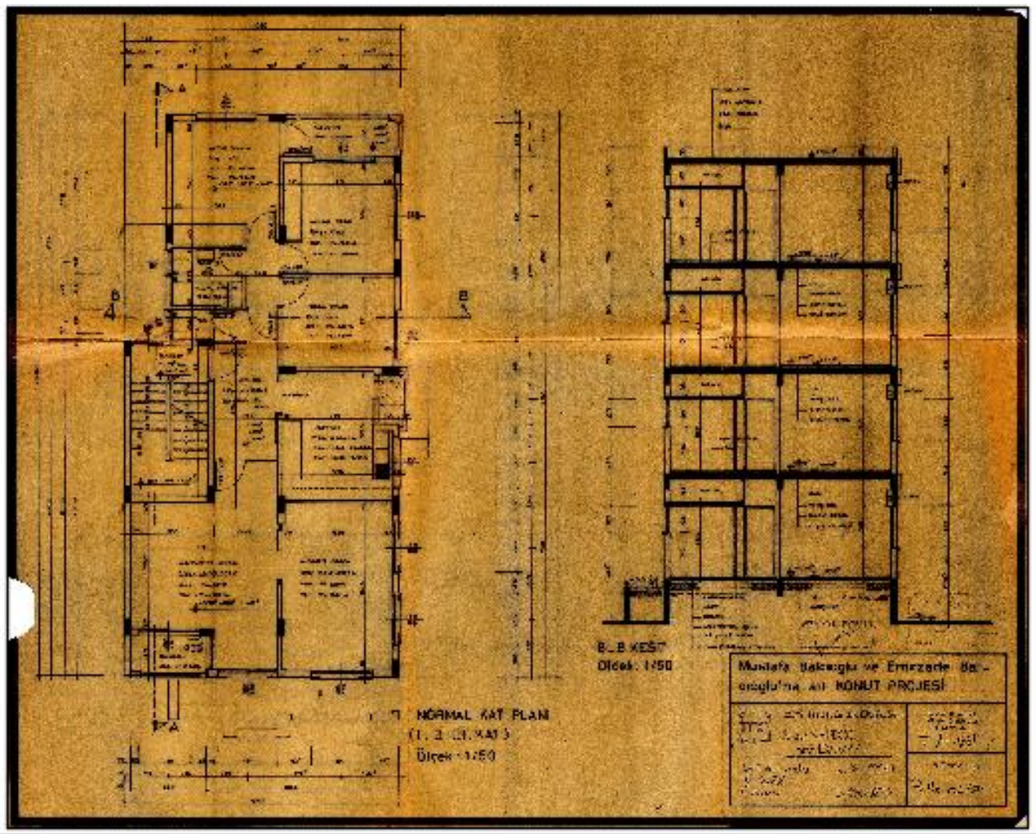


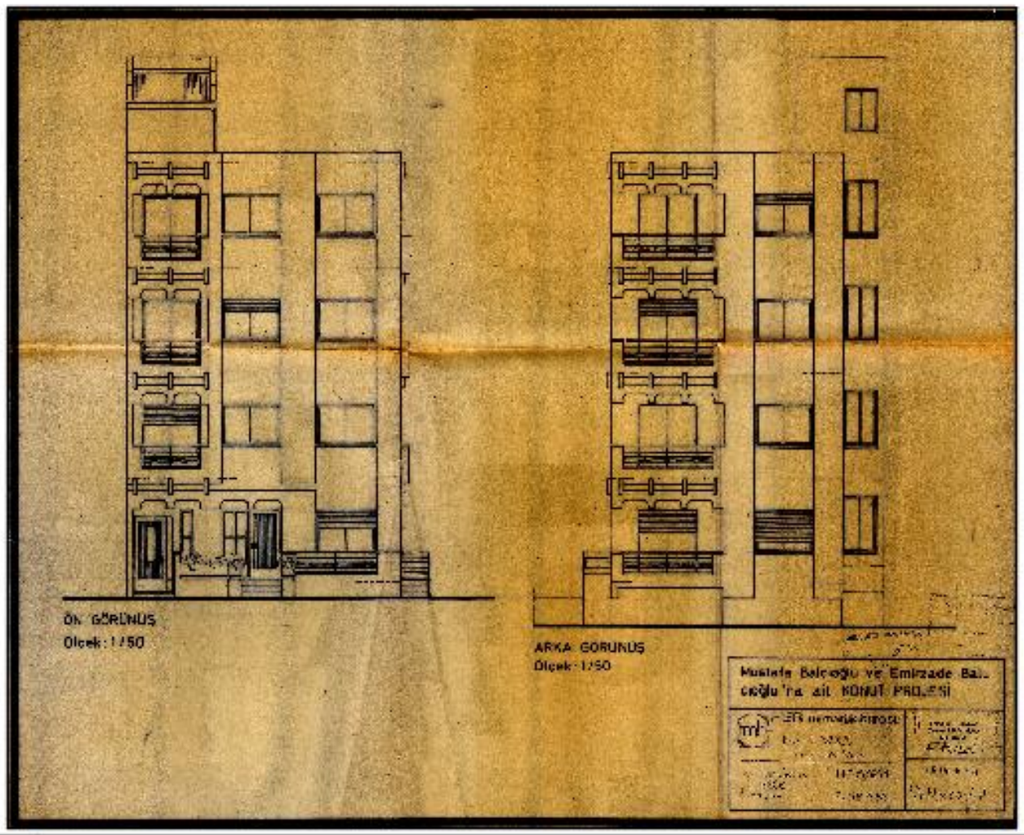
Appendix 40: Project 14 – Document no: 02/81 – Balcıoğlu Dwelling



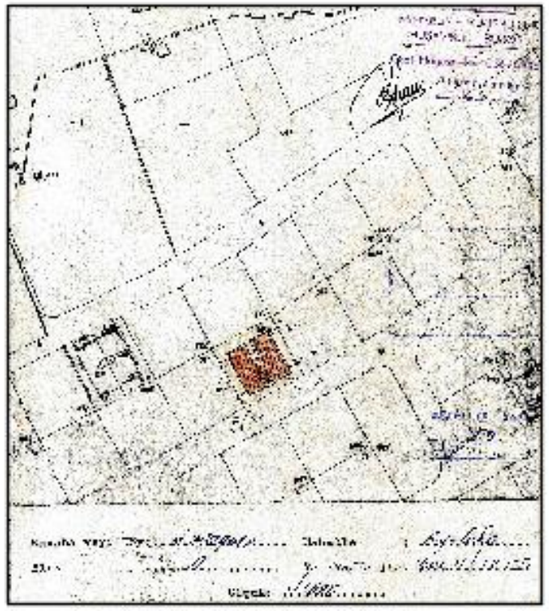


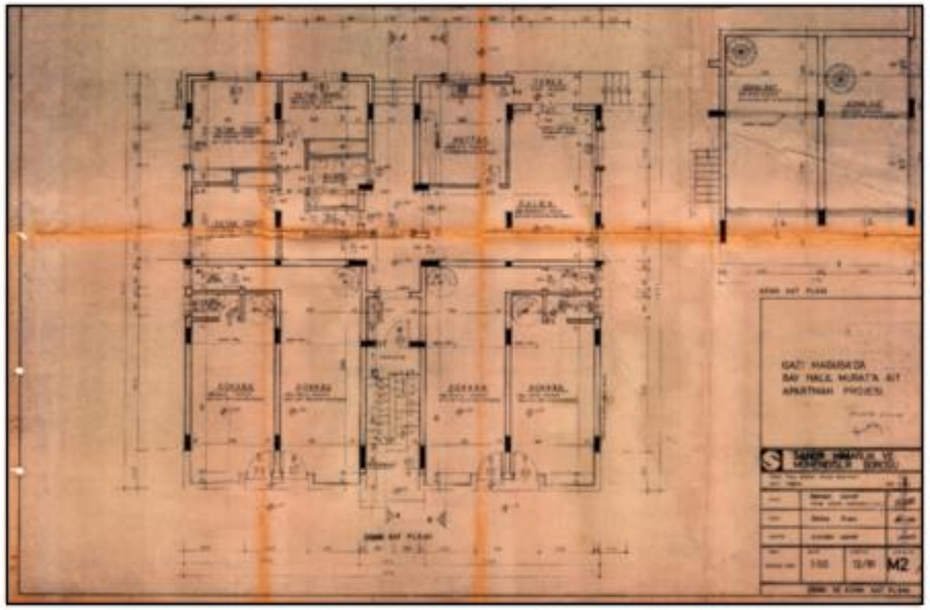


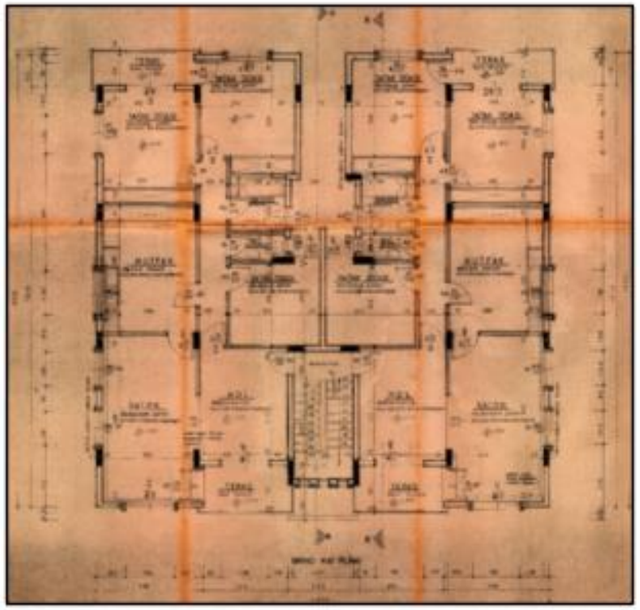


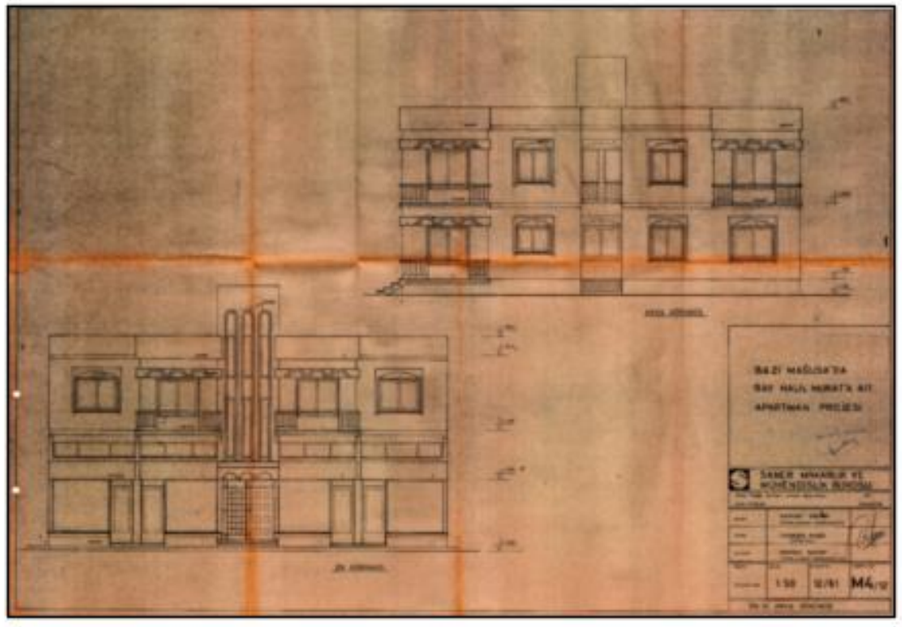


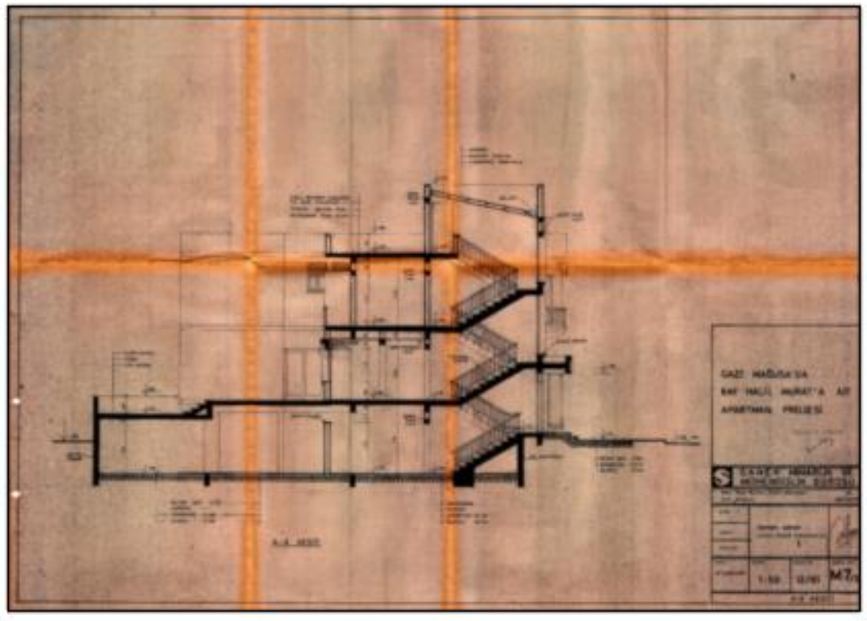
Appendix 41: Project 15 – Document no: 12/81 – Halil Murat Apartment



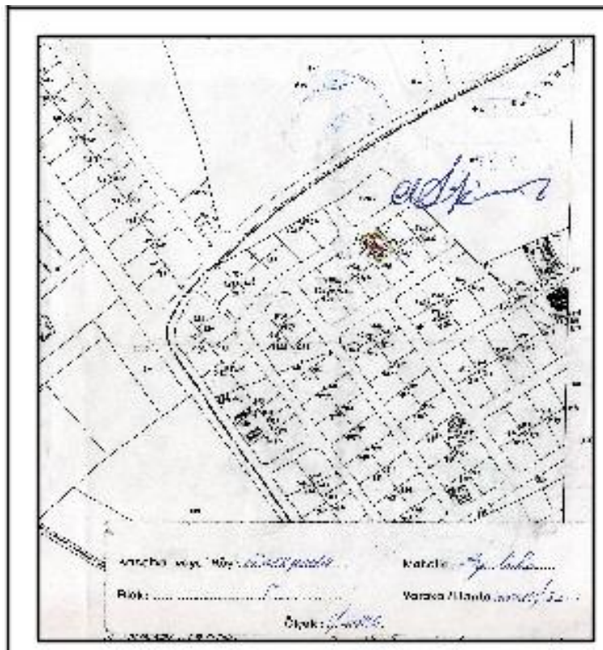


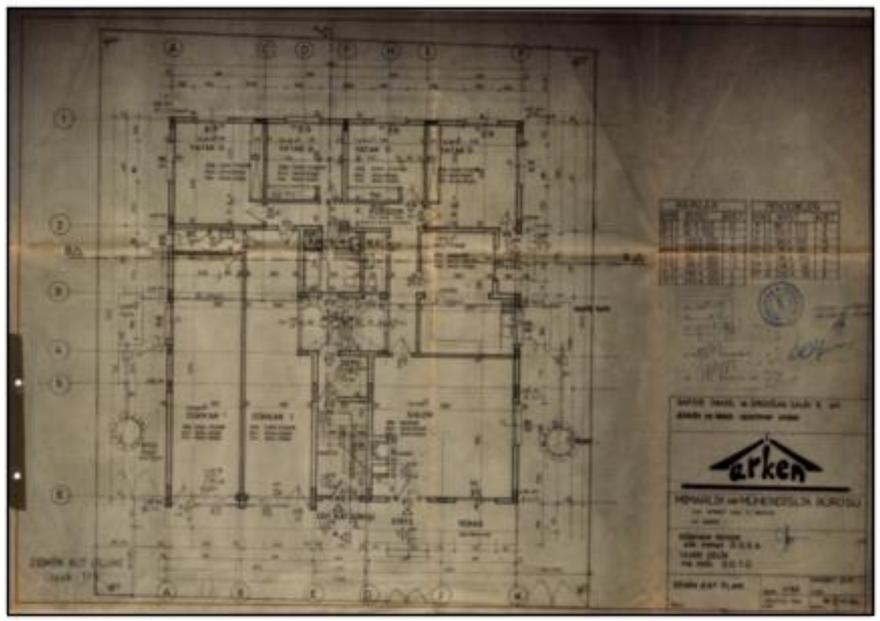


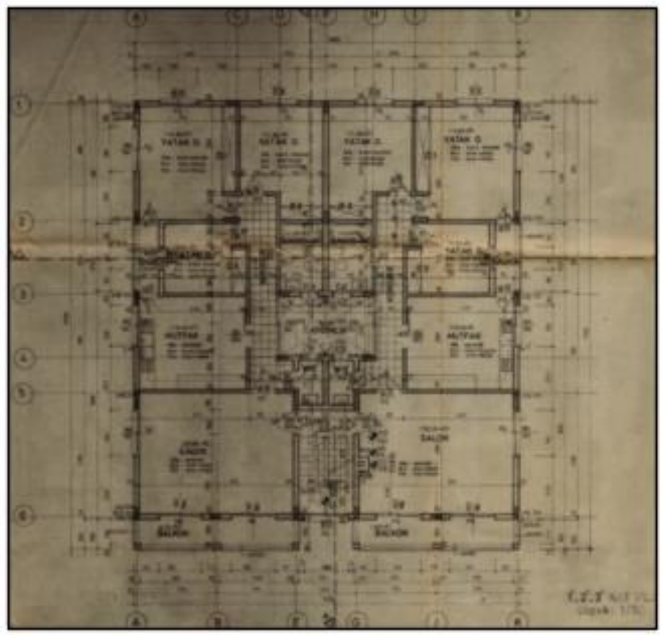


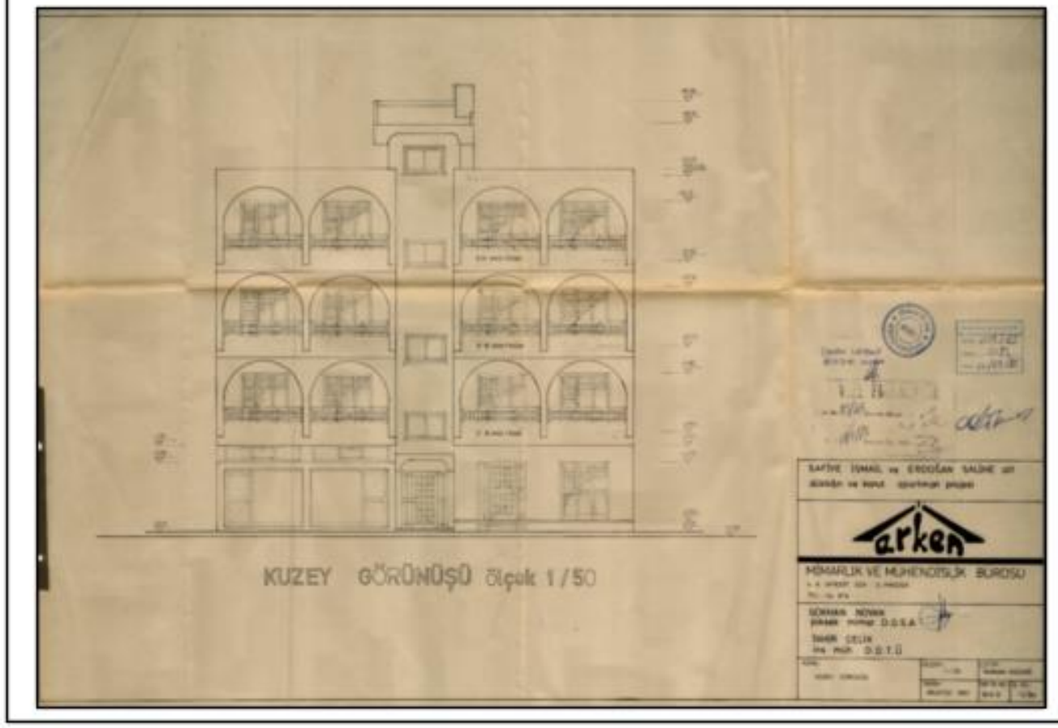


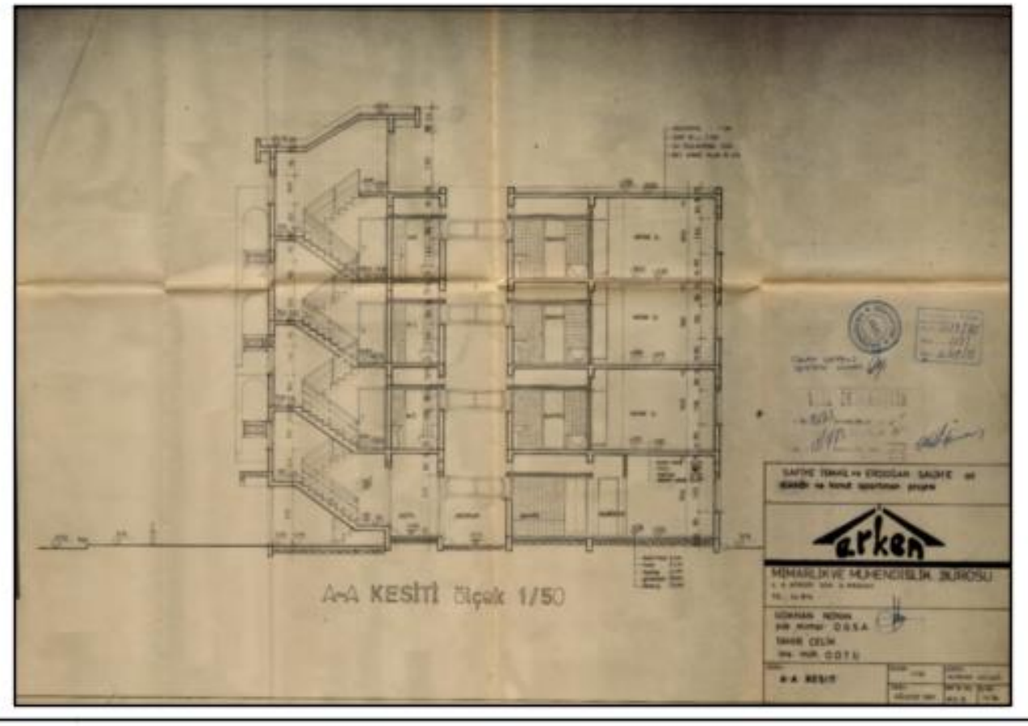
Appendix 42: Project 16 – Document no: 11/84 – Sayfiye İsmail & Erdoğan Salih Apartment





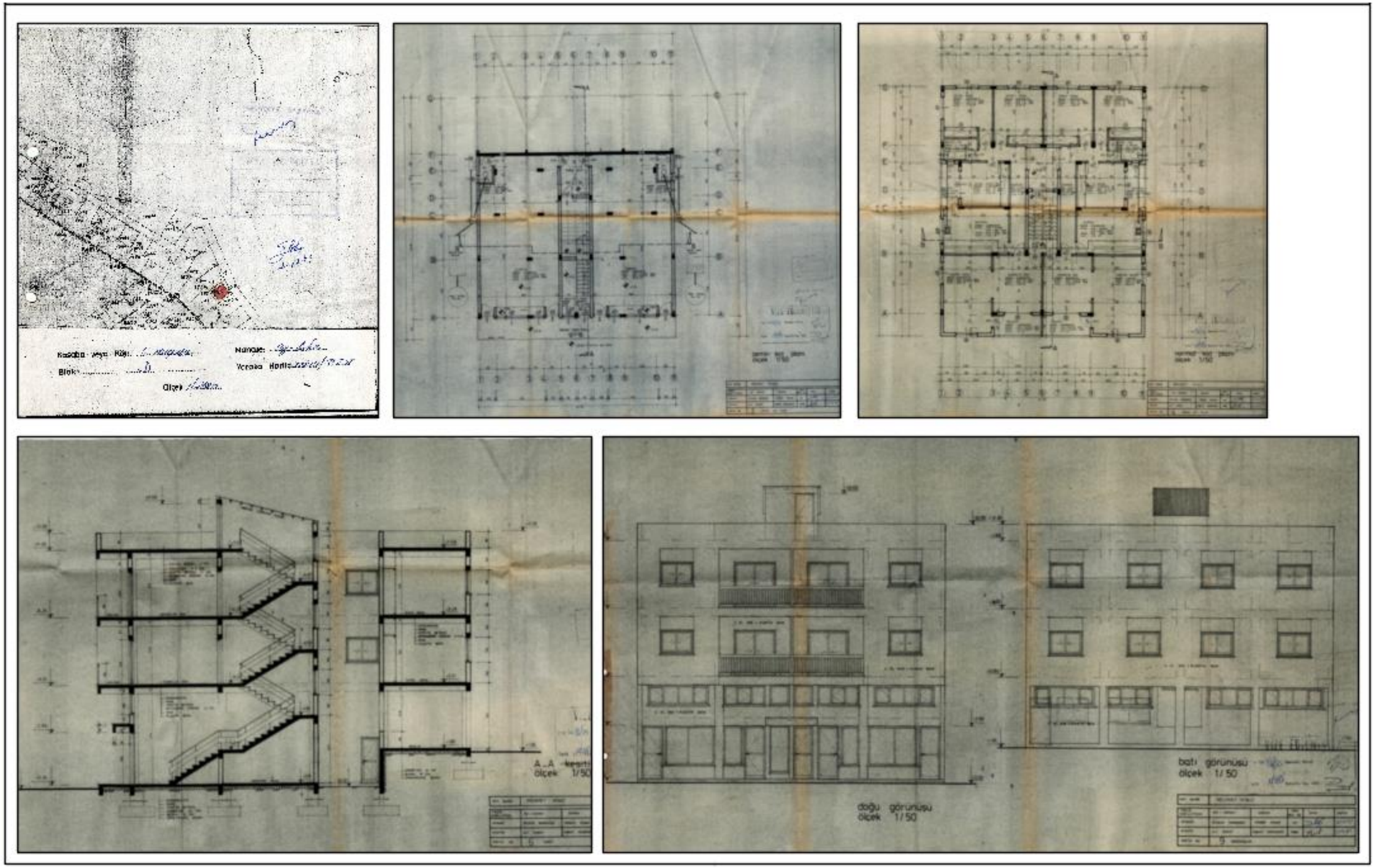




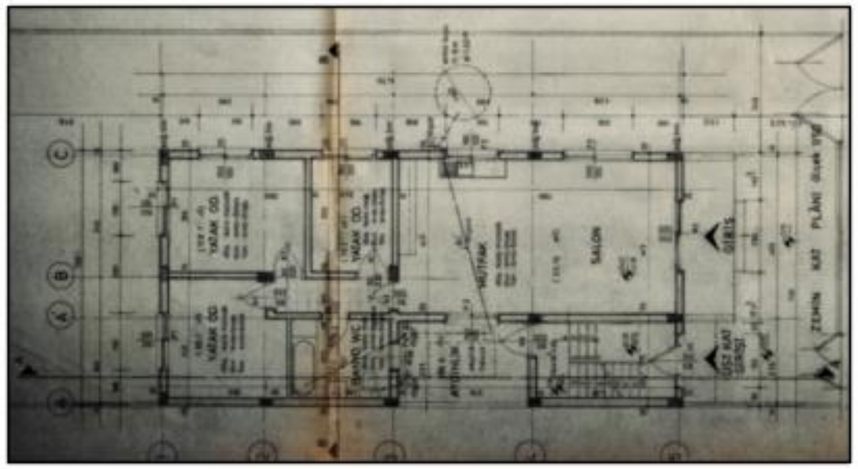


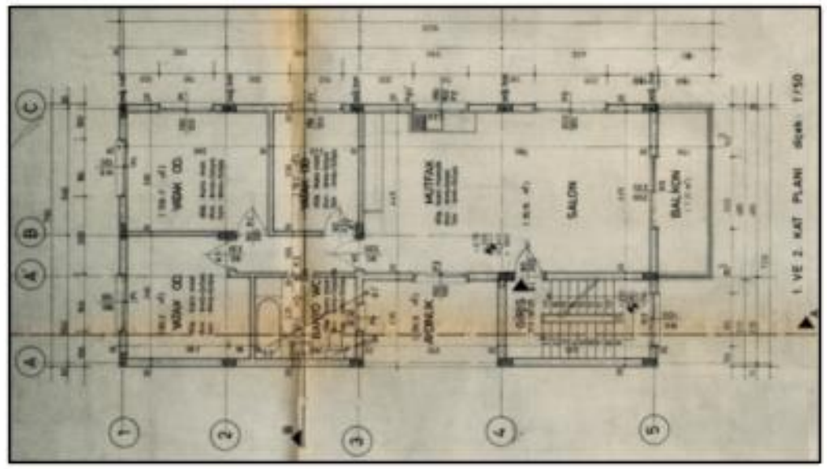
Appendix 43: Project 17 – Document no: 25/84 – Hanife Mustafa & Mustafa Osman Dwelling

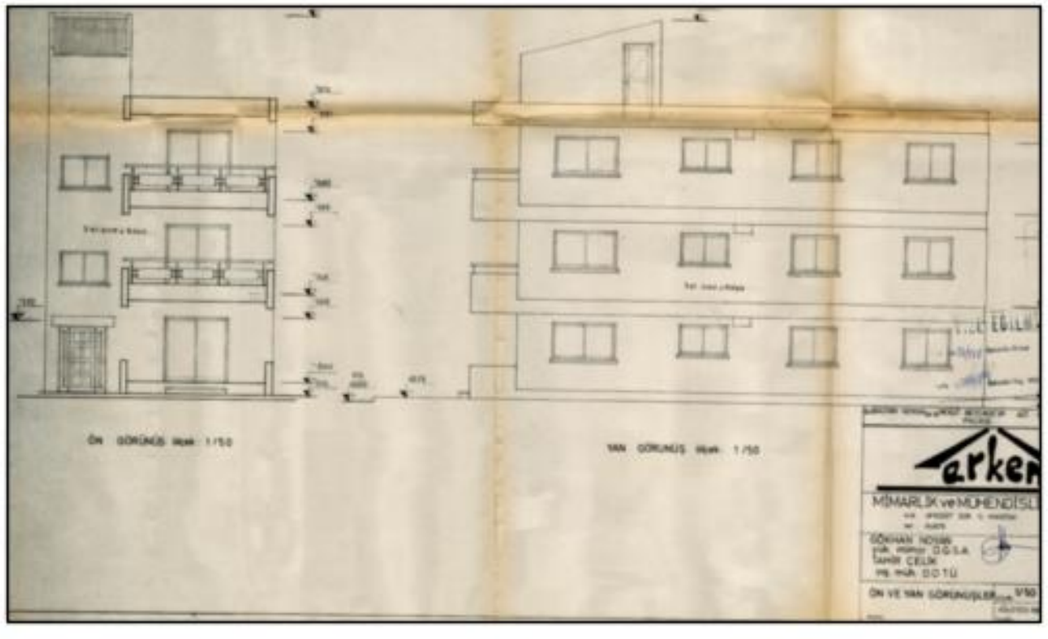
Appendix 44: Project 18 – Document no: 75/84 – Mehmet Niyazi Apartment

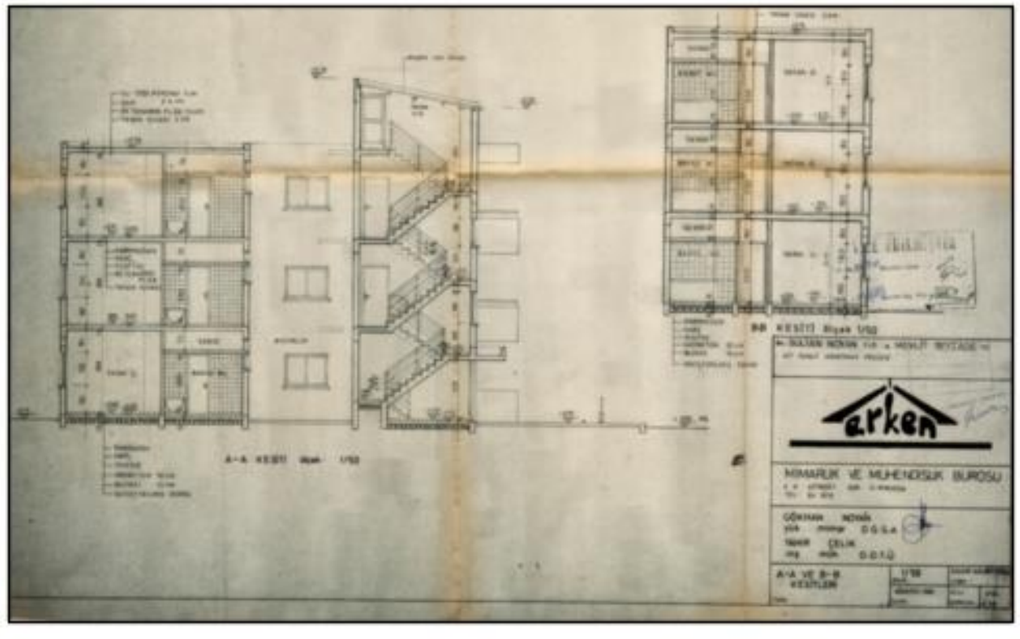


Appendix 45: Project 19 – Vise no: 228/84 – Sultan Noyan & Mevlit Beyzade Apartment

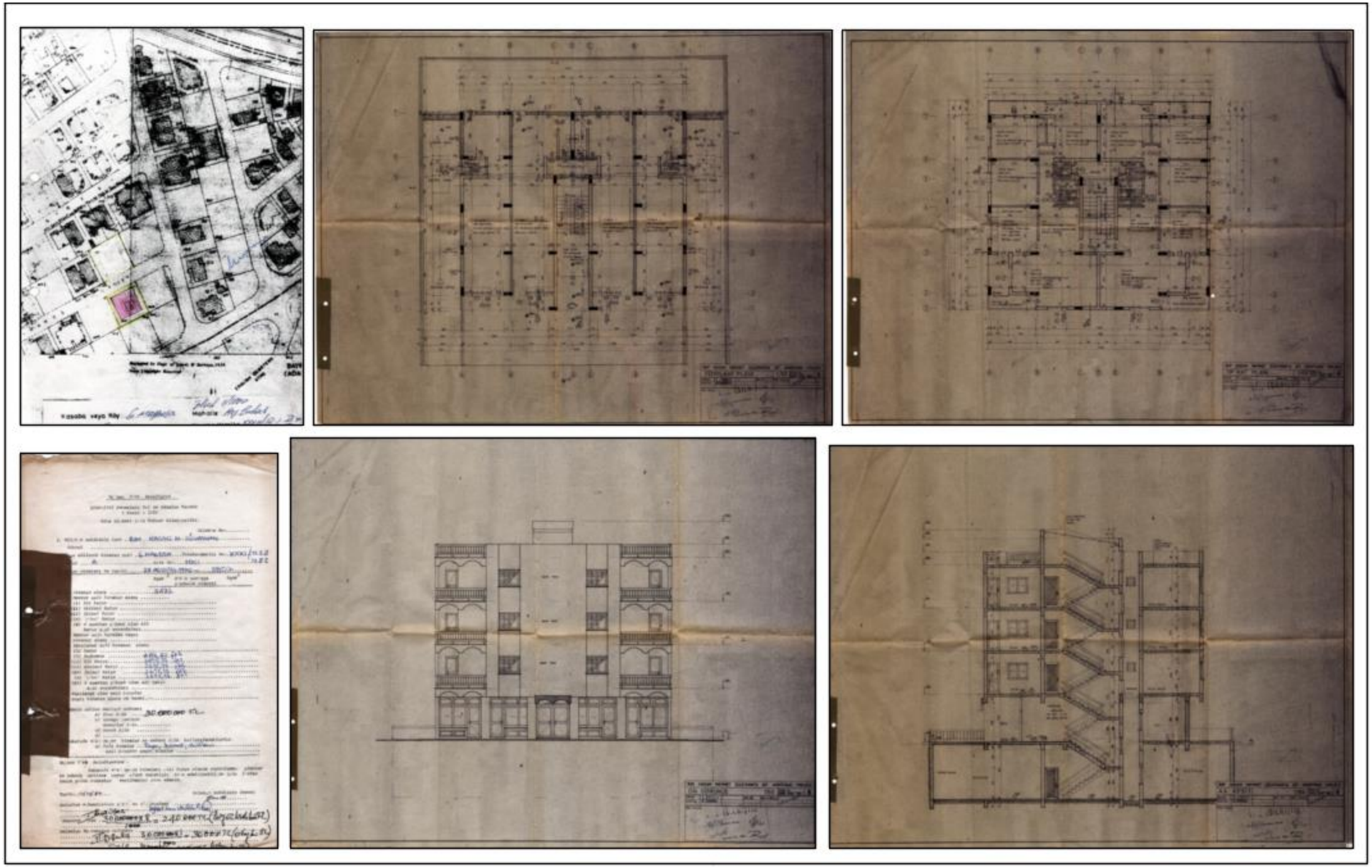




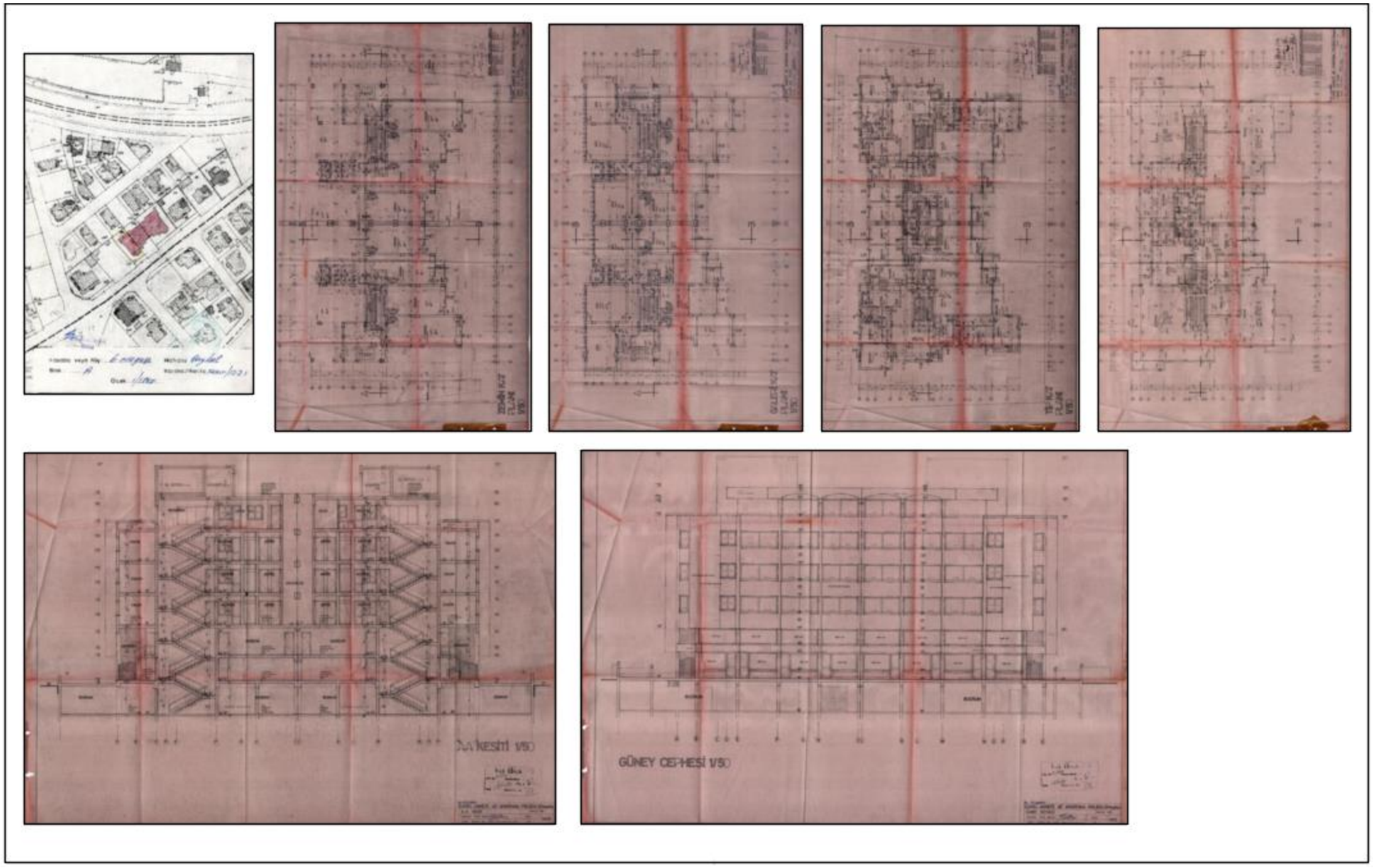




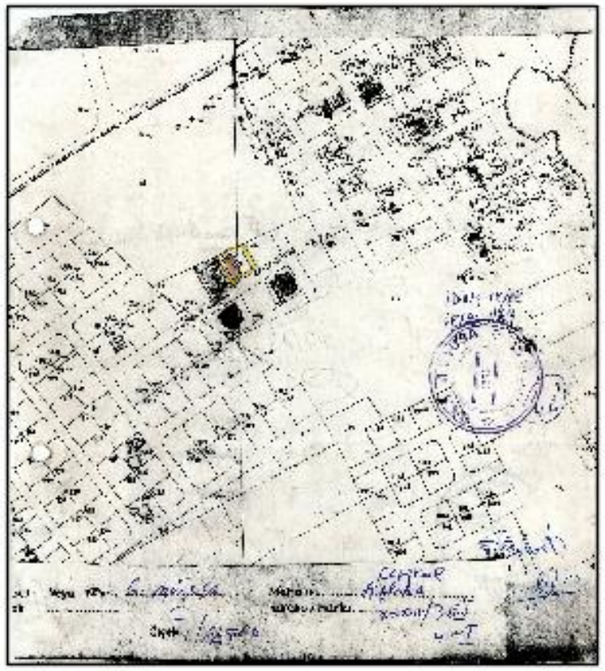
Appendix 46: Project 20 – Vise no: 734/84 – Hasan Mehmet Süleyman Apartment

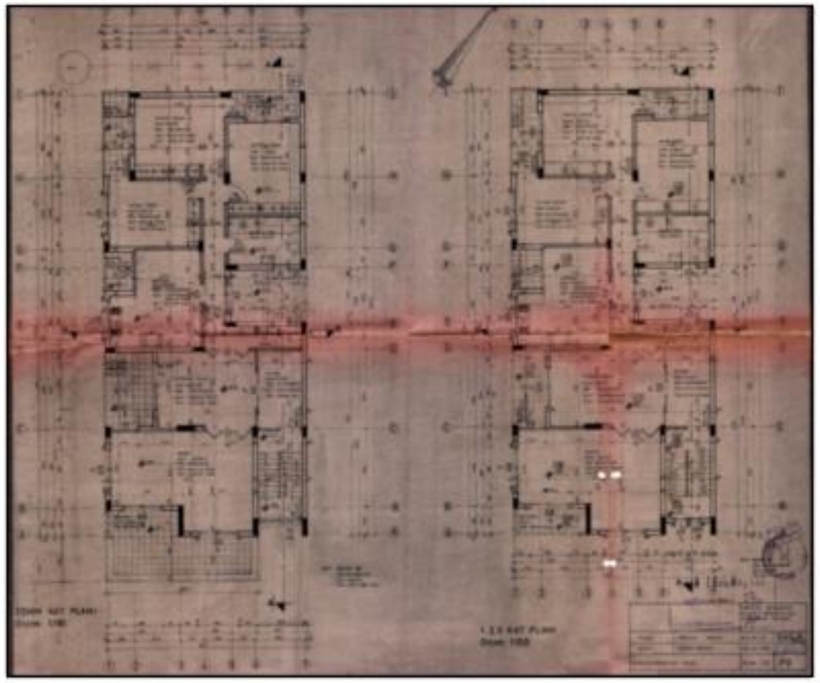


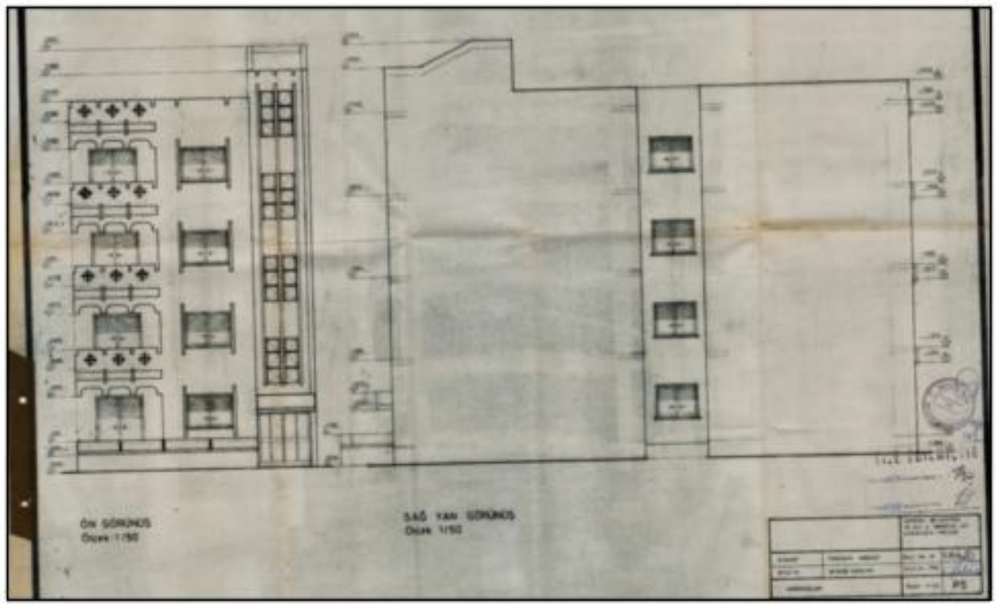
Appendix 47: Project 21 – Vise no: 884/85 – Şükrü Ahmet Apartment

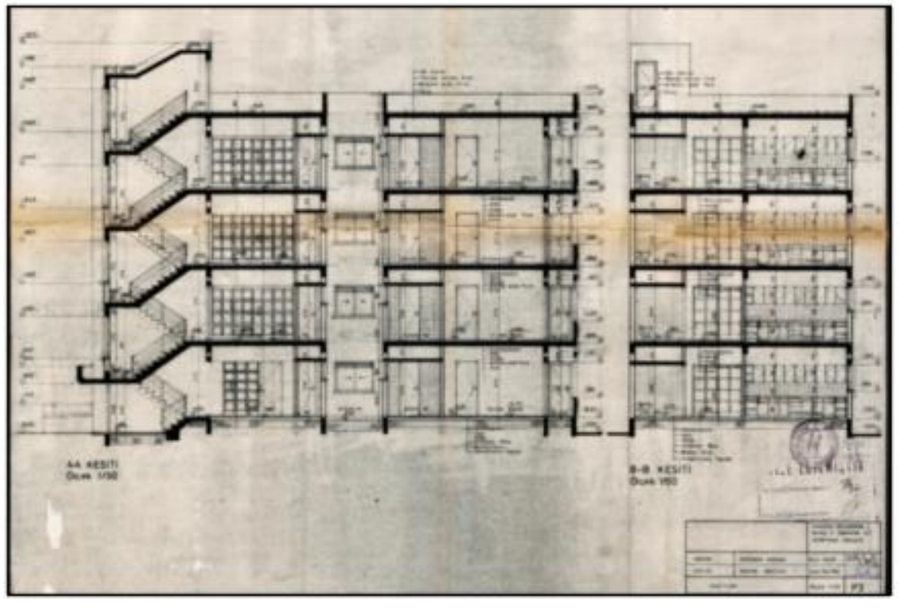


Appendix 48: Project 22 – Document no: 18/86 – Ali Ç. İbrahim Apartment

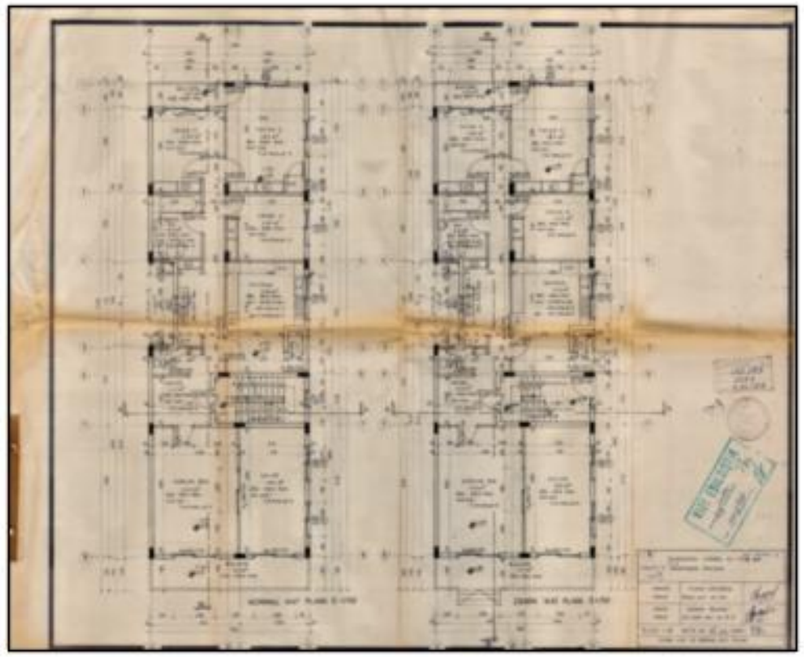


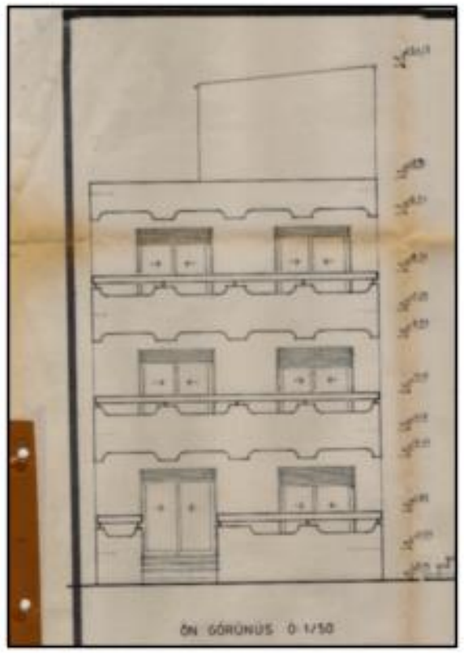


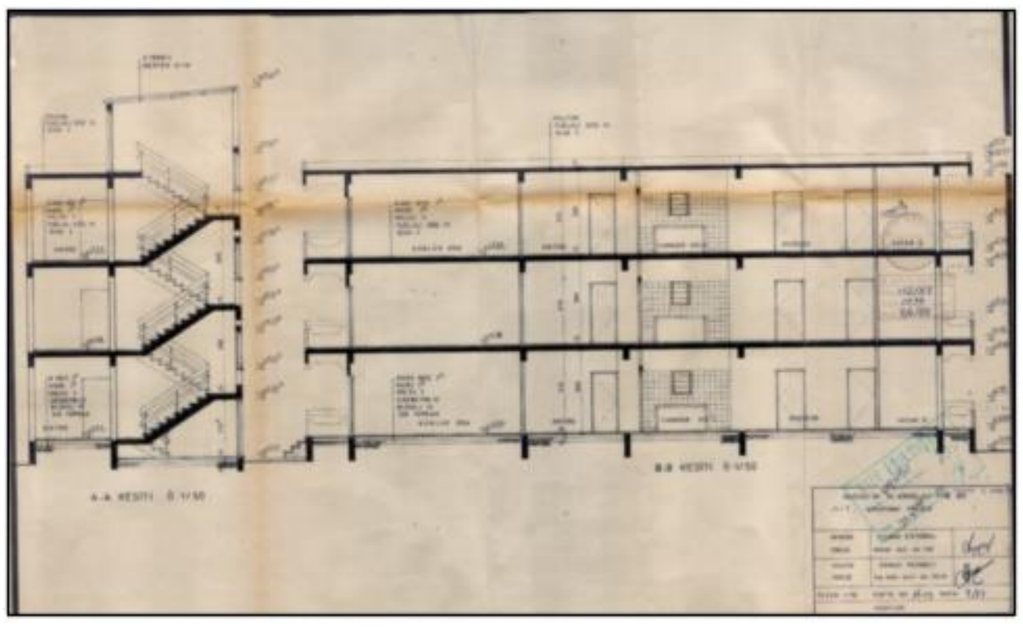




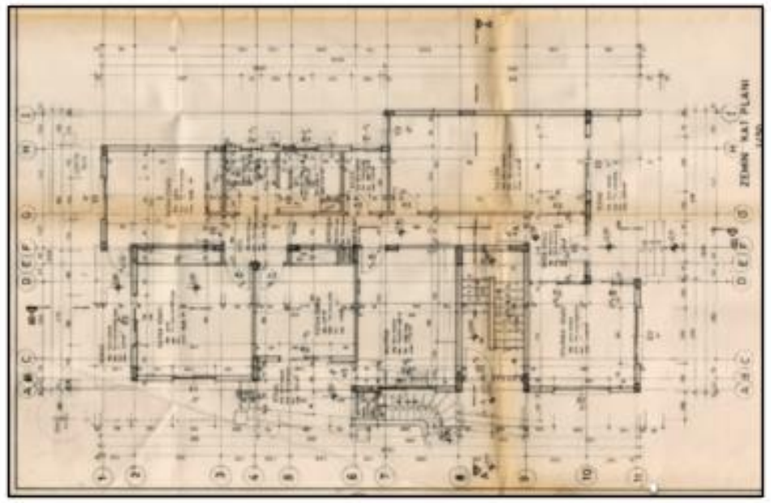
Appendix 49: Project 23 – Document no: 9/87 – Gürsel Ali Pit & Soner E. Raşit Apartment

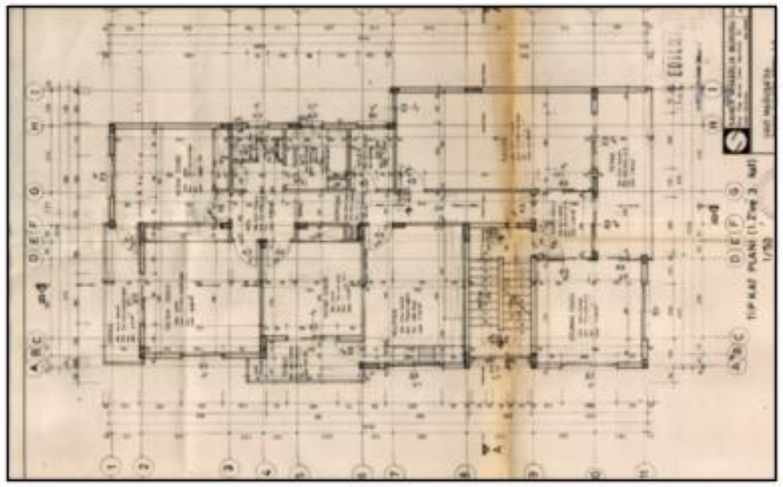


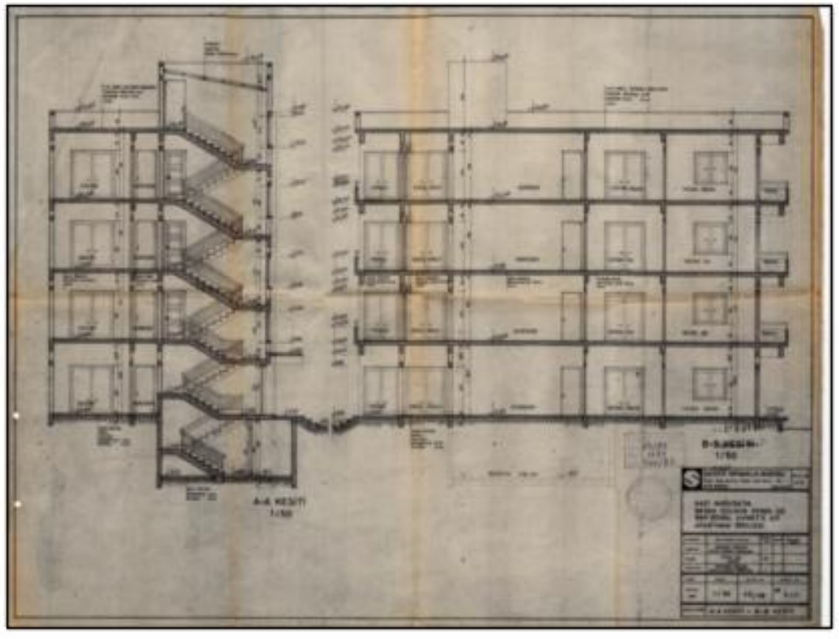




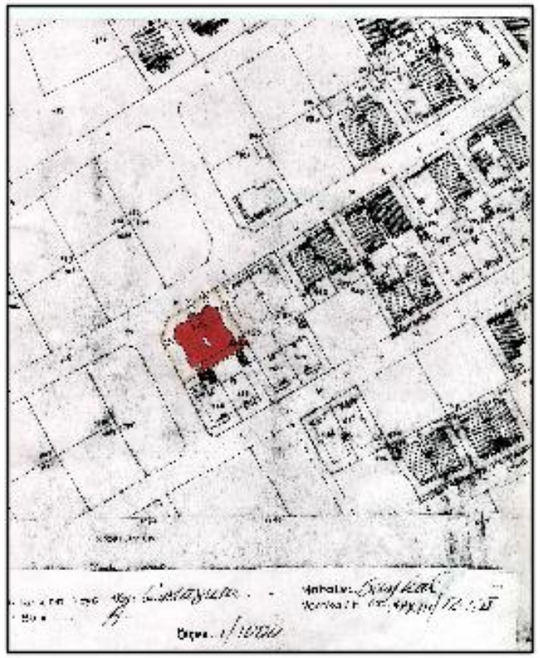
Appendix 50: Project 24 – Document no: 59/87 – Gülgün Kemal & Kemal Ahmet Apartment

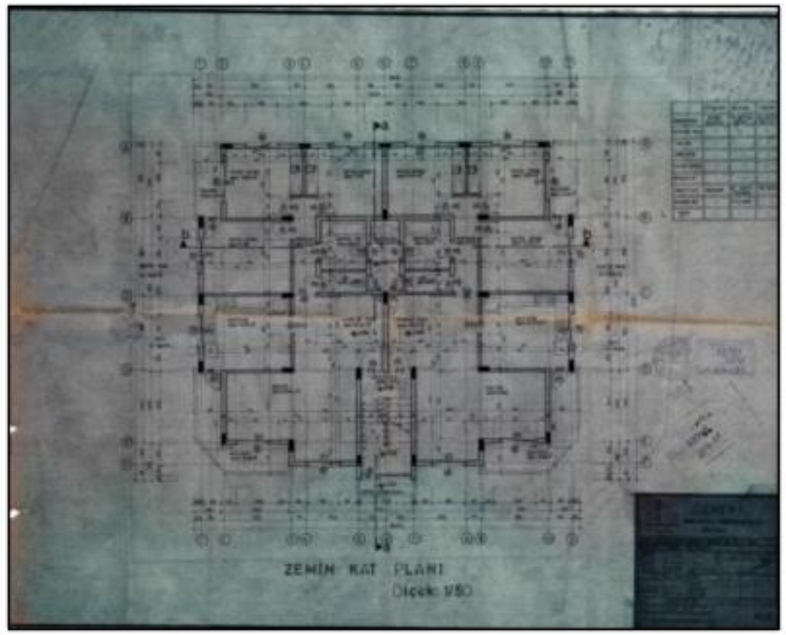


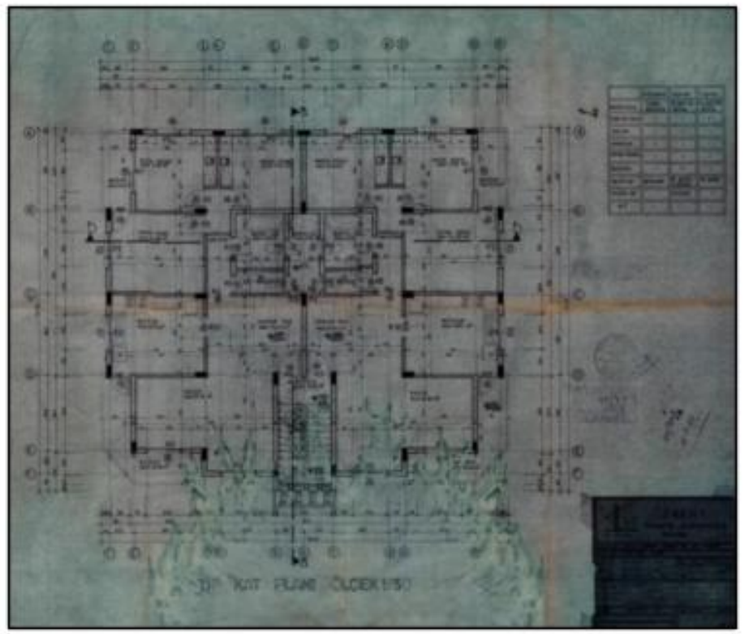


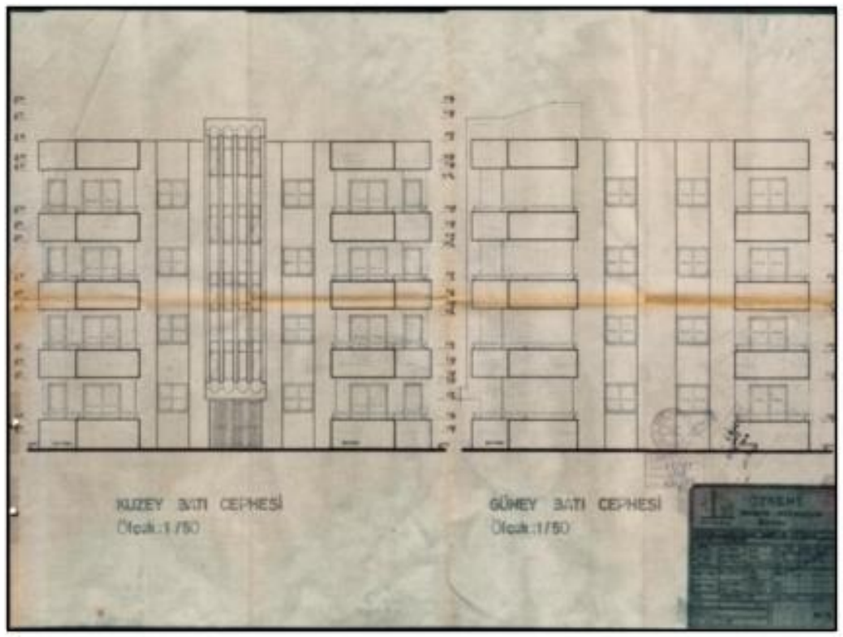


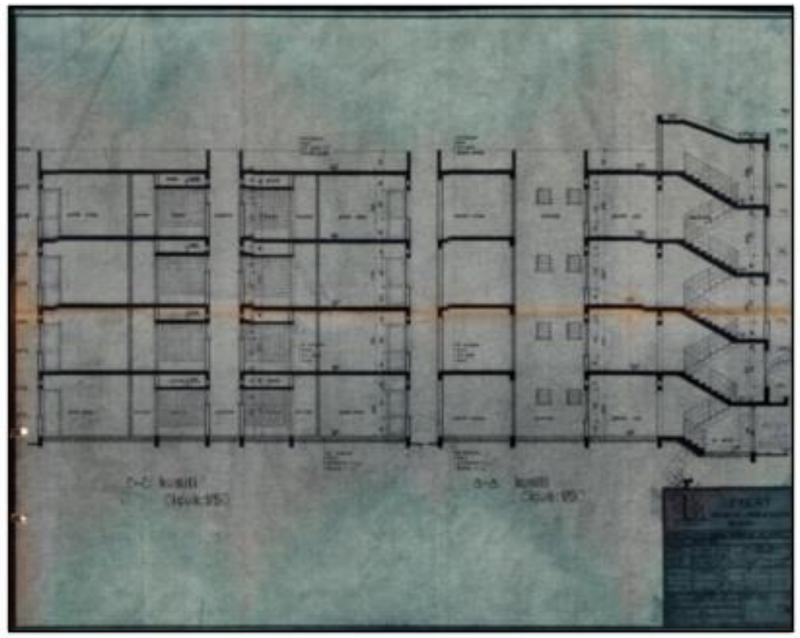
Appendix 51: Project 25 – Document no: 97/87 – Levent Sanayi Apartment











Appendix 52: Project 26 – Vise no: 518/87 – Arif Hayrettin Apartment